

Investment Performance Review
Period Ending June 30, 2018

Washoe County 457 & 401a Plans



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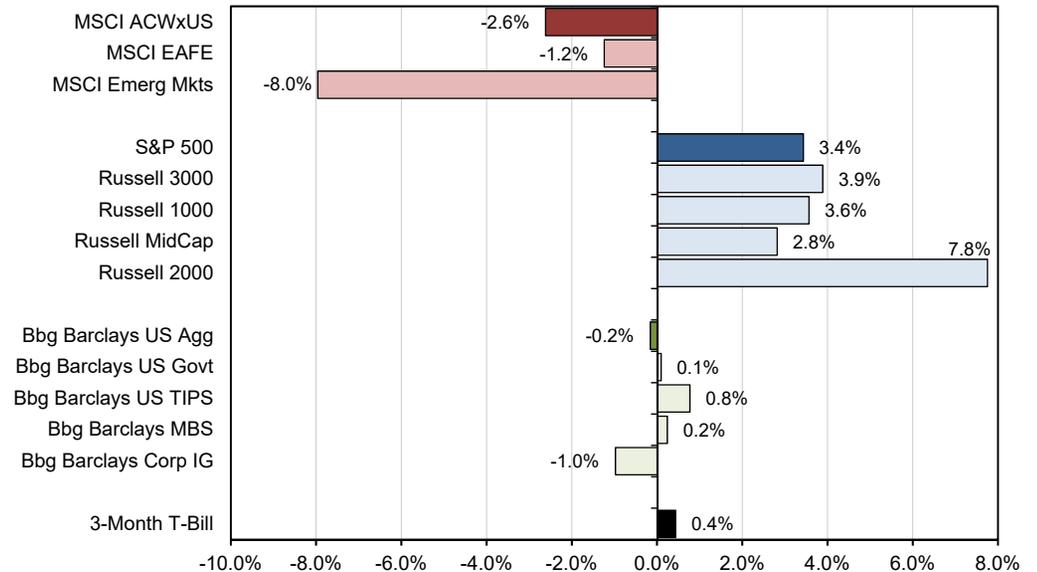


2nd Quarter 2018 Market Environment

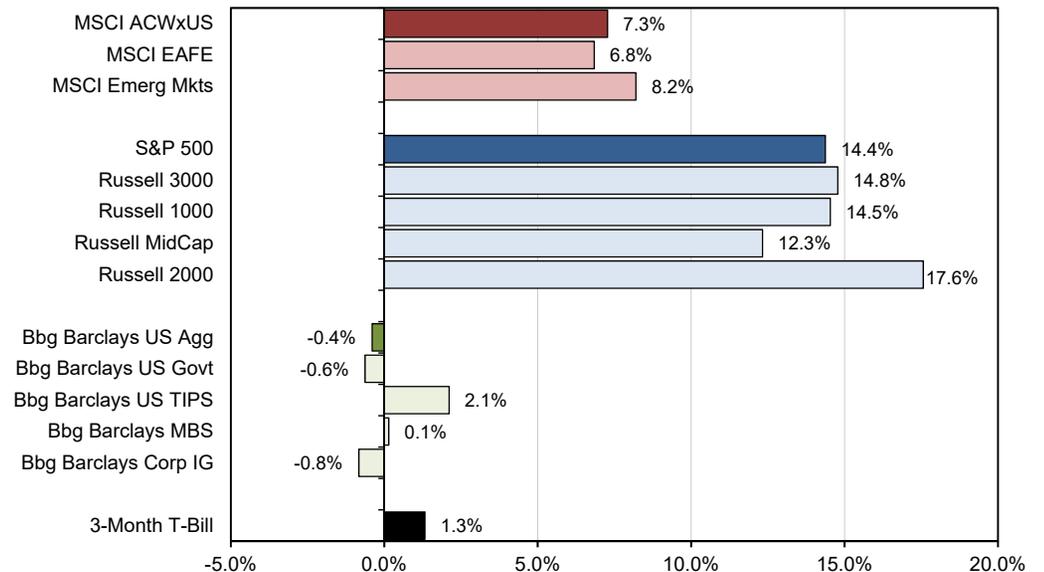


- Market returns were mixed across major equity and fixed income indices for the 2nd quarter of 2018. Broad domestic equity indices had healthy gains as supportive economic and corporate earnings data, helped by a fiscal stimulus tailwind resulting from the Republican Party led tax reform passed in late 2017, continued to push domestic stocks higher. International indices did not fare as well during the period, posting negative returns in US dollar (USD) terms, as markets were hurt by relatively soft economic data, geopolitical concerns and a strengthening USD. Fixed income returns were somewhat flat for the quarter with the various sector segments producing minor gains or losses. Despite the Federal Reserve's (Fed) ongoing tightening of monetary policy and the potential for global trade disruptions resulting from Trump administration protectionist trade policies, economic momentum in the US continued to fuel investor demand for domestic equities. The US stock market represented by the Russell 3000 Index returned 3.9% and 14.8% for the quarter and 1-year period respectively.
- International equity posted negative returns for the quarter with emerging markets stocks falling the greatest degree. The developed market MSCI EAFE Index lost -1.2% as macroeconomic data abroad, while still signaling a continuation in global growth, appeared to slow throughout the quarter. International markets were also affected by investor concerns surrounding ongoing political developments in various countries and continued uncertainty around the outlook for global trade relations. International market returns also faced a currency effect headwind as the USD appreciated against most other currencies during the period. This combination of factors had the greatest influence on emerging market equities with the MSCI Emerging Markets Index posting a sharp decline of -8.0%. One-year returns remain broadly positive with the MSCI EAFE and MSCI Emerging Markets indices returning 6.8% and 8.2% respectively.
- Interest rates on the US Treasury Yield Curve rose across all maturities during the 2nd quarter. The increase in interest rates was most pronounced in short-term maturities resulting in further flattening of the yield curve. The relatively large increase at the short-end of the curve was partially due to the Fed's decision to tighten monetary policy by increasing short-term interest rates for the second time this year during their June meeting. Also significant was the change in the Fed's forecasted schedule for interest rate increases, which now projects two potential additional rate increases in 2018, where it had previously forecast just one. The broad market Bloomberg Barclays US Aggregate Index was modestly negative for both the 2nd quarter and the 1-year time period, returning -0.2% and -0.4% respectively. Corporate issues were the worst performing investment grade sector during the quarter, returning -1.0% as credit spreads continued to widen through 2018.

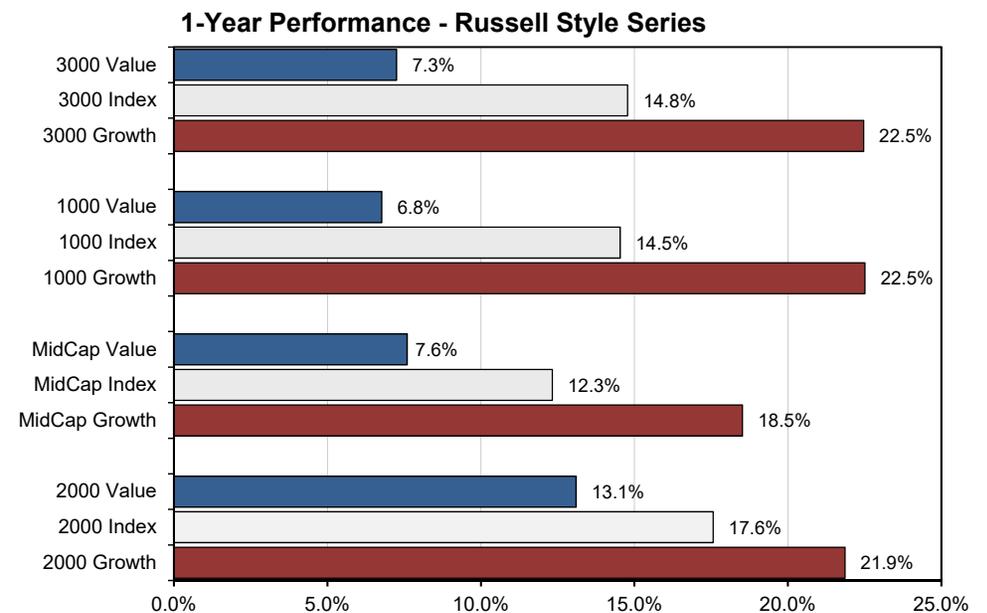
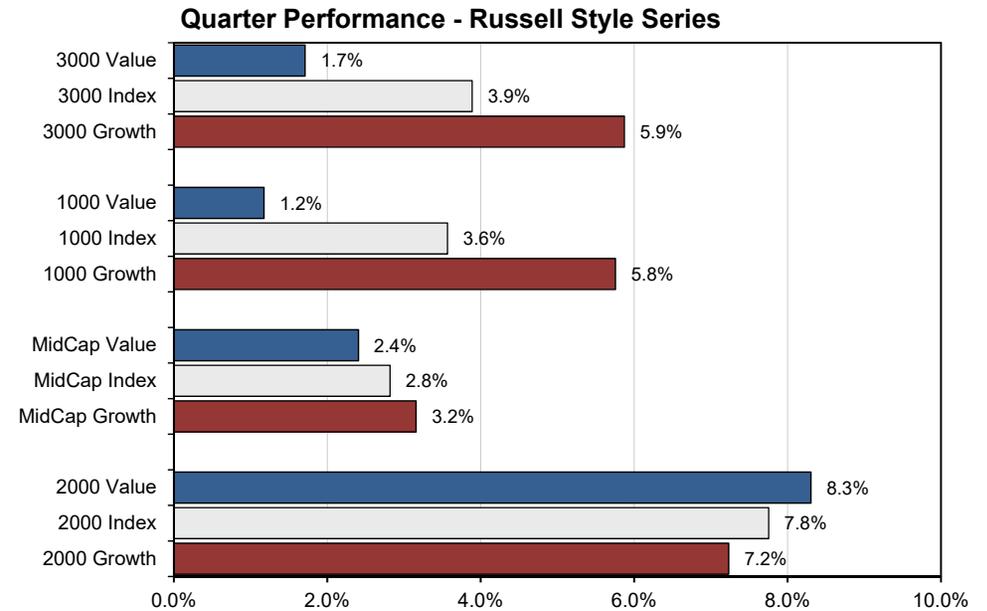
Quarter Performance



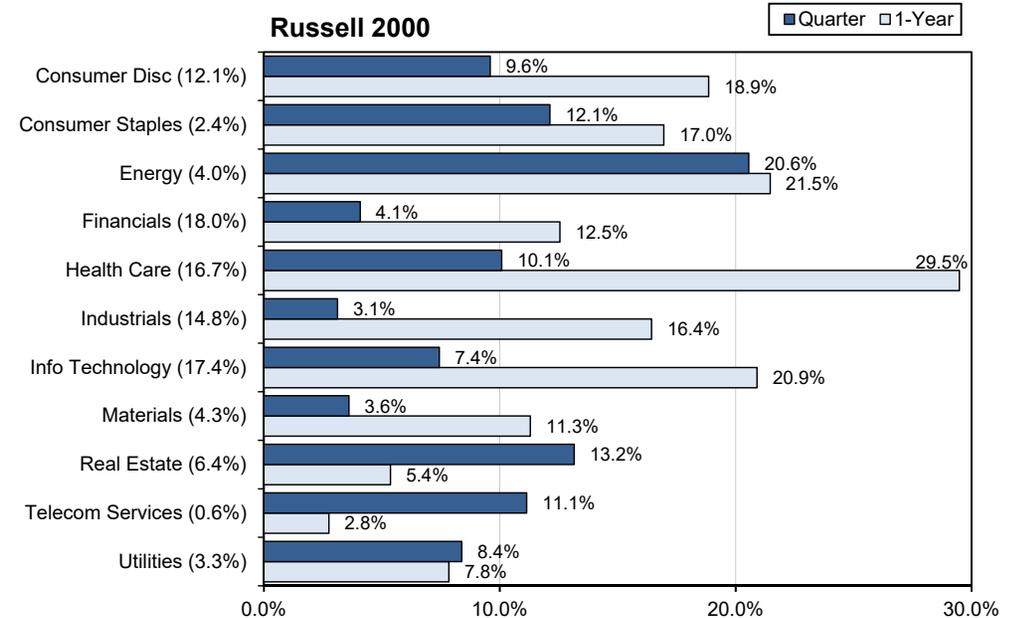
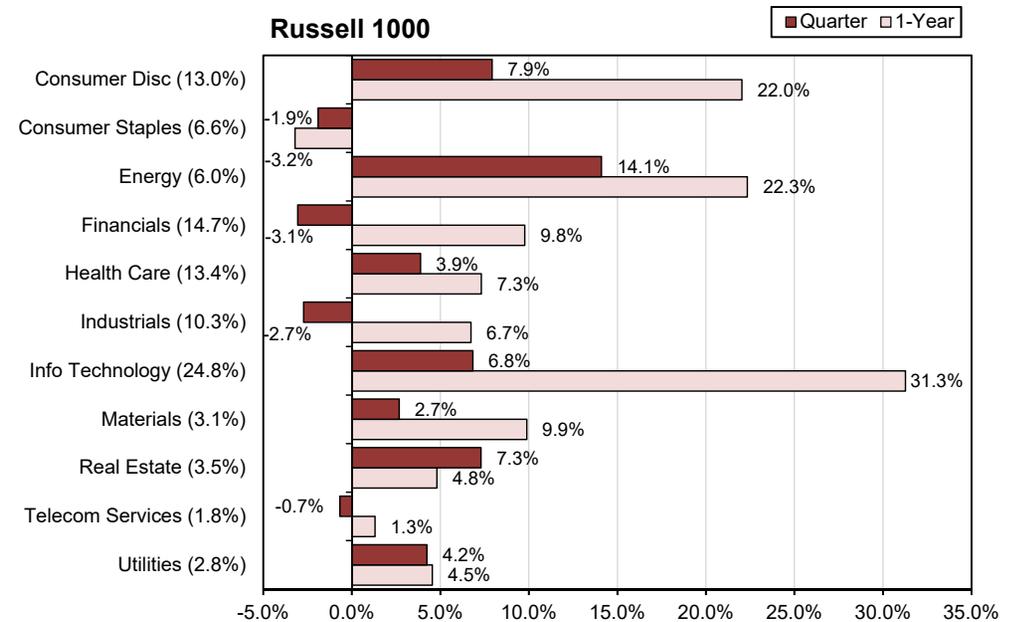
1-Year Performance



- US equity index returns were positive across the style and capitalization spectrum during the 2nd quarter of 2018. Markets were encouraged by the ongoing strength in US economic data and corporate earnings. Positive data releases in unemployment, retail sales, consumer consumption, GDP and investor sentiment highlighted the continued health of the US economy. Additionally, Q1 2018 corporate earnings announced throughout the period grew at an impressive rate as corporate profits were beneficiaries of the late 2017 Republican Party tax reforms. Returns for the period were tempered by global trade uncertainty as tariffs on steel and aluminum imported from Canada, Mexico and the European Union took effect with the possibility of additional tariffs aimed at China and foreign auto producers being considered. The Trump administration also announced the US withdrawal from the Iran nuclear accord, proposing new sanctions, which could disrupt oil markets in the future, and made progress toward a denuclearization deal with North Korea.
- During the quarter, small cap stocks outperformed mid and large cap equities for style and core indices. This is partially due to the increased tax reform benefit small cap companies will receive relative to large caps. Small cap stocks have historically paid higher taxes relative to large cap companies since they typically generate more of their revenue in the US. More globally oriented large caps also faced a considerable headwind from the recent USD strength. Large cap companies generate more revenue outside of the US and an appreciating USD makes US exports more expensive to foreign consumers. The small cap Russell 2000 Index returned 7.8% during the period, while the large cap Russell 1000 Index returned 3.6%. Small caps also outperformed over the 1-year period with the Russell 2000 returning 17.6% over the trailing year while the Russell 1000 posted a return of 14.5%.
- Style index performance was mixed during the quarter with growth companies outperforming in large- and mid-cap, but value stocks outperforming in the small-cap space. The Russell 2000 Value Index was the best performing style index for the period returning a notable 8.3% for the quarter. Returns over the trailing year continue to show significant outperformance of growth indices relative to their value counterparts with the return of the Russell 1000 Growth Index more than tripling the return of the Russell 1000 Value Index. Growth benchmarks benefitted from larger exposures to more cyclical names within the information technology, consumer discretionary, health care and industrials sectors. They also benefitted from underweights to more defensive sectors such as REITs, utilities and telecom.



- Sector performance was mixed across large cap sectors for the 2nd quarter of 2018. Seven of eleven sectors had positive returns for the quarter and six of eleven economic sectors outpaced the Russell 1000 Index return. Energy was the best performing sector during the quarter, returning 14.1%, as an OPEC announced increase in crude oil production was overshadowed by supply concerns in Iran, Venezuela and Libya, resulting in considerably higher oil prices. The consumer discretionary sector also performed well on the back of strong retail sales and increased consumer spending, gaining 7.9% for the period. Technology stocks continued their climb, returning 6.8% over the quarter. Technology names now account for nearly 25% of the market cap of the Russell 1000 Index. The largest detractors for the quarter were the financials, industrials and consumer staples sectors which returned -3.1%, -2.7% and -1.9% respectively. Over the trailing 1-year period, technology was the best performing sector by a relatively wide margin returning an impressive 31.3% and the consumer discretionary and energy sectors also posted returns greater than 20%. Ten of eleven large cap economic sectors posted positive returns for the 1-year period with consumer staples being the only sector to post negative performance, returning -3.2%.
- Quarterly results for small cap sectors were higher relative to their large capitalization counterparts. All sectors had positive returns during the period with seven of eleven economic sectors outpacing the Russell 2000 Index return for the quarter. Like the large cap index sector performance, industrials and financials were relative underperformers for the 2nd quarter. Financials were hurt by a flattening yield curve and concerns over global trade weighed on industrials. Quarterly performance on industrials and financials was 3.1% and 4.1% respectively. Energy was the best performing sector in the Russell 2000 as well, returning a notable 20.6%. However, there were several differences, particularly in consumer staples and telecom where there was significant outperformance relative to their large cap counterparts. Small cap sectors beat large cap sectors in those two categorizations by over 10.0% during the quarter. Over the trailing 1-year period, all eleven sectors posted gains. Health care stocks were the best performers within the Russell 2000 for the trailing year returning a solid 29.5%. Energy and technology also posted returns over 20% for the 1-year period.
- Using S&P 500 sector valuations as a proxy for the market, forward P/E ratios for six of the eleven GICS sectors were higher than their long-term averages at quarter-end. Using these historical P/E measures, the utilities, consumer discretionary and real estate sectors appear the most extended. In contrast the telecommunications, technology and health care sectors were trading at a discount to their long-term average P/E ratios.



The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of June 30, 2018

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	3.53%	10.8%	30.5%	Information Technology
Microsoft Corp	2.89%	8.5%	45.8%	Information Technology
Amazon.com Inc	2.68%	17.4%	75.6%	Consumer Discretionary
Facebook Inc A	1.79%	21.6%	28.7%	Information Technology
Berkshire Hathaway Inc B	1.40%	-6.4%	10.2%	Financials
JPMorgan Chase & Co	1.37%	-4.8%	16.5%	Financials
Exxon Mobil Corp	1.36%	12.0%	6.6%	Energy
Alphabet Inc C	1.32%	8.1%	22.8%	Information Technology
Alphabet Inc A	1.31%	8.9%	21.5%	Information Technology
Johnson & Johnson	1.26%	-4.6%	-5.8%	Health Care

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Five Below Inc	0.24%	33.2%	97.9%	Consumer Discretionary
Etsy Inc	0.23%	50.4%	181.3%	Information Technology
Blackbaud Inc	0.22%	0.8%	20.1%	Information Technology
LivaNova PLC	0.22%	12.8%	63.1%	Health Care
Haemonetics Corp	0.22%	22.6%	127.1%	Health Care
Entegris Inc	0.22%	-2.4%	55.4%	Information Technology
FibroGen Inc	0.21%	35.5%	93.8%	Health Care
Idacorp Inc	0.21%	5.2%	10.9%	Utilities
Medidata Solutions Inc	0.21%	28.3%	3.0%	Health Care
Loxo Oncology Inc	0.21%	50.4%	116.3%	Health Care

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Sarepta Therapeutics Inc	0.03%	78.4%	292.1%	Health Care
Wayfair Inc Class A	0.03%	75.9%	54.5%	Consumer Discretionary
Chesapeake Energy Corp	0.02%	73.5%	5.4%	Energy
Whiting Petroleum Corp	0.02%	55.8%	139.2%	Energy
Twitter Inc	0.12%	50.5%	144.4%	Information Technology
Advanced Micro Devices Inc	0.05%	49.2%	20.1%	Information Technology
Exact Sciences Corp	0.03%	48.3%	69.0%	Health Care
Under Armour Inc C	0.02%	46.9%	4.6%	Consumer Discretionary
Twilio Inc A	0.02%	46.7%	92.4%	Information Technology
Weatherford International PLC	0.01%	43.7%	-15.0%	Energy

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Turtle Beach Corp	0.01%	746.8%	625.7%	Consumer Discretionary
Solid Biosciences Inc	0.01%	375.1%	N/A	Health Care
Tandem Diabetes Care Inc	0.04%	344.0%	175.2%	Health Care
Intelsat SA	0.03%	343.1%	444.4%	Telecommunication Services
Evolus Inc	0.01%	210.0%	N/A	Health Care
California Resources Corp	0.09%	165.0%	431.5%	Energy
TransEnterix Inc	0.03%	156.5%	514.1%	Health Care
Penn Virginia Corp	0.05%	142.3%	131.0%	Energy
Regenxbio Inc	0.09%	140.4%	263.3%	Health Care
Madrigal Pharmaceuticals Inc	0.07%	139.5%	1620.1%	Health Care

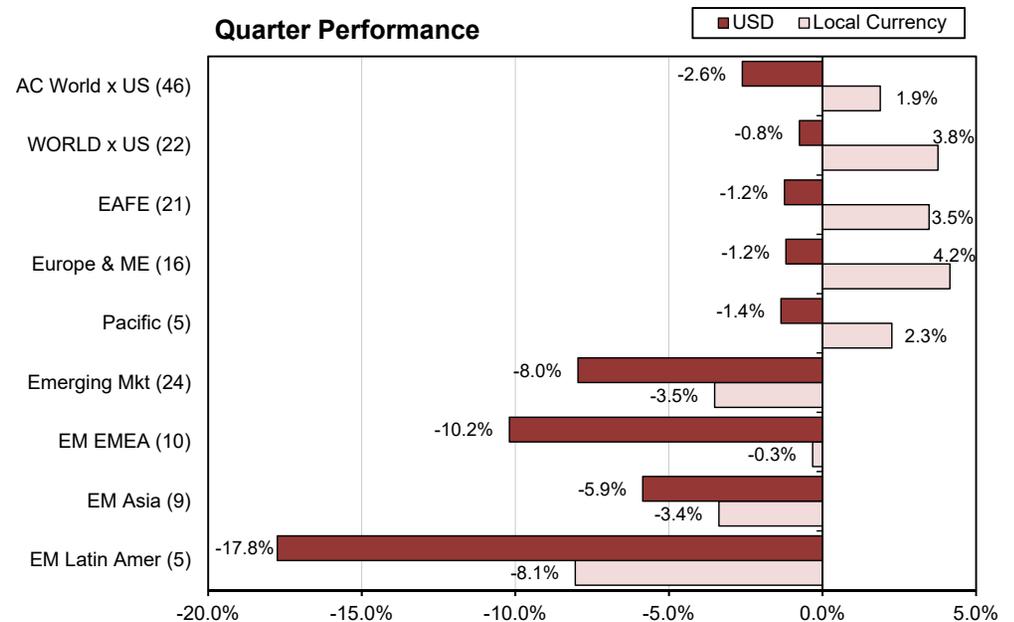
Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Nektar Therapeutics Inc	0.03%	-54.0%	149.8%	Health Care
Alkermes PLC	0.02%	-29.0%	-29.0%	Health Care
CommScope Holding Co Inc	0.02%	-26.9%	-23.2%	Information Technology
American Airlines Group Inc	0.06%	-26.8%	-23.9%	Industrials
Arconic Inc	0.03%	-25.9%	-24.1%	Industrials
Copa Holdings SA Class A	0.01%	-25.9%	-17.0%	Industrials
First Solar Inc	0.02%	-25.8%	32.0%	Information Technology
ManpowerGroup Inc	0.02%	-24.4%	-21.5%	Industrials
Switch Inc Class A	0.00%	-23.3%	N/A	Information Technology
Skechers USA Inc	0.02%	-22.8%	1.7%	Consumer Discretionary

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Arsanis Inc	0.00%	-84.1%	N/A	Health Care
Menlo Therapeutics Inc	0.00%	-78.4%	N/A	Health Care
Jounce Therapeutics Inc	0.01%	-65.7%	-45.4%	Health Care
Prothena Corp PLC	0.03%	-60.3%	-73.1%	Health Care
Biglari Holdings Inc	0.01%	-55.1%	-54.1%	Consumer Discretionary
Catalyst Biosciences Inc	0.01%	-54.8%	151.0%	Health Care
Recro Pharma Inc	0.00%	-54.4%	-28.6%	Health Care
scPharmaceuticals Inc	0.00%	-54.4%	N/A	Health Care
Agenus Inc	0.01%	-51.8%	-41.9%	Health Care
Syndax Pharmaceuticals Inc	0.00%	-50.7%	-49.7%	Health Care

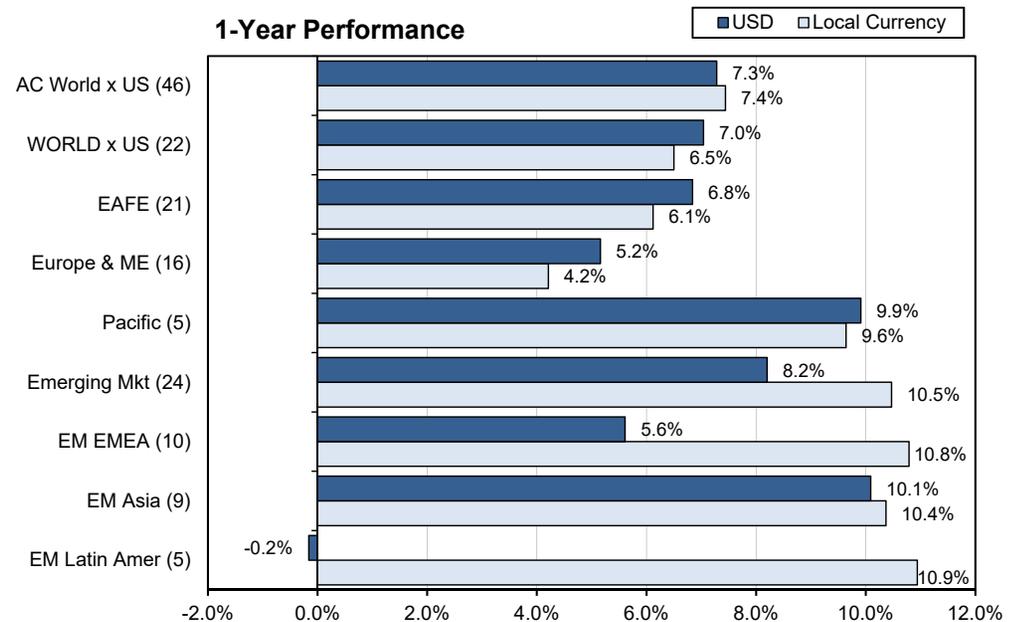


- Broad international equity returns were mixed for the quarter. Many developed markets were positive in local currency terms, but negative in USD terms whereas emerging markets posted negative returns in both local currency and USD. Performance was largely driven by the same catalysts as the US equity markets with global macroeconomic data remaining generally positive, but returns being tempered by global trade tensions and ongoing political uncertainty. A strengthening USD caused by relatively strong US economic fundamentals and the continued divergence in global monetary policy hurt US investors in international markets. The MSCI ACWI ex US Index gained 1.9% in local currency terms, but lost -2.6% in USD terms during the second quarter. Returns over the 1-year period remain positive in both local currency and USD terms with the MSCI ACWI ex US returning 7.4% and 7.3% respectively.
- Second quarter results for developed market international indices were generally positive in local currency terms with the MSCI EAFE Index returning 3.5%. However, an appreciating USD pushed returns for US investors into negative territory, with the index returning -1.2% in USD terms. Developed markets were pushed higher by broadly positive, but slowing, global economic and earnings data despite several significant political events in Europe during the quarter. There was considerable volatility surrounding the formation of a coalition government in Italy which called into question Italy's future as part of the European Union. Spain also had a change in leadership after a political fundraising scandal led to a vote of no-confidence in Prime Minister Rajoy, forcing him to step down. World markets also reacted to the implementation of new tariffs on US imports of steel and aluminum and the possibility of new tariffs in the future, including tariffs on auto imports, which would negatively affect producers in Europe and Japan. The MSCI EAFE Index returned 6.1% and 6.8% for the last twelve months in local currency and USD terms respectively.
- Emerging markets trailed developed markets for the 2nd quarter, posting losses in local currency terms that were then intensified by the strengthening USD. The MSCI Emerging Markets Index returned -3.5% and -8.0% in local currency and USD terms respectively. The main factors affecting emerging markets were the threat of continued protectionist trade policies from the US creating uncertainty for export focused economies and rising US interest rates coupled with an appreciating USD. Many emerging market countries and companies issue debt denominated in USD and the combination of higher interest rates and a relatively weaker local currency can put stress on the balance sheets of these borrowers, especially those heavily dependent on external capital. One year returns for the MSCI Emerging Market Index were 10.5% in local currency terms and 8.2% in USD terms.

Quarter Performance



1-Year Performance



The Market Environment
US Dollar International Index Attribution & Country Detail
As of June 30, 2018

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	12.4%	-2.6%	10.9%
Consumer Staples	11.3%	0.4%	3.1%
Energy	6.1%	11.2%	35.8%
Financials	19.8%	-6.2%	-0.5%
Health Care	10.7%	1.9%	1.7%
Industrials	14.3%	-2.2%	7.3%
Information Technology	6.8%	-0.2%	15.0%
Materials	8.2%	0.7%	16.7%
Real Estate	3.5%	-0.4%	7.8%
Telecommunication Services	3.6%	-4.8%	-6.3%
Utilities	3.3%	0.5%	5.2%
Total	100.0%	-1.2%	6.8%

MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	11.2%	-3.5%	8.4%
Consumer Staples	9.7%	-0.7%	2.9%
Energy	7.4%	7.3%	27.5%
Financials	21.9%	-7.3%	1.7%
Health Care	8.1%	1.4%	3.2%
Industrials	11.7%	-2.7%	5.9%
Information Technology	11.9%	-2.9%	15.5%
Materials	8.2%	-0.4%	16.1%
Real Estate	3.2%	-3.0%	6.9%
Telecommunication Services	3.7%	-6.0%	-6.3%
Utilities	3.0%	-1.5%	3.8%
Total	100.0%	-2.6%	7.3%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	9.8%	-7.1%	-0.2%
Consumer Staples	6.7%	-6.2%	3.3%
Energy	7.2%	-4.7%	24.9%
Financials	22.8%	-12.7%	5.5%
Health Care	3.2%	-5.0%	22.4%
Industrials	5.2%	-11.2%	-5.9%
Information Technology	27.9%	-5.1%	15.2%
Materials	7.6%	-5.5%	14.0%
Real Estate	3.0%	-11.2%	5.6%
Telecommunication Services	4.3%	-9.7%	-7.5%
Utilities	2.4%	-8.1%	2.2%
Total	100.0%	-8.0%	8.2%

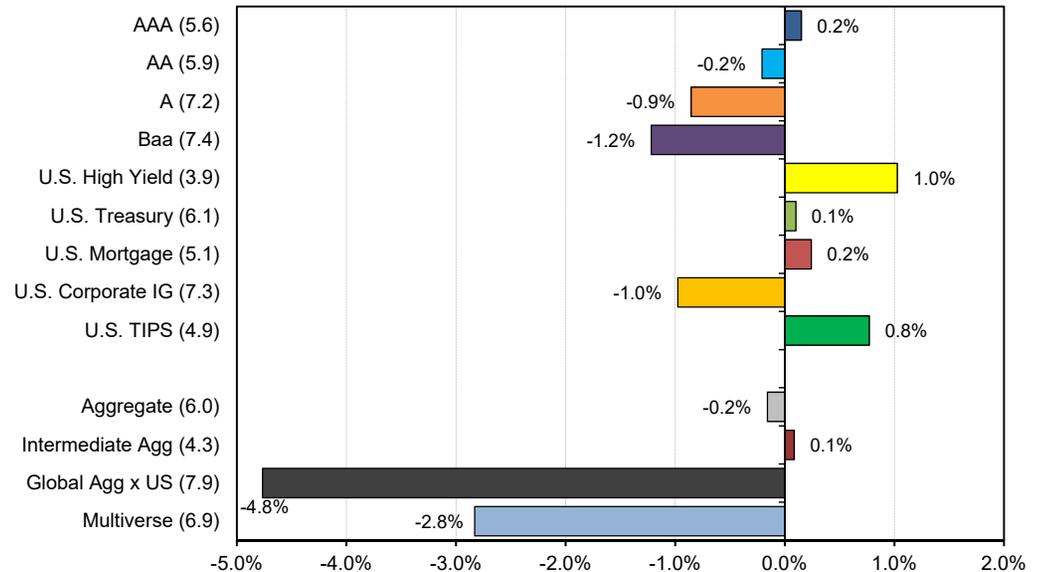
Country	MSCI-EAFE Weight	MSCI-ACWIXUS Weight	Quarter Return	1-Year Return
Japan	24.0%	16.4%	-2.8%	10.5%
United Kingdom	18.0%	12.3%	3.0%	10.0%
France	11.0%	7.5%	-0.5%	9.9%
Germany	9.5%	6.5%	-4.0%	2.6%
Switzerland	7.8%	5.3%	-2.7%	-3.4%
Australia	7.0%	4.8%	5.2%	8.7%
Hong Kong	3.6%	2.5%	-1.2%	9.2%
Netherlands	3.6%	2.5%	-1.8%	9.2%
Spain	3.1%	2.1%	-4.4%	-3.6%
Sweden	2.6%	1.8%	-3.7%	-4.6%
Italy	2.4%	1.7%	-7.3%	8.4%
Denmark	1.7%	1.1%	-7.0%	0.9%
Singapore	1.3%	0.9%	-7.5%	7.9%
Belgium	1.1%	0.7%	-6.0%	1.7%
Finland	1.0%	0.7%	1.3%	10.4%
Norway	0.7%	0.5%	2.3%	27.1%
Ireland	0.6%	0.4%	2.0%	5.3%
Israel	0.5%	0.4%	10.9%	-4.6%
Austria	0.2%	0.2%	-10.6%	8.9%
New Zealand	0.2%	0.2%	5.8%	1.7%
Portugal	0.2%	0.1%	1.2%	15.8%
Total EAFE Countries	100.0%	68.4%	-1.2%	6.8%
Canada		6.6%	4.7%	9.1%
Total Developed Countries		75.0%	-0.8%	7.0%
China		8.2%	-3.5%	21.2%
Korea		3.7%	-9.2%	3.4%
Taiwan		2.9%	-6.3%	3.9%
India		2.2%	-0.6%	6.5%
South Africa		1.6%	-11.9%	6.4%
Brazil		1.5%	-26.4%	-0.3%
Russia		0.9%	-6.0%	26.0%
Mexico		0.7%	-3.6%	-9.3%
Malaysia		0.6%	-11.4%	5.6%
Thailand		0.5%	-15.0%	12.0%
Indonesia		0.5%	-12.5%	-13.1%
Chile		0.3%	-11.5%	12.5%
Poland		0.3%	-11.6%	-6.2%
Philippines		0.2%	-11.2%	-13.9%
Qatar		0.2%	3.5%	3.5%
Turkey		0.2%	-25.9%	-26.3%
United Arab Emirates		0.2%	-4.4%	-6.0%
Colombia		0.1%	6.7%	20.1%
Peru		0.1%	-3.2%	30.7%
Greece		0.1%	-2.2%	-9.2%
Hungary		0.1%	-14.4%	-0.6%
Czech Republic		0.0%	-5.4%	19.4%
Egypt		0.0%	-8.1%	1.9%
Pakistan		0.0%	-20.8%	-30.3%
Total Emerging Countries		25.0%	-8.0%	8.2%
Total ACWIXUS Countries		100.0%	-2.6%	7.3%

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

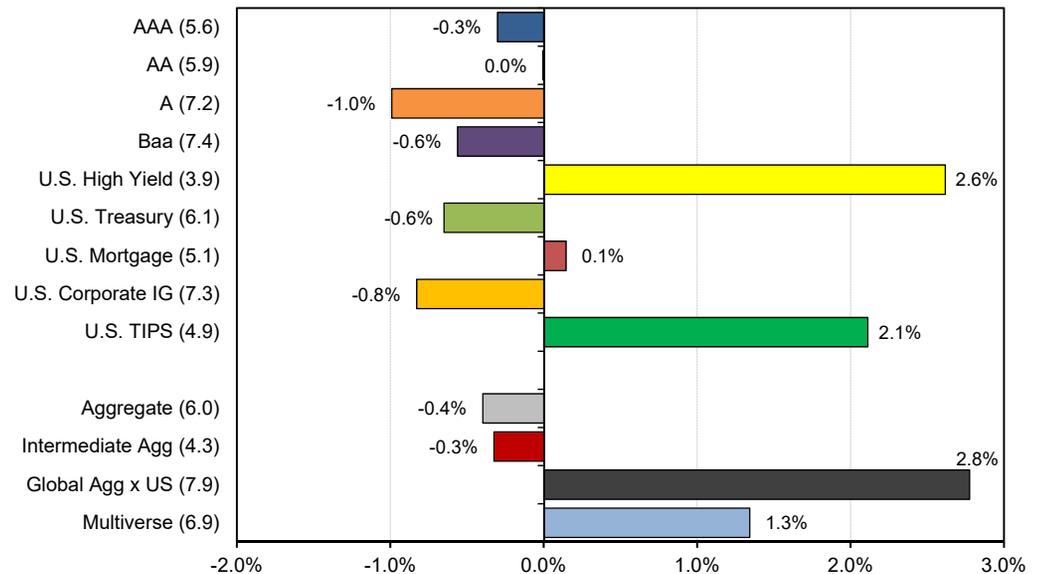


- Broad fixed income benchmarks had mixed results during the 2nd quarter. Interest rates rose across all maturities on the US Treasury Yield Curve. Early in the quarter, rates rose as positive economic data and signs of higher inflation increased investor expectations for another Fed interest rate hike. However, volatility caused by ongoing geopolitical developments later in the quarter led to an increase in risk aversion and demand for relatively safe assets, driving rates lower through the rest of the quarter. Interest rates on the 10-year Treasury reached a near-term high of 3.11% in mid-May before falling to end the quarter at 2.87%. As expected, the Federal Open Market Committee (FOMC), decided to increase short-term interest rates by 25 basis points at their June meeting. This is the second rate hike of 2018. The current Fed Funds Rate target range sits at 1.75%-2.00%. The FOMC also updated their forecast for future rate increases, now expecting two potential additional hikes in 2018 and three in 2019. The yield curve continued to flatten through the quarter as short-term yields rose at a greater rate than longer-term yields. The difference in yields between the 2-year and 10-year Treasury now sits at just 0.3%. The Fed is also continuing to reduce the size of its balance sheet by slowing its pace of reinvestment as the securities it holds mature. The Bloomberg Barclays US Aggregate Index was relatively flat during the quarter, falling -0.2%. It was also negative for the 1-year period returning -0.4%.
- Within investment grade credit, higher quality corporate issues outperformed lower quality issues for the quarter as credit spreads widened and investors looked for safety amid increased financial market volatility. On an absolute basis, without negating the duration differences in the sub-indices, AAA rated credit was the best performing investment grade credit quality segment returning 0.2% for the quarter. High yield debt outperformed relative to investment grade credit, returning 1.0%, as spreads widened to a lesser degree for these issues and the index benefitted from its lower duration. Part of the reason for the increased spread widening for investment grade issues relative to high yield issues was continued selling pressure from companies repatriating foreign cash reserves in response to the new tax code and lower demand from foreign investors due to increased hedging costs and a stronger USD.
- Of the Bloomberg Barclays US Aggregate Index's three broad sectors, US mortgage backed securities (MBS) were the best performing investment grade sector through the quarter, narrowly outperforming US Treasuries. Corporate credit underperformed as credit spreads widened and investors reacted to market volatility by moving into higher quality issues. Higher durations relative to other index sectors also acted as a headwind to these issues. The Bloomberg Barclays US Corporate IG Index returned -1.0%. While TIPS were also positive, it is important to note these Treasury issues are not part of the Bloomberg Barclays US Aggregate Index.

Quarter Performance

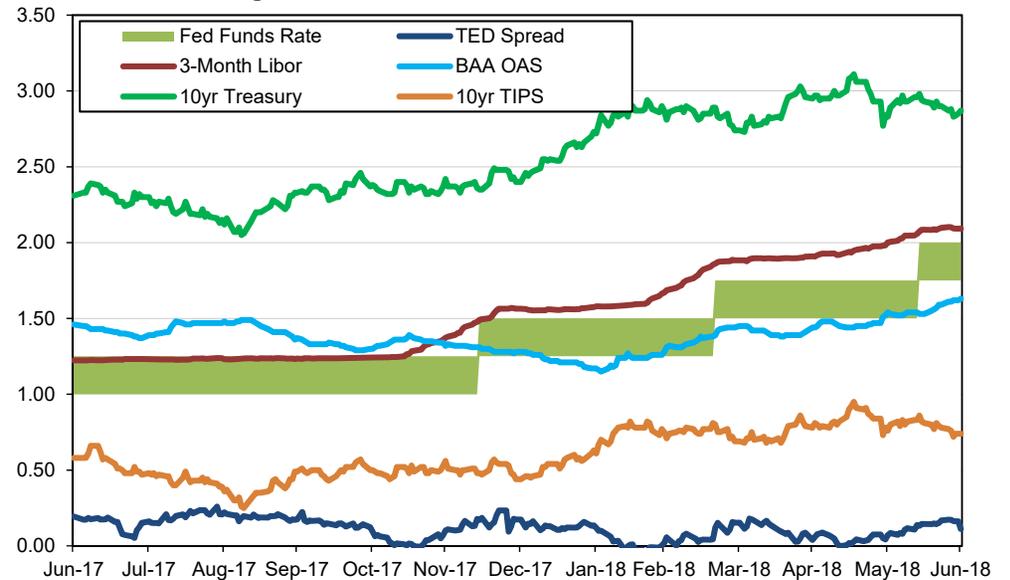


1-Year Performance

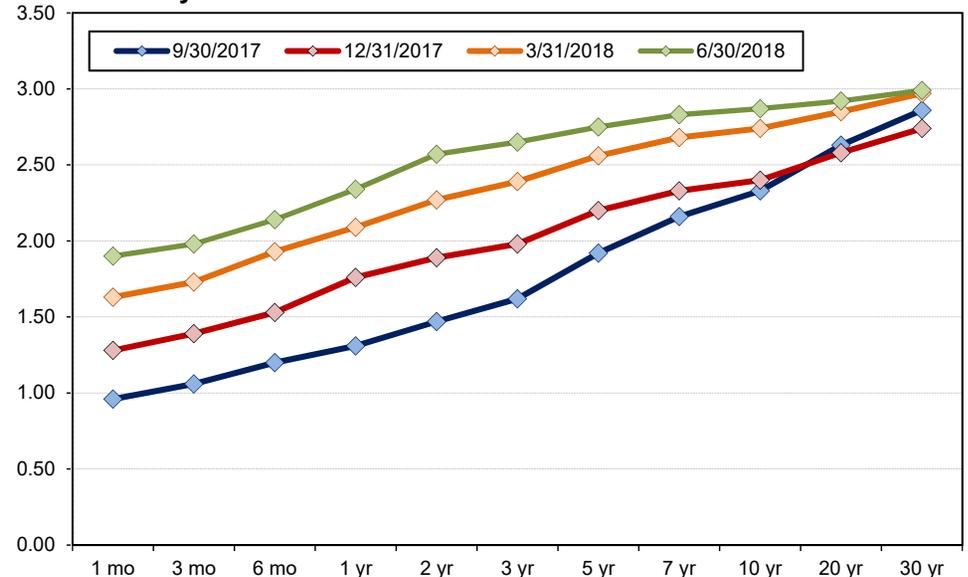


- Relative to their domestic counterparts, global fixed income indices underperformed during the quarter. The relatively high duration of these indices acted as a headwind to performance in the current quarter as interest rates increased. The returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. During the 2nd quarter the USD strengthened against most other currencies, negatively impacting the returns on global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was -4.8% for the quarter. However, when viewed over the trailing year, global issues have outperformed domestic securities, returning 2.8%. As the global economy continues to recover, several international central banks have started to move toward less accommodative postures. Notably, the ECB, is planning to slow its monthly bond purchase program in September, reducing new purchases to 15 billion euro per month from 30 billion euro per month, as well as forecasting an end to the program by the end of the year assuming the eurozone recovery continues to flourish. However, they have indicated a continuation of reinvestment in maturing securities and would likely not raise interest rates from current levels until summer 2019. In contrast, the Bank of Japan will continue current stimulus programs and the Bank of England backed away from a telegraphed interest rate hike after disappointing economic data led them to lower their forecasts for future growth.
- 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) rose significantly during the first half of the 2nd quarter, rising to a near-term high of 3.11% before falling to 2.87% to end the period. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury issues. This line illustrates a steady increase in credit spreads through the first two quarters of 2018. This increase is equivalent to an interest rate increase on corporate bonds, which produces an additional headwind for corporate bond index returns. These credit spreads have widened by about 17 basis points over the last 3-months. The green band across the graph illustrates the gradual increase in the Federal Funds Rate (three in the last twelve months) due to the continued unwinding of accommodative US monetary policy.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. As mentioned, the yield curve continues to flatten as yields on shorter-term maturities have risen more than interest rates on the long end of the curve. The upward momentum of interest rates as well as a general flattening of the yield curve are clearly visible over both the 2nd quarter and the last twelve months.

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)	15
Guarded	3
Watch	0

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

Plan Fund Observations and Comments

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

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

Fund Commentary

Hotchkis & Wiley Mid Cap Value remains on **GUARDED** status 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 recent quarterly performance was very strong and has helped to raise the longer term results closer to the benchmark and peer group. Relative peer group rankings are mixed in the near term, but are favorable when looking at consistency during the last ten years annual periods. The value style has certainly provided most of the drag on returns. We will continue to monitor.

The Lazard Emerging Markets Fund has been placed back on **GUARDED** status due to an exceptionally poor quarter, which has negatively impacted the funds improving results. Emerging markets funds experienced severe downside volatility during the last two quarters. The value style of Lazard was also a cause for the funds severe underperformance during the quarter. We continue to believe that Lazard is still a strong long-term EM strategy. We will continue to monitor.

AMG Managers Special Equities was placed on **GUARDED** status due to significant underperformance relative to its benchmark and peers in the last two quarters. The fund has underperformed the benchmark index over the three and five years periods, while outperforming during the last seven and ten years annualized. The recent quarterly performance was negatively impacted by an overweight in the materials sector, and having no exposure to the energy sector. Relative peer group rankings are mixed in the near term, but are favorable when looking at consistency during the last seven and ten years annual periods. The value style has certainly provided most of the drag on returns. We will continue to monitor.



Portfolio Evaluation Summary

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

Pass (Satisfactory)

Guarded

Watch

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



Historical Summary Evaluation

Pass (Satisfactory)
Guarded
Watch

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



Asset Allocation Attributes

	Jun-2018		Mar-2018		Dec-2017	
	(\$)	%	(\$)	%	(\$)	%
Total 457 Fund	163,438,442	100.00	162,200,397	100.00	162,444,817	100.00
International Equity						
Lazard Emerging Markets Equity (LZOEX)	1,236,329	0.76	1,494,673	0.92	1,487,376	0.92
DFA International Small Cap Value (DISVX)	1,528,399	0.94	1,655,204	1.02	1,718,930	1.06
American Funds EuroPacific Growth (RERGX)	4,760,334	2.91	4,982,417	3.07	5,003,950	3.08
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	3,010,395	1.84	2,696,090	1.66	2,516,049	1.55
Vanguard Small Cap Index (VSMAX)	2,725,317	1.67	2,648,315	1.63	2,604,097	1.60
AMG Managers Skyline Special Equities (SKSEX)	2,815,385	1.72	2,827,756	1.74	3,005,593	1.85
Hartford Mid Cap (HIMCX)	9,272,485	5.67	9,013,471	5.56	8,704,355	5.36
Vanguard Mid Cap Index (VIMAX)	2,750,781	1.68	2,485,051	1.53	2,476,412	1.52
Hotchkis & Wiley Mid Cap Value (HWMIX)	3,234,063	1.98	3,087,896	1.90	3,365,377	2.07
AF Growth Fund of America (RGAGX)	14,770,965	9.04	13,909,074	8.58	13,530,089	8.33
Wells Fargo Disciplined US Core (EVSIX)	12,333,868	7.55	12,483,633	7.70	13,283,116	8.18
Vanguard Institutional Index (VINIX)	11,592,073	7.09	11,315,922	6.98	11,443,764	7.04
American Century Equity Income (AEUDX)	6,692,783	4.09	7,178,799	4.43	7,907,182	4.87
Balanced Fund						
American Funds American Balanced (RLBGX)	5,763,007	3.53	5,625,161	3.47	5,555,750	3.42
Fixed Income						
PIMCO High Yield (PHIYX)	2,103,283	1.29	2,153,947	1.33	2,345,621	1.44
PIMCO Foreign Bond USD-Hedged (PFORX)	931,097	0.57	878,431	0.54	863,182	0.53
Hartford Total Return Bond (HIABX)	3,391,915	2.08	3,516,314	2.17	3,733,330	2.30
Cash						
MassMutual Guaranteed Interest Account	71,911,388	44.00	71,746,231	44.23	70,439,086	43.36
Loan Account	2,614,576	1.60	2,502,011	1.54	2,461,556	1.52



Asset Allocation Attributes	Jun-2018		Mar-2018		Dec-2017	
	(\$)	%	(\$)	%	(\$)	%
WCAB 2060 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2055 Retirement	9,851	0.11	7,742	0.09	4,554	0.05
WCAB 2050 Retirement	978,760	10.97	956,144	11.10	891,530	10.52
WCAB 2045 Retirement	128,197	1.44	95,104	1.10	105,636	1.25
WCAB 2040 Retirement	2,115,904	23.71	2,011,782	23.35	2,302,298	27.17
WCAB 2035 Retirement	301,182	3.37	255,368	2.96	201,277	2.38
WCAB 2030 Retirement	2,869,481	32.15	2,824,104	32.78	2,373,978	28.01
WCAB 2025 Retirement	962,429	10.78	833,365	9.67	715,882	8.45
WCAB 2020 Retirement	1,483,445	16.62	1,508,510	17.51	1,583,119	18.68
WCAB 2015 Retirement	-	0.00	26,923	0.31	26,880	0.32
WCAB Income Retirement	74,909	0.84	96,867	1.12	268,984	3.17
Model Portfolios Total	8,924,157	100.00	8,615,908	100.00	8,474,138	100.00

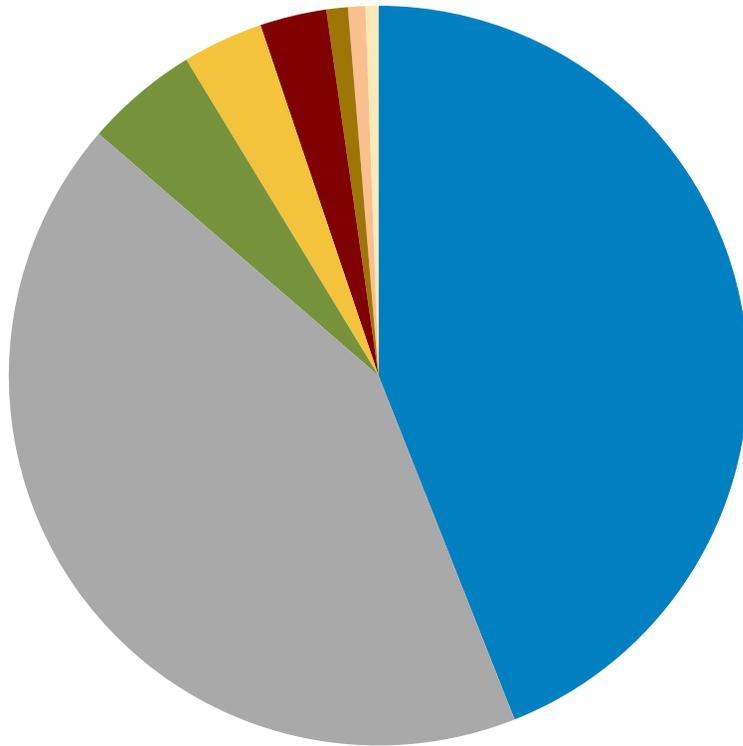


Asset Allocation By Asset Class
457 Total Plan
As of June 30, 2018

June 30, 2018 : \$163,438,442

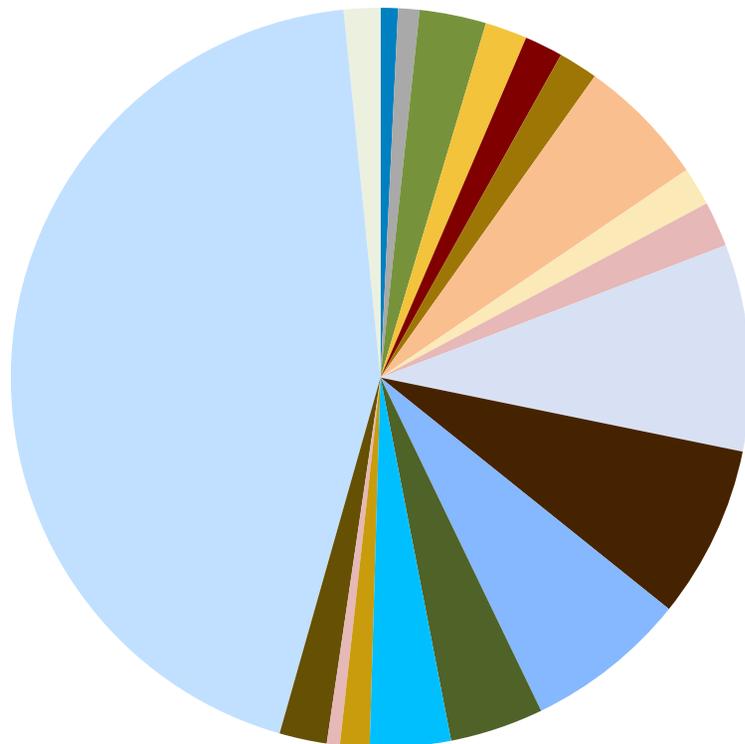
Allocation

	Market Value	Allocation
■ Cash	71,911,388	44.0
■ US Equity	69,198,114	42.3
■ US Fixed Income	8,109,774	5.0
■ US Balanced	5,763,007	3.5
■ International Equity	4,760,334	2.9
■ International-Developed Equity	1,528,399	0.9
■ International-Emerging Equity	1,236,329	0.8
■ International Fixed Income	931,097	0.6



Asset Allocation By Manager
457 Total Plan
As of June 30, 2018

June 30, 2018 : \$163,438,442



Allocation

	Market Value	Allocation
Lazard Emerging Markets Equity (LZOEX)	1,236,329	0.8
DFA International Small Cap Value (DISVX)	1,528,399	0.9
American Funds EuroPacific Growth (RERGX)	4,760,334	2.9
Wells Fargo Small Co Growth (WSCRX)	3,010,395	1.8
Vanguard Small Cap Index (VSMAX)	2,725,317	1.7
AMG Managers Skyline Special Equities (SKSEX)	2,815,385	1.7
Hartford Mid Cap (HIMCX)	9,272,485	5.7
Vanguard Mid Cap Index (VIMAX)	2,750,781	1.7
Hotchkis & Wiley Mid Cap Value (HWMIX)	3,234,063	2.0
AF Growth Fund of America (RGAGX)	14,770,965	9.0
Wells Fargo Disciplined US Core (EVSIX)	12,333,868	7.5
Vanguard Institutional Index (VINIX)	11,592,073	7.1
American Century Equity Income (AEUDX)	6,692,783	4.1
American Funds American Balanced (RLBGX)	5,763,007	3.5
PIMCO High Yield (PHIYX)	2,103,283	1.3
PIMCO Foreign Bond USD-Hedged (PFORX)	931,097	0.6
Hartford Total Return Bond (HIABX)	3,391,915	2.1
MassMutual Guaranteed Interest Account	71,911,388	44.0
Loan Account	2,614,576	1.6



Asset Allocation Attributes

	Jun-2018		Mar-2018		Dec-2017	
	(\$)	%	(\$)	%	(\$)	%
Total 401(a) Fund	11,806,197	100.00	11,538,526	100.00	11,465,557	100.00
International Equity						
Lazard Emerging Markets Equity (LZOEX)	144,959	1.23	164,294	1.42	169,227	1.48
DFA International Small Cap Value (DISVX)	164,836	1.40	173,632	1.50	185,076	1.61
American Funds EuroPacific Growth (RERGX)	411,568	3.49	428,993	3.72	436,034	3.80
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	303,725	2.57	285,206	2.47	292,717	2.55
Vanguard Small Cap Index (VSMAX)	286,159	2.42	216,826	1.88	225,062	1.96
AMG Managers Skyline Special Equities (SKSEX)	297,690	2.52	286,272	2.48	336,077	2.93
Hartford Mid Cap (HIMCX)	803,915	6.81	751,621	6.51	721,120	6.29
Vanguard Mid Cap Index (VIMAX)	255,763	2.17	221,714	1.92	222,214	1.94
Hotchkis & Wiley Mid Cap Value (HWMIX)	288,965	2.45	266,336	2.31	319,945	2.79
American Funds Growth Fund of America (RGAGX)	784,609	6.65	765,514	6.63	711,403	6.20
Wells Fargo Disciplined US Core (EVSIX)	864,204	7.32	853,957	7.40	896,273	7.82
Vanguard Institutional Index (VINIX)	1,101,825	9.33	1,091,764	9.46	1,039,155	9.06
American Century Equity Income (AEUDX)	618,080	5.24	720,220	6.24	809,339	7.06
Balanced Fund						
American Funds American Balanced (RLBGX)	510,350	4.32	491,704	4.26	479,271	4.18
Fixed Income						
PIMCO High Yield (PHIYX)	150,441	1.27	159,396	1.38	186,124	1.62
PIMCO Foreign Bond USD-Hedged (PFORX)	104,872	0.89	102,199	0.89	122,592	1.07
Hartford Total Return Bond (HIABX)	395,694	3.35	431,615	3.74	570,767	4.98
Cash						
MassMutual Guaranteed Interest Account	4,114,185	34.85	3,892,626	33.74	3,509,838	30.61
Loan Account	204,356	1.73	234,636	2.03	233,322	2.03



Asset Allocation
401(a) Retirement Models
As of June 30, 2018

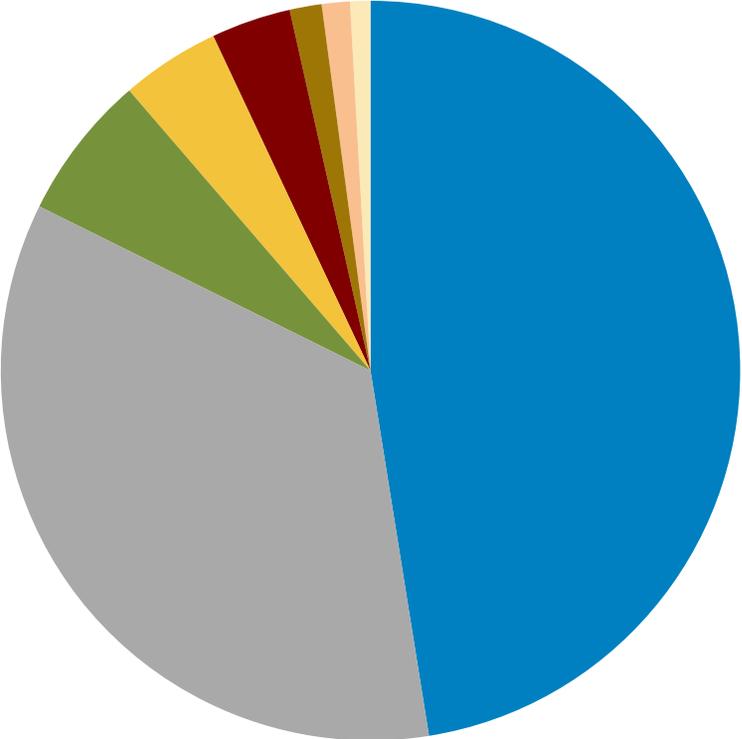
Asset Allocation Attributes	Jun-2018		Mar-2018		Dec-2017	
	(\$)	%	(\$)	%	(\$)	%
WCAB 2060 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2055 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2050 Retirement	53,457	4.64	50,308	4.49	47,758	4.05
WCAB 2045 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2040 Retirement	158,066	13.73	151,869	13.54	147,468	12.51
WCAB 2035 Retirement	57,687	5.01	56,490	5.04	55,990	4.75
WCAB 2030 Retirement	196,180	17.04	189,931	16.94	186,229	15.80
WCAB 2025 Retirement	454,923	39.52	444,177	39.61	438,765	37.23
WCAB 2020 Retirement	-	0.00	-	0.00	7,753	0.66
WCAB 2015 Retirement	-	0.00	-	0.00	-	0.00
WCAB Income Retirement	230,817	20.05	228,738	20.40	294,625	25.00
Total Model Portfolios	1,151,130	100.00	1,121,513	100.00	1,178,588	100.00



Asset Allocation By Asset Class
401(a) Total Plan
As of June 30, 2018

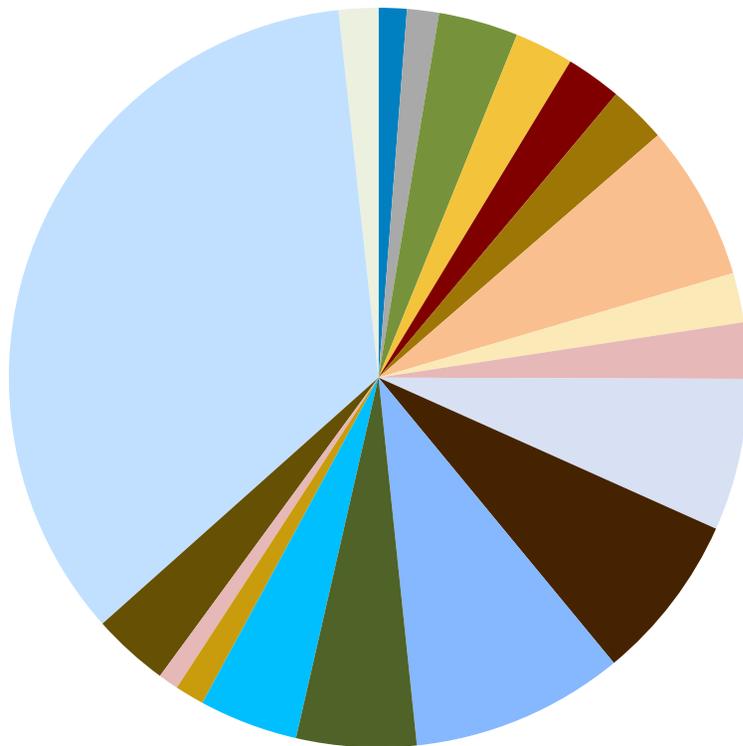
June 30, 2018 : \$11,806,197

Allocation	Market Value	Allocation
US Equity	5,604,936	47.5
Cash	4,114,185	34.8
US Fixed Income	750,491	6.4
US Balanced	510,350	4.3
International Equity	411,568	3.5
International-Developed Equity	164,836	1.4
International-Emerging Equity	144,959	1.2
International Fixed Income	104,872	0.9



Asset Allocation By Manager
401(a) Total Plan
As of June 30, 2018

June 30, 2018 : \$11,806,197



Allocation

	Market Value	Allocation
Lazard Emerging Markets Equity (LZOEX)	144,959	1.2
DFA International Small Cap Value (DISVX)	164,836	1.4
American Funds EuroPacific Growth (RERGX)	411,568	3.5
Wells Fargo Small Co Growth (WSCRX)	303,725	2.6
Vanguard Small Cap Index (VSMAX)	286,159	2.4
AMG Managers Skyline Special Equities (SKSEX)	297,690	2.5
Hartford Mid Cap (HIMCX)	803,915	6.8
Vanguard Mid Cap Index (VIMAX)	255,763	2.2
Hotchkis & Wiley Mid Cap Value (HWMIX)	288,965	2.4
American Funds Growth Fund of America (RGAGX)	784,609	6.6
Wells Fargo Disciplined US Core (EVSIX)	864,204	7.3
Vanguard Institutional Index (VINIX)	1,101,825	9.3
American Century Equity Income (AEUDX)	618,080	5.2
American Funds American Balanced (RLBGX)	510,350	4.3
PIMCO High Yield (PHIYX)	150,441	1.3
PIMCO Foreign Bond USD-Hedged (PFORX)	104,872	0.9
Hartford Total Return Bond (HIABX)	395,694	3.4
MassMutual Guaranteed Interest Account	4,114,185	34.8
Loan Account	204,356	1.7



Comparative Performance
401(a) Trailing Returns
As of June 30, 2018

Comparative Performance	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
International Equity														
Lazard Emerging Markets Equity (LZOEX)	-13.67	(98)	-11.99	(97)	-0.18	(89)	2.89	(77)	2.16	(82)	0.31	(74)	1.75	(56)
MSCI Emerging Markets (Net) Index	-7.96	(32)	-6.66	(37)	8.20	(35)	5.60	(44)	5.01	(39)	1.43	(46)	2.26	(41)
IM Emerging Markets Equity (MF) Median	-9.05		-7.26		6.78		5.07		4.57		1.29		1.89	
DFA International Small Cap Value (DISVX)	-3.47	(73)	-5.66	(87)	5.40	(91)	7.19	(65)	10.09	(36)	7.46	(53)	6.11	(48)
MSCI AC World ex USA Small Cap (Net)	-2.60	(53)	-2.94	(63)	10.57	(53)	7.94	(51)	8.98	(51)	5.86	(79)	5.77	(58)
IM International SMID Cap Equity (MF) Median	-2.36		-2.09		10.98		8.00		9.05		7.51		6.08	
American Funds EuroPacific Growth (RERGX)	-2.82	(70)	-1.82	(10)	9.35	(8)	6.51	(1)	8.34	(1)	6.08	(1)	N/A	
MSCI EAFE (Net) Index	-1.24	(17)	-2.75	(22)	6.84	(20)	4.90	(6)	6.44	(17)	4.89	(21)	2.84	(43)
IM International Large Cap Core Equity (MF) Median	-2.02		-3.38		5.17		3.62		5.44		4.15		2.36	
Domestic Equity														
Wells Fargo Small Co Growth (WSCRX)	8.68	(79)	13.80	(35)	25.50	(25)	8.81	(52)	N/A		N/A		N/A	
Russell 2000 Growth Index	7.23	(87)	9.70	(71)	21.86	(62)	10.60	(39)	13.65	(24)	12.50	(27)	11.24	(41)
IM U.S. Small Cap Growth Equity (MF) Median	9.87		12.00		23.39		8.96		10.93		11.26		10.90	
Vanguard Small Cap Index (VSMAX)	6.20	(68)	5.98	(53)	16.48	(42)	10.45	(60)	12.40	(46)	12.10	(44)	11.27	(33)
Vanguard Spliced Small Cap Index	6.20	(69)	5.97	(53)	16.47	(42)	10.43	(60)	12.39	(47)	12.08	(44)	11.20	(34)
IM U.S. Small Cap Core Equity (MF) Median	7.89		6.19		15.22		11.00		12.08		11.68		10.69	
AMG Managers Skyline Special Equities (SKSEX)	3.43	(97)	2.05	(87)	8.93	(91)	6.58	(80)	10.62	(45)	12.17	(16)	11.88	(6)
Russell 2000 Value Index	8.30	(38)	5.44	(51)	13.10	(66)	11.22	(38)	11.18	(38)	11.10	(32)	9.88	(46)
IM U.S. Small Cap Value Equity (MF) Median	7.91		5.46		15.22		10.14		10.16		10.33		9.60	
Hartford Mid Cap (HIMCX)	3.95	(45)	7.51	(41)	19.41	(42)	12.96	(12)	15.12	(10)	13.58	(9)	10.86	(18)
Russell Midcap Growth Index	3.16	(62)	5.40	(70)	18.52	(50)	10.73	(42)	13.37	(37)	12.16	(33)	10.45	(26)
IM U.S. Mid Cap Growth Equity (MF) Median	3.68		6.96		18.46		10.10		12.57		11.35		9.30	
Vanguard Mid Cap Index (VIMAX)	2.57	(42)	2.58	(24)	12.09	(31)	9.21	(30)	12.30	(13)	11.71	(13)	10.09	(22)
Vanguard Spliced Mid Cap Index	2.58	(40)	2.60	(23)	12.12	(30)	9.25	(29)	12.35	(12)	11.76	(12)	10.14	(20)
IM U.S. Mid Cap Core Equity (MF) Median	2.28		1.10		10.11		7.79		10.33		10.10		8.81	
Hotchkis & Wiley Mid Cap Value (HWMIX)	7.80	(1)	5.59	(2)	14.32	(4)	6.97	(55)	9.26	(78)	12.05	(6)	12.50	(1)
Russell Midcap Value Index	2.41	(32)	-0.16	(51)	7.60	(43)	8.80	(25)	11.27	(14)	11.70	(10)	10.06	(30)
IM U.S. Mid Cap Value Equity (MF) Median	1.89		-0.16		7.25		7.15		9.93		10.37		9.01	
American Funds Growth Fund of America (RGAGX)	5.97	(43)	9.16	(47)	22.76	(44)	14.81	(25)	15.83	(41)	14.49	(27)	N/A	
Russell 1000 Growth Index	5.76	(50)	7.25	(66)	22.51	(47)	14.98	(22)	16.36	(28)	14.88	(18)	11.83	(20)
IM U.S. Large Cap Growth Equity (MF) Median	5.74		8.87		22.27		13.49		15.46		13.59		10.45	

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



Comparative Performance
401(a) Trailing Returns
As of June 30, 2018

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
Wells Fargo Disciplined US Core (EVSIX)	2.18	(77)	0.35	(77)	12.10	(60)	11.20	(28)	13.43	(13)	13.35	(10)	N/A	
S&P 500 Index	3.43	(25)	2.65	(28)	14.37	(31)	11.93	(13)	13.42	(13)	13.23	(11)	10.17	(17)
IM U.S. Large Cap Core Equity (MF) Median	2.80		1.68		13.02		10.20		12.06		11.87		9.03	
Vanguard Institutional Index (VINIX)	3.42	(26)	2.63	(28)	14.33	(32)	11.90	(13)	13.39	(14)	13.20	(12)	10.17	(17)
S&P 500 Index	3.43	(25)	2.65	(28)	14.37	(31)	11.93	(13)	13.42	(13)	13.23	(11)	10.17	(17)
IM U.S. Large Cap Core Equity (MF) Median	2.80		1.68		13.02		10.20		12.06		11.87		9.03	
American Century Equity Income (AEUDX)	1.72	(35)	-1.41	(49)	6.05	(76)	11.32	(2)	N/A		N/A		N/A	
Russell 1000 Value Index	1.18	(55)	-1.69	(56)	6.77	(69)	8.26	(44)	10.34	(37)	11.27	(27)	8.49	(36)
IM U.S. Large Cap Value Equity (MF) Median	1.30		-1.45		8.20		8.09		9.99		10.47		7.89	
Balanced Fund														
American Funds American Balanced (RLBGX)	2.19	(7)	1.01	(15)	9.53	(23)	8.94	(3)	9.66	(7)	10.12	(1)	N/A	
American Balanced Fund Hybrid	1.63	(13)	0.58	(26)	6.86	(50)	6.86	(30)	7.85	(33)	7.96	(24)	7.20	(13)
IM All Balanced (MF) Median	0.71		-0.14		6.82		5.64		6.74		6.48		5.74	
WCAB 2060 Retirement	1.76	(9)	1.78	(8)	11.52	(17)	N/A		N/A		N/A		N/A	
The WCAB 2060 Retirement Portfolio Policy	2.03	(2)	1.30	(15)	11.56	(17)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2055+ (MF) Median	1.12		0.51		10.39		7.97		9.33		8.64		6.66	
WCAB 2055 Retirement	1.76	(9)	1.78	(8)	11.52	(17)	N/A		N/A		N/A		N/A	
The WCAB 2055 Retirement Portfolio Policy	2.03	(2)	1.30	(15)	11.56	(17)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2055+ (MF) Median	1.12		0.51		10.39		7.97		9.33		8.64		6.66	
WCAB 2050 Retirement	1.73	(7)	1.74	(8)	11.38	(16)	8.82	(9)	10.15	(10)	9.43	(13)	8.11	(5)
The WCAB 2050 Retirement Portfolio Policy	2.00	(2)	1.26	(14)	11.40	(16)	9.22	(4)	10.55	(5)	10.02	(3)	8.12	(5)
IM Mixed-Asset Target 2050 (MF) Median	1.15		0.46		10.18		7.74		9.16		8.41		6.70	
WCAB 2045 Retirement	1.71	(7)	1.76	(8)	11.30	(16)	N/A		N/A		N/A		N/A	
The WCAB 2045 Retirement Portfolio Policy	1.97	(2)	1.25	(16)	11.27	(16)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2045 (MF) Median	1.04		0.49		10.09		7.88		9.06		8.38		6.73	
WCAB 2040 Retirement	1.54	(10)	1.62	(8)	10.82	(16)	8.67	(7)	9.68	(17)	9.09	(16)	8.02	(4)
The WCAB 2040 Retirement Portfolio Policy	1.83	(3)	1.17	(14)	10.76	(17)	8.77	(5)	9.85	(10)	9.34	(9)	7.68	(11)
IM Mixed-Asset Target 2040 (MF) Median	1.06		0.35		9.52		7.32		8.68		8.05		6.42	
WCAB 2035 Retirement	1.36	(16)	1.45	(7)	10.22	(17)	N/A		N/A		N/A		N/A	
The WCAB 2035 Retirement Portfolio Policy	1.67	(5)	1.05	(15)	10.07	(19)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2035 (MF) Median	0.91		0.33		9.09		7.14		8.27		7.83		6.39	
WCAB 2030 Retirement	1.64	(2)	1.73	(1)	9.84	(4)	8.08	(1)	8.96	(8)	8.48	(7)	7.64	(2)
The WCAB 2030 Retirement Portfolio Policy	1.68	(2)	1.14	(6)	9.41	(9)	7.80	(3)	8.89	(9)	8.52	(7)	7.16	(10)
IM Mixed-Asset Target 2030 (MF) Median	0.85		0.00		7.82		6.42		7.52		7.13		5.95	

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Comparative Performance
401(a) Trailing Returns
As of June 30, 2018

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
WCAB 2025 Retirement	1.36	(3)	1.44	(1)	8.87	(1)	N/A		N/A		N/A		N/A	
The WCAB 2025 Retirement Portfolio Policy	1.46	(1)	0.99	(1)	8.40	(4)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2025 (MF) Median	0.68		-0.09		6.71		5.90		6.84		6.68		5.79	
WCAB 2020 Retirement	1.05	(6)	1.19	(1)	7.94	(1)	6.97	(1)	7.74	(2)	7.43	(3)	6.93	(1)
The WCAB 2020 Retirement Portfolio Policy	1.20	(3)	0.83	(1)	7.37	(4)	6.36	(3)	7.32	(7)	7.07	(10)	6.20	(10)
IM Mixed-Asset Target 2020 (MF) Median	0.58		-0.24		5.55		5.08		6.02		5.83		5.24	
WCAB 2015 Retirement	1.21	(1)	1.45	(1)	7.41	(1)	N/A		N/A		N/A		N/A	
The WCAB 2015 Retirement Portfolio Policy	1.19	(1)	0.94	(1)	6.64	(3)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2015 (MF) Median	0.51		-0.27		4.99		4.84		5.95		5.79		5.16	
WCAB Income Retirement	0.90	(6)	0.87	(1)	5.86	(2)	5.68	(1)	6.46	(1)	6.42	(1)	6.25	(1)
The WCAB Income Retirement Portfolio Policy	0.87	(7)	0.50	(1)	5.12	(8)	4.64	(15)	5.51	(9)	5.45	(11)	5.04	(27)
IM Mixed-Asset Target Today (MF) Median	0.31		-0.50		3.80		3.60		4.08		4.04		4.50	
Fixed Income														
PIMCO High Yield (PHIYX)	0.55	(57)	-0.87	(72)	1.21	(75)	4.70	(28)	4.95	(24)	5.60	(30)	6.93	(34)
ICE BofAML High Yield Master II	1.00	(23)	0.08	(34)	2.53	(31)	5.55	(8)	5.51	(11)	6.22	(11)	8.03	(6)
IM U.S. High Yield Bonds (MF) Median	0.63		-0.32		1.95		4.06		4.34		5.15		6.56	
PIMCO Foreign Bond USD-Hedged (PFORX)	0.53	(1)	1.91	(1)	4.33	(1)	4.80	(1)	5.24	(3)	5.85	(1)	6.72	(1)
Bloomberg Barclays Global Aggregate	-2.78	(40)	-1.45	(42)	1.36	(40)	2.58	(38)	1.50	(48)	1.14	(51)	2.58	(67)
IM International Fixed Income (MF) Median	-4.61		-1.80		0.94		2.19		1.37		1.18		3.66	
Hartford Total Return Bond (HIABX)	-0.09	(20)	-1.50	(28)	0.23	(10)	2.56	(5)	2.98	(7)	3.34	(8)	4.01	(37)
Blmbg. Barc. U.S. Aggregate Index	-0.16	(30)	-1.62	(35)	-0.40	(34)	1.72	(37)	2.27	(40)	2.57	(47)	3.72	(54)
IM U.S. Broad Market Core Fixed Income (MF) Median	-0.25		-1.73		-0.59		1.60		2.14		2.53		3.79	
Cash														
MassMutual Guaranteed Interest Account	0.85	(6)	1.71	(6)	3.53	(5)	3.78	(1)	3.87	(1)	3.91	(1)	N/A	
Ryan 3 Yr GIC Master Index	0.47	(90)	0.91	(85)	1.75	(91)	1.50	(95)	1.32	(100)	1.39	(100)	2.14	(67)
IM U.S. GIC/Stable Value (SA+CF) Median	0.51		0.98		1.92		1.82		1.71		1.87		2.35	

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Comparative Performance
401(a) Calendar Returns
As of June 30, 2018

Comparative Performance	2017		2016		2015		2014		2013		2012		2011		2010		2009		2008	
International Equity																				
Lazard Emerging Markets Equity (LZOEX)	27.73	(81)	20.17	(6)	-20.33	(90)	-4.39	(69)	-1.14	(48)	22.03	(18)	-18.02	(32)	22.43	(22)	69.14	(63)	-48.09	(17)
MSCI Emerging Markets (Net) Index	37.28	(42)	11.19	(30)	-14.92	(58)	-2.19	(43)	-2.60	(58)	18.23	(56)	-18.42	(36)	18.88	(44)	78.51	(26)	-53.33	(42)
IM Emerging Markets Equity (MF) Median	35.34		8.29		-14.05		-2.92		-1.42		18.78		-19.51		18.32		72.67		-54.63	
DFA International Small Cap Value (DISVX)	27.98	(90)	8.00	(16)	3.99	(46)	-4.99	(28)	32.39	(11)	22.26	(26)	-17.46	(59)	18.10	(89)	39.51	(90)	-41.68	(4)
MSCI AC World ex USA Small Cap (Net)	31.65	(58)	3.91	(36)	2.60	(50)	-4.03	(17)	19.73	(81)	18.52	(70)	-18.50	(68)	25.21	(14)	62.91	(29)	-50.23	(44)
IM International SMID Cap Core Equity (MF) Median	32.15		2.24		2.57		-6.02		24.27		20.14		-16.31		23.96		47.92		-50.87	
American Funds EuroPacific Growth (RERGX)	31.17	(7)	1.01	(59)	-0.48	(22)	-2.29	(21)	20.58	(47)	19.64	(36)	-13.31	(54)	9.76	(20)	N/A		N/A	
MSCI EAFE (Net) Index	25.03	(43)	1.00	(59)	-0.81	(25)	-4.90	(32)	22.78	(18)	17.32	(59)	-12.14	(38)	7.75	(36)	31.78	(34)	-43.38	(58)
IM International Large Cap Core Equity (MF) Median	24.71		1.43		-2.26		-6.01		20.37		18.68		-13.16		6.99		29.91		-42.29	
Domestic Equity																				
Wells Fargo Small Co Growth (WSCRX)	20.68	(45)	7.76	(79)	-4.33	(53)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Russell 2000 Growth Index	22.17	(38)	11.32	(59)	-1.38	(28)	5.60	(9)	43.30	(45)	14.59	(24)	-2.91	(26)	29.09	(31)	34.47	(45)	-38.54	(16)
IM U.S. Small Cap Growth Equity (MF) Median	16.15		12.12		-3.91		0.58		42.53		11.48		-5.08		26.70		33.39		-42.69	
Vanguard Small Cap Index (VSMAX)	16.24	(13)	18.30	(73)	-3.64	(40)	7.50	(8)	37.81	(43)	18.24	(15)	-2.69	(36)	27.89	(23)	36.33	(28)	-36.00	(47)
Vanguard Spliced Small Cap Index	16.24	(13)	18.26	(73)	-3.68	(41)	7.54	(7)	37.77	(43)	18.20	(16)	-2.75	(38)	27.82	(23)	36.15	(28)	-36.20	(48)
IM U.S. Small Cap Core Equity (MF) Median	12.41		21.92		-4.18		3.80		36.39		13.95		-4.17		24.93		27.88		-36.38	
AMG Managers Skyline Special Equities (SKSEX)	8.39	(48)	21.32	(86)	-6.05	(26)	4.02	(35)	51.59	(5)	19.34	(21)	-2.05	(40)	26.07	(41)	52.79	(13)	-40.15	(78)
Russell 2000 Value Index	7.84	(51)	31.74	(24)	-7.47	(49)	4.22	(35)	34.52	(53)	18.05	(28)	-5.50	(61)	24.50	(60)	20.58	(82)	-28.92	(24)
IM U.S. Small Cap Value Equity (MF) Median	7.87		29.29		-7.61		2.78		35.08		15.07		-3.15		24.93		28.27		-31.91	
Hartford Mid Cap (HIMCX)	24.47	(55)	11.98	(7)	1.60	(30)	11.37	(12)	39.82	(15)	19.44	(6)	-7.92	(76)	23.45	(67)	30.96	(76)	-35.32	(5)
Russell Midcap Growth Index	25.27	(44)	7.33	(29)	-0.20	(46)	11.90	(10)	35.74	(44)	15.81	(31)	-1.65	(31)	26.38	(47)	46.29	(24)	-44.32	(46)
IM U.S. Mid Cap Growth Equity (MF) Median	24.84		5.08		-0.72		7.20		35.07		14.31		-4.40		25.87		39.97		-45.00	
Vanguard Mid Cap Index (VIMAX)	19.25	(17)	11.22	(77)	-1.34	(24)	13.76	(10)	35.15	(49)	15.99	(48)	-1.97	(33)	25.59	(22)	40.48	(18)	-41.78	(74)
Vanguard Spliced Mid Cap Index	19.30	(16)	11.25	(76)	-1.28	(23)	13.83	(9)	35.21	(47)	16.04	(47)	-1.91	(31)	25.69	(21)	40.49	(18)	-41.80	(74)
IM U.S. Mid Cap Core Equity (MF) Median	15.41		14.52		-3.25		8.94		35.05		15.80		-3.41		23.23		33.54		-38.81	
Hotchkis & Wiley Mid Cap Value (HWMIX)	7.78	(88)	21.00	(21)	-12.53	(95)	12.18	(24)	42.55	(4)	31.09	(1)	-8.60	(96)	34.41	(1)	56.49	(4)	-43.05	(88)
Russell Midcap Value Index	13.34	(42)	20.00	(34)	-4.78	(46)	14.75	(8)	33.46	(70)	18.51	(21)	-1.38	(36)	24.75	(23)	34.21	(57)	-38.44	(55)
IM U.S. Mid Cap Value Equity (MF) Median	12.54		17.22		-5.60		10.51		35.34		16.67		-2.87		21.53		36.85		-38.03	
American Funds Growth Fund of America (RGAGX)	26.53	(77)	8.82	(2)	5.70	(49)	9.63	(60)	34.29	(46)	20.98	(3)	-4.53	(75)	12.67	(71)	N/A		N/A	
Russell 1000 Growth Index	30.21	(41)	7.08	(8)	5.67	(50)	13.05	(22)	33.48	(55)	15.26	(46)	2.64	(10)	16.71	(35)	37.21	(41)	-38.44	(38)
IM U.S. Large Cap Growth Equity (MF) Median	29.39		1.91		5.63		10.46		33.91		14.78		-1.84		15.32		35.07		-39.87	

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Comparative Performance
401(a) Calendar Returns
As of June 30, 2018

	2017		2016		2015		2014		2013		2012		2011		2010		2009		2008	
Wells Fargo Disciplined US Core (EVSIX)	20.88	(52)	12.09	(24)	2.53	(17)	15.69	(4)	33.97	(22)	14.90	(58)	4.12	(13)	N/A		N/A		N/A	
S&P 500 Index	21.83	(37)	11.96	(26)	1.38	(28)	13.69	(15)	32.39	(39)	16.00	(40)	2.11	(23)	15.06	(25)	26.46	(52)	-37.00	(48)
IM U.S. Large Cap Core Equity (MF) Median	20.99		9.99		-0.23		11.34		31.80		15.41		-0.55		13.15		26.73		-37.19	
Vanguard Institutional Index (VINIX)	21.79	(37)	11.93	(26)	1.37	(28)	13.65	(15)	32.35	(40)	15.98	(40)	2.09	(23)	15.05	(25)	26.63	(51)	-36.95	(48)
S&P 500 Index	21.83	(37)	11.96	(26)	1.38	(28)	13.69	(15)	32.39	(39)	16.00	(40)	2.11	(23)	15.06	(25)	26.46	(52)	-37.00	(48)
IM U.S. Large Cap Core Equity (MF) Median	20.99		9.99		-0.23		11.34		31.80		15.41		-0.55		13.15		26.73		-37.19	
American Century Equity Income (AEUDX)	13.83	(76)	19.88	(8)	0.94	(3)	12.84	(15)	N/A		N/A									
Russell 1000 Value Index	13.66	(77)	17.34	(22)	-3.83	(51)	13.45	(8)	32.53	(48)	17.51	(28)	0.39	(26)	15.51	(21)	19.69	(71)	-36.85	(50)
IM U.S. Large Cap Value Equity (MF) Median	16.45		14.07		-3.80		10.89		32.38		15.78		-2.41		12.81		23.83		-36.87	
Balanced Fund																				
American Funds American Balanced (RLBGX)	15.84	(40)	8.90	(17)	2.03	(3)	9.22	(5)	22.12	(19)	14.57	(23)	4.16	(6)	13.39	(34)	N/A		N/A	
American Balanced Fund Hybrid	12.37	(62)	7.38	(38)	1.21	(4)	9.85	(4)	14.08	(55)	10.13	(73)	5.28	(4)	11.29	(65)	16.34	(91)	-17.94	(13)
IM All Balanced (MF) Median	14.15		6.73		-1.66		4.73		15.22		12.13		-1.49		12.29		25.99		-29.54	
WCAB 2060 Retirement	19.06	(88)	N/A		N/A															
The WCAB 2060 Retirement Portfolio Policy	20.16	(73)	N/A		N/A															
IM Mixed-Asset Target 2055+ (MF) Median	21.12		8.26		-1.77		5.43		23.21		15.58		-4.66		14.78		30.80		-40.69	
WCAB 2055 Retirement	19.06	(88)	N/A		N/A															
The WCAB 2055 Retirement Portfolio Policy	20.16	(73)	N/A		N/A															
IM Mixed-Asset Target 2055+ (MF) Median	21.12		8.26		-1.77		5.43		23.21		15.58		-4.66		14.78		30.80		-40.69	
WCAB 2050 Retirement	18.90	(84)	11.88	(5)	-1.95	(56)	6.64	(25)	25.10	(23)	16.28	(25)	-4.13	(44)	17.93	(1)	33.46	(34)	-34.84	(6)
The WCAB 2050 Retirement Portfolio Policy	19.96	(71)	9.74	(14)	-0.34	(14)	8.81	(3)	24.71	(26)	14.68	(72)	-0.69	(7)	14.29	(58)	26.79	(99)	-33.35	(1)
IM Mixed-Asset Target 2050 (MF) Median	20.76		8.19		-1.76		5.61		23.08		15.47		-4.38		14.80		31.42		-39.08	
WCAB 2045 Retirement	18.72	(84)	N/A		N/A															
The WCAB 2045 Retirement Portfolio Policy	19.74	(69)	N/A		N/A															
IM Mixed-Asset Target 2045 (MF) Median	20.65		8.18		-1.76		5.55		23.07		15.47		-4.03		15.03		31.12		-38.51	
WCAB 2040 Retirement	18.16	(79)	11.43	(5)	-1.44	(41)	6.39	(26)	22.17	(46)	15.41	(37)	-2.67	(24)	16.48	(9)	31.03	(49)	-31.07	(1)
The WCAB 2040 Retirement Portfolio Policy	18.88	(70)	9.17	(18)	-0.24	(12)	8.23	(3)	21.96	(48)	13.52	(79)	-0.23	(6)	13.31	(70)	24.59	(95)	-30.38	(1)
IM Mixed-Asset Target 2040 (MF) Median	19.71		7.98		-1.75		5.38		21.61		14.92		-3.93		14.63		30.70		-38.09	
WCAB 2035 Retirement	17.40	(75)	N/A		N/A															
The WCAB 2035 Retirement Portfolio Policy	17.82	(71)	N/A		N/A															
IM Mixed-Asset Target 2035 (MF) Median	18.72		7.75		-1.66		5.40		20.78		14.75		-3.34		14.57		30.99		-36.09	
WCAB 2030 Retirement	15.96	(65)	11.11	(5)	-1.35	(40)	6.36	(20)	19.21	(40)	14.56	(36)	-1.71	(30)	15.53	(11)	29.56	(43)	-28.65	(1)
The WCAB 2030 Retirement Portfolio Policy	16.16	(61)	8.41	(17)	-0.08	(6)	7.93	(1)	19.45	(38)	12.40	(76)	0.41	(8)	12.40	(79)	22.29	(94)	-27.19	(1)
IM Mixed-Asset Target 2030 (MF) Median	16.91		7.31		-1.61		5.18		17.87		13.71		-2.56		13.63		28.81		-36.38	

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



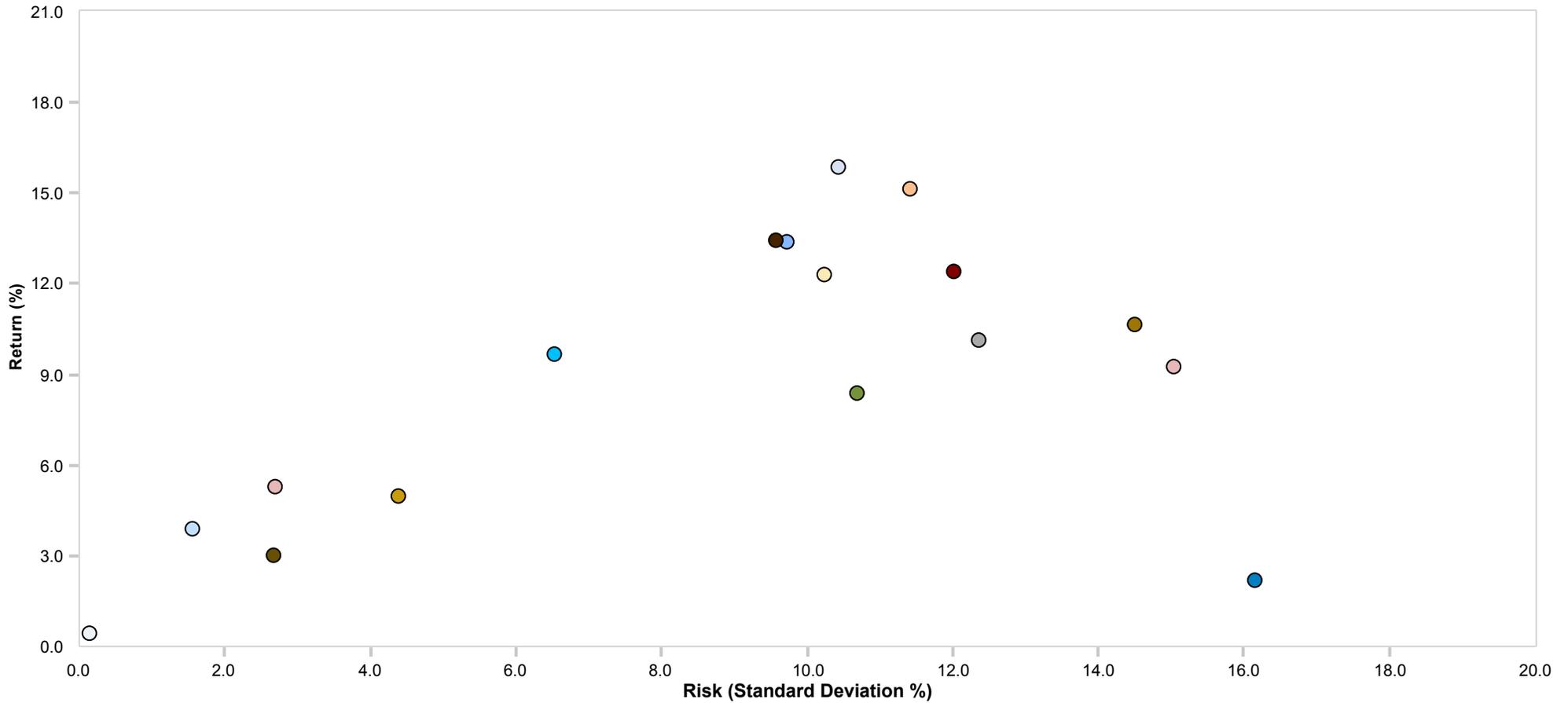
Comparative Performance
401(a) Calendar Returns
As of June 30, 2018

	2017		2016		2015		2014		2013		2012		2011		2010		2009		2008		
WCAB 2025 Retirement	14.73	(53)	N/A		N/A																
The WCAB 2025 Retirement Portfolio Policy	14.49	(57)	N/A		N/A																
IM Mixed-Asset Target 2025 (MF) Median	14.95		6.87		-1.44		5.19		15.85		13.00		-2.03		13.42		28.95		-35.04		
WCAB 2020 Retirement	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)	-23.68	(13)	
The WCAB 2020 Retirement Portfolio Policy	12.81	(47)	7.02	(27)	0.07	(6)	7.07	(1)	14.96	(26)	10.45	(72)	1.18	(21)	10.65	(82)	18.43	(93)	-21.50	(8)	
IM Mixed-Asset Target 2020 (MF) Median	12.63		6.31		-1.44		4.72		11.84		11.53		-0.43		12.31		26.02		-31.77		
WCAB 2015 Retirement	11.81	(38)	N/A		N/A																
The WCAB 2015 Retirement Portfolio Policy	10.98	(62)	N/A		N/A																
IM Mixed-Asset Target 2015 (MF) Median	11.40		6.37		-1.30		4.47		10.42		10.81		-0.11		11.49		25.34		-29.31		
WCAB Income Retirement	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)	-18.10	(71)	
The WCAB Income Retirement Portfolio Policy	9.06	(47)	5.19	(46)	0.26	(1)	6.08	(4)	10.51	(5)	8.08	(66)	2.13	(68)	8.66	(67)	13.73	(83)	-14.85	(35)	
IM Mixed-Asset Target Today (MF) Median	8.83		5.06		-1.37		3.87		5.29		8.84		2.78		9.39		18.26		-16.26		
Fixed Income																					
PIMCO High Yield (PHIYX)	7.02	(37)	12.68	(63)	-1.88	(22)	3.31	(12)	5.77	(70)	14.57	(53)	4.00	(37)	14.28	(45)	44.09	(64)	-23.62	(38)	
ICE BofAML High Yield Master II	7.48	(24)	17.49	(4)	-4.64	(62)	2.50	(22)	7.42	(30)	15.58	(33)	4.38	(27)	15.19	(28)	57.51	(11)	-26.39	(61)	
IM U.S. High Yield Bonds (MF) Median	6.63		13.41		-3.96		1.48		6.61		14.72		3.32		14.04		47.59		-24.95		
PIMCO Foreign Bond USD-Hedged (PFORX)	3.53	(69)	7.03	(6)	0.40	(9)	11.16	(3)	0.90	(17)	11.19	(22)	6.77	(8)	9.19	(30)	19.04	(17)	-2.36	(80)	
Bloomberg Barclays Global Aggregate	7.39	(59)	2.09	(58)	-3.15	(25)	0.59	(52)	-2.60	(37)	4.32	(79)	5.64	(17)	5.54	(69)	6.93	(66)	4.79	(33)	
IM International Fixed Income (MF) Median	9.83		2.89		-6.01		0.63		-3.74		7.43		2.56		7.26		10.01		2.41		
Hartford Total Return Bond (HIABX)	5.16	(4)	4.49	(8)	-0.59	(72)	5.89	(32)	-1.36	(26)	7.54	(20)	6.99	(37)	7.51	(42)	15.01	(32)	-7.62	(70)	
Blmbg. Barc. U.S. Aggregate Index	3.54	(53)	2.65	(61)	0.55	(18)	5.97	(26)	-2.02	(53)	4.21	(81)	7.84	(11)	6.54	(69)	5.93	(90)	5.24	(10)	
IM U.S. Broad Market Core Fixed Income (MF) Median	3.58		2.85		0.00		5.55		-1.98		5.99		6.65		7.25		12.12		-3.46		
Cash																					
MassMutual Guaranteed Interest Account	3.67	(1)	3.94	(1)	4.00	(1)	4.00	(1)	4.00	(1)	4.00	(3)	4.00	(5)	N/A		N/A		N/A		
Ryan 3 Yr GIC Master Index	1.60	(95)	1.39	(94)	1.16	(94)	1.03	(95)	1.06	(92)	1.48	(99)	2.44	(62)	3.53	(41)	4.49	(11)	4.79	(27)	
IM U.S. GIC/Stable Value (SA+CF) Median	1.86		1.85		1.82		1.70		1.73		2.39		2.91		3.39		3.67		4.65		

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



Risk and Return



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

Calculation based on monthly periodicity.



Age Based Strategy Model Allocation by Broad Asset Class

Investment Name	Stocks	Bonds	Cash	Other	Total
Washoe County Age Based Strategy Model 2050	79.5%	13.6%	4.3%	2.7%	100.0%
Washoe County Age Based Strategy Model 2040	71.4%	17.5%	8.2%	3.0%	100.0%
Washoe County Age Based Strategy Model 2030	63.6%	22.4%	11.0%	3.1%	100.0%
Washoe County Age Based Strategy Model 2020	50.2%	30.4%	16.4%	3.0%	100.0%
Washoe County Age Based Strategy Model 2010	36.4%	35.5%	25.5%	2.6%	100.0%

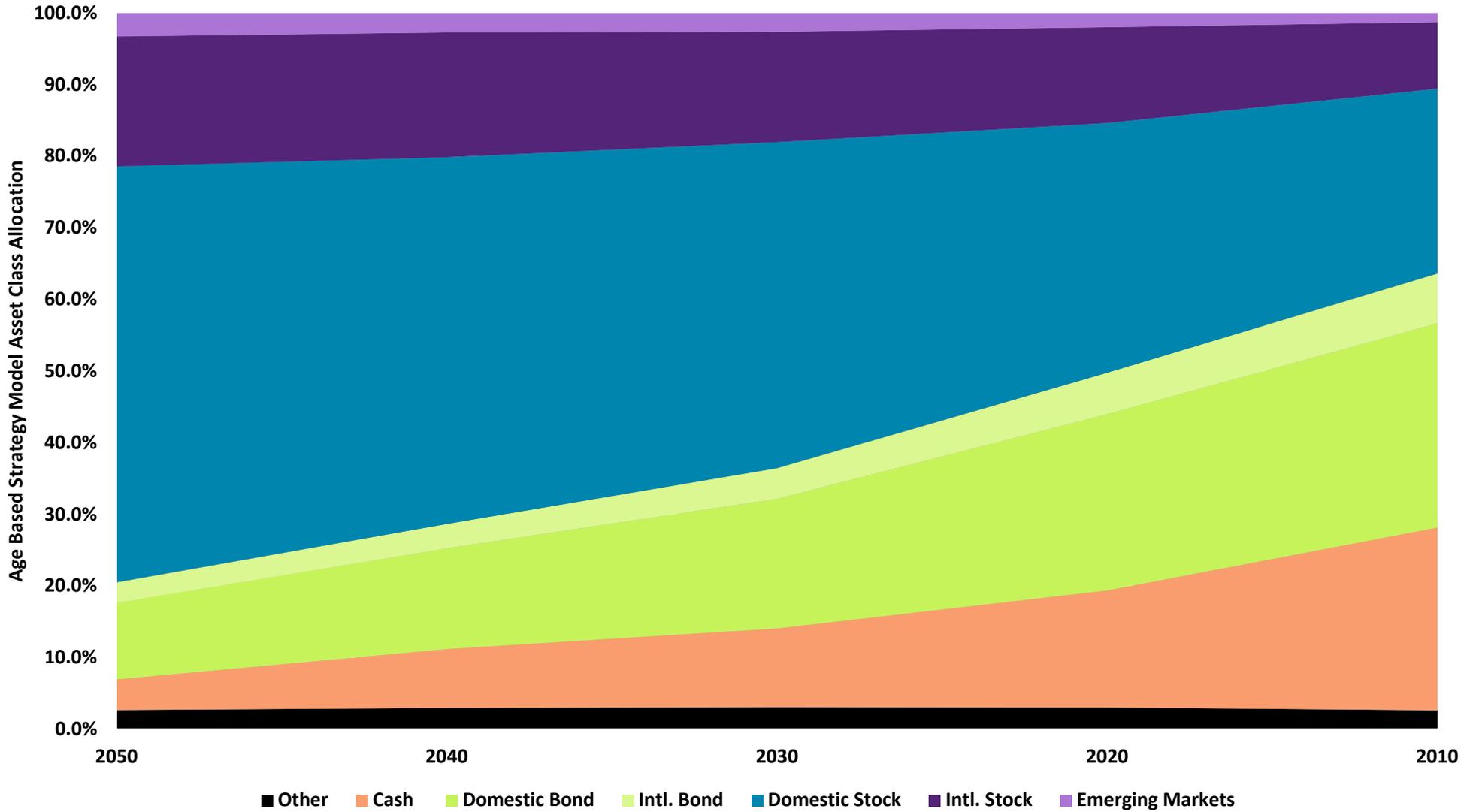


Age Based Strategy Model Allocation by Sub Asset Class

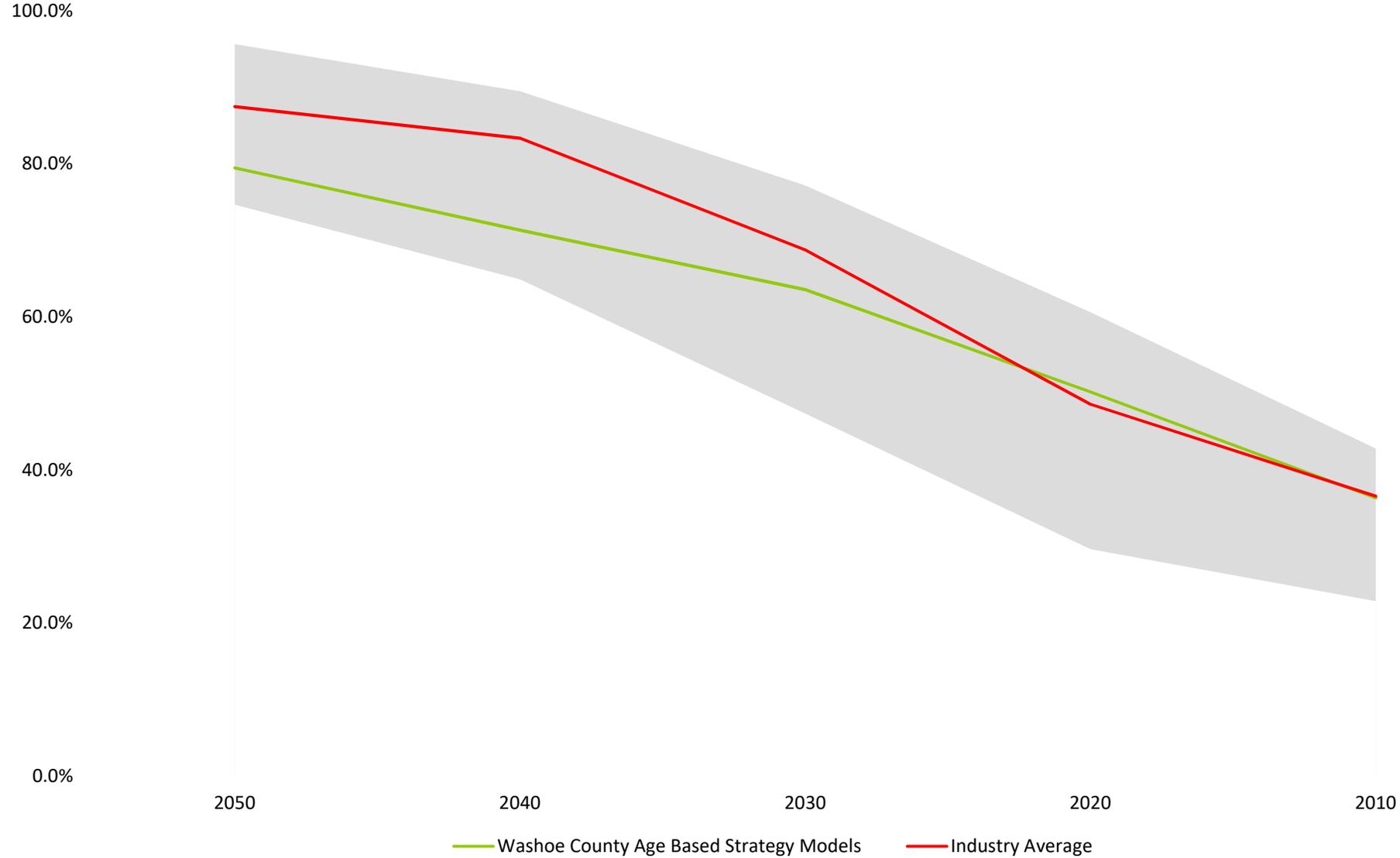
Investment Name	Emerging Markets	Intl. Stock	Domestic Stock	Intl. Bond	Domestic Bond	Cash	Other	Total
Washoe County Age Based Strategy Model 2050	3.3%	18.1%	58.1%	2.9%	10.7%	4.3%	2.7%	100.0%
Washoe County Age Based Strategy Model 2040	2.7%	17.4%	51.2%	3.4%	14.1%	8.2%	3.0%	100.0%
Washoe County Age Based Strategy Model 2030	2.6%	15.4%	45.5%	4.3%	18.1%	11.0%	3.1%	100.0%
Washoe County Age Based Strategy Model 2020	2.0%	13.4%	34.9%	5.8%	24.6%	16.4%	3.0%	100.0%
Washoe County Age Based Strategy Model 2010	1.3%	9.3%	25.8%	6.9%	28.5%	25.5%	2.6%	100.0%



Age Based Strategy Model Allocation Graph by Sub Asset Class



Age Based Strategy Model Equity Glide Path Ranges



Fee and Expense Summary

Mass Mutual requires 0.08% in revenue from the plan assets annually, 0.02% per quarter.

AndCo Consulting bills quarterly. The fee structure is 0.03% per annum, paid in quarterly cash payments excluding the WCAB Assets.

The WCAB Assets are billed at 0.10% per annum on invested assets, capped at \$10,000 per year.

Plan Demographics

Total Assets*	\$172,425,704
Number of Participants with a Balance (active and terminated)	2,483

Expense Type Estimates (annual)	Percent of Assets	Dollar Cost	% Cost
MassMutual Recordkeeping fees	0.08%	\$137,941	0.08%
AndCo Consulting fees	0.03%	\$48,705	
AndCo Consulting fees WCAB	0.10%	\$10,075	
Total AndCo Consulting fees		\$ 58,780	0.03%
Total plan expenses		\$ 196,721	0.11%

Revenue Sharing Estimates (annual)

Revenue from participant annual fee	0.13%	\$224,153
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Net plan fee surplus (annual)		\$27,432	0.02%
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Annual average total plan recordkeeping and administrative cost per participant (gross)**		\$90.28
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*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)	\$1,381,288	1.34%	\$18,509	0.40%	\$5,525
DFA International Small Cap Value (DISVX)	\$1,693,235	0.68%	\$11,514	0.00%	\$0
American Funds EuroPacific Growth (RERGX)	\$5,171,902	0.50%	\$25,860	0.00%	\$0
Wells Fargo Small Co Growth (WSCRX)	\$3,314,120	0.90%	\$29,827	0.00%	\$0
Vanguard Small Cap Index (VSMAX)	\$3,011,476	0.05%	\$1,506	0.00%	\$0
AMG Managers Skyline Special Equities (SKSEX)	\$3,113,075	1.25%	\$38,913	0.25%	\$7,783
Hartford Mid Cap (HIMCX)	\$10,076,400	0.70%	\$70,535	0.25%	\$25,191
Vanguard Mid Cap Index (VIMAX)	\$3,006,544	0.05%	\$1,503	0.00%	\$0
Hotchkis & Wiley Mid Cap Value (HWMIX)	\$3,523,028	1.03%	\$36,287	0.40%	\$14,092
AF Growth Fund of America (RGAGX)	\$15,555,574	0.33%	\$51,333	0.00%	\$0
Wells Fargo Disciplined US Core (EVSIX)	\$13,198,072	0.48%	\$63,351	0.15%	\$19,797
Vanguard Institutional Index (VINIX)	\$12,693,898	0.04%	\$5,078	0.00%	\$0
American Century Equity Income (AEUDX)	\$7,310,863	0.56%	\$40,941	0.00%	\$0
American Funds American Balanced (RLBGX)	\$6,273,357	0.28%	\$17,565	0.00%	\$0
PIMCO High Yield (PHIYX)	\$2,253,724	0.55%	\$12,395	0.00%	\$0
PIMCO Foreign Bond USD-Hedged (PFORX)	\$1,035,966	0.50%	\$5,180	0.00%	\$0
Hartford Total Return Bond (HIABX)	\$3,787,609	0.51%	\$19,317	0.25%	\$9,469
MassMutual Guaranteed Interest Account	\$76,025,573	0.00%	\$0	0.00%	\$0
TOTAL	\$172,425,704	0.26%	\$449,614	0.05%	\$81,857

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



Understanding Plan Fees - Paying for Plan Expenses

- Plan Sponsors are responsible for determining how to pay for Plan expenses. In general, there are three options:
 - The Plan Sponsor pays for all of the Plan expenses
 - The Plan Participants pay for all of the Plan expenses
 - The Plan expenses are shared and paid by the Plan Sponsor and Participants
- If the Participants are being charged for some or all of the Plan expenses, the Plan Sponsor has the obligation to ensure that those fees are reasonable and fair.
- There are several ways to recover plan expenses including:
 - Revenue Sharing (%)
 - Asset Based (%)
 - Hybrid Approach (%+\$)
 - Per Participant (\$)

AndCo believes it is best practice to seek equitable and transparent fees and to document any relevant discussions and decisions regarding them.



Understanding Plan Fees - Different Fee Structures

How are the fees being charged to the Plan or the Participants?

- **Asset Based Fees (%)**
 - Pro Rata: An asset based fee is assessed on the value of each participant balance.
- **Per Participant Fee (\$)**
 - Per Capita: A flat dollar fee is assessed on each participant account.
- **Hybrid Options (% + \$ = Total Fee)**
 - An asset based (%) fee in addition to a per capita participant fee.
- **Revenue Sharing (%)**
 - Revenue rebates provided by the Mutual Fund that can be used to pay plan expenses.

42.1%
of Plan Sponsors
are unsure if the
investments are
returning revenue
sharing to the Plan.*

Understanding Plan Fees - Revenue Sharing

Revenue sharing rebates are payments provided by the Mutual Fund to the Plan. Plan Sponsors have the authority and responsibility to determine how the revenue sharing rebates are utilized. These rebates, like other fund administrative costs, are reflected in the fund's expense ratio.

- Funds may offer different amounts of revenue sharing depending on share class and negotiated arrangements with recordkeepers.
- Index (passive) fund options generally do not have revenue sharing
- There are multiple ways Plan Sponsors can direct revenue sharing:
 - Direct the revenue sharing to an Expense Account to pay Plan expenses.
 - Use the revenue sharing to pay the Plan providers directly.
 - Direct the revenue sharing back to the Participant that earned it.

Investment Option	Prospectus Net Expense Ratio	Revenue Sharing (12b-1, subTA)	Net Expense
Mutual Fund 1	0.75%	0.30%	0.45%
Mutual Fund 2	0.50%	0.00%	0.50%

Next Quarter's Module Topic: Plan Benchmarking



2018 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 administrator search			✓	



Fund Information

Portfolio Manager : Team Managed Ticker : LZOEX
PM Tenure : Inception Date : 01/08/1997
Fund Assets : \$1,253 Million Portfolio Turnover : 14%

Fund Investment Policy

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

Comparative Performance - Trailing

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
Lazard Emerging Markets Equity (LZOEX)	-13.67 (98)	-11.99 (97)	-0.18 (89)	2.89 (77)	2.16 (82)	0.31 (74)	1.75 (56)
MSCI Emerging Markets (Net) Index	-7.96 (32)	-6.66 (37)	8.20 (35)	5.60 (44)	5.01 (39)	1.43 (46)	2.26 (41)
IM Emerging Markets Equity (MF) 1st Quartile	-7.46	-5.81	9.68	6.82	5.81	2.53	3.17
IM Emerging Markets Equity (MF) Median	-9.05	-7.26	6.78	5.07	4.57	1.29	1.89
IM Emerging Markets Equity (MF) 3rd Quartile	-10.26	-8.64	2.95	3.15	2.84	0.23	0.88

Comparative Performance - Calendar

	2017	2016	2015	2014	2013	2012	2011
Lazard Emerging Markets Equity (LZOEX)	27.73 (81)	20.17 (6)	-20.33 (90)	-4.39 (69)	-1.14 (48)	22.03 (18)	-18.02 (32)
MSCI Emerging Markets (Net) Index	37.28 (42)	11.19 (30)	-14.92 (58)	-2.19 (43)	-2.60 (58)	18.23 (56)	-18.42 (36)
IM Emerging Markets Equity (MF) 1st Quartile	40.34	11.79	-10.14	-0.22	2.78	20.70	-17.42
IM Emerging Markets Equity (MF) Median	35.34	8.29	-14.05	-2.92	-1.42	18.78	-19.51
IM Emerging Markets Equity (MF) 3rd Quartile	29.35	4.04	-17.08	-5.04	-4.73	15.35	-23.06

Comparative Performance - Quarterly

	Mar-2018	Dec-2017	Sep-2017	Jun-2017	Mar-2017	Dec-2016	Sep-2016
Lazard Emerging Markets Equity (LZOEX)	1.94 (51)	6.20 (53)	6.80 (64)	2.04 (94)	10.36 (73)	-2.85 (18)	8.74 (36)
MSCI Emerging Markets (Net) Index	1.42 (62)	7.44 (22)	7.89 (48)	6.27 (40)	11.44 (55)	-4.16 (34)	9.03 (27)
IM Emerging Markets Equity (MF) 1st Quartile	3.00	7.29	9.20	7.07	13.01	-3.84	9.13
IM Emerging Markets Equity (MF) Median	1.96	6.34	7.78	5.92	11.81	-5.17	7.84
IM Emerging Markets Equity (MF) 3rd Quartile	0.70	5.20	5.50	4.55	10.18	-7.19	6.02

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	14.84	16.51	16.15
Downside Risk	9.87	10.57	10.84
vs. MSCI Emerging Markets (Net) Index			
Alpha	-8.11	-2.44	-2.79
Beta	1.06	0.99	1.05
Down Market Capture	139.03	113.44	119.48
Information Ratio	-2.09	-0.50	-0.53
Tracking Error	3.77	4.99	4.83
Up Market Capture	91.45	99.88	103.68
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	-0.03	0.22	0.19

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

	Periods	5-25	25-Median	Median-75	75-95
Lazard Emerging Markets Equity (LZOEX)	28	8 (29%)	6 (21%)	7 (25%)	7 (25%)
MSCI Emerging Markets (Net) Index	28	0 (0%)	19 (68%)	9 (32%)	0 (0%)

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

	Periods	5-25	25-Median	Median-75	75-95
Lazard Emerging Markets Equity (LZOEX)	28	5 (18%)	9 (32%)	9 (32%)	5 (18%)
MSCI Emerging Markets (Net) Index	28	1 (4%)	15 (54%)	12 (43%)	0 (0%)

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

	Periods	5-25	25-Median	Median-75	75-95
Lazard Emerging Markets Equity (LZOEX)	28	9 (32%)	8 (29%)	9 (32%)	2 (7%)
MSCI Emerging Markets (Net) Index	28	3 (11%)	17 (61%)	8 (29%)	0 (0%)



Portfolio Characteristics								Top Ten Equity Holdings			
	Portfolio		Benchmark					Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	48,831,223,339		87,762,138,789					5.6	1.7	-10.0	-0.6
Median Mkt. Cap (\$)	11,241,043,108		5,227,077,066					4.2	0.7	-16.8	-0.7
Price/Earnings ratio	10.2		13.4					4.0	3.3	-13.3	-0.5
Price/Book ratio	2.4		2.6					3.9	0.9	0.6	0.0
5 Yr. EPS Growth Rate (%)	9.6		15.4					3.8	1.0	-0.9	0.0
Current Yield (%)	3.8		2.6					2.7	0.4	-9.8	-0.3
Beta (5 Years, Monthly)	1.05		1.00					2.5	0.5	24.3	0.6
Number of Stocks	72		1,138					2.3	0.5	-12.7	-0.3
								2.1	0.1	-40.6	-0.9
								2.0	0.6	-0.1	0.0
Buy and Hold Sector Attribution - 1 Qtr								Ten Best Performers			
	Allocation		Performance		Attribution						
	Portfolio	Benchmark	Portfolio	Benchmark	Sector	Stock	Total	Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn
Consumer Discretionary	9.5	9.4	-14.96	-7.04	0.00	-0.74	-0.74	0.7	0.0	27.4	0.2
Consumer Staples	7.2	6.5	-15.21	-6.44	0.01	-0.62	-0.60	2.5	0.5	24.3	0.6
Energy	8.7	7.3	-8.97	-5.05	0.04	-0.33	-0.29	1.9	0.1	23.0	0.4
Financials	30.7	23.6	-19.09	-12.77	-0.32	-2.05	-2.37	1.2	0.6	19.8	0.2
Health Care	0.9	2.8	-21.13	-4.60	-0.06	-0.15	-0.21	1.5	0.1	11.6	0.2
Industrials	5.0	5.2	-13.26	-11.56	0.02	-0.10	-0.08	1.8	1.3	8.9	0.2
Information Technology	19.9	27.9	-3.87	-4.88	-0.20	0.14	-0.06	1.0	0.1	5.9	0.1
Materials	4.3	7.5	-14.17	-5.77	-0.07	-0.35	-0.41	1.6	0.3	3.1	0.1
Real Estate	0.0	2.8	0.00	-11.30	0.09	0.00	0.09	1.0	0.2	2.1	0.0
Telecommunication Services	12.0	4.5	-13.87	-9.81	-0.14	-0.49	-0.63	0.9	0.2	1.4	0.0
Utilities	2.0	2.4	-11.10	-7.67	0.00	-0.07	-0.08				
Total	100.0	100.0	-13.36	-7.97	-0.63	-4.76	-5.39				
Buy and Hold Region Attribution- 1 Qtr								Ten Worst Performers			
	Allocation		Performance		Attribution						
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Region	Total	Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn
EM Asia	44.8	60.7	-4.96	-6.46	0.63	-0.24	0.40	0.6	0.0	-43.2	-0.3
EM Europe	17.1	6.4	-16.43	-10.19	-1.08	-0.23	-1.30	2.1	0.1	-40.6	-0.9
EM Latin America	14.1	11.5	-29.39	-19.66	-1.60	-0.28	-1.88	1.2	0.0	-37.2	-0.4
EM Mid East+Africa	13.4	7.9	-23.16	-9.89	-1.82	-0.10	-1.93	1.4	0.4	-35.8	-0.5
Europe ex UK	0.0	0.3	0.00	-0.43	0.00	-0.02	-0.02	0.9	0.0	-35.3	-0.3
Frontier Markets	3.5	0.1	-23.22	-20.67	-0.08	-0.44	-0.53	0.6	0.0	-32.7	-0.2
North America	0.0	0.1	0.00	-10.15	0.00	0.00	0.00	0.7	0.1	-32.1	-0.2
Other	0.0	0.1	0.00	-12.87	0.00	0.00	0.00	1.5	0.1	-32.0	-0.5
Pacific ex Japan	7.1	12.9	1.66	-1.64	0.20	-0.34	-0.13	0.7	0.0	-30.9	-0.2
United Kingdom	0.0	0.0	0.00	-18.97	0.00	0.01	0.01	1.0	0.1	-30.5	-0.3
Total	100.0	100.0	-13.36	-7.97	-3.75	-1.64	-5.39				



Manager Profile
AMG Managers Skyline Special Equities (SKSEX)

As of June 30, 2018

Fund Information

Portfolio Manager : Fiedler/Maloney/Odegard Ticker : SKSEX
 PM Tenure : 2001--2001--2001 Inception Date : 04/23/1987
 Fund Assets : \$841 Million Portfolio Turnover : 33%

Fund Investment Policy

The Fund seeks maximum capital appreciation primarily through investment in common stocks that the adviser considers under valued.

Comparative Performance - Trailing

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
AMG Managers Skyline Special Equities (SKSEX)	3.43 (97)	2.05 (87)	8.93 (91)	6.58 (80)	10.62 (45)	12.17 (16)	11.88 (6)
Russell 2000 Value Index	8.30 (38)	5.44 (51)	13.10 (66)	11.22 (38)	11.18 (38)	11.10 (32)	9.88 (46)
IM U.S. Small Cap Value Equity (MF) 1st Quartile	8.91	7.09	17.89	12.33	11.81	11.39	10.42
IM U.S. Small Cap Value Equity (MF) Median	7.91	5.46	15.22	10.14	10.16	10.33	9.60
IM U.S. Small Cap Value Equity (MF) 3rd Quartile	5.49	3.18	11.00	7.23	8.03	8.83	7.87

Comparative Performance - Calendar

	2017	2016	2015	2014	2013	2012	2011
AMG Managers Skyline Special Equities (SKSEX)	8.39 (48)	21.32 (86)	-6.05 (26)	4.02 (35)	51.59 (5)	19.34 (21)	-2.05 (40)
Russell 2000 Value Index	7.84 (51)	31.74 (24)	-7.47 (49)	4.22 (35)	34.52 (53)	18.05 (28)	-5.50 (61)
IM U.S. Small Cap Value Equity (MF) 1st Quartile	12.67	31.58	-5.89	5.39	41.17	18.21	-0.99
IM U.S. Small Cap Value Equity (MF) Median	7.87	29.29	-7.61	2.78	35.08	15.07	-3.15
IM U.S. Small Cap Value Equity (MF) 3rd Quartile	5.23	24.49	-11.86	-0.70	31.95	11.57	-7.70

Comparative Performance - Quarterly

	Mar-2018	Dec-2017	Sep-2017	Jun-2017	Mar-2017	Dec-2016	Sep-2016
AMG Managers Skyline Special Equities (SKSEX)	-1.34 (34)	0.91 (88)	5.78 (42)	1.10 (46)	0.44 (28)	14.88 (26)	5.66 (86)
Russell 2000 Value Index	-2.64 (51)	2.05 (75)	5.11 (62)	0.67 (51)	-0.13 (32)	14.07 (32)	8.87 (45)
IM U.S. Small Cap Value Equity (MF) 1st Quartile	-1.12	4.13	6.63	1.86	0.81	15.03	11.30
IM U.S. Small Cap Value Equity (MF) Median	-2.61	3.24	5.55	0.70	-0.92	13.08	8.41
IM U.S. Small Cap Value Equity (MF) 3rd Quartile	-3.58	2.00	4.66	-0.57	-1.81	11.56	6.59

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	10.44	14.43	14.50
Downside Risk	4.95	7.92	8.06
vs. Russell 2000 Value Index			
Alpha	-2.51	-3.91	-0.43
Beta	0.90	0.98	1.00
Down Market Capture	93.52	97.48	96.20
Information Ratio	-0.98	-0.98	-0.10
Tracking Error	3.94	4.33	4.13
Up Market Capture	79.48	81.55	96.25
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	0.74	0.47	0.74

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

	Periods	5-25	25-Median	Median-75	75-95
AMG Managers Skyline Special Equities (SKSEX)	28	13 (46%)	8 (29%)	3 (11%)	4 (14%)
Russell 2000 Value Index	28	4 (14%)	12 (43%)	12 (43%)	0 (0%)

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

	Periods	5-25	25-Median	Median-75	75-95
AMG Managers Skyline Special Equities (SKSEX)	28	19 (68%)	4 (14%)	4 (14%)	1 (4%)
Russell 2000 Value Index	28	1 (4%)	17 (61%)	7 (25%)	3 (11%)

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

	Periods	5-25	25-Median	Median-75	75-95
AMG Managers Skyline Special Equities (SKSEX)	28	21 (75%)	7 (25%)	0 (0%)	0 (0%)
Russell 2000 Value Index	28	3 (11%)	11 (39%)	9 (32%)	5 (18%)



Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	2,663,823,245	2,081,334,930	The Children's Place	2.6	0.0	-10.0	-0.3
Median Mkt. Cap (\$)	2,076,707,810	827,104,740	Brunswick Corp	2.4	0.0	8.9	0.2
Price/Earnings ratio	17.2	15.7	Orion Engineered Carbons SA	2.2	0.0	14.5	0.3
Price/Book ratio	2.1	1.7	First Busey Corp	2.2	0.1	7.4	0.2
5 Yr. EPS Growth Rate (%)	13.2	7.4	Bancorpsouth Bank	2.2	0.3	4.0	0.1
Current Yield (%)	1.1	2.0	Aaron's Inc	2.2	0.3	-6.7	-0.1
Beta (5 Years, Monthly)	1.00	1.00	Rexnord Corp	2.1	0.2	-2.1	0.0
Number of Stocks	64	1,364	TriMas Corp	2.1	0.1	12.0	0.3
			BMC Stock Holdings Inc	2.1	0.1	6.6	0.1
			Ferro Corp.	2.1	0.0	-10.2	-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					
Consumer Discretionary	11.6	10.9	-3.95	8.12	0.00	-1.43	-1.43	Ensign Group Inc (The)	1.7	0.0	36.4	0.6
Consumer Staples	0.0	2.2	0.00	6.70	0.03	0.00	0.03	NOW Inc	1.3	0.1	30.4	0.4
Energy	0.0	7.1	0.00	21.61	-0.87	0.00	-0.87	CBIZ Inc	1.6	0.1	26.0	0.4
Financials	25.1	31.2	3.71	4.21	0.22	-0.13	0.09	Knowles Corp	1.5	0.1	21.5	0.3
Health Care	7.4	6.8	14.12	9.66	0.02	0.31	0.33	Columbus McKinnon Corp	2.0	0.0	21.2	0.4
Industrials	26.1	12.1	4.98	5.81	-0.30	-0.20	-0.50	Infinity Property and Casualty Corp	1.9	0.1	20.7	0.4
Information Technology	18.4	8.7	6.91	6.22	-0.17	0.13	-0.04	Korn/Ferry International	1.9	0.0	20.2	0.4
Materials	10.0	4.3	1.65	6.03	-0.08	-0.47	-0.56	Electronics for Imaging Inc	1.3	0.1	19.1	0.3
Real Estate	1.5	10.0	-16.11	14.73	-0.56	-0.47	-1.03	McGrath RentCorp	0.2	0.0	18.6	0.0
Telecommunication Services	0.0	0.5	0.00	14.52	-0.03	0.00	-0.03	WNS (Holdings) Ltd	2.0	0.0	15.1	0.3
Utilities	0.0	6.2	0.00	8.31	-0.02	0.00	-0.02					
Total	100.0	100.0	3.95	7.99	-1.78	-2.26	-4.04					

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					
Mid Growth	5.1	0.2	-1.77	46.62	1.53	-2.16	-0.63	ManpowerGroup Inc	1.2	0.0	-24.4	-0.3
Mid Neutral	8.0	3.5	-3.52	3.69	-0.21	-0.78	-0.99	NN Inc	0.8	0.0	-21.0	-0.2
Mid Value	12.7	12.8	-5.43	2.77	-0.02	-1.01	-1.03	Anixter International Inc	1.5	0.2	-16.4	-0.3
Small Growth	6.1	2.0	6.08	10.01	-0.05	-0.31	-0.36	Berry Global Group Inc	0.9	0.0	-16.2	-0.1
Small Neutral	19.2	12.3	5.17	8.06	0.22	-0.96	-0.74	Realogy Holdings Corp	1.5	0.0	-16.1	-0.2
Small Value	49.0	66.2	7.06	8.95	-0.18	-0.75	-0.93	Essent Group Ltd	1.9	0.2	-15.8	-0.3
Unclassified	0.0	3.0	0.00	11.59	-0.11	0.00	-0.11	Reinsurance Group of Amer.	1.6	0.0	-13.0	-0.2
Total	100.0	100.0	3.95	7.99	1.18	-5.96	-4.78	LCI Industries	1.4	0.0	-12.8	-0.2
								Belden Inc	0.7	0.2	-11.3	-0.1
								Ferro Corp.	2.1	0.0	-10.2	-0.2



Manager Profile
Hotchkis & Wiley Mid Cap Value (HWMIX)
As of June 30, 2018

Fund Information

Portfolio Manager : Majcher/Davis, Jr./Miles Ticker : HWMIX
PM Tenure : 1997--1997--1997 Inception Date : 01/02/1997
Fund Assets : \$1,609 Million Portfolio Turnover : 37%

Fund Investment Policy

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

Comparative Performance - Trailing

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
Hotchkis & Wiley Mid Cap Value (HWMIX)	7.80 (1)	5.59 (2)	14.32 (4)	6.97 (55)	9.26 (78)	12.05 (6)	12.50 (1)
Russell Midcap Value Index	2.41 (32)	-0.16 (51)	7.60 (43)	8.80 (25)	11.27 (14)	11.70 (10)	10.06 (30)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	2.77	1.10	11.07	8.67	10.68	11.12	10.17
IM U.S. Mid Cap Value Equity (MF) Median	1.89	-0.16	7.25	7.15	9.93	10.37	9.01
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	0.84	-1.78	5.11	6.33	9.29	9.79	8.46

Comparative Performance - Calendar

	2017	2016	2015	2014	2013	2012	2011
Hotchkis & Wiley Mid Cap Value (HWMIX)	7.78 (88)	21.00 (21)	-12.53 (95)	12.18 (24)	42.55 (4)	31.09 (1)	-8.60 (96)
Russell Midcap Value Index	13.34 (42)	20.00 (34)	-4.78 (46)	14.75 (8)	33.46 (70)	18.51 (21)	-1.38 (36)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	14.82	20.68	-3.48	12.14	37.59	18.23	-0.52
IM U.S. Mid Cap Value Equity (MF) Median	12.54	17.22	-5.60	10.51	35.34	16.67	-2.87
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	10.53	15.47	-7.34	8.45	32.97	14.84	-6.18

Comparative Performance - Quarterly

	Mar-2018	Dec-2017	Sep-2017	Jun-2017	Mar-2017	Dec-2016	Sep-2016
Hotchkis & Wiley Mid Cap Value (HWMIX)	-2.05 (54)	4.58 (73)	3.53 (31)	-1.33 (97)	0.88 (96)	12.05 (3)	10.61 (2)
Russell Midcap Value Index	-2.50 (70)	5.50 (37)	2.14 (69)	1.37 (49)	3.76 (32)	5.52 (75)	4.45 (63)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	-1.53	5.73	3.63	1.79	4.14	8.49	5.86
IM U.S. Mid Cap Value Equity (MF) Median	-1.98	5.10	2.86	1.32	3.28	6.39	4.94
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	-2.83	4.53	1.50	-0.12	2.60	5.35	4.24

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	11.31	16.76	15.05
Downside Risk	6.64	9.72	8.60
vs. Russell Midcap Value Index			
Alpha	4.26	-4.63	-4.45
Beta	1.30	1.43	1.29
Down Market Capture	131.71	148.88	139.50
Information Ratio	0.99	-0.10	-0.16
Tracking Error	6.52	9.00	7.96
Up Market Capture	159.98	119.78	111.30
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	1.13	0.45	0.64

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

	Periods	5-25	25-Median	Median-75	75-95
Hotchkis & Wiley Mid Cap Value (HWMIX)	28	15 (54%)	1 (4%)	1 (4%)	11 (39%)
Russell Midcap Value Index	28	9 (32%)	12 (43%)	7 (25%)	0 (0%)

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

	Periods	5-25	25-Median	Median-75	75-95
Hotchkis & Wiley Mid Cap Value (HWMIX)	28	17 (61%)	0 (0%)	3 (11%)	8 (29%)
Russell Midcap Value Index	28	20 (71%)	7 (25%)	1 (4%)	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%)	7 (25%)	2 (7%)	4 (14%)
Russell Midcap Value Index	28	18 (64%)	8 (29%)	2 (7%)	0 (0%)



Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	8,351,456,808	14,224,423,345	Whiting Petroleum Corp	7.7	0.1	55.8	4.3
Median Mkt. Cap (\$)	5,267,280,450	7,724,476,245	Popular Inc	5.2	0.1	9.2	0.5
Price/Earnings ratio	10.4	17.4	ARRIS International plc	4.0	0.1	-8.0	-0.3
Price/Book ratio	1.5	2.1	Kosmos Energy Ltd	3.6	0.0	31.3	1.1
5 Yr. EPS Growth Rate (%)	7.7	10.1	Hewlett Packard Enterprise Co	3.6	0.0	-16.1	-0.6
Current Yield (%)	1.5	2.2	Cairn Energy PLC, Edinburgh	3.5	0.0	14.1	0.5
Beta (5 Years, Monthly)	1.29	1.00	Telefonaktiebolaget LM Ericsson	3.5	0.0	22.2	0.8
Number of Stocks	59	596	GEO Group Inc (The)	3.0	0.0	37.5	1.1
			CIT Group Inc	2.9	0.1	-1.8	-0.1
			Citizens Financial Group Inc	2.9	0.4	-6.8	-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					
Consumer Discretionary	16.6	11.6	5.46	1.06	-0.07	0.74	0.67	Rent-A-Center Inc	0.3	0.0	70.6	0.2
Consumer Staples	1.3	3.8	-5.10	-1.96	0.11	-0.04	0.07	Whiting Petroleum Corp	7.7	0.1	55.8	4.3
Energy	26.1	8.8	25.83	16.53	2.18	2.11	4.29	Sanchez Energy Corp	0.6	0.0	44.4	0.3
Financials	21.9	20.9	0.13	-2.72	-0.03	0.66	0.63	Weatherford Intl	1.8	0.1	43.7	0.8
Health Care	1.9	6.3	19.72	0.15	0.10	0.40	0.50	Frank's International NV	0.6	0.0	43.6	0.3
Industrials	9.6	11.8	-2.10	-4.20	0.13	0.25	0.38	GEO Group Inc (The)	3.0	0.0	37.5	1.1
Information Technology	16.5	6.6	-1.37	3.34	0.09	-0.74	-0.65	Hess Corp	0.7	0.4	32.7	0.2
Materials	0.0	5.6	0.00	1.32	0.06	0.00	0.06	Murphy Oil Corp	1.4	0.1	31.8	0.4
Real Estate	2.8	13.8	32.99	8.53	-0.67	0.60	-0.07	Kosmos Energy Ltd	3.6	0.0	31.3	1.1
Telecommunication Services	0.0	0.5	0.00	13.55	-0.06	0.00	-0.06	Discovery Inc	2.4	0.2	30.6	0.7
Utilities	3.2	10.3	1.09	4.65	-0.16	-0.11	-0.27					
Total	100.0	100.0	7.89	2.31	1.67	3.87	5.54					

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	8.93	-0.01	0.00	-0.01	Avis Budget Group Inc	0.5	0.0	-30.6	-0.2
Large Neutral	0.9	1.6	0.00	1.19	0.08	0.00	0.08	Cummins Inc.	0.9	0.3	-17.3	-0.2
Large Value	2.6	2.4	-2.39	2.55	0.00	-0.18	-0.18	Adient Plc	0.6	0.1	-17.3	-0.1
Mid Growth	1.6	2.0	-5.67	-5.83	0.01	0.04	0.05	Hewlett Packard Enterprise Co	3.6	0.0	-16.1	-0.6
Mid Neutral	1.7	31.5	-8.82	1.80	0.20	-0.47	-0.27	Royal Mail Holdings PLC	1.6	0.0	-12.2	-0.2
Mid Value	60.8	56.0	5.34	2.53	0.03	1.72	1.75	Goodyear Tire & Rubber Co	2.5	0.1	-11.9	-0.3
Small Growth	0.2	0.1	-16.65	-9.57	0.00	-0.10	-0.10	CNO Financial Group Inc	1.7	0.0	-11.7	-0.2
Small Neutral	5.0	0.6	33.70	1.94	0.07	1.33	1.40	Ophir Energy PLC	2.0	0.0	-9.8	-0.2
Small Value	20.1	3.3	10.69	9.00	1.16	0.20	1.36	Fifth Third Bancorp	0.2	0.4	-9.0	0.0
Unclassified	7.2	2.4	9.86	6.97	0.24	0.20	0.44	C&J Energy Services Inc	1.4	0.0	-8.6	-0.1
Total	100.0	100.0	7.89	2.31	1.79	2.74	4.53					



Historical Activity

Jul-2017

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

Nov-2016

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

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

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

Dec-2015

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

The SSGA Index Fund were replaced by Vanguard Index Funds.

The Hartford Balanced was replaced by American Funds Balanced.

American Century Equity Income shares changed from ACIX to AEUDX.

Deutsche Alternative Asset Allocation shares changed from AAAAX to AAAX.

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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