

Investment Performance Review
Period Ending September 30, 2019

Washoe County 457 & 401a Plans



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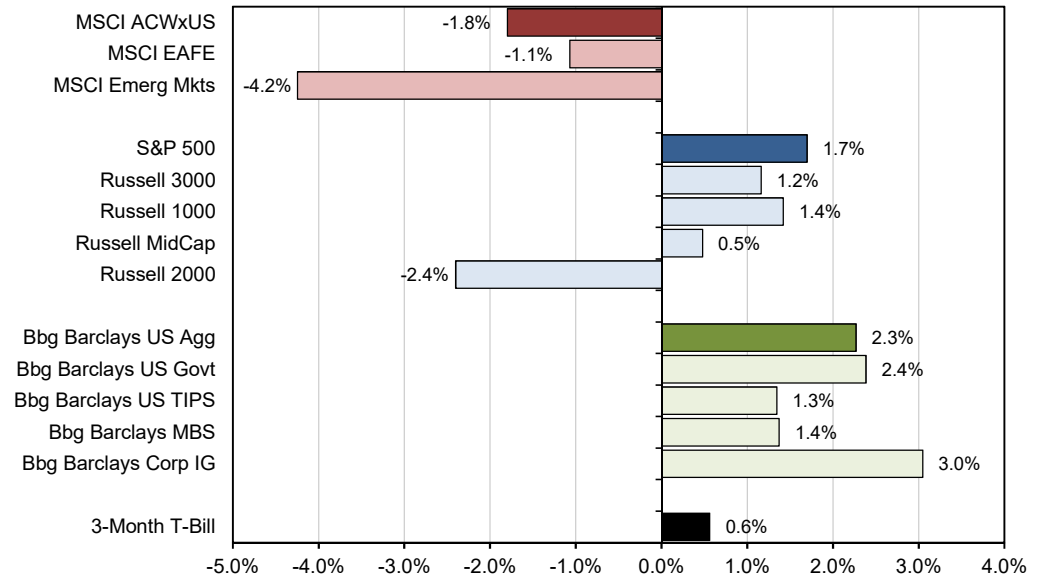


3rd Quarter 2019 Market Environment

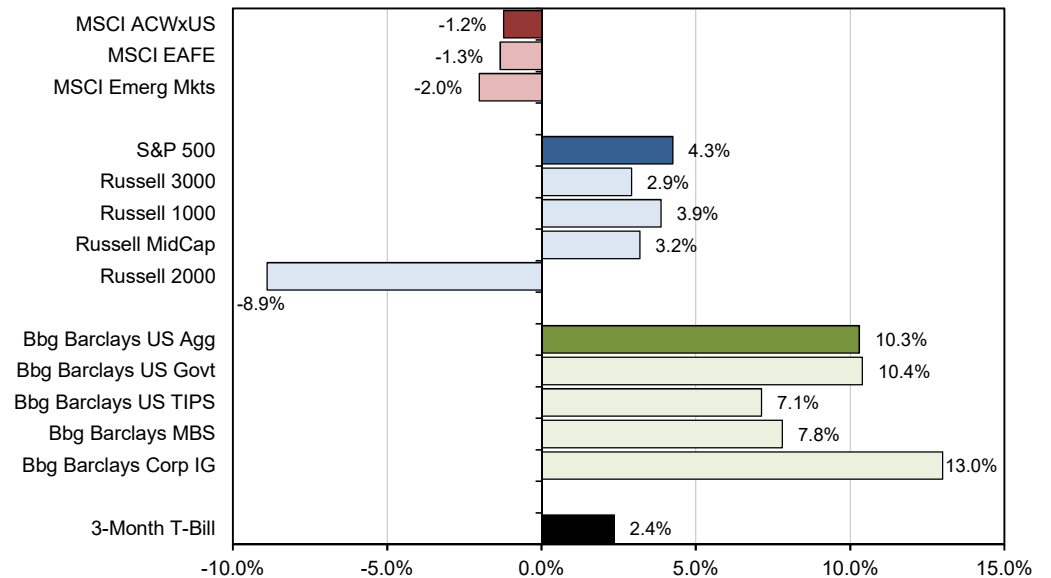


- Broad asset class returns were mixed during the 3rd quarter of 2019 with both US large cap equity and fixed income indices extending their year-to-date gains while US small cap and international indices declined. Volatility was high during the period as investors weighed the effects of ongoing trade disruption and slowing global economic data against the announcement of several new central bank stimulus measures. US stocks continued their year-to-date outperformance relative to international stocks during the period. US markets faced headwinds from continued escalation in the ongoing trade dispute with China, slowing economic data, particularly with regards to manufacturing, and political uncertainty following a late quarter impeachment inquiry against President Donald Trump. However, markets were supported by easing monetary policy from the Federal Reserve (Fed) which cut interest rates twice during the period. In general, lower risk assets performed better through the period as investors weighed the increased risk of a recession. Within domestic equity markets, large cap stocks outperformed small cap equities during the quarter with the S&P 500 Index returning 1.7% versus a -2.4% return on the small cap Russell 2000 Index. US equity returns over the 1-year period were positive for large and mid-cap stocks, returning 4.3% and 3.2% respectively, but small cap stocks posted a loss, falling -8.9%.
- International markets posted negative returns for the 3rd quarter. Similar to US markets, international returns were impacted by continued weakness in economic data, heightened geopolitical uncertainty around global trade and Brexit and newly announced stimulus measures from global central banks including the European Central Bank (ECB) and Peoples Bank of China (PBoC). International returns also faced headwinds from a strengthening US dollar (USD) which appreciated against most major currencies during the period. Developed markets continued their outperformance relative to emerging markets during the period with the MSCI EAFE Index falling -1.1% versus a -4.2% decline for the MSCI Emerging Markets Index. Both developing and emerging markets posted slight losses over the 1-year period, returning -1.3% and -2.0% respectively.
- Fixed income returns outperformed equities during the 3rd quarter as investors looked for relative safety amid the equity market volatility. The broad market Bloomberg Barclays Aggregate Index gained 2.3% as interest rates fell following central bank stimulus from the Fed and other global central banks. The US Treasury Yield Curve also inverted in August, contributing to growing concern around the potential for an upcoming recession. Investment grade corporate issues were the best performing securities for the third quarter in a row, returning 3.0%, outperforming Treasury and securitized issues. Corporate issues benefitted from their relatively high duration and yield. The bond market has meaningfully outperformed the equity market over the trailing 1-year period with the Bloomberg Barclays Aggregate posting a solid 10.3% return.

Quarter Performance

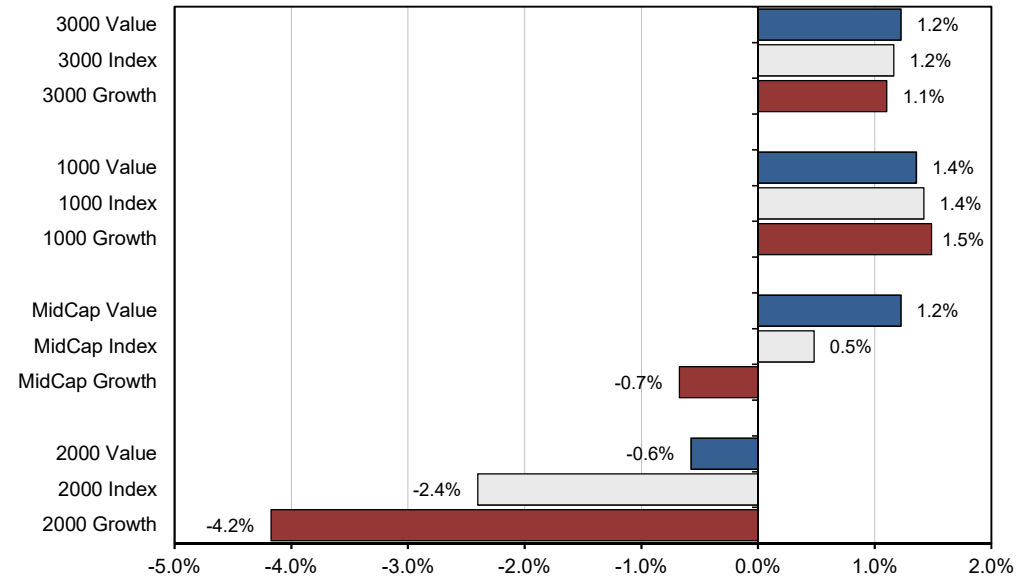


1-Year Performance

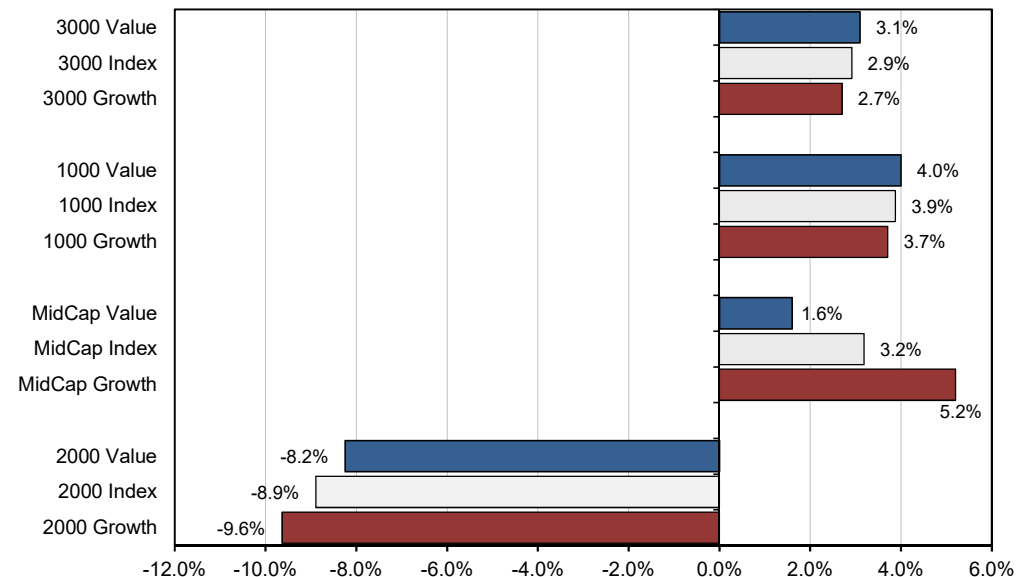


- US equity returns were modestly positive during the 3rd quarter, but results varied considerably across the style and capitalization spectrum. Data released during the quarter showed signs that the US economy could be slowing down. Weakening metrics around manufacturing and sentiment were particularly concerning and employment, typically a bright spot for the US economy, missed expectations for the pace of new jobs and hours worked. A likely contributor to the softening economic data is the ongoing trade war between the US and China. Despite last quarter's agreement to cease escalations following a meeting between President Trump and President Jinping at the G20 summit, the 3rd quarter saw the announcement and implementation of a series of new tariffs from both the US and China. Additionally, in response to new tariffs, the PBoC allowed the yuan to depreciate to its lowest level since 2008 leading US Treasury officials to accuse China of currency manipulation. Even with the apparent breakdown in relations between the two sides, both China and the US agreed to continue negotiations set to take place in October. Markets also reacted to the late quarter announcement of a formal impeachment inquiry against President Trump following a whistle blower report alleging that President Trump pressured the government of Ukraine to investigate the son of political opponent Joe Biden. Despite these substantial headwinds, the US equity market found support from Fed easing of monetary policy in the form of two separate interest rate cuts and ended the period with a gain. The Russell 3000 Index returned 1.2% and 2.9% for the quarter and 1-year period respectively.
- During the quarter, higher market cap stocks outperformed lower market cap stocks across the style spectrum. The large cap Russell 1000 Index gained 1.4% during the period versus a -2.4% return for the small cap Russell 2000 Index. Investors may have been attracted to large cap names as a result of the quarter's volatility as large cap stocks are typically viewed as less risky than their small cap counterparts. When viewed over the most recent 1-year period, large cap stocks significantly outperformed small cap stocks with the Russell 1000 posting a 3.9% gain while the while the Russell 2000 had considerable losses, declining -8.9%.
- In general, value stocks outperformed growth stocks during the 3rd quarter as investors gravitated toward the relative safety these securities typically provide. However, large cap growth stocks slightly outperformed large cap value stocks due to favorable holdings in the technology and industrials sectors as well as a large underweight to the underperforming energy sector. The Russell 1000 Growth Index was the best performing style index for the period, returning 1.5%, with the small cap growth index posting the lowest relative return, a loss of -4.2%. Results over the 1-year period are mixed with value stocks outperforming in large and small cap and growth stocks outperforming in mid-cap.

Quarter Performance - Russell Style Series

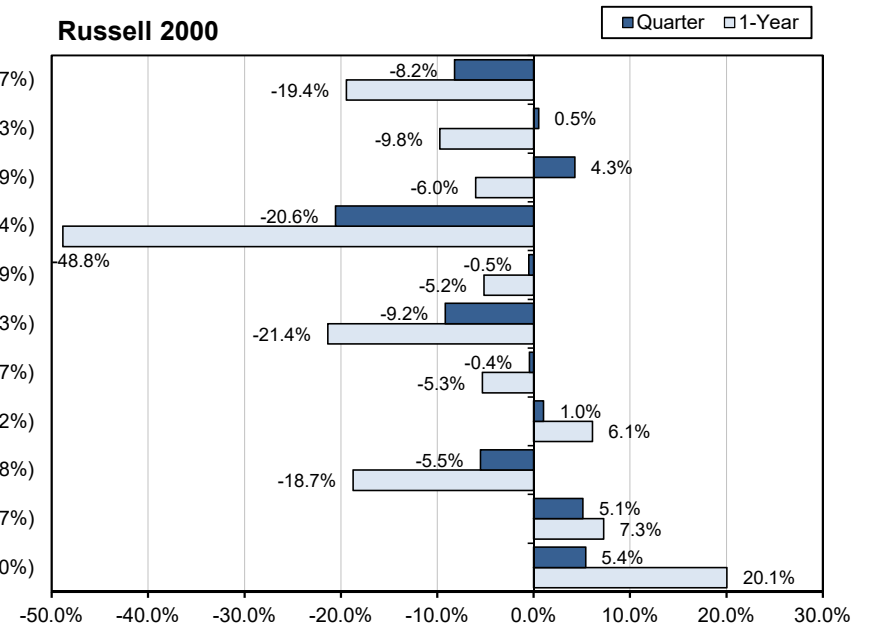
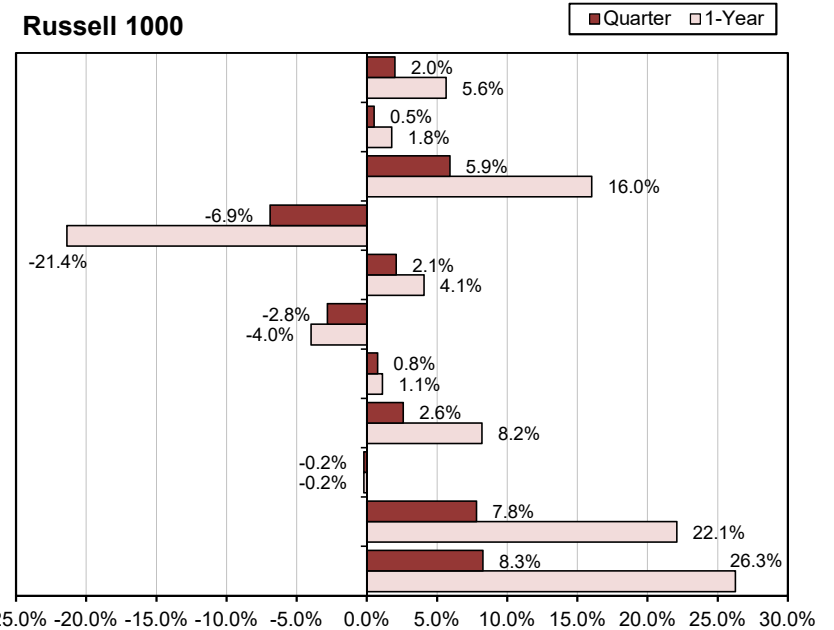


1-Year Performance - Russell Style Series



- Sector performance was mixed across large cap sectors for the 3rd quarter. There were gains for eight out of eleven sectors within the Russell 1000 Index during the period with six sectors outpacing the return of the index. Defensive sectors such as utilities, real estate and consumer staples were the best performers through the quarter returning 8.3%, 7.8% and 16.0% respectively as investors looked toward these sectors for their higher yields and lower historical volatility. Energy, health care and materials stocks were the worst performers during the period. Energy stocks fell -6.9% as crude oil prices fell during the period despite a sharp upward spike in September following a terrorist attack in Saudi Arabia that temporarily reduced the country's oil production, causing a large disruption in supply. Health care stocks also lagged, declining -2.8%, as discussions in Washington around the potential for increased regulation on drug pricing acted as a headwind. Health care reform has also been a major topic of discussion among candidates for the 2020 US Presidential election, creating additional uncertainty within the sector. Materials returned -0.2% as demand concerns weighed on the economically sensitive sector. Returns over the 1-year period were also generally positive with eight out of eleven sectors posting gains. Similar to the quarter's results, defensive sectors outperformed by a considerable margin. Utilities, real estate and consumer staples performed well returning 26.3%, 22.1% and 16.0% respectively. Technology returns were also strong gaining 8.2%. Energy, health care and materials were the only sectors to post negative results over the 1-year period with energy falling -21.4%, health care dropping -4.0% and materials returning -0.2%.

- Quarterly results for small cap sectors were worse than their large capitalization counterparts with all eleven sectors trailing their corresponding large cap equivalents. Five of eleven economic sectors produced gains during the period with seven of eleven sectors outpacing the Russell 2000 Index return for the quarter. Similar to large caps, defensive sectors performed well as investors gravitated toward their relative safety and higher yields. Utilities were the best performers, returning 5.4% followed closely by REITs and consumer staples which returned 5.1% and 4.3% respectively. The cyclically oriented energy sector was the largest detractor for the period, posting a loss of -20.6%. Health care and communication services stocks also experienced notable declines, falling -9.2% and -8.2% respectively. Over the trailing 1-year period, returns were broadly negative. Utilities, real estate and technology were the only sectors to post gains returning 20.1%, 7.3% and 6.1%. The energy sector was an outlier in terms of negative returns dropping -48.8% during the period. There were also notable losses in health care, communication services and materials which declined -21.4%, -19.4% and -18.7% respectively.



The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of September 30, 2019

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Microsoft Corp	3.82%	4.1%	22.9%	Information Technology
Apple Inc	3.68%	13.6%	0.8%	Information Technology
Amazon.com Inc	2.61%	-8.3%	-13.3%	Consumer Discretionary
Facebook Inc A	1.55%	-7.7%	8.3%	Communication Services
Berkshire Hathaway Inc B	1.48%	-2.4%	-2.8%	Financials
JPMorgan Chase & Co	1.36%	6.0%	7.4%	Financials
Alphabet Inc Class C	1.35%	12.8%	2.1%	Communication Services
Alphabet Inc A	1.33%	12.8%	1.2%	Communication Services
Johnson & Johnson	1.25%	-6.4%	-3.8%	Health Care
Procter & Gamble Co	1.12%	14.2%	54.0%	Consumer Staples

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Insulet Corp	0.04%	38.2%	55.7%	Health Care
CyrusOne Inc	0.03%	37.9%	28.8%	Real Estate
KLA Corp	0.09%	35.7%	61.1%	Information Technology
New York Community Bancorp Inc	0.02%	27.6%	28.7%	Financials
Entegris Inc	0.02%	26.3%	63.9%	Information Technology
Pilgrims Pride Corp	0.01%	26.2%	77.1%	Consumer Staples
Western Digital Corp	0.06%	25.4%	5.6%	Information Technology
DocuSign Inc	0.03%	24.6%	17.8%	Information Technology
Target Corp	0.19%	24.4%	24.3%	Consumer Discretionary
XPO Logistics Inc	0.02%	23.8%	-37.3%	Industrials

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
2U Inc	0.00%	-56.7%	-78.3%	Information Technology
PG&E Corp	0.02%	-56.4%	-78.3%	Utilities
Covetrus Inc	0.00%	-51.4%	N/A	Health Care
Sarepta Therapeutics Inc	0.02%	-50.4%	-53.4%	Health Care
Nektar Therapeutics Inc	0.01%	-48.8%	-70.1%	Health Care
DXC Technology Co	0.03%	-46.2%	-67.9%	Information Technology
Antero Resources Corp	0.00%	-45.4%	-82.9%	Energy
Range Resources Corp	0.00%	-45.0%	-77.3%	Energy
Pluralsight Inc Class A	0.00%	-44.6%	-47.5%	Information Technology
Fluor Corp	0.01%	-42.5%	-66.1%	Industrials

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
NovoCure Ltd	0.34%	18.3%	42.7%	Health Care
Haemonetics Corp	0.33%	4.8%	10.1%	Health Care
Trex Co Inc	0.28%	26.8%	18.1%	Industrials
Science Applications International	0.27%	1.3%	10.4%	Information Technology
Portland General Electric Co	0.26%	4.8%	27.2%	Utilities
ONE Gas Inc	0.26%	7.0%	19.5%	Utilities
First Industrial Realty Trust Inc	0.26%	8.3%	29.3%	Real Estate
Southwest Gas Holdings Inc	0.26%	2.2%	18.2%	Utilities
Maximus Inc	0.25%	6.9%	20.4%	Information Technology
Teladoc Health Inc	0.25%	2.0%	-21.6%	Health Care

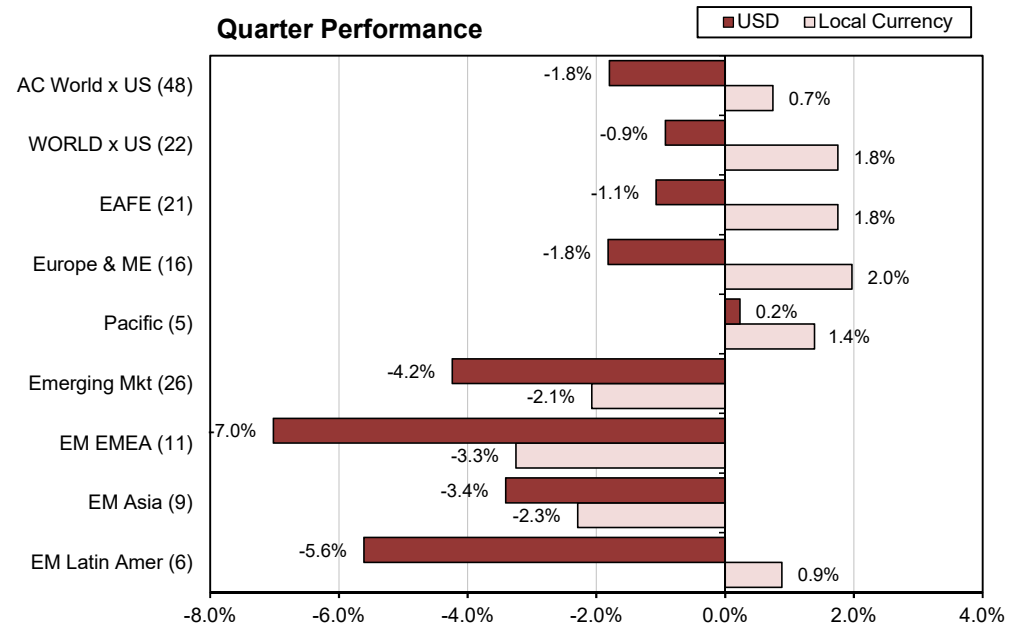
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
NextCure Inc	0.00%	105.9%	N/A	Health Care
Dova Pharmaceuticals Inc	0.01%	98.2%	33.3%	Health Care
WW International Inc	0.09%	98.0%	-47.5%	Consumer Discretionary
R.R.Donnelley & Sons Co	0.01%	94.7%	-27.6%	Industrials
Infinera Corp	0.05%	87.3%	-25.3%	Information Technology
Lannett Co Inc	0.02%	84.8%	135.8%	Health Care
Owens & Minor Inc	0.02%	81.6%	-64.4%	Health Care
Allakos Inc	0.08%	81.5%	74.8%	Health Care
Solid Biosciences Inc	0.01%	79.8%	-78.1%	Health Care
Ardelyx Inc	0.01%	74.7%	8.0%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Tocagen Inc	0.00%	-90.1%	-95.8%	Health Care
Waitr Holdings Inc Class A	0.00%	-79.6%	-88.1%	Consumer Discretionary
McDermott International Inc	0.02%	-79.1%	-89.0%	Energy
Sonim Technologies Inc	0.00%	-77.0%	N/A	Information Technology
Synlogic Inc	0.00%	-74.8%	-83.9%	Health Care
Mallinckrodt PLC	0.01%	-73.7%	-91.8%	Health Care
Clovis Oncology Inc	0.01%	-73.6%	-86.6%	Health Care
Bloom Energy Corp Class A	0.01%	-73.5%	-90.5%	Industrials
Chaparral Energy Inc Class A	0.00%	-71.5%	-92.4%	Energy
Pacific Drilling SA	0.01%	-69.3%	-99.7%	Energy

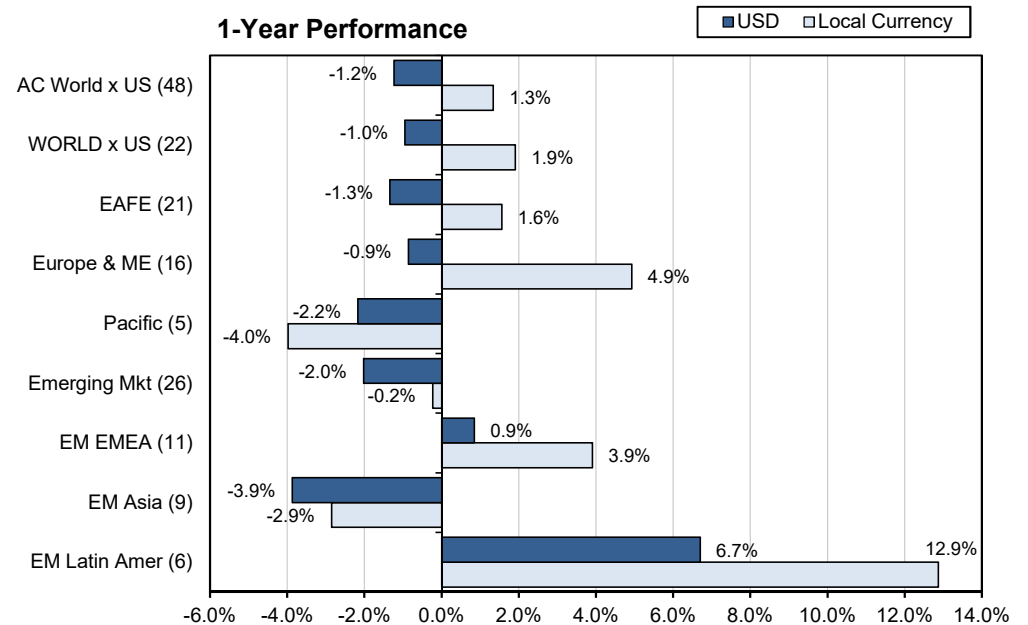


- Broad international equity returns were negative in USD terms for the 3rd quarter as US investors in international markets faced a meaningful headwind from a USD that strengthened against most major currencies. In local currency terms, developed markets were generally positive while emerging markets posted losses. The MSCI ACWI ex US Index gained 0.7% in local currency terms, but a USD investor experienced a loss of -1.8% due to the currency effect. Similar to US markets, international equity markets balanced headwinds from slowing economic data and concerns around global trade with tailwinds from central bank shifts toward more accommodative policies. Among others, the ECB and PBoC announced new stimulus measures during the quarter. The ECB cut its policy rate and committed to a new quantitative easing program and the PBoC announced new stimulus measures designed to encourage bank lending and reduce borrowing costs as it tries to counteract a cooling economy and the effects of its ongoing trade war with the US. The recent USD strength can also be seen over the 1-year period with USD returns trailing most local currency returns. Returns for the MSCI ACWI ex US Index were 1.3% in local currency terms and -1.2% in USD terms for the trailing year.
- Results for developed market international indices were generally positive in local currency terms, but negative in USD terms for the 3rd quarter, with the MSCI EAFE Index returning 1.8% and -0.9% respectively. Outside of central bank policy and trade, there were notable developments within the political sphere. In Europe, Christine Lagarde was nominated to succeed Mario Draghi as the head of the ECB. Japanese stocks rose as election results appeared to support continuity for Prime Minister Abe's ongoing policy efforts. In the UK, pro-Brexit Boris Johnson was appointed to prime minister, replacing Theresa May. The UK continues to face uncertainty around Brexit as its late October deadline to agree to a withdrawal agreement with the European Union (EU) quickly approaches. Stocks in Hong Kong fell as the government dealt with major pro-democracy protests throughout the quarter. The MSCI EAFE Index returned 1.6% and -1.3% for the last twelve months in local currency and USD terms respectively.
- Emerging markets continued their trend of 2019 underperformance relative to developed markets during the 3rd quarter, posting negative returns in both local currency and USD terms. The MSCI Emerging Markets Index fell -2.1% and -4.2% respectively. As expected, geopolitical tensions around trade continued to put pressure on emerging market stocks. Countries with greater sensitivities to commodity prices or a strong USD tended to underperform during the period. Argentina's stock market fell -46.8% as primary elections in the country saw the defeat of the country's current market friendly president. One year returns for the MSCI Emerging Market Index were -0.2% in local currency terms and -2.0% in USD terms.

Quarter Performance



1-Year Performance



The Market Environment
US Dollar International Index Attribution & Country Detail
As of September 30, 2019

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.4%	-0.9%	-0.7%
Consumer Discretionary	11.5%	0.3%	-2.0%
Consumer Staples	12.0%	1.9%	6.9%
Energy	5.1%	-6.5%	-14.5%
Financials	18.6%	-2.6%	-6.3%
Health Care	11.6%	2.4%	4.3%
Industrials	14.7%	-2.0%	-2.1%
Information Technology	6.7%	-0.5%	1.8%
Materials	7.0%	-5.4%	-5.7%
Real Estate	3.6%	-1.3%	4.3%
Utilities	3.8%	2.4%	13.2%
Total	100.0%	-1.1%	-1.3%

MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.8%	-2.9%	-1.0%
Consumer Discretionary	11.4%	-0.7%	-1.6%
Consumer Staples	10.2%	1.5%	6.8%
Energy	6.7%	-4.6%	-9.8%
Financials	21.6%	-3.6%	-3.2%
Health Care	8.5%	1.1%	0.9%
Industrials	11.9%	-2.5%	-2.4%
Information Technology	8.9%	2.2%	4.1%
Materials	7.3%	-6.5%	-7.2%
Real Estate	3.2%	-3.1%	5.0%
Utilities	3.5%	1.3%	12.6%
Total	100.0%	-1.8%	-1.2%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	11.6%	-5.2%	-2.5%
Consumer Discretionary	13.1%	-3.1%	0.1%
Consumer Staples	6.9%	-0.8%	3.0%
Energy	7.7%	-4.0%	-2.3%
Financials	24.7%	-8.0%	1.6%
Health Care	2.6%	-6.6%	-24.2%
Industrials	5.4%	-5.2%	-4.4%
Information Technology	15.1%	5.6%	3.9%
Materials	7.3%	-10.7%	-15.9%
Real Estate	2.9%	-8.8%	6.8%
Utilities	2.8%	-3.6%	7.2%
Total	100.0%	-4.2%	-2.0%

Country	MSCI-EAFE Weight	MSCI-ACWIXUS Weight	Quarter Return	1- Year Return
Japan	24.6%	16.5%	3.1%	-4.7%
United Kingdom	16.4%	11.0%	-2.5%	-2.9%
France	11.4%	7.6%	-1.7%	-1.6%
Switzerland	9.4%	6.3%	0.3%	12.0%
Germany	8.5%	5.7%	-4.0%	-7.1%
Australia	7.0%	4.7%	-1.4%	6.1%
Netherlands	4.0%	2.7%	2.4%	9.5%
Hong Kong	3.5%	2.4%	-11.9%	-1.8%
Spain	2.9%	2.0%	-3.8%	-3.5%
Sweden	2.6%	1.7%	-4.8%	-8.0%
Italy	2.3%	1.6%	-0.1%	3.9%
Denmark	1.8%	1.2%	-1.0%	2.3%
Singapore	1.3%	0.9%	-5.8%	-0.2%
Belgium	1.0%	0.7%	3.4%	-0.8%
Finland	1.0%	0.7%	-1.8%	-9.3%
Norway	0.7%	0.4%	-3.4%	-13.4%
Israel	0.6%	0.4%	-3.7%	-12.5%
Ireland	0.5%	0.4%	-0.6%	-4.6%
New Zealand	0.2%	0.2%	-2.9%	10.0%
Austria	0.2%	0.2%	-3.1%	-16.0%
Portugal	0.2%	0.1%	1.6%	-2.5%
Total EAFE Countries	100.0%	67.0%	-1.1%	-1.3%
Canada		7.0%	0.5%	3.0%
Total Developed Countries		74.0%	-0.9%	-1.0%
China		8.3%	-4.7%	-3.9%
Korea		3.2%	-4.5%	-13.8%
Taiwan		3.0%	5.2%	-0.2%
India		2.3%	-5.2%	4.7%
Brazil		2.0%	-4.6%	25.4%
South Africa		1.2%	-12.6%	-6.4%
Russia		1.0%	-1.4%	18.0%
Thailand		0.8%	-6.0%	-0.9%
Saudi Arabia		0.7%	-9.5%	4.0%
Mexico		0.7%	-1.7%	-14.8%
Indonesia		0.5%	-5.2%	11.9%
Malaysia		0.5%	-6.3%	-10.4%
Philippines		0.3%	-4.6%	13.1%
Poland		0.3%	-12.1%	-12.2%
Qatar		0.3%	-0.2%	5.0%
Chile		0.3%	-7.3%	-16.8%
United Arab Emirates		0.2%	-0.2%	-0.3%
Turkey		0.2%	11.7%	16.5%
Colombia		0.1%	-6.1%	-7.3%
Peru		0.1%	-9.3%	-4.0%
Greece		0.1%	-3.1%	6.8%
Hungary		0.1%	-3.9%	3.4%
Argentina		0.1%	-46.8%	-32.3%
Czech Republic		0.0%	-10.1%	-12.6%
Egypt		0.0%	7.4%	21.5%
Pakistan		0.0%	1.1%	-32.7%
Total Emerging Countries		26.0%	-4.2%	-2.0%
Total ACWIXUS Countries		100.0%	-1.8%	-1.2%

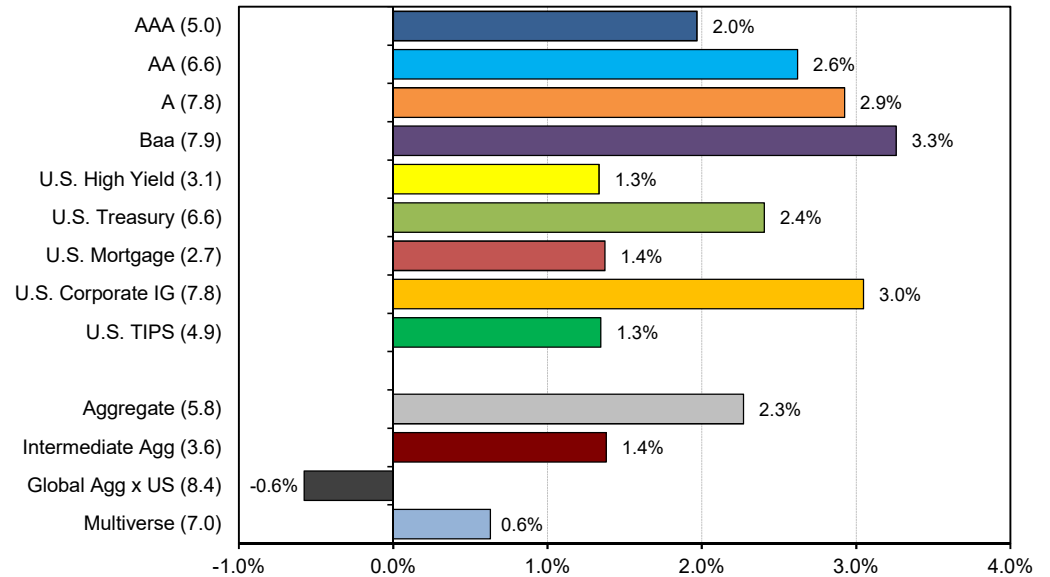
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

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.

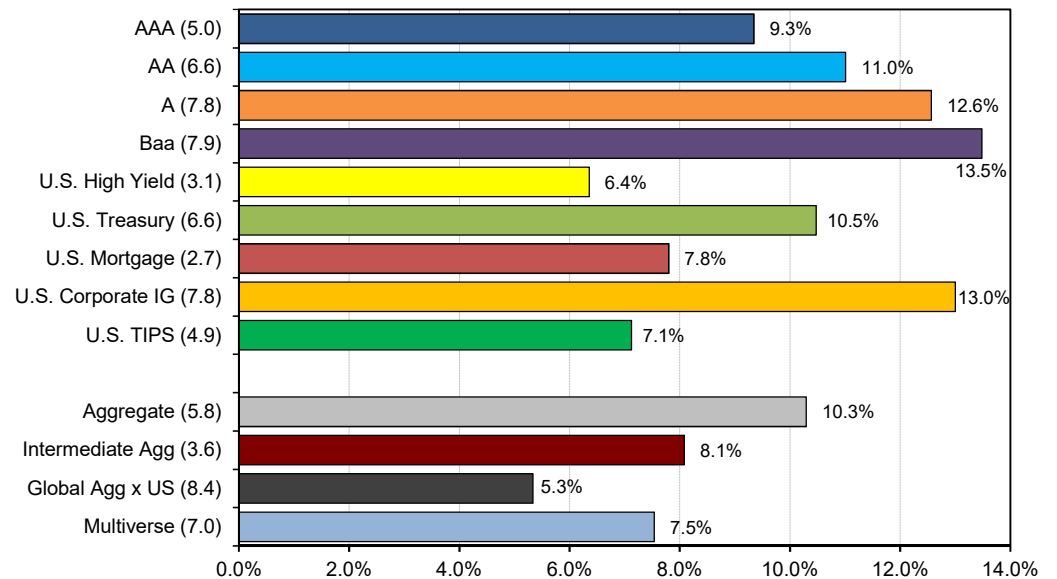


- Broad fixed income benchmarks continued their trend of 2019 gains during the 3rd quarter. Interest rates fell across the US Treasury Yield Curve through the quarter as the Fed continued to shift toward an easing of monetary policy in an attempt to combat slowing economic data. The Fed cut short-term interest rates twice during the period following their July and September meetings. In addition, it ended its balance sheet reduction plan in September which represents a further easing of monetary policy. After its September meeting, the Fed issued a statement commenting that future changes to monetary policy are not on a preset course and will be evaluated as the Fed receives new information on the state of the economy, but that Fed officials “will continue to monitor the implications of incoming information for the economic outlook and will act as appropriate to sustain the expansion.” The Fed response provided market support in a quarter where we saw the formal inversion of the yield curve. Treasury yields on 2-year issues briefly surpassed the yield on 10-year issues in August. This inversion of the yield curve has historically preceded a recession within the next 6-24 months. However, the magnitude of the inversion was mild and short in duration with rates on the 10-year Treasury rising above the yield of the 2-year by early September. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 3rd quarter and the 1-year period, returning 2.3% and 10.3% respectively.
- Within investment grade credit, lower quality issues outperformed higher quality issues during the quarter. Lower quality issues benefitted from their higher durations as interest rates fell during the quarter. 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 3.3% for the quarter, while AAA was the worst performing, returning 2.0%. High yield issues returned 1.3% for the quarter as these issues did not commensurately benefit from the drop in interest rates due to their relatively low durations. Returns over the 1-year period show lower quality securities outperforming higher quality issues with Baa rated issues returning 13.5% versus a 9.3% return for AAA securities.
- Investment grade corporates outperformed the more defensive Treasury and mortgage backed sectors of the Bloomberg Barclays US Aggregate Index’s three broad sectors during the 3rd quarter. Investment grade corporate credit returned 3.0%, as they benefitted from their higher sensitivity to interest rates, low credit spreads and high investor demand for yield. When viewed over the 1-year period, corporate credit outperformed both Treasuries and mortgage backed securities. Corporate issues returned 13.0% versus a 7.8% return for mortgages and 10.5% gain on Treasury securities.

Quarter Performance

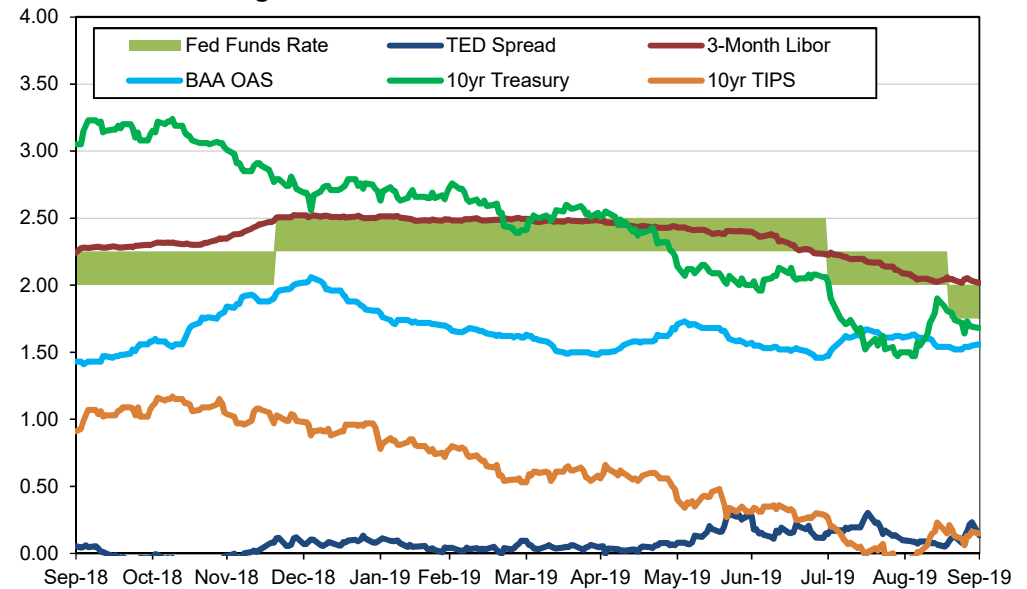


1-Year Performance

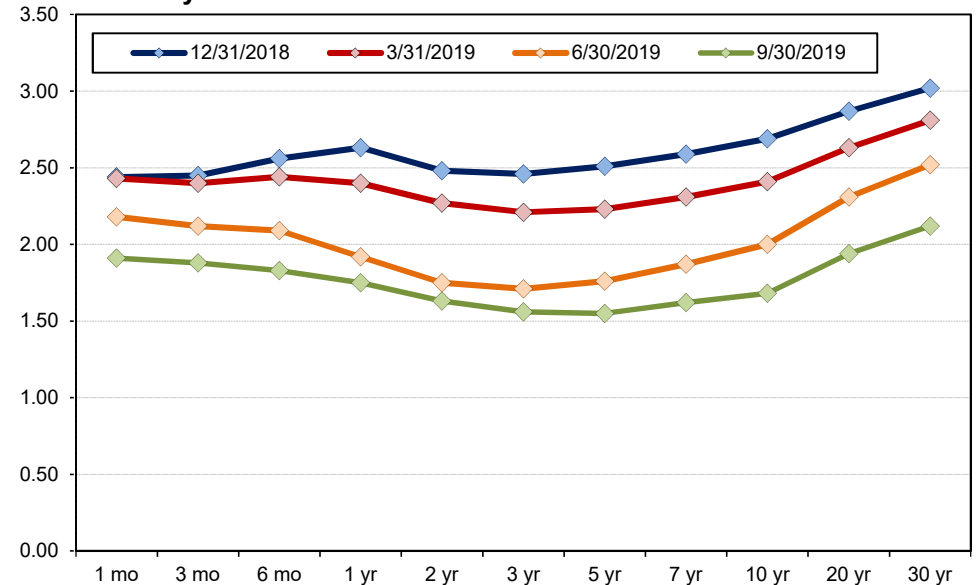


- Global fixed income returns underperformed their domestic counterparts during the 3rd quarter. These indices have lower, or in some cases (Germany, Japan), negative yields, but have higher durations. Given their higher durations, these issues would be expected to perform relatively well during periods of falling rates, however, the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. As mentioned, the USD appreciated against most other developed currencies during the quarter, acting as a headwind to global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was -0.6%. Global bonds also trailed over the 1-year period with the Global Aggregate ex US Index returning 5.3% versus a 10.3% return on the domestically focused Bloomberg Barclays Aggregate Index. As global growth has shown signs of stalling, several international central banks have started to step back from more restrictive postures. The ECB and the PBoC have moved toward an easing of monetary policy and implemented various stimulus programs designed to support their respective economies. 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 over the last year, the 10-year Treasury yield (green line) fell from high's greater than 3.0%, to yields below 1.5% before ending the quarter at 1.68%. 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 an abrupt increase in credit spreads during the 4th quarter of 2018 as investors moved to higher quality assets during the quarter's risk-off environment. Subsequently, spreads declined steadily, remaining somewhat range bound with increases in May and August. There was little change through the quarter with spreads tightening by about 1 basis point. Spread tightening is equivalent to an interest rate decrease on corporate bonds, which produces an additional tailwind for corporate bond index returns. The green band across the graph illustrates the decrease in the Federal Funds Rate due to the recent easing in US monetary policy. The rate cuts in July and September have pushed the Fed Funds Rate to 1-year lows.
- 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 in 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- and middle-term maturities fell less than interest rates at the 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)	13
Guarded	2
Watch	3

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 has been downgraded to **WATCH** status due to continued lagging returns relative to its benchmark and peers. The fund has underperformed the benchmark index over the three and five years periods, while outperforming during the last ten years annualized. The underperformance continues to be primarily driven by the value style of the manager. Relative peer group and benchmark returns have now deteriorated for the longer term periods. This is a manager that has shown prior periods of significant underperformance and then has bounced back when their strategy comes back into favor. However, The volatility of the returns is concerning and we will begin the process of seeking alternatives.

Both the American Funds Growth Fund of America and the Wells fargo Disciplined US Core have been placed on **GUARDED** status due to short term underperformance primarily to their benchmark indices. Both funds have seasoned investment teams and we believe this underperformance is temporary and we continue to have conviction in these firms and teams. We are not recommending any changes at this time.

Lazard Emerging Markets and DFA International Small Cap Value remain on **WATCH** status and both funds will be terminated and removed from the plan in early January.



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 (REMGX)	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)	Watch	Watch	Pass	Pass	Pass	Guarded	Pass	Pass	Watch
American Funds Growth Fund of America (RGAGX)	Guarded	Guarded	Pass	Pass	Guarded	Pass	Pass	Pass	Guarded
Wells Fargo Disciplined US Core (EVSIX)	Guarded	Guarded	Pass	Pass	Guarded	Pass	Pass	Pass	Guarded
Vanguard Institutional Index (VINIX)	Pass	Pass	Pass	Pass	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)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hartford Total Return Bond (HIABX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Voya Fixed Account	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass



Historical Summary Evaluation

Pass (Satisfactory)

Guarded

Watch

Investment Funds	2Q19	1Q19	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17
Lazard Emerging Markets Equity (LZOEX)	Watch	Guarded	Guarded	Guarded	Guarded	Pass	Guarded	Guarded	Guarded
DFA International Small Cap Value (DISVX)	Watch	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
American Funds EuroPacific Growth (RERGX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Wells Fargo Small Co Growth R6 (WSCRX)	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	Guarded	Guarded	Guarded	Pass	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)	Watch	Guarded	Guarded	Guarded	Guarded	Guarded	Guarded	Guarded	Guarded
American Funds Growth Fund of America (RGAGX)	Guarded	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Wells Fargo Disciplined US Core (EVSIX)	Guarded	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Institutional Index (VINIX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
American Century Equity Income (AEUDX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
American Funds American Balanced (RLBGX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
PIMCO High Yield (PHIYX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
PIMCO Foreign Bond USD-Hedged (PFORX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hartford Total Return Bond (HIABX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Voya Fixed Account	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass



Asset Allocation Attributes	Sep-2019		Jun-2019		Mar-2019	
	(\$)	%	(\$)	%	(\$)	%
Total 457 Fund	165,278,170	100.00	166,539,433	100.00	164,682,108	100.00
International Equity						
Lazard Emerging Markets Equity (LZOEX)	1,252,453	0.76	1,329,194	0.80	1,248,809	0.76
DFA International Small Cap Value (DISVX)	1,271,772	0.77	1,382,379	0.83	1,384,967	0.84
American Funds EuroPacific Growth (RERGX)	4,632,880	2.80	4,751,798	2.85	4,663,439	2.83
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	2,767,497	1.67	2,982,772	1.79	2,959,611	1.80
Vanguard Small Cap Index (VSMAX)	3,333,445	2.02	3,270,685	1.96	2,818,903	1.71
AMG Managers Skyline Special Equities (SKSEX)	2,089,367	1.26	2,180,574	1.31	2,259,079	1.37
Hartford Mid Cap (HIMCX)	9,428,546	5.70	9,557,380	5.74	9,469,592	5.75
Vanguard Mid Cap Index (VIMAX)	3,736,865	2.26	3,416,163	2.05	2,868,679	1.74
Hotchkis & Wiley Mid Cap Value (HWMIX)	2,229,301	1.35	2,504,690	1.50	2,716,779	1.65
AF Growth Fund of America (RGAGX)	14,535,036	8.79	14,912,715	8.95	14,588,895	8.86
Wells Fargo Disciplined US Core (EVSIX)	11,277,052	6.82	11,556,436	6.94	12,229,332	7.43
Vanguard Institutional Index (VINIX)	13,953,199	8.44	13,514,175	8.11	12,045,266	7.31
American Century Equity Income (AEUDX)	7,017,365	4.25	7,123,087	4.28	6,779,281	4.12
Balanced Fund						
American Funds American Balanced (RLBGX)	5,816,576	3.52	5,799,168	3.48	5,780,556	3.51
Fixed Income						
PIMCO High Yield (PHIYX)	2,429,404	1.47	2,250,045	1.35	2,041,630	1.24
PIMCO Foreign Bond USD-Hedged (PFORX)	1,166,865	0.71	1,143,475	0.69	984,025	0.60
Hartford Total Return Bond (HIABX)	3,721,420	2.25	3,721,769	2.23	3,417,417	2.08
Cash						
Voya Fixed Account	71,947,980	43.53	72,490,644	43.53	73,728,945	44.77
Loan Account	2,671,146	1.62	2,652,286	1.59	2,696,903	1.64



Asset Allocation
457 Retirement Models
As of September 30, 2019

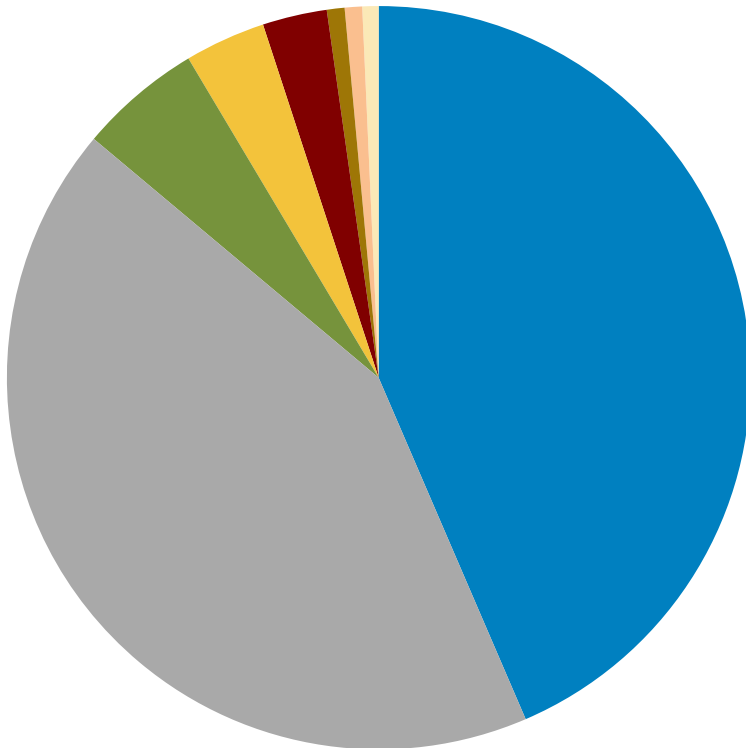
Asset Allocation Attributes	Sep-2019		Jun-2019		Mar-2019	
	(\$)	%	(\$)	%	(\$)	%
WCAB 2060 Retirement	24,397	0.22	22,181	0.20	1,549	0.02
WCAB 2055 Retirement	31,817	0.28	28,061	0.26	22,239	0.24
WCAB 2050 Retirement	1,141,734	10.11	1,044,645	9.56	930,952	9.84
WCAB 2045 Retirement	532,288	4.71	484,568	4.44	241,559	2.55
WCAB 2040 Retirement	2,871,706	25.42	2,918,299	26.71	2,632,554	27.82
WCAB 2035 Retirement	666,725	5.90	734,142	6.72	444,988	4.70
WCAB 2030 Retirement	2,515,693	22.27	2,238,001	20.48	2,451,957	25.92
WCAB 2025 Retirement	957,548	8.48	881,829	8.07	1,126,771	11.91
WCAB 2020 Retirement	2,475,523	21.91	2,518,397	23.05	1,551,915	16.40
WCAB 2015 Retirement	-	0.00	-	0.00	-	0.00
WCAB Income Retirement	79,827	0.71	55,125	0.50	56,869	0.60
Model Portfolios Total	11,297,258	100.00	10,925,246	100.00	9,461,354	100.00



September 30, 2019 : \$165,278,170

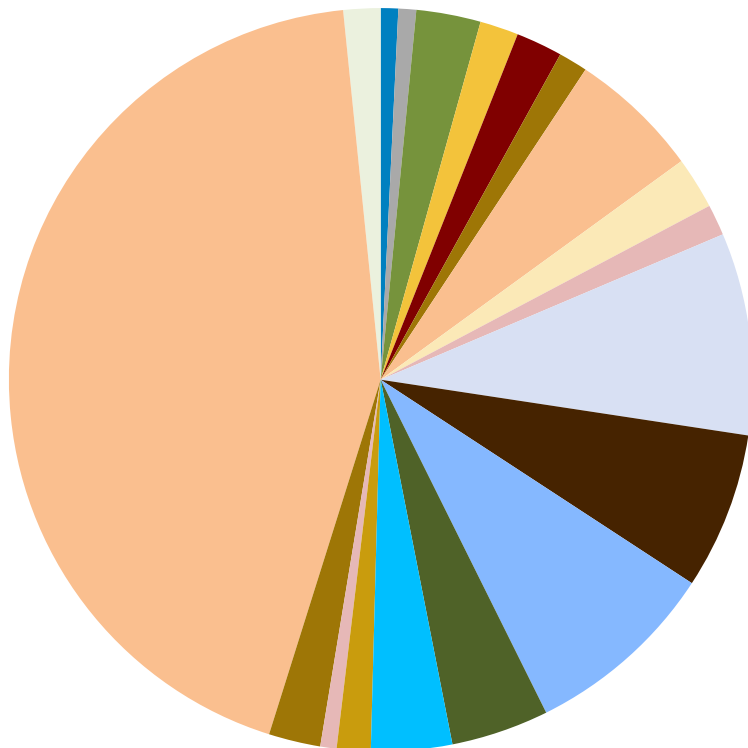
Allocation

	Market Value	Allocation
Cash	71,947,980	43.5
US Equity	70,367,674	42.6
US Fixed Income	8,821,970	5.3
US Balanced	5,816,576	3.5
International Equity	4,632,880	2.8
International-Developed Equity	1,271,772	0.8
International-Emerging Equity	1,252,453	0.8
International Fixed Income	1,166,865	0.7



Asset Allocation By Manager
457 Total Plan
As of September 30, 2019

September 30, 2019 : \$165,278,170



Allocation

	Market Value	Allocation
Lazard Emerging Markets Equity (LZOEX)	1,252,453	0.8
DFA International Small Cap Value (DISVX)	1,271,772	0.8
American Funds EuroPacific Growth (RERGX)	4,632,880	2.8
Wells Fargo Small Co Growth (WSCRX)	2,767,497	1.7
Vanguard Small Cap Index (VSMAX)	3,333,445	2.0
AMG Managers Skyline Special Equities (SKSEX)	2,089,367	1.3
Hartford Mid Cap (HIMCX)	9,428,546	5.7
Vanguard Mid Cap Index (VIMAX)	3,736,865	2.3
Hotchkis & Wiley Mid Cap Value (HWMIX)	2,229,301	1.3
AF Growth Fund of America (RGAGX)	14,535,036	8.8
Wells Fargo Disciplined US Core (EVSIX)	11,277,052	6.8
Vanguard Institutional Index (VINIX)	13,953,199	8.4
American Century Equity Income (AEUDX)	7,017,365	4.2
American Funds American Balanced (RLBGX)	5,816,576	3.5
PIMCO High Yield (PHIYX)	2,429,404	1.5
PIMCO Foreign Bond USD-Hedged (PFORX)	1,166,865	0.7
Hartford Total Return Bond (HIABX)	3,721,420	2.3
Voya Fixed Account	71,947,980	43.5
Loan Account	2,671,146	1.6



Asset Allocation Attributes	Sep-2019		Jun-2019		Mar-2019	
	(\$)	%	(\$)	%	(\$)	%
Total 401(a) Fund	12,581,032	100.00	12,546,539	100.00	12,160,188	100.00
International Equity						
Lazard Emerging Markets Equity (LZOEX)	207,222	1.65	128,380	1.02	148,972	1.23
DFA International Small Cap Value (DISVX)	133,365	1.06	126,482	1.01	157,667	1.30
American Funds EuroPacific Growth (RERGX)	376,910	3.00	396,606	3.16	410,201	3.37
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	274,387	2.18	291,293	2.32	298,639	2.46
Vanguard Small Cap Index (VSMAX)	323,248	2.57	300,026	2.39	280,060	2.30
AMG Managers Skyline Special Equities (SKSEX)	250,830	1.99	253,151	2.02	260,185	2.14
Hartford Mid Cap (HIMCX)	854,767	6.79	856,797	6.83	864,683	7.11
Vanguard Mid Cap Index (VIMAX)	328,133	2.61	296,828	2.37	260,336	2.14
Hotchkis & Wiley Mid Cap Value (HWMIX)	232,451	1.85	242,987	1.94	268,752	2.21
American Funds Growth Fund of America (RGAGX)	894,649	7.11	856,141	6.82	831,450	6.84
Wells Fargo Disciplined US Core (EVSIX)	876,675	6.97	891,614	7.11	910,499	7.49
Vanguard Institutional Index (VINIX)	1,222,227	9.71	1,192,438	9.50	1,147,322	9.44
American Century Equity Income (AEUDX)	750,396	5.96	675,153	5.38	665,292	5.47
Balanced Fund						
American Funds American Balanced (RLBGX)	603,232	4.79	586,691	4.68	558,992	4.60
Fixed Income						
PIMCO High Yield (PHIYX)	95,836	0.76	104,844	0.84	143,528	1.18
PIMCO Foreign Bond USD-Hedged (PFORX)	62,566	0.50	59,650	0.48	95,467	0.79
Hartford Total Return Bond (HIABX)	341,852	2.72	342,259	2.73	354,558	2.92
Cash						
Voya Fixed Account	4,558,100	36.23	4,746,859	37.83	4,302,708	35.38
Loan Account	194,188	1.54	198,339	1.58	200,878	1.65



Asset Allocation
401(a) Retirement Models
As of September 30, 2019

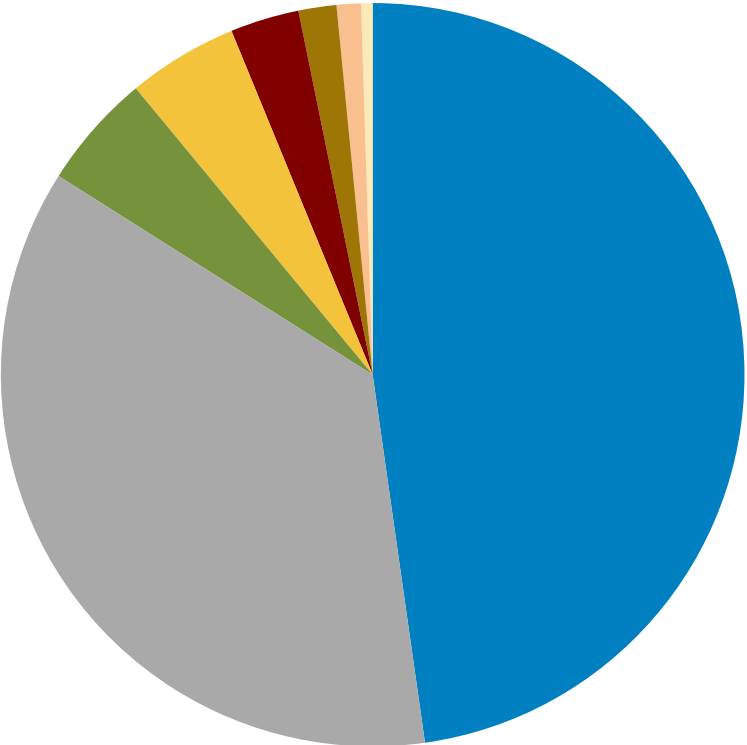
Asset Allocation Attributes	Sep-2019		Jun-2019		Mar-2019	
	(\$)	%	(\$)	%	(\$)	%
WCAB 2060 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2055 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2050 Retirement	40,696	5.42	59,505	7.84	63,147	5.38
WCAB 2045 Retirement	113,837	15.17	112,585	14.83	-	0.00
WCAB 2040 Retirement	83,619	11.15	80,650	10.62	173,804	14.81
WCAB 2035 Retirement	64,874	8.65	64,418	8.48	60,611	5.17
WCAB 2030 Retirement	178,461	23.79	175,842	23.16	137,314	11.70
WCAB 2025 Retirement	1,044	0.14	-	0.00	478,138	40.75
WCAB 2020 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2015 Retirement	21,065	2.81	21,052	2.77	23,328	1.99
WCAB Income Retirement	246,587	32.87	245,178	32.29	236,985	20.20
Total Model Portfolios	750,185	100.00	759,229	100.00	1,173,326	100.00



Asset Allocation By Asset Class
401(a) Total Plan
As of September 30, 2019

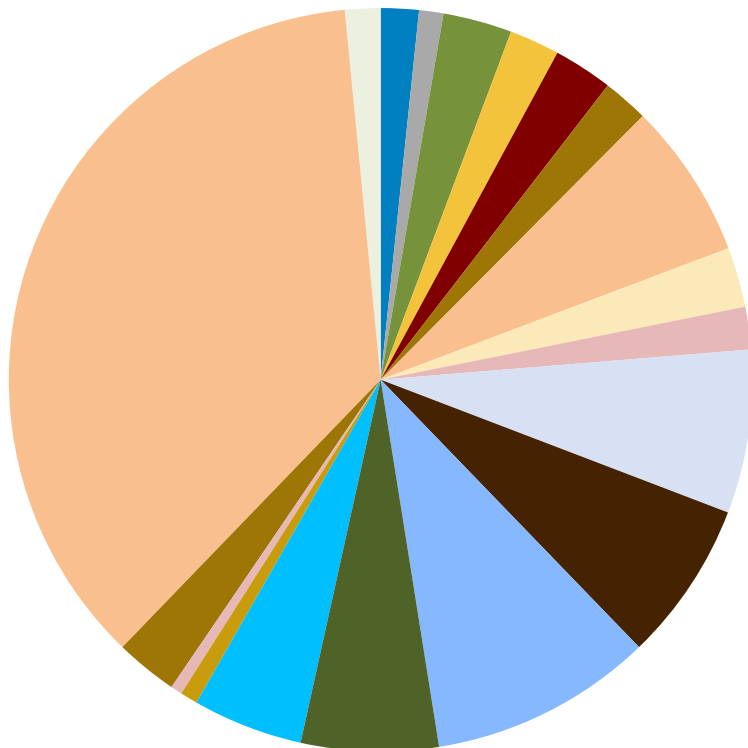
September 30, 2019 : \$12,581,032

Allocation	Market Value	Allocation
■ US Equity	6,007,762	47.8
■ Cash	4,558,100	36.2
■ US Fixed Income	631,875	5.0
■ US Balanced	603,232	4.8
■ International Equity	376,910	3.0
■ International-Emerging Equity	207,222	1.6
■ International-Developed Equity	133,365	1.1
■ International Fixed Income	62,566	0.5



Asset Allocation By Manager
401(a) Total Plan
As of September 30, 2019

September 30, 2019 : \$12,581,032



Allocation

	Market Value	Allocation
Lazard Emerging Markets Equity (LZOEX)	207,222	1.6
DFA International Small Cap Value (DISVX)	133,365	1.1
American Funds EuroPacific Growth (RERGX)	376,910	3.0
Wells Fargo Small Co Growth (WSCRX)	274,387	2.2
Vanguard Small Cap Index (VSMAX)	323,248	2.6
AMG Managers Skyline Special Equities (SKSEX)	250,830	2.0
Hartford Mid Cap (HIMCX)	854,767	6.8
Vanguard Mid Cap Index (VIMAX)	328,133	2.6
Hotchkis & Wiley Mid Cap Value (HWMIX)	232,451	1.8
American Funds Growth Fund of America (RGAGX)	894,649	7.1
Wells Fargo Disciplined US Core (EVSIX)	876,675	7.0
Vanguard Institutional Index (VINIX)	1,222,227	9.7
American Century Equity Income (AEUDX)	750,396	6.0
American Funds American Balanced (RLBGX)	603,232	4.8
PIMCO High Yield (PHIYX)	95,836	0.8
PIMCO Foreign Bond USD-Hedged (PFORX)	62,566	0.5
Hartford Total Return Bond (HIABX)	341,852	2.7
Voya Fixed Account	4,558,100	36.2
Loan Account	194,188	1.5



Comparative Performance
401(a) Trailing Returns
As of September 30, 2019

Comparative Performance														
	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
International Equity														
Lazard Emerging Markets Equity (LZOEX)	-3.92	(61)	5.96	(70)	0.05	(53)	2.41	(88)	-0.26	(85)	0.78	(87)	2.62	(69)
MSCI Emerging Markets (Net) Index	-4.25	(69)	5.90	(70)	-2.02	(70)	5.97	(37)	2.33	(44)	2.41	(52)	3.37	(50)
IM Emerging Markets Equity (MF) Median	-3.48		8.54		0.29		5.24		2.03		2.52		3.27	
DFA International Small Cap Value (DISVX)	-0.55	(14)	8.21	(84)	-11.17	(81)	2.61	(83)	2.75	(78)	7.24	(40)	5.77	(81)
MSCI AC World ex USA Small Cap (Net)	-1.19	(22)	10.28	(64)	-5.63	(38)	4.64	(52)	3.98	(53)	6.22	(66)	6.13	(74)
IM International SMID Cap Equity (MF) Median	-1.99		11.28		-7.15		4.73		4.07		6.79		7.07	
American Funds EuroPacific Growth (RERGX)	-1.59	(53)	15.72	(10)	1.14	(10)	7.38	(14)	5.02	(1)	7.10	(2)	6.07	(1)
MSCI EAFE (Net) Index	-1.07	(43)	12.80	(36)	-1.34	(29)	6.48	(21)	3.27	(14)	6.12	(12)	4.90	(24)
IM International Large Cap Core Equity (MF) Median	-1.28		12.00		-3.16		5.23		1.45		4.60		4.06	
Domestic Equity														
Wells Fargo Small Co Growth (WSCRX)	-4.68	(49)	13.52	(25)	-10.20	(25)	10.34	(27)	N/A		N/A		N/A	
Russell 2000 Growth Index	-4.17	(31)	15.34	(22)	-9.63	(25)	9.79	(42)	9.08	(38)	11.43	(32)	12.25	(32)
IM U.S. Small Cap Growth Equity (MF) Median	-5.12		7.15		-15.03		9.13		7.76		8.57		11.30	
Vanguard Small Cap Index (VSMAX)	-1.45	(64)	17.78	(8)	-3.81	(6)	9.62	(5)	8.62	(32)	11.59	(13)	12.38	(20)
Vanguard Spliced Small Cap Index	-1.47	(64)	17.79	(8)	-3.80	(5)	9.61	(5)	8.60	(32)	11.58	(14)	12.35	(21)
IM U.S. Small Cap Core Equity (MF) Median	-0.92		12.64		-9.88		7.03		7.40		9.65		10.79	
AMG Managers Skyline Special Equities (SKSEX)	-1.55	(84)	17.26	(2)	-6.87	(11)	5.75	(38)	5.09	(48)	10.20	(9)	11.15	(9)
Russell 2000 Value Index	-0.57	(67)	12.82	(30)	-8.24	(20)	6.54	(25)	7.17	(12)	9.35	(20)	10.06	(26)
IM U.S. Small Cap Value Equity (MF) Median	0.31		11.36		-9.87		5.09		4.99		8.10		9.14	
Hartford Mid Cap (HIMCX)	-1.35	(49)	24.33	(48)	2.34	(58)	14.25	(45)	11.36	(31)	14.59	(19)	13.82	(26)
Russell Midcap Growth Index	-0.67	(33)	25.23	(42)	5.20	(33)	14.50	(39)	11.12	(36)	13.80	(29)	14.08	(20)
IM U.S. Mid Cap Growth Equity (MF) Median	-1.37		24.19		3.02		13.95		10.45		12.44		12.85	
Vanguard Mid Cap Index (VIMAX)	0.61	(61)	22.60	(20)	3.65	(23)	10.67	(21)	9.20	(18)	12.65	(10)	13.05	(7)
Vanguard Spliced Mid Cap Index	0.62	(60)	22.66	(18)	3.70	(21)	10.70	(19)	9.24	(16)	12.70	(9)	13.10	(6)
IM U.S. Mid Cap Core Equity (MF) Median	0.91		19.69		0.93		8.76		6.92		10.40		10.79	
Hotchkis & Wiley Mid Cap Value (HWMIX)	-7.34	(99)	3.90	(99)	-22.90	(99)	0.42	(95)	0.05	(95)	7.06	(94)	9.65	(80)
Russell Midcap Value Index	1.22	(47)	19.47	(31)	1.60	(25)	7.82	(31)	7.55	(19)	11.63	(11)	12.29	(12)
IM U.S. Mid Cap Value Equity (MF) Median	0.99		17.64		-3.11		6.59		5.91		9.96		10.54	
American Funds Growth Fund of America (RGAGX)	-2.06	(81)	15.46	(94)	-1.93	(90)	13.10	(84)	10.97	(72)	13.77	(51)	12.76	(75)
Russell 1000 Growth Index	1.49	(16)	23.30	(25)	3.71	(33)	16.89	(27)	13.39	(22)	15.02	(19)	14.94	(13)
IM U.S. Large Cap Growth Equity (MF) Median	-0.01		21.44		2.32		15.72		12.20		13.77		13.61	

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Returns are expressed as percentages.

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Comparative Performance
401(a) Trailing Returns
As of September 30, 2019

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
Wells Fargo Disciplined US Core (EVSIX)	1.62	(42)	18.24	(64)	1.59	(67)	11.24	(69)	9.68	(43)	12.86	(25)	N/A	
S&P 500 Index	1.70	(39)	20.55	(35)	4.25	(39)	13.39	(24)	10.84	(16)	13.26	(14)	13.24	(11)
IM U.S. Large Cap Core Equity (MF) Median	1.46		19.49		3.21		12.26		9.41		12.00		11.90	
Vanguard Institutional Index (VINIX)	1.69	(40)	20.54	(35)	4.23	(39)	13.36	(25)	10.81	(16)	13.22	(15)	13.22	(11)
S&P 500 Index	1.70	(39)	20.55	(35)	4.25	(39)	13.39	(24)	10.84	(16)	13.26	(14)	13.24	(11)
IM U.S. Large Cap Core Equity (MF) Median	1.46		19.49		3.21		12.26		9.41		12.00		11.90	
American Century Equity Income (AEUDX)	2.65	(14)	18.84	(25)	10.09	(1)	10.56	(27)	10.34	(1)	N/A		N/A	
Russell 1000 Value Index	1.36	(53)	17.81	(34)	4.00	(30)	9.43	(56)	7.79	(32)	11.30	(22)	11.46	(19)
IM U.S. Large Cap Value Equity (MF) Median	1.41		16.67		1.87		9.67		7.17		10.63		10.52	
Balanced Fund														
American Funds American Balanced (RLBGX)	1.54	(13)	12.80	(54)	5.43	(21)	9.09	(13)	7.91	(3)	9.73	(4)	10.37	(1)
American Balanced Fund Hybrid	2.01	(6)	14.66	(31)	7.72	(5)	8.27	(28)	7.26	(8)	8.06	(28)	8.64	(23)
IM All Balanced (MF) Median	0.66		13.12		3.24		6.84		5.33		6.69		7.38	
WCAB 2060 Retirement	-0.52	(92)	15.68	(51)	-0.19	(91)	N/A		N/A		N/A		N/A	
The WCAB 2060 Retirement Portfolio Policy	0.96	(3)	17.26	(9)	3.65	(5)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2055 (MF) Median	0.16		15.73		1.88		8.95		6.81		8.87		8.94	
WCAB 2055 Retirement	-0.52	(92)	15.68	(51)	-0.19	(91)	N/A		N/A		N/A		N/A	
The WCAB 2055 Retirement Portfolio Policy	0.96	(3)	17.26	(9)	3.65	(5)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2055 (MF) Median	0.16		15.73		1.88		8.95		6.81		8.87		8.94	
WCAB 2050 Retirement	-0.52	(92)	15.60	(52)	-0.15	(92)	8.84	(53)	7.21	(26)	9.43	(14)	9.69	(15)
The WCAB 2050 Retirement Portfolio Policy	0.96	(3)	17.15	(9)	3.72	(8)	10.59	(1)	8.37	(1)	10.32	(2)	10.36	(1)
IM Mixed-Asset Target 2050 (MF) Median	0.22		15.61		1.95		8.87		6.75		8.74		9.04	
WCAB 2045 Retirement	-0.53	(92)	15.45	(54)	-0.12	(93)	N/A		N/A		N/A		N/A	
The WCAB 2045 Retirement Portfolio Policy	0.95	(4)	16.96	(9)	3.71	(8)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2045 (MF) Median	0.26		15.59		1.99		8.81		6.69		8.64		8.99	
WCAB 2040 Retirement	-0.39	(88)	14.91	(55)	0.33	(92)	8.60	(51)	7.06	(26)	8.95	(24)	9.27	(25)
The WCAB 2040 Retirement Portfolio Policy	0.96	(6)	16.30	(14)	3.83	(13)	10.08	(1)	7.96	(1)	9.62	(8)	9.67	(15)
IM Mixed-Asset Target 2040 (MF) Median	0.35		15.04		2.29		8.64		6.52		8.42		8.71	
WCAB 2035 Retirement	-0.31	(93)	14.29	(63)	0.65	(96)	N/A		N/A		N/A		N/A	
The WCAB 2035 Retirement Portfolio Policy	0.93	(16)	15.44	(22)	3.89	(19)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2035 (MF) Median	0.53		14.65		2.89		8.27		6.33		8.05		8.60	
WCAB 2030 Retirement	-0.12	(94)	13.73	(55)	1.16	(97)	8.08	(32)	6.71	(14)	8.33	(21)	8.77	(21)
The WCAB 2030 Retirement Portfolio Policy	1.07	(16)	14.71	(19)	4.31	(33)	9.02	(4)	7.29	(1)	8.77	(6)	8.91	(17)
IM Mixed-Asset Target 2030 (MF) Median	0.72		13.91		3.86		7.60		5.91		7.55		8.11	

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Comparative Performance
401(a) Trailing Returns
As of September 30, 2019

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
WCAB 2025 Retirement	0.13	(94)	12.78	(57)	1.95	(98)	N/A		N/A		N/A		N/A	
The WCAB 2025 Retirement Portfolio Policy	1.11	(33)	13.54	(25)	4.59	(46)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2025 (MF) Median	0.92		12.94		4.50		6.96		5.50		6.80		7.85	
WCAB 2020 Retirement	0.32	(93)	11.67	(59)	2.53	(98)	7.07	(13)	6.08	(2)	7.28	(8)	7.82	(11)
The WCAB 2020 Retirement Portfolio Policy	1.07	(43)	12.13	(41)	4.61	(58)	7.32	(5)	6.12	(1)	7.25	(9)	7.50	(29)
IM Mixed-Asset Target 2020 (MF) Median	1.00		11.87		4.81		6.20		5.01		6.15		6.99	
WCAB 2015 Retirement	0.43	(100)	10.83	(77)	3.06	(100)	N/A		N/A		N/A		N/A	
The WCAB 2015 Retirement Portfolio Policy	1.20	(28)	11.21	(52)	4.97	(56)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2015 (MF) Median	0.92		11.23		5.10		5.80		4.82		5.99		6.84	
WCAB Income Retirement	0.96	(86)	10.47	(52)	4.74	(85)	6.11	(7)	5.48	(1)	6.34	(1)	6.96	(1)
The WCAB Income Retirement Portfolio Policy	1.47	(29)	10.49	(50)	6.22	(36)	5.87	(14)	5.05	(7)	5.75	(3)	6.07	(18)
IM Mixed-Asset Target Today (MF) Median	1.27		10.49		5.80		4.69		3.90		4.05		5.23	
Fixed Income														
PIMCO High Yield (PHIYX)	1.51	(29)	12.14	(16)	7.49	(11)	5.78	(20)	5.38	(9)	5.54	(18)	7.40	(21)
ICE BofAML High Yield Master II	1.22	(52)	11.50	(32)	6.30	(29)	6.07	(13)	5.36	(9)	5.87	(11)	7.85	(8)
IM U.S. High Yield Bonds (MF) Median	1.24		10.78		5.34		5.16		4.15		4.87		6.83	
PIMCO Foreign Bond USD-Hedged (PFORX)	2.07	(23)	8.00	(24)	8.75	(26)	4.39	(6)	4.96	(4)	5.02	(1)	6.20	(1)
Bloomberg Barclays Global Aggregate	0.71	(33)	6.32	(35)	7.60	(37)	1.59	(48)	2.00	(24)	1.21	(35)	2.34	(61)
IM International Fixed Income (MF) Median	-1.06		4.67		4.60		1.24		0.58		0.65		2.63	
Hartford Total Return Bond (HIABX)	2.35	(20)	9.78	(9)	10.19	(31)	3.85	(4)	3.86	(5)	3.29	(10)	4.51	(15)
Blmbg. Barc. U.S. Aggregate Index	2.27	(33)	8.52	(57)	10.30	(24)	2.92	(45)	3.38	(27)	2.72	(40)	3.75	(60)
IM U.S. Broad Market Core Fixed Income (MF) Median	2.16		8.68		9.81		2.86		3.11		2.61		3.90	
Cash														
Voya Fixed Account*	0.80	(10)	2.34	(11)	3.13	(11)	3.44	(1)	3.67	(1)	3.76	(1)	N/A	
Ryan 3 Yr GIC Master Index	0.60	(90)	1.76	(74)	2.30	(77)	1.90	(94)	1.63	(95)	1.47	(100)	1.84	(97)
IM U.S. GIC/Stable Value (SA+CF) Median	0.64		1.87		2.50		2.14		2.03		1.94		2.15	

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Comparative Performance
401(a) Calendar Returns
As of September 30, 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	(31)	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	-16.40		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	(87)	8.00	(11)	3.99	(56)	-4.99	(28)	32.39	(19)	22.26	(32)	-17.46	(54)	18.10	(82)	39.51	(93)
MSCI AC World ex USA Small Cap (Net)	-18.20	(38)	31.65	(57)	3.91	(35)	2.60	(58)	-4.03	(23)	19.73	(85)	18.52	(73)	-18.50	(63)	25.21	(6)	62.91	(18)
IM International SMID Cap Core Equity (MF) Median	-19.09		32.40		-0.71		5.09		-6.28		24.95		20.35		-17.32		21.91		54.59	
American Funds EuroPacific Growth (RERGX)	-14.91	(44)	31.17	(9)	1.01	(52)	-0.48	(11)	-2.29	(24)	20.58	(46)	19.64	(35)	-13.31	(58)	9.76	(28)	N/A	
MSCI EAFE (Net) Index	-13.79	(25)	25.03	(38)	1.00	(53)	-0.81	(15)	-4.90	(29)	22.78	(23)	17.32	(58)	-12.14	(41)	7.75	(45)	31.78	(32)
IM International Large Cap Core Equity (MF) Median	-15.69		24.43		1.27		-2.75		-5.87		20.29		18.55		-12.76		7.48		29.88	
Domestic Equity																				
Wells Fargo Small Co Growth (WSCRX)	-3.57	(32)	20.68	(35)	7.76	(79)	-4.33	(54)	N/A		N/A		N/A		N/A		N/A		N/A	
Russell 2000 Growth Index	-9.31	(75)	22.17	(28)	11.32	(56)	-1.38	(36)	5.60	(8)	43.30	(42)	14.59	(29)	-2.91	(28)	29.09	(32)	34.47	(44)
IM U.S. Small Cap Growth Equity (MF) Median	-6.85		16.99		11.80		-3.30		0.65		42.25		11.98		-4.94		26.73		33.15	
Vanguard Small Cap Index (VSMAX)	-9.31	(27)	16.24	(13)	18.30	(78)	-3.64	(33)	7.50	(8)	37.81	(41)	18.24	(15)	-2.69	(36)	27.89	(24)	36.33	(30)
Vanguard Spliced Small Cap Index	-9.33	(28)	16.24	(13)	18.26	(78)	-3.68	(33)	7.54	(8)	37.77	(41)	18.20	(16)	-2.75	(37)	27.82	(24)	36.15	(30)
IM U.S. Small Cap Core Equity (MF) Median	-11.84		10.80		21.97		-5.08		4.05		36.44		14.47		-4.49		25.37		27.89	
AMG Managers Skyline Special Equities (SKSEX)	-19.00	(76)	8.39	(60)	21.32	(83)	-6.05	(14)	4.02	(32)	51.59	(4)	19.34	(29)	-2.05	(37)	26.07	(35)	52.79	(13)
Russell 2000 Value Index	-12.86	(25)	7.84	(66)	31.74	(31)	-7.47	(44)	4.22	(31)	34.52	(64)	18.05	(35)	-5.50	(64)	24.50	(55)	20.58	(83)
IM U.S. Small Cap Value Equity (MF) Median	-16.87		8.91		29.88		-8.52		2.78		35.81		15.95		-3.67		24.82		28.29	
Hartford Mid Cap (HIMCX)	-7.44	(76)	24.47	(55)	11.98	(8)	1.60	(36)	11.37	(13)	39.82	(14)	19.44	(6)	-7.92	(76)	23.45	(67)	30.96	(74)
Russell Midcap Growth Index	-4.75	(46)	25.27	(45)	7.33	(27)	-0.20	(55)	11.90	(10)	35.74	(45)	15.81	(28)	-1.65	(31)	26.38	(47)	46.29	(23)
IM U.S. Mid Cap Growth Equity (MF) Median	-5.12		24.79		4.80		0.44		7.20		35.30		13.98		-4.40		25.83		39.96	
Vanguard Mid Cap Index (VIMAX)	-9.23	(22)	19.25	(19)	11.22	(76)	-1.34	(23)	13.76	(10)	35.15	(49)	15.99	(49)	-1.97	(32)	25.59	(20)	40.48	(16)
Vanguard Spliced Mid Cap Index	-9.22	(22)	19.30	(18)	11.25	(75)	-1.28	(22)	13.83	(10)	35.21	(47)	16.04	(48)	-1.91	(30)	25.69	(18)	40.49	(16)
IM U.S. Mid Cap Core Equity (MF) Median	-11.60		15.30		14.45		-3.44		8.92		35.05		15.84		-3.38		23.15		33.22	
Hotchkis & Wiley Mid Cap Value (HWMIX)	-19.29	(81)	7.78	(89)	21.00	(21)	-12.53	(95)	12.18	(25)	42.55	(4)	31.09	(1)	-8.60	(92)	34.41	(1)	56.49	(4)
Russell Midcap Value Index	-12.29	(24)	13.34	(49)	20.00	(30)	-4.78	(52)	14.75	(10)	33.46	(75)	18.51	(29)	-1.38	(30)	24.75	(31)	34.21	(58)
IM U.S. Mid Cap Value Equity (MF) Median	-14.14		13.21		17.04		-4.65		10.17		35.44		16.68		-3.95		22.18		36.81	
American Funds Growth Fund of America (RGAGX)	-2.60	(70)	26.53	(77)	8.82	(3)	5.70	(53)	9.63	(60)	34.29	(47)	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	(22)	33.48	(55)	15.26	(46)	2.64	(11)	16.71	(33)	37.21	(42)
IM U.S. Large Cap Growth Equity (MF) Median	-0.86		29.47		2.18		6.00		10.46		33.94		14.81		-1.76		15.15		35.24	

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Comparative Performance
401(a) Calendar Returns
As of September 30, 2019

	2018		2017		2016		2015		2014		2013		2012		2011		2010		2009	
Wells Fargo Disciplined US Core (EVSIX)	-8.08	(84)	20.88	(55)	12.09	(25)	2.53	(22)	15.69	(4)	33.97	(22)	14.90	(56)	4.12	(13)	N/A		N/A	
S&P 500 Index	-4.38	(30)	21.83	(38)	11.96	(26)	1.38	(33)	13.69	(16)	32.39	(38)	16.00	(39)	2.11	(22)	15.06	(24)	26.46	(50)
IM U.S. Large Cap Core Equity (MF) Median	-5.61		21.17		10.07		0.25		11.41		31.77		15.28		-0.57		13.13		26.46	
Vanguard Institutional Index (VINIX)	-4.42	(31)	21.79	(39)	11.93	(27)	1.37	(33)	13.65	(17)	32.35	(39)	15.98	(39)	2.09	(22)	15.05	(24)	26.63	(50)
S&P 500 Index	-4.38	(30)	21.83	(38)	11.96	(26)	1.38	(33)	13.69	(16)	32.39	(38)	16.00	(39)	2.11	(22)	15.06	(24)	26.46	(50)
IM U.S. Large Cap Core Equity (MF) Median	-5.61		21.17		10.07		0.25		11.41		31.77		15.28		-0.57		13.13		26.46	
American Century Equity Income (AEUDX)	-4.17	(9)	13.83	(76)	19.88	(8)	0.94	(4)	12.84	(16)	N/A		N/A		N/A		N/A		N/A	
Russell 1000 Value Index	-8.27	(36)	13.66	(77)	17.34	(19)	-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	-9.08		16.25		13.82		-3.54		10.81		32.30		15.84		-2.20		13.00		24.10	
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	-6.25		14.21		6.80		-1.59		4.73		15.23		12.13		-1.48		12.30		26.02	
WCAB 2060 Retirement	-9.02	(66)	19.06	(88)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
The WCAB 2060 Retirement Portfolio Policy	-5.80	(4)	20.16	(73)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		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		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
The WCAB 2055 Retirement Portfolio Policy	-5.80	(4)	20.16	(73)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		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	(65)	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	(71)	18.72	(84)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
The WCAB 2045 Retirement Portfolio Policy	-5.68	(4)	19.74	(69)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		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	(64)	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	-7.98		19.74		7.95		-1.66		5.38		21.61		14.92		-3.93		14.63		30.70	
WCAB 2035 Retirement	-7.82	(73)	17.40	(75)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
The WCAB 2035 Retirement Portfolio Policy	-5.04	(3)	17.82	(71)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		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.
*Returns are MassMutual Guaranteed Account until 1Q2019 then the Voya Fixed account thereafter.



Comparative Performance
401(a) Calendar Returns
As of September 30, 2019

	2018		2017		2016		2015		2014		2013		2012		2011		2010		2009	
WCAB 2025 Retirement	-5.66	(59)	14.73	(53)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
The WCAB 2025 Retirement Portfolio Policy	-3.53	(7)	14.49	(57)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		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		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
The WCAB 2015 Retirement Portfolio Policy	-2.06	(1)	10.98	(62)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		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	-3.57		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	(64)	-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		13.49		-3.85		1.49		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																				
Voya Fixed Account*	3.38	(1)	3.67	(1)	3.94	(1)	4.00	(1)	4.00	(3)	4.00	(1)	4.00	(5)	4.00	(8)	N/A		N/A	
Ryan 3 Yr GIC Master Index	1.96	(84)	1.60	(95)	1.39	(94)	1.16	(95)	1.03	(95)	1.06	(92)	1.48	(99)	2.44	(62)	3.53	(41)	4.49	(12)
IM U.S. GIC/Stable Value (SA+CF) Median	2.14		1.86		1.85		1.76		1.74		1.66		2.41		2.91		3.39		3.67	

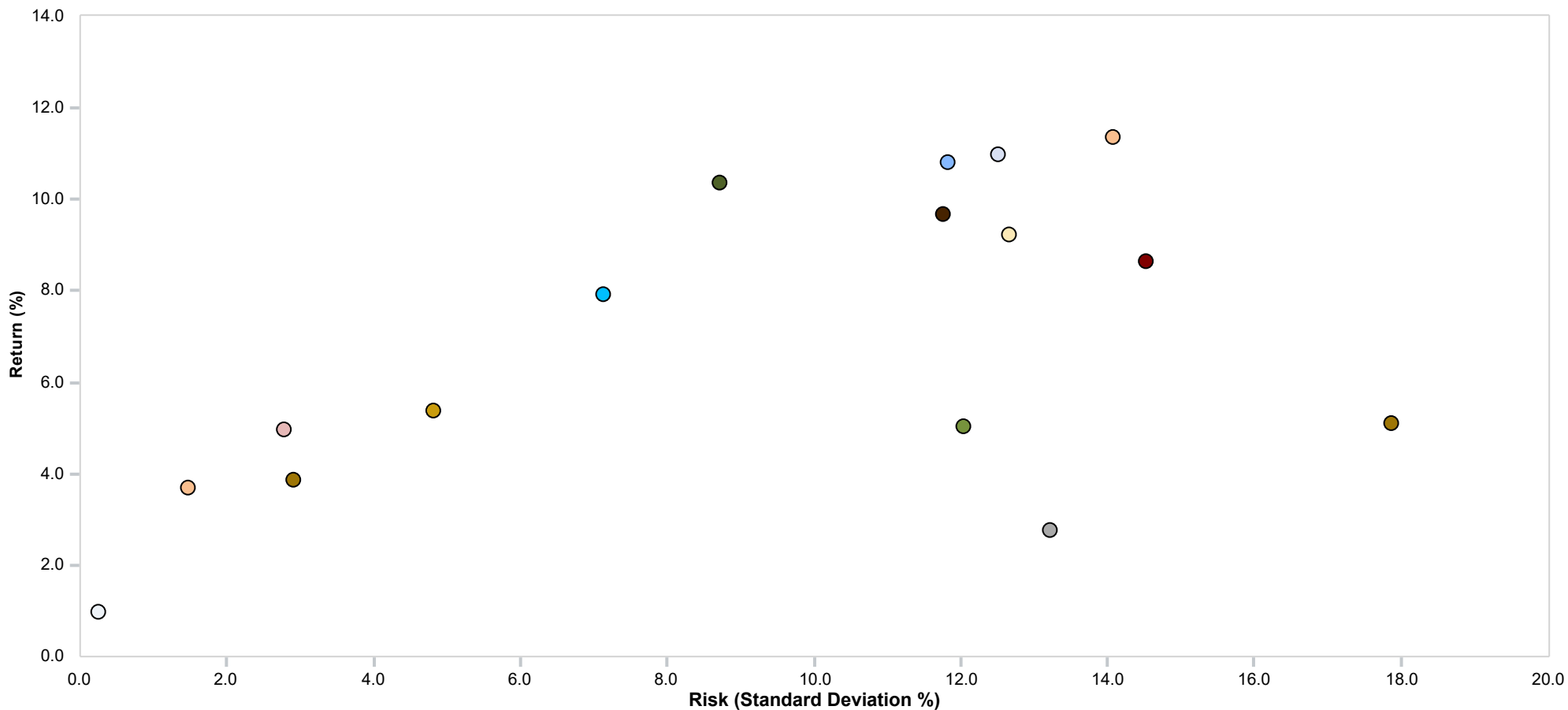
Returns for periods greater than one year are annualized.

Returns are expressed as percentages.

*Returns are MassMutual Guaranteed Account until 1Q2019 then the Voya Fixed account thereafter.



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)
- Voya Fixed 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%



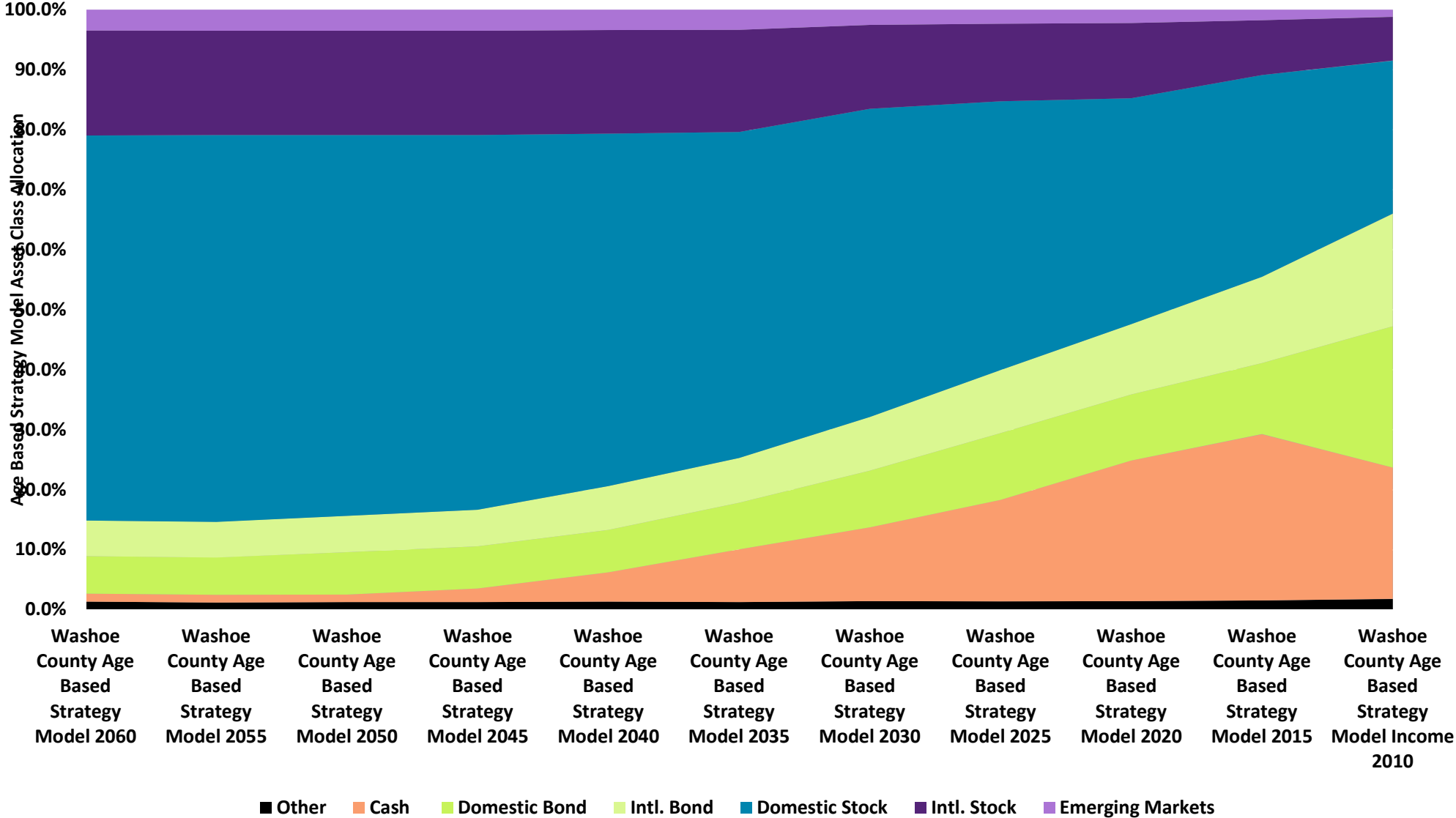
Washoe County Age Based Strategy Models
Age Based Strategy Model Asset Allocation
As of December 31, 2018

Age Based Strategy Model Allocation by Sub Asset Class

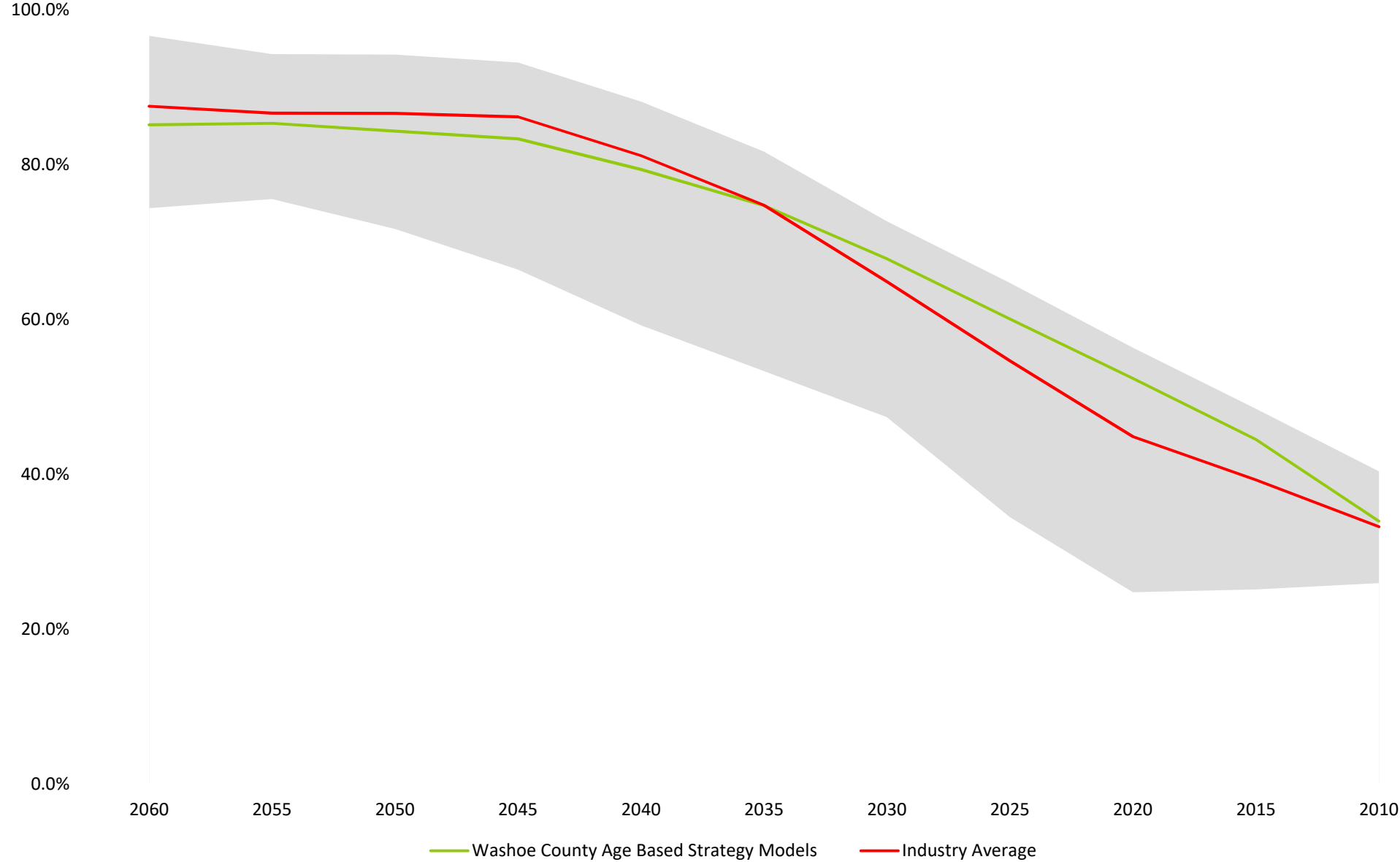
Investment Name	Emerging Markets	Intl. Stock	Domestic Stock	Intl. Bond	Domestic Bond	Cash	Other	Total
Washoe County Age Based Strategy Model 2060	3.5%	17.5%	64.2%	5.9%	6.2%	1.3%	1.4%	100.0%
Washoe County Age Based Strategy Model 2055	3.5%	17.4%	64.4%	5.9%	6.2%	1.3%	1.2%	100.0%
Washoe County Age Based 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

Voya requires 0.03% in revenue from the plan assets annually.

AndCo Consulting bills quarterly. The fee structure is \$60,000 per annum, paid in quarterly cash payments.

Plan Demographics

Total Assets*	\$174,993,869
Number of Participants with a Balance (active and terminated)	2,565

Expense Type Estimates (annual)

Percent of Assets

Dollar Cost

% Cost

Voya Recordkeeping fees	0.03%	\$52,498	0.03%
AndCo Consulting fees		\$60,000	0.03%

Total plan expenses

\$ 112,498

0.06%

Revenue Sharing Estimates (annual)

Revenue from participant annual fee	0.08%	\$139,995
-------------------------------------	-------	-----------

Net plan fee surplus (annual)

\$27,497

0.02%

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

\$54.58

*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

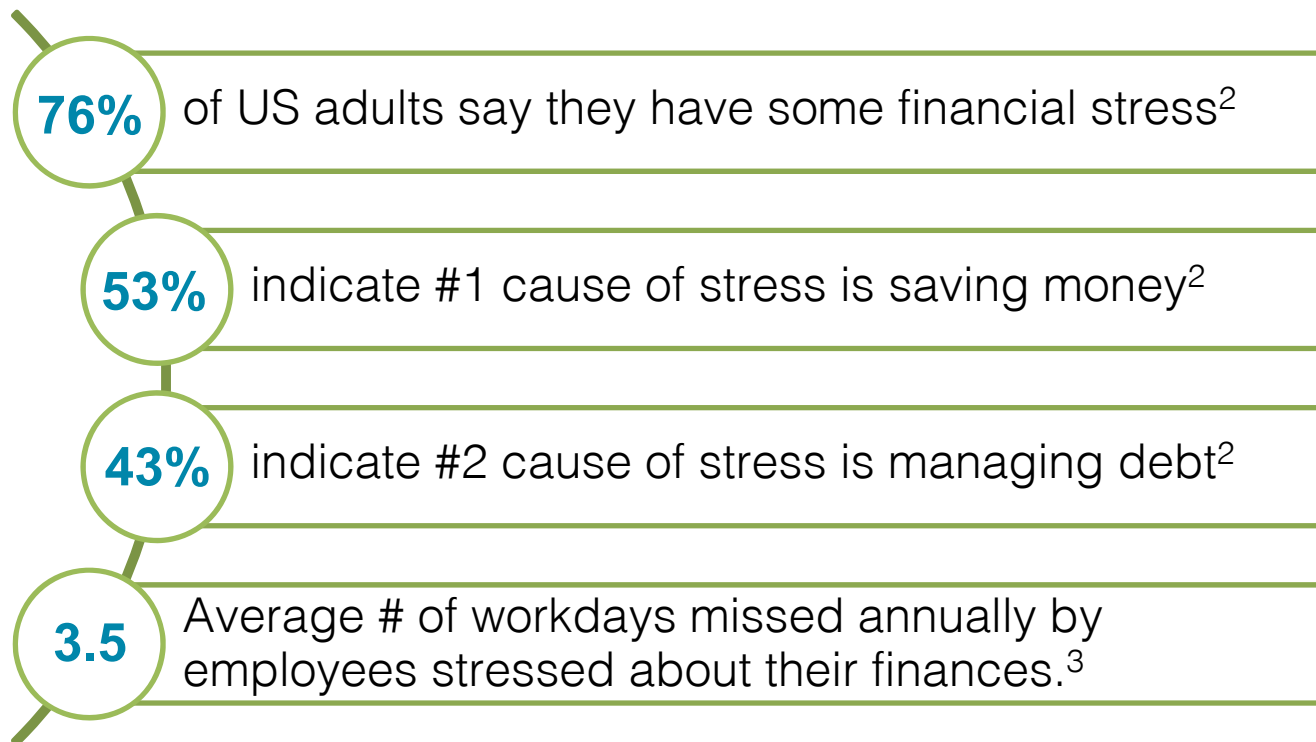
	Market Value	Expense Ratio	Expense Ratio Weighted Fee	Revenue Sharing	*Revenue Sharing \$
Lazard Emerging Markets Equity (LZOEX)	\$1,459,675	1.32%	\$19,268	0.40%	\$5,839
DFA International Small Cap Value (DISVX)	\$1,405,137	0.68%	\$9,555	0.00%	\$0
American Funds EuroPacific Growth (RERGX)	\$5,009,790	0.49%	\$24,548	0.00%	\$0
Wells Fargo Small Co Growth (WSCRX)	\$3,041,884	0.89%	\$27,073	0.00%	\$0
Vanguard Small Cap Index (VSMAX)	\$3,656,693	0.05%	\$1,828	0.00%	\$0
AMG Managers Skyline Special Equities (SKSEX)	\$2,340,197	1.17%	\$27,380	0.25%	\$5,850
Hartford Mid Cap (HIMCX)	\$10,283,313	0.69%	\$70,955	0.25%	\$25,708
Vanguard Mid Cap Index (VIMAX)	\$4,064,998	0.05%	\$2,032	0.00%	\$0
Hotchkis & Wiley Mid Cap Value (HWMIX)	\$2,461,752	0.99%	\$24,371	0.40%	\$9,847
AF Growth Fund of America (RGAGX)	\$15,429,685	0.32%	\$49,375	0.00%	\$0
Wells Fargo Disciplined US Core (EVSIX)	\$12,153,727	0.48%	\$58,338	0.15%	\$18,231
Vanguard Institutional Index (VINIX)	\$15,175,426	0.04%	\$6,070	0.00%	\$0
American Century Equity Income (AEUDX)	\$7,767,761	0.56%	\$43,499	0.00%	\$0
American Funds American Balanced (RLBGX)	\$6,419,808	0.28%	\$17,975	0.00%	\$0
PIMCO High Yield (PHIYX)	\$2,525,240	0.59%	\$14,899	0.00%	\$0
PIMCO Foreign Bond USD-Hedged (PFORX)	\$1,229,431	0.55%	\$6,762	0.00%	\$0
Hartford Total Return Bond (HIABX)	\$4,063,272	0.51%	\$20,723	0.25%	\$10,158
Voya Fixed Account	\$76,506,080	0.00%	\$0	0.00%	\$0
TOTAL	\$174,993,869	0.24%	\$424,652	0.04%	\$75,633

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



Defining Financial Wellness

Financial wellness refers to programs that assess and support an individual's "complete financial picture" and "overall financial health." Financial wellness programs are meant to look comprehensively at how the pieces of an individual's financial life fit together with their physical health.¹

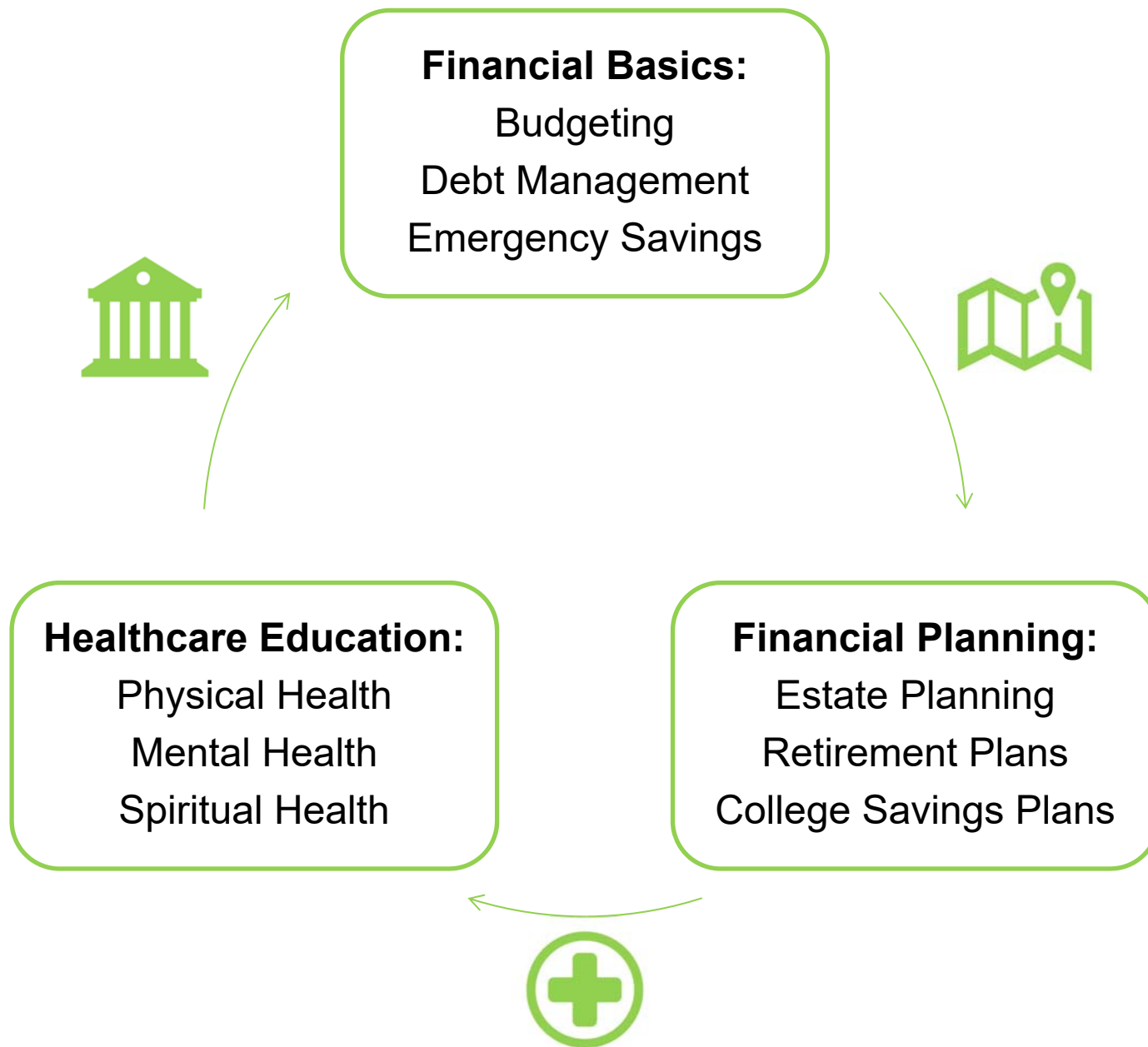


¹ Consumer Financial Protection Bureau (CFPB) - https://files.consumerfinance.gov/f/201408_cfpb_report_financial-wellness-at-work.pdf

² National Endowment for Financial Education - [New Year Resolutions 2018 Survey](#)

³ Center for Retirement Research at Boston College - [Work Absenteeism Tied to Money Stress](#)

Typical Financial Wellness Topics



Implementing the Financial Wellness Program

Step 1:

Review and survey employee demographics, utilization of existing benefits, and Health and Wellness programs

Step 2:

Emphasize quantifiable outcomes based on the identifiable employee needs

Step 3:

Create the program to meet the needs of the employee and the culture of the employer

Step 4:

Align all metrics and key performance indicators to the organizational goals

Step 5:

Evaluate and update the Program as necessary

Next Quarter's Module Topic: Fiduciary Update



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	✓	✓		



Fund Information

Portfolio Manager : Majcher/Davis, Jr./Miles Ticker : HWMIX
PM Tenure : 1997--1997--1997 Inception Date : 01/02/1997
Fund Assets : \$867 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)	-7.34 (99)	3.90 (99)	-22.90 (99)	0.42 (95)	0.05 (95)	7.06 (94)	9.65 (80)
Russell Midcap Value Index	1.22 (47)	19.47 (31)	1.60 (25)	7.82 (31)	7.55 (19)	11.63 (11)	12.29 (12)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	1.97	20.21	1.51	8.27	6.95	10.67	11.35
IM U.S. Mid Cap Value Equity (MF) Median	0.99	17.64	-3.11	6.59	5.91	9.96	10.54
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	-0.59	14.47	-5.35	5.24	4.78	9.05	9.79

Comparative Performance - Calendar

	2018	2017	2016	2015	2014	2013	2012
Hotchkis & Wiley Mid Cap Value (HWMIX)	-19.29 (81)	7.78 (89)	21.00 (21)	-12.53 (95)	12.18 (25)	42.55 (4)	31.09 (1)
Russell Midcap Value Index	-12.29 (24)	13.34 (49)	20.00 (30)	-4.78 (52)	14.75 (10)	33.46 (75)	18.51 (29)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	-12.34	15.89	20.41	-3.28	12.16	37.49	18.77
IM U.S. Mid Cap Value Equity (MF) Median	-14.14	13.21	17.04	-4.65	10.17	35.44	16.68
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	-17.72	10.85	14.50	-6.82	7.87	33.23	15.41

Comparative Performance - Quarterly

	Jun-2019	Mar-2019	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017
Hotchkis & Wiley Mid Cap Value (HWMIX)	-3.44 (97)	16.12 (4)	-25.79 (98)	3.00 (40)	7.80 (1)	-2.05 (53)	4.58 (71)
Russell Midcap Value Index	3.19 (38)	14.37 (30)	-14.95 (27)	3.30 (23)	2.41 (30)	-2.50 (66)	5.50 (42)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	3.60	14.61	-14.95	3.24	2.70	-1.35	6.12
IM U.S. Mid Cap Value Equity (MF) Median	2.88	13.50	-17.17	2.82	1.91	-1.94	5.11
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	1.15	12.58	-17.73	1.65	0.84	-2.91	4.49

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	32.68	22.32	20.31
Downside Risk	26.12	15.87	14.17
vs. Russell Midcap Value Index			
Alpha	-23.13	-9.83	-9.42
Beta	1.55	1.57	1.48
Down Market Capture	182.58	173.57	162.50
Information Ratio	-1.67	-0.49	-0.58
Tracking Error	14.37	11.18	10.31
Up Market Capture	96.25	118.72	108.15
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	-0.69	0.06	0.06

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	13 (46%)	1 (4%)	1 (4%)	13 (46%)
Russell Midcap Value Index	28	10 (36%)	11 (39%)	7 (25%)	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	12 (43%)	1 (4%)	4 (14%)	11 (39%)
Russell Midcap Value Index	28	19 (68%)	9 (32%)	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	14 (50%)	4 (14%)	3 (11%)	7 (25%)
Russell Midcap Value Index	28	23 (82%)	4 (14%)	1 (4%)	0 (0%)



Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	7,867,311,804	15,280,784,778	Kosmos Energy Ltd	5.6	0.0	0.2	0.0
Median Mkt. Cap (\$)	5,165,903,600	7,626,009,135	Citizens Financial Group Inc	4.6	0.3	1.0	0.0
Price/Earnings ratio	11.4	17.6	Hewlett Packard Enterprise Co	4.2	0.4	2.2	0.1
Price/Book ratio	1.5	2.2	Cairn Energy PLC, Edinburgh	4.2	0.0	7.3	0.3
5 Yr. EPS Growth Rate (%)	3.2	9.5	Popular Inc	4.0	0.1	0.3	0.0
Current Yield (%)	2.6	2.4	Goodyear Tire & Rubber Co	3.4	0.1	-4.8	-0.2
Beta (5 Years, Monthly)	1.48	1.00	Discovery Inc	3.1	0.2	-13.5	-0.4
Number of Stocks	59	633	CIT Group Inc	3.0	0.1	-13.1	-0.4
			Amerco	2.9	0.1	3.2	0.1
			CNO Financial Group Inc	2.8	0.0	-4.4	-0.1

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	6.3	3.7	-9.60	-5.71	-0.15	-0.25	-0.40	TRI Pointe Group Inc	2.4	0.0	25.6	0.6
Consumer Discretionary	13.8	8.7	-0.89	0.31	-0.04	-0.07	-0.11	Colony Capital Inc	1.1	0.1	22.6	0.2
Consumer Staples	2.0	4.5	2.56	6.42	-0.12	-0.08	-0.21	Vistra Energy Corp	2.4	0.2	18.6	0.4
Energy	19.1	5.6	-23.36	-12.98	-2.00	-2.22	-4.23	Alleghany Corp	0.8	0.2	17.1	0.1
Financials	25.7	18.6	0.59	2.22	0.09	-0.39	-0.30	Zimmer Biomet Holdings Inc	0.6	0.6	16.8	0.1
Health Care	1.1	7.0	-37.43	-3.81	0.29	-0.46	-0.17	NRG Energy Inc	2.1	0.2	12.9	0.3
Industrials	12.9	11.9	-10.97	-0.84	-0.02	-1.28	-1.30	First Horizon National Corp	0.7	0.1	9.4	0.1
Information Technology	11.1	7.9	-5.76	0.49	-0.07	-0.66	-0.73	Enstar Group Ltd	1.7	0.0	9.0	0.2
Materials	0.0	6.4	0.00	-2.51	0.24	0.00	0.24	Magna International Inc.	2.1	0.0	8.1	0.2
Real Estate	3.2	14.2	-5.91	8.20	-0.74	-0.44	-1.19	Cairn Energy PLC, Edinburgh	4.2	0.0	7.3	0.3
Utilities	4.7	11.4	10.93	7.32	-0.42	0.25	-0.17					
Other	0.0	0.0	0.00	20.55	0.00	0.00	0.00					
Total	100.0	100.0	-7.39	1.17	-2.95	-5.61	-8.56					

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	0.5	0.00	2.84	-0.01	0.00	-0.01	Superior Energy Services Inc.	0.0	0.0	-90.0	0.0
Large Neutral	3.2	11.8	-6.93	4.27	-0.21	-0.33	-0.54	McDermott International Inc.	0.4	0.0	-79.1	-0.3
Large Value	0.0	3.8	0.00	5.48	-0.14	0.00	-0.14	Mallinckrodt Plc	0.2	0.0	-73.7	-0.2
Mid Growth	0.7	4.4	-3.65	0.67	-0.01	-0.02	-0.03	Whiting Petroleum Corp	2.4	0.0	-57.0	-1.4
Mid Neutral	2.1	31.2	-10.19	0.86	0.04	-0.22	-0.17	Fluor Corp	0.8	0.1	-42.5	-0.3
Mid Value	54.5	43.6	-2.59	0.69	-0.10	-1.81	-1.90	CommScope Holding Co Inc	1.1	0.0	-25.2	-0.3
Small Growth	0.5	0.0	-29.55	5.34	-0.16	-0.05	-0.21	Avis Budget Group Inc	0.7	0.0	-19.6	-0.1
Small Neutral	7.3	0.5	-11.66	-7.45	-0.56	-0.52	-1.08	CBS Corp	0.7	0.0	-18.8	-0.1
Small Value	25.7	1.8	-19.65	-8.65	-2.29	-2.68	-4.97	Navistar International Corp	1.9	0.0	-18.4	-0.4
Unclassified	5.8	2.6	2.91	-0.32	-0.07	0.57	0.50	Telefonaktiebolaget LM Ericsson	0.7	0.0	-16.0	-0.1
Total	100.0	100.0	-7.39	1.17	-3.51	-5.05	-8.56					



Fund Information

Portfolio Manager : Team Managed
PM Tenure :
Fund Assets : \$32,010 Million

Ticker : RGAGX
Inception Date : 05/01/2009
Portfolio Turnover : 28%

Fund Investment Policy

The Fund seeks to provide growth of capital. The Fund invests primarily in common stocks in companies that appear to offer superior opportunities for growth of capital. The Fund seeks to invest in attractively valued companies that, in the Adviser's opinion, represent good, long-term investment opportunities.

Comparative Performance - Trailing

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
AF Growth Fund of America (RGAGX)	-2.06 (81)	15.46 (94)	-1.93 (90)	13.10 (84)	10.97 (72)	13.77 (51)	12.76 (75)
Russell 1000 Growth Index	1.49 (16)	23.30 (25)	3.71 (33)	16.89 (27)	13.39 (22)	15.02 (19)	14.94 (13)
IM U.S. Large Cap Growth Equity (MF) 1st Quartile	0.98	23.23	4.72	17.05	13.27	14.75	14.35
IM U.S. Large Cap Growth Equity (MF) Median	-0.01	21.44	2.32	15.72	12.20	13.77	13.61
IM U.S. Large Cap Growth Equity (MF) 3rd Quartile	-1.56	19.43	-0.07	13.99	10.79	13.02	12.75

Comparative Performance - Calendar

	2018	2017	2016	2015	2014	2013	2012
AF Growth Fund of America (RGAGX)	-2.60 (70)	26.53 (77)	8.82 (3)	5.70 (53)	9.63 (60)	34.29 (47)	20.98 (4)
Russell 1000 Growth Index	-1.51 (58)	30.21 (41)	7.08 (8)	5.67 (54)	13.05 (22)	33.48 (55)	15.26 (46)
IM U.S. Large Cap Growth Equity (MF) 1st Quartile	1.50	31.94	4.88	7.91	12.75	36.34	17.65
IM U.S. Large Cap Growth Equity (MF) Median	-0.86	29.47	2.18	6.00	10.46	33.94	14.81
IM U.S. Large Cap Growth Equity (MF) 3rd Quartile	-3.17	26.71	-0.18	3.39	8.54	30.98	12.93

Comparative Performance - Quarterly

	Jun-2019	Mar-2019	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017
AF Growth Fund of America (RGAGX)	3.53 (81)	13.87 (92)	-15.06 (38)	5.05 (95)	5.97 (44)	3.01 (45)	7.01 (35)
Russell 1000 Growth Index	4.64 (56)	16.10 (55)	-15.89 (54)	9.17 (11)	5.76 (51)	1.42 (78)	7.86 (10)
IM U.S. Large Cap Growth Equity (MF) 1st Quartile	5.65	17.22	-14.41	8.60	6.76	4.32	7.26
IM U.S. Large Cap Growth Equity (MF) Median	4.76	16.25	-15.73	7.78	5.77	2.82	6.66
IM U.S. Large Cap Growth Equity (MF) 3rd Quartile	3.84	15.37	-16.57	6.75	4.61	1.50	5.82

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	18.87	12.84	12.52
Downside Risk	14.09	8.44	8.02
vs. Russell 1000 Growth Index			
Alpha	-5.37	-2.44	-1.45
Beta	0.97	0.95	0.94
Down Market Capture	105.94	100.85	98.85
Information Ratio	-1.97	-0.98	-0.64
Tracking Error	2.87	3.45	3.46
Up Market Capture	86.09	88.05	90.47

vs. 90 Day U.S. Treasury Bill

Sharpe Ratio	-0.13	0.91	0.82
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Ranking vs. IM U.S. Large Cap Growth Equity (MF) 4 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
AF Growth Fund of America (RGAGX)	28	7 (25%)	8 (29%)	7 (25%)	6 (21%)
Russell 1000 Growth Index	28	7 (25%)	14 (50%)	7 (25%)	0 (0%)

Ranking vs. IM U.S. Large Cap Growth Equity (MF) 12 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
AF Growth Fund of America (RGAGX)	28	10 (36%)	14 (50%)	3 (11%)	1 (4%)
Russell 1000 Growth Index	28	19 (68%)	9 (32%)	0 (0%)	0 (0%)

Ranking vs. IM U.S. Large Cap Growth Equity (MF) 20 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
AF Growth Fund of America (RGAGX)	22	5 (23%)	7 (32%)	10 (45%)	0 (0%)
Russell 1000 Growth Index	28	23 (82%)	5 (18%)	0 (0%)	0 (0%)



Manager Profile
American Funds Growth Fund of America (RGAGX)
As of September 30, 2019

Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	234,424,176,313	323,014,230,411	Facebook Inc	5.8	3.0	-7.7	-0.4
Median Mkt. Cap (\$)	32,303,313,240	12,429,806,360	Microsoft Corp	5.5	7.5	4.1	0.2
Price/Earnings ratio	24.2	26.6	Amazon.com Inc	4.3	5.1	-8.3	-0.4
Price/Book ratio	4.4	7.6	Netflix Inc	4.1	0.8	-27.1	-1.1
5 Yr. EPS Growth Rate (%)	24.8	24.0	Unitedhealth Group Inc	2.5	1.5	-10.5	-0.3
Current Yield (%)	1.1	1.2	Alphabet Inc	2.5	2.7	12.8	0.3
Beta (5 Years, Monthly)	0.94	1.00	Broadcom Inc	2.0	0.8	-3.2	-0.1
Number of Stocks	295	531	Mastercard Inc	1.7	1.7	2.8	0.0
			Home Depot Inc. (The)	1.7	1.0	12.2	0.2
			Abbott Laboratories	1.5	0.4	-0.1	0.0

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	17.9	11.7	-6.11	0.77	-0.05	-1.26	-1.31	Allakos Inc	0.2	0.0	81.5	0.2
Consumer Discretionary	14.1	14.8	-0.63	-0.41	0.02	-0.03	-0.01	Federal National Mortgage Assc	0.2	0.0	40.9	0.1
Consumer Staples	3.8	5.1	0.67	5.49	-0.02	-0.18	-0.21	Insulet Corp	0.2	0.1	38.2	0.1
Energy	4.4	0.4	-17.53	-6.74	-0.34	-0.51	-0.85	Freddie Mac	0.2	0.0	38.1	0.1
Financials	8.2	3.6	2.74	0.83	-0.04	0.17	0.13	KLA Corp	0.0	0.2	35.7	0.0
Health Care	16.4	13.8	-4.99	-2.62	-0.14	-0.40	-0.55	London Stock Exchange Group PLC	0.1	0.0	28.9	0.0
Industrials	7.5	10.3	1.36	3.08	-0.02	-0.13	-0.14	DocuSign Inc.	0.2	0.1	24.6	0.0
Information Technology	24.0	36.2	1.95	3.05	-0.15	-0.26	-0.40	Lam Research Corp	0.0	0.2	23.6	0.0
Materials	2.1	1.6	-3.64	3.53	0.02	-0.15	-0.13	Seattle Genetics Inc	0.4	0.1	23.4	0.1
Real Estate	1.6	2.5	10.21	7.44	-0.05	0.05	-0.01	D.R. Horton Inc.	0.2	0.0	22.6	0.0
Other	0.0	0.0	0.00	20.55	-0.01	0.00	-0.01					
Total	100.0	100.0	-1.94	1.55	-0.78	-2.71	-3.49					

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	41.9	61.7	-3.95	1.29	0.03	-2.22	-2.20	Concho Resources Inc	0.6	0.0	-34.1	-0.2
Large Neutral	26.1	15.3	0.86	3.84	0.22	-0.80	-0.58	Align Technology Inc	0.1	0.1	-33.9	0.0
Large Value	8.5	0.7	0.78	-10.38	-1.00	1.02	0.02	GW Pharmaceuticals PLC	0.0	0.0	-33.3	0.0
Mid Growth	6.6	11.5	-1.11	-1.00	0.12	0.00	0.12	Ollie's Bargain Outlet Holdings	0.0	0.0	-32.7	0.0
Mid Neutral	4.0	3.8	-8.14	-0.87	-0.02	-0.29	-0.30	Ultragenyx Pharmaceutical Inc	0.1	0.0	-32.6	0.0
Mid Value	5.4	0.9	-10.96	-1.76	-0.14	-0.51	-0.65	bluebird bio Inc	0.3	0.0	-27.8	-0.1
Small Growth	0.1	0.0	122.79	-24.00	-0.01	0.07	0.07	Ulta Salon Cosmetics	0.2	0.1	-27.7	-0.1
Small Neutral	0.1	0.1	-10.69	-6.57	0.00	-0.01	-0.01	Chesapeake Energy Corp	0.0	0.0	-27.7	0.0
Small Value	0.1	0.0	-25.66	1.32	0.01	-0.02	-0.01	Netflix Inc	4.1	0.8	-27.1	-1.1
Unclassified	7.2	6.2	4.46	4.96	0.07	-0.03	0.04	Teva Pharmaceutical	0.2	0.0	-25.5	0.0
Total	100.0	100.0	-1.94	1.55	-0.71	-2.78	-3.49					



Fund Information

Portfolio Manager : Golden/Carr/Wicentowski Ticker : EVSIX
 PM Tenure : 2011--2017--2019 Inception Date : 07/30/2010
 Fund Assets : \$261 Million Portfolio Turnover : 73%

Fund Investment Policy

The Fund seeks total return greater than that of the S&P 500 Index. The Fund invests, under normal conditions, at least 80% of its assets in common stocks of companies included within the S&P 500 Index.

Comparative Performance - Trailing

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
Wells Fargo Disciplined US Core (EVSIX)	1.62	(42)	18.24	(64)	1.59	(67)	11.24	(69)	9.68	(43)	12.86	(25)	N/A	
S&P 500 Index	1.70	(39)	20.55	(35)	4.25	(39)	13.39	(24)	10.84	(16)	13.26	(14)	13.24 (11)	
IM U.S. Large Cap Core Equity (MF) 1st Quartile	2.17		21.47		5.76		13.35		10.42		12.84		12.69	
IM U.S. Large Cap Core Equity (MF) Median	1.46		19.49		3.21		12.26		9.41		12.00		11.90	
IM U.S. Large Cap Core Equity (MF) 3rd Quartile	0.75		17.24		0.68		10.92		8.40		11.28		11.13	

Comparative Performance - Calendar

	2018		2017		2016		2015		2014		2013		2012	
Wells Fargo Disciplined US Core (EVSIX)	-8.08	(84)	20.88	(55)	12.09	(25)	2.53	(22)	15.69	(4)	33.97	(22)	14.90 (56)	
S&P 500 Index	-4.38	(30)	21.83	(38)	11.96	(26)	1.38	(33)	13.69	(16)	32.39	(38)	16.00 (39)	
IM U.S. Large Cap Core Equity (MF) 1st Quartile	-3.73		22.79		12.01		2.16		12.95		33.50		16.84	
IM U.S. Large Cap Core Equity (MF) Median	-5.61		21.17		10.07		0.25		11.41		31.77		15.28	
IM U.S. Large Cap Core Equity (MF) 3rd Quartile	-7.17		19.28		8.34		-1.67		9.73		29.72		13.13	

Comparative Performance - Quarterly

	Jun-2019		Mar-2019		Dec-2018		Sep-2018		Jun-2018		Mar-2018		Dec-2017	
Wells Fargo Disciplined US Core (EVSIX)	3.29	(76)	12.65	(61)	-14.08	(62)	6.62	(67)	2.18	(77)	-1.79	(75)	6.46 (49)	
S&P 500 Index	4.30	(44)	13.65	(31)	-13.52	(46)	7.71	(32)	3.43	(26)	-0.76	(45)	6.64 (39)	
IM U.S. Large Cap Core Equity (MF) 1st Quartile	4.91		13.93		-12.03		7.89		3.44		-0.31		7.17	
IM U.S. Large Cap Core Equity (MF) Median	4.15		13.08		-13.74		7.28		2.78		-1.02		6.44	
IM U.S. Large Cap Core Equity (MF) 3rd Quartile	3.30		11.94		-14.72		6.06		2.22		-1.80		5.77	

MPT Stats

	1 YR		3 YR		5 YR	
Standard Deviation	18.34		12.24		11.77	
Downside Risk	13.76		8.47		7.64	
vs. S&P 500 Index						
Alpha	-2.61		-2.09		-0.95	
Beta	1.02		1.01		0.99	
Down Market Capture	107.64		106.81		99.24	
Information Ratio	-2.14		-1.74		-0.87	
Tracking Error	1.18		1.10		1.23	
Up Market Capture	97.62		95.05		94.74	
vs. 90 Day U.S. Treasury Bill						
Sharpe Ratio	0.05		0.81		0.77	

Ranking vs. IM U.S. Large Cap Core Equity (MF) 4 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
Wells Fargo Disciplined US Core (EVSIX)	28	10 (36%)	8 (29%)	7 (25%)	3 (11%)
S&P 500 Index	28	7 (25%)	20 (71%)	1 (4%)	0 (0%)

Ranking vs. IM U.S. Large Cap Core Equity (MF) 12 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
Wells Fargo Disciplined US Core (EVSIX)	25	19 (76%)	2 (8%)	4 (16%)	0 (0%)
S&P 500 Index	28	22 (79%)	6 (21%)	0 (0%)	0 (0%)

Ranking vs. IM U.S. Large Cap Core Equity (MF) 20 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
Wells Fargo Disciplined US Core (EVSIX)	17	14 (82%)	3 (18%)	0 (0%)	0 (0%)
S&P 500 Index	28	23 (82%)	5 (18%)	0 (0%)	0 (0%)



Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	263,132,749,693	246,599,138,806	Microsoft Corp	4.8	4.3	4.1	0.2
Median Mkt. Cap (\$)	48,786,680,000	22,714,385,610	Apple Inc	4.4	3.9	13.6	0.6
Price/Earnings ratio	17.6	20.6	Amazon.com Inc	2.8	2.9	-8.3	-0.2
Price/Book ratio	3.1	3.5	Berkshire Hathaway Inc	1.9	1.7	-2.4	0.0
5 Yr. EPS Growth Rate (%)	16.0	15.8	Johnson & Johnson	1.9	1.4	-6.4	-0.1
Current Yield (%)	2.3	2.0	JPMorgan Chase & Co	1.8	1.5	6.0	0.1
Beta (5 Years, Monthly)	0.99	1.00	Alphabet Inc	1.8	1.5	12.8	0.2
Number of Stocks	135	505	Alphabet Inc	1.7	1.5	12.8	0.2
			AT&T Inc	1.7	1.1	14.6	0.3
			Exxon Mobil Corp	1.6	1.2	-6.7	-0.1

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	10.9	10.4	5.08	2.21	0.00	0.31	0.31	Target Corp	0.4	0.2	24.4	0.1
Consumer Discretionary	10.0	10.2	-0.33	0.48	0.00	-0.10	-0.09	Lam Research Corp	0.4	0.1	23.6	0.1
Consumer Staples	6.9	7.4	6.68	6.12	-0.03	0.04	0.01	Kroger Co. (The)	0.7	0.1	19.6	0.1
Energy	5.4	4.8	-5.81	-6.15	-0.06	0.02	-0.04	PulteGroup Inc	0.4	0.0	16.0	0.1
Financials	13.3	13.0	0.02	2.00	0.00	-0.26	-0.25	Lamb Weston Holdings Inc	0.3	0.0	15.1	0.0
Health Care	14.8	14.0	-1.20	-2.26	-0.03	0.16	0.13	Equinix Inc	0.8	0.2	14.9	0.1
Industrials	8.5	9.3	-1.53	0.90	0.00	-0.20	-0.20	AT&T Inc	1.7	1.1	14.6	0.3
Information Technology	21.5	21.8	2.39	3.32	0.01	-0.19	-0.19	Procter & Gamble Co (The)	1.3	1.3	14.2	0.2
Materials	1.9	2.7	2.18	-0.12	0.01	0.04	0.05	Apple Inc	4.4	3.9	13.6	0.6
Real Estate	4.0	3.1	8.24	7.71	0.05	0.02	0.07	Eversource Energy	0.8	0.1	13.5	0.1
Utilities	2.8	3.3	7.96	9.36	-0.04	-0.03	-0.07					
Total	100.0	100.0	1.42	1.68	-0.08	-0.18	-0.26					

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	32.0	38.7	1.50	1.07	0.00	0.14	0.14	Macy's Inc	0.4	0.0	-26.0	-0.1
Large Neutral	23.4	24.4	3.16	2.55	0.00	0.15	0.15	Helmerich & Payne Inc.	0.4	0.0	-19.5	-0.1
Large Value	20.2	17.2	-0.26	1.36	-0.01	-0.33	-0.34	Xilinx Inc.	0.2	0.1	-18.4	0.0
Mid Growth	3.6	3.6	-0.40	0.45	0.00	-0.02	-0.02	Tractor Supply Co	0.2	0.0	-16.6	0.0
Mid Neutral	4.1	4.8	0.32	1.73	0.00	-0.03	-0.03	Pfizer Inc	0.5	0.8	-16.3	-0.1
Mid Value	10.0	5.3	-1.08	-0.27	-0.15	-0.08	-0.23	Ralph Lauren Corp	0.5	0.0	-15.3	-0.1
Small Value	0.7	0.0	3.94	0.00	0.00	0.00	0.00	Xerox Holdings Corp	0.3	0.0	-14.8	0.0
Unclassified	5.9	5.9	6.12	4.67	-0.02	0.08	0.06	Anthem Inc	0.7	0.2	-14.6	-0.1
Total	100.0	100.0	1.42	1.68	-0.17	-0.09	-0.26	Discovery Communications	0.5	0.0	-13.3	-0.1
								ManpowerGroup Inc	0.4	0.0	-12.8	-0.1



Historical Activity

Jun-2019

The MassMutual Guaranteed Interest Account was replaced by the Voya Fixed Account. The returns are MassMutual until 1Q2019, Voya thereafter.
The Record Keeper was changed in 2Q2019 from Mass Mutual to Voya.

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 ACIIX 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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