Investment Performance Review Period Ending September 30, 2020

# Washoe County 457 & 401a Plans



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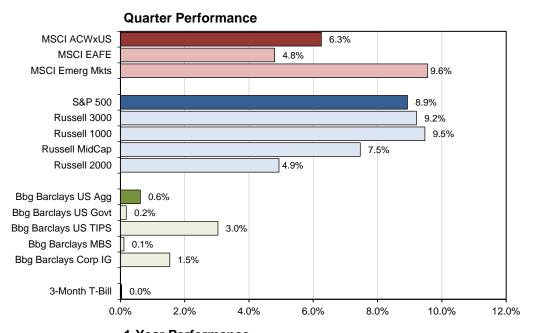
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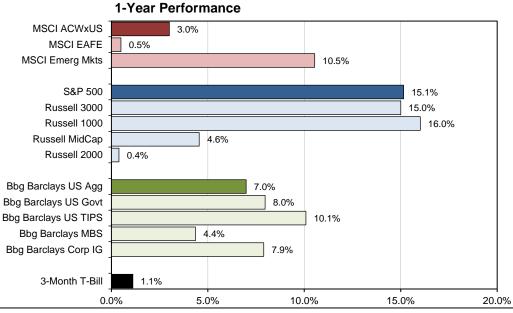


**3rd Quarter 2020 Market Environment** 



- Broad asset class returns were positive in the 3rd quarter continuing their rebound from the 2nd guarter. In general, US monetary policy remains supportive as the Federal Reserve Bank (Fed) continues to hold interest rates near zero with the goal of providing the markets with liquidity. Importantly, the Fed indicated that interest rates in the US would remain low for an extended period as GDP growth and business activity remains subdued as the COVID-19 pandemic lingers. The Fed also commented that it was comfortable allowing inflation to exceed its 2% target in the near-term with the goal of averaging its target over the long-term. The final reading of US GDP growth in the 2nd guarter showed the economy contracted by -31.4%. While expectations for growth in the 3rd quarter vary widely, the general outlook is for a strong positive reading. Within domestic equity markets, we saw a reversal during the quarter with large cap stocks outperforming small cap stocks with the S&P 500 returning 8.9% compared to 4.9% for the Russell 2000 Index. Over the trailing 1-year period, large cap stocks significantly outperformed both small and mid-cap stocks with the S&P 500 returning 15.1% while small and mid-cap stocks returned 0.4% and 4.6%, respectively.
- Similar to US markets, international markets posted strong returns for the period despite concerns about a potential "second wave" of the pandemic flowing through Europe. While neither the European Central Bank nor the Bank of England changed their policies, global central banks remain accommodative and prepared to provide additional support if required. International investors also benefited from a weakening USD which declined against most major currencies during the period. Emerging market economies continued to outperform relative to developed markets during the period with China showing signs of improvement. For the quarter, the MSCI Emerging Market Index returned 9.6% compared to 4.8% for the MSCI EAFE Index. Following the strong quarter, both developed and emerging market indices turned positive over the 1-year trailing period with the developed market index returning 0.5% and the emerging market index returning 10.5%.
- Fixed income returns were mixed during the 3rd quarter as interest rates remained relatively stable. For the quarter, the BB US Aggregate Index returned 0.6% while the BB Corporate Investment Grade Index returned 1.5%. TIPS were an area of strength during the quarter, benefiting from higher inflation expectations. For the trailing 1-year period, fixed income returns were solid with the BB US Aggregate Index returning 7.0%, while corporate bonds returned 7.9%. TIPS outperformed nominal bonds by posting a respectable 10.1% return over the trailing 1-year period as investors' inflation expectations rose.

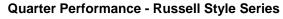


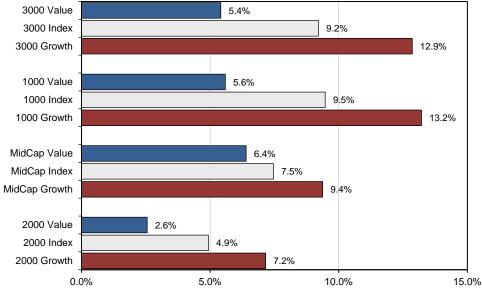


Source: Investment Metrics

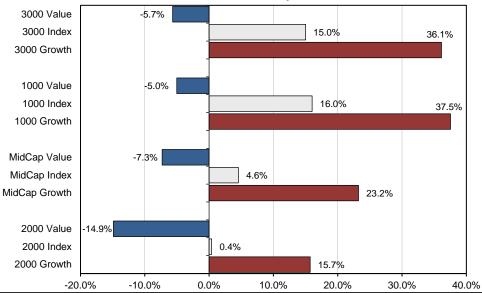


- Continuing their recent trend, US equities posted their second straight quarter of positive returns across the style and market capitalization spectrum. During the quarter, large cap stocks resumed their leadership, outpacing both mid and small-cap stocks as investors gravitated toward large companies for their relatively attractive profitability profile, lower leverage, and diversified business models. The Russell 1000 Index returned 9.5% compared with 7.5% and 4.9% for the Russell MidCap and Russell 2000 indices, respectively. While small cap stocks have historically performed well in periods following a recession, the relative uncertainty surrounding the path of global economic growth and the upcoming US Presidential election pushed investors toward the relative safety of large cap stocks.
- Growth stocks maintained their dominance relative to value-oriented stocks across all market capitalizations for the 3rd quarter. The Russell 1000 Growth Index returned 13.2% and was the best performing index across style and market capitalization for the period. The index benefitted from favorable relative weightings to consumer discretionary, materials and technology-related companies, which powered large cap returns during the period. Small cap value stocks trailed their index peers during the quarter with the Russell 2000 Value Index returning 2.6%. Exposures to financial-related companies and real estate acted as a headwind as those sectors lagged during the period.
- When viewed over the trailing 1-year period, the performance dispersion between large cap and small cap stocks across styles is glaring. While some of the difference in relative performance between market capitalizations can be attributed to the drawdown experienced during the 1st quarter, large cap stocks have benefited from investors favoring companies with healthier financial profiles that can weather a protracted period of weak growth due to the pandemic. Additionally, the sector weights within the respective indices and a tilt towards growth-oriented, higher P/E companies in large caps has acted as a tailwind for growth index performance.
- Results over the trailing 1-year reflect the continued strength of growth compared to value benchmarks with each growth index earning double digit gains while each value index posted negative results for the period. The widest performance gap was in the large cap space with the Russell 1000 Growth Index returning 37.5%, which outpaced the large cap value benchmark by more than 40% for the year. The dispersion between both mid and small cap growth benchmarks was also substantial relative to their value counterparts with each growth index outpacing its respective value benchmark by more than 30% for the year.





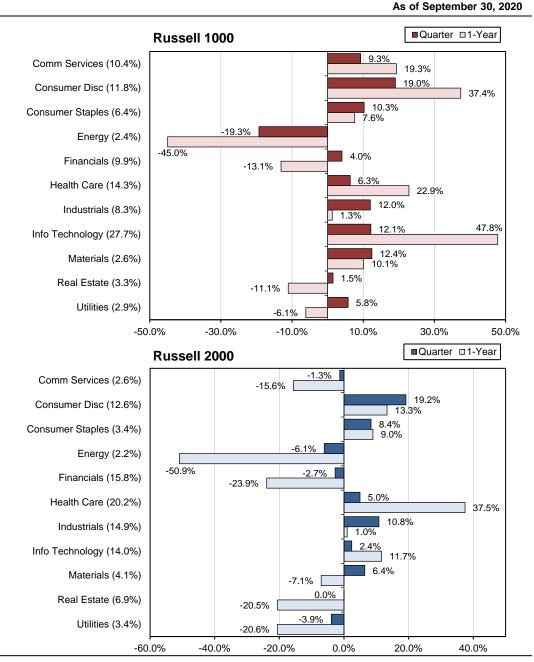
## 1-Year Performance - Russell Style Series



Source: Investment Metrics



- Ten of eleven economic sectors within the large cap Russell 1000 Index were positive for the 3rd quarter with only the energy sector posting a negative return. Five sectors outpaced the return of the broad index during the period. Growth-oriented sectors such as consumer discretionary, materials and technology were some of the best performers for the quarter returning 19.0%, 12.4%, and 12.1%, respectively. The energy sector continues to lag due to reduced consumption and the threat of bankruptcies resulting from stubbornly low oil prices. While the sectors were positive, financials and real estate were laggards relative to the broad index results, posting returns of 4.0% and 1.5% respectively. With the Fed indicating that interest rates will remain lower for longer, both sectors faced headwinds due to their sensitivity to US interest rates.
- Over the trailing 1-year period, technology-related and consumer discretionary stocks were the best performers returning 47.8% and 37.4% respectively. For the full-year, five sectors exceeded the return of the broad benchmark: technology, consumer discretionary, health care, communication services, and materials. In contrast, traditional value sectors such as energy, financials, real estate and utilities posted returns of -45.0%, -13.1%, -11.1%, and -6.1%, respectively, for the trailing 1-year period. This sector performance shows a staggering dispersion of more than 90% from best to worst performing sector in the large cap benchmark.
- Five of eleven small cap sectors posted returns greater than the Russell 2000 Index for the 3rd quarter. Similar to large cap stocks, sectors sensitive to the consumer and improving economic conditions were the primary drivers of return during the quarter. That said, only the consumer discretionary sector outpaced its large cap counterpart during the period, returning 19.2% compared to 19.0%.
- As previously noted, small cap stocks have significantly trailed large caps over the previous 1-year period. Specifically, energy-related companies have faced significant headwinds due primarily to low oil prices while interest rate sensitive sectors such as financials and real estate have failed to produce gains as a result of historically low US interest rates. The lone bright spot has been health care stocks which outperformed their large cap equivalents by more than 14% over the period (37.5% versus 22.9%).





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



Top 10 Weighted Stocks					
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	
Apple Inc	6.04%	27.2%	108.9%	Information Technology	
Microsoft Corp	5.02%	3.6%	53.0%	Information Technology	
Amazon.com Inc	4.25%	14.1%	81.4%	Consumer Discretionary	
Facebook Inc A	2.00%	15.3%	47.1%	Communication Services	
Alphabet Inc A	1.40%	3.4%	20.0%	Communication Services	
Alphabet Inc Class C	1.39%	4.0%	20.6%	Communication Services	
Berkshire Hathaway Inc Class B	1.32%	19.3%	2.4%	Financials	
Johnson & Johnson	1.25%	6.6%	18.2%	Health Care	
Procter & Gamble Co	1.08%	17.0%	14.6%	Consumer Staples	
Visa Inc Class A	1.08%	3.7%	17.0%	Information Technology	

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Penn National Gaming Inc	0.59%	138.0%	290.3%	Consumer Discretionary
Sunrun Inc	0.49%	290.8%	361.4%	Industrials
Caesars Entertainment Inc	0.41%	39.9%	40.6%	Consumer Discretionary
MyoKardia Inc	0.37%	41.1%	161.4%	Health Care
Novavax Inc	0.35%	30.0%	2058.4%	Health Care
iRhythm Technologies Inc	0.35%	105.5%	221.3%	Health Care
LHC Group Inc	0.34%	21.9%	87.2%	Health Care
Mirati Therapeutics Inc	0.33%	45.4%	113.1%	Health Care
Churchill Downs Inc	0.33%	23.0%	33.3%	Consumer Discretionary
Momenta Pharmaceuticals Inc	0.33%	57.7%	304.9%	Health Care

Top 10 Performing Stocks (by Quarter)					
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	
Immunomedics Inc	0.06%	139.9%	541.3%	Health Care	
L Brands Inc	0.02%	112.5%	67.3%	Consumer Discretionary	
Tesla Inc	1.01%	98.7%	790.5%	Consumer Discretionary	
NovoCure Ltd	0.04%	87.7%	48.8%	Health Care	
Pinterest Inc	0.05%	87.2%	56.9%	Communication Services	
Livongo Health Inc	0.02%	86.3%	703.0%	Health Care	
Carvana Co Class A	0.04%	85.6%	238.0%	Consumer Discretionary	
Zoom Video Communications Inc	0.25%	85.4%	516.9%	Information Technology	
FedEx Corp	0.19%	79.9%	75.8%	Industrials	
Zillow Group Inc A	0.02%	76.7%	243.7%	Communication Services	

Top 10 Performing Stocks (by Quarter)					
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector	
Whiting Petroleum Corp	0.00%	1430.1%	115.3%	Energy	
Seres Therapeutics Inc	0.08%	494.7%	606.0%	Health Care	
Vivint Solar Inc	0.11%	327.8%	547.6%	Industrials	
Tupperware Brands Corp	0.05%	324.4%	27.0%	Consumer Discretionary	
Eastman Kodak Co	0.01%	295.5%	234.1%	Information Technology	
Sunrun Inc	0.49%	290.8%	361.4%	Industrials	
Cassava Sciences Inc	0.01%	273.7%	859.2%	Health Care	
Owens & Minor Inc	0.08%	229.6%	332.8%	Health Care	
Gogo Inc	0.03%	192.4%	53.2%	Communication Services	
Pacific Biosciences of California Inc	0.09%	186.1%	91.3%	Health Care	

Bottom 10 Performing Stocks (by Quarter)					
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	
Occidental Petroleum Corp	0.03%	-45.2%	-75.5%	Energy	
Coty Inc Class A	0.00%	-39.6%	-73.8%	Consumer Staples	
Biomarin Pharmaceutical Inc	0.04%	-38.3%	12.9%	Health Care	
Reata Pharmaceuticals Inc A	0.01%	-37.6%	21.3%	Health Care	
Murphy Oil Corp	0.00%	-34.8%	-58.0%	Energy	
Agios Pharmaceuticals Inc	0.01%	-34.6%	8.0%	Health Care	
Marathon Oil Corp	0.01%	-33.2%	-66.4%	Energy	
Kirby Corp	0.01%	-32.5%	-56.0%	Industrials	
HollyFrontier Corp	0.01%	-31.6%	-61.8%	Energy	
Alteryx Inc Class A	0.02%	-30.9%	5.7%	Information Technology	

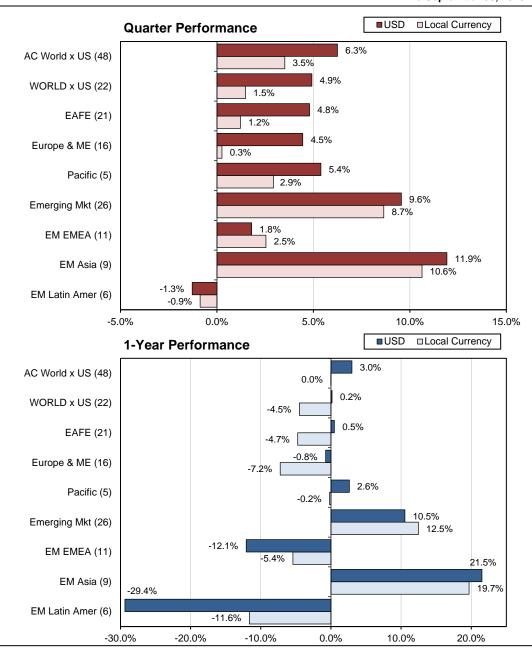
Bottom 10 Performing Stocks (by Quarter)					
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector	
Satsuma Pharmaceuticals Inc Ord. Shr.	0.00%	-86.5%	-74.1%	Health Care	
Akebia Therapeutics Inc	0.02%	-81.5%	-36.0%	Health Care	
Corbus Pharmaceuticals Holdings Inc	0.01%	-78.5%	-63.0%	Health Care	
Odonate Therapeutics Inc	0.01%	-68.3%	-48.4%	Health Care	
Tricida Inc	0.01%	-67.0%	-70.7%	Health Care	
Abeona Therapeutics Inc	0.00%	-65.0%	-54.9%	Health Care	
Mallinckrodt PLC	0.00%	-63.7%	-59.6%	Health Care	
Nemaura Medical Inc	0.00%	-61.6%	-51.4%	Health Care	
Express, Inc.	0.00%	-60.4%	-82.3%	Consumer Discretionary	
Unity Biotechnology Inc	0.01%	-60.1%	-43.3%	Health Care	

Source: Morningstar Direct



- Nearly all broad international equity indices posted positive returns in both USD and local currency terms for the 3rd quarter. Similar to US markets, international markets continued to benefit from sustained monetary and fiscal stimulus in addition to economic recovery following the onset of the pandemic. Importantly, US investors benefited from the foreign exchange element of investing internationally as the USD declined relative to most developed market currencies during the quarter.
- For the 3rd quarter, emerging markets outperformed developed markets by nearly 5%. The MSCI Emerging Markets Index gained 9.6% in USD and 8.7% in local currency terms for the period. Emerging markets were led higher by China (12.5% for the quarter) which showed signs of accelerating economic growth during the quarter and represents more than 10% of 26 country emerging market benchmark. Developed international markets also delivered solid returns during the period with the MSCI EAFE Index rising by 4.8% in USD and 1.2% in local currency returns.

- Trailing 1-year returns for international developed markets were mixed both in terms of USD and local currency returns. In contrast, emerging market returns were broadly positive during the period despite both EMEA and Latin America posting negative returns in both USD and local currency terms. For the year, the MSCI EAFE Index returned 0.5% in USD and -4.7% in local currency returns while the MSCI Emerging Markets Index returned 10.5% and 12.5%, respectively.
- During the trailing 1-year period, the USD weakened against most major international developed and emerging market currencies which positively contributed to returns in USD terms. Despite this, emerging markets in Latin America were adversely affected as a result of the decisions by Argentina and Ecuador to restructure their sovereign debt which resulted in local currency weakness and declining asset values.







MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.5%	4.1%	1.4%
Consumer Discretionary	11.9%	9.7%	3.4%
Consumer Staples	11.9%	4.5%	0.7%
Energy	2.8%	-13.4%	-42.7%
Financials	15.1%	-1.3%	-16.9%
Health Care	14.4%	2.9%	20.4%
Industrials	15.2%	10.3%	5.3%
Information Technology	8.6%	8.1%	23.7%
Materials	7.6%	10.8%	10.9%
Real Estate	3.1%	2.9%	-15.5%
Utilities	4.0%	3.0%	5.9%
Total	100.0%	4.8%	0.5%

MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.5%	3.3%	11.8%
Consumer Discretionary	13.8%	16.5%	18.1%
Consumer Staples	9.7%	4.6%	0.2%
Energy	4.2%	-7.6%	-33.5%
Financials	16.9%	-0.2%	-17.2%
Health Care	10.5%	2.6%	22.2%
Industrials	11.7%	9.9%	4.5%
Information Technology	11.7%	13.4%	34.6%
Materials	7.9%	11.1%	12.0%
Real Estate	2.7%	2.3%	-14.1%
Utilities	3.4%	2.0%	0.2%
Total	100.0%	6.3%	3.0%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	12.7%	2.5%	25.4%
Consumer Discretionary	20.2%	26.8%	48.4%
Consumer Staples	6.1%	4.3%	-2.7%
Energy	5.4%	-0.5%	-19.2%
Financials	17.2%	-0.5%	-19.0%
Health Care	4.3%	1.9%	47.0%
Industrials	4.4%	2.9%	-6.7%
Information Technology	18.5%	20.5%	41.9%
Materials	6.9%	11.6%	8.0%
Real Estate	2.4%	0.9%	-7.8%
Utilities	2.0%	-4.4%	-18.4%
Total	100.0%	9.6%	10.5%

	MSCI-EAFE	MSCI-ACWIXUS	Quarter	1- Year
Country	Weight	Weight	Return	Return
Japan	25.8%	16.5%	6.9%	6.9%
United Kingdom	13.3%	8.5%	-0.2%	-15.8%
France	10.7%	6.8%	2.8%	-6.2%
Switzerland	10.4%	6.6%	5.1%	11.0%
Germany	9.6%	6.2%	8.3%	10.0%
Australia	6.6%	4.2%	2.8%	-7.7%
Netherlands	4.4%	2.8%	5.9%	12.6%
Sweden	3.3%	2.1%	14.6%	22.4%
Hong Kong	3.3%	2.1%	1.6%	-1.6%
Denmark	2.5%	1.6%	15.3%	42.5%
Spain	2.3%	1.4%	-3.8%	-21.0%
Italy	2.2%	1.4%	1.3%	-10.1%
Finland	1.1%	0.7%	11.9%	12.7%
Singapore	1.0%	0.7%	-1.0%	-16.4%
Belgium	1.0%	0.6%	2.0%	-23.2%
reland	0.7%	0.5%	14.5%	20.7%
srael	0.6%	0.4%	-2.0%	3.5%
Norway	0.6%	0.4%	8.2%	-13.8%
New Zealand	0.3%	0.2%	-1.0%	24.4%
Portugal	0.2%	0.1%	-3.4%	2.3%
Austria	0.2%	0.1%	-4.8%	-29.1%
Total EAFE Countries	100.0%	63.8%	4.8%	0.5%
Canada		6.5%	6.2%	-3.0%
Total Developed Countries		70.3%	4.9%	0.2%
China		12.5%	12.5%	33.6%
Гаiwan		3.8%	16.5%	35.0%
Korea		3.6%	12.8%	18.6%
ndia		2.5%	15.0%	0.5%
Brazil		1.4%	-3.3%	-32.5%
South Africa		1.1%	3.7%	-11.1%
Russia		0.9%	-4.7%	-16.0%
Saudi Arabia		0.8%	9.3%	-2.9%
Thailand		0.5%	-14.1%	-30.2%
Malaysia		0.5%	2.6%	-2.9%
Mexico		0.5%	4.6%	-20.5%
Indonesia		0.4%	-6.9%	-25.4%
Qatar Philippines		0.2% 0.2%	7.5% -2.7%	-2.6% -18.7%
Poland				-18.7%
United Arab Emirates		0.2% 0.2%	-0.9% 6.2%	-20.9%
Chile		0.2%	-4.2%	-33.0%
Turkey		0.1%	-4.2%	-30.0%
Peru		0.1%	3.5%	-22.2%
Hungary		0.1%	-8.9%	-22.5%
Colombia		0.1%	-1.3%	-37.6%
Argentina		0.0%	6.7%	7.3%
Greece		0.0%	3.3%	-29.3%
Czech Republic		0.0%	-6.2%	-22.1%
Egypt		0.0%	4.6%	-13.8%
Pakistan		0.0%	12.4%	-2.6%
Total Emerging Countries		29.7%	9.6%	10.5%

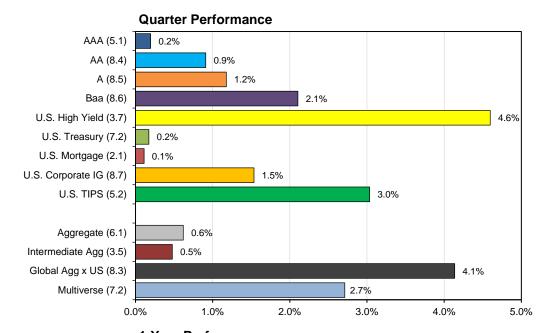
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

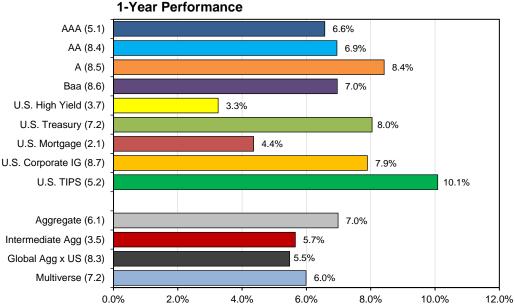
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.



- During the 3rd quarter, each fixed income benchmark posted positive results and returns were led by lower quality high yield bonds, international bonds and TIPS. During the period, US interest rates were roughly unchanged as investors vacillated between concerns related to the pandemic and a positive outlook on future economic growth. Despite declining during the month of September, US high yield bonds delivered strong returns for the quarter with the Bloomberg Barclays (BB) US High Yield Index returning 4.6%. High quality global bonds outperformed US bonds during the period largely due to a declining USD.
- During the quarter, the broad Bloomberg Barclays (BB) US Aggregate Index returned 0.6%. The primary contributor of performance to the index during the period were US Corporate IG bonds which delivered 1.5%. Despite near-record issuance, investors continue to gravitate towards corporate credit for its higher return potential as US interest rates look to remain low for some time. US TIPS also performed well during the quarter with the BB US TIPS Index returning 3.0% as investors remained concerned about the potential for rising US inflation as a result of the fiscal and monetary stimulus provided to combat the pandemic.

- Over the trailing 1-year period, each of the domestic and international fixed income indices delivered positive absolute returns. Longer duration, higher quality investment grade bonds outperformed lower quality, shorter duration high yield bonds as global interest rates fell while investors looked for less volatile assets. US TIPS were the best performing bonds with the BB US TIPS Index returning 10.1% followed by US Treasury bonds which returned 8.0%. High Yield bonds performed worst, returning 3.3% during the period as they continued to recover from the spread-widening drawdown during the 1st quarter.
- For the full year, both domestic and global bonds performed well. The US BB Aggregate Bond Index returned 7.0% compared to 5.5% for the BB Global Aggregate ex-US Index. Despite lower interest rates in both Europe and Japan, global bonds delivered solid returns primarily due to a decline in the USD compared to most major developed currencies.

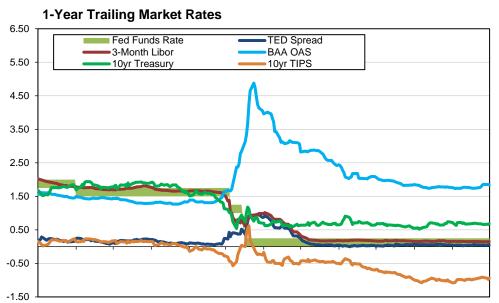




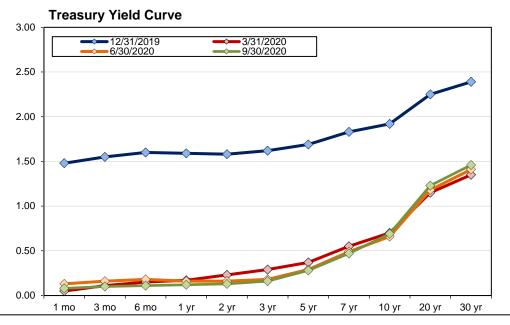
Source: Bloomberg



- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the yield graph to the right. The '1-Year Trailing Market Rates' chart illustrates that over the last year, the 10-year Treasury yield (green line) fell from yields of greater than 1.5%, to a low of roughly 0.5% before ending the quarter at roughly 0.7%. A decline in yields acts as a tailwind for bond performance. 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 investment grade issues. This line illustrates the dramatic increase in credit spreads in early 2020 as investors required additional compensation to hold riskier credit assets following the onset of the pandemic. Since that time, spreads have steadily declined as markets have largely normalized following the aggressive actions taken by the Treasury and Fed. During the quarter, the BB US High Yield OAS spread fell by roughly 1.1% but is still widen than pre-pandemic levels. Similar to Treasury yield declines, spread tightening in corporate bonds is equivalent to an interest rate decrease, which causes bond prices to rise. The green band across the graph illustrates the Fed Funds Rate. Following the onset of the pandemic, the Fed began aggressively cutting interest rates during the 1st guarter to between 0.0% to 0.25%, where it has remained since then.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. US interest rates were broadly higher at the end of 2019. Following the onset of the pandemic, interest rates fell dramatically as the Fed took unprecedented action to stimulate the economy. While short-term interest rates have remained anchored near 0.0%, intermediate-term interest rates between 2-years and 7-years declined as concerns over future US economic growth increased. Additionally, the Fed has indicated that US interest rates will remain low for the foreseeable future in an effort to provide the market with liquidity. Longer-term US Treasury interest rates moved slightly higher during the most recent quarter as investors balanced the Fed's statements with the need to increase the amount of US Treasury bond issuance to fund both the annual budget deficit and additional stimulus.



Sep-19 Oct-19 Nov-19 Dec-19 Jan-20 Feb-20 Mar-20 Apr-20 May-20 Jun-20 Jul-20 Aug-20 Sep-20



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
Inception & Manager Tenure	10%	history or having manager tenure of less than three years will receive a lower grade.
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
Historical Style Stability	10%	receive lower grades.
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)	12
Guarded	3
Watch	1

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 was removed from the plan on August 19, 2020.

The American Funds Growth Fund of America, remains on **GUARDED** status due to short term underperformance primarily to their benchmark indices. We continue to have conviction in this firm and team. We are not recommending any changes at this time.

The Wells Fargo Small Cap Growth remains on **GUARDED** status due to short term underperformance primarily to their benchmark indices. The fund has a seasoned investment team and we believe this underperformance is temporary and we continue to have conviction in the team. We are not recommending any changes at this time.

The Hartford Mid Cap Fund was placed on GUARDED status due to short term underperformance in relation to their benchmark indicex and peer group. We are not recommending any changes at this time.



Pass (Satisfactory)

Guarded

Watch

## **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

Investment Funds	1	2	3	4	5	6	7	8	9
American Funds EuroPacific Growth (RERGX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Wells Fargo Small Co Growth R6 (WSCRX)	Guarded	Guarded	Pass	Pass	Pass	Guarded	Pass	Pass	Guarded
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)	Guarded	Guarded	Pass	Pass	Pass	Guarded	Pass	Pass	Guarded
Vanguard Mid Cap Index Adm (VIMAX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hotchkis & Wiley Mid Cap Value (HWMIX)	Watch	Watch	Pass	Pass	Pass	Guarded	Pass	Pass	Watch
American Funds Growth Fund of America (RGAGX)	Guarded	Guarded	Pass	Pass	Guarded	Pass	Pass	Pass	Guarded
Wells Fargo Disciplined US Core (EVSIX)	Pass	Guarded	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Institutional Index (VINIX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
American Century Equity Income (AEUDX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
American Funds Target Date 2060-2010 R6	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	Guarded	Pass	Pass	Pass	Pass
PIMCO Foreign Bond USD-Hedged (PFORX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hartford Total Return Bond (HIABX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Voya Fixed Account	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass



## **Historical Summary Evaluation**

Pass (Satisfactory)

Guarded

Watch

Investment Funds	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18	3Q18	2Q18
American Funds EuroPacific Growth (RERGX)	Pass								
Wells Fargo Small Co Growth R6 (WSCRX)	Guarded	Guarded	Pass						
Vanguard Small Cap Index Adm (VSMAX)	Pass								
AMG Managers Skyline Special Equities (SKSEX)	Guarded	Guarded	Pass	Pass	Pass	Guarded	Guarded	Guarded	Guarded
Hartford Mid Cap (HIMCX)	Pass								
Vanguard Mid Cap Index Adm (VIMAX)	Pass								
Hotchkis & Wiley Mid Cap Value (HWMIX)	Watch	Watch	Watch	Watch	Watch	Guarded	Guarded	Guarded	Guarded
American Funds Growth Fund of America (RGAGX)	Guarded	Guarded	Guarded	Guarded	Guarded	Pass	Pass	Pass	Pass
Wells Fargo Disciplined US Core (EVSIX)	Pass	Guarded	Guarded	Guarded	Guarded	Pass	Pass	Pass	Pass
Vanguard Institutional Index (VINIX)	Pass								
American Century Equity Income (AEUDX)	Pass								
American Funds Target Date 2060-2010 R6	Pass	Pass							
American Funds American Balanced (RLBGX)	Pass								
PIMCO High Yield (PHIYX)	Pass								
PIMCO Foreign Bond USD-Hedged (PFORX)	Pass								
Hartford Total Return Bond (HIABX)	Pass								
Voya Fixed Account	Pass								



Asset Allocation Attributes						
	Sep-2			Jun-2020		020
	(\$)	%	(\$)	%	(\$)	%
Total 457 Fund	175,086,430	100.00	169,291,631	100.00	158,416,068	100.00
International Equity						
American Funds EuroPacific Growth (RERGX)	5,514,483	3.15	5,010,367	2.96	4,325,554	2.73
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	2,057,464	1.18	1,934,246	1.14	1,713,506	1.08
Vanguard Small Cap Index (VSMAX)	2,814,030	1.61	2,758,687	1.63	2,356,735	1.49
AMG Managers Skyline Special Equities (SKSEX)	1,278,520	0.73	1,241,197	0.73	1,019,680	0.64
Hartford Mid Cap (HIMCX)	8,469,793	4.84	8,904,427	5.26	7,753,607	4.89
Vanguard Mid Cap Index (VIMAX)	4,835,354	2.76	3,341,061	1.97	2,938,782	1.86
Hotchkis & Wiley Mid Cap Value (HWMIX)	-	0.00	1,162,850	0.69	984,019	0.62
AF Growth Fund of America (RGAGX)	16,146,418	9.22	15,119,807	8.93	13,255,114	8.37
Wells Fargo Disciplined US Core (EVSIX)	10,925,084	6.24	10,272,323	6.07	9,423,672	5.95
Vanguard Institutional Index (VINIX)	14,994,165	8.56	13,816,559	8.16	12,402,965	7.83
American Century Equity Income (AEUDX)	5,897,023	3.37	5,869,514	3.47	5,760,804	3.64
Balanced Fund						
American Funds American Balanced (RLBGX)	6,146,590	3.51	5,971,914	3.53	5,605,361	3.54
Fixed Income						
PIMCO High Yield (PHIYX)	1,879,707	1.07	2,012,523	1.19	1,903,561	1.20
PIMCO Foreign Bond USD-Hedged (PFORX)	561,081	0.32	552,034	0.33	532,978	0.34
Hartford Total Return Bond (HIABX)	4,254,118	2.43	4,130,024	2.44	3,967,321	2.50
Cash						
Voya Fixed Account	74,975,956	42.82	73,299,715	43.30	71,798,586	45.32
Loan Account	2,324,083	1.33	2,313,939	1.37	2,452,853	1.55



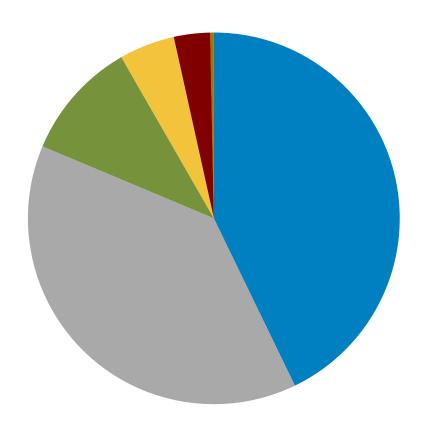
Asset Allocation Attributes							
	Sep-2	020	Jun-2	020	Mar-2	Mar-2020	
	(\$)	%	(\$)	%	(\$)	%	
American Funds 2060 TD Fund R6 (RFUTX)	49,288	0.41	120,186	1.04	28,865	0.28	
American Funds 2055 TD Fund R6 (RFKTX)	82,363	0.69	53,585	0.46	43,203	0.42	
American Funds 2050 TD Fund R6 (RFITX)	1,245,705	10.37	1,109,313	9.58	938,006	9.18	
American Funds 2045 TD Fund R6 (RFHTX)	839,849	6.99	727,768	6.28	610,909	5.98	
American Funds 2040 TD Fund R6 (RFGTX)	3,573,052	29.74	3,200,497	27.64	2,767,682	27.08	
American Funds 2035 TD Fund R6 (RFFTX)	855,936	7.13	761,504	6.58	656,734	6.43	
American Funds 2030 TD Fund R6 (RFETX)	2,700,250	22.48	3,120,966	26.95	2,831,278	27.70	
American Funds 2025 TD Fund R6 (RFDTX)	1,056,053	8.79	900,213	7.77	814,965	7.97	
American Funds 2020 TD Fund R6 (RRCTX)	1,538,543	12.81	1,518,943	13.12	1,464,917	14.33	
American Funds 2015 TD Fund R6 (RFJTX)	955	0.01	-	0.00	-	0.00	
American Funds 2010 TD Fund R6 (RFTTX)	70,565	0.59	67,469	0.58	64,411	0.63	
Target Date Funds Total	12,012,559	100.00	11,580,443	100.00	10,220,971	100.00	



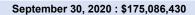
As of September 30, 2020

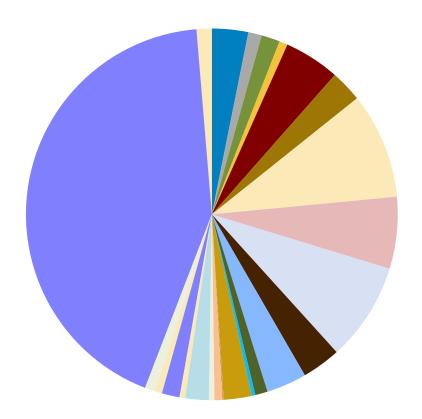
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Market Value	Allocation
74,975,956	42.8
67,417,851	38.5
18,159,150	10.4
8,457,909	4.8
5,514,483	3.1
561,081	0.3
	74,975,956 67,417,851 18,159,150 8,457,909 5,514,483









llocation		
	Market Value	Allocation
American Funds EuroPacific Growth (RERGX)	5,514,483	3.1
■ Wells Fargo Small Co Growth (WSCRX)	2,057,464	1.2
■ Vanguard Small Cap Index (VSMAX)	2,814,030	1.6
AMG Managers Skyline Special Equities (SKSEX)	1,278,520	0.7
Hartford Mid Cap (HIMCX)	8,469,793	4.8
Vanguard Mid Cap Index (VIMAX)	4,835,354	2.8
Hotchkis & Wiley Mid Cap Value (HWMIX)	-	0.0
AF Growth Fund of America (RGAGX)	16,146,418	9.2
Wells Fargo Disciplined US Core (EVSIX)	10,925,084	6.2
Vanguard Institutional Index (VINIX)	14,994,165	8.6
American Century Equity Income (AEUDX)	5,897,023	3.4
American Funds American Balanced (RLBGX)	6,146,590	3.5
PIMCO High Yield (PHIYX)	1,879,707	1.1
PIMCO Foreign Bond USD-Hedged (PFORX)	561,081	0.3
Hartford Total Return Bond (HIABX)	4,254,118	2.4
American Funds 2060 TD Fund R6 (RFUTX)	49,288	0.0
American Funds 2055 TD Fund R6 (RFKTX)	82,363	0.0
American Funds 2050 TD Fund R6 (RFITX)	1,245,705	0.7
American Funds 2045 TD Fund R6 (RFHTX)	839,849	0.5
American Funds 2040 TD Fund R6 (RFGTX)	3,573,052	2.0
American Funds 2035 TD Fund R6 (RFFTX)	855,936	0.5
American Funds 2030 TD Fund R6 (RFETX)	2,700,250	1.5
American Funds 2025 TD Fund R6 (RFDTX)	1,056,053	0.6
American Funds 2020 TD Fund R6 (RRCTX)	1,538,543	0.9
American Funds 2015 TD Fund R6 (RFJTX)	955	0.0
American Funds 2010 TD Fund R6 (RFTTX)	70,565	0.0
Voya Fixed Account	74,975,956	42.8
Loan Account	2,324,083	1.3



Asset Allocation Attributes						
	Sep-2	020	Jun-2	020	Mar-2	020
	(\$)	%	(\$)	%	(\$)	%
Total 401(a) Fund	11,996,964	100.00	12,151,646	100.00	10,854,946	100.00
International Equity						
American Funds EuroPacific Growth (RERGX)	473,507	3.95	503,896	4.15	394,453	3.63
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	162,106	1.35	150,029	1.23	124,601	1.15
Vanguard Small Cap Index (VSMAX)	238,698	1.99	263,863	2.17	192,184	1.77
AMG Managers Skyline Special Equities (SKSEX)	153,001	1.28	166,156	1.37	130,539	1.20
Hartford Mid Cap (HIMCX)	631,223	5.26	664,631	5.47	555,829	5.12
Vanguard Mid Cap Index (VIMAX)	392,491	3.27	252,803	2.08	196,053	1.81
Hotchkis & Wiley Mid Cap Value (HWMIX)	-	0.00	129,819	1.07	98,543	0.91
American Funds Growth Fund of America (RGAGX)	907,154	7.56	824,634	6.79	670,725	6.18
Wells Fargo Disciplined US Core (EVSIX)	682,204	5.69	645,556	5.31	539,350	4.97
Vanguard Institutional Index (VINIX)	1,069,684	8.92	928,743	7.64	778,844	7.18
American Century Equity Income (AEUDX)	451,910	3.77	537,685	4.42	500,023	4.61
Balanced Fund						
American Funds American Balanced (RLBGX)	718,424	5.99	647,021	5.32	568,992	5.24
Fixed Income						
PIMCO High Yield (PHIYX)	39,884	0.33	37,981	0.31	64,494	0.59
PIMCO Foreign Bond USD-Hedged (PFORX)	8,071	0.07	8,278	0.07	51,668	0.48
Hartford Total Return Bond (HIABX)	277,669	2.31	270,380	2.23	324,974	2.99
Cash						
Voya Fixed Account	4,665,543	38.89	5,090,878	41.89	4,750,706	43.77
Loan Account	249,159	2.08	211,524	1.74	230,478	2.12



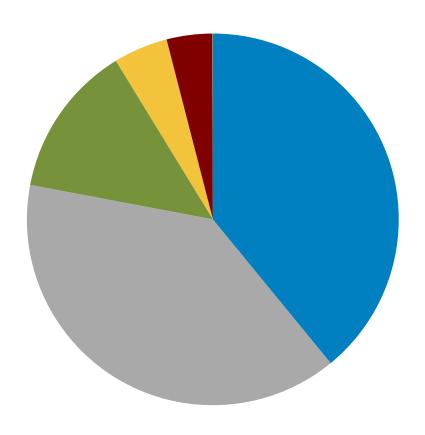
	Sep-2	2020	Jun-2	2020	Mar-2	2020
	(\$)	%	(\$)	%	(\$)	%
American Funds 2060 TD Fund R6 (RFUTX)	-	0.00	18,682	2.28	-	0.00
American Funds 2055 TD Fund R6 (RFKTX)	-	0.00	-	0.00	-	0.00
American Funds 2050 TD Fund R6 (RFITX)	56,779	6.48	49,130	6.01	37,092	5.43
American Funds 2045 TD Fund R6 (RFHTX)	141,454	16.14	129,537	15.84	106,187	15.56
American Funds 2040 TD Fund R6 (RFGTX)	105,339	12.02	92,871	11.36	72,301	10.59
American Funds 2035 TD Fund R6 (RFFTX)	83,613	9.54	76,589	9.37	63,196	9.26
American Funds 2030 TD Fund R6 (RFETX)	204,941	23.39	175,695	21.48	149,667	21.93
American Funds 2025 TD Fund R6 (RFDTX)	1,163	0.13	1,113	0.14	993	0.15
American Funds 2020 TD Fund R6 (RRCTX)	-	0.00	-	0.00	-	0.00
American Funds 2015 TD Fund R6 (RFJTX)	19,525	2.23	18,875	2.31	17,314	2.54
American Funds 2010 TD Fund R6 (RFTTX)	263,423	30.06	255,278	31.22	235,740	34.54
Target Date Funds Total	876,237	100.00	817,769	100.00	682,491	100.00



As of September 30, 2020

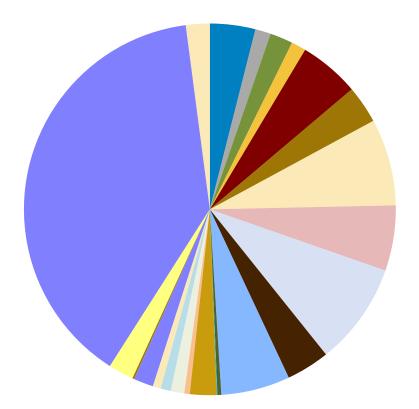
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Allocation		
	Market Value	Allocation
■ US Equity	4,688,471	39.1
■ Cash	4,665,543	38.9
US Balanced	1,594,661	13.3
US Fixed Income	566,712	4.7
■ International Equity	473,507	3.9
International Fixed Income	8,071	0.1





## September 30, 2020 : \$11,996,964



llocation		
	Market Value	Allocation
American Funds EuroPacific Growth (RERGX)	473,507	3.9
■ Wells Fargo Small Co Growth (WSCRX)	162,106	1.4
■ Vanguard Small Cap Index (VSMAX)	238,698	2.0
AMG Managers Skyline Special Equities (SKSEX)	153,001	1.3
■ Hartford Mid Cap (HIMCX)	631,223	5.3
■ Vanguard Mid Cap Index (VIMAX)	392,491	3.3
■ Hotchkis & Wiley Mid Cap Value (HWMIX)	-	0.0
American Funds Growth Fund of America (RGAGX)	907,154	7.6
■ Wells Fargo Disciplined US Core (EVSIX)	682,204	5.7
Vanguard Institutional Index (VINIX)	1,069,684	8.9
■ American Century Equity Income (AEUDX)	451,910	3.8
American Funds American Balanced (RLBGX)	718,424	6.0
■ PIMCO High Yield (PHIYX)	39,884	0.3
PIMCO Foreign Bond USD-Hedged (PFORX)	8,071	0.1
Hartford Total Return Bond (HIABX)	277,669	2.3
American Funds 2060 TD Fund R6 (RFUTX)	-	0.0
■ American Funds 2055 TD Fund R6 (RFKTX)	-	0.0
American Funds 2050 TD Fund R6 (RFITX)	56,779	0.5
American Funds 2045 TD Fund R6 (RFHTX)	141,454	1.2
American Funds 2040 TD Fund R6 (RFGTX)	105,339	0.9
American Funds 2035 TD Fund R6 (RFFTX)	83,613	0.7
American Funds 2030 TD Fund R6 (RFETX)	204,941	1.7
American Funds 2025 TD Fund R6 (RFDTX)	1,163	0.0
American Funds 2020 TD Fund R6 (RRCTX)	-	0.0
■ American Funds 2015 TD Fund R6 (RFJTX)	19,525	0.2
American Funds 2010 TD Fund R6 (RFTTX)	263,423	2.2
Voya Fixed Account	4,665,543	38.9
Loan Account	249,159	2.1



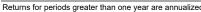
Comparative Performance														
	Q <sup>-</sup>	TR	ΥT	D	1 \	/R	3 \	/R	5 \	/R	7	YR	10	YR
International Equity														
American Funds EuroPacific Growth (RERGX)	9.66	(7)	4.43	(8)	14.97	(9)	5.67	(8)	9.08	(1)	6.67	(1)	6.79	(1)
MSCI EAFE (Net) Index	4.80	(69)	-7.09	(57)	0.49	(51)	0.62	(28)	5.26	(19)	3.01	(12)	4.62	(9)
IM International Large Cap Core Equity (MF) Median	5.40		-6.39		0.99		-0.25		4.34		2.17		3.36	
Domestic Equity														
Wells Fargo Small Co Growth (WSCRX)	8.78	(44)	1.55	(71)	13.21	(64)	9.20	(62)	10.01	(76)	N/A		N/A	
Russell 2000 Growth Index	7.16	(64)	3.88	(64)	15.71	(58)	8.18	(69)	11.42	(63)	9.22	(61)	12.34	(60)
IM U.S. Small Cap Growth Equity (MF) Median	8.49		8.36		18.09		10.59		12.44		9.70		12.75	
Vanguard Small Cap Index (VSMAX)	5.79	(20)	-6.29	(15)	1.34	(15)	4.39	(6)	8.95	(6)	7.68	(5)	10.95	(4)
Vanguard Spliced Small Cap Index	5.78	(20)	-6.32	(15)	1.29	(15)	4.37	(6)	8.92	(6)	7.66	(5)	10.92	(5)
IM U.S. Small Cap Core Equity (MF) Median	3.45		-14.50		-7.64		-1.21		5.50		4.75		8.29	
AMG Managers Skyline Special Equities (SKSEX)	5.74	(14)	-18.76	(24)	-10.87	(18)	-5.12	(37)	2.26	(55)	2.94	(34)	8.52	(10)
Russell 2000 Value Index	2.56	(48)	-21.54	(54)	-14.88	(50)	-5.13	(38)	4.11	(31)	3.27	(27)	7.09	(30)
IM U.S. Small Cap Value Equity (MF) Median	2.48		-21.43		-14.93		-5.95		2.38		2.24		6.53	
Hartford Mid Cap (HIMCX)	4.44	(94)	-0.84	(91)	5.96	(91)	9.42	(89)	11.75	(86)	11.17	(77)	12.82	(74)
Russell Midcap Growth Index	9.37	(56)	13.92	(61)	23.23	(59)	16.23	(50)	15.53	(37)	13.25	(34)	14.55	(25)
IM U.S. Mid Cap Growth Equity (MF) Median	9.71		16.58		24.97		16.18		14.69		12.64		13.80	
Vanguard Mid Cap Index (VIMAX)	7.95	(19)	0.19	(15)	7.08	(14)	7.98	(11)	10.33	(13)	9.82	(9)	11.97	(7)
Vanguard Spliced Mid Cap Index	7.95	(19)	0.18	(15)	7.07	(15)	7.99	(10)	10.36	(11)	9.86	(8)	12.01	(5)
IM U.S. Mid Cap Core Equity (MF) Median	5.84		-7.45		-1.32		3.33		6.94		6.32		8.95	
Hotchkis & Wiley Mid Cap Value (HWMIX)	3.19	(74)	-29.94	(99)	-23.85	(99)	-12.59	(99)	-3.57	(99)	-1.97	(99)	5.05	(95)
Russell Midcap Value Index	6.40	(10)	-12.84	(14)	-7.30	(22)	0.82	(24)	6.38	(14)	6.63	(11)	9.71	(11)
IM U.S. Mid Cap Value Equity (MF) Median	4.49		-16.40	, ,	-11.40	, ,	-1.72		4.36		4.01		7.61	
American Funds Growth Fund of America (RGAGX)	11.12	(60)	19.07	(78)	32.55	(64)	16.84	(84)	17.22	(71)	14.65	(77)	15.07	(70)
Russell 1000 Growth Index	13.22	(23)	24.33	(40)	37.53	(34)	21.67	(34)	20.10	(18)	17.39	(19)	17.25	(18)
IM U.S. Large Cap Growth Equity (MF) Median	11.51		22.78	, ,	34.55	, ,	20.65		18.51		15.95		15.83	
Wells Fargo Disciplined US Core (EVSIX)	8.10	(57)	4.15	(49)	13.66	(45)	9.56	(59)	12.27	(52)	11.86	(33)	13.41	(22)
S&P 500 Index	8.93	(45)	5.57	(38)	15.15	(36)	12.28	(28)	14.15	(18)	12.68	(14)	13.74	(14)
IM U.S. Large Cap Core Equity (MF) Median	8.45		3.96	• •	12.90		10.43	•	12.43	•	11.05		12.24	
Vanguard Institutional Index (VINIX)	8.92	(45)	5.57	(38)	15.13	(36)	12.25	(28)	14.12	(18)	12.65	(14)	13.71	(15)
S&P 500 Index	8.93	(45)	5.57	(38)	15.15	(36)	12.28	(28)	14.15	(18)	12.68	(14)	13.74	(14)
IM U.S. Large Cap Core Equity (MF) Median	8.45	. ,	3.96	• •	12.90	• •	10.43	, ,	12.43	. ,	11.05	. ,	12.24	. ,





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

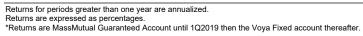
	Q.	ΓR	Υ٦	TD	1 \	′R	3 \	/R	5 `	YR	7	YR	10	YR
American Century Equity Income (AEUDX)	3.93	(67)	-8.26	(21)	-3.79	(44)	4.42	(22)	9.78	(6)	8.74	(7)	N/A	
Russell 1000 Value Index	5.59	(34)	-11.58	(57)	-5.03	(54)	2.63	(50)	7.66	(41)	7.35	(35)	9.95	(26)
IM U.S. Large Cap Value Equity (MF) Median	4.82		-11.18	, ,	-4.55	. ,	2.63	. ,	7.15		6.82	. ,	9.13	. ,
Balanced Fund														
American Funds 2060 TD Fund R6 (RFUTX)	7.20	(61)	5.53	(1)	14.96	(1)	9.73	(1)	12.05	(1)	N/A		N/A	
S&P Target Date 2060+ Index	6.61	(83)	-0.50	(73)	7.28	(75)	6.41	(65)	9.67	(62)	8.01	(N/A)	9.37	(N/A)
IM Mixed-Asset Target 2060+ (MF) Median	7.37		1.15		9.48		6.82		10.05		N/A		N/A	
American Funds 2055 TD Fund R6 (RFKTX)	7.22	(56)	5.54	(1)	15.01	(1)	9.74	(1)	12.08	(1)	10.18	(1)	11.13	(1)
S&P Target Date 2055 Index	6.62	(80)	-0.61	(77)	7.07	(73)	6.26	(66)	9.50	(51)	7.93	(42)	9.31	(49)
IM Mixed-Asset Target 2055 (MF) Median	7.32		1.29		9.09		6.75		9.54		7.67		9.19	
American Funds 2050 TD Fund R6 (RFITX)	7.29	(50)	5.59	(1)	15.07	(1)	9.77	(1)	12.08	(1)	10.20	(1)	11.14	(1)
S&P Target Date 2050 Index	6.53	(76)	-0.47	(70)	7.14	(69)	6.27	(61)	9.41	(48)	7.85	(37)	9.18	(32)
IM Mixed-Asset Target 2050 (MF) Median	7.28		1.29		8.87		6.64		9.31		7.62		8.88	
American Funds 2045 TD Fund R6 (RFHTX)	7.16	(50)	5.49	(1)	14.73	(1)	9.60	(1)	11.94	(1)	10.09	(1)	11.07	(1)
S&P Target Date 2045 Index	6.44	(79)	-0.32	(72)	7.14	(70)	6.26	(65)	9.23	(55)	7.71	(43)	9.03	(33)
IM Mixed-Asset Target 2045 (MF) Median	7.15		1.46		9.24		6.77		9.40		7.61		8.76	
American Funds 2040 TD Fund R6 (RFGTX)	7.04	(28)	5.40	(1)	14.50	(1)	9.46	(1)	11.76	(1)	9.96	(1)	10.97	(1)
S&P Target Date 2040 Index	6.14	(72)	0.00	(71)	7.16	(67)	6.26	(62)	9.04	(51)	7.57	(44)	8.85	(37)
IM Mixed-Asset Target 2040 (MF) Median	6.72		1.67		9.07		6.69		9.08		7.41		8.61	
American Funds 2035 TD Fund R6 (RFFTX)	6.43	(35)	5.34	(1)	13.88	(1)	9.15	(1)	11.40	(1)	9.71	(1)	10.75	(1)
S&P Target Date 2035 Index	5.70	(70)	0.53	(79)	7.17	(72)	6.19	(67)	8.74	(55)	7.35	(45)	8.58	(40)
IM Mixed-Asset Target 2035 (MF) Median	6.25		2.13		9.02		6.66		8.94		7.25		8.41	
American Funds 2030 TD Fund R6 (RFETX)	5.51	(40)	5.21	(2)	12.15	(1)	8.30	(1)	10.34	(1)	9.00	(1)	10.23	(1)
S&P Target Date 2030 Index	5.02	(68)	1.26	(71)	7.14	(66)	6.10	(57)	8.32	(48)	7.03	(37)	8.18	(37)
IM Mixed-Asset Target 2030 (MF) Median	5.37		2.68		8.32		6.33		8.26		6.76		7.91	
American Funds 2025 TD Fund R6 (RFDTX)	4.59	(51)	5.35	(1)	11.40	(1)	7.69	(1)	9.27	(1)	8.19	(1)	9.48	(1)
S&P Target Date 2025 Index	4.39	(66)	2.03	(77)	7.10	(65)	5.97	(53)	7.86	(42)	6.67	(30)	7.73	(40)
IM Mixed-Asset Target 2025 (MF) Median	4.60		3.21		7.71		6.09		7.68		6.28		7.51	
American Funds 2020 TD Fund R6 (RRCTX)	3.85	(53)	4.09	(13)	8.89	(14)	6.63	(6)	8.11	(7)	7.27	(1)	8.33	(1)
S&P Target Date 2020 Index	3.74	(61)	2.67	(62)	6.98	(55)	5.77	(42)	7.32	(34)	6.28	(26)	7.20	(33)
IM Mixed-Asset Target 2020 (MF) Median	3.90		3.18		7.32		5.49		6.86		5.69		6.81	
American Funds 2015 TD Fund R6 (RFJTX)	3.55	(68)	3.27	(52)	7.71	(45)	6.00	(25)	7.44	(16)	6.65	(1)	7.58	(1)
S&P Target Date 2015 Index	3.57	(66)	3.27	(52)	7.14	(64)	5.70	(39)	6.85	(50)	5.89	(42)	6.63	(48)
IM Mixed-Asset Target 2015 (MF) Median	3.89		3.32		7.57		5.56		6.82		5.72		6.61	





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	Q <sup>-</sup>	ΓR	YT	ΓD	1 \	′R	3 \	′R	5 Y	/R	7	YR	10	YR
American Funds 2010 TD Fund R6 (RFTTX)	3.29	(59)	3.36	(65)	7.40	(42)	5.70	(25)	7.12	(5)	6.28	(1)	7.07	(1)
S&P Target Date 2010 Index	3.26	(60)	3.76	(45)	7.28	(49)	5.62	(29)	6.33	(53)	5.42	(42)	5.97	(58)
IM Mixed-Asset Target 2010 (MF) Median	3.49		3.67		7.25		5.31		6.39		5.26		6.05	
American Funds American Balanced (RLBGX)	4.21	(67)	3.25	(33)	9.42	(27)	8.00	(10)	9.82	(13)	8.93	(5)	10.16	(4)
American Balanced Fund Hybrid	4.81	(56)	6.83	(6)	11.70	(11)	9.15	(5)	9.38	(19)	8.51	(8)	8.84	(19)
IM All Balanced (MF) Median	5.13		2.05		7.23		5.55		7.29		6.07		7.05	
Fixed Income														
PIMCO High Yield (PHIYX)	3.99	(76)	-0.09	(37)	2.40	(37)	3.90	(18)	6.08	(16)	5.03	(13)	5.86	(20)
ICE BofAML High Yield Master II	4.71	(37)	-0.30	(44)	2.30	(39)	3.83	(21)	6.61	(6)	5.18	(8)	6.28	(9)
IM U.S. High Yield Bonds (MF) Median	4.50		-0.64		1.89		3.08		5.31		4.08		5.37	
PIMCO Foreign Bond USD-Hedged (PFORX)	2.14	(56)	3.96	(21)	3.34	(45)	4.98	(13)	5.02	(5)	5.30	(4)	5.25	(1)
Bloomberg Barclays Global Aggregate	2.66	(50)	5.72	(2)	6.24	(14)	4.10	(25)	3.93	(28)	2.48	(24)	2.36	(22)
IM International Fixed Income (MF) Median	2.56		2.65		3.12		1.98		2.84		1.23		1.59	
Hartford Total Return Bond (HIABX)	1.61	(23)	7.12	(34)	7.97	(18)	5.76	(12)	5.12	(5)	4.64	(7)	4.36	(8)
Blmbg. Barc. U.S. Aggregate Index	0.62	(88)	6.79	(49)	6.98	(50)	5.24	(36)	4.18	(49)	3.97	(42)	3.64	(52)
IM U.S. Broad Market Core Fixed Income (MF) Median	1.19	, ,	6.76	, ,	6.96	. ,	5.03	. ,	4.16	, ,	3.88	. ,	3.65	
Cash														
Voya Fixed Account*	0.62	(14)	1.57	(89)	2.20	(88)	2.93	(12)	3.30	(4)	3.50	(3)	N/A	
Ryan 3 Yr GIC Master Index	0.57	(26)	1.79	(30)	2.41	(39)	2.18	(69)	1.89	(82)	1.65	(89)	1.71	(100)
IM U.S. GIC/Stable Value (SA+CF) Median	0.52		1.69		2.34		2.33		2.09		2.02		2.10	





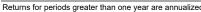
Comparative Performance		4.6		4.0						. =				4.0						
	20	19	20	18	20	17	20	16	20	15	20	14	20	13	20	12	20′	11	20	10
International Equity																				
American Funds EuroPacific Growth (RERGX)	27.40	(11)	-14.91	(44)	31.17	(9)	1.01	(52)	-0.48	(11)	-2.29	(24)	20.58	(46)	19.64	(35)	-13.31	(58)	9.76	(28)
MSCI EAFE (Net) Index	22.01	(52)	-13.79	(25)	25.03	(38)	1.00	(53)	-0.81	(15)	-4.90	(29)	22.78	` '	17.32	` '	-12.14	` '	7.75	(45)
IM International Large Cap Core Equity (MF) Median	22.06	, ,	-15.69	,	24.43	,	1.27		-2.75	,	-5.87	,	20.29	, ,	18.55	, ,	-12.76		7.48	,
Domestic Equity																				
Wells Fargo Small Co Growth (WSCRX)	26.55	(55)	-3.57	(31)	20.68	(51)	7.76	(71)	-4.33	(72)	N/A		N/A		N/A		N/A		N/A	
Russell 2000 Growth Index	28.48	(47)	-9.31	(79)	22.17	(41)	11.32	(41)	-1.38	(37)	5.60	(21)	43.30	(47)	14.59	(35)	-2.91	(43)	29.09	(41)
IM U.S. Small Cap Growth Equity (MF) Median	27.70		-5.12		20.69		9.86		-2.35		2.79		42.88		13.42		-3.63		27.70	
Vanguard Small Cap Index (VSMAX)	27.37	(15)	-9.31	(18)	16.24	(13)	18.30	(78)	-3.64	(41)	7.50	(12)	37.81	(44)	18.24	(18)	-2.69	(40)	27.89	(24)
Vanguard Spliced Small Cap Index	27.35	(16)	-9.33	(18)	16.24	(13)	18.26	(78)	-3.68	(42)	7.54	(12)	37.77	(44)	18.20	(19)	-2.75	(41)	27.82	(24)
IM U.S. Small Cap Core Equity (MF) Median	23.86		-12.67		12.38		21.36		-4.34		4.63		36.93		14.57		-3.77		25.53	
AMG Managers Skyline Special Equities (SKSEX)	28.64	(6)	-19.00	(80)	8.39	(50)	21.32	(85)	-6.05	(38)	4.02	(40)	51.59	(3)	19.34	(24)	-2.05	(34)	26.07	(38)
Russell 2000 Value Index	22.39	(36)	-12.86	(24)	7.84	(57)	31.74	(15)	-7.47	(55)	4.22	(37)	34.52	(68)	18.05	(38)	-5.50	(62)	24.50	(60)
IM U.S. Small Cap Value Equity (MF) Median	21.26		-16.08		8.32		26.61		-7.10		3.36		36.11		16.27		-4.15		25.13	
Hartford Mid Cap (HIMCX)	32.87	(63)	-7.44	(79)	24.47	(56)	11.98	(7)	1.60	(39)	11.37	(13)	39.82	(14)	19.44	(6)	-7.92	` '	23.45	(67)
Russell Midcap Growth Index	35.47	(39)	-4.75	(47)	25.27	(44)	7.33	(25)	-0.20	(56)	11.90	(10)	35.74	(47)	15.81	(27)	-1.65	(30)	26.38	(47)
IM U.S. Mid Cap Growth Equity (MF) Median	34.41		-5.01		24.81		4.80		0.53		7.28		35.43		13.92		-4.44		25.82	
Vanguard Mid Cap Index (VIMAX)	31.03	(20)	-9.23	(23)	19.25	(19)	11.22	(75)	-1.34	(24)	13.76	(11)	35.15	(49)	15.99	(49)	-1.97	(31)	25.59	(18)
Vanguard Spliced Mid Cap Index	31.09	(19)	-9.22	(23)	19.30	(19)	11.25	(73)	-1.28	(23)	13.83	(10)	35.21	(48)	16.04	(47)	-1.91	(30)	25.69	(17)
IM U.S. Mid Cap Core Equity (MF) Median	28.08		-11.52		15.44		14.23		-3.40		8.91		35.08		15.84		-3.38		23.12	
Hotchkis & Wiley Mid Cap Value (HWMIX)	12.92	(99)	-19.29	(79)	7.78	(88)	21.00	(17)	-12.53	(94)	12.18	(27)	42.55	(3)	31.09	(1)	-8.60	(96)	34.41	(1)
Russell Midcap Value Index	27.06	(30)	-12.29	(27)	13.34	(50)	20.00	(28)	-4.78	(51)	14.75	(11)	33.46	(75)	18.51	(25)	-1.38	(33)	24.75	(33)
IM U.S. Mid Cap Value Equity (MF) Median	24.92		-13.98		13.21		17.03		-4.76		10.68		35.67		16.59		-3.40		22.02	
American Funds Growth Fund of America (RGAGX)	28.54	(88)	-2.60	(70)	26.53	(77)	8.82	(3)	5.70	(53)	9.63	(60)	34.29	(47)	20.98	(4)	-4.53	(76)	12.67	(70)
Russell 1000 Growth Index	36.39	(21)	-1.51	(58)	30.21	(41)	7.08	(8)	5.67	(54)	13.05	(22)	33.48	(55)	15.26	(46)	2.64	(11)	16.71	(33)
IM U.S. Large Cap Growth Equity (MF) Median	33.38		-0.87		29.46		2.18		6.01		10.47		33.94		14.81		-1.76		15.15	
Wells Fargo Disciplined US Core (EVSIX)	29.04	(58)	-8.08	(84)	20.88	(55)	12.09	(25)	2.53	(22)	15.69	(4)	33.97	(22)	14.90	(56)	4.12	(13)	N/A	
S&P 500 Index	31.49	(30)	-4.38	(30)	21.83	(38)	11.96	(26)	1.38	(33)	13.69	(16)	32.39	(38)	16.00	(39)	2.11	(22)	15.06	(24)
IM U.S. Large Cap Core Equity (MF) Median	29.68		-5.61		21.17		10.07		0.26		11.41		31.77		15.28		-0.57		13.13	
Vanguard Institutional Index (VINIX)	31.46	(30)	-4.42	(31)	21.79	(39)	11.93	(27)	1.37	(33)	13.65	(17)	32.35	(39)	15.98	(39)	2.09	(22)	15.05	(24)
S&P 500 Index	31.49	(30)	-4.38	(30)	21.83	(38)	11.96	(26)	1.38	(33)	13.69	(16)	32.39	(38)	16.00	(39)	2.11	(22)	15.06	(24)
IM U.S. Large Cap Core Equity (MF) Median	29.68		-5.61		21.17		10.07		0.26		11.41		31.77		15.28		-0.57		13.13	





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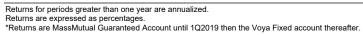
	20	19	20	10	20	17	20	16	20	15	20	14	20	12	20	12	20	11	20	10
American Combum Fauitulineans (AFUDY)													N/A	13		12	20	11		10
American Century Equity Income (AEUDX)	24.64	(67)	-4.17	` '	13.83	(76)	19.88	(8)	0.94	` '	12.84	` '		(40)	N/A	(00)	N/A	(00)	N/A	(04)
Russell 1000 Value Index	26.54	(45)	-8.27	(36)	13.66	(77)	17.34	(19)	-3.83	(58)	13.45	(9)	32.53	(48)	17.51	(28)	0.39	(28)	15.51	(21)
IM U.S. Large Cap Value Equity (MF) Median	26.07		-9.08		16.29		13.82		-3.54		10.81		32.30		15.84		-2.20		13.00	
Balanced Fund																				
American Funds 2060 TD Fund R6 (RFUTX)	25.52	(39)	-5.25	(1)	22.99	(6)	8.85	(25)	N/A											
S&P Target Date 2060+ Index	24.73	(68)	-7.95	(35)	20.75	(68)	10.08	(4)	-0.66	(34)	5.64	(N/A)	24.96	(N/A)	15.81	(N/A)	-2.87	(N/A)	N/A	
IM Mixed-Asset Target 2060+ (MF) Median	25.08		-8.66		21.30		7.86		-1.01		N/A									
American Funds 2055 TD Fund R6 (RFKTX)	25.58	(30)	-5.27	(1)	23.11	(4)	8.73	(34)	1.03	(1)	7.44	(15)	27.08	(1)	17.22	(6)	-1.90	(1)	N/A	
S&P Target Date 2055 Index	24.48	(63)	-7.97	(38)	20.48	(66)	9.94	(7)	-0.54	(20)	5.64	(45)	24.96	(26)	15.81	(39)	-2.87	(10)	15.62	(15)
IM Mixed-Asset Target 2055 (MF) Median	24.85	()	-8.48	()	21.12	()	8.25	( )	-1.67	( - /	5.43	( - /	23.21	( - /	15.60	()	-4.66	( - /	14.78	( - /
American Funds 2050 TD Fund R6 (RFITX)	25.52	(29)	-5.24	(1)	23.08	(4)	8.75	(35)	1.04	(1)	7.44	(14)	27.14	(1)	17.17	(11)	-1.89	(11)	13.51	(74)
S&P Target Date 2050 Index	24.35	(60)	-7.94	` '	20.18	` '	9.74	(14)	-0.47	` '	5.69	. ,	24.13	. ,	15.49	` '	-2.87	` '	15.62	(27)
IM Mixed-Asset Target 2050 (MF) Median	24.67	()	-8.54	()	20.80	(=-)	8.10	(* ')	-1.63	(12)	5.61	(10)	23.08	()	15.47	()	-4.38	(11)	14.80	(=: )
American Funds 2045 TD Fund R6 (RFHTX)	25.15	(32)	-5.22	(2)	22.90	(3)	8.68	(36)	1.02	(1)	7.49	(10)	26.98	(1)	17.24	(10)	-1.91	(8)	13.40	(76)
S&P Target Date 2045 Index	24.02	(63)	-7.74	` '	19.56	` '	9.54	(13)	-0.46	` '	5.67	` '	23.14	` '	15.15	` '	-2.56	` '	15.62	(27)
IM Mixed-Asset Target 2045 (MF) Median	24.61	()	-8.19	()	20.65	( - /	8.15	( - /	-1.65	( - /	5.55	( - /	23.07	( - /	15.47	(- )	-4.03	( )	15.03	( )
American Funds 2040 TD Fund R6 (RFGTX)	24.86	(18)	-5.16	(2)	22.43	(2)	8.58	(33)	0.96	(1)	7.37	(10)	27.13	(1)	17.15	(7)	-1.91	(14)	13.44	(68)
S&P Target Date 2040 Index	23.37	(57)	-7.41	` '	18.87	(70)	9.23	(16)	-0.40	` '	5.69	(41)	22.10	(46)	14.69	` '	-2.17	(17)	15.38	(27)
IM Mixed-Asset Target 2040 (MF) Median	23.63	, ,	-7.97	,	19.74	,	7.95	, ,	-1.66	,	5.38	,	21.61	,	14.92	, ,	-3.93	,	14.63	,
American Funds 2035 TD Fund R6 (RFFTX)	23.74	(16)	-4.79	(2)	21.48	(1)	8.40	(28)	0.97	(1)	7.41	(7)	26.43	(1)	17.07	(7)	-1.77	(13)	13.48	(75)
S&P Target Date 2035 Index	22.18	(52)	-6.88	(44)	17.78	(71)	8.85	(15)	-0.35	(15)	5.69	(40)	20.84	(49)	14.12	(65)	-1.71	(13)	15.02	(34)
IM Mixed-Asset Target 2035 (MF) Median	22.26	, ,	-7.26	,	18.72	( )	7.75	( )	-1.53	,	5.40	,	20.78	( )	14.75	,	-3.34	, ,	14.57	( )
American Funds 2030 TD Fund R6 (RFETX)	20.47	(45)	-3.82	(3)	18.81	(6)	8.09	(26)	0.82	(1)	7.44	(3)	26.07	(1)	16.89	(2)	-1.48	(28)	13.54	(52)
S&P Target Date 2030 Index	20.38	(48)	-5.99		16.19	(61)	8.35	(19)	-0.30	. ,	5.64	` '	19.14	` '	13.43	` '	-1.17		14.52	(33)
IM Mixed-Asset Target 2030 (MF) Median	20.08	,	-6.32	,	16.92	,	7.30	( )	-1.47	( )	5.18	,	17.87	,	13.71	,	-2.56	,	13.63	( )
American Funds 2025 TD Fund R6 (RFDTX)	18.24	(50)	-3.15	(4)	15.70	(29)	7.72	(19)	0.47	(1)	7.02	(6)	24.16	(1)	15.96	(2)	-0.64	(21)	13.04	(64)
S&P Target Date 2025 Index	18.38	(47)	-5.02	` '	14.55	` '	7.82	(17)	-0.25	` '	5.56	` '	17.03	` '	12.51	` '	-0.28		13.82	(42)
IM Mixed-Asset Target 2025 (MF) Median	18.18	( )	-5.23	(10)	14.95	()	6.87	(**)	-1.37	( )	5.19	()	15.85	()	13.00	()	-2.03	(**)	13.42	( )
	45.04	(54)		(0)	40.04	(00)	7.00	(40)	0.50	(4)	7.07	(4)	40.07	(4)	40.00	(00)	4 40	(4.5)	44.04	(00)
American Funds 2020 TD Fund R6 (RRCTX)	15.94	(51)	-2.39	` '	13.21	(39)	7.38	(18)	0.50	` '	7.07	` '	19.07	` '	13.33	` '	1.42		11.64	(68)
S&P Target Date 2020 Index	16.52	(42)	-4.16	(41)	12.80	(48)	7.22	(25)	-0.19	(7)	5.67	(23)	14.76	(27)	11.48	(52)	0.58	(33)	12.93	(40)
IM Mixed-Asset Target 2020 (MF) Median	15.97		-4.52		12.69		6.36		-1.44		4.72		11.84		11.53		-0.43		12.31	
American Funds 2015 TD Fund R6 (RFJTX)	15.29	(51)	-2.42	(1)	11.53	(43)	7.88	(2)	-0.31	` '	6.97	` '	16.08	` '	11.92	` '	2.63	` '	10.55	(74)
S&P Target Date 2015 Index	15.40	(48)	-3.67	(42)	11.39	(51)	6.56	(44)	-0.16	(7)	5.49	(25)	12.16	(35)	10.32	(64)	1.53	(25)	11.85	(40)
IM Mixed-Asset Target 2015 (MF) Median	15.31		-3.90		11.40		6.40		-1.29		4.47		10.42		10.81		-0.11		11.49	

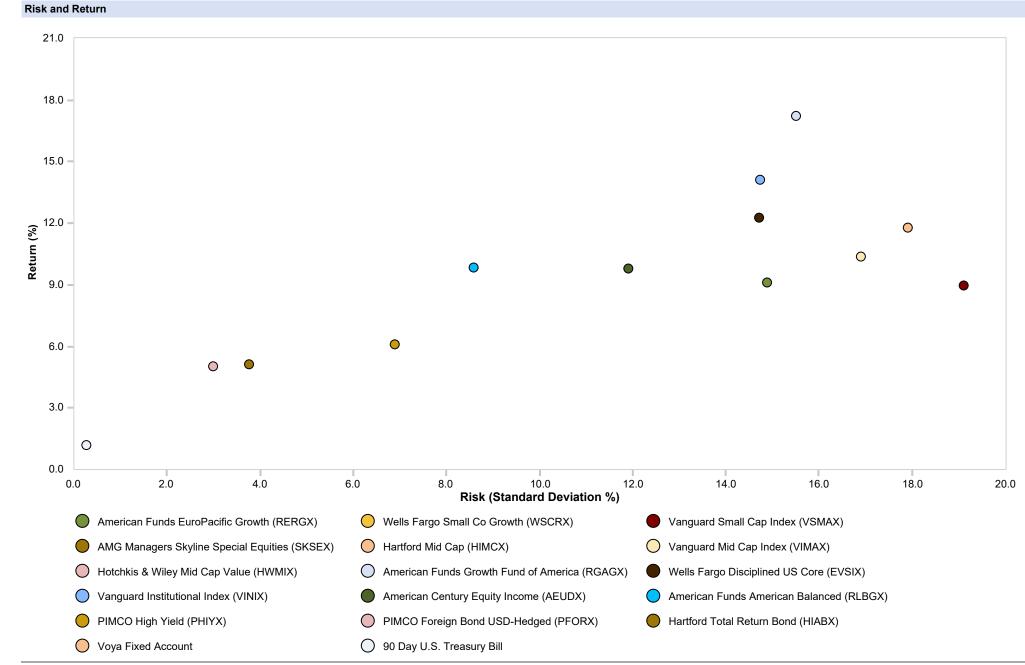




Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
\*Returns are MassMutual Guaranteed Account until 1Q2019 then the Voya Fixed account thereafter.

	20	19	20	18	20	17	20	16	20	15	20	14	20	13	20	12	201	11	20	10
American Funds 2010 TD Fund R6 (RFTTX)	14.23	(50)	-2.19	(3)	10.75	(31)	7.78	(2)	-0.53	(15)	7.12	(1)	12.89	(1)	10.85	(31)	4.03	(2)	10.32	(62)
S&P Target Date 2010 Index	14.30	(49)	-3.10	(25)	9.95	(66)	5.82	(59)	-0.21	(7)	5.07	(18)	9.42				2.61	(17)	10.56	(58)
IM Mixed-Asset Target 2010 (MF) Median	14.19	. ,	-3.58	, ,	10.24	, ,	6.06	. ,	-1.20		4.11	` '	8.67	, ,	9.78	, ,	0.75	, ,	10.78	
American Funds American Balanced (RLBGX)	19.55	(46)	-2.42	(7)	15.84	(40)	8.90	(18)	2.03	(3)	9.22	(5)	22.12	(19)	14.57	(23)	4.16	(6)	13.39	(34)
American Balanced Fund Hybrid	19.89	(44)	-1.90	(5)	12.37	(63)	7.38	(40)	1.21	(4)	9.85	(4)	14.08	(55)	10.13	(73)	5.28	(4)	11.29	(65)
IM All Balanced (MF) Median	18.86		-6.24		14.21		6.80		-1.59		4.73		15.22		12.13		-1.48		12.30	
Fixed Income																				
PIMCO High Yield (PHIYX)	14.94	(21)	-2.49	(36)	7.02	(38)	12.68	(64)	-1.88	(24)	3.31	(12)	5.77	(70)	14.57	(53)	4.00	(37)	14.28	(45)
ICE BofAML High Yield Master II	14.41	(32)	-2.27	(32)	7.48	(25)	17.49	(5)	-4.64	(64)	2.50	(22)	7.42	(30)	15.58	(33)	4.38	(27)	15.19	(28)
IM U.S. High Yield Bonds (MF) Median	13.51		-2.91		6.65		13.49		-3.85		1.49		6.61		14.72		3.32		14.04	
PIMCO Foreign Bond USD-Hedged (PFORX)	7.35	(34)	2.63	(7)	3.53	(69)	7.03	(7)	0.40	(9)	11.16	(3)	0.90	(17)	11.19	(22)	6.77	(8)	9.19	(30)
Bloomberg Barclays Global Aggregate	6.84	(41)	-1.19	(46)	7.39	(59)	2.09	(61)	-3.15	(24)	0.59	(52)	-2.60	(37)	4.32	(79)	5.64	(17)	5.54	(69)
IM International Fixed Income (MF) Median	6.60		-2.68		9.80		3.34		-5.82		0.63		-3.74		7.43		2.56		7.26	
Hartford Total Return Bond (HIABX)	10.65	(5)	-0.81	(60)	5.16	(4)	4.49	(8)	-0.59	(75)	5.89	(32)	-1.36	(26)	7.54	(20)	6.99	(37)	7.51	(42)
Blmbg. Barc. U.S. Aggregate Index	8.72	(53)	0.01	(18)	3.54	(54)	2.65	(61)	0.55	(20)	5.97	(26)	-2.02	(53)	4.21	(81)	7.84	(11)	6.54	(70)
IM U.S. Broad Market Core Fixed Income (MF) Median	8.76		-0.63		3.59		2.86		0.09		5.55		-1.98		5.99		6.65		7.25	
Cash																				
Voya Fixed Account*	2.97	(15)	3.38	(1)	3.67	(1)	3.94	(1)	4.00	(1)	4.00	(3)	4.00	(1)	4.00	(5)	4.00	(8)	N/A	
Ryan 3 Yr GIC Master Index	2.38	(71)	1.96	(84)	1.60	(92)	1.39	(91)	1.16	(92)	1.03	(92)	1.06	(90)	1.48	(99)	2.44	(62)	3.53	(41)
IM U.S. GIC/Stable Value (SA+CF) Median	2.51		2.14		1.83		1.83		1.71		1.70		1.65		2.41		2.91		3.39	





Calculation based on monthly periodicity.



Asset Class	2060+	2055	2050	2045	2040	2035	2030	2025	2020	2015	2010
Equity Range											
Maximum	100%	100%	100%	95%	95%	90%	85%	75%	65%	55%	45%
Minimum	50%	50%	50%	45%	45%	40%	35%	25%	15%	10%	5%
Fixed Income Range											
Maximum	20%	20%	30%	35%	40%	50%	55%	65%	70%	75%	80%
Minimum	0%	0%	0%	5%	5%	10%	15%	20%	25%	35%	40%
Oaal Barra											
Cash Range											
Maximum	20%	20%	30%	30%	30%	30%	30%	30%	35%	35%	35%
Minimum	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other Range											
Maximum	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Minimum	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Target Date Universe	61	54	55	52	55	54	51	57	56	37	38

#### Morningstar Definitions:

- 1. Cash The percentage of the fund's assets in cash. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.
- 2. Other The percentage of the fund's assets in other instruments. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.
- 3. Target Date Universe Based on the number of unique glide paths in the Morningstar Target Date Universe. Only one share class is selected to represent the fund manager.



**September 30, 2020** 

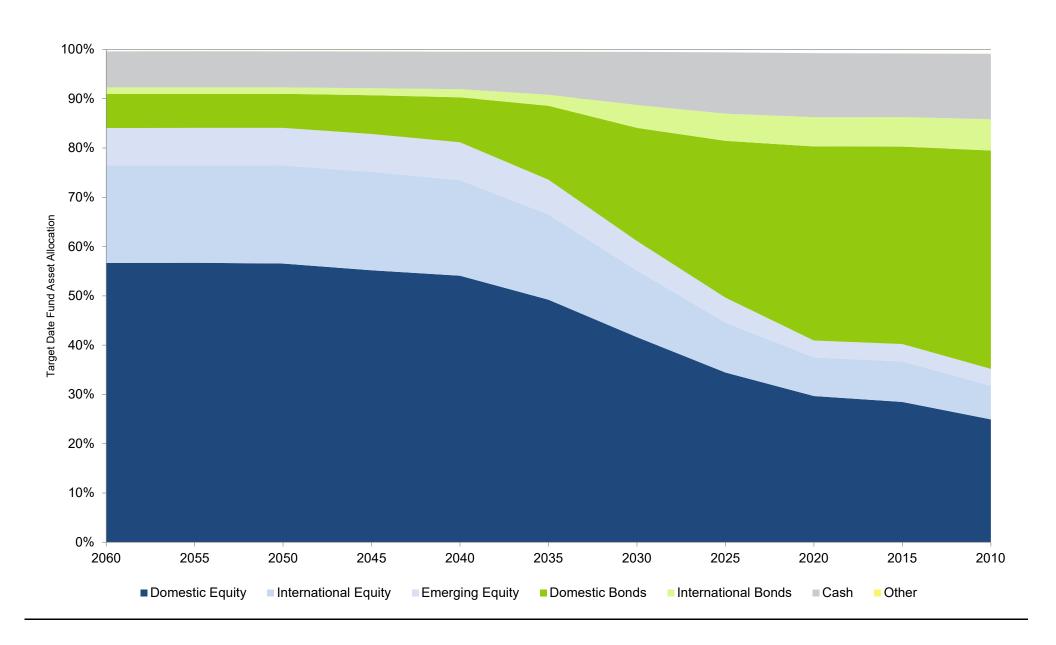
Asset Class	2060	2055	2050	2045	2040	2035	2030	2025	2020	2015	2010
Total Equity	84%	84%	84%	83%	81%	74%	61%	50%	41%	40%	35%
Domestic Equity	57%	57%	57%	55%	54%	49%	42%	34%	30%	28%	25%
International Equity	20%	20%	20%	20%	19%	17%	14%	10%	8%	8%	7%
Emerging Equity	8%	8%	8%	8%	8%	7%	6%	5%	3%	4%	3%
Total Fixed Income	8%	8%	8%	9%	11%	17%	28%	37%	45%	46%	51%
Domestic Bonds	7%	7%	7%	8%	9%	15%	23%	32%	39%	40%	44%
International Bonds	1%	1%	1%	1%	2%	2%	5%	6%	6%	6%	6%
Cash	7%	7%	7%	7%	8%	9%	11%	12%	13%	13%	13%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%	99%	99%	99%	99%

Terminal Equity Date: 30 years after Retirement
Active/Passive/Blend Allocation: Active

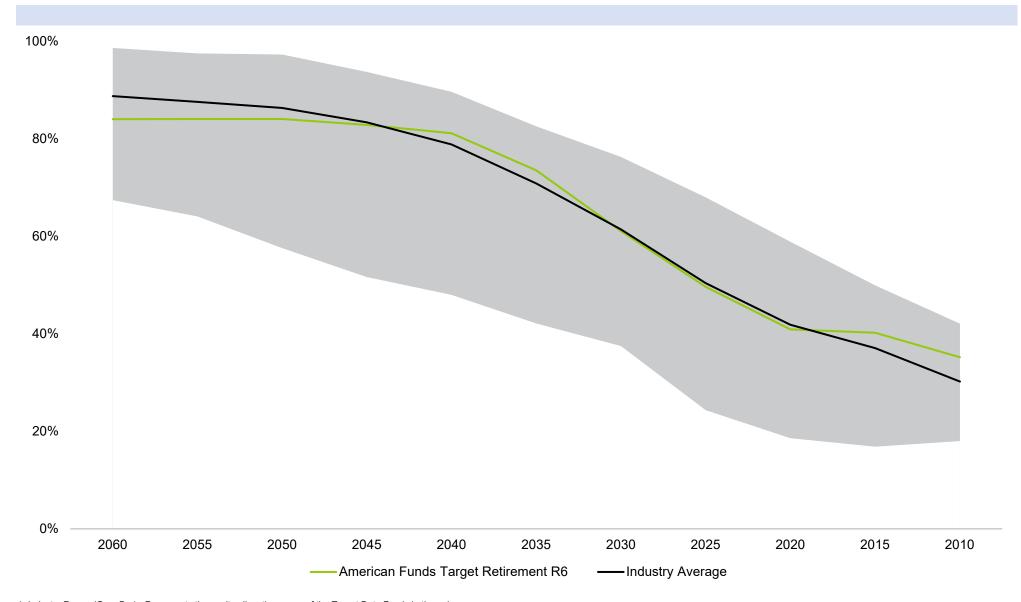
#### Morningstar Definitions:

- 1. Cash The percentage of the fund's assets in cash. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.
- 2. Other The percentage of the fund's assets in other instruments. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.











<sup>2.</sup> Industry Average - The average equity allocation of the investments included in the universe.



## Fee and Expense Summary

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

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

## Plan Demographics

Total Assets\* \$184,510,152

Number of Participants with a Balance (active and terminated) 2,729

Expense Type Estimates (annual)	Percent of Assets	Dollar Cost	% Cost	
Voya Recordkeeping fees	0.03%	\$55,353	0.03%	
AndCo Consulting fees		\$60,000	0.03%	
Total plan expenses		\$ 115,353	0.06%	
Revenue Sharing Estimates (annual)				
Revenue from participant annual fee	0.08%	\$147,608		
Net plan fee surplus (annual)		\$32,255	0.02%	
Annual average total plan recordkeeping and administrative cost per participant (gross)	**	\$54.09		



<sup>\*</sup>Does not include outstanding loan values

<sup>\*\*</sup>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 \$
American Funds EuroPacific Growth (RERGX)	\$5,987,990	0.47%	\$28,144	0.00%	\$0
Wells Fargo Small Co Growth (WSCRX)	\$2,219,570	0.89%	\$19,754	0.00%	\$0
Vanguard Small Cap Index (VSMAX)	\$3,052,728	0.05%	\$1,526	0.00%	\$0
AMG Managers Skyline Special Equities (SKSEX)	\$1,431,521	1.17%	\$16,749	0.25%	\$3,579
Hartford Mid Cap (HIMCX)	\$9,001,016	0.69%	\$62,107	0.25%	\$22,503
Vanguard Mid Cap Index (VIMAX)	\$5,227,845	0.05%	\$2,614	0.00%	\$0
AF Growth Fund of America (RGAGX)	\$17,053,572	0.32%	\$54,571	0.00%	\$0
Wells Fargo Disciplined US Core (EVSIX)	\$11,607,288	0.48%	\$55,715	0.15%	\$17,411
Vanguard Institutional Index (VINIX)	\$16,063,849	0.04%	\$6,426	0.00%	\$0
American Century Equity Income (AEUDX)	\$6,348,933	0.56%	\$35,554	0.00%	\$0
American Funds Target 2060-2010 R6	\$12,988,797	0.33%	\$43,383	0.00%	\$0
American Funds American Balanced (RLBGX)	\$6,865,014	0.27%	\$18,536	0.00%	\$0
PIMCO High Yield (PHIYX)	\$1,919,591	0.57%	\$10,942	0.00%	\$0
PIMCO Foreign Bond USD-Hedged (PFORX)	\$569,152	0.60%	\$3,415	0.00%	\$0
Hartford Total Return Bond (HIABX)	\$4,531,787	0.51%	\$23,112	0.25%	\$11,329
Voya Fixed Account	\$79,641,499	0.00%	\$0	0.00%	\$0
TOTAL	\$184,510,152	0.21%	\$382,547	0.03%	\$54,822

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



A statement of investment policy is part of the "documents and instruments governing the plan." 1

"Determination of the terms of a statement of investment policy is an exercise of fiduciary responsibility." 1

An investment policy is "a written statement that provides the fiduciaries responsible for plan investments with guidelines or general instructions concerning investment management decisions." 1

"The maintenance by an employee benefit plan of a statement of investment policy designed to further the purposes of the plan and its funding policy is consistent with the fiduciary obligations set forth in ERISA."

"The investment policy statement is based upon the funding policy assumptions and becomes the very foundation upon which all investment decisions are made. If an investment policy statement has been properly formulated and memorialized, all prudent procedures covered will fall into place. This is predicated upon the fact that liability usually occurs when the fiduciary has failed to act in this area as opposed to acting improperly."<sup>2</sup>



<sup>&</sup>lt;sup>1</sup> Department of Labor Interpretive Bulletin 2016-01 (29 CFR § 2509.2016-01)

<sup>&</sup>lt;sup>2</sup> 2006 Advisory Council Report of the Working Group on Prudent Investment Process, Advisory Council on Employee Welfare and Pension Benefit Plans

# **Purpose of an Investment Policy Statement**

The overall purpose of an Investment Policy Statement (IPS) is to define general investment goals and to establish a process for consistent and informed decision making in monitoring and evaluating the investments within the fiduciary's stewardship.

Reasons to create, approve, and regularly review an IPS include:

- Provides evidence of a prudent investment decision making process
- Serves as a multi-generational document to support continuity in decision making as plan fiduciaries change
- Helps protect fiduciaries from making decisions based on external sources (participants, vendors, money managers, etc.)
- May assist in defense against potential fiduciary liability



# Framework of an Investment Policy Statement

- 1. Information about the plan and who it ultimately serves
- 2. Definition and description of duties and responsibilities
- 3. Identification of fiduciaries, legal constraints, unique conditions, and conflicts of interest
- 4. Statement of investment objectives
- 5. Framework for selecting, monitoring, and potentially replacing investments
- **6.** Process for IPS review and modification



Quarterly	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
Follow procedures, including documentation of all meetings and decisions	✓	✓	✓	✓
Review of plan investments and compliance with investment policy statement	✓	✓	✓	✓
Fiduciary education	✓	✓	✓	✓
Periodically				
Investment policy statement review				✓
Review QDIA selection	✓			
Plan fee analysis	✓	✓	✓	✓
Plan recordkeeping & administration services review	✓	✓	✓	✓
Employee education review	✓	✓	✓	✓
Review of ancillary products, if applicable (self-directed brokerage, managed accounts, etc.)	✓	✓	✓	✓
Other Projects				



**Fund Information** 

Portfolio Manager: Team Managed

Ticker:

RGAGX

PM Tenure : Fund Assets : \$3

\$36,695 Million

Inception Date : 05/01/2009
Portfolio Turnover : 36%

**Fund Investment Policy** 

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

Comparative Performance	- Trailing									
		QTR	YTD	1 YR	3 YR	5 Y	'R	7 YR	10	) YR
AF Growth Fund of America	(RGAGX)	11.12 (60)	19.07 (78)	32.55 (64)	16.84 (84)	17.22	(71)	14.65 (77	) 15.0	7 (70)
Russell 1000 Growth Index	<	13.22 (23)	24.33 (40)	37.53 (34)	21.67 (34)	20.10	(18)	17.39 (19	) 17.2	5 (18)
IM U.S. Large Cap Grow	th Equity (MF) 1st Quartile	13.11	27.91	40.23	22.36	19.69		17.01	16.8	9
IM U.S. Large Cap Grow	th Equity (MF) Median	11.51	22.78	34.55	20.65	18.51		15.95	15.8	3
IM U.S. Large Cap Grow	th Equity (MF) 3rd Quartile	10.57	19.65	31.00	18.02	16.92		14.77	14.9	0
Comparative Performance	- Calendar									
		2019	2018	2017	2016	20	15	2014	2	2013
AF Growth Fund of America	(RGAGX)	28.54 (88)	-2.60 (70)	26.53 (77)	8.82 (3)	5.70	(53)	9.63 (60	) 34.2	29 (47)
Russell 1000 Growth Index	x	36.39 (21)	-1.51 (58)	30.21 (41)	7.08 (8)	5.67	(54)	13.05 (22	) 33.4	8 (55)
IM U.S. Large Cap Grow	th Equity (MF) 1st Quartile	36.14	1.49	31.94	4.88	7.91		12.75	36.3	31
IM U.S. Large Cap Grow	th Equity (MF) Median	33.38	-0.87	29.46	2.18	6.01		10.47	33.9	94
IM U.S. Large Cap Grow	th Equity (MF) 3rd Quartile	30.92	-3.18	26.71	-0.18	3.40		8.56	30.9	7
Comparative Performance	- Quarterly									
		Jun-2020	Mar-2020	Dec-2019	Sep-2019	Jun-	2019	Mar-2019	De	c-2018
AF Growth Fund of America	(RGAGX)	26.13 (70)	-15.04 (75)	11.32 (15)	-2.06 (81)	3.53	(81)	13.87 (92	) -15.0	06 (38)
Russell 1000 Growth Index	x	27.84 (45)	-14.10 (64)	10.62 (27)	1.49 (16)	4.64	(56)	16.10 (55	-15.8	39 (53)
IM U.S. Large Cap Grow	th Equity (MF) 1st Quartile	29.80	-12.26	10.73	0.98	5.64		17.20	-14.4	<b>1</b> 1
IM U.S. Large Cap Grow	th Equity (MF) Median	27.69	-13.51	9.68	0.00	4.76		16.25	-15.7	76
IM U.S. Large Cap Grow	th Equity (MF) 3rd Quartile	25.78	-15.05	8.79	-1.56	3.84		15.37	-16.	57
MPT Stats				Ranking vs. IM U.S. La	arge Cap Growth	Equity (MF) 4	Quarters Ro	olling Periods		
	1 YR	3 YR	5 YR			Periods	5-25	25-Median	Median-75	75-95
Standard Deviation	22.48	18.14	15.51	AF Growth Fund of Am	nerica (RGAGX)	28	3 (11%)	8 (29%)	8 (29%)	9 (32%
Downside Risk	12.93	11.22	9.39	Russell 1000 Growth In	ndex	28	7 (25%)	15 (54%)	6 (21%)	0 (0%)
vs. Russell 1000 Growth Inde	ex			Ranking vs. IM U.S. La	arge Cap Growth	Equity (MF) 12	2 Quarters F	Rollina Period:	s	
Alpha	-2.11	-3.09	-1.57		. Jp	Periods	5-25	25-Median	Median-75	75-95
Beta	0.95	0.95	0.95	AF Growth Fund of Am	nerica (RGAGX)	28	10 (36%)	10 (36%)	3 (11%)	5 (18%
Down Market Capture	94.83	99.66	98.11	Russell 1000 Growth Ir	, ,	28	15 (54%)	, ,	0 (0%)	0 (0%)
Information Ratio	-1.20	-1.21	-0.71	. 1230011 1000 C10Will II		_0	10 (0170)	10 (1070)	0 (070)	0 (070)
Tracking Error	3.32	3.49	3.56	Ranking vs. IM U.S. La	arge Can Growth	Equity (MF) 20	0 Quarters F	Rolling Period	s .	
Up Market Capture	90.95	88.91	91.49	Tanking vo. iii 0.0. Li	ango oup oromin	Periods	5-25	25-Median	Median-75	75-95
vs. 90 Day U.S. Treasury Bill	I			AF Growth Fund of Am	nerica (RGAGX)	26	5 (19%)	7 (27%)	14 (54%)	0 (0%
Sharpe Ratio	1.32	0.86	1.03	Russell 1000 Growth Ir	ndex	28	24 (86%)	4 (14%)	0 (0%)	0 (0%



<b>Portfolio Characteristics</b>								Top Ten Equity Holdings					
		Portfol				Benchmark		_	Port. Wt		nch. <i>N</i> t	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)		367,840,09	*			2,346,692,128		Facebook Inc	6.1				
Median Mkt. Cap (\$)		25,754,35	*		13	3,809,199,300					3.8	15.3	0.9
Price/Earnings ratio			38.4			38.4		Netflix Inc	6.0		1.3	9.9	0.6
Price/Book ratio			6.2			11.3		Amazon.com Inc	5.9		8.1	14.1	8.0
5 Yr. EPS Growth Rate (%)	)		23.1			20.2		Tesla Inc	5.4		1.9	98.6	5.4
Current Yield (%)			0.7			8.0		Microsoft Corp	5.3		9.5	3.6	0.2
Beta (5 Years, Monthly)			0.95			1.00		Unitedhealth Group Inc	2.2		1.5	6.1	0.1
Number of Stocks			365			447		Alphabet Inc	2.1	:	2.0	4.0	0.1
								Mastercard Inc	2.0		1.8	14.5	0.3
								Broadcom Inc	1.9	(	8.0	16.5	0.3
								Thermo Fisher Scientific Inc	1.5	(	0.6	21.9	0.3
Buy and Hold Sector Attri	bution - 1 Qtr							Ten Best Performers					
	Allo	ation	Perfo	mance		Attribution				Port.	Bench.	Qtr.	Contr.
	Portfolio	Benchmark	Portfolio	Benchmark	Sector	Stock	Total			Wt	Wt	Rtrn	Rtrn
Communication Services	20.7	11.2	11.90	9.94	-0.35	0.41	0.07	Pacific Biosciences of Californ	a Inc	0.0	0.0	186.1	0.0
Consumer Discretionary	16.9	16.1	35.60	20.65	0.14	2.43	2.56	Tesla Inc		5.4	1.9	98.6	5.4
Consumer Staples	2.4	4.7	9.95	12.19	0.03	-0.05	-0.02	NovoCure Ltd		0.3	0.1	87.7	0.3
Energy	1.6	0.1	-22.05	-4.03	-0.27	-0.34	-0.62	Pinterest Inc		0.1	0.1	87.2	0.1
Financials	5.6	2.0	4.61	6.38	-0.22	-0.12	-0.35	Zoom Video Communications	nc	0.0	0.5	85.4	0.0
Health Care	17.2	14.4	2.65	5.66	-0.18	-0.54	-0.72	DraftKings Inc		0.0	0.0	76.9	0.0
Industrials	6.4	4.5	7.82	13.40	0.02	-0.37	-0.35	Zillow Group Inc		0.0	0.0	76.7	0.0
Information Technology	25.8	44.2	9.45	14.98	-0.33	-1.41	-1.73	Zillow Group Inc		0.1	0.0	76.3	0.1
Materials	1.5	0.8	14.77	15.05	0.02	0.00	0.01	Peloton Interactive Inc		0.7	0.0	71.8	0.5
Real Estate	1.6	1.9	2.95	1.04	0.05	0.04	0.08	Twist Bioscience Corp		0.0	0.0	67.7	0.0
Utilities	0.2	0.0	9.33	-4.75	-0.04	0.03	0.00	•					
Cuntion	5.2	3.0	0.00	0	0.04	0.00	5.00						

<b>Buy and Hold S</b>	tyle Attribution	n - 1 Qtr						Ten Worst Performers				
	Allo	cation	Perfo	mance		Attribution			Port.	Bench.	Qtr.	Contr.
	Portfolio	Benchmark	Portfolio	Benchmark	Style	Stock	Total		Wt	Wt	Rtrn	Rtrn
Large Growth	35.5	57.2	18.32	15.88	-0.57	0.84	0.28	Rolls Royce Holdings PLC	0.1	0.0	<b>-</b> 52.2	0.0
Large Neutral	34.0	24.4	11.67	10.56	-0.27	0.36	0.09	Biomarin Pharmaceutical Inc	0.3	0.1	-38.3	-0.1
Large Value	7.2	0.7	2.49	-0.09	-0.82	0.21	-0.61	Alteryx Inc	0.1	0.0	-30.9	0.0
Mid Growth	5.3	6.4	12.11	9.90	0.13	0.13	0.26	EOG Resources Inc.	0.4	0.0	-28.5	-0.1
Mid Neutral	6.8	7.1	4.99	10.65	0.00	-0.42	-0.41	Diamondback Energy Inc	0.1	0.0	-27.4	0.0
Mid Value	4.8	0.2	3.98	4.10	-0.39	-0.03	-0.42	Teva Pharmaceutical	0.2	0.0	-26.9	-0.1
Small Growth	0.0	0.0	10.74	6.10	0.00	0.00	0.01	Suncor Energy Inc.	0.1	0.0	-26.7	0.0
Small Neutral	0.1	0.1	5.73	-9.85	0.00	0.02	0.02	BP PLC	0.0	0.0	-22.4	0.0
Small Value	0.1	0.0	-14.35	10.08	0.00	-0.02	-0.03	Exxon Mobil Corp	0.0	0.0	-21.7	0.0
Unclassified	6.2	3.7	5.18	7.10	-0.14	-0.11	-0.25	Neurocrine Biosciences Inc	0.1	0.1	-21.2	0.0
Total	100.0	100.0	12.14	13.20	-2.04	0.98	-1.06					



**Fund Information** 

Portfolio Manager: Grierson/Hagen/Von Kuster Ticker:

WSCRX

Inception Date: 10/31/2014

Fund Assets:

PM Tenure:

\$430 Million

2014--2014--2014

Portfolio Turnover: 41%

**Fund Investment Policy** 

The Fund seeks long-term capital appreciation. The Fund invests substantially in the Small Company Growth Portfolio, a master portfolio with identical investment objective and substantially similar investment strategies. It may also invest in equity securities of foreign issuers through ADRs and similar investments.

Comparative Performance - T	railing									
		QTR	YTD	1 YR	3 YR	5 Y	R	7 YR	10	) YR
Wells Fargo Small Co Growth (	WSCRX)	8.78 (44)	1.55 (71)	13.21 (64)	9.20 (62)	10.01	(76)	N/A	N/A	Ą
Russell 2000 Growth Index		7.16 (64)	3.88 (64)	15.71 (58)	8.18 (69)	11.42	(63)	9.22 (61)	12.34	4 (60)
IM U.S. Small Cap Growth I	Equity (MF) 1st Quartile	10.96	16.46	29.13	17.15	15.30		11.58	14.09	9
IM U.S. Small Cap Growth I	Equity (MF) Median	8.49	8.36	18.09	10.59	12.44		9.70	12.75	5
IM U.S. Small Cap Growth I	Equity (MF) 3rd Quartile	5.96	0.79	9.88	7.18	10.15		8.20	11.53	3
Comparative Performance - C	Calendar									
		2019	2018	2017	2016	20 <sup>-</sup>	15	2014	2	013
Wells Fargo Small Co Growth (	(WSCRX)	26.55 (55)	-3.57 (31)	20.68 (51)	7.76 (71)	-4.33	(72)	N/A	N/A	Ά
Russell 2000 Growth Index		28.48 (47)	-9.31 (79)	22.17 (41)	11.32 (41)	-1.38	(37)	5.60 (21)	) 43.3	30 (47)
IM U.S. Small Cap Growth	Equity (MF) 1st Quartile	34.36	-2.55	25.06	13.22	-0.30		5.15	46.4	5
IM U.S. Small Cap Growth	Equity (MF) Median	27.70	-5.12	20.69	9.86	-2.35		2.79	42.8	88
IM U.S. Small Cap Growth	Equity (MF) 3rd Quartile	23.56	-8.62	17.29	7.31	-4.65		0.07	38.0	00
Comparative Performance - C	Quarterly									
		Jun-2020	Mar-2020	Dec-2019	Sep-2019	Jun-2	2019	Mar-2019		c-2018
Wells Fargo Small Co Growth (	(WSCRX)	29.42 (64)	-27.87 (82)	11.48 (32)	-4.68 (54)	3.28	(57)	15.30 (69)	) -20.9	90 (47)
Russell 2000 Growth Index		30.58 (54)	-25.76 (62)	11.39 (34)	<b>-4</b> .17 (45)	2.75	(66)	17.14 (48)	) -21.6	65 (64)
IM U.S. Small Cap Growth	Equity (MF) 1st Quartile	36.40	-21.40	12.00	-2.84	5.67		19.75	-19.7	76
IM U.S. Small Cap Growth	Equity (MF) Median	31.19	-24.19	9.92	-4.47	3.74		16.89	-21.0	01
IM U.S. Small Cap Growth	Equity (MF) 3rd Quartile	28.36	-26.69	8.15	-6.61	2.45		14.91	-22.3	37
MPT Stats				Ranking vs. IM U.S. S	mall Cap Growth E	quity (MF) 4	Quarters Rol	lling Periods		
	1 YR	3 YR	5 YR			Periods	5-25	25-Median	Median-75	75-95
Standard Deviation	31.14	24.33	21.11	Wells Fargo Small Co	Growth (WSCRX)	20	0 (0%)	4 (20%)	15 (75%)	1 (5%)
Downside Risk	22.78	17.41	15.04	Russell 2000 Growth I	ndex	28	2 (7%)	17 (61%)	7 (25%)	2 (7%)
vs. Russell 2000 Growth Index				Ranking vs. IM U.S. S	mall Cap Growth E	auity (MF) 12	2 Quarters Ro	ollina Periods	;	
Alpha	-2.91	0.75	-1.52	, <b>,</b> , , , , ,		Periods	5-25	25-Median	Median-75	75-95
Beta	1.08	1.06	1.04	Wells Fargo Small Co	Growth (WSCRX)	12	0 (0%)	1 (8%)	11 (92%)	0 (0%)
Down Market Capture	108.61	100.83	102.75	Russell 2000 Growth I	,	28	5 (18%)	, ,	8 (29%)	0 (0%)
Information Ratio	-0.31	0.34	-0.26				5 (.570)	. 5 (5 . 76)	0 (=0.0)	3 (370)
Tracking Error	4.33	3.88	3.99	Ranking vs. IM U.S. S	mall Can Growth F	auity (MF) 20	Quarters Re	ollina Periods		
Up Market Capture	102.47	104.39	98.47		a oup orowin b	Periods	5-25	25-Median	Median-75	75-95
00 D II O T				Wells Fargo Small Co	Growth (WSCRX)	4	0 (0%)	0 (0%)	1 (25%)	3 (75%)
vs. 90 Day U.S. Treasury Bill					Ciowai (WCCiot)	•	0 (0.0)	0 (0.0)	. (=0,0)	



Portfolio Characteristics								Top Ten Equity Holdings				
		Portfol				Benchmark			Port.	Bench.	Qtr	Contr
Wtd. Avg. Mkt. Cap (\$)		5,005,862	*		•	973,762,093			Wt	Wt	Rtrn	Rtrn
Median Mkt. Cap (\$)		2,655,935	-			918,896,160		Icon PLC	1.7	0.0	13.4	0.2
Price/Earnings ratio			27.0			29.2		Nuance Communications Inc	1.6	0.0	31.2	0.5
Price/Book ratio			3.3			4.5		Palomar Holdings Inc	1.6	0.2	21.5	0.3
5 Yr. EPS Growth Rate (%)	)		12.8			17.9		Immunomedics Inc	1.6	0.0	139.9	2.2
Current Yield (%)			0.4			0.5		Black Knight Inc	1.5	0.0	20.0	0.3
Beta (5 Years, Monthly)			1.04			1.00		SS&C Tech. Holdings Inc	1.5	0.0	7.4	0.1
Number of Stocks			125			1,099		Liveramp Holdings Inc	1.5	0.3	21.9	0.3
								PTC Inc	1.5	0.0	6.3	0.1
								Axonics Modulation Technologies Inc	1.4	0.2	45.4	0.6
								RealPage Inc	1.4	0.0	-11.3	-0.2
Buy and Hold Sector Attri	bution - 1 Qtr							Ten Best Performers				
	Alloc	cation	Perfo	rmance		Attribution			Port.	Bench.	Qtr.	Contr
	Portfolio	Benchmark	Portfolio	Benchmark	Sector	Stock	Total	<del></del>	Wt	Wt	Rtrn	Rtrn
Communication Services	1.5	2.6	3.09	-1.33	0.10	0.06	0.17	Immunomedics Inc	1.6	0.0	139.9	2.2
Consumer Discretionary	9.0	13.2	3.28	17.13	-0.38	-1.23	-1.62	NovoCure Ltd	0.9	0.0	87.7	8.0
Consumer Staples	1.0	3.2	18.80	9.76	-0.06	0.07	0.01	Evolent Health Inc	0.6	0.0	74.3	0.5
Energy	0.4	0.2	-8.97	-6.09	-0.03	-0.02	-0.05	Open Lending Corp	0.5	0.0	68.9	0.4
Financials	11.3	4.3	13.09	5.08	-0.15	0.90	0.76	Silk Road Medical Inc	1.3	0.2	60.4	8.0
Health Care	28.9	33.3	15.70	4.45	0.20	3.19	3.38	Generac Holdings Inc	0.9	0.0	58.8	0.5
Industrials	16.7	13.5	13.21	15.16	0.25	-0.33	-0.08	Momenta Pharmaceuticals Inc	1.3	0.6	57.7	0.7
Information Technology	26.8	21.3	-0.34	3.03	-0.19	-0.93	-1.13	Axonics Modulation Technologies Inc	1.4	0.2	45.4	0.6
Materials	3.3	2.7	7.62	6.53	0.01	0.04	0.05	Chart Industries Inc	8.0	0.0	44.9	0.4
Real Estate	1.0	3.8	-0.94	6.71	0.01	-0.08	-0.06	Brp Group Inc	8.0	0.1	44.2	0.3
Utilities	0.0	1.8	0.00	-3.79	0.21	0.00	0.21					
Total	100.0	100.0	8.79	7.16	-0.04	1.67	1.63					

Buy and Hold S	Style Attributio	n - 1 Qtr						Ten Worst Performers				
	Allo	cation	Perfo	rmance		Attribution			Port.	Bench.	Qtr.	Contr.
	Portfolio	Benchmark	Portfolio	Benchmark	Style	Stock	Total		Wt	Wt	Rtrn	Rtrn
Mid Growth	5.4	7.8	37.81	10.24	-0.09	1.21	1.12	Strategic Education Inc	0.7	0.2	-40.1	-0.3
Mid Neutral	28.9	20.3	6.17	11.80	0.36	-1.59	-1.24	Agios Pharmaceuticals Inc	0.3	0.0	-34.6	-0.1
Mid Value	12.9	3.1	0.94	1.39	-0.59	-0.09	-0.68	Theravance Biopharma Inc	0.3	0.1	-29.6	-0.1
Small Growth	6.5	10.5	7.50	14.30	-0.20	-0.39	-0.59	Galapagos NV	0.2	0.0	-28.1	-0.1
Small Neutral	19.7	35.3	5.09	3.93	0.52	0.25	0.77	Ciena Corp	1.2	0.0	-26.7	-0.3
Small Value	21.3	18.3	12.99	5.88	-0.04	1.43	1.39	Monro Inc	0.3	0.1	-25.8	-0.1
Unclassified	5.3	4.7	21.17	4.50	0.00	0.87	0.87	Tabula Rasa HealthCare Inc	0.5	0.1	-25.5	-0.1
Total	100.0	100.0	8.79	7.16	-0.05	1.68	1.63	Silicon Motion Technology Corp	0.7	0.0	-21.9	-0.1
								Flexion Therapeutics Inc	0.3	0.0	-20.8	-0.1
								Ionis Pharmaceuticals Inc	0.4	0.0	-19.5	-0.1
								ionis i naimaceuticais inc	0.4	0.0	-13.3	_



**Fund Information** 

PM Tenure:

Portfolio Manager : Team Managed

Ticker:

Inception Date : 07/14/1997

Fund Assets: -

Portfolio Turnover: 29%

# **Fund Investment Policy**

The Fund seeks long-term growth of capital. The Fund invests at least 80% of its assets in common stocks of mid-capitalization companies. The Fund may invest up to 20% of its total assets in securities of foreign issuers and non-dollar securities.

Comparative Performance - T	railing								
		QTR	YTD	1 YR	3 YR	5 YR	7 YR		10 YR
Hartford Mid Cap (HIMCX)		4.44 (94)	-0.84 (91)	5.96 (91)	9.42 (89)	11.75 (86)	11.17 (	77) 12	.82 (74)
Russell Midcap Growth Index	(	9.37 (56)	13.92 (61)	23.23 (59)	16.23 (50)	15.53 (37)	13.25 (	34) 14	.55 (25)
IM U.S. Mid Cap Growth E	quity (MF) 1st Quartile	11.61	22.93	33.10	19.15	16.99	13.77	14	.54
IM U.S. Mid Cap Growth E	quity (MF) Median	9.71	16.58	24.97	16.18	14.69	12.64	13	.80
IM U.S. Mid Cap Growth E	quity (MF) 3rd Quartile	7.77	9.37	17.48	12.83	13.34	11.32	12	.71
Comparative Performance - 0	Calendar								
		2019	2018	2017	2016	2015	2014		2013
Hartford Mid Cap (HIMCX)		32.87 (63)	-7.44 (79)	24.47 (56)	11.98 (7)	1.60 (39)	11.37 (	(13) 39	.82 (14)
Russell Midcap Growth Inde	X	35.47 (39)	-4.75 (47)	25.27 (44)	7.33 (25)	-0.20 (56)	11.90 (	(10) 35	5.74 (47)
IM U.S. Mid Cap Growth E	quity (MF) 1st Quartile	37.31	-2.08	27.88	7.26	2.79	9.52	37	.81
IM U.S. Mid Cap Growth E	quity (MF) Median	34.41	-5.01	24.81	4.80	0.53	7.28	35	.43
IM U.S. Mid Cap Growth E	quity (MF) 3rd Quartile	31.44	-7.15	22.63	2.25	-2.17	4.92	30	.99
Comparative Performance - 0	Quarterly								
		Jun-2020	Mar-2020	Dec-2019	Sep-2019	Jun-2019	Mar-20	19 D	ec-2018
Hartford Mid Cap (HIMCX)		25.27 (82)	-24.21 (91)	6.86 (61)	-1.35 (50)	4.85 (82)	20.20 (	(31) -17	7.69 (62)
Russell Midcap Growth Inde	X	30.26 (55)	-20.04 (60)	8.17 (37)	-0.67 (33)	5.40 (72)	19.62 (	(46) -15	5.99 (30)
IM U.S. Mid Cap Growth E	quity (MF) 1st Quartile	35.16	-16.99	8.83	-0.30	7.41	20.75	-15	5.75
IM U.S. Mid Cap Growth E	quity (MF) Median	30.71	-19.33	7.45	-1.37	6.42	19.44	-17	7.14
IM U.S. Mid Cap Growth E	quity (MF) 3rd Quartile	26.78	-21.41	6.34	-3.46	5.23	17.74	-19	9.09
MPT Stats				Ranking vs. IM U.S.	Mid Cap Growth Equity	(MF) 4 Quarters	Rolling Periods	3	
	1 YR	3 YR	5 YR		Periods	5-25	25-Median	Median-75	75-95
Standard Deviation	27.03	20.99	17.91	Hartford Mid Cap (HII	MCX) 28	10 (36%)	7 (25%)	4 (14%)	7 (25%
Downside Risk	19.36	14.78	12.29	Russell Midcap Grow	th Index 28	6 (21%)	12 (43%)	10 (36%)	0 (0%)
vs. Russell Midcap Growth Ind	ex			Ranking vs. IM U.S.	Mid Cap Growth Equity	(MF) 12 Quarter	s Rolling Period	is	
Alpha	-14.48	-6.03	-3.50	ramming vor im oron	Periods	5-25	25-Median	Median-75	75-95
Beta	1.03	1.02	1.02	Hartford Mid Cap (HII		18 (64%)	6 (21%)	1 (4%)	3 (11%
Down Market Capture	125.56	112.88	111.62	Russell Midcap Grow	,	10 (36%)	18 (64%)	0 (0%)	0 (0%)
Information Ratio	-3.24	-1.50	-0.80	rassen whatap Orow	TILLINGON ZO	10 (5070)	10 (0+70)	0 (070)	0 (070)
Tracking Error	4.60	3.95	4.00	Ranking vs. IM II S	Mid Cap Growth Equity	(MF) 20 Quarter	s Rolling Period	łe	
Up Market Capture	81.14	90.12	94.78	Ranking vs. IIV U.S.	Periods	5-25	25-Median	Median-75	75-95
vs. 90 Day U.S. Treasury Bill				Hartford Mid Cap (HII		17 (61%)	7 (25%)	2 (7%)	2 (7%)
Sharpe Ratio	0.31	0.46	0.65	Russell Midcap Grow	,	14 (50%)	14 (50%)	0 (0%)	0 (0%)



Portfolio Characteristics								Top Ten Equity Holding	s				
		Portfol				Benchmark				Port. Wt	Bench.	Qtr	Contr.
Wtd. Avg. Mkt. Cap (\$)		8,302,17	,			,991,067,436		Cammantitud			Wt	Rtrn	Rtrn
Median Mkt. Cap (\$)		6,671,696	,		10	,854,272,000		Genpact Ltd		2.3	0.1	6.9	0.2
Price/Earnings ratio			27.8			36.3		Ingersoll Rand Inc		2.2	0.0	26.6	0.6
Price/Book ratio			3.5			9.7		II VI Inc		2.0	0.0	-14.1	-0.3
5 Yr. EPS Growth Rate (%)	)		9.8			20.8		NVR Inc.		1.9	0.0	25.3	0.5
Current Yield (%)			8.0			0.5		IDEX Corp		1.8	0.0	15.8	0.3
Beta (5 Years, Monthly)			1.02			1.00		WEX Inc		1.8	0.0	-15.8	-0.3
Number of Stocks			102			341		Etsy Inc		1.8	0.5	14.5	0.3
								Lennox International Inc.		1.7	0.0	17.3	0.3
								Monolithic Power System	ıs Inc	1.6	0.4	18.2	0.3
								Encompass Health Corp		1.6	0.1	5.4	0.1
Buy and Hold Sector Attri	bution - 1 Qtr							Ten Best Performers					
	Allo	cation	Perfo	rmance		Attribution			Port.	Ве	nch.	Qtr.	Contr.
	Portfolio	Benchmark	Portfolio	Benchmark	Sector	Stock	Total	-	Wt	1	Nt	Rtrn	Rtrn
Communication Services	3.8	5.6	16.89	13.29	-0.08	0.14	0.06	Roku Inc	1.6		0.7	62.0	1.0
Consumer Discretionary	11.2	11.0	16.26	14.79	0.03	0.18	0.22	Wayfair Inc	0.3		0.6	47.3	0.2
Consumer Staples	1.8	4.3	13.23	10.77	-0.04	0.07	0.03	IAA Inc	1.5		0.1	35.0	0.5
Energy	0.5	0.4	1.56	-4.03	0.00	0.03	0.02	First Solar Inc	1.3		0.0	33.7	0.4
Financials	10.4	3.8	-4.95	2.10	-0.48	-0.77	-1.24	Watsco Inc.	1.0		0.0	32.3	0.3
Health Care	18.9	22.5	-1.16	9.66	-0.05	-2.08	-2.13	Graco Inc.	0.3		0.2	28.3	0.1
Industrials	16.3	12.0	14.36	12.08	0.12	0.36	0.48	Ingersoll Rand Inc	2.2		0.0	26.6	0.6
Information Technology	28.8	36.7	0.44	6.73	0.20	-1.85	-1.65	NVR Inc.	1.9		0.0	25.3	0.5
Materials	3.0	2.2	11.32	11.58	0.02	0.00	0.02	PVH Corp	1.5		0.0	24.1	0.4
Real Estate	3.1	1.4	1.82	2.79	-0.12	0.00	-0.12	Aspen Technology Inc	0.9		0.3	22.2	0.2
0	0.1												
Utilities	2.1	0.1	1.47	-4.75	-0.29	0.14	-0.15						

<b>Buy and Hold S</b>	tyle Attributio	n - 1 Qtr						Ten Worst Performers				
	Allo	cation	Perfo	rmance		Attribution			Port.	Bench.	Qtr.	Contr.
	Portfolio	Benchmark	Portfolio	Benchmark	Style	Stock	Total		Wt	Wt	Rtrn	Rtrn
Large Growth	0.0	11.2	0.00	7.59	0.14	0.00	0.14	Reata Pharmaceuticals Inc	0.9	0.1	-37.6	-0.4
Large Neutral	0.2	4.4	-0.14	2.47	0.23	-0.01	0.22	Hill-Rom Holdings Inc	1.5	0.0	-23.7	-0.4
Mid Growth	16.7	35.6	9.09	9.99	-0.03	-0.27	-0.30	First Citizens BancShares Inc	0.5	0.0	<b>-</b> 21.2	-0.1
Mid Neutral	40.7	41.2	3.22	10.87	0.02	-3.10	-3.08	Ionis Pharmaceuticals Inc	0.2	0.1	-19.5	0.0
Mid Value	25.3	1.3	5.20	4.10	-1.25	0.24	-1.01	Credit Acceptance Corp	1.0	0.0	-19.2	-0.2
Small Growth	1.1	0.2	-6.64	6.10	-0.01	-0.19	-0.20	Douglas Emmett Inc	0.5	0.0	-17.2	-0.1
Small Neutral	7.3	0.6	-2.80	-9.85	-1.37	0.60	-0.76	WEX Inc	1.8	0.0	-15.8	-0.3
Small Value	3.8	0.1	4.01	10.08	0.02	-0.31	-0.29	Coherent Inc	1.3	0.1	-15.3	-0.2
Unclassified	5.0	5.4	24.38	9.09	0.05	0.76	0.81	CarGurus Inc	0.6	0.0	-14.7	-0.1
Total	100.0	100.0	4.76	9.24	-2.20	-2.28	-4.48	II VI Inc	2.0	0.0	-14.1	-0.3



## **Historical Activity**

#### Jan-2020

The Custom Target Date funds were replaced with the American R6 Target Date funds.

## Jun-2019

The MassMutual Guaranteed Interest Account was replaced by the Voya Fixed Account. The returns are MassMutual until 1Q2019, Voya thereafter.

The Record Keeper was changed in 2Q2019 from Mass Mutual to Voya.

#### Jul-2017

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

#### Nov-2016

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

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

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

## Dec-2015

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

The SSGA Index Fund were replaced by Vanguard Index Funds.
The Hartford Balanced was replaced by American Funds Balanced.
American Century Equity Income shares changed from ACIIX to AEUDX.
Deutsche Alternative Asset Allocation shares changed from AAAAX to AAAVX.

## Sep-2014

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

## Oct-2013

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

#### Apr-2011

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

#### Mar-2011

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

## Oct-2010

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

American Funds EuroPacific Growth to R6 shares SSgA Russell Small Cap to A shares Lord Abbett Mid Cap Value to I shares SSgA S&P Mid Cap Index to A shares



American Funds Growth Fund of America to R6 shares SSgA S&P 500 Index to A shares Pimco High Yield to Institutional shares.

## Dec-2009

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

## Sep-2009

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

## Feb-2009

The Following new investment choices were added to the Plans:

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

## Sep-2007

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

#### Jun-2007

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

## Mar-2005

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

Retained Funds:

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

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



#### **Common Index Definitions**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



Δ	cti	ve	R	۵tı	ırn

- 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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