

Investment Performance Review
Period Ending June 30, 2019

Washoe County 457 & 401a Plans



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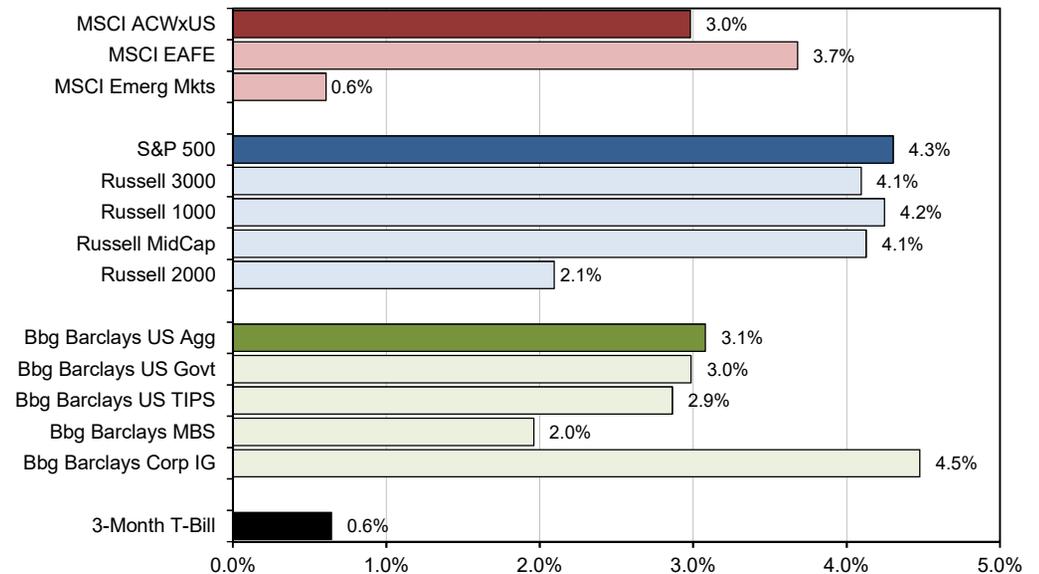


2nd Quarter 2019 Market Environment

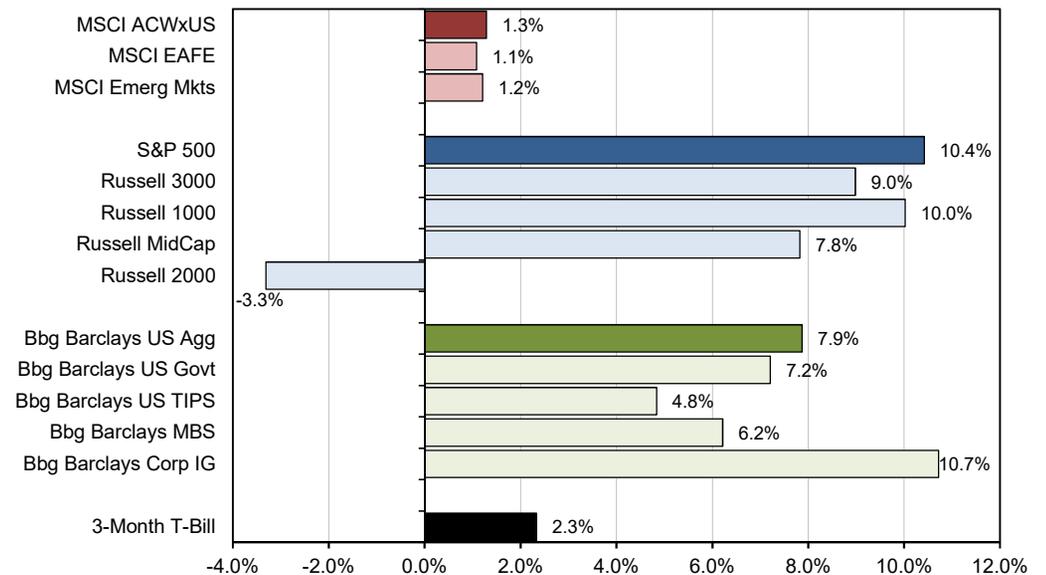


- Broad asset class returns were positive during the 2nd quarter of 2019 with both equity and fixed income indices extending their year-to-date gains. US stocks outperformed international stocks during a very volatile quarter. Equity indices rose to start the period as progress in global trade negotiations outweighed signs of weakness in macroeconomic data. However, trade discussions between the US and China fell apart in May prompting increased tariffs and sharp declines in equity markets. The softening in economic data, stubbornly low inflation and the threat of slower future growth caused by ongoing disruption in trade led the Federal Reserve (Fed) to communicate a shift toward a more accommodative policy stance. This change in central bank posture caused markets to rebound strongly, ending the quarter higher for the period. Fixed income returns were also positive during the quarter as the prospect of more accommodative monetary policy pushed interest rates lower, increasing bond prices. Within domestic equity markets, large cap stocks outperformed small cap equities during the quarter with the S&P 500 Index returning 4.3% versus a 2.1% return on the small cap Russell 2000 Index. US equity returns over the 1-year period were positive within large and mid cap stocks, returning 10.4% and 7.8% respectively, but small cap stocks posted a loss, falling -3.3%.
- Similar to US markets, international markets were volatile during the 2nd quarter as investors reacted to mixed economic data, heightened geopolitical uncertainty, particularly around the outlook for global trade and Brexit, and increased accommodation in central bank policy with the European Central Bank (ECB) and People's Bank of China (PBoC) pledging additional stimulus if needed. Developed markets outperformed emerging markets during the period with the MSCI EAFE Index returning 3.7% versus a 0.6% return on the MSCI Emerging Markets Index. Both developing and emerging markets posted modest gains over the 1-year period, returning 1.1% and 1.2% respectively.
- Fixed income returns were in line with equities during the 2nd quarter. The broad market Bloomberg Barclays Aggregate Index returned 3.1% as a more dovish stance from the Fed and other global central banks pushed interest rates lower across the US Treasury Yield Curve. The curve steepened but remained inverted with shorter-term maturities paying higher interest rates than those in the middle of the curve. Investment grade corporate issues were the best performing securities for the second quarter in a row, outperforming Treasury and securitized issues. The Bloomberg Barclays Corporate IG Index returned 4.5% for the period, as corporate credit had tailwinds due to greater interest rate sensitivity, higher yields and tightening credit spreads. Corporate issues also outperformed the other major fixed income sectors over the 1-year period, returning 10.7% versus a 7.9% return for the Bloomberg Barclays Aggregate Index.

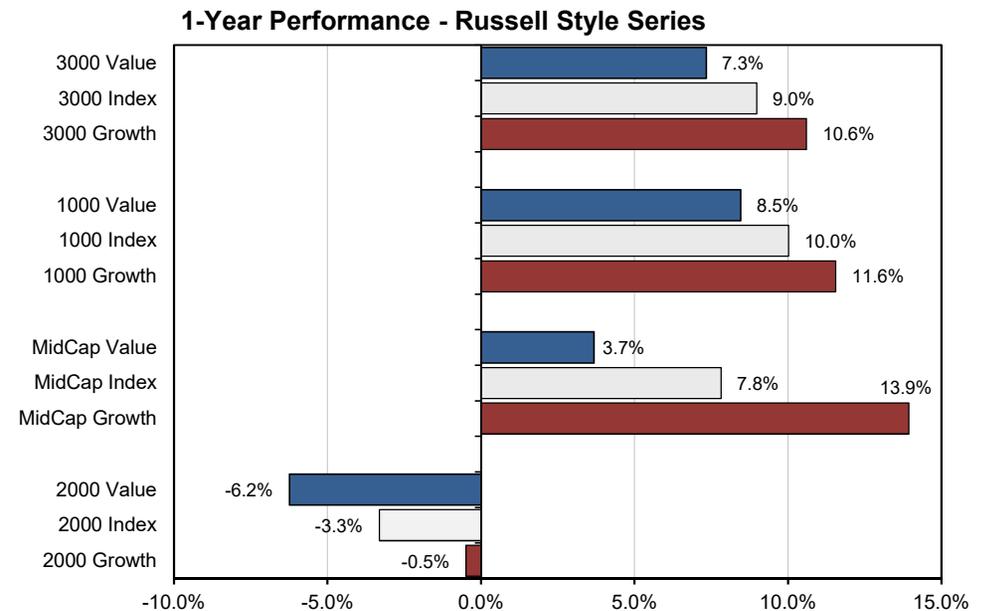
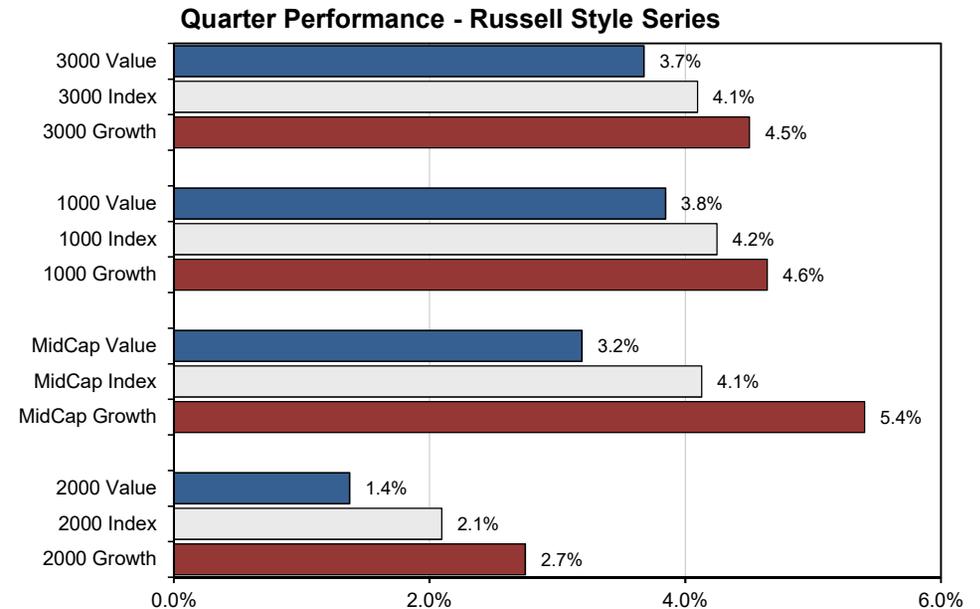
Quarter Performance



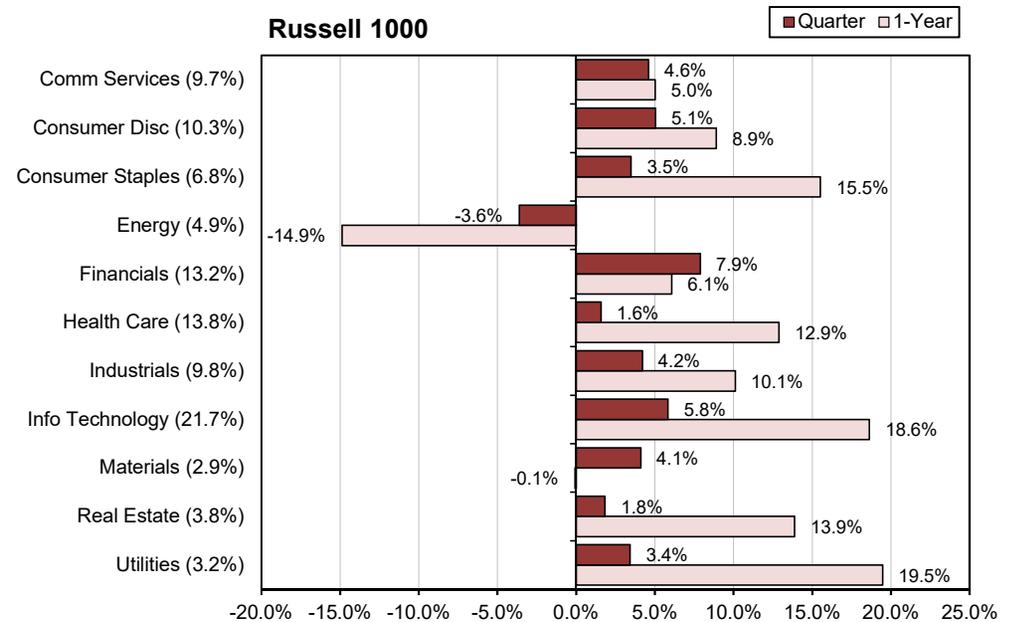
1-Year Performance



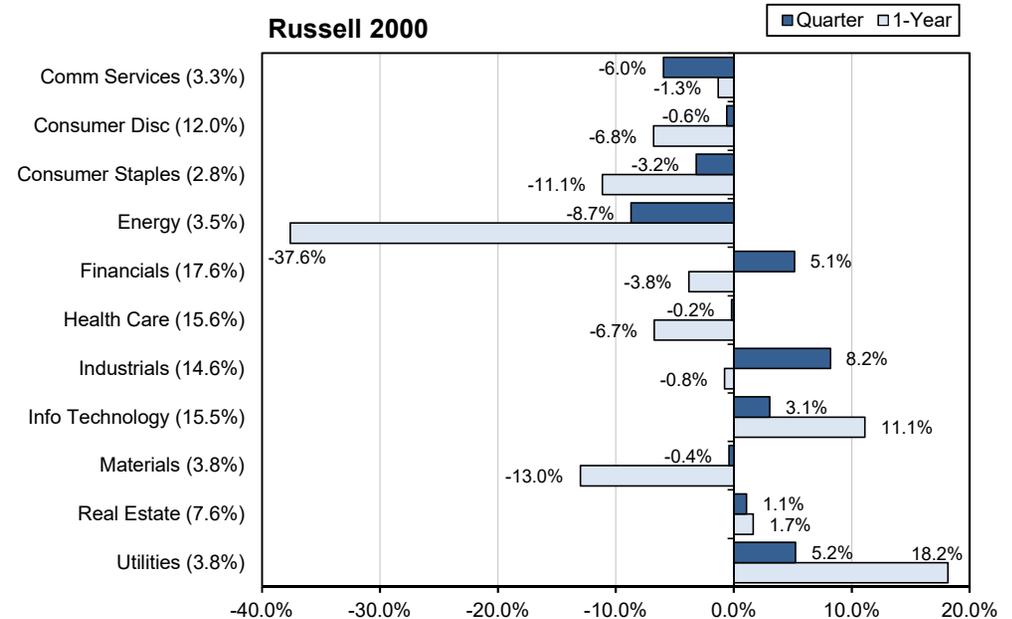
- US equity index returns were modestly positive across the style and capitalization spectrum for the 2nd quarter. Corporate earnings reported during the quarter surprised to the upside, but economic data released during the period showed signs of slowing growth. Developments around global trade were particularly prominent during the period, heavily influencing market sentiment. Positive developments in trade negotiations with China came to an abrupt halt in May leading the US to increase tariffs on \$200 billion of Chinese imports from 10% to 25% and announce that the US would consider tariffs on the remaining \$300 billion in goods imported from China. China retaliated by increasing the tariff range on \$60 billion of US goods from 5-10% to 5-25%. Additionally, the US instituted a ban on sales of technology equipment to Chinese telecommunications firm Huawei citing national security risks. China is expected to take similar action in retaliation although nothing has been announced. Trade talks are ready to resume and both sides have agreed to cease escalations following a meeting between President Trump and President Jinping at the G20 summit held at the end of the quarter. In addition, President Trump threatened a 5% tariff on all Mexican imports as a tact to reduce the level of illegal immigration at the US border with Mexico, and US waivers on sanctions for Iranian oil ended leading to increased tensions in the region that were further escalated after Iran downed a US drone. Despite these headwinds, markets rose following comments from an increasingly accommodative Fed as investors priced in greater odds of easy monetary policy going forward.
- During the quarter, higher market cap stocks outperformed lower market cap stocks across the style spectrum with the only exception being the outperformance of mid cap growth stocks relative to large cap growth stocks. The large cap Russell 1000 Index gained 4.2% during the period versus a 4.1% return for the Russell MidCap Index and a 2.1% gain on the small cap Russell 2000 Index as market participants may be moving toward the relative safety of large cap names as the economy continues to show growing signs of weakness. When viewed over the most recent 1-year period, large cap stocks outperformed relative to small cap stocks. The Russell 1000 returned 10.0% for the year while the Russell 2000 fell -3.3%.
- Growth indices outperformed value indices across the market cap spectrum during the 2nd quarter. Growth stocks have outperformed value in nine of the last ten quarters. The Russell MidCap Growth Index was the best performing style index for the period, returning 5.4% for the quarter with the small cap value index posting the lowest relative return, a gain of 1.4%. The trend of growth outperformance is also visible over the 1-year period as growth indices have benefitted from larger exposures to technology which has been a large driver of index performance over the last year, as well as a meaningful underweight to energy which has been a relative detractor.



- Sector performance was broadly positive across large cap sectors for the 2nd quarter. There were gains for ten out of eleven sectors within the Russell 1000 Index during the period with four sectors outpacing the return of the index. Cyclical sectors such as technology, industrials and consumer discretionary were some of the best performers through the quarter returning 5.8%, 4.2% and 5.1% respectively. Financials also outperformed, returning 7.9%, as investors weighed the benefits of continued economic expansion due to easing monetary policy against the effects of lower interest rates on bank earnings. More defensive higher yielding sectors such as consumer staples, real estate and utilities underperformed for the quarter returning 3.5%, 1.8% and 3.4% respectively. The energy sector was the only large cap sector to post a negative return during the quarter, falling -3.6%, as headwinds from weakening economic data and low oil and natural gas prices weighed on 1st quarter earnings. Health care stocks also lagged as continued discussions in Washington around the potential for increased regulation on drug pricing acted as a headwind. Returns over the 1-year period were positive with nine out of eleven sectors posting gains, six of which were over 10%. Defensive sectors such as utilities, REITs and consumer staples performed well returning 19.5%, 13.9% and 15.5% respectively. Technology returns were also strong gaining 18.6%. Energy and materials were the only sectors to post negative results over the 1-year period with energy falling -14.9% and materials returning -0.1%.



- Quarterly results for small cap sectors were generally worse than their large capitalization counterparts with only two of eleven sectors (industrials and utilities) outperforming their corresponding large cap equivalents. Five of eleven sectors produced gains during the period with four of eleven economic sectors outpacing the Russell 2000 Index return for the quarter. Similar to large caps, cyclical sectors performed well on hopes that any Fed policy easing would counteract the recent weakness in economic growth. The industrials sector performed particularly well returning 8.2%, financials posted a 5.1% gain and technology returned 3.1%. Utilities also outperformed returning 5.2%. The largest detractors over the period were energy and communication services which returned -8.7% and -6.0% respectively. Over the trailing 1-year period, returns were broadly negative. Utilities and technology were relative bright spots returning 18.2% and 11.1%. The energy sector was an outlier in terms of negative returns losing -37.6% during the period. There were also notable losses in materials and consumer staples with materials losing -13.0% and consumer staples falling -11.1%.



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

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Microsoft Corp	3.71%	14.0%	37.5%	Information Technology
Apple Inc	3.44%	4.6%	8.6%	Information Technology
Amazon.com Inc	2.85%	6.3%	11.4%	Consumer Discretionary
Facebook Inc A	1.68%	15.8%	-0.7%	Communication Services
Berkshire Hathaway Inc B	1.51%	6.1%	14.2%	Financials
Johnson & Johnson	1.37%	0.3%	17.9%	Health Care
JPMorgan Chase & Co	1.35%	11.3%	10.3%	Financials
Alphabet Inc Class C	1.20%	-7.9%	-3.1%	Communication Services
Exxon Mobil Corp	1.19%	-4.1%	-3.3%	Energy
Alphabet Inc A	1.18%	-8.0%	-4.1%	Communication Services

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Adient PLC	0.01%	87.3%	-50.0%	Consumer Discretionary
Anadarko Petroleum Corp	0.13%	55.8%	-1.6%	Energy
Cypress Semiconductor Corp	0.03%	49.8%	46.9%	Information Technology
Okta Inc A	0.04%	49.3%	145.2%	Information Technology
Erie Indemnity Co Class A	0.02%	43.2%	122.5%	Financials
Heico Corp	0.02%	41.1%	83.9%	Industrials
Legg Mason Inc-LeggMason RETAIL	0.01%	39.9%	14.4%	Financials
Exact Sciences Corp	0.05%	36.3%	97.4%	Health Care
Caesars Entertainment Corp	0.02%	36.0%	10.5%	Consumer Discretionary
Ardagh Group SA	0.00%	35.9%	9.6%	Materials

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
2U Inc	0.01%	-46.9%	-55.0%	Information Technology
Alkermes PLC	0.01%	-38.2%	-45.2%	Health Care
Range Resources Corp	0.01%	-37.7%	-58.0%	Energy
Antero Resources Corp	0.00%	-37.4%	-74.1%	Energy
Chesapeake Energy Corp	0.01%	-37.1%	-62.8%	Energy
RPC Inc	0.00%	-36.5%	-48.8%	Energy
Realogy Holdings Corp	0.00%	-35.8%	-67.4%	Real Estate
The Chemours Co	0.02%	-34.7%	-44.2%	Materials
United Therapeutics Corp	0.01%	-33.5%	-31.0%	Health Care
Mylan NV	0.04%	-32.8%	-47.3%	Health Care

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Array BioPharma Inc	0.48%	90.0%	176.1%	Health Care
The Trade Desk Inc A	0.37%	15.1%	142.8%	Information Technology
Etsy Inc	0.36%	-8.7%	45.5%	Consumer Discretionary
Coupa Software Inc	0.35%	39.2%	103.4%	Information Technology
Five Below Inc	0.32%	-3.4%	22.8%	Consumer Discretionary
Planet Fitness Inc A	0.31%	5.4%	64.9%	Consumer Discretionary
HubSpot Inc	0.31%	2.6%	36.0%	Information Technology
Haemonetics Corp	0.30%	37.6%	34.2%	Health Care
Woodward Inc	0.30%	19.4%	48.0%	Industrials
Ciena Corp	0.29%	10.1%	55.1%	Information Technology

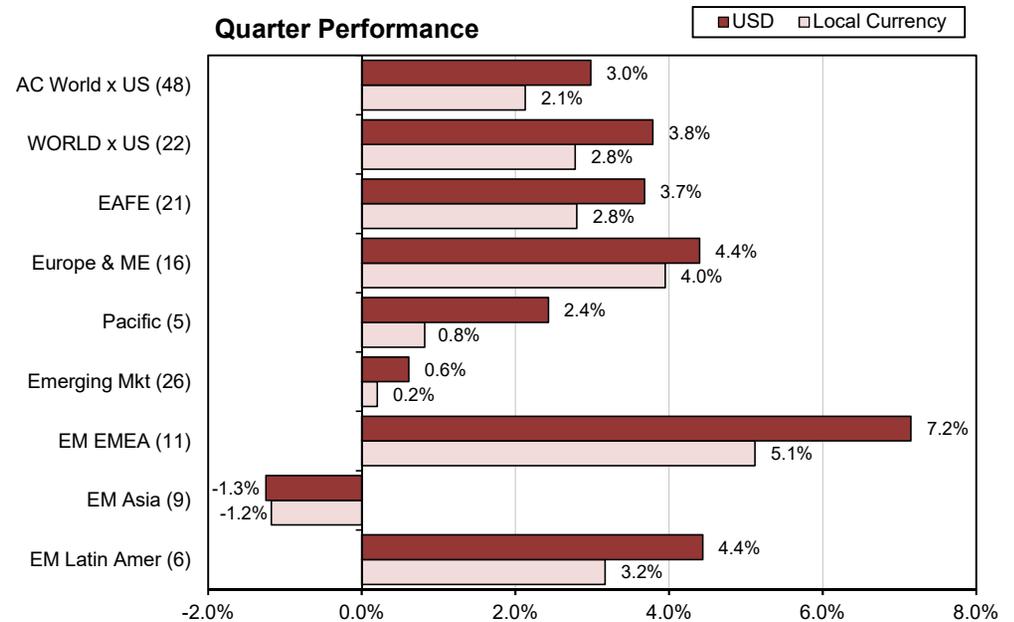
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Iovance Biotherapeutics Inc	0.13%	157.8%	91.6%	Health Care
Arqule Inc	0.06%	129.9%	99.1%	Health Care
Adverum Biotechnologies Inc	0.03%	126.9%	124.3%	Health Care
Chimerix Inc	0.01%	105.7%	-9.2%	Health Care
Enphase Energy Inc	0.08%	97.5%	170.9%	Information Technology
Maxar Technologies Inc	0.02%	94.8%	-84.0%	Industrials
Array BioPharma Inc	0.48%	90.0%	176.1%	Health Care
Melinta Therapeutics Inc	0.00%	87.3%	-79.1%	Health Care
G1 Therapeutics Inc	0.03%	84.7%	-29.5%	Health Care
Foundation Building Materials Inc	0.01%	80.7%	15.6%	Industrials

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
FuelCell Energy Inc	0.00%	-94.0%	-98.9%	Industrials
Halcon Resources Corp	0.00%	-86.9%	-96.0%	Energy
Pioneer Energy Services Corp	0.00%	-85.7%	-95.7%	Energy
Eros International PLC	0.00%	-85.2%	-89.6%	Communication Services
Superior Energy Services Inc	0.01%	-72.2%	-86.7%	Energy
electroCore Inc	0.00%	-71.4%	-87.9%	Health Care
Ultra Petroleum Corp	0.00%	-70.5%	-92.2%	Energy
Nuvectra Corp	0.00%	-69.6%	-83.7%	Health Care
Dean Foods Co	0.00%	-69.5%	-91.1%	Consumer Staples
Kirkland's Inc	0.00%	-67.9%	-80.6%	Consumer Discretionary

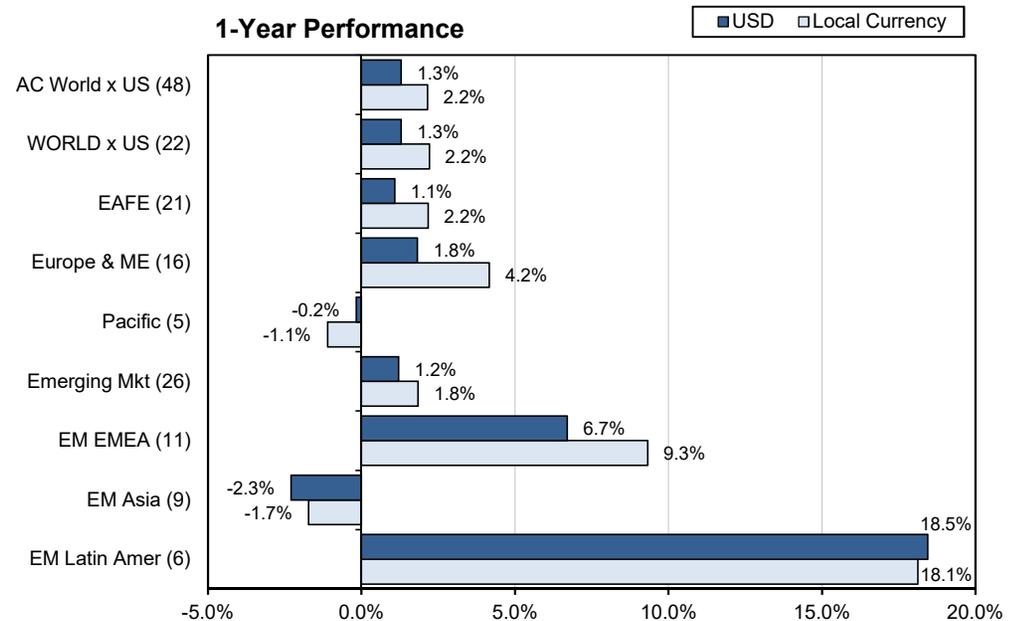


- Broad international equity returns were positive for the quarter in both local currency and USD terms. The MSCI ACWI ex US Index gained 2.1% in local currency terms and 3.0% in US dollar (USD) terms during the 2nd quarter. Similar to US markets, international equity investors balanced difficulties around global trade with central bank shifts toward more accommodative policies as a response to slowing global growth. Notably the ECB President Mario Draghi stated that further monetary policy action may need to be taken if inflation remains below target and the PBoC launched stimulus measures designed to encourage growth following the deterioration of trade negotiations with the US. Returns in USD largely outperformed those in local currency during the quarter as the USD depreciated against most major developed currencies following dovish Fed comments in June. However, the recent USD strength can still be seen over the 1-year period with USD returns trailing most local currency returns. Returns for the MSCI ACWI ex US Index were 2.2% in local currency terms and 1.3% in USD terms for the trailing year.
- Results for developed market international indices were positive in both local currency and USD terms during the 2nd quarter, with the MSCI EAFE Index returning 2.8% and 3.7% respectively. Outside of central bank policy and trade, there was notable news out of the UK with Prime Minister Theresa May resigning from her post after her Brexit withdrawal plan failed to gain parliamentary approval and a new vote for the office is currently underway. UK markets were pressured by continued uncertainty around Brexit with the UK having until October to strike an agreement with the European Union (EU) or withdraw with no agreement in place. Despite the growing uncertainty, the Bank of England (BoE) left monetary policy unchanged. Japan also underperformed as the yen appreciated due to its perceived safe haven status and trade headwinds were expected to affect its export driven economy. The MSCI EAFE Index returned 2.2% and 1.1% for the last twelve months in local currency and USD terms respectively.
- Emerging markets underperformed relative to developed markets for the 2nd quarter, slightly appreciating in both local currency and USD terms. The MSCI Emerging Markets Index gained 0.2% and 0.6% respectively. As expected, geopolitical tensions around trade put pressure on emerging market stocks, with Chinese equities underperforming relative to most countries. Latin American stocks performed well with Brazil and Argentina posting strong returns as commodity prices appreciated from recent lows at the end of 2018 and interest rates fell. Russian equities also performed well, benefiting from increasing commodity prices, but also had a tailwind from a decrease in the likelihood of future US sanctions. One year returns for the MSCI Emerging Market Index were 1.8% in local currency terms and 1.2% in USD terms.

Quarter Performance



1-Year Performance



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

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.4%	4.0%	4.3%
Consumer Discretionary	11.1%	5.9%	-2.6%
Consumer Staples	11.7%	1.9%	4.8%
Energy	5.6%	0.4%	-5.5%
Financials	18.9%	4.3%	-2.9%
Health Care	11.2%	2.0%	7.5%
Industrials	14.8%	5.9%	2.4%
Information Technology	6.7%	6.6%	2.7%
Materials	7.4%	3.9%	0.2%
Real Estate	3.6%	-2.2%	2.3%
Utilities	3.6%	1.5%	9.8%
Total	100.0%	3.7%	1.1%

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.9%	1.0%	5.6%
Consumer Discretionary	11.3%	3.8%	-3.6%
Consumer Staples	9.8%	2.2%	4.6%
Energy	7.2%	0.5%	-1.4%
Financials	21.9%	4.4%	2.0%
Health Care	8.3%	1.2%	4.2%
Industrials	11.9%	5.2%	2.9%
Information Technology	8.5%	4.0%	-0.7%
Materials	7.6%	2.9%	-0.5%
Real Estate	3.3%	-1.6%	4.3%
Utilities	3.3%	2.2%	10.1%
Total	100.0%	3.0%	1.3%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	11.7%	-2.4%	4.5%
Consumer Discretionary	13.5%	-1.2%	-7.6%
Consumer Staples	6.6%	3.3%	0.9%
Energy	7.9%	1.2%	16.3%
Financials	25.2%	4.0%	11.9%
Health Care	2.6%	-6.6%	-24.7%
Industrials	5.3%	0.0%	4.1%
Information Technology	13.9%	-0.1%	-6.1%
Materials	7.6%	-1.2%	-1.9%
Real Estate	3.0%	-0.2%	10.1%
Utilities	2.7%	2.9%	9.0%
Total	100.0%	0.6%	1.2%

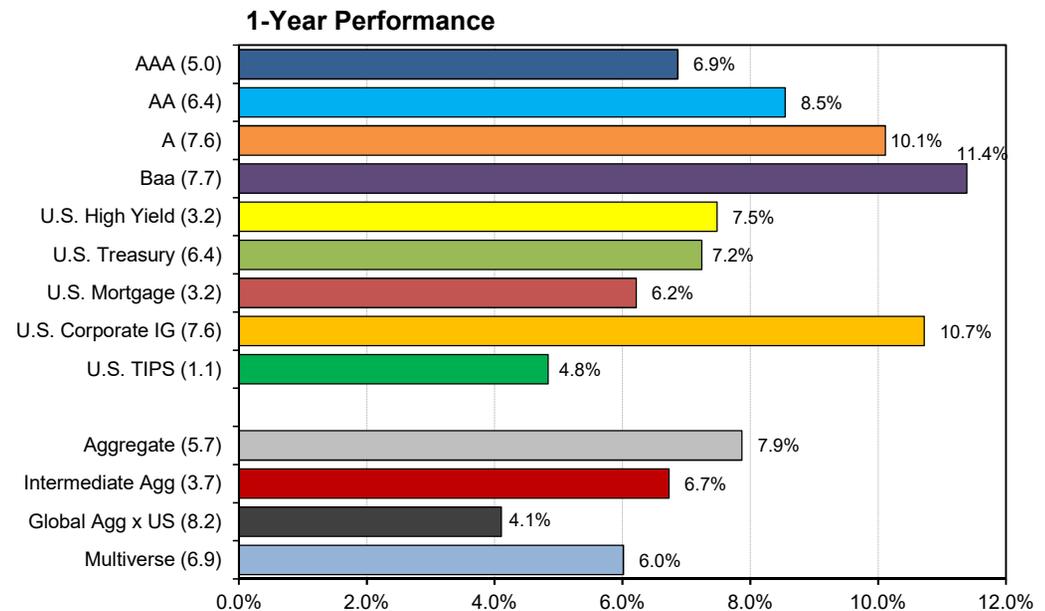
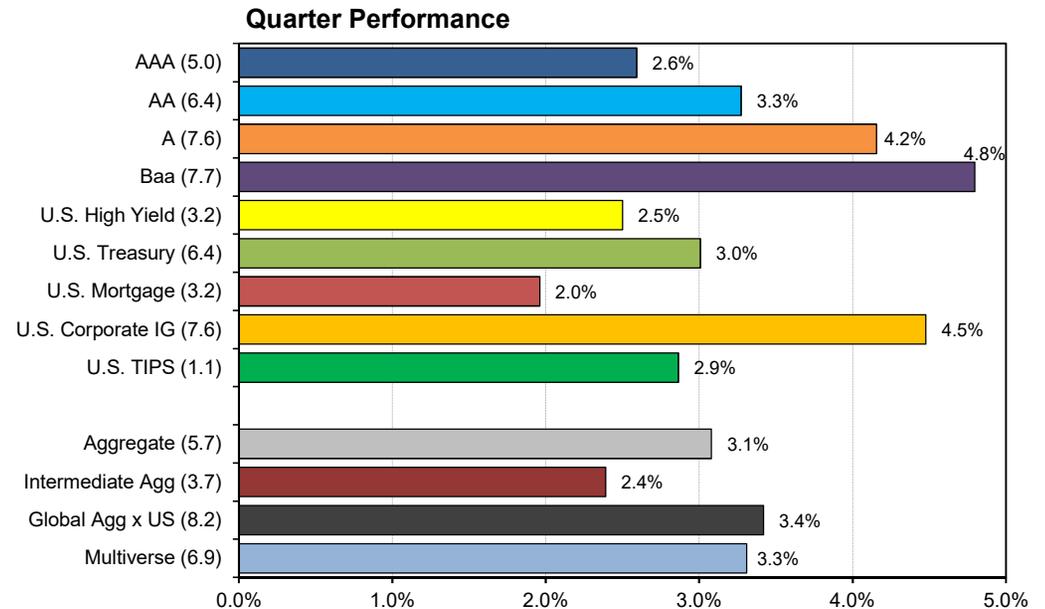
Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1-Year Return
Japan	23.7%	15.8%	1.0%	-4.2%
United Kingdom	16.8%	11.2%	0.9%	-2.1%
France	11.4%	7.6%	6.5%	3.0%
Switzerland	9.3%	6.2%	8.4%	19.8%
Germany	8.8%	5.9%	7.1%	-3.8%
Australia	7.1%	4.8%	7.3%	6.6%
Hong Kong	4.0%	2.7%	1.0%	10.4%
Netherlands	3.6%	2.4%	5.8%	5.3%
Spain	3.0%	2.0%	2.6%	-2.1%
Sweden	2.7%	1.8%	4.9%	3.4%
Italy	2.3%	1.6%	2.9%	-0.7%
Denmark	1.7%	1.1%	1.6%	5.8%
Singapore	1.4%	0.9%	7.0%	8.3%
Finland	1.0%	0.7%	0.2%	-4.7%
Belgium	1.0%	0.7%	1.2%	-9.1%
Norway	0.7%	0.5%	2.4%	-4.3%
Israel	0.6%	0.4%	-3.6%	-4.5%
Ireland	0.5%	0.4%	4.7%	-9.2%
New Zealand	0.3%	0.2%	3.9%	16.0%
Austria	0.2%	0.2%	0.8%	-13.1%
Portugal	0.2%	0.1%	1.6%	-4.6%
Total EAFE Countries	100.0%	66.8%	3.7%	1.1%
Canada		6.8%	4.9%	3.3%
Total Developed Countries		73.6%	3.8%	1.3%
China		8.3%	-4.0%	-6.7%
Korea		3.3%	-1.0%	-9.1%
Taiwan		2.9%	0.9%	1.1%
India		2.4%	0.5%	7.9%
Brazil		2.0%	7.2%	39.4%
South Africa		1.6%	6.6%	-0.8%
Russia		1.1%	16.9%	27.1%
Thailand		0.8%	9.3%	19.8%
Saudi Arabia		0.8%	0.6%	11.0%
Mexico		0.7%	1.1%	-7.4%
Indonesia		0.6%	3.2%	20.3%
Malaysia		0.6%	1.2%	-0.8%
Philippines		0.3%	4.4%	19.7%
Poland		0.3%	3.5%	10.5%
Qatar		0.3%	0.6%	18.8%
Chile		0.2%	-5.6%	-12.1%
United Arab Emirates		0.2%	-2.7%	3.0%
Turkey		0.1%	2.8%	-17.1%
Colombia		0.1%	-2.4%	-3.7%
Peru		0.1%	-1.9%	3.5%
Argentina		0.1%	31.7%	15.8%
Greece		0.1%	16.2%	-9.2%
Hungary		0.1%	-4.1%	12.7%
Czech Republic		0.0%	2.6%	1.1%
Egypt		0.0%	7.8%	5.4%
Pakistan		0.0%	-20.8%	-36.7%
Total Emerging Countries		26.4%	0.6%	1.2%
Total ACWIxUS Countries		100.0%	3.0%	1.3%

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.

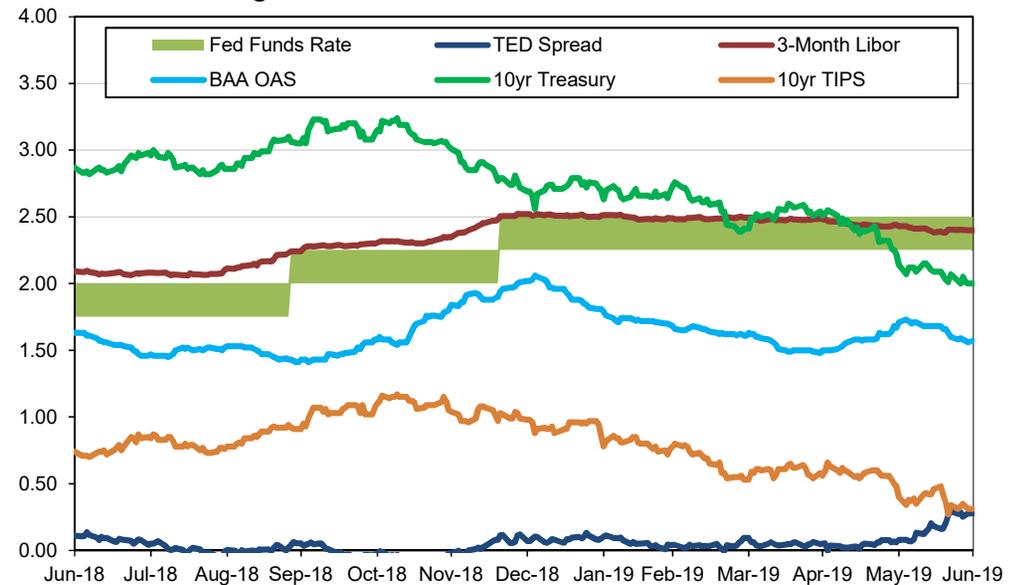


- Broad fixed income benchmarks built on their early 2019 gains during the 2nd quarter. During the 1st quarter, the Federal Open Market Committee (FOMC) reacted to a difficult end to 2018 by issuing guidance that the FOMC is no longer projecting any further interest rate increases through 2019. Federal Reserve Chair Jerome Powell also stated that the Fed would begin tapering the roll off from the planned balance sheet reduction program in May with a plan to halt the program entirely in September. The stoppage of the balance sheet reduction program represents an easing of monetary policy. The Fed took an increasingly dovish stance during the 2nd quarter reacting to softening economic data, tepid inflation and increased risks around global trade. While the committee left interest rates unchanged, the minutes from the June FOMC meeting indicate that the committee felt “downside risks to the outlook for economic activity had risen materially” during the quarter with several participants noting that a “near-term cut in the target range for the Federal Funds Rate could help cushion the effects of possible future adverse shocks to the economy”. These comments led market participants to forecast greater odds of an interest rate cut this year, pushing markets higher. Interest rates fell across all maturities on the US Treasury Yield Curve with the greatest declines occurring in the mid- and long-term issues. The curve remains inverted with short-term maturities paying higher interest rates than issues in the mid- to long-end of the curve. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 1st quarter and the 1-year period, returning 3.1% and 7.9% respectively.
- Within investment grade credit, lower quality issues outperformed higher quality issues as investors gravitated toward higher risk securities during the quarter. Lower quality issues also benefitted from their higher durations. On an absolute basis, without negating the duration differences in the sub-indices, Baa rated credit was the best performing investment grade credit quality segment returning 4.8% for the quarter, while AAA was the worst performing, returning 2.6%. High yield issues returned 2.5% for the quarter as these issues did not commensurately benefit from the drop in interest rates due to their lower durations. Returns over the 1-year period generally show lower quality securities outperforming higher quality issues.
- 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 2nd quarter. Investment grade corporate credit returned 4.5%, as falling interest rates benefitted these securities to a greater degree and credit spreads have continued to tighten since the end of 2018. When viewed over the 1-year period, corporate credit outperformed both Treasuries and mortgage backed securities. Corporate issues returned 10.7% versus a 6.2% return for mortgages and 7.2% gain on Treasury securities.

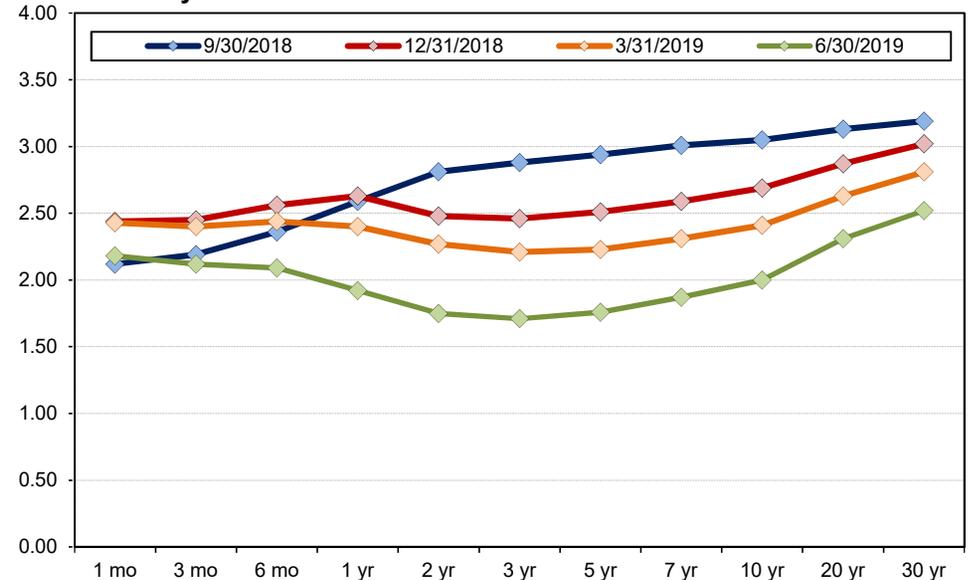


- Global fixed income returns were in line with their domestic counterparts, slightly outperforming during the 2nd quarter. These indices have lower, or in some cases (Germany, Japan), negative yields, but have higher durations. The returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. The USD depreciated against most other developed currencies, acting as a tailwind to global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was 3.4%. Global bonds still trail over the 1-year period with the Global Aggregate ex US Index returning 4.1% versus a 7.9% return on the domestically focused 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 the 10-year Treasury yield (green line) fell from recent high's greater than 3.0%, to 2.0% to end the quarter. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury issues. This line illustrates 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 dropped steadily until they rose again in May and then later declined in June. This spread tightening is equivalent to an interest rate decrease on corporate bonds, which produces an additional tailwind for corporate bond index returns. These credit spreads have tightened by about 6 basis points over the last three months. The green band across the graph illustrates the gradual increase in the Federal Funds Rate due to the tightening of US monetary policy during 2018. There have been no changes to the Federal Funds Rate in 2019.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. The downward shift in interest rates as well as a general steepening of the yield curve are clearly visible over the last quarter. As mentioned, the yield curve continues to invert as yields on shorter-term maturities fell less than interest rates in the middle- to long-end of the curve.

1-Year Trailing Market Rates



Treasury Yield Curve



Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)



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 are still strong during the last ten years annualized periods. We are recommending patience at this time.

The Lazard Emerging Markets Fund remained on **WATCH** status due to continued poor relative performance when compared to the peer group and market index. Emerging markets funds continue to experience severe return volatility, and although absolute returns were better in the first and second quarters The value style of Lazard continued to be the primary cause for the funds severe underperformance over the one, three and five year periods. Although we continue to believe in the team, it is my opinion that we examine alternative strategies that are not deeply style driven.

The DFA International Small Cap Value fund remains on **WATCH** status due to significant underperformance during the last eighteen months that has caused a deterioration on the longer term relative returns. As we have seen with some of our other value oriented strategies the style has been the primary driver of the funds poor performance. The fund represents a small allocation in the overall assets of the plan. As with the emerging markets strategy we are recommending examining potential replacement strategies that are not deeply style driven.

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 will pass. We are not recommending any changes at this time.



Portfolio Evaluation Summary

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

Pass (Satisfactory)

Guarded

Watch

Investment Funds	1	2	3	4	5	6	7	8	9
Lazard Emerging Markets Equity (LZOEX)	Watch	Watch	Pass	Pass	Pass	Guarded	Pass	Pass	Watch
DFA International Small Cap Value (DISVX)	Watch	Watch	Pass	Pass	Pass	Guarded	Pass	Pass	Watch
American Funds EuroPacific Growth (RERGX)	Pass	Pass	Pass	Pass	Guarded	Pass	Pass	Pass	Pass
Wells Fargo Small Co Growth R6 (WSCRX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Small Cap Index Adm (VSMAX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
AMG Managers Skyline Special Equities (SKSEX)	Pass	Guarded	Pass	Pass	Pass	Guarded	Pass	Pass	Pass
Hartford Mid Cap (HIMCX)	Pass	Pass	Pass	Pass	Pass	Guarded	Pass	Pass	Pass
Vanguard Mid Cap Index Adm (VIMAX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hotchkis & Wiley Mid Cap Value (HWMIX)	Guarded	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	1Q19	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17	1Q17
Lazard Emerging Markets Equity (LZOEX)	Guarded	Guarded	Guarded	Guarded	Pass	Guarded	Guarded	Guarded	Pass
DFA International Small Cap Value (DISVX)	Pass								
American Funds EuroPacific Growth (RERGX)	Pass								
Wells Fargo Small Co Growth R6 (WSCRX)	Pass								
Vanguard Small Cap Index Adm (VSMAX)	Pass								
AMG Managers Skyline Special Equities (SKSEX)	Guarded	Guarded	Guarded	Guarded	Pass	Pass	Pass	Pass	Pass
Hartford Mid Cap (HIMCX)	Pass								
Vanguard Mid Cap Index Adm (VIMAX)	Pass								
Hotchkis & Wiley Mid Cap Value (HWMIX)	Guarded								
American Funds Growth Fund of America (RGAGX)	Pass								
Wells Fargo Disciplined US Core (EVSIX)	Pass								
Vanguard Institutional Index (VINIX)	Pass								
American Century Equity Income (AEUDX)	Pass								
American Funds American Balanced (RLBGX)	Pass								
PIMCO High Yield (PHIYX)	Pass								
PIMCO Foreign Bond USD-Hedged (PFORX)	Pass								
Hartford Total Return Bond (HIABX)	Pass								
Voya Fixed Account	Pass								



Asset Allocation Attributes

	Jun-2019		Mar-2019		Dec-2018	
	(\$)	%	(\$)	%	(\$)	%
Total 457 Fund	166,539,433	100.00	164,682,108	100.00	155,626,513	100.00
International Equity						
Lazard Emerging Markets Equity (LZOEX)	1,329,194	0.80	1,248,809	0.76	1,172,330	0.75
DFA International Small Cap Value (DISVX)	1,382,379	0.83	1,384,967	0.84	1,255,726	0.81
American Funds EuroPacific Growth (RERGX)	4,751,798	2.85	4,663,439	2.83	4,108,472	2.64
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	2,982,772	1.79	2,959,611	1.80	2,551,478	1.64
Vanguard Small Cap Index (VSMAX)	3,270,685	1.96	2,818,903	1.71	2,408,630	1.55
AMG Managers Skyline Special Equities (SKSEX)	2,180,574	1.31	2,259,079	1.37	2,041,078	1.31
Hartford Mid Cap (HIMCX)	9,557,380	5.74	9,469,592	5.75	7,890,061	5.07
Vanguard Mid Cap Index (VIMAX)	3,416,163	2.05	2,868,679	1.74	2,484,906	1.60
Hotchkis & Wiley Mid Cap Value (HWMIX)	2,504,690	1.50	2,716,779	1.65	2,325,742	1.49
AF Growth Fund of America (RGAGX)	14,912,715	8.95	14,588,895	8.86	12,922,280	8.30
Wells Fargo Disciplined US Core (EVSIX)	11,556,436	6.94	12,229,332	7.43	10,881,687	6.99
Vanguard Institutional Index (VINIX)	13,514,175	8.11	12,045,266	7.31	10,702,954	6.88
American Century Equity Income (AEUDX)	7,123,087	4.28	6,779,281	4.12	6,214,511	3.99
Balanced Fund						
American Funds American Balanced (RLBGX)	5,799,168	3.48	5,780,556	3.51	5,472,323	3.52
Fixed Income						
PIMCO High Yield (PHIYX)	2,250,045	1.35	2,041,630	1.24	1,926,869	1.24
PIMCO Foreign Bond USD-Hedged (PFORX)	1,143,475	0.69	984,025	0.60	949,338	0.61
Hartford Total Return Bond (HIABX)	3,721,769	2.23	3,417,417	2.08	3,269,210	2.10
Cash						
Voya Fixed Account	72,490,644	43.53	73,728,945	44.77	74,349,570	47.77
Loan Account	2,652,286	1.59	2,696,903	1.64	2,699,348	1.73



Asset Allocation
457 Retirement Models
As of June 30, 2019

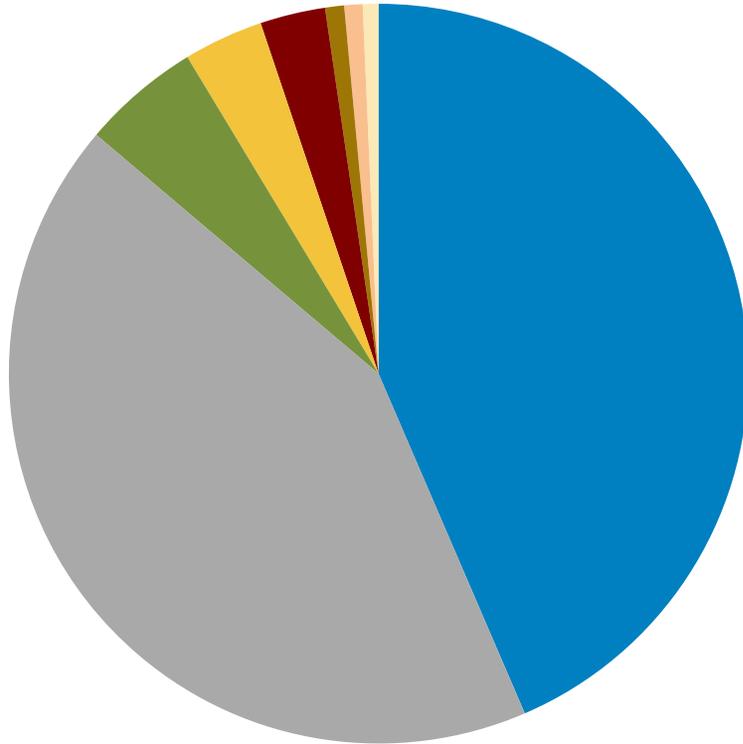
Asset Allocation Attributes	Jun-2019		Mar-2019		Dec-2018	
	(\$)	%	(\$)	%	(\$)	%
WCAB 2060 Retirement	22,181	0.20	1,549	0.02	1,378	0.02
WCAB 2055 Retirement	28,061	0.26	22,239	0.24	16,788	0.19
WCAB 2050 Retirement	1,044,645	9.56	930,952	9.84	834,999	9.60
WCAB 2045 Retirement	484,568	4.44	241,559	2.55	201,441	2.32
WCAB 2040 Retirement	2,918,299	26.71	2,632,554	27.82	1,957,770	22.50
WCAB 2035 Retirement	734,142	6.72	444,988	4.70	388,876	4.47
WCAB 2030 Retirement	2,238,001	20.48	2,451,957	25.92	2,680,467	30.81
WCAB 2025 Retirement	881,829	8.07	1,126,771	11.91	1,148,501	13.20
WCAB 2020 Retirement	2,518,397	23.05	1,551,915	16.40	1,410,296	16.21
WCAB 2015 Retirement	-	0.00	-	0.00	-	0.00
WCAB Income Retirement	55,125	0.50	56,869	0.60	59,660	0.69
Model Portfolios Total	10,925,246	100.00	9,461,354	100.00	8,700,176	100.00



June 30, 2019 : \$166,539,433

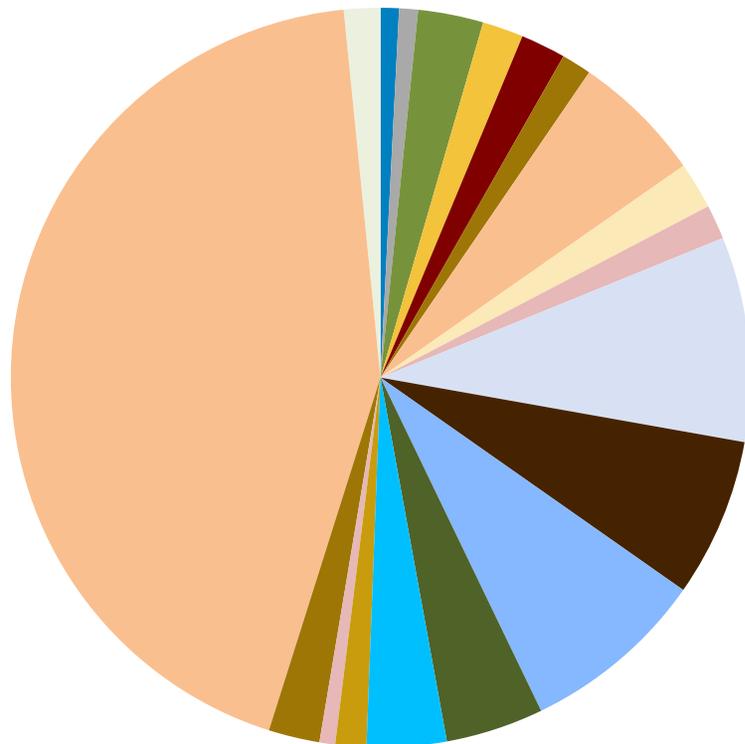
Allocation

	Market Value	Allocation
■ Cash	72,490,644	43.5
■ US Equity	71,018,677	42.6
■ US Fixed Income	8,624,100	5.2
■ US Balanced	5,799,168	3.5
■ International Equity	4,751,798	2.9
■ International-Developed Equity	1,382,379	0.8
■ International-Emerging Equity	1,329,194	0.8
■ International Fixed Income	1,143,475	0.7



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

June 30, 2019 : \$166,539,433



Allocation

	Market Value	Allocation
Lazard Emerging Markets Equity (LZOEX)	1,329,194	0.8
DFA International Small Cap Value (DISVX)	1,382,379	0.8
American Funds EuroPacific Growth (RERGX)	4,751,798	2.9
Wells Fargo Small Co Growth (WSCRX)	2,982,772	1.8
Vanguard Small Cap Index (VSMAX)	3,270,685	2.0
AMG Managers Skyline Special Equities (SKSEX)	2,180,574	1.3
Hartford Mid Cap (HIMCX)	9,557,380	5.7
Vanguard Mid Cap Index (VIMAX)	3,416,163	2.1
Hotchkis & Wiley Mid Cap Value (HWMIX)	2,504,690	1.5
AF Growth Fund of America (RGAGX)	14,912,715	9.0
Wells Fargo Disciplined US Core (EVSIX)	11,556,436	6.9
Vanguard Institutional Index (VINIX)	13,514,175	8.1
American Century Equity Income (AEUDX)	7,123,087	4.3
American Funds American Balanced (RLBGX)	5,799,168	3.5
PIMCO High Yield (PHIYX)	2,250,045	1.4
PIMCO Foreign Bond USD-Hedged (PFORX)	1,143,475	0.7
Hartford Total Return Bond (HIABX)	3,721,769	2.2
Voya Fixed Account	72,490,644	43.5
Loan Account	2,652,286	1.6



Asset Allocation Attributes

	Jun-2019		Mar-2019		Dec-2018	
	(\$)	%	(\$)	%	(\$)	%
Total 401(a) Fund	12,546,539	100.00	12,160,188	100.00	11,284,725	100.00
International Equity						
Lazard Emerging Markets Equity (LZOEX)	128,380	1.02	148,972	1.23	139,058	1.23
DFA International Small Cap Value (DISVX)	126,482	1.01	157,667	1.30	139,951	1.24
American Funds EuroPacific Growth (RERGX)	396,606	3.16	410,201	3.37	360,260	3.19
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	291,293	2.32	298,639	2.46	257,843	2.28
Vanguard Small Cap Index (VSMAX)	300,026	2.39	280,060	2.30	240,442	2.13
AMG Managers Skyline Special Equities (SKSEX)	253,151	2.02	260,185	2.14	227,646	2.02
Hartford Mid Cap (HIMCX)	856,797	6.83	864,683	7.11	695,036	6.16
Vanguard Mid Cap Index (VIMAX)	296,828	2.37	260,336	2.14	219,795	1.95
Hotchkis & Wiley Mid Cap Value (HWMIX)	242,987	1.94	268,752	2.21	226,283	2.01
American Funds Growth Fund of America (RGAGX)	856,141	6.82	831,450	6.84	725,306	6.43
Wells Fargo Disciplined US Core (EVSIX)	891,614	7.11	910,499	7.49	800,488	7.09
Vanguard Institutional Index (VINIX)	1,192,438	9.50	1,147,322	9.44	1,024,994	9.08
American Century Equity Income (AEUDX)	675,153	5.38	665,292	5.47	605,152	5.36
Balanced Fund						
American Funds American Balanced (RLBGX)	586,691	4.68	558,992	4.60	515,484	4.57
Fixed Income						
PIMCO High Yield (PHIYX)	104,844	0.84	143,528	1.18	132,714	1.18
PIMCO Foreign Bond USD-Hedged (PFORX)	59,650	0.48	95,467	0.79	92,876	0.82
Hartford Total Return Bond (HIABX)	342,259	2.73	354,558	2.92	341,387	3.03
Cash						
Voya Fixed Account	4,746,859	37.83	4,302,708	35.38	4,325,160	38.33
Loan Account	198,339	1.58	200,878	1.65	214,851	1.90



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

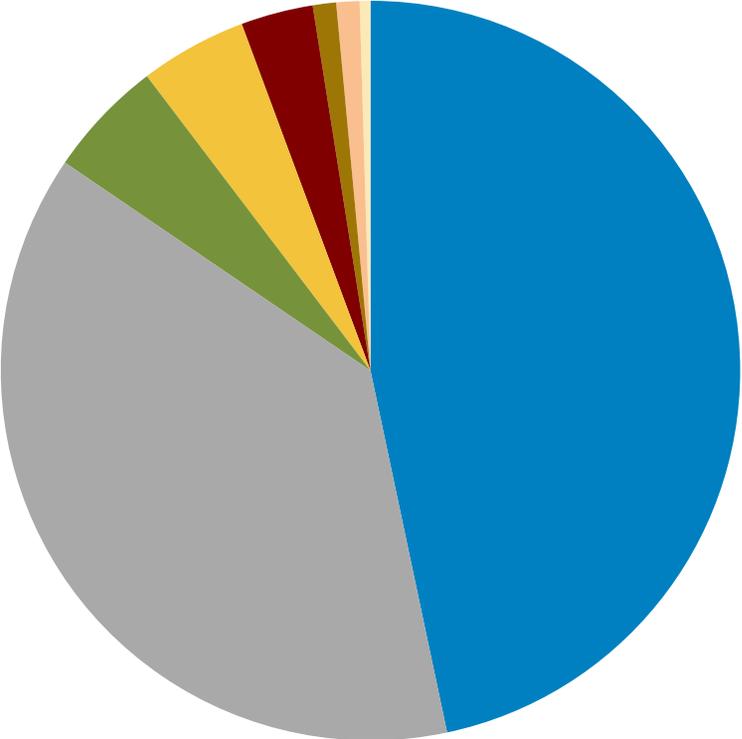
Asset Allocation Attributes	Jun-2019		Mar-2019		Dec-2018	
	(\$)	%	(\$)	%	(\$)	%
WCAB 2060 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2055 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2050 Retirement	59,505	7.84	63,147	5.38	53,253	5.04
WCAB 2045 Retirement	112,585	14.83	-	0.00	-	0.00
WCAB 2040 Retirement	80,650	10.62	173,804	14.81	151,467	14.32
WCAB 2035 Retirement	64,418	8.48	60,611	5.17	53,738	5.08
WCAB 2030 Retirement	175,842	23.16	137,314	11.70	120,939	11.44
WCAB 2025 Retirement	-	0.00	478,138	40.75	433,368	40.98
WCAB 2020 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2015 Retirement	21,052	2.77	23,328	1.99	21,746	2.06
WCAB Income Retirement	245,178	32.29	236,985	20.20	222,982	21.09
Total Model Portfolios	759,229	100.00	1,173,326	100.00	1,057,494	100.00



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

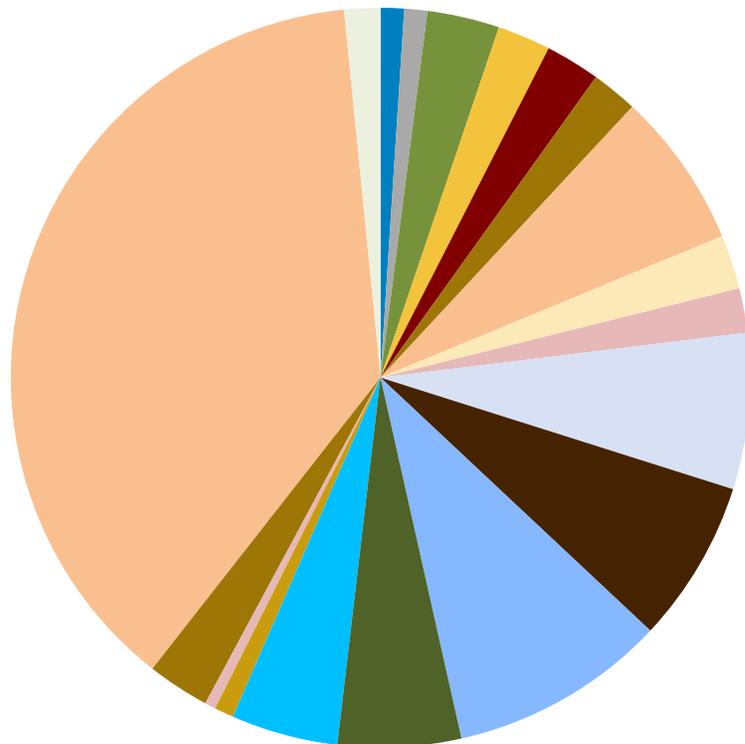
June 30, 2019 : \$12,546,539

Allocation	Market Value	Allocation
US Equity	5,856,427	46.7
Cash	4,746,859	37.8
US Fixed Income	645,443	5.1
US Balanced	586,691	4.7
International Equity	396,606	3.2
International-Emerging Equity	128,380	1.0
International-Developed Equity	126,482	1.0
International Fixed Income	59,650	0.5



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

June 30, 2019 : \$12,546,539



Allocation

	Market Value	Allocation
Lazard Emerging Markets Equity (LZOEX)	128,380	1.0
DFA International Small Cap Value (DISVX)	126,482	1.0
American Funds EuroPacific Growth (RERGX)	396,606	3.2
Wells Fargo Small Co Growth (WSCRX)	291,293	2.3
Vanguard Small Cap Index (VSMAX)	300,026	2.4
AMG Managers Skyline Special Equities (SKSEX)	253,151	2.0
Hartford Mid Cap (HIMCX)	856,797	6.8
Vanguard Mid Cap Index (VIMAX)	296,828	2.4
Hotchkis & Wiley Mid Cap Value (HWMIX)	242,987	1.9
American Funds Growth Fund of America (RGAGX)	856,141	6.8
Wells Fargo Disciplined US Core (EVSIX)	891,614	7.1
Vanguard Institutional Index (VINIX)	1,192,438	9.5
American Century Equity Income (AEUDX)	675,153	5.4
American Funds American Balanced (RLBGX)	586,691	4.7
PIMCO High Yield (PHIYX)	104,844	0.8
PIMCO Foreign Bond USD-Hedged (PFORX)	59,650	0.5
Hartford Total Return Bond (HIABX)	342,259	2.7
Voya Fixed Account	4,746,859	37.8
Loan Account	198,339	1.6



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

Comparative Performance														
	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
International Equity														
Lazard Emerging Markets Equity (LZOEX)	2.65	(30)	10.28	(71)	2.36	(38)	6.72	(78)	-0.70	(90)	2.33	(86)	5.12	(68)
MSCI Emerging Markets (Net) Index	0.61	(76)	10.59	(69)	1.21	(48)	10.66	(31)	2.49	(39)	4.15	(46)	5.81	(47)
IM Emerging Markets Equity (MF) Median	1.59		12.23		0.93		9.17		2.10		3.95		5.71	
DFA International Small Cap Value (DISVX)	0.15	(91)	8.82	(93)	-11.54	(85)	6.29	(80)	1.05	(82)	8.54	(47)	8.17	(81)
MSCI AC World ex USA Small Cap (Net)	1.21	(85)	11.60	(75)	-5.94	(40)	7.76	(58)	2.77	(55)	7.66	(65)	8.48	(73)
IM International SMID Cap Equity (MF) Median	2.43		13.10		-7.06		8.24		2.90		8.35		9.31	
American Funds EuroPacific Growth (RERGX)	3.87	(33)	17.59	(11)	1.91	(17)	10.84	(9)	4.45	(1)	8.44	(2)	8.15	(1)
MSCI EAFE (Net) Index	3.68	(34)	14.03	(46)	1.08	(28)	9.11	(31)	2.25	(8)	7.31	(8)	6.90	(28)
IM International Large Cap Core Equity (MF) Median	3.03		13.66		-0.39		8.30		1.07		6.11		6.17	
Domestic Equity														
Wells Fargo Small Co Growth (WSCRX)	3.28	(26)	19.09	(26)	0.91	(29)	15.39	(45)	N/A		N/A		N/A	
Russell 2000 Growth Index	2.75	(32)	20.36	(25)	-0.49	(32)	14.69	(51)	8.63	(41)	12.87	(31)	14.41	(39)
IM U.S. Small Cap Growth Equity (MF) Median	1.08		16.02		-3.54		14.74		7.07		11.05		13.35	
Vanguard Small Cap Index (VSMAX)	2.87	(16)	19.51	(8)	2.26	(2)	12.38	(12)	7.72	(22)	12.68	(12)	14.79	(10)
Vanguard Spliced Small Cap Index	2.86	(16)	19.54	(8)	2.29	(2)	12.37	(12)	7.70	(22)	12.67	(12)	14.76	(10)
IM U.S. Small Cap Core Equity (MF) Median	1.67		13.47		-6.11		10.05		6.35		10.71		13.19	
AMG Managers Skyline Special Equities (SKSEX)	5.68	(1)	19.10	(1)	-5.47	(12)	8.27	(40)	4.13	(30)	11.44	(5)	13.68	(6)
Russell 2000 Value Index	1.38	(16)	13.47	(28)	-6.24	(19)	9.81	(16)	5.39	(13)	10.31	(16)	12.40	(26)
IM U.S. Small Cap Value Equity (MF) Median	0.09		12.25		-9.17		7.42		3.31		8.58		11.36	
Hartford Mid Cap (HIMCX)	4.85	(80)	26.03	(64)	8.50	(79)	16.45	(41)	10.59	(44)	15.59	(16)	15.65	(30)
Russell Midcap Growth Index	5.40	(70)	26.08	(63)	13.94	(41)	16.49	(40)	11.10	(35)	14.76	(31)	16.02	(20)
IM U.S. Mid Cap Growth Equity (MF) Median	6.39		26.79		12.89		15.94		10.36		13.67		14.71	
Vanguard Mid Cap Index (VIMAX)	4.36	(38)	21.86	(12)	7.83	(18)	12.32	(22)	8.82	(16)	13.37	(8)	15.21	(5)
Vanguard Spliced Mid Cap Index	4.37	(38)	21.90	(10)	7.85	(18)	12.36	(19)	8.85	(14)	13.42	(6)	15.26	(4)
IM U.S. Mid Cap Core Equity (MF) Median	4.08		18.90		4.25		9.70		6.04		11.07		12.59	
Hotchkis & Wiley Mid Cap Value (HWMIX)	-3.44	(97)	12.13	(91)	-14.29	(97)	6.53	(76)	0.82	(93)	8.94	(89)	13.31	(35)
Russell Midcap Value Index	3.19	(37)	18.02	(22)	3.68	(21)	8.95	(35)	6.72	(15)	12.34	(10)	14.56	(8)
IM U.S. Mid Cap Value Equity (MF) Median	2.86		16.49		-0.97		8.34		4.86		10.73		12.78	
American Funds Growth Fund of America (RGAGX)	3.53	(81)	17.89	(93)	5.19	(94)	16.34	(74)	11.54	(73)	15.28	(41)	14.43	(69)
Russell 1000 Growth Index	4.64	(56)	21.49	(54)	11.56	(36)	18.07	(45)	13.39	(30)	15.76	(25)	16.28	(18)
IM U.S. Large Cap Growth Equity (MF) Median	4.77		21.80		10.56		17.71		12.53		14.98		15.09	

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

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
Wells Fargo Disciplined US Core (EVSIX)	3.29	(76)	16.35	(72)	6.58	(77)	12.03	(71)	9.81	(36)	13.43	(34)	N/A	
S&P 500 Index	4.30	(45)	18.54	(38)	10.42	(34)	14.19	(26)	10.71	(14)	13.98	(16)	14.70	(12)
IM U.S. Large Cap Core Equity (MF) Median	4.17		17.88		9.26		13.11		9.33		12.89		13.36	
Vanguard Institutional Index (VINIX)	4.30	(45)	18.54	(38)	10.39	(34)	14.15	(27)	10.68	(15)	13.95	(17)	14.68	(13)
S&P 500 Index	4.30	(45)	18.54	(38)	10.42	(34)	14.19	(26)	10.71	(14)	13.98	(16)	14.70	(12)
IM U.S. Large Cap Core Equity (MF) Median	4.17		17.88		9.26		13.11		9.33		12.89		13.36	
American Century Equity Income (AEUDX)	4.61	(13)	15.78	(40)	12.54	(5)	10.28	(58)	9.74	(1)	N/A		N/A	
Russell 1000 Value Index	3.84	(38)	16.24	(34)	8.46	(31)	10.19	(61)	7.46	(33)	12.09	(22)	13.19	(18)
IM U.S. Large Cap Value Equity (MF) Median	3.47		15.17		6.39		10.52		6.90		11.39		12.12	
Balanced Fund														
American Funds American Balanced (RLBGX)	2.91	(61)	11.09	(61)	7.31	(11)	9.18	(32)	7.72	(2)	10.23	(6)	11.38	(4)
American Balanced Fund Hybrid	3.84	(9)	12.39	(48)	9.63	(3)	8.32	(42)	6.98	(6)	8.35	(34)	9.42	(35)
IM All Balanced (MF) Median	3.06		12.14		5.37		7.63		4.75		7.22		8.64	
WCAB 2060 Retirement	3.26	(62)	16.29	(19)	3.95	(85)	N/A		N/A		N/A		N/A	
The WCAB 2060 Retirement Portfolio Policy	3.87	(9)	16.15	(24)	8.01	(2)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2055 (MF) Median	3.35		15.51		5.36		10.63		6.26		9.74		10.65	
WCAB 2055 Retirement	3.26	(62)	16.29	(19)	3.95	(85)	N/A		N/A		N/A		N/A	
The WCAB 2055 Retirement Portfolio Policy	3.87	(9)	16.15	(24)	8.01	(2)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2055 (MF) Median	3.35		15.51		5.36		10.63		6.26		9.74		10.65	
WCAB 2050 Retirement	3.25	(60)	16.21	(21)	3.94	(87)	10.91	(36)	6.75	(25)	10.38	(15)	11.42	(7)
The WCAB 2050 Retirement Portfolio Policy	3.86	(9)	16.03	(23)	8.00	(2)	11.75	(5)	8.00	(1)	11.05	(3)	11.77	(3)
IM Mixed-Asset Target 2050 (MF) Median	3.32		15.39		5.32		10.38		6.14		9.60		10.63	
WCAB 2045 Retirement	3.23	(62)	16.06	(22)	3.92	(89)	N/A		N/A		N/A		N/A	
The WCAB 2045 Retirement Portfolio Policy	3.82	(10)	15.85	(30)	7.93	(2)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2045 (MF) Median	3.33		15.32		5.41		10.39		6.16		9.49		10.58	
WCAB 2040 Retirement	3.20	(59)	15.37	(31)	4.10	(84)	10.46	(34)	6.65	(21)	9.84	(24)	10.85	(24)
The WCAB 2040 Retirement Portfolio Policy	3.72	(16)	15.20	(36)	7.76	(2)	11.10	(15)	7.61	(2)	10.28	(14)	10.96	(23)
IM Mixed-Asset Target 2040 (MF) Median	3.26		14.76		5.30		10.01		5.89		9.20		10.30	
WCAB 2035 Retirement	3.07	(77)	14.64	(28)	4.17	(93)	N/A		N/A		N/A		N/A	
The WCAB 2035 Retirement Portfolio Policy	3.58	(22)	14.37	(34)	7.48	(4)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2035 (MF) Median	3.28		14.03		5.55		9.55		5.78		8.79		10.11	
WCAB 2030 Retirement	2.99	(71)	13.87	(23)	4.43	(87)	9.68	(18)	6.32	(10)	9.12	(21)	10.22	(24)
The WCAB 2030 Retirement Portfolio Policy	3.47	(27)	13.50	(32)	7.53	(2)	9.86	(13)	6.95	(1)	9.34	(11)	10.07	(30)
IM Mixed-Asset Target 2030 (MF) Median	3.21		13.01		5.77		8.63		5.34		8.22		9.57	

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

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
WCAB 2025 Retirement	2.87	(77)	12.63	(19)	4.74	(89)	N/A		N/A		N/A		N/A	
The WCAB 2025 Retirement Portfolio Policy	3.29	(35)	12.29	(33)	7.27	(6)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2025 (MF) Median	3.16		11.93		6.01		7.83		4.90		7.50		9.17	
WCAB 2020 Retirement	2.69	(80)	11.32	(31)	4.81	(82)	8.27	(6)	5.70	(1)	7.92	(6)	9.02	(15)
The WCAB 2020 Retirement Portfolio Policy	3.03	(55)	10.94	(40)	6.74	(20)	7.93	(14)	5.82	(1)	7.70	(14)	8.43	(40)
IM Mixed-Asset Target 2020 (MF) Median	3.07		10.71		5.90		6.85		4.42		6.67		8.19	
WCAB 2015 Retirement	2.59	(87)	10.35	(44)	4.99	(84)	N/A		N/A		N/A		N/A	
The WCAB 2015 Retirement Portfolio Policy	2.86	(60)	9.90	(58)	6.63	(24)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2015 (MF) Median	2.95		10.17		6.05		6.32		4.37		6.44		8.03	
WCAB Income Retirement	2.72	(60)	9.42	(39)	5.73	(58)	6.79	(5)	5.15	(1)	6.78	(1)	7.87	(1)
The WCAB Income Retirement Portfolio Policy	2.88	(49)	8.89	(54)	6.88	(19)	6.07	(22)	4.71	(3)	5.99	(8)	6.71	(19)
IM Mixed-Asset Target Today (MF) Median	2.86		8.97		5.87		4.99		3.32		4.36		5.86	
Fixed Income														
PIMCO High Yield (PHIYX)	2.81	(23)	10.48	(20)	8.67	(6)	6.96	(29)	4.71	(9)	5.93	(21)	8.80	(18)
ICE BofAML High Yield Master II	2.56	(38)	10.16	(27)	7.58	(21)	7.54	(11)	4.70	(9)	6.37	(10)	9.22	(9)
IM U.S. High Yield Bonds (MF) Median	2.40		9.37		6.41		6.44		3.50		5.36		8.06	
PIMCO Foreign Bond USD-Hedged (PFORX)	2.74	(62)	5.80	(39)	6.55	(36)	4.27	(15)	5.07	(4)	5.45	(1)	6.88	(1)
Bloomberg Barclays Global Aggregate	3.29	(39)	5.57	(52)	5.85	(50)	1.63	(62)	1.20	(38)	1.57	(56)	2.89	(67)
IM International Fixed Income (MF) Median	2.96		5.63		5.75		2.08		0.42		1.75		3.82	
Hartford Total Return Bond (HIABX)	3.41	(9)	7.26	(9)	8.01	(19)	3.48	(4)	3.26	(11)	3.37	(8)	4.90	(19)
Blmbg. Barc. U.S. Aggregate Index	3.08	(41)	6.11	(64)	7.87	(28)	2.31	(54)	2.95	(26)	2.62	(50)	3.90	(69)
IM U.S. Broad Market Core Fixed Income (MF) Median	3.04		6.34		7.56		2.39		2.67		2.62		4.26	
Cash														
Voya Fixed Account*	0.74	(12)	1.53	(12)	3.19	(10)	3.51	(1)	3.70	(1)	3.79	(1)	N/A	
Ryan 3 Yr GIC Master Index	0.58	(89)	1.15	(89)	2.20	(90)	1.81	(87)	1.56	(94)	1.43	(100)	1.89	(95)
IM U.S. GIC/Stable Value (SA+CF) Median	0.63		1.24		2.44		2.14		2.05		1.99		2.28	

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

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

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

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
*Returns are MassMutual Guaranteed Account until 1Q2019 then the Voya Fixed account thereafter.



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

	2018		2017		2016		2015		2014		2013		2012		2011		2010		2009	
WCAB 2025 Retirement	-5.66	(59)	14.73	(53)	N/A															
The WCAB 2025 Retirement Portfolio Policy	-3.53	(7)	14.49	(57)	N/A															
IM Mixed-Asset Target 2025 (MF) Median	-5.26		14.95		6.87		-1.37		5.19		15.85		13.00		-2.03		13.42		28.95	
WCAB 2020 Retirement	-4.73	(55)	13.52	(30)	9.56	(1)	-0.71	(24)	6.09	(12)	14.86	(27)	12.96	(28)	-0.23	(46)	13.65	(24)	25.92	(51)
The WCAB 2020 Retirement Portfolio Policy	-2.99	(7)	12.81	(48)	7.02	(29)	0.07	(4)	7.07	(1)	14.96	(26)	10.45	(72)	1.18	(21)	10.65	(82)	18.43	(93)
IM Mixed-Asset Target 2020 (MF) Median	-4.52		12.69		6.36		-1.44		4.72		11.84		11.53		-0.43		12.31		26.02	
WCAB 2015 Retirement	-3.49	(36)	11.81	(38)	N/A															
The WCAB 2015 Retirement Portfolio Policy	-2.06	(1)	10.98	(62)	N/A															
IM Mixed-Asset Target 2015 (MF) Median	-3.90		11.40		6.40		-1.29		4.47		10.42		10.81		-0.11		11.49		25.34	
WCAB Income Retirement	-2.54	(18)	10.22	(28)	7.81	(6)	0.10	(3)	6.27	(2)	10.99	(2)	11.15	(8)	1.66	(75)	11.58	(9)	21.97	(28)
The WCAB Income Retirement Portfolio Policy	-1.36	(5)	9.06	(47)	5.19	(47)	0.26	(1)	6.08	(4)	10.51	(5)	8.08	(66)	2.13	(68)	8.66	(67)	13.73	(83)
IM Mixed-Asset Target Today (MF) Median	-3.60		8.85		5.07		-1.42		3.87		5.29		8.84		2.78		9.39		18.26	
Fixed Income																				
PIMCO High Yield (PHIYX)	-2.49	(36)	7.02	(38)	12.68	(65)	-1.88	(24)	3.31	(12)	5.77	(70)	14.57	(53)	4.00	(37)	14.28	(45)	44.09	(64)
ICE BofAML High Yield Master II	-2.27	(32)	7.48	(25)	17.49	(5)	-4.64	(64)	2.50	(22)	7.42	(30)	15.58	(33)	4.38	(27)	15.19	(28)	57.51	(11)
IM U.S. High Yield Bonds (MF) Median	-2.91		6.65		13.52		-3.85		1.48		6.61		14.72		3.32		14.04		47.59	
PIMCO Foreign Bond USD-Hedged (PFORX)	2.63	(7)	3.53	(69)	7.03	(7)	0.40	(9)	11.16	(3)	0.90	(17)	11.19	(22)	6.77	(8)	9.19	(30)	19.04	(17)
Bloomberg Barclays Global Aggregate	-1.19	(46)	7.39	(59)	2.09	(61)	-3.15	(24)	0.59	(52)	-2.60	(37)	4.32	(79)	5.64	(17)	5.54	(69)	6.93	(66)
IM International Fixed Income (MF) Median	-2.68		9.80		3.34		-5.82		0.63		-3.74		7.43		2.56		7.26		10.01	
Hartford Total Return Bond (HIABX)	-0.81	(60)	5.16	(4)	4.49	(8)	-0.59	(75)	5.89	(32)	-1.36	(26)	7.54	(20)	6.99	(37)	7.51	(42)	15.01	(32)
Blmbg. Barc. U.S. Aggregate Index	0.01	(18)	3.54	(53)	2.65	(61)	0.55	(20)	5.97	(26)	-2.02	(53)	4.21	(81)	7.84	(11)	6.54	(69)	5.93	(90)
IM U.S. Broad Market Core Fixed Income (MF) Median	-0.63		3.58		2.86		0.09		5.55		-1.98		5.99		6.65		7.25		12.12	
Cash																				
Voya Fixed Account*	3.38	(1)	3.67	(1)	3.94	(1)	4.00	(1)	4.00	(1)	4.00	(1)	4.00	(3)	4.00	(6)	N/A		N/A	
Ryan 3 Yr GIC Master Index	1.96	(87)	1.60	(95)	1.39	(94)	1.16	(94)	1.03	(95)	1.06	(92)	1.48	(99)	2.44	(60)	3.53	(41)	4.49	(12)
IM U.S. GIC/Stable Value (SA+CF) Median	2.14		1.81		1.79		1.76		1.63		1.66		2.36		2.91		3.39		3.67	

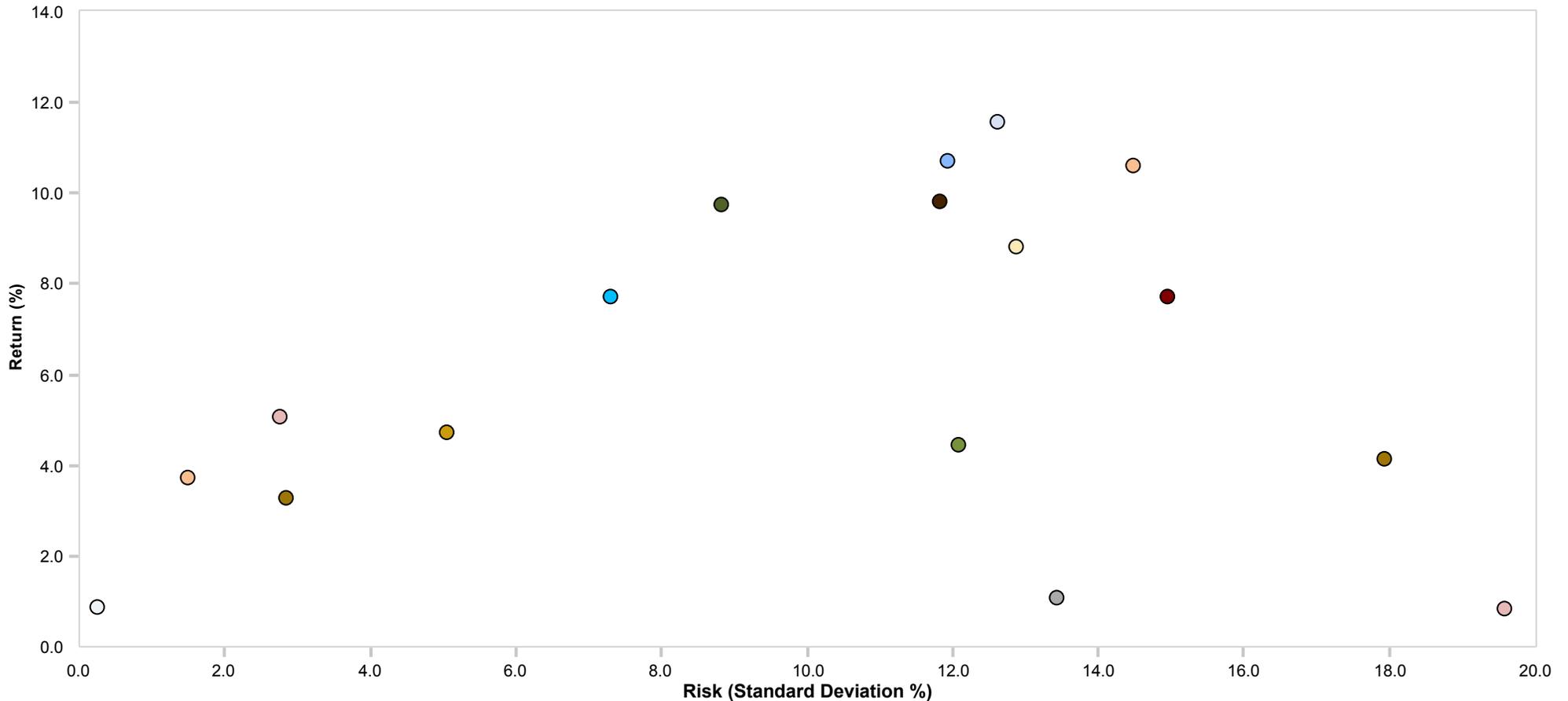
Returns for periods greater than one year are annualized.

Returns are expressed as percentages.

*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%



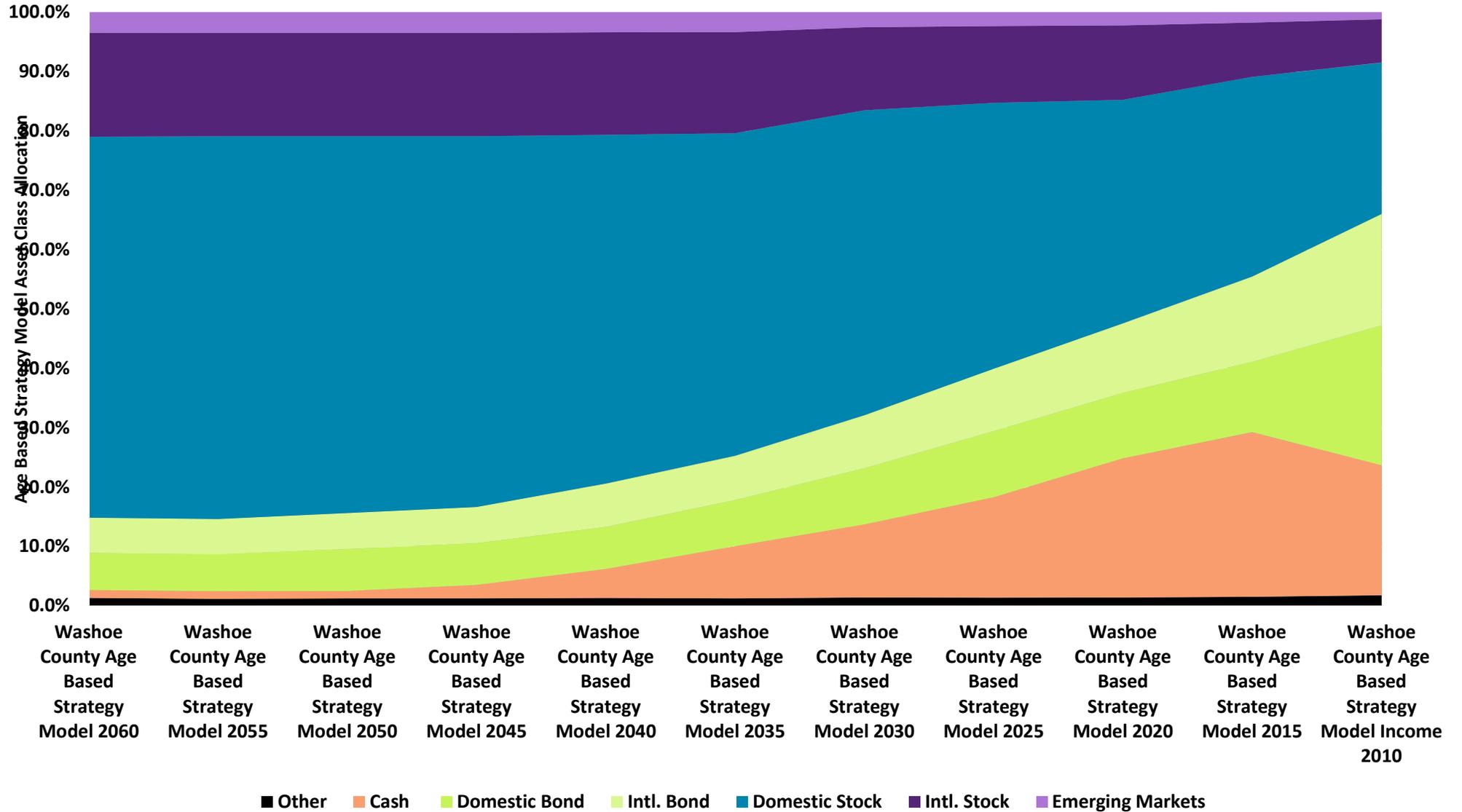
Washoe County Age Based Strategy Models
Age Based Strategy Model Asset Allocation
As of December 31, 2018

Age Based Strategy Model Allocation by Sub Asset Class

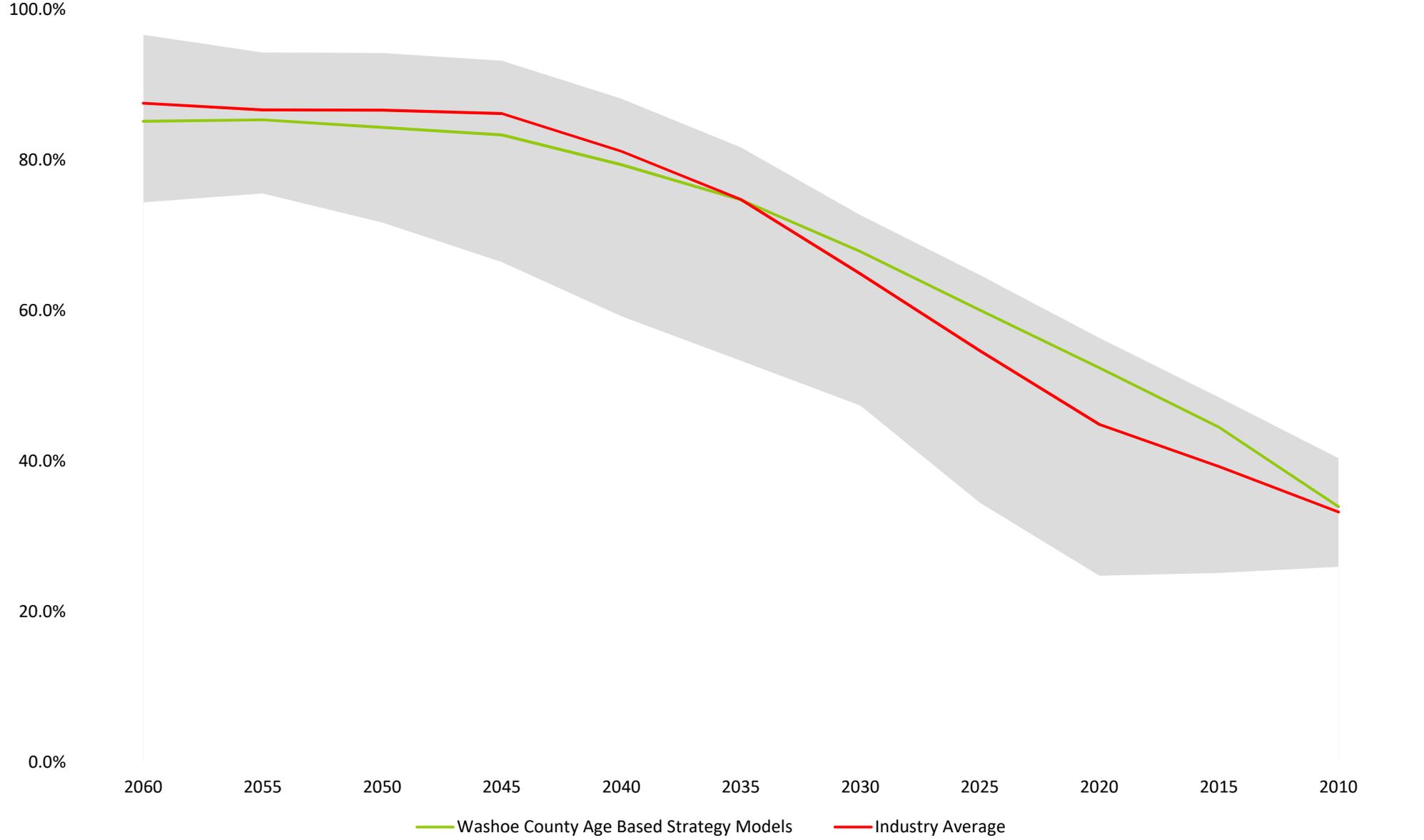
Investment Name	Emerging Markets	Intl. Stock	Domestic Stock	Intl. Bond	Domestic Bond	Cash	Other	Total
Washoe County Age Based Strategy Model 2060	3.5%	17.5%	64.2%	5.9%	6.2%	1.3%	1.4%	100.0%
Washoe County Age Based Strategy Model 2055	3.5%	17.4%	64.4%	5.9%	6.2%	1.3%	1.2%	100.0%
Washoe County Age Based 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* \$176,235,348

Number of Participants with a Balance (active and terminated) 2,526

Expense Type Estimates (annual)

Percent of Assets

Dollar Cost

% Cost

Voya Recordkeeping fees

0.03%

\$52,871

0.03%

AndCo Consulting fees

\$60,000

0.03%

Total plan expenses

\$ 112,871

0.06%

Revenue Sharing Estimates (annual)

Revenue from participant annual fee

0.08%

\$140,988

Net plan fee surplus (annual)

\$28,118

0.02%

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

\$55.81

*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)	\$1,457,574	1.32%	\$19,240	0.40%	\$5,830
DFA International Small Cap Value (DISVX)	\$1,508,861	0.68%	\$10,260	0.00%	\$0
American Funds EuroPacific Growth (RERGX)	\$5,148,404	0.49%	\$25,227	0.00%	\$0
Wells Fargo Small Co Growth (WSCRX)	\$3,274,065	0.89%	\$29,139	0.00%	\$0
Vanguard Small Cap Index (VSMAX)	\$3,570,711	0.05%	\$1,785	0.00%	\$0
AMG Managers Skyline Special Equities (SKSEX)	\$2,433,725	1.17%	\$28,475	0.25%	\$6,084
Hartford Mid Cap (HIMCX)	\$10,414,177	0.69%	\$71,858	0.25%	\$26,035
Vanguard Mid Cap Index (VIMAX)	\$3,712,991	0.05%	\$1,856	0.00%	\$0
Hotchkis & Wiley Mid Cap Value (HWMIX)	\$2,747,677	0.99%	\$27,202	0.40%	\$10,991
AF Growth Fund of America (RGAGX)	\$15,768,856	0.32%	\$50,460	0.00%	\$0
Wells Fargo Disciplined US Core (EVSIX)	\$12,448,050	0.48%	\$59,751	0.15%	\$18,672
Vanguard Institutional Index (VINIX)	\$14,706,613	0.04%	\$5,883	0.00%	\$0
American Century Equity Income (AEUDX)	\$7,798,240	0.56%	\$43,670	0.00%	\$0
American Funds American Balanced (RLBGX)	\$6,385,859	0.28%	\$17,880	0.00%	\$0
PIMCO High Yield (PHIYX)	\$2,354,889	0.59%	\$13,894	0.00%	\$0
PIMCO Foreign Bond USD-Hedged (PFORX)	\$1,203,125	0.55%	\$6,617	0.00%	\$0
Hartford Total Return Bond (HIABX)	\$4,064,028	0.51%	\$20,727	0.25%	\$10,160
Voya Fixed Account	\$77,237,503	0.00%	\$0	0.00%	\$0
TOTAL	\$176,235,348	0.25%	\$433,925	0.04%	\$77,773

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



Cybersecurity & Recordkeeping – For Plan Sponsors

Some of the top cybersecurity risks facing Plan Sponsors are:

- Potential financial losses for participants
- Disruption of internal operations
- Potential financial costs to the institution
- Plan participants losing confidence
- Cost of remediation and litigation
- Fines and penalties the government may assess

What is a breach?*

Unauthorized use of sensitive personal information that creates a substantial risk of identity theft or fraud.

*Source: Federal Office of Management and Budget – Memo on Preparing for and Responding to a Breach of Personally Identifiable Information.

Preventative Measures to Consider – For Plan Sponsors

Plan Sponsors have options to help protect themselves and their participants from cyber attacks and breaches:

- Employees involved with the Plan should be properly trained on protecting Plan data.
- Consider a recordkeeper that offers cybersecurity guarantees and independent system audits
- Establish a Cybersecurity Policy*
 - Identify: List all the equipment and data
 - Protect: Control access, update software, and train employees
 - Detect: Monitor networks and computers for issues
 - Respond: Create a plan and test regularly
 - Recover: Repair, restore, and assess the breach
- Research potential cybersecurity insurance options

*Source: <https://www.ftc.gov/tips-advice/business-center/small-businesses/cybersecurity/nist-framework>



Cybersecurity Guarantees & System Audits

Most recordkeepers offer a security guarantee that protects Plan assets in the event there is an unauthorized distribution.

- Participants may need to take certain actions to be eligible for protection including:
 - Activating their account online
 - Enabling the multi-factor authentication feature
 - Maintaining the confidential nature of their account
 - Promptly reporting any suspicious activity

In addition, most recordkeepers are engaging CPAs to conduct independent reviews verifying internal information about their financials and systems:

Service Organization Control (SOC)*	Description
SOC 1 – Used for Auditing	Internal Control Over Financial Reporting
SOC 2 – Restricted Reports on Trust Services Criteria	Report On Controls for Security, Availability, Processing Integrity, Confidentiality Or Privacy

*Source: <https://www.aicpa.org/interestareas/frc/assuranceadvisoryservices/sorhome.html>

Next Quarter's Module Topic: Financial Wellness



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			Fund Investment Policy	
Portfolio Manager : Team Managed	Ticker : LZOEX		The Fund seeks long term capital appreciation by investing primarily in equity securities, principally common stocks of non -U.S. companies whose principal activities are located in emerging market countries and that Lazard believes are undervalued based on their earning, cash flow or asset values.	
PM Tenure :	Inception Date : 01/08/1997			
Fund Assets : \$1,103 Million	Portfolio Turnover : 16%			

Comparative Performance - Trailing								
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	
Lazard Emerging Markets Equity (LZOEX)	2.65 (30)	10.28 (71)	2.36 (38)	6.72 (78)	-0.70 (90)	2.33 (86)	5.12 (68)	
MSCI Emerging Markets (Net) Index	0.61 (76)	10.59 (69)	1.21 (48)	10.66 (31)	2.49 (39)	4.15 (46)	5.81 (47)	
IM Emerging Markets Equity (MF) 1st Quartile	2.85	14.85	3.97	11.00	3.02	5.35	6.94	
IM Emerging Markets Equity (MF) Median	1.59	12.23	0.93	9.17	2.10	3.95	5.71	
IM Emerging Markets Equity (MF) 3rd Quartile	0.61	9.82	-1.54	7.02	0.59	2.91	4.84	

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

Comparative Performance - Quarterly								
	Mar-2019	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017	Sep-2017	
Lazard Emerging Markets Equity (LZOEX)	7.44 (84)	-5.58 (23)	-1.70 (39)	-13.67 (98)	1.94 (51)	6.20 (53)	6.80 (65)	
MSCI Emerging Markets (Net) Index	9.93 (59)	-7.47 (48)	-1.09 (25)	-7.96 (32)	1.42 (62)	7.44 (22)	7.89 (49)	
IM Emerging Markets Equity (MF) 1st Quartile	12.63	-5.83	-1.13	-7.48	3.01	7.31	9.33	
IM Emerging Markets Equity (MF) Median	10.38	-7.62	-2.43	-9.06	1.97	6.36	7.84	
IM Emerging Markets Equity (MF) 3rd Quartile	8.35	-9.01	-4.56	-10.26	0.74	5.21	5.70	

MPT Stats				Ranking vs. IM Emerging Markets Equity (MF) 4 Quarters Rolling Periods					
	1 YR	3 YR	5 YR	Periods	5-25	25-Median	Median-75	75-95	
Standard Deviation	16.78	14.11	16.37	Lazard Emerging Markets Equity (LZOEX)	28	6 (21%)	5 (18%)	8 (29%)	9 (32%)
Downside Risk	9.91	8.71	10.99	MSCI Emerging Markets (Net) Index	28	1 (4%)	18 (64%)	9 (32%)	0 (0%)

vs. MSCI Emerging Markets (Net) Index			
Alpha	1.34	-3.08	-2.96
Beta	0.90	0.96	0.99
Down Market Capture	81.03	106.57	109.78
Information Ratio	0.15	-0.67	-0.56
Tracking Error	7.28	5.33	5.43
Up Market Capture	87.44	89.22	95.14

Ranking vs. IM Emerging Markets Equity (MF) 12 Quarters Rolling Periods					
	Periods	5-25	25-Median	Median-75	75-95
Lazard Emerging Markets Equity (LZOEX)	28	3 (11%)	8 (29%)	11 (39%)	6 (21%)
MSCI Emerging Markets (Net) Index	28	2 (7%)	13 (46%)	13 (46%)	0 (0%)

vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	0.08	0.43	-0.01

Ranking vs. IM Emerging Markets Equity (MF) 20 Quarters Rolling Periods					
	Periods	5-25	25-Median	Median-75	75-95
Lazard Emerging Markets Equity (LZOEX)	28	5 (18%)	8 (29%)	9 (32%)	6 (21%)
MSCI Emerging Markets (Net) Index	28	0 (0%)	19 (68%)	9 (32%)	0 (0%)



Fund Information

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

Fund Investment Policy

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

Comparative Performance - Trailing

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
DFA International Small Cap Value (DISVX)	0.15 (77)	8.82 (87)	-11.54 (88)	6.29 (74)	1.05 (69)	8.54 (35)	8.17 (57)
MSCI AC World ex USA Small Cap (Net)	1.21 (65)	11.60 (49)	-5.94 (31)	7.76 (44)	2.77 (38)	7.66 (46)	8.48 (53)
IM International SMID Cap Core Equity (MF) 1st Quartile	2.20	12.27	-4.64	8.31	2.94	8.75	9.64
IM International SMID Cap Core Equity (MF) Median	1.82	11.46	-7.58	7.60	2.42	7.61	8.83
IM International SMID Cap Core Equity (MF) 3rd Quartile	0.62	9.76	-8.72	5.83	0.84	6.10	6.48

Comparative Performance - Calendar

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

Comparative Performance - Quarterly

	Mar-2019	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017	Sep-2017
DFA International Small Cap Value (DISVX)	8.65 (74)	-17.91 (88)	-0.97 (33)	-3.47 (79)	-2.26 (85)	3.83 (81)	7.60 (44)
MSCI AC World ex USA Small Cap (Net)	10.26 (23)	-14.43 (38)	-1.51 (54)	-2.60 (49)	-0.35 (36)	6.56 (8)	6.90 (67)
IM International SMID Cap Core Equity (MF) 1st Quartile	10.06	-14.15	-0.35	-0.99	0.30	6.10	7.95
IM International SMID Cap Core Equity (MF) Median	9.60	-14.84	-1.45	-2.76	-1.12	5.45	7.48
IM International SMID Cap Core Equity (MF) 3rd Quartile	8.64	-16.73	-2.09	-3.35	-1.67	4.05	6.38

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	17.87	13.20	13.45
Downside Risk	15.00	9.44	9.49
vs. MSCI AC World ex USA Small Cap (Net)			
Alpha	-5.04	-1.73	-1.67
Beta	1.11	1.07	1.04
Down Market Capture	121.37	108.32	109.27
Information Ratio	-1.15	-0.28	-0.39
Tracking Error	4.95	4.28	3.96
Up Market Capture	95.05	99.24	99.09
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	-0.72	0.42	0.08

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

	Periods	5-25	25-Median	Median-75	75-95
DFA International Small Cap Value (DISVX)	28	10 (36%)	6 (21%)	5 (18%)	7 (25%)
MSCI AC World ex USA Small Cap (Net)	28	2 (7%)	12 (43%)	9 (32%)	5 (18%)

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

	Periods	5-25	25-Median	Median-75	75-95
DFA International Small Cap Value (DISVX)	28	11 (39%)	10 (36%)	6 (21%)	1 (4%)
MSCI AC World ex USA Small Cap (Net)	28	0 (0%)	13 (46%)	12 (43%)	3 (11%)

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

	Periods	5-25	25-Median	Median-75	75-95
DFA International Small Cap Value (DISVX)	28	9 (32%)	14 (50%)	5 (18%)	0 (0%)
MSCI AC World ex USA Small Cap (Net)	28	2 (7%)	10 (36%)	16 (57%)	0 (0%)



Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	1,854,954,912	2,263,377,208
Median Mkt. Cap (\$)	384,023,188	865,941,878
Price/Earnings ratio	11.7	14.0
Price/Book ratio	1.5	2.1
5 Yr. EPS Growth Rate (%)	5.9	10.7
Current Yield (%)	3.2	2.9
Beta (5 Years, Monthly)	1.04	1.00
Number of Stocks	2,051	4,207

Top Ten Equity Holdings

	Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Fidelity Federal Bancorp	4.0	0.0	0.1	0.0
Hiscox Ltd	0.9	0.2	7.4	0.1
Bellway PLC	0.9	0.1	-9.1	-0.1
SBM Offshore NV	0.8	0.1	3.5	0.0
Rexel SA	0.7	0.1	12.6	0.1
Phoenix Group Holdings	0.7	0.2	2.1	0.0
Rheinmetall AG, Duesseldorf	0.7	0.2	20.1	0.1
Kesko OYJ	0.7	0.1	-6.5	0.0
Acciona SA, Madrid	0.7	0.1	0.0	0.0
Cleanaway Waste Management Ltd	0.6	0.1	3.7	0.0

Buy and Hold Sector Attribution - 1 Qtr

	Allocation		Performance		Attribution		
	Portfolio	Benchmark	Portfolio	Benchmark	Sector	Stock	Total
Communication Services	2.7	4.7	0.13	1.92	-0.01	-0.05	-0.06
Consumer Discretionary	12.9	12.7	-1.46	-1.58	-0.02	0.01	-0.01
Consumer Staples	5.0	6.3	-0.63	-2.48	0.05	0.09	0.14
Energy	7.0	3.4	-4.83	-4.87	-0.25	0.01	-0.24
Financials	23.3	11.0	0.61	1.74	0.01	-0.26	-0.25
Health Care	2.1	7.4	-0.36	-0.33	0.11	0.00	0.10
Industrials	22.1	19.3	1.13	2.40	0.01	-0.28	-0.27
Information Technology	4.2	10.4	3.86	4.89	-0.19	-0.04	-0.22
Materials	15.2	10.0	2.59	2.68	0.05	0.01	0.06
Real Estate	3.4	11.5	-0.50	4.70	-0.25	-0.18	-0.43
Utilities	2.1	3.2	-2.73	5.07	-0.05	-0.16	-0.21
Other	0.0	0.0	0.00	8.32	0.00	0.00	0.00
Total	100.0	100.0	0.29	1.67	-0.54	-0.84	-1.38

Ten Best Performers

	Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn
Donaco International Ltd	0.0	0.0	117.0	0.0
Eclixp Group Ltd	0.0	0.0	102.2	0.0
Ramirent OYJ, Helsinki	0.0	0.0	65.3	0.0
Alkane Resources Ltd	0.0	0.0	63.4	0.0
Bauer AG	0.1	0.0	60.9	0.0
SRG Global Limited	0.0	0.0	60.3	0.0
Summit Ascent Holdings Ltd	0.0	0.0	58.1	0.0
Automotive Holdings Group Ltd	0.1	0.0	58.0	0.0
Medusa Mining Ltd	0.0	0.0	53.7	0.0
Silver Lake Resources Ltd	0.1	0.0	51.2	0.0

Buy and Hold Region Attribution- 1 Qtr

	Allocation		Performance		Attribution		
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Region	Total
EM Asia	0.0	13.7	26.05	-2.63	0.00	0.60	0.60
EM Europe	0.0	0.9	30.03	12.81	0.00	-0.09	-0.09
EM Latin America	0.0	2.5	0.00	8.10	0.00	-0.16	-0.16
EM Mid East+Africa	0.0	1.6	4.53	0.72	0.00	0.02	0.02
Europe ex UK	35.1	26.6	3.16	5.06	-0.64	0.28	-0.35
Japan	24.8	22.0	-1.87	-0.84	-0.25	-0.08	-0.33
Middle East	0.8	1.2	10.81	8.84	0.01	-0.04	-0.02
North America	12.0	6.8	0.40	2.81	-0.30	0.08	-0.22
Pacific ex Japan	12.1	10.8	-1.01	2.53	-0.42	0.01	-0.42
United Kingdom	14.6	13.3	-2.48	0.12	-0.39	-0.05	-0.44
Other	0.6	0.6	4.44	-4.04	0.05	0.00	0.05
Total	100.0	100.0	0.29	1.67	-1.93	0.55	-1.38

Ten Worst Performers

	Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn
Sonde Resources Corp	0.0	0.0	-99.0	0.0
Bellatrix Exploration Ltd	0.0	0.0	-82.3	0.0
Kier Group PLC	0.0	0.0	-71.4	0.0
Low & Bonar PLC	0.0	0.0	-65.6	0.0
Saga Plc	0.0	0.0	-64.4	0.0
ARQ Group Ltd	0.0	0.0	-64.3	0.0
Blue Sky Alternative Investments Ltd	0.0	0.0	-62.7	0.0
Bonavista Energy Corp	0.0	0.0	-53.5	0.0
Sherritt International Corp	0.0	0.0	-52.2	0.0
Landing International Devel	0.0	0.0	-51.5	0.0



Fund Information

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

Fund Investment Policy

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

Comparative Performance - Trailing

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
Hotchkis & Wiley Mid Cap Value (HWMIX)	-3.44 (97)	12.13 (91)	-14.29 (97)	6.53 (76)	0.82 (93)	8.94 (89)	13.31 (35)
Russell Midcap Value Index	3.19 (37)	18.02 (22)	3.68 (21)	8.95 (35)	6.72 (15)	12.34 (10)	14.56 (8)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	3.56	17.81	1.26	9.38	6.12	11.45	13.45
IM U.S. Mid Cap Value Equity (MF) Median	2.86	16.49	-0.97	8.34	4.86	10.73	12.78
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	1.14	14.20	-3.99	6.68	3.94	9.78	11.85

Comparative Performance - Calendar

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

Comparative Performance - Quarterly

	Mar-2019	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017	Sep-2017
Hotchkis & Wiley Mid Cap Value (HWMIX)	16.12 (1)	-25.79 (98)	3.00 (39)	7.80 (1)	-2.05 (54)	4.58 (69)	3.53 (31)
Russell Midcap Value Index	14.37 (26)	-14.95 (27)	3.30 (24)	2.41 (33)	-2.50 (69)	5.50 (40)	2.14 (68)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	14.44	-14.95	3.24	2.82	-1.34	6.12	3.66
IM U.S. Mid Cap Value Equity (MF) Median	13.37	-17.20	2.81	1.97	-1.90	4.99	2.77
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	12.44	-17.84	1.66	0.85	-2.84	4.40	1.86

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	30.33	21.10	19.60
Downside Risk	23.42	14.39	13.39
vs. Russell Midcap Value Index			
Alpha	-17.37	-5.46	-7.35
Beta	1.48	1.50	1.41
Down Market Capture	158.21	149.24	147.80
Information Ratio	-1.29	-0.08	-0.48
Tracking Error	12.61	10.35	9.61
Up Market Capture	94.22	123.20	107.71
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	-0.43	0.34	0.10

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	14 (50%)	2 (7%)	0 (0%)	12 (43%)
Russell Midcap Value Index	28	10 (36%)	10 (36%)	8 (29%)	0 (0%)

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

	Periods	5-25	25-Median	Median-75	75-95
Hotchkis & Wiley Mid Cap Value (HWMIX)	28	13 (46%)	1 (4%)	4 (14%)	10 (36%)
Russell Midcap Value Index	28	21 (75%)	7 (25%)	0 (0%)	0 (0%)

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

	Periods	5-25	25-Median	Median-75	75-95
Hotchkis & Wiley Mid Cap Value (HWMIX)	28	15 (54%)	4 (14%)	3 (11%)	6 (21%)
Russell Midcap Value Index	28	21 (75%)	6 (21%)	1 (4%)	0 (0%)



Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	8,010,634,672	15,761,590,774	Kosmos Energy Ltd	4.9	0.0	1.5	0.1
Median Mkt. Cap (\$)	5,564,510,030	7,901,107,175	Whiting Petroleum Corp	4.4	0.0	-28.5	-1.3
Price/Earnings ratio	11.7	18.7	Citizens Financial Group Inc	4.3	0.4	9.8	0.4
Price/Book ratio	1.7	2.2	Popular Inc	4.0	0.1	4.6	0.2
5 Yr. EPS Growth Rate (%)	1.5	8.9	Hewlett Packard Enterprise Co	3.7	0.0	-2.3	-0.1
Current Yield (%)	2.4	2.4	CIT Group Inc	3.7	0.1	10.3	0.4
Beta (5 Years, Monthly)	1.41	1.00	Discovery Inc	3.7	0.2	11.9	0.4
Number of Stocks	61	587	Cairn Energy PLC, Edinburgh	3.4	0.0	4.3	0.1
			Avnet Inc	2.9	0.1	4.9	0.1
			Embraer SA	2.8	0.0	5.9	0.2

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	5.5	3.2	9.97	7.74	0.09	0.13	0.22	Adient Plc	2.3	0.1	87.3	2.0
Consumer Discretionary	13.5	8.6	-10.91	-0.57	-0.18	-1.40	-1.58	McDermott International Inc.	1.6	0.0	29.8	0.5
Consumer Staples	1.7	4.9	5.98	-1.55	0.14	0.14	0.28	Santander Consumer	0.3	0.1	14.5	0.0
Energy	20.4	5.8	-14.26	-8.23	-1.71	-1.28	-2.99	KeyCorp	0.3	0.4	13.9	0.0
Financials	26.5	17.7	7.30	7.47	0.34	-0.05	0.29	Ally Financial Inc	1.5	0.3	13.4	0.2
Health Care	1.7	7.0	-45.89	2.95	-0.02	-1.01	-1.03	JetBlue Airways Corp	0.5	0.1	13.0	0.1
Industrials	14.3	12.3	2.98	8.29	0.12	-0.71	-0.59	GEO Group Inc (The)	2.5	0.0	12.1	0.3
Information Technology	10.8	8.9	-1.59	5.44	-0.02	-0.77	-0.79	Discovery Inc	3.7	0.2	11.9	0.4
Materials	0.0	5.9	0.00	2.87	0.02	0.00	0.02	Fifth Third Bancorp	0.8	0.5	11.6	0.1
Real Estate	3.1	14.4	7.75	0.25	0.28	0.21	0.49	Alleghany Corp	0.6	0.2	11.2	0.1
Utilities	2.6	11.4	-7.51	3.52	-0.10	-0.25	-0.35					
Total	100.0	100.0	-2.82	3.21	-1.02	-5.01	-6.03					

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	0.2	0.00	7.21	-0.01	0.00	-0.01	Superior Energy Services Inc.	0.5	0.0	-72.2	-0.4
Large Neutral	2.7	11.5	-6.62	3.49	-0.03	-0.20	-0.22	Mallinckrodt Plc	0.7	0.0	-57.8	-0.4
Large Value	0.8	3.7	-8.56	3.82	-0.03	-0.17	-0.20	Office Depot Inc	2.3	0.0	-42.5	-1.0
Mid Growth	1.2	4.0	2.22	1.88	0.04	-0.04	0.00	Bed Bath & Beyond Inc.	1.8	0.0	-30.7	-0.5
Mid Neutral	4.0	30.3	-2.24	4.12	-0.24	-0.22	-0.46	Whiting Petroleum Corp	4.4	0.0	-28.5	-1.3
Mid Value	53.5	45.0	3.64	2.77	-0.05	0.51	0.46	CommScope Holding Co Inc	1.0	0.1	-27.6	-0.3
Small Growth	0.9	0.0	0.86	2.26	0.00	-0.01	-0.01	C&J Energy Services Inc	1.8	0.0	-24.1	-0.4
Small Neutral	8.1	0.4	-8.97	-1.32	-0.34	-0.63	-0.98	NRG Energy Inc	1.3	0.2	-17.3	-0.2
Small Value	25.1	1.9	-14.51	-2.31	-1.24	-3.00	-4.24	Apache Corp	1.3	0.2	-15.8	-0.2
Unclassified	3.6	3.0	-6.23	-0.66	-0.05	-0.33	-0.38	Murphy Oil Corp	0.7	0.1	-15.1	-0.1
Total	100.0	100.0	-2.82	3.21	-1.95	-4.08	-6.03					



Fund Information

Portfolio Manager : Team Managed	Ticker : RGAGX
PM Tenure :	Inception Date : 05/01/2009
Fund Assets : \$31,533 Million	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)	3.53 (81)	17.89 (93)	5.19 (94)	16.34 (74)	11.54 (73)	15.28 (41)	14.43 (69)
Russell 1000 Growth Index	4.64 (56)	21.49 (54)	11.56 (36)	18.07 (45)	13.39 (30)	15.76 (25)	16.28 (18)
IM U.S. Large Cap Growth Equity (MF) 1st Quartile	5.64	23.51	12.77	19.68	13.57	15.72	15.91
IM U.S. Large Cap Growth Equity (MF) Median	4.77	21.80	10.56	17.71	12.53	14.98	15.09
IM U.S. Large Cap Growth Equity (MF) 3rd Quartile	3.84	20.37	8.79	16.25	11.37	14.12	14.22

Comparative Performance - Calendar

	2018	2017	2016	2015	2014	2013	2012
AF Growth Fund of America (RGAGX)	-2.60 (70)	26.53 (77)	8.82 (2)	5.70 (54)	9.63 (60)	34.29 (46)	20.98 (4)
Russell 1000 Growth Index	-1.51 (58)	30.21 (41)	7.08 (8)	5.67 (54)	13.05 (23)	33.48 (55)	15.26 (46)
IM U.S. Large Cap Growth Equity (MF) 1st Quartile	1.51	31.94	4.75	7.91	12.76	36.37	17.63
IM U.S. Large Cap Growth Equity (MF) Median	-0.85	29.47	2.17	6.01	10.46	33.91	14.80
IM U.S. Large Cap Growth Equity (MF) 3rd Quartile	-3.15	26.75	-0.18	3.47	8.52	30.96	12.93

Comparative Performance - Quarterly

	Mar-2019	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017	Sep-2017
AF Growth Fund of America (RGAGX)	13.87 (92)	-15.06 (38)	5.05 (95)	5.97 (44)	3.01 (45)	7.01 (35)	5.09 (61)
Russell 1000 Growth Index	16.10 (55)	-15.89 (53)	9.17 (11)	5.76 (51)	1.42 (78)	7.86 (10)	5.90 (35)
IM U.S. Large Cap Growth Equity (MF) 1st Quartile	17.23	-14.41	8.60	6.76	4.32	7.26	6.23
IM U.S. Large Cap Growth Equity (MF) Median	16.26	-15.76	7.78	5.77	2.82	6.66	5.52
IM U.S. Large Cap Growth Equity (MF) 3rd Quartile	15.40	-16.57	6.75	4.60	1.51	5.81	4.70

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	18.87	12.78	12.63
Downside Risk	13.90	8.33	8.03
vs. Russell 1000 Growth Index			
Alpha	-5.19	-0.41	-0.94
Beta	0.94	0.93	0.94
Down Market Capture	99.58	92.49	97.39
Information Ratio	-1.69	-0.46	-0.51
Tracking Error	3.60	3.41	3.33
Up Market Capture	83.20	91.67	92.02
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	0.24	1.15	0.87

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%)	9 (32%)	7 (25%)	5 (18%)
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%)	4 (14%)	0 (0%)
Russell 1000 Growth Index	28	20 (71%)	8 (29%)	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)	21	5 (24%)	7 (33%)	9 (43%)	0 (0%)
Russell 1000 Growth Index	28	25 (89%)	3 (11%)	0 (0%)	0 (0%)



Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	232,967,539,217	300,665,806,279	Facebook Inc	6.0	3.3	15.8	0.9
Median Mkt. Cap (\$)	33,864,438,574	12,769,594,320	Microsoft Corp	5.1	6.9	14.0	0.7
Price/Earnings ratio	24.3	24.7	Amazon.com Inc	4.7	5.6	6.3	0.3
Price/Book ratio	4.4	6.9	Netflix Inc	4.6	1.1	3.0	0.1
5 Yr. EPS Growth Rate (%)	24.7	23.4	Unitedhealth Group Inc	2.7	1.7	-0.9	0.0
Current Yield (%)	1.0	1.3	Alphabet Inc	2.2	2.4	-7.9	-0.2
Beta (5 Years, Monthly)	0.94	1.00	Broadcom Inc	2.1	0.5	-3.3	-0.1
Number of Stocks	296	546	Mastercard Inc	1.7	1.7	12.5	0.2
			Home Depot Inc. (The)	1.5	1.7	9.1	0.1
			Abbott Laboratories	1.4	0.0	5.6	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	18.4	12.3	4.63	3.62	-0.06	0.18	0.11	Shopify Inc	0.0	0.0	45.3	0.0
Consumer Discretionary	14.6	15.1	3.61	5.53	0.00	-0.28	-0.28	Caesars Entertainment Corp	0.1	0.0	36.0	0.0
Consumer Staples	3.7	5.8	-3.20	4.78	0.00	-0.31	-0.31	QUALCOMM Inc.	0.2	0.0	34.6	0.1
Energy	5.9	0.7	-3.74	-3.32	-0.42	-0.03	-0.45	Fortescue Metals Group Ltd	0.1	0.0	34.4	0.0
Financials	8.4	4.4	8.36	8.86	0.17	-0.04	0.12	NovoCure Ltd	0.1	0.0	31.3	0.0
Health Care	15.7	12.7	-0.66	0.18	-0.14	-0.13	-0.27	Alteryx Inc	0.1	0.0	30.1	0.0
Industrials	7.1	11.6	5.78	2.62	0.09	0.22	0.32	SNAP INC	0.1	0.0	29.8	0.0
Information Technology	22.5	33.2	7.12	6.62	-0.21	0.11	-0.10	Nintendo Co Ltd	0.0	0.0	28.6	0.0
Materials	2.2	1.8	-4.93	7.97	0.00	-0.28	-0.28	Cerner Corp	0.1	0.1	28.4	0.0
Real Estate	1.5	2.4	4.83	3.59	0.01	0.02	0.03	DexCom Inc	0.2	0.1	25.8	0.0
Total	100.0	100.0	3.53	4.64	-0.56	-0.55	-1.11					

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	41.0	58.4	6.64	5.48	-0.15	0.44	0.29	Teva Pharmaceutical	0.2	0.0	-41.1	-0.1
Large Neutral	26.4	17.2	2.01	0.54	-0.43	0.42	-0.01	Chesapeake Energy Corp	0.0	0.0	-37.1	0.0
Large Value	9.2	1.6	4.40	6.33	0.12	-0.14	-0.02	Regeneron Pharma	0.7	0.2	-23.8	-0.2
Mid Growth	6.3	11.3	5.38	5.40	-0.04	-0.02	-0.06	Occidental Petroleum Corp	0.0	0.0	-22.8	0.0
Mid Neutral	4.0	4.5	-1.16	5.39	-0.04	-0.25	-0.29	Halliburton Co	0.1	0.1	-21.8	0.0
Mid Value	6.3	1.1	-5.29	7.42	0.15	-0.77	-0.63	DuPont De Nemours Inc	0.2	0.0	-20.6	0.0
Small Growth	0.0	0.0	26.11	-2.00	0.00	0.01	0.01	Tesla Inc	0.6	0.2	-20.2	-0.1
Small Neutral	0.1	0.1	-13.42	-1.08	0.00	-0.01	-0.02	Canada Goose Holdings Inc	0.0	0.0	-19.3	0.0
Small Value	0.1	0.1	-18.02	4.26	0.00	-0.02	-0.02	Herbalife Nutrition Ltd	0.2	0.0	-19.3	0.0
Unclassified	6.5	5.6	-0.08	5.85	0.03	-0.39	-0.36	bluebird bio Inc	0.4	0.0	-19.2	-0.1
Total	100.0	100.0	3.53	4.64	-0.36	-0.75	-1.11					



Fund Information

Portfolio Manager : Golden/Carr Ticker : EVSIX
PM Tenure : 2011--2017 Inception Date : 07/30/2010
Fund Assets : \$315 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)	3.29 (76)	16.35 (72)	6.58 (77)	12.03 (71)	9.81 (36)	13.43 (34)	N/A
S&P 500 Index	4.30 (45)	18.54 (38)	10.42 (34)	14.19 (26)	10.71 (14)	13.98 (16)	14.70 (12)
IM U.S. Large Cap Core Equity (MF) 1st Quartile	4.95	19.38	11.26	14.22	10.23	13.68	14.12
IM U.S. Large Cap Core Equity (MF) Median	4.17	17.88	9.26	13.11	9.33	12.89	13.36
IM U.S. Large Cap Core Equity (MF) 3rd Quartile	3.32	15.75	6.71	11.74	8.24	11.94	12.49

Comparative Performance - Calendar

	2018	2017	2016	2015	2014	2013	2012
Wells Fargo Disciplined US Core (EVSIX)	-8.08 (85)	20.88 (55)	12.09 (24)	2.53 (21)	15.69 (4)	33.97 (22)	14.90 (56)
S&P 500 Index	-4.38 (31)	21.83 (38)	11.96 (26)	1.38 (32)	13.69 (16)	32.39 (38)	16.00 (39)
IM U.S. Large Cap Core Equity (MF) 1st Quartile	-3.73	22.83	11.98	2.10	12.93	33.53	16.87
IM U.S. Large Cap Core Equity (MF) Median	-5.60	21.17	10.06	0.14	11.36	31.77	15.34
IM U.S. Large Cap Core Equity (MF) 3rd Quartile	-7.13	19.22	8.30	-1.67	9.73	29.73	13.14

Comparative Performance - Quarterly

	Mar-2019	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017	Sep-2017
Wells Fargo Disciplined US Core (EVSIX)	12.65 (62)	-14.08 (62)	6.62 (67)	2.18 (77)	-1.79 (76)	6.46 (49)	4.93 (26)
S&P 500 Index	13.65 (32)	-13.52 (45)	7.71 (31)	3.43 (26)	-0.76 (45)	6.64 (39)	4.48 (47)
IM U.S. Large Cap Core Equity (MF) 1st Quartile	13.95	-12.16	7.86	3.45	-0.30	7.18	4.94
IM U.S. Large Cap Core Equity (MF) Median	13.12	-13.77	7.26	2.81	-1.01	6.44	4.44
IM U.S. Large Cap Core Equity (MF) 3rd Quartile	12.02	-14.77	6.04	2.23	-1.79	5.77	3.78

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	18.42	12.22	11.84
Downside Risk	13.57	8.37	7.61
vs. S&P 500 Index			
Alpha	-3.59	-2.06	-0.69
Beta	1.01	1.01	0.99
Down Market Capture	105.07	104.88	96.90
Information Ratio	-4.74	-1.89	-0.67
Tracking Error	0.74	1.01	1.24
Up Market Capture	92.95	94.16	94.64
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	0.32	0.88	0.78

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	11 (39%)	8 (29%)	6 (21%)	3 (11%)
S&P 500 Index	28	8 (29%)	19 (68%)	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)	24	19 (79%)	2 (8%)	3 (13%)	0 (0%)
S&P 500 Index	28	23 (82%)	5 (18%)	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)	16	14 (88%)	2 (13%)	0 (0%)	0 (0%)
S&P 500 Index	28	22 (79%)	6 (21%)	0 (0%)	0 (0%)



Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	259,731,873,545	238,881,623,598	Microsoft Corp	5.8	4.2	14.0	0.8
Median Mkt. Cap (\$)	42,395,660,300	22,706,756,860	Apple Inc	4.4	3.5	4.6	0.2
Price/Earnings ratio	17.7	20.4	Amazon.com Inc	3.7	3.2	6.3	0.2
Price/Book ratio	3.2	3.5	Johnson & Johnson	2.4	1.5	0.3	0.0
5 Yr. EPS Growth Rate (%)	14.6	15.5	Facebook Inc	2.1	1.9	15.8	0.3
Current Yield (%)	2.3	2.0	Exxon Mobil Corp	2.1	1.3	-4.1	-0.1
Beta (5 Years, Monthly)	0.99	1.00	JPMorgan Chase & Co	2.1	1.5	11.3	0.2
Number of Stocks	123	505	Alphabet Inc	2.1	1.4	-7.9	-0.2
			AT&T Inc	2.0	1.0	8.6	0.2
			Verizon Communications Inc	1.8	1.0	-2.4	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	10.1	10.2	4.01	4.44	-0.02	-0.04	-0.05	Far Eastern Department Stores Ltd	0.0	0.0	36.6	0.0
Consumer Discretionary	11.0	10.4	3.88	5.31	0.00	-0.16	-0.16	Arconic Inc	0.3	0.0	35.2	0.1
Consumer Staples	5.8	7.7	1.16	4.03	0.03	-0.23	-0.20	KBR Inc	0.4	0.0	31.1	0.1
Energy	6.1	5.1	-2.20	-2.77	-0.03	0.04	0.01	Walt Disney Co (The)	1.0	1.0	25.8	0.3
Financials	12.8	13.3	7.53	7.77	-0.01	-0.02	-0.03	Lockheed Martin Corp	0.4	0.4	21.9	0.1
Health Care	15.3	13.9	0.78	1.27	-0.03	-0.07	-0.11	Ford Motor Co	0.8	0.2	18.4	0.2
Industrials	8.8	9.4	2.43	3.69	0.02	-0.09	-0.07	Metlife Inc.	1.0	0.2	17.8	0.2
Information Technology	21.1	21.1	6.46	6.02	0.00	0.09	0.09	Tyson Foods Inc.	0.8	0.1	16.9	0.1
Materials	1.8	2.6	-0.03	4.18	0.00	-0.05	-0.05	Facebook Inc	2.1	1.9	15.8	0.3
Real Estate	4.2	3.0	5.88	2.47	-0.04	0.15	0.11	McKesson Corp	0.6	0.1	15.2	0.1
Utilities	3.1	3.2	-3.25	3.48	0.05	-0.22	-0.17					
Total	100.0	100.0	3.64	4.27	-0.02	-0.61	-0.63					

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	31.2	38.1	5.41	5.34	-0.07	0.03	-0.05	Kohl's Corp	0.3	0.0	-29.9	-0.1
Large Neutral	23.1	24.7	1.91	2.61	-0.02	-0.15	-0.17	Lamb Weston Holdings Inc	0.3	0.0	-15.2	0.0
Large Value	20.9	17.9	5.28	4.62	0.00	0.15	0.15	Eli Lilly and Co	1.0	0.4	-14.1	-0.1
Mid Growth	4.7	3.8	-2.38	3.70	-0.01	-0.30	-0.31	State Street Corp	0.2	0.1	-14.1	0.0
Mid Neutral	4.7	5.3	3.34	5.15	-0.02	-0.16	-0.17	Robert Half Intl	0.6	0.0	-12.0	-0.1
Mid Value	9.8	5.5	2.71	2.51	-0.05	0.06	0.01	NetApp Inc	0.3	0.1	-10.5	0.0
Small Neutral	0.2	0.0	0.39	0.00	0.01	0.00	0.01	Grainger (W.W.) Inc	0.6	0.0	-10.4	-0.1
Small Value	0.7	0.0	1.05	0.00	-0.04	0.00	-0.04	Intel Corp	1.6	0.9	-10.3	-0.2
Unclassified	4.6	4.7	3.10	4.06	0.00	-0.05	-0.05	JB Hunt Transport	0.2	0.0	-9.5	0.0
Total	100.0	100.0	3.64	4.27	-0.21	-0.42	-0.63	ABIOMED Inc	0.3	0.0	-8.8	0.0



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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