Investment Performance Review Period Ending March 31, 2023

# Washoe County 457 & 401a Plans



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1st Quarter 2023 Market Environment



### The Economy

- US GDP growth is expected to wane in the coming quarters as the impact from higher interest rates continues to spread through the broader economy. The final measure of 1st quarter GDP was revised downward to 1.7%. Global GDP growth also remains challenged with higher energy prices continuing to act as a headwind, especially in Europe. China has fully reopened after almost three years of COVID-19 restrictions, which boosted estimates and performance for the region.
- The US Federal Reserve Bank (the Fed) continued to increase interest rates during the quarter with two successive 0.25% increases in the Fed Funds rate in January and February. While the Fed's policy remains hawkish on fighting high inflation, the press release from the February meeting took on a more dovish tone.
- The US labor market continues to show its resiliency, adding roughly 236 thousand jobs during the 1st quarter. As a result, the unemployment rate fell to 3.5% in March. Noticeably, the labor market is showing signs of declining growth which could soon signal an inflection point in economic output and the fight against inflation.
- The global banking sector came under duress in the 1st quarter of 2023, triggered by the second and third-largest regional bank failures in US history. The combination of aggressive Fed rate hikes and questionable capital deployment by Silicon Valley Bank led to a flurry of depositor withdrawals and rocked general confidence in the overall banking system.

### **Equity (Domestic and International)**

- US equities moved broadly higher during the 1st quarter despite concerns regarding stubbornly high inflation, the potential for additional rate hikes, slowing global GDP growth, and shaken confidence in the global banking system. Large cap growth was the best performing domestic segment of the equity market during the period while small cap value performed the worst.
- International stocks also experienced strong returns during the 1st quarter. US Dollar (USD) and local currency (LCL) performance were both solid as the USD remained largely unchanged for the quarter. Non-US GDP growth, particularly in Europe, remained under pressure as restrictive central bank policies and elevated energy prices acted as a headwind. Finally, China's reopening from its restrictive COVID-19 policies is well underway and has proven to be a greater tailwind to the region than previously expected.

#### **Fixed Income**

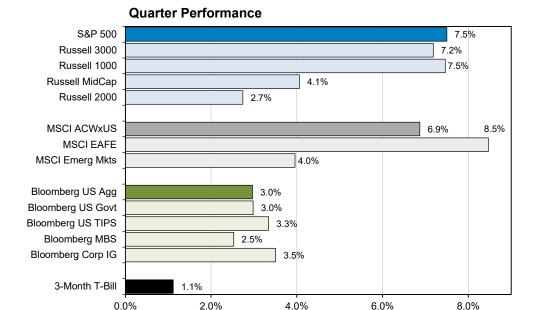
- While inflation continues to decline quarter-over-quarter, the Fed maintained their inflation-fighting policy stance, increasing interest rates twice, totaling 0.50%. Despite the short-term increases, yields beyond 1-year actually fell during the quarter with the bellwether US 10-Year Treasury bond closing March at 3.48%, 0.40% lower than year-end.
- Performance across domestic bond market sectors was positive during the quarter, led by corporate investment grade bonds. Global bonds slightly outperformed domestic fixed income for the quarter.
- A combination of higher coupons and narrower credit spreads were the primary drivers of lower quality corporate results during the period.
- US Treasury bonds rebounded this quarter as yields at longer maturities fell and investors fled to safety amidst troubles in the banking sector.

#### **Market Themes**

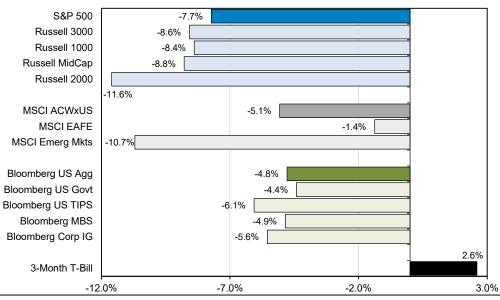
- Central banks remained vigilant in their fight against inflation with the Fed, the Bank of England, and the European Central Bank continuing on the path of raising interest rates during the quarter. However, recession fears and softening inflation readings led to a recovery in asset prices as market expectations grew there may be fewer, less drastic rate hikes going forward.
- The conflict in Ukraine continues as a major geopolitical event without a clear resolution in sight. Energy costs remain elevated, which continues to negatively impact the economic growth outlook for the region.
- Short-term interest rates rose across most developed markets as central banks continued to tighten. Despite concerns about the potential for slowing economic growth, lower-quality corporate bonds slightly outpaced higher-quality government bonds.
- Both US and international equity markets continued to recover from the disappointing year that was 2022 on expectations that inflation would continue to moderate and central banks would slow the pace of monetary tightening.



- Domestic equity markets started 2023 with solid results led by large cap companies, but each index remains negative over the trailing 1-year period. Factors contributing to the quarter's results include declining inflation readings, expectations the Fed would slow the pace of future interest rate increases, and China's economic reopening from its self-imposed COVID-19 restrictions. For the period, the S&P 500 large cap benchmark returned 7.5%, versus 4.1% for mid cap, and 2.7% for small cap benchmarks.
- Like domestic equities, international developed and emerging market equities delivered positive results for the 1st quarter. Europe continues to face headwinds from higher-than-expected inflation, elevated energy prices, geopolitical risks related to the conflict in Ukraine, and rising interest rates. Emerging markets benefited from China's return to the global economy. The developed market MSCI EAFE Index returned 8.5% for the quarter and the MSCI Emerging Markets Index rose by 4.0%.
- For the quarter, performance of the bond market was broadly positive due to lower inflation and falling yields beyond 1-year maturities. The Bloomberg (BB) US Aggregate Index returned 3.0% for the period while investment grade corporate bonds posted a moderately higher return of 3.5%.
- US equity markets were negative over the trailing 1-year period, though much of this weak performance occurred at the beginning of the timeframe and will continue to roll off in the coming quarters. The S&P 500 Index return of -7.7% for the year was largely driven by concerns related to rising inflation, tighter monetary policy, and recession fears. The weakest relative performance for the year was the Russell 2000 Index, which declined -11.6%.
- Over the trailing 1-year period, international markets also declined. The MSCI EAFE Index returned -1.4% while the MSCI Emerging Markets Index fell a much larger -10.7%. Continued concerns related to Ukraine, elevated inflation, and slowing global economic growth negatively impacted markets. However, USD weakness and easing energy prices acted as a tailwind to international performance in the second half of 2022.
- Bond markets followed a largely similar narrative to equities, finishing the trailing 1-year period in negative territory. While bond market performance was impacted by similar factors to equity market performance, the primary driver of results over the prior year was dramatically higher interest rates, which directly and immediately impact bond prices and index performance. US mortgage backed and Government issues were the least negative sectors returning 4.9% and -4.4%, respectively, for the year. US TIPS suffered the year's largest loss, falling -6.1%.



#### 1-Year Performance

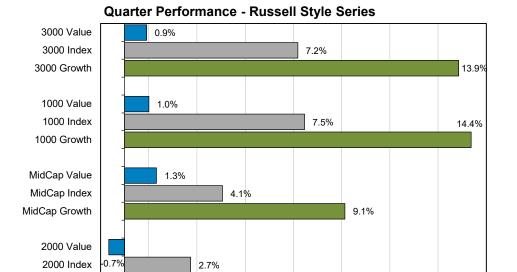


Source: Investment Metrics



- Domestic equity core benchmarks pulled back from their February highs, but each finished the quarter with solid, positive results. Concerns regarding the regional banking sector and the financial sector's large weight in the value benchmarks weighed heavily on style-based index performance. Large cap stocks led results for the capitalization-based benchmarks and finished well ahead of both the mid cap and small cap indices for the quarter. Growth benchmarks, with their lower weight in the financial sector and larger weight in the information technology sector, produced the quarter's strongest results at all capitalization levels. The Russell 1000 Growth Index topped the quarter, returning 14.4% followed by the Russell Mid Cap Growth Index and the Russell 2000 Growth Index, which rose by 9.1% and 6.1%, respectively.
- Large, mid, and small cap growth stocks each outperformed their value counterparts by a wide margin for the quarter. While it is only a single quarter, this performance reversed 2022's dominant trend of value-based benchmarks outpacing their growth counterparts. Large and mid cap stocks managed small, positive returns of 1.0% and 1.3%, respectively, for the quarter while the Russell 2000 Value Index fell -0.7%.

- The 1st quarter's positive performance was not enough to offset the challenging performance experienced by domestic equity markets during 2022. All market capitalizations and styles remain in sizable negative territory over the trailing 1-year period. Within large cap stocks, the Russell 1000 Value Index returned a disappointing -5.9% but was down much less than the Russell Large Cap Growth Index, which fell -10.9% for the year.
- Outside of large cap issues, 2023's strong 1st quarter growth benchmark results were enough to push growth results over their value equivalents at both mid and small cap levels for the year. The Russell Mid Cap Value Index returned -9.2% and the small cap Russell 2000 Value Index returned -13.0% for the period. The growth benchmark counterparts at both capitalization levels were each down less than value.



6.1%

7.0%

9.0%

11.0%

13.0%

15.0%

# 1-Year Performance - Russell Style Series

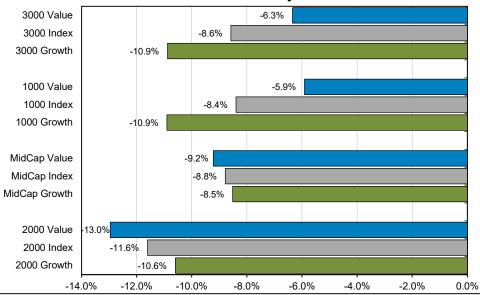
5.0%

3.0%

2000 Growth

-1.0%

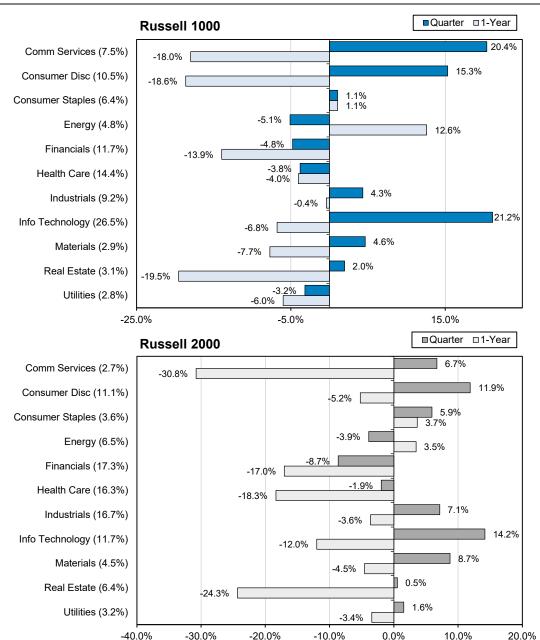
1.0%



Source: Investment Metrics



- Economic sector performance was mixed during the quarter. Seven of 11
  economic sectors posted positive absolute performance for the quarter but
  just three managed to outpace the return of the broad index.
- After a challenging 2022, the information technology sector rebounded during the quarter on hopes that inflation was softening, and that the Fed would soon end its rate hiking cycle. The sector returned an impressive 21.2% in the quarter. The other two sectors that outpaced the headline index's return for the quarter were communication services (20.4%) and consumer discretionary (15.3%). The energy (-5.1%), financials (-4.8%), health care (-3.8%), and utilities (-3.2%) sectors each posted negative performance for the quarter.
- Eight small cap economic sectors posted positive results during the quarter and six exceeded the 2.7% return of the broader Russell 2000 Index. The consumer discretionary (11.9%) and information technology (14.2%) sectors each posted double-digit gains for the quarter while the energy (-3.9%), financials (-8.7%), and health care (1.9%) sectors posted negative returns.
- For the full year, seven economic sectors exceeded the return of the broad large cap benchmark, but only the energy (12.6%) and consumer staples (1.1%) sectors managed to post positive performance for the period. The weakest economic sector in the Russell 1000 for the year was Real Estate, which declined by -19.5% and was heavily impacted by rising interest rates.
- Similar to large cap sector performance, for the trailing 1-year period only two small cap sectors were positive. Energy was the best performing sector followed by consumer staples, which posted returns of 3.5% and 3.7%, respectively. Four of the 11 economic sectors were down less than the broad small cap benchmark's return of -11.6%. The worst performing sector for the year was communication services with a return of -30.8%. However, the information technology (-12.0%), financials (-17.0%), health care (-18.3%), and real estate (-24.3%) sectors were also down significantly for the year.





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	6.5%	27.1%	-5.0%	Information Technology	
Microsoft Corp	5.7%	20.5%	-5.6%	Information Technology	
Amazon.com Inc	2.4%	23.0%	-36.6%	Consumer Discretionary	
NVIDIA Corp	1.7%	90.1%	1.9%	Information Technology	
Alphabet Inc Class A	1.6%	17.6%	-25.4%	Communication Services	
Berkshire Hathaway Inc Class B	1.5%	0.0%	-12.5%	Financials	
Alphabet Inc Class C	1.4%	17.2%	-25.5%	Communication Services	
Tesla Inc	1.4%	68.4%	-42.2%	Consumer Discretionary	
Meta Platforms Inc Class A	1.2%	76.1%	-4.7%	Communication Services	
Exxon Mobil Corp	1.2%	0.2%	37.5%	Energy	

Top 10 Weighted Stocks					
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector	
Iridium Communications Inc	0.3%	20.7%	53.9%	Communication Services	
ShockWave Medical Inc	0.3%	5.5%	4.6%	Health Care	
EMCOR Group Inc	0.3%	9.9%	45.0%	Industrials	
Crocs Inc	0.3%	16.6%	65.5%	Consumer Discretionary	
Texas Roadhouse Inc	0.3%	19.4%	31.8%	Consumer Discretionary	
Saia Inc	0.3%	29.8%	11.6%	Industrials	
Inspire Medical Systems Inc	0.3%	-7.1%	-8.8%	Health Care	
RBC Bearings Inc	0.3%	11.2%	20.0%	Industrials	
Kinsale Capital Group Inc	0.3%	14.8%	31.9%	Financials	
Apellis Pharmaceuticals Inc	0.3%	27.6%	29.8%	Health Care	
Apellis Pharmaceuticals Inc	0.3%	27.6%	29.8%	Health Care	

Top 10 Performing Stocks (by Quarter)					
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	
Sotera Health Co Ordinary Shares	0.0%	115.0%	-17.3%	Health Care	
Carvana Co Class A	0.0%	106.5%	-91.8%	Consumer Discretionary	
Coinbase Global Inc Ordinary Shares	0.0%	90.9%	-64.4%	Financials	
NVIDIA Corp	1.7%	90.1%	1.9%	Information Technology	
Oak Street Health Inc Ordinary Shares	0.0%	79.8%	43.9%	Health Care	
Meta Platforms Inc Class A	1.2%	76.1%	-4.7%	Communication Services	
DraftKings Inc Ordinary Shs - Class A	0.0%	70.0%	-0.6%	Consumer Discretionary	
Spotify Technology SA	0.0%	69.2%	-11.5%	Communication Services	
Tesla Inc	1.4%	68.4%	-42.2%	Consumer Discretionary	
Roku Inc Class A	0.0%	61.7%	-47.5%	Communication Services	

Top 10 Performing Stocks (by Quarter)					
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector	
Cipher Mining Inc	0.0%	316.1%	-36.0%	Information Technology	
SelectQuote Inc Ordinary Shares	0.0%	223.0%	-22.2%	Financials	
C3.ai Inc Ordinary Shares - Class A	0.1%	200.0%	47.9%	Information Technology	
Riot Platforms Inc	0.1%	194.7%	-52.8%	Information Technology	
Oscar Health Inc Class A	0.0%	165.9%	-34.4%	Financials	
Marathon Digital Holdings Inc	0.0%	155.0%	-68.8%	Information Technology	
Aurinia Pharmaceuticals Inc	0.1%	153.7%	-11.5%	Health Care	
Reata Pharmaceuticals Inc Class A	0.1%	139.3%	177.5%	Health Care	
Atlas Technical Consultants Inc	0.0%	136.7%	N/A	Industrials	
Berkshire Grey Inc Ordinary Shares	0.0%	128.5%	-52.1%	Industrials	

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
First Republic Bank	0.0%	-88.5%	-91.3%	Financials
PacWest Bancorp	0.0%	-57.2%	-76.6%	Financials
Lumen Technologies Inc Ordinary Shs	0.0%	-49.2%	-75.4%	Communication Services
WeWork Inc	0.0%	-45.6%	-88.6%	Real Estate
Enviva Inc	0.0%	-44.4%	-61.2%	Energy
Western Alliance Bancorp	0.0%	-40.0%	-56.3%	Financials
Zions Bancorp NA	0.0%	-38.6%	-52.9%	Financials
Charles Schwab Corp	0.2%	-36.9%	-37.1%	Financials
Comerica Inc	0.0%	-34.0%	-49.8%	Financials
DISH Network Corp Class A	0.0%	-33.5%	-70.5%	Communication Services

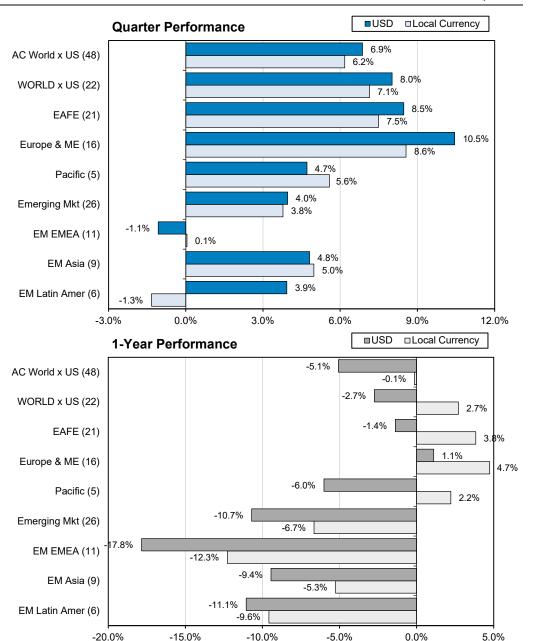
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Cerberus Cyber Sentinel Corp	0.0%	-86.7%	-93.6%	Information Technology
Cyxtera Technologies Inc	0.0%	-84.1%	-97.5%	Information Technology
Bed Bath & Beyond Inc	0.0%	-83.0%	-98.1%	Consumer Discretionary
Pear Therapeutics Inc Class A	0.0%	-78.4%	-95.0%	Health Care
Veru Inc	0.0%	-78.0%	-76.0%	Consumer Staples
Sunlight Financial Holdings Inc	0.0%	-75.8%	-93.8%	Financials
Esperion Therapeutics Inc	0.0%	-74.5%	-65.7%	Health Care
Nektar Therapeutics	0.0%	-68.9%	-87.0%	Health Care
Vintage Wine Estates Inc Ordinary Shs	0.0%	-67.2%	-89.2%	Consumer Staples
Bright Health Group Inc	0.0%	-66.1%	-88.6%	Financials

Source: Morningstar Direct



Many of the International developed and emerging market benchmarks posted positive performance in both USD and LCL terms for the 1st quarter. A weakening USD acted as a slight tailwind for non-US index performance during the quarter. Higher energy prices and the reopening of China drove performance, especially in emerging markets. Europe and Middle East subindex led results, returning a strong 10.5% in USD and 8.6% in LCL. The developed market MSCI EAFE Index returned a solid 8.5% in USD and 7.5% in LCL terms for the period, and the MSCI Emerging Markets Index rose by 4.0% in USD and 3.8% in LCL terms.

The trailing 1-year results for international developed and emerging markets remain in negative territory in USD terms. A strong dollar over most of the trailing 1-year period was the dominant USD performance factor, shaving 5.2% off broad developed market performance and 4.0% from emerging market results. Developed market performance was positive in LCL terms with the MSCI EAFE Index returning -1.4% in USD and 3.8% in LCL terms for the year. The MSCI Emerging Markets Index declined by -10.7% in USD and -6.7% in LCL terms for the period. Performance in the EMEA (Europe, Middle East, and Africa) regional benchmark significantly detracted from emerging market index performance with a return of -17.8% in USD and -12.3% in LCL terms.



Source: MSCI Global Index Monitor (Returns are Net)



MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.5%	10.5%	-6.5%
Consumer Discretionary	12.0%	17.0%	5.0%
Consumer Staples	10.4%	7.6%	1.3%
Energy	4.5%	0.4%	9.6%
Financials	17.7%	2.5%	-1.1%
Health Care	13.2%	5.4%	-2.6%
Industrials	15.6%	11.9%	-0.5%
Information Technology	8.6%	19.0%	-4.1%
Materials	7.7%	7.6%	-6.5%
Real Estate	2.4%	-2.1%	-20.4%
Utilities	3.4%	8.2%	-1.2%
Total	100.0%	8.5%	-1.4%

MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.1%	11.2%	-7.1%
Consumer Discretionary	11.9%	11.3%	1.7%
Consumer Staples	8.9%	6.5%	1.1%
Energy	5.5%	-0.3%	0.8%
Financials	19.9%	1.4%	-7.5%
Health Care	9.6%	4.2%	-4.4%
Industrials	12.7%	10.0%	-1.8%
Information Technology	11.8%	17.2%	-9.5%
Materials	8.3%	5.9%	-10.5%
Real Estate	2.1%	-1.7%	-19.7%
Utilities	3.2%	3.3%	-5.9%
Total	100.0%	6.9%	-5.1%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	10.6%	12.6%	-7.4%
Consumer Discretionary	13.9%	1.5%	-3.9%
Consumer Staples	6.3%	2.4%	-0.6%
Energy	4.7%	-0.3%	-4.8%
Financials	21.0%	-0.9%	-13.6%
Health Care	3.8%	-4.9%	-15.4%
Industrials	6.0%	2.2%	-6.3%
Information Technology	20.5%	14.7%	-13.9%
Materials	8.7%	2.4%	-15.6%
Real Estate	1.9%	-1.6%	-18.7%
Utilities	2.6%	-10.5%	-14.4%
Total	100.0%	4.0%	-10.7%

	MSCI-EAFE	MSCI-ACWIXUS	Quarter	1- Year
Country	Weight	Weight	Return	Return
Japan	21.5%	13.9%	6.2%	-5.2%
United Kingdom	14.8%	9.6%	6.1%	-0.8%
France	12.5%	8.1%	14.6%	8.8%
Switzerland	10.0%	6.5%	6.7%	-6.8%
Germany	8.7%	5.6%	14.7%	2.2%
Australia	7.5%	4.8%	2.8%	-9.2%
Netherlands	4.6%	3.0%	16.6%	2.0%
Sweden	3.4%	2.2%	9.5%	-7.2%
Denmark	3.1%	2.0%	12.4%	14.2%
Hong Kong	2.7%	1.8%	-2.4%	-5.3%
Spain	2.6%	1.7%	15.7%	11.9%
Italy	2.5%	1.6%	14.7%	9.1%
Singapore	1.5%	1.0%	7.1%	-3.1%
Belgium	1.0%	0.7%	6.3%	-2.2%
Finland	1.0%	0.6%	-0.3%	-4.2%
Ireland		0.5%	21.4%	12.1%
Israel	0.8%	0.5%	0.8%	-20.6%
Norway	0.7%	0.4%	-7.2%	-21.6%
Portugal	0.2%	0.1%	3.4%	1.3%
New Zealand	0.2%	0.1%	8.0%	2.1%
Austria	0.2%	0.1%	2.6%	-5.7%
Total EAFE Countries	100.0%	64.8%	17.3%	-14.5%
Canada		7.5%	4.3%	-13.1%
Total Developed Countries		72.3%	16.2%	-14.3%
China		9.1%	4.7%	-4.7%
Taiwan		4.2%	14.8%	-13.7%
India		3.6%	-6.4%	-12.2%
Korea		3.3%	9.6%	-14.4%
Brazil		1.4%	-3.2%	-18.7%
Saudi Arabia		1.1%	0.1%	-19.0%
South Africa		1.0%	-0.6%	-20.6%
Mexico		0.7%	20.3%	8.6%
Thailand		0.6%	-1.7%	-0.9%
Indonesia		0.5%	6.0%	0.2%
Malaysia		0.4%	-3.6%	-10.9%
United Arab Emirates		0.3%	-7.5%	-28.4%
Qatar		0.3%	-0.7%	-22.6%
Kuwait		0.2%	-3.7%	-11.3%
Philippines		0.2%	2.4%	-13.7%
Poland		0.2%	-1.0%	-20.1%
Turkey		0.2%	-9.4%	52.8%
Chile		0.2%	5.2%	-3.0%
Greece		0.1%	15.8%	14.8%
Peru		0.1%	8.3%	-12.2%
Czech Republic		0.1%	33.0%	10.3%
Hungary		0.1%	2.9%	-12.1%
Columbia		0.1%	-13.5%	-39.2%
		0.0%	-13.5%	-39.2%
Eqypt				
Total Emerging Countries		27.7%	4.0%	-10.7%
Total ACWIxUS Countries		100.0%	6.9%	-5.1%

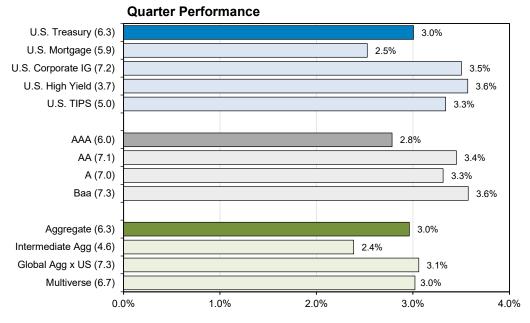
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

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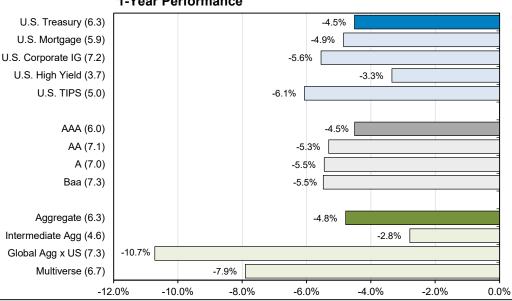


- After a challenging 2022 in fixed income markets brought on by the largest and most rapid increase in interest rates since the early 80's, the 1st quarter's positive bond benchmark results were a welcome relief. Despite two additional rate increases during the guarter, bond prices were aided by softening inflation and expectations that the Fed was nearing the end of its historic rate hiking cycle.
- The BB US Aggregate Bond Index, the bellwether US investment grade benchmark, returned a solid 3.0% for the period. Performance across the investment grade index's segments was also positive during the period with the US Corporate Investment Grade Index returning 3.5% and the US Mortgage Index component posting a return of 2.5%. Outside of the aggregate index's components, high yield bonds rose 3.6% and US TIPS posted a return of 3.3% for the quarter. The Bloomberg Global Aggregate ex US Index posted a similar return to the US bond benchmark with a return of 3.1% for the quarter.

- Over the trailing 1-year period, the BB US Aggregate Bond Index declined by -4.8% and each of the benchmark's sub-components fell in a narrow band above and below the broad index's return. US TIPS, which are excluded from the aggregate index, dropped by -6.1% for the year. Lower quality high yield corporate bonds, which have a much shorter duration, were down less than their investment grade counterparts with the Bloomberg US High Yield Index returning -3.3% for the year.
- Performance for non-US bonds was also negative for the year with the developed market Bloomberg Global Aggregate ex US Index falling by -The combination of rising interest rates, elevated inflation, geopolitical risks, and USD strength earlier in the year hindered non-US index performance.



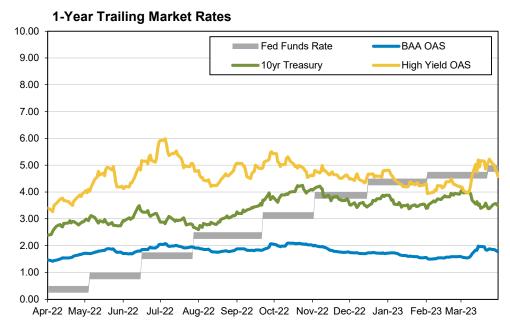
#### 1-Year Performance

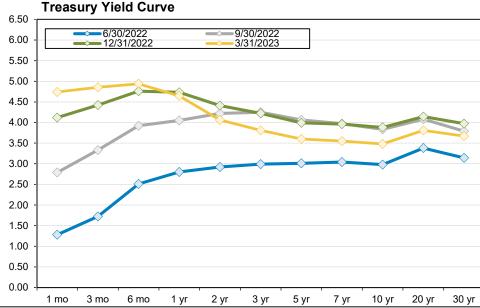


Source: Bloomberg



- The gray band across the graph illustrates the range of the current Fed Funds Rate. During the 1st quarter the Fed raised the lower end of its target rate range from 4.25% to 4.75% through two successive 0.25% increases in February and March. After its March meeting, the Federal Open Market Committee (FOMC) altered a phrase in its press release that had been included since the beginning of this rate increase cycle. Their revised release stated "some additional policy firming may be appropriate" and it removed "ongoing increases in the target range will be appropriate." The FOMC also stated that it would continue its policy of removing liquidity from the market by allowing bonds held on its balance sheet to mature without reinvesting those proceeds. While subtle, the capital market interpreted this change favorably in terms of the future path of interest rates.
- The yield on the US 10-year Treasury (green line) ended the period slightly lower as concerns over the state of the economy and March's banking disruption drove yields. The closing yield on the 10-Year Treasury was 3.88% at year-end but finished the quarter 0.40% lower at 3.48%. The benchmark's rate peaked in October, cresting at just over 4.00% before pulling back to its current level.
- 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-US Treasury investment grade issues. For the full year, the spread widened slightly from 1.42% to 1.80%. High Yield OAS spreads rose from roughly 3.27% at the beginning of the year to 4.74% at year-end. High yield spreads reached their highs in July 2022 at a level of 5.80% before trading lower the remainder of the year. A spike in both the BAA OAS and High Yield spreads is visible in March following a short-lived banking crisis of confidence addressed quickly by the FDIC and supported further by the Fed's aggressive short-term par loan program. Both spread measures traded lower on the news of the Government's intervention but were still elevated from pre-crisis levels at the end of the quarter.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. Short-term rates continued to rise during the 1st quarter as the Fed increased interest rates twice to combat elevated inflation. Despite these short-term rate increases, at the end of the quarter both intermediate and longer-term yields were slightly lower than they were at the end of the 3rd quarter of 2022. The yield curve remains inverted (short-term rates higher than long-term rates) between 2-year and 10-year maturities. Historically, a persistent inversion of these two key rates has been a precursor of an economic recession within 6- to 24-months.





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



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#### **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)	15
Guarded	1
Watch	0

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

#### **Plan Fund Observations and Comments**

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

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

#### **Fund Commentary**

The Hartford Mid Cap Fund remains on GUARDED status due to near term underperformance that has impacted longer term relative performance. The Fund continues to suffer from some significant underperformance experienced earlier during 2022. The fund did post exceptionally good performance during the first quarter as exposures to consumer discretionary, industrials and technology bounced back. We will continue to monitor the fund, 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
Allspring Small Co Growth R6 (WSCRX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Small Cap Index Adm (VSMAX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
AMG Managers Skyline Special Equities (SKSEX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hartford Mid Cap (HIMCX)	Guarded	Guarded	Pass	Pass	Pass	Pass	Pass	Pass	Guarded
Vanguard Mid Cap Index Adm (VIMAX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
American Funds Growth Fund of America (RGAGX)	Pass	Guarded	Pass						
Allspring Disciplined US Core (EVSIX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Institutional Index (VINIX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
American Century Equity Income (AEUDX)	Pass	Guarded	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	Pass	Pass	Pass	Pass	Pass
PIMCO Foreign Bond USD-Hedged (PFORX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hartford Total Return Bond (HIABX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Voya Fixed Account	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass



# **Historical Summary Evaluation**

Pass (Satisfactory)

Guarded

Watch

Investment Funds	4Q22	3Q22	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20
American Funds EuroPacific Growth (RERGX)	Pass								
Allspring Small Co Growth R6 (WSCRX)	Pass	Pass	Pass	Pass	Pass	Pass	Guarded	Guarded	Guarded
Vanguard Small Cap Index Adm (VSMAX)	Pass								
AMG Managers Skyline Special Equities (SKSEX)	Pass								
Hartford Mid Cap (HIMCX)	Guarded	Guarded	Guarded	Guarded	Pass	Pass	Pass	Guarded	Guarded
Vanguard Mid Cap Index Adm (VIMAX)	Pass								
American Funds Growth Fund of America (RGAGX)	Pass	Pass	Guarded	Guarded	Guarded	Pass	Pass	Pass	Pass
Allspring Disciplined US Core (EVSIX)	Pass	Pass	Pass	Pass	Pass	Pass	Guarded	Guarded	Pass
Vanguard Institutional Index (VINIX)	Pass								
American Century Equity Income (AEUDX)	Pass	Pass	Guarded	Guarded	Guarded	Guarded	Guarded	Pass	Pass
American Funds Target Date 2060-2010 R6	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								



	Mar-20	023	Dec-20	Dec-2022		Sep-2022	
	(\$)	%	(\$)	%	(\$)	%	
Total 457 Fund	190,854,267	100.00	186,584,228	100.00	179,732,107	100.00	
International Equity							
American Funds EuroPacific Growth (RERGX)	6,041,812	3.17	5,436,657	2.91	4,723,302	2.63	
Domestic Equity							
Allspring Small Co Growth (WSCRX)	2,387,505	1.25	2,234,601	1.20	2,133,480	1.19	
Vanguard Small Cap Index (VSMAX)	3,837,554	2.01	3,790,350	2.03	3,524,007	1.96	
AMG Managers Skyline Special Equities (SKSEX)	1,914,184	1.00	1,850,307	0.99	1,696,231	0.94	
Hartford Mid Cap (HIMCX)	8,384,597	4.39	7,919,433	4.24	7,411,814	4.12	
Vanguard Mid Cap Index (VIMAX)	6,853,324	3.59	6,643,689	3.56	6,184,373	3.44	
AF Growth Fund of America (RGAGX)	15,934,077	8.35	14,524,709	7.78	14,277,377	7.94	
Allspring Disciplined US Core (EVSIX)	12,414,457	6.50	11,825,281	6.34	11,042,943	6.14	
Vanguard Institutional Index (VINIX)	20,609,372	10.80	19,455,169	10.43	18,171,087	10.11	
American Century Equity Income (AEUDX)	6,989,713	3.66	7,112,800	3.81	6,586,245	3.66	
Balanced Fund							
American Funds American Balanced (RLBGX)	6,683,418	3.50	6,787,679	3.64	6,280,616	3.49	
Fixed Income							
PIMCO High Yield (PHIYX)	2,203,973	1.15	2,126,652	1.14	2,085,760	1.16	
PIMCO Foreign Bond USD-Hedged (PFORX)	475,407	0.25	484,327	0.26	447,918	0.25	
Hartford Total Return Bond (HIABX)	3,462,082	1.81	3,431,161	1.84	3,317,301	1.85	
Cash							
Voya Fixed Account	72,349,311	37.91	72,503,469	38.86	73,484,768	40.89	
Loan Account	1,031,772	0.54	2,128,479	1.14	2,231,297	1.24	



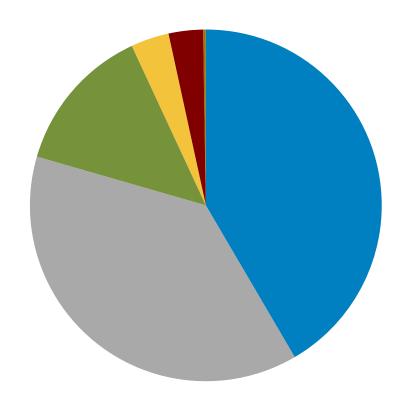
	Mar-2023		Dec-2	022	Sep-2	022
	(\$)	%	(\$)	%	(\$)	%
American Funds 2060 TD Fund R6 (RFUTX)	282,447	1.46	243,967	1.33	190,687	1.18
American Funds 2055 TD Fund R6 (RFKTX)	305,826	1.59	252,309	1.38	196,027	1.22
American Funds 2050 TD Fund R6 (RFITX)	2,412,678	12.51	2,171,389	11.85	1,890,192	11.72
American Funds 2045 TD Fund R6 (RFHTX)	1,718,914	8.91	1,469,959	8.02	1,268,260	7.86
American Funds 2040 TD Fund R6 (RFGTX)	4,869,492	25.25	4,631,800	25.27	4,122,173	25.55
American Funds 2035 TD Fund R6 (RFFTX)	1,600,398	8.30	1,435,707	7.83	1,296,369	8.04
American Funds 2030 TD Fund R6 (RFETX)	4,706,769	24.41	4,582,783	25.00	3,860,378	23.93
American Funds 2025 TD Fund R6 (RFDTX)	1,716,173	8.90	1,944,528	10.61	1,854,676	11.50
American Funds 2020 TD Fund R6 (RRCTX)	1,515,203	7.86	1,473,661	8.04	1,357,283	8.41
American Funds 2015 TD Fund R6 (RFJTX)	36,405	0.19	31,180	0.17	13,838	0.09
American Funds 2010 TD Fund R6 (RFTTX)	117,402	0.61	92,183	0.50	83,706	0.52
Target Date Funds Total	19,281,707	100.00	18,329,465	100.00	16,133,589	100.00



As of March 31, 2023

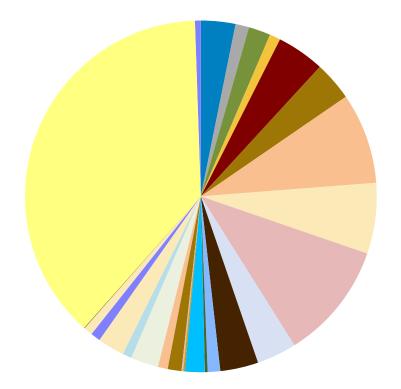
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Allocation		
	Market Value	Allocation
■ US Equity	79,324,784	41.6
■ Cash	72,349,311	37.9
US Balanced	25,965,126	13.6
US Fixed Income	6,697,826	3.5
■ International Equity	6,041,812	3.2
International Fixed Income	475,407	0.2





Mar-2023: \$190,854,267



location	Markat Value	Allo oot!
	Market Value	Allocation
American Funds EuroPacific Growth (RERGX)	6,041,812	3.2
Allspring Small Co Growth (WSCRX)	2,387,505	1.3
Vanguard Small Cap Index (VSMAX)	3,837,554	2.0
AMG Managers Skyline Special Equities (SKSEX)	1,914,184	1.0
Hartford Mid Cap (HIMCX)	8,384,597	4.4
Vanguard Mid Cap Index (VIMAX)	6,853,324	3.6
AF Growth Fund of America (RGAGX)	15,934,077	8.3
Allspring Disciplined US Core (EVSIX)	12,414,457	6.5
Vanguard Institutional Index (VINIX)	20,609,372	10.8
American Century Equity Income (AEUDX)	6,989,713	3.7
American Funds American Balanced (RLBGX)	6,683,418	3.5
PIMCO High Yield (PHIYX)	2,203,973	1.2
PIMCO Foreign Bond USD-Hedged (PFORX)	475,407	0.2
Hartford Total Return Bond (HIABX)	3,462,082	1.8
American Funds 2060 TD Fund R6 (RFUTX)	282,447	0.1
American Funds 2055 TD Fund R6 (RFKTX)	305,826	0.2
American Funds 2050 TD Fund R6 (RFITX)	2,412,678	1.3
American Funds 2045 TD Fund R6 (RFHTX)	1,718,914	0.9
American Funds 2040 TD Fund R6 (RFGTX)	4,869,492	2.6
American Funds 2035 TD Fund R6 (RFFTX)	1,600,398	0.8
American Funds 2030 TD Fund R6 (RFETX)	4,706,769	2.5
American Funds 2025 TD Fund R6 (RFDTX)	1,716,173	0.9
American Funds 2020 TD Fund R6 (RRCTX)	1,515,203	0.8
American Funds 2015 TD Fund R6 (RFJTX)	36,405	0.0
American Funds 2010 TD Fund R6 (RFTTX)	117,402	0.1
Voya Fixed Account	72,349,311	37.9
Loan Account	1,031,772	0.5



Asset Allocation Attributes						
	Mar-2	023	Dec-2	Dec-2022		022
	(\$)	%	(\$)	%	(\$)	%
Total 401(a) Fund	13,192,698	100.00	12,950,276	100.00	12,529,003	100.00
International Equity						
American Funds EuroPacific Growth (RERGX)	334,299	2.53	300,579	2.32	260,099	2.08
Domestic Equity						
Allspring Small Co Growth (WSCRX)	127,037	0.96	118,018	0.91	111,538	0.89
Vanguard Small Cap Index (VSMAX)	293,483	2.22	303,561	2.34	279,052	2.23
AMG Managers Skyline Special Equities (SKSEX)	365,817	2.77	349,390	2.70	328,129	2.62
Hartford Mid Cap (HIMCX)	603,143	4.57	584,517	4.51	534,387	4.27
Vanguard Mid Cap Index (VIMAX)	486,939	3.69	487,803	3.77	443,717	3.54
American Funds Growth Fund of America (RGAGX)	924,808	7.01	845,276	6.53	828,553	6.61
Allspring Disciplined US Core (EVSIX)	810,013	6.14	751,070	5.80	705,237	5.63
Vanguard Institutional Index (VINIX)	1,556,640	11.80	1,449,158	11.19	1,327,415	10.59
American Century Equity Income (AEUDX)	513,044	3.89	510,306	3.94	461,022	3.68
Balanced Fund						
American Funds American Balanced (RLBGX)	879,835	6.67	847,232	6.54	812,770	6.49
Fixed Income						
PIMCO High Yield (PHIYX)	114,715	0.87	115,099	0.89	108,925	0.87
PIMCO Foreign Bond USD-Hedged (PFORX)	73,519	0.56	76,443	0.59	74,761	0.60
Hartford Total Return Bond (HIABX)	187,016	1.42	184,988	1.43	180,802	1.44
Cash						
Voya Fixed Account	4,644,118	35.20	4,762,088	36.77	4,931,425	39.36
Loan Account	83,813	0.64	134,815	1.04	130,500	1.04



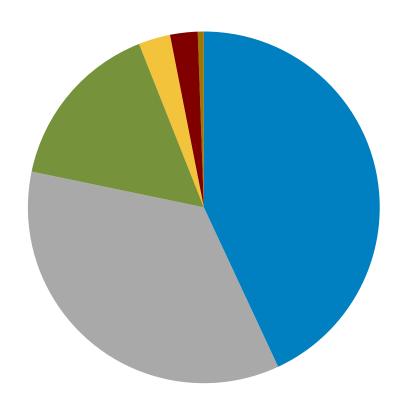
Asset Allocation Attributes			_			
	Mar-2	2023	Dec-2	2022	Sep-2	022
	(\$)	%	(\$)	%	(\$)	%
American Funds 2060 TD Fund R6 (RFUTX)	18,837	1.58	16,542	1.46	14,067	1.39
American Funds 2055 TD Fund R6 (RFKTX)	-	0.00	-	0.00	-	0.00
American Funds 2050 TD Fund R6 (RFITX)	72,626	6.08	88,351	7.82	77,264	7.64
American Funds 2045 TD Fund R6 (RFHTX)	10,146	0.85	8,021	0.71	5,874	0.58
American Funds 2040 TD Fund R6 (RFGTX)	192,002	16.07	173,057	15.32	150,203	14.86
American Funds 2035 TD Fund R6 (RFFTX)	195,193	16.34	170,768	15.11	143,602	14.21
American Funds 2030 TD Fund R6 (RFETX)	413,108	34.59	390,449	34.56	358,303	35.45
American Funds 2025 TD Fund R6 (RFDTX)	196,163	16.42	185,841	16.45	170,200	16.84
American Funds 2020 TD Fund R6 (RRCTX)	-	0.00	-	0.00	-	0.00
American Funds 2015 TD Fund R6 (RFJTX)	6	0.00	7	0.00	7	0.00
American Funds 2010 TD Fund R6 (RFTTX)	96,379	8.07	96,898	8.58	91,152	9.02
Target Date Funds Total	1,194,460	100.00	1,129,934	100.00	1,010,672	100.00



As o	f Ma	rch	31,	2023
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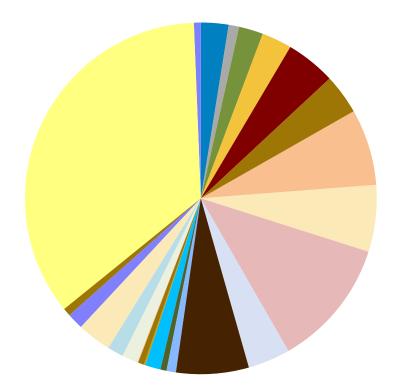
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Allocation		
	Market Value	Allocation
■ US Equity	5,680,924	43.1
■ Cash	4,644,118	35.2
US Balanced	2,074,295	15.7
US Fixed Income	385,544	2.9
■ International Equity	334,299	2.5
International Fixed Income	73,519	0.6





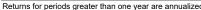
Mar-2023 : \$13,192,698



llocation		
	Market Value	Allocation
American Funds EuroPacific Growth (RERGX)	334,299	2.5
Allspring Small Co Growth (WSCRX)	127,037	1.0
Vanguard Small Cap Index (VSMAX)	293,483	2.2
AMG Managers Skyline Special Equities (SKSEX)	365,817	2.8
Hartford Mid Cap (HIMCX)	603,143	4.6
Vanguard Mid Cap Index (VIMAX)	486,939	3.7
American Funds Growth Fund of America (RGAGX)	924,808	7.0
Allspring Disciplined US Core (EVSIX)	810,013	6.1
Vanguard Institutional Index (VINIX)	1,556,640	11.8
American Century Equity Income (AEUDX)	513,044	3.9
American Funds American Balanced (RLBGX)	879,835	6.7
PIMCO High Yield (PHIYX)	114,715	0.9
PIMCO Foreign Bond USD-Hedged (PFORX)	73,519	0.6
Hartford Total Return Bond (HIABX)	187,016	1.4
American Funds 2060 TD Fund R6 (RFUTX)	18,837	0.1
American Funds 2055 TD Fund R6 (RFKTX)	-	0.0
American Funds 2050 TD Fund R6 (RFITX)	72,626	0.6
American Funds 2045 TD Fund R6 (RFHTX)	10,146	0.1
American Funds 2040 TD Fund R6 (RFGTX)	192,002	1.5
American Funds 2035 TD Fund R6 (RFFTX)	195,193	1.5
American Funds 2030 TD Fund R6 (RFETX)	413,108	3.1
American Funds 2025 TD Fund R6 (RFDTX)	196,163	1.5
American Funds 2020 TD Fund R6 (RRCTX)	-	0.0
American Funds 2015 TD Fund R6 (RFJTX)	6	0.0
American Funds 2010 TD Fund R6 (RFTTX)	96,379	0.7
Voya Fixed Account	4,644,118	35.2
Loan Account	83,813	0.6



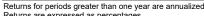
Comparative Performance														
	Q.	TR	Υ٦	ΓD	1 \	′R	3 \	/R	5 `	/R	7	YR	10	YR
International Equity														
American Funds EuroPacific Growth (RERGX)	9.87	(25)	9.87	(25)	-3.26	(68)	12.13	(56)	3.25	(42)	7.02	(18)	5.99	(1)
MSCI EAFE (Net) Index	8.47	(51)	8.47	(51)	-1.38	(51)	12.99	(46)	3.52	(31)	6.21	(34)	5.00	(21)
IM International Large Cap Core Equity (MF) Median	8.49	,	8.49		-1.25		12.49		3.03		5.54	, ,	4.32	,
Domestic Equity														
Allspring Small Co Growth (WSCRX)	7.09	(35)	7.09	(35)	-8.28	(21)	18.82	(18)	7.12	(43)	10.75	(44)	N/A	
Russell 2000 Growth Index	6.07	(54)	6.07	(54)	-10.60	(43)	13.36	(70)	4.26	(84)	8.74	(76)	8.49	(68)
IM U.S. Small Cap Growth Equity (MF) Median	6.24		6.24		-11.42		15.45		6.89		10.37		9.14	
Vanguard Small Cap Index (VSMAX)	3.74	(27)	3.74	(27)	-9.33	(65)	19.67	(67)	6.76	(24)	9.48	(22)	9.19	(21)
Vanguard Spliced Small Cap Index	3.71	(27)	3.71	(27)	-9.39	(66)	19.63	(67)	6.74	(24)	9.45	(22)	9.17	(21)
IM U.S. Small Cap Core Equity (MF) Median	2.71		2.71		-8.33		21.16		5.52		8.31		8.01	
AMG Managers Skyline Special Equities (SKSEX)	4.04	(9)	4.04	(9)	-6.62	(44)	25.68	(51)	5.02	(63)	7.04	(76)	7.73	(46)
Russell 2000 Value Index	-0.66	(75)	-0.66	(75)	-12.96	(89)	21.01	(92)	4.55	(70)	7.86	(61)	7.22	(58)
IM U.S. Small Cap Value Equity (MF) Median	0.68		0.68		-7.14		25.68		5.66		8.16		7.57	
Hartford Mid Cap (HIMCX)	6.23	(6)	6.23	(6)	-10.33	(86)	13.41	(96)	5.63	(77)	9.49	(31)	10.16	(11)
Russell Midcap Index	4.06	(28)	4.06	(28)	-8.78	(76)	19.20	(54)	8.05	(27)	9.88	(18)	10.05	(12)
IM U.S. Mid Cap Core Equity (MF) Median	2.31		2.31		-6.60		19.49		6.91		8.51		8.47	
Vanguard Mid Cap Index (VIMAX)	3.87	(30)	3.87	(30)	-9.86	(83)	18.73	(64)	8.13	(23)	9.92	(17)	10.17	(11)
Vanguard Spliced Mid Cap Index	3.87	(30)	3.87	(30)	-9.85	(83)	18.75	(64)	8.15	(23)	9.94	(17)	10.21	(10)
IM U.S. Mid Cap Core Equity (MF) Median	2.31		2.31		-6.60		19.49		6.91		8.51		8.47	
American Funds Growth Fund of America (RGAGX)	11.27	(72)	11.27	(72)	-13.47	(59)	14.64	(49)	9.24	(78)	12.37	(61)	12.19	(62)
Russell 1000 Growth Index	14.37	(37)	14.37	(37)	-10.90	(25)	18.58	(8)	13.66	(8)	15.01	(8)	14.59	(7)
IM U.S. Large Cap Growth Equity (MF) Median	13.68		13.68		-12.88		14.60		10.72		12.72		12.57	
Allspring Disciplined US Core (EVSIX)	7.70	(25)	7.70	(25)	-7.97	(54)	18.98	(12)	10.27	(51)	11.43	(57)	11.96	(24)
S&P 500 Index	7.50	(30)	7.50	(30)	-7.73	(50)	18.60	(18)	11.19	(23)	12.42	(19)	12.24	(15)
IM U.S. Large Cap Core Equity (MF) Median	6.60		6.60		-7.77		17.55		10.27		11.55		11.28	
Vanguard Institutional Index (VINIX)	7.49	(31)	7.49	(31)	-7.76	(50)	18.57	(19)	11.16	(23)	12.39	(20)	12.21	(16)
S&P 500 Index	7.50	(30)	7.50	(30)	-7.73	(50)	18.60	(18)	11.19	(23)	12.42	(19)	12.24	(15)
IM U.S. Large Cap Core Equity (MF) Median	6.60		6.60		-7.77		17.55		10.27		11.55		11.28	
American Century Equity Income (AEUDX)	0.53	(44)	0.53	(44)	-2.88	(20)	13.89	(98)	7.43	(68)	8.62	(77)	N/A	
Russell 1000 Value Index	1.01	(33)	1.01	(33)	-5.91	(67)	17.93	(54)	7.50	(67)	9.02	(68)	9.13	(58)
IM U.S. Large Cap Value Equity (MF) Median	0.15		0.15		-4.96		18.15		8.02		9.60		9.36	





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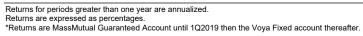
	Q <sup>-</sup>	TR	YTD		1 YR		3 '	YR	5 YR		7 YR		10 YR	
Balanced Fund														
American Funds 2060 TD Fund R6 (RFUTX)	6.38	(47)	6.38	(47)	-7.22	(50)	13.20	(82)	7.01	(1)	9.31	(N/A)	N/A	
S&P Target Date 2060 Index	6.46	(42)	6.46	(42)	-5.85	(2)	14.98	(27)	6.87	(15)	8.90	(N/A)	8.38	(N/A)
IM Mixed-Asset Target 2065+ (MF) Median	6.36		6.36		-7.24		14.46		6.62		N/A		N/A	
American Funds 2055 TD Fund R6 (RFKTX)	6.36	(47)	6.36	(47)	-7.11	(50)	13.31	(79)	7.07	(8)	9.36	(3)	9.08	(1)
S&P Target Date 2055 Index	6.42	(42)	6.42	(42)	-5.85	(6)	14.98	(12)	6.83	(17)	8.81	(26)	8.34	(18)
IM Mixed-Asset Target 2055 (MF) Median	6.34		6.34		-7.11		14.19		6.29		8.42		7.81	
American Funds 2050 TD Fund R6 (RFITX)	6.15	(57)	6.15	(57)	-6.93	(40)	13.54	(71)	7.20	(4)	9.44	(1)	9.14	(1)
S&P Target Date 2050 Index	6.40	(41)	6.40	(41)	-5.87	(7)	14.78	(16)	6.78	(19)	8.69	(30)	8.22	(21)
IM Mixed-Asset Target 2050 (MF) Median	6.23		6.23		-7.15		14.09		6.25		8.37		7.68	
American Funds 2045 TD Fund R6 (RFHTX)	5.89	(64)	5.89	(64)	-6.72	(35)	13.53	(62)	7.24	(3)	9.43	(1)	9.14	(1)
S&P Target Date 2045 Index	6.33	(39)	6.33	(39)	-5.78	(7)	14.39	(29)	6.66	(22)	8.49	(39)	8.01	(27)
IM Mixed-Asset Target 2045 (MF) Median	6.14		6.14		-7.05		13.93		6.17		8.28		7.53	
American Funds 2040 TD Fund R6 (RFGTX)	5.68	(61)	5.68	(61)	-6.45	(29)	13.37	(32)	7.20	(1)	9.31	(1)	9.05	(1)
S&P Target Date 2040 Index	6.08	(40)	6.08	(40)	-5.68	(7)	13.59	(24)	6.42	(21)	8.17	(38)	7.74	(33)
IM Mixed-Asset Target 2040 (MF) Median	5.90		5.90		-6.95		12.96		5.86		7.97		7.38	
American Funds 2035 TD Fund R6 (RFFTX)	5.08	(69)	5.08	(69)	-6.10	(27)	12.33	(18)	6.86	(1)	8.89	(1)	8.73	(1)
S&P Target Date 2035 Index	5.68	(46)	5.68	(46)	-5.40	(7)	12.27	(23)	5.99	(23)	7.65	(39)	7.31	(31)
IM Mixed-Asset Target 2035 (MF) Median	5.59		5.59		-6.71		11.53		5.47		7.40		6.91	
American Funds 2030 TD Fund R6 (RFETX)	4.52	(69)	4.52	(69)	-5.45	(19)	10.02	(27)	6.03	(1)	7.79	(1)	7.96	(1)
S&P Target Date 2030 Index	5.18	(46)	5.18	(46)	-4.82	(10)	10.46	(15)	5.43	(19)	6.95	(37)	6.72	(27)
IM Mixed-Asset Target 2030 (MF) Median	5.04		5.04		-6.32		9.63		4.93		6.63		6.28	
American Funds 2025 TD Fund R6 (RFDTX)	3.70	(77)	3.70	(77)	-4.99	(15)	8.50	(27)	5.51	(1)	6.81	(7)	7.16	(1)
S&P Target Date 2025 Index	4.72	(47)	4.72	(47)	-4.41	(8)	8.75	(20)	4.91	(20)	6.26	(35)	6.12	(23)
IM Mixed-Asset Target 2025 (MF) Median	4.62		4.62		-5.87		7.88		4.41		5.86		5.54	
American Funds 2020 TD Fund R6 (RRCTX)	3.11	(92)	3.11	(92)	-4.51	(4)	7.32	(35)	4.99	(3)	5.95	(12)	6.29	(3)
S&P Target Date 2020 Index	4.53	(37)	4.53	(37)	-4.36	(2)	6.90	(58)	4.26	(43)	5.45	(55)	5.44	(44)
IM Mixed-Asset Target 2020 (MF) Median	4.37		4.37		-5.75		7.01		4.16		5.57		5.29	
American Funds 2015 TD Fund R6 (RFJTX)	2.83	(91)	2.83	(91)	-4.27	(1)	7.01	(18)	4.78	(2)	5.52	(7)	5.76	(1)
S&P Target Date 2015 Index	4.28	(41)	4.28	(41)	-4.01	(1)	6.30	(46)	4.12	(31)	5.06	(60)	4.99	(54)
IM Mixed-Asset Target 2015 (MF) Median	4.22		4.22		-5.50		6.21		3.93		5.17		5.05	
American Funds 2010 TD Fund R6 (RFTTX)	2.59	(91)	2.59	(91)	-3.68	(1)	6.46	(16)	4.54	(1)	5.20	(4)	5.30	(1)
S&P Target Date 2010 Index	4.12	(32)	4.12	(32)	-3.47	(1)	5.40	(47)	3.83	(39)	4.54	(56)	4.42	(47)
IM Mixed-Asset Target 2010 (MF) Median	3.86		3.86		-4.98		5.27		3.60		4.69		4.31	



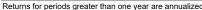
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	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
American Funds American Balanced (RLBGX)	2.87	(82)	2.87	(82)	-5.57	(30)	9.83	(47)	6.69	(11)	7.82	(24)	8.17	(7)
American Balanced Fund Hybrid	5.22	(37)	5.22	(37)	-5.95	(37)	7.75	(63)	6.32	(17)	6.81	(40)	6.94	(31)
IM All Balanced (MF) Median	4.59		4.59		-6.44		9.37		4.67		6.12		5.80	
Fixed Income														
PIMCO High Yield (PHIYX)	3.98	(9)	3.98	(9)	-2.65	(22)	4.56	(75)	2.94	(32)	4.24	(48)	3.72	(23)
ICE BofA U.S. High Yield Index	3.72	(23)	3.72	(23)	-3.60	(47)	5.82	(39)	3.04	(27)	5.01	(16)	4.02	(13)
IM U.S. High Yield Bonds (MF) Median	3.29		3.29		-3.75		5.45		2.58		4.20		3.27	
PIMCO Foreign Bond USD-Hedged (PFORX)	2.85	(29)	2.85	(29)	-3.68	(8)	-0.43	(14)	1.02	(3)	2.01	(1)	2.74	(1)
Bloomberg Global Aggregate	3.01	(22)	3.01	(22)	-8.07	(61)	-3.43	(68)	-1.34	(37)	-0.27	(34)	0.07	(21)
IM International Fixed Income (MF) Median	2.58		2.58		-6.26		-2.46		-2.86		-0.93		-1.07	
Hartford Total Return Bond (HIABX)	3.24	(35)	3.24	(35)	-4.95	(32)	-1.13	(23)	1.26	(20)	1.67	(8)	1.80	(10)
Blmbg. U.S. Aggregate Index	2.96	(68)	2.96	(68)	<b>-</b> 4.78	(22)	-2.77	(86)	0.90	(43)	0.88	(59)	1.36	(45)
IM U.S. Broad Market Core Fixed Income (MF) Median	3.14		3.14		-5.31		-1.85		0.85		0.99		1.32	
Cash														
Voya Fixed Account*	0.49	(72)	0.49	(72)	1.67	(63)	1.85	(28)	2.27	(10)	2.69	(1)	3.08	(1)
Morningstar US CIT Stable Value	0.64	(27)	0.64	(27)	2.12	(22)	1.97	(17)	2.15	(13)	2.08	(14)	1.98	(22)
IM U.S. GIC/Stable Value (SA+CF) Median	0.56		0.56		1.84		1.68		1.86		1.78		1.59	



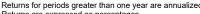
Comparative Performance										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
International Equity										
American Funds EuroPacific Growth (RERGX)	-22.72 (100)	2.84 (96)	25.27 (1)	27.40 (4)	-14.91 (49)	31.17 (10)	1.01 (37)	-0.48 (22)	-2.29 (11)	20.58 (46)
MSCI EAFE (Net) Index	-14.45 (39)	11.26 (39)	7.82 (67)	22.01 (52)	-13.79 (25)	25.03 (50)	1.00 (37)	-0.81 (29)	-4.90 (27)	22.78 (16)
IM International Large Cap Core Equity (MF) Median	-15.06	10.74	9.07	22.06	-15.00	25.00	-0.04	-1.95	-6.01	20.42
Domestic Equity										
Allspring Small Co Growth (WSCRX)	-24.21 (28)	15.68 (30)	28.87 (67)	26.55 (55)	-3.57 (30)	20.68 (51)	7.76 (72)	-4.33 (71)	N/A	N/A
Russell 2000 Growth Index	-26.36 (44)	2.83 (82)	34.63 (56)	28.48 (47)	-9.31 (73)	22.17 (43)	11.32 (43)	-1.38 (34)	5.60 (22)	43.30 (45)
IM U.S. Small Cap Growth Equity (MF) Median	-27.54	10.53	36.55	27.69	-5.57	20.72	10.11	-2.35	2.77	42.49
Vanguard Small Cap Index (VSMAX)	-17.61 (71)	17.73 (84)	19.11 (17)	27.37 (16)	-9.31 (18)	16.24 (14)	18.30 (79)	-3.64 (39)	7.50 (13)	37.81 (43)
Vanguard Spliced Small Cap Index	-17.64 (71)	17.71 (84)	19.07 (17)	27.35 (17)	-9.33 (18)	16.24 (14)	18.26 (80)	-3.68 (40)	7.54 (13)	37.77 (44)
IM U.S. Small Cap Core Equity (MF) Median	-15.78	25.12	9.89	23.94	-12.71	12.09	21.66	-4.35	4.71	36.85
AMG Managers Skyline Special Equities (SKSEX)	-15.33 (97)	32.93 (43)	3.29 (54)	28.64 (7)	-19.00 (80)	8.39 (51)	21.32 (84)	-6.05 (33)	4.02 (38)	51.59 (3)
Russell 2000 Value Index	-14.48 (96)	28.27 (73)	4.63 (35)	22.39 (28)	-12.86 (23)	7.84 (60)	31.74 (17)	-7.47 (57)	4.22 (35)	34.52 (71)
IM U.S. Small Cap Value Equity (MF) Median	-11.09	31.97	3.57	21.05	-16.08	8.46	26.70	-7.05	3.41	36.46
Hartford Mid Cap (HIMCX)	-24.30 (95)	9.91 (100)	25.10 (7)	32.87 (16)	-7.44 (12)	24.47 (2)	11.98 (72)	1.60 (6)	11.37 (27)	39.82 (14)
Russell Midcap Index	-17.32 (88)	22.58 (68)	17.10 (17)	30.54 (31)	-9.06 (21)	18.52 (25)	13.80 (57)	-2.44 (31)	13.22 (9)	34.76 (49)
IM U.S. Mid Cap Core Equity (MF) Median	-13.21	25.73	8.44	28.59	-11.64	14.94	14.51	-3.74	8.88	34.49
Vanguard Mid Cap Index (VIMAX)	-18.71 (93)	24.51 (60)	18.24 (15)	31.03 (27)	-9.23 (22)	19.25 (19)	11.22 (76)	-1.34 (23)	13.76 (6)	35.15 (47)
Vanguard Spliced Mid Cap Index	-18.68 (93)	24.52 (60)	18.24 (15)	31.09 (27)	-9.22 (22)	19.30 (19)	11.25 (76)	-1.28 (23)	13.83 (6)	35.21 (46)
IM U.S. Mid Cap Core Equity (MF) Median	-13.21	25.73	8.44	28.59	-11.64	14.94	14.51	-3.74	8.88	34.49
American Funds Growth Fund of America (RGAGX)	-30.49 (38)	19.69 (67)	38.28 (36)	28.54 (89)	-2.60 (64)	26.53 (74)	8.82 (2)	5.70 (49)	9.63 (61)	34.29 (48)
Russell 1000 Growth Index	-29.14 (27)	27.60 (17)	38.49 (34)	, ,	-1.51 (54)	30.21 (39)	7.08 (10)	5.67 (49)	13.05 (24)	33.48 (57)
IM U.S. Large Cap Growth Equity (MF) Median	-31.30	22.39	35.62	33.26	-1.22	29.28	2.21	5.61	10.49	34.12
Allspring Disciplined US Core (EVSIX)	-17.82 (42)	30.94 (8)	16.47 (62)	29.04 (67)	-8.08 (88)	20.88 (59)	12.09 (18)	2.53 (22)	15.69 (4)	33.97 (21)
S&P 500 Index	-18.11 (45)	28.71 (25)	18.40 (50)	31.49 (36)	-4.38 (32)	21.83 (45)	11.96 (20)	1.38 (35)	13.69 (18)	32.39 (37)
IM U.S. Large Cap Core Equity (MF) Median	-18.72	26.95	18.39	30.64	-5.45	21.45	9.70	0.53	11.51	31.77
Vanguard Institutional Index (VINIX)	-18.14 (46)	28.67 (26)	18.39 (50)	31.46 (37)	-4.42 (32)	21.79 (45)	11.93 (20)	1.37 (35)	13.65 (18)	32.35 (38)
S&P 500 Index	-18.11 (45)	28.71 (25)	18.40 (50)	31.49 (36)	-4.38 (32)	21.83 (45)	11.96 (20)	1.38 (35)	13.69 (18)	32.39 (37)
IM U.S. Large Cap Core Equity (MF) Median	-18.72	26.95	18.39	30.64	-5.45	21.45	9.70	0.53	11.51	31.77
American Century Equity Income (AEUDX)	-2.90 (18)	17.27 (98)	1.43 (80)	24.64 (74)	-4.17 (18)	13.83 (82)	19.88 (6)	0.94 (6)	12.84 (14)	N/A
Russell 1000 Value Index	-7.54 (66)	25.16 (63)	2.80 (61)	26.54 (50)	-8.27 (45)	13.66 (82)	17.34 (17)	-3.83 (69)	13.45 (8)	32.53 (44)
IM U.S. Large Cap Value Equity (MF) Median	-6.10	25.96	3.82	26.50	-8.61	16.95	13.85	-3.00	10.82	32.11





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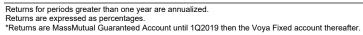
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Balanced Fund										
American Funds 2060 TD Fund R6 (RFUTX)	-19.66 (91)	17.19 (48)	19.44 (1)	25.01 (61)	-5.64 (1)	22.49 (N/A)	8.41 (N/A)	N/A	N/A	N/A
S&P Target Date 2060 Index	-16.01 (7)	18.05 (34)	13.99 (73)	24.73 (84)	-7.95 (7)	20.75 (N/A)	10.08 (N/A)	-0.66 (N/A)	5.64 (N/A)	24.96 (N/A)
IM Mixed-Asset Target 2065+ (MF) Median	-18.59	17.15	16.23	26.28	-9.37	N/A	N/A	N/A	N/A	N/A
American Funds 2055 TD Fund R6 (RFKTX)	-19.50 (87)	17.28 (46)	19.39 (7)	25.09 (40)	-5.65 (3)	22.63 (5)	8.30 (48)	0.63 (1)	7.01 (22)	26.59 (1)
S&P Target Date 2055 Index	-15.97 (10)	18.19 (25)	13.86 (71)	24.48 (63)	-7.97 (38)	20.48 (66)	9.94 (7)	-0.54 (20)	5.64 (45)	24.96 (26)
IM Mixed-Asset Target 2055 (MF) Median	-18.31	17.18	15.65	24.84	-8.48	21.12	8.25	-1.67	5.43	23.21
American Funds 2050 TD Fund R6 (RFITX)	-18.89 (68)	17.27 (42)	19.42 (6)	25.04 (38)	-5.61 (2)	22.61 (6)	8.33 (44)	0.65 (1)	7.02 (18)	26.65 (1)
S&P Target Date 2050 Index	-15.97 (10)	17.99 (26)	13.86 (65)	24.35 (60)	-7.94 (35)	20.18 (67)	9.74 (14)	-0.47 (16)	5.69 (46)	24.13 (33)
IM Mixed-Asset Target 2050 (MF) Median	-18.30	16.99	15.54	24.67	-8.54	20.80	8.10	-1.63	5.61	23.08
American Funds 2045 TD Fund R6 (RFHTX)	-18.18 (52)	17.18 (37)	19.21 (5)	24.68 (48)	-5.58 (3)	22.44 (6)	8.27 (47)	0.64 (1)	7.09 (14)	26.51 (2)
S&P Target Date 2045 Index	-15.84 (12)	17.52 (25)	13.66 (69)	24.02 (63)	-7.74 (36)	19.56 (73)	9.54 (13)	-0.46 (18)	5.67 (43)	23.14 (46)
IM Mixed-Asset Target 2045 (MF) Median	-18.15	16.67	15.38	24.61	-8.19	20.65	8.15	-1.65	5.55	23.07
American Funds 2040 TD Fund R6 (RFGTX)	-17.55 (41)	16.83 (15)	18.77 (5)	24.40 (30)	-5.52 (3)	21.98 (4)	8.17 (41)	0.58 (1)	6.96 (15)	26.66 (2)
S&P Target Date 2040 Index	-15.56 (11)	16.55 (20)	13.37 (69)	23.37 (57)	-7.41 (34)	18.87 (70)	9.23 (16)	-0.40 (15)	5.69 (41)	22.10 (46)
IM Mixed-Asset Target 2040 (MF) Median	-17.85	15.67	14.74	23.63	-7.97	19.74	7.95	-1.66	5.38	21.61
American Funds 2035 TD Fund R6 (RFFTX)	-16.24 (30)	15.54 (12)	17.55 (6)	23.29 (22)	-5.14 (4)	21.04 (3)	8.00 (44)	0.59 (1)	7.02 (11)	25.97 (1)
S&P Target Date 2035 Index	-14.99 (12)	14.93 (20)	12.79 (75)	22.18 (52)	-6.88 (44)	17.78 (71)	8.85 (15)	-0.35 (15)	5.69 (40)	20.84 (49)
IM Mixed-Asset Target 2035 (MF) Median	-17.05	13.84	14.15	22.26	-7.26	18.72	7.75	-1.53	5.40	20.78
American Funds 2030 TD Fund R6 (RFETX)	-14.50 (23)	13.16 (13)	15.16 (14)	20.06 (52)	-4.16 (5)	18.40 (11)	7.71 (38)	0.47 (1)	7.06 (7)	25.64 (1)
S&P Target Date 2030 Index	-13.96 (16)	12.61 (25)	11.91 (65)	20.38 (48)	-5.99 (42)	16.19 (61)	8.35 (19)	-0.30 (10)	5.64 (35)	19.14 (41)
IM Mixed-Asset Target 2030 (MF) Median	-16.21	11.44	12.86	20.08	-6.32	16.92	7.30	-1.47	5.18	17.87
American Funds 2025 TD Fund R6 (RFDTX)	-12.74 (15)	11.44 (14)	13.67 (23)	17.85 (57)	-3.47 (7)	15.33 (38)	7.36 (31)	0.13 (3)	6.66 (11)	23.76 (1)
S&P Target Date 2025 Index	-13.13 (21)	10.67 (27)	11.22 (64)	18.38 (47)	-5.02 (43)	14.55 (56)	7.82 (17)	-0.25 (11)	5.56 (39)	17.03 (35)
IM Mixed-Asset Target 2025 (MF) Median	-15.31	9.70	12.13	18.18	-5.23	14.95	6.87	-1.37	5.19	15.85
American Funds 2020 TD Fund R6 (RRCTX)	-11.01 (1)	10.64 (6)	10.99 (47)	15.59 (58)	-2.69 (4)	12.87 (46)	7.05 (28)	0.19 (2)	6.74 (3)	18.71 (1)
S&P Target Date 2020 Index	-12.81 (19)	8.76 (48)	10.24 (58)	16.52 (42)	-4.16 (41)	12.80 (48)	7.22 (25)	-0.19 (7)	5.67 (23)	14.76 (27)
IM Mixed-Asset Target 2020 (MF) Median	-14.37	8.70	10.90	15.97	-4.52	12.69	6.36	-1.44	4.72	11.84
American Funds 2015 TD Fund R6 (RFJTX)	-10.25 (1)	10.27 (3)	9.96 (64)	14.94 (58)	-2.72 (5)	11.19 (52)	7.55 (8)	-0.62 (18)	6.64 (3)	15.72 (1)
S&P Target Date 2015 Index	-12.16 (22)	8.01 (50)	10.28 (62)	15.40 (47)	-3.67 (41)	11.39 (49)	6.56 (44)	-0.16 (7)	5.49 (25)	12.16 (36)
IM Mixed-Asset Target 2015 (MF) Median	-13.71	8.00	11.37	15.22	-3.91	11.30	6.39	-1.30	4.49	10.38
American Funds 2010 TD Fund R6 (RFTTX)	-9.15 (1)	9.32 (1)	9.25 (74)	13.88 (57)	-2.49 (9)	10.41 (41)	7.45 (3)	-0.84 (27)	6.79 (1)	12.55 (1)
S&P Target Date 2010 Index	-11.44 (16)	6.54 (50)	9.95 (59)	14.30 (49)	-3.10 (25)	9.95 (66)	5.82 (59)	-0.21 (7)	5.07 (18)	9.42 (46)
IM Mixed-Asset Target 2010 (MF) Median	-12.72	5.80	10.43	14.19	-3.58	10.24	6.06	-1.20	4.11	8.67



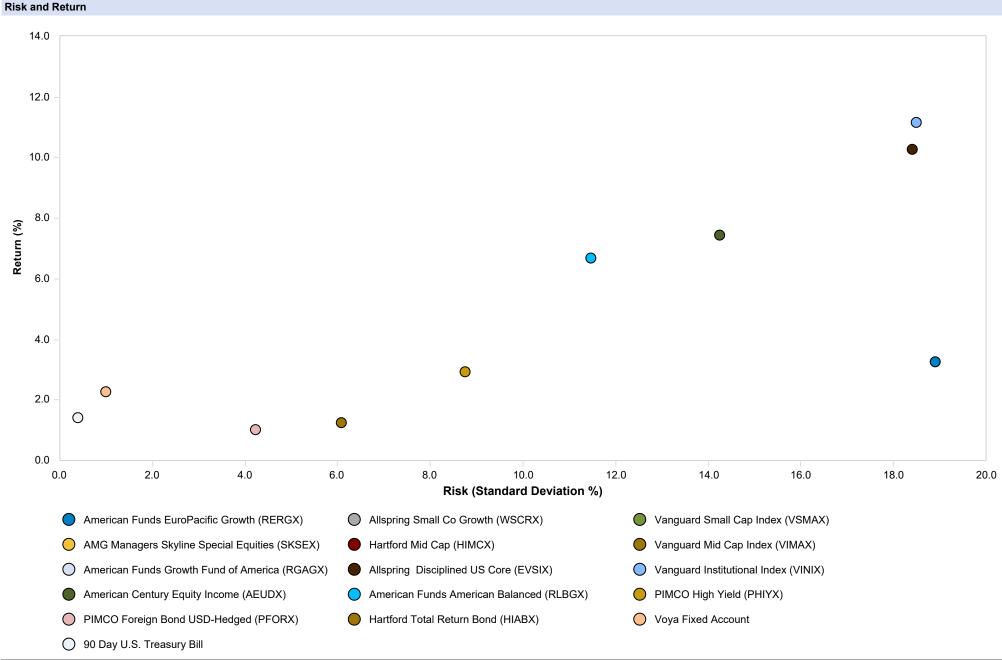


Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
\*Returns are MassMutual Guaranteed Account until 1Q2019 then the Voya Fixed account thereafter.

	202	22	20	21	20	20	20	19	20 <sup>-</sup>	18	20	17	20	16	20	15	20	14	20	13
American Funds American Balanced (RLBGX)	-11.83	(19)	16.11	(25)	11.22	(57)	19.55	(45)	-2.42	(7)	15.84	(39)	8.90	(18)	2.03	(3)	9.22	(6)	22.12	(20)
American Balanced Fund Hybrid	-15.26	(48)	12.80	(46)	13.66	(35)	19.89	(42)	-1.90	(5)	12.37	(62)	7.38	(39)	1.21	(4)	9.85	(4)	14.08	(56)
IM All Balanced (MF) Median	-15.51		11.99		12.01		18.63		-6.15		14.08		6.80		-1.58		4.75		15.39	
Fixed Income																				
PIMCO High Yield (PHIYX)	-10.76	(46)	4.06	(73)	5.31	(53)	14.94	(24)	-2.49	(32)	7.02	(35)	12.68	(70)	-1.88	(21)	3.31	(13)	5.77	(74)
ICE BofA U.S. High Yield Index	-11.25	(59)	5.35	(40)	6.17	(34)	14.41	(36)	-2.27	(27)	7.48	(21)	17.49	(5)	-4.64	(61)	2.50	(23)	7.42	(32)
IM U.S. High Yield Bonds (MF) Median	-10.94		4.93		5.43		13.83		-2.97		6.63		13.80		-3.96		1.50		6.72	
PIMCO Foreign Bond USD-Hedged (PFORX)	-9.84	(18)	-1.67	(8)	6.15	(57)	7.35	(34)	2.63	(7)	3.53	(69)	7.03	(7)	0.40	(9)	11.16	(3)	0.90	(17)
Bloomberg Global Aggregate	-16.25	(62)	-4.71	(41)	9.20	(28)	6.84	(42)	-1.19	(46)	7.39	(59)	2.09	(61)	-3.15	(24)	0.59	(52)	-2.60	(37)
IM International Fixed Income (MF) Median	-12.94		-5.39		6.55		6.64		-2.47		9.80		3.34		-5.82		0.63		-3.74	
Hartford Total Return Bond (HIABX)	-14.21	(70)	-0.95	(31)	9.03	(27)	10.65	(5)	-0.81	(61)	5.16	(5)	4.49	(11)	-0.59	(73)	5.89	(33)	-1.36	(28)
Blmbg. U.S. Aggregate Index	-13.01	(21)	-1.55	(60)	7.51	(73)	8.72	(53)	0.01	(18)	3.54	(54)	2.65	(62)	0.55	(20)	5.97	(27)	-2.02	(54)
IM U.S. Broad Market Core Fixed Income (MF) Median	-13.67		-1.33		8.15		8.76		-0.62		3.60		2.90		0.04		5.55		-1.97	
Cash																				
Voya Fixed Account*	1.47	(56)	1.73	(22)	2.19	(21)	2.97	(7)	3.38	(1)	3.67	(2)	3.94	(1)	4.00	(1)	4.00	(2)	4.00	(1)
Morningstar US CIT Stable Value	1.88	(17)	1.74	(21)	2.24	(16)	2.51	(22)	2.23	(16)	1.96	(21)	1.79	(36)	1.77	(34)	1.69	(43)	1.84	(31)
IM U.S. GIC/Stable Value (SA+CF) Median	1.54		1.43		2.01		2.30		2.00		1.68		1.60		1.45		1.38		1.47	







Calculation based on monthly periodicity.



Asset Class	2065+	2060	2055	2050	2045	2040	2035	2030	2025	2020	2015	2010
Equity Range												
Maximum	100%	100%	100%	100%	95%	90%	85%	80%	70%	65%	50%	45%
Minimum	60%	50%	50%	50%	45%	45%	40%	35%	20%	15%	10%	5%
Fixed Income Range												
Maximum	20%	20%	25%	30%	35%	40%	50%	55%	70%	75%	75%	80%
Minimum	0%	0%	0%	0%	0%	5%	10%	15%	20%	25%	30%	40%
Cash Range												
Maximum	20%	20%	20%	30%	30%	30%	30%	30%	30%	35%	35%	35%
Minimum	0%	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%	20%
Minimum	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Target Date Universe	39	48	48	48	49	50	50	49	49	37	37	37

#### 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.



Asset Class	2065	2060	2055	2050	2045	2040	2035	2030	2025	2020	2015	2010
Total Equity	83%	83%	83%	83%	82%	78%	67%	56%	48%	43%	40%	38%
Domestic Equity	57%	57%	57%	57%	56%	54%	47%	40%	34%	31%	29%	28%
			20%						10%	8%	29% 7%	7%
International Equity	20%	20%		20%	20%	19%	16%	12%				
Emerging Equity	6%	6%	6%	6%	6%	5%	4%	4%	4%	3%	3%	3%
	•••	-01	-0/	-01	400/	4001	/	2.01				
Total Fixed Income	8%	8%	8%	9%	10%	13%	23%	34%	42%	47%	50%	52%
Domestic Bonds	7%	7%	7%	8%	8%	11%	21%	30%	38%	42%	44%	47%
International Bonds	1%	1%	1%	1%	1%	2%	3%	4%	5%	5%	6%	5%
Cash	8%	8%	8%	8%	8%	8%	9%	10%	10%	10%	10%	10%
Other	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	101%	101%	101%	101%

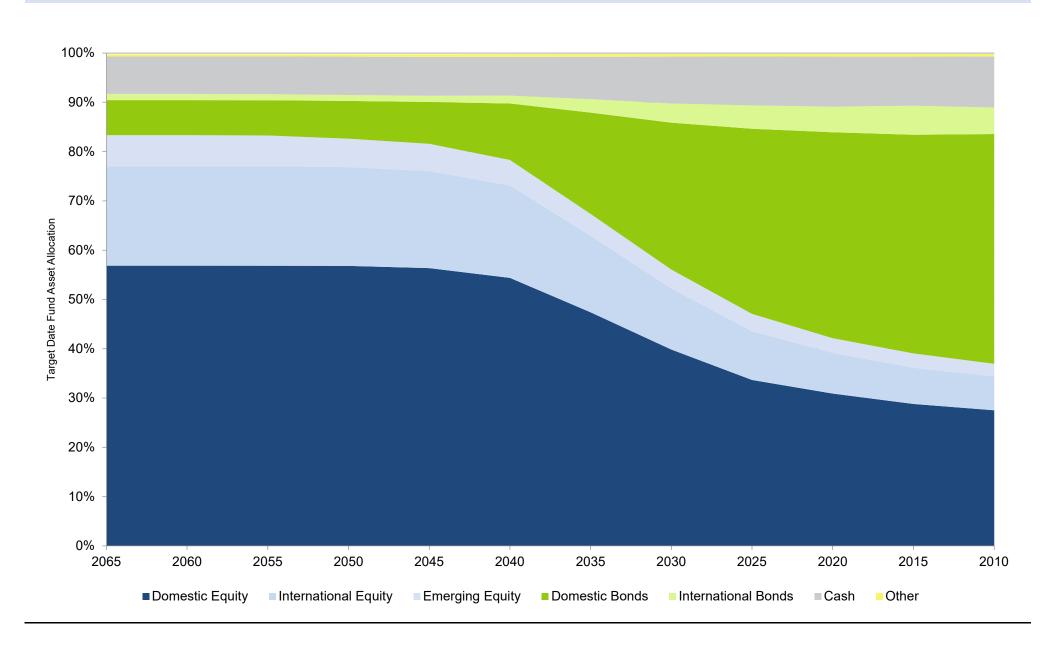
Terminal Equity Date:	30 years after Retirement
Active/Passive/Blend Allocation:	Active

## Morningstar Definitions:

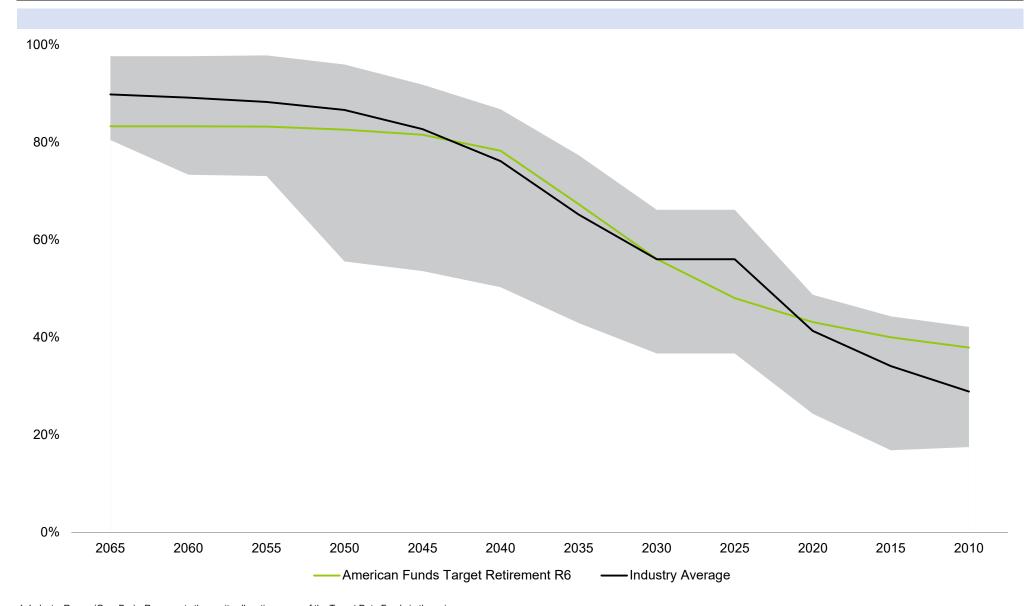
<sup>2.</sup> Other - The percentage of the fund's assets in other instruments. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.

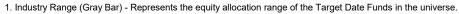


<sup>1.</sup> Cash - The percentage of the fund's assets in cash. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.









<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\* \$202,931,379

Number of Participants with a Balance (active and terminated) 3,356

Expense Type Estimates (annual)	Percent of Assets	Dollar Cost	% Cost	
Voya Recordkeeping fees	0.03%	\$60,879	0.03%	
AndCo Consulting fees		\$60,000	0.03%	
Total plan expenses		\$ 120,879	0.06%	
Revenue Sharing Estimates (annual)				
Revenue from participant annual fee	0.08%	\$162,345		
Net plan fee surplus (annual)		\$41,466	0.02%	
Annual average total plan recordkeeping and administrative cost per participant (gross	)**	\$48.37		



<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)	\$6,376,111	0.46%	\$29,330	0.00%	\$0
Allspring Small Co Growth (WSCRX)	\$2,514,542	0.86%	\$21,625	0.00%	\$0
Vanguard Small Cap Index (VSMAX)	\$4,131,037	0.05%	\$2,066	0.00%	\$0
AMG Managers Skyline Special Equities (SKSEX)	\$2,280,001	1.13%	\$25,764	0.25%	\$5,700
Hartford Mid Cap (HIMCX)	\$8,987,740	0.71%	\$63,813	0.25%	\$22,469
Vanguard Mid Cap Index (VIMAX)	\$7,340,263	0.05%	\$3,670	0.00%	\$0
AF Growth Fund of America (RGAGX)	\$16,858,885	0.29%	\$48,891	0.00%	\$0
Allspring Disciplined US Core (EVSIX)	\$13,224,470	0.48%	\$63,477	0.15%	\$19,837
Vanguard Institutional Index (VINIX)	\$22,166,012	0.04%	\$8,866	0.00%	\$0
American Century Equity Income (AEUDX)	\$7,502,757	0.58%	\$43,516	0.00%	\$0
American Funds Target 2060-2010 R6	\$20,476,167	0.33%	\$68,390	0.00%	\$0
American Funds American Balanced (RLBGX)	\$7,563,253	0.25%	\$18,908	0.00%	\$0
PIMCO High Yield (PHIYX)	\$2,318,688	0.56%	\$12,985	0.00%	\$0
PIMCO Foreign Bond USD-Hedged (PFORX)	\$548,926	0.51%	\$2,800	0.00%	\$0
Hartford Total Return Bond (HIABX)	\$3,649,098	0.50%	\$18,245	0.25%	\$9,123
Voya Fixed Account	\$76,993,429	0.00%	\$0	0.00%	\$0
TOTAL	\$202,931,379	0.21%	\$432,347	0.03%	\$57,129

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



Individuals serving as Trustees or Committee members are charged with certain fiduciary duties and responsibilities, designed to protect participants and their benefits. **Implementation and documentation of a prudent process** is key in mitigating fiduciary risk and successful plan governance.

The **Employee Retirement Income Security Act of 1974 (ERISA)** is administered by the Department of Labor and establishes high standards of conduct, transparency, and accountability. Regardless of whether your plan is subject to the legislation, it is common for plan documents to explicitly or implicitly reference the fiduciary standards of ERISA.

# **Overview of Fiduciary Duties**

Duties	Summary
Exclusive Benefit Rule	Decisions must be made in the best interest of plan participants, ensure fees are reasonable and customary, and avoid prohibited transactions (misuse of plan assets, party-in-interest transactions, self-dealing, etc).
Investment Diversification	Plan offerings must reflect a range of risk/return objectives and broad exposure to capital markets (eg. capital preservation, fixed income and equity).
Compliance with Plan Documents	Responsible for application of terms and conditions in governing plan documents.
Duty of Prudence	Must act with the "care, skill, prudence and diligence of a prudent person acting in a like capacity and familiar with such matters". This standard is expanded under the Prudent Expert standard, which states that the experience is not of a prudent lay person, but of an prudent fiduciary with experience dealing with a similar enterprise.
Test of Prudence	The test under ERISA is one of conduct and process, not of performance results.



# Other Fiduciary Responsibilities

- Retain and monitor service providers that assist in administering the plans consultant, administrator, recordkeeper, attorneys, auditor, clerical staff, etc.
- Maintain accurate records and complete required regulatory filings in a timely manner
- Manage participant communication, content, and effectiveness
- Receive ongoing education on fiduciary best practices, legislation, and compliance
- Report to Board, Council, City or other supervisory entity on the status and developments of the plan, as needed

# **Documentation of Prudent Process**

Establishing a framework of **documented procedural prudence** helps ensure consistency in oversight, decision-making, and is the best defense against breach of fiduciary duty allegations. Some key documents include:

- **Charter** Establishes and defines the responsibilities, scope of authority and delegation of duties to the oversight Board/Committee.
- **Investment Policy Statement (IPS)** Defines the objectives, roles and process by which investments are selected and monitored.
- Quarterly Investment Report Provides capital market information and feedback loop for how investments are performing based on IPS guidelines.
- **Meeting Minutes** Record highlighting key topics, discussions and decisions made by Board/Committee, reinforcing prudent process.



# Who are Fiduciaries

- Any individual which has discretionary authority or renders advice on plan management or utilization of plan assets, either directly or indirectly, need not be designated in writing
- Officers and Directors of Plan Sponsor
- Board/Committee Members
- Named Fiduciary in Plan Document

Fiduciaries may be held **professionally and personally liable** for their actions and should follow the duties of **LOYALTY**, **CARE**, and **PRUDENCE**.

# **Settlor Functions**

Business decisions related to the Plan are not subject to fiduciary standards and are considered settlor functions. Examples include:

- Decision to offer/terminate or amend the plan
- Elements of plan design such as level of benefits, matching, eligibility, loans/hardship provisions, etc.

Note that although a decision may be a settlor function, implementation may subsequently be subject to fiduciary standards.



# **Our Consulting Services Support Your Fiduciary Needs**

**Prudent Expert.** By partnering with AndCo, the Plan is demonstrating its commitment to the fiduciary standard of prudence by engaging with a prudent expert.

# **Consulting Services Overview**

As an independent consultant, AndCo provides clients a suite of fiduciary services structured to help design, implement and reinforce the Plan's documented prudent process.

- Investment Policy Statement (IPS) design, implementation, and review
- Design and structure of investment offerings
- Investment Manager selection and monitoring (discretionary or non-discretionary)
- QDIA/Asset Allocation evaluation, selection and monitoring
- Quarter Investment Report including IPS compliance of investment offerings, capital markets review, and fiduciary education modules
- Service provider fee benchmarking, negotiations and RFPs
- · Coordination with other Plan service providers on key initiatives
- Updates on industry trends, regulatory changes, and fiduciary best practices



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	Yes			
Review of plan investments and compliance with investment policy statement	Yes			
Fiduciary education	Yes			
Periodically				
Investment policy statement review	No			
Review QDIA selection	Yes			
Plan fee analysis	Yes			
Plan recordkeeping & administration services review	Yes			
Employee education review	Yes			
Review of ancillary products, if applicable (self-directed brokerage, managed accounts, etc.)				
Other Projects				



### **Fund Information**

Portfolio Manager : Ruedi/Whittaker

uedi/Whittaker Ticker :

PM Tenure : 2004--2004 Inception Date : 07/14/1997
Fund Assets : - Portfolio Turnover : 44%

## **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 Performanc	e - Trailing								
		QTR	YTD	1 YR	3 YR	5 YR	7 YR		10 YR
Hartford Mid Cap (HIMCX)		6.23 (6)	6.23 (6)	-10.33 (86)	13.41 (96)	5.63 (77)	9.49	(31) 10	.16 (11)
Russell Midcap Index		4.06 (28)	4.06 (28)	-8.78 (76)	19.20 (54)	8.05 (27)	9.88	(18) 10	.05 (12)
IM U.S. Mid Cap Core	Equity (MF) 1st Quartile	4.21	4.21	-4.63	21.36	8.10	9.70	9	.46
IM U.S. Mid Cap Core	Equity (MF) Median	2.31	2.31	-6.60	19.49	6.91	8.51	8	.47
IM U.S. Mid Cap Core	Equity (MF) 3rd Quartile	1.23	1.23	-8.75	18.06	5.72	7.50	7.	.53
Comparative Performance	ce - Calendar								
		2022	2021	2020	2019	2018	201	7	2016
Hartford Mid Cap (HIMCX)	)	-24.30 (95)	9.91 (100)	25.10 (7)	32.87 (16)	-7.44 (12)	24.47	(2) 11	.98 (72)
Russell Midcap Index		-17.32 (88)	22.58 (68)	17.10 (17)	30.54 (31)	-9.06 (21)	18.52	(25) 13	.80 (57)
IM U.S. Mid Cap Core	Equity (MF) 1st Quartile	-9.55	28.72	14.20	31.35	-9.97	18.51	18	.23
IM U.S. Mid Cap Core	Equity (MF) Median	-13.21	25.73	8.44	28.59	-11.64	14.94	14	.51
IM U.S. Mid Cap Core	Equity (MF) 3rd Quartile	-15.51	21.53	3.24	25.60	-14.53	12.36	11	.25
Comparative Performance	ce - Quarterly								
		Dec-2022	Sep-2022	Jun-2022	Mar-2022	Dec-2021	Sep-20	021 J	un-2021
Hartford Mid Cap (HIMCX)	)	8.77 (67)	-5.25 (75)	-18.09 (98)	-10.32 (99)	5.15 (92)	-3.52	(97) 2	.98 (97)
Russell Midcap Index		9.18 (60)	-3.44 (32)	-16.85 (91)	-5.68 (77)	6.44 (80)	-0.93	(52) 7	.50 (3)
IM U.S. Mid Cap Core	Equity (MF) 1st Quartile	11.73	-3.25	-11.52	-1.65	8.95	-0.19	6	.10
IM U.S. Mid Cap Core	Equity (MF) Median	9.63	-4.32	-13.63	-4.08	8.20	-0.87	5	.14
IM U.S. Mid Cap Core	Equity (MF) 3rd Quartile	8.52	-5.35	-15.27	-5.65	6.74	-1.72	4	.08
MPT Stats				Ranking vs. IM U.S. M	Mid Cap Core Equity	y (MF) 4 Quarters I	Rolling Periods		
	1 YR	3 YR	5 YR		Periods	5-25	25-Median	Median-75	75-95
Standard Deviation	24.86	21.77	21.88	Hartford Mid Cap (HIM	1CX) 28	14 (50%)	4 (14%)	2 (7%)	8 (29%
Downside Risk	18.17	12.46	14.82	Russell Midcap Index	28	11 (39%)	8 (29%)	5 (18%)	4 (14%
vs. Russell Midcap Index				Ranking vs. IM U.S. M	Mid Cap Core Equity	/ (MF) 12 Quarters	Rolling Periods		
Alpha	-1.27	-5.73	-2.32	ramang vor mi oron	Periods	5-25	25-Median	Median-75	75-95
Beta	1.03	1.06	1.02	Hartford Mid Cap (HIM		23 (82%)	0 (0%)	0 (0%)	5 (18%
Down Market Capture	103.55	111.49	105.60	Russell Midcap Index	•	23 (82%)	2 (7%)	3 (11%)	0 (0%)
Information Ratio	-0.36	-1.05	-0.48	rasson middap maex	20	20 (02/0)	2 (170)	3 (1170)	0 (070)
Tracking Error	4.02	4.49	4.44	Ranking vs. IM U.S. M	did Can Cara Equit	, (ME) 20 Quartara	Polling Pariods		
Up Market Capture	99.84	93.53	97.48	Mariking VS. IIVI U.S. I			=		75.05
				Lloutford Mid Com /LUN	Periods	5-25	25-Median	Median-75	75-95
vs. 90 Day U.S. Treasury E				Hartford Mid Cap (HIM	,	24 (86%)	0 (0%)	3 (11%)	1 (4%)
Sharpe Ratio	-0.41	0.65	0.30	Russell Midcap Index	28	26 (93%)	2 (7%)	0 (0%)	0 (0%)



<b>Portfolio Characteristics</b>								<b>Top Ten Equity Holdings</b>				
		Portfol				enchmark			Port.	Bench.	Qtr	Contr.
Wtd. Avg. Mkt. Cap (\$)		11,227,57	*			,290,914,118			Wt	Wt	Rtrn	Rtrn
Median Mkt. Cap (\$)		9,354,58	-		9,	,436,963,515		Axon Enterprise Inc	2.8	0.2	35.5	1.0
Price/Earnings ratio			17.3			17.3		Shift4 Payments Inc	2.4	0.0	35.5	0.8
Price/Book ratio			3.4			3.0		NVR Inc.	2.3	0.2	20.8	0.5
5 Yr. EPS Growth Rate (%)	)		21.9			16.6		Insulet Corporation	2.2	0.2	8.3	0.2
Current Yield (%)			0.7			1.7		WEX Inc	2.2	0.1	12.4	0.3
Beta (5 Years, Monthly)			1.02			1.00		Genpact Ltd	1.9	0.1	0.1	0.0
Number of Stocks			103			814		IDEX Corp	1.7	0.2	1.4	0.0
								Markel Corp	1.7	0.2	-3.0	-0.1
								Nuvei Corp	1.6	0.0	71.3	1.2
								United Therapeutics Corp	1.6	0.1	-19.5	-0.3
<b>Buy and Hold Sector Attri</b>	bution - 1 Qtr	•						Ten Best Performers				
		cation		rmance		Attribution			Port.	Bench.	Qtr.	Contr.
	Portfolio	Benchmark	Portfolio	Benchmark	Sector	Stock	Total	- N	Wt	Wt	Rtrn	Rtrn
Communication Services	2.0	3.5	21.32	15.42	-0.17	0.11	-0.06	Nuvei Corp	1.6	0.0	71.3	1.2
Consumer Discretionary	12.6	12.0	9.97	8.02	0.01	0.23	0.25	Roku Inc	0.6	0.1	61.7	0.4
Consumer Staples	0.3	3.6	12.34	3.47	0.05	0.01	0.05	First Solar Inc	1.3	0.2	45.2	0.6
Energy	6.0	5.0	-7.29	-7.89	-0.13	0.04	-0.09	Monolithic Power Systems Inc		0.2	41.8	0.2
Financials	8.4	14.0	-16.54	-6.92	0.66	-0.88	-0.21	Exact Sciences Corporation	1.5	0.1	37.0	0.6
Health Care	19.1	10.7	0.32	3.43	-0.07	-0.61	-0.68	Builders FirstSource Inc	1.1	0.1	36.8	0.4
Industrials	21.3	15.9	10.73	7.92	0.21	0.57	0.78	Shift4 Payments Inc	2.4	0.0	35.5	8.0
Information Technology	22.9	15.6	15.91	13.29	0.68	0.53	1.21	Axon Enterprise Inc	2.8	0.2	35.5	1.0
Materials	5.6	6.4	5.27	4.10	-0.01	0.07	0.06	Wingstop Inc	1.3	0.0	33.5	0.4
Real Estate	1.1	7.6	6.44	0.49	0.23	0.07	0.30	CarGurus Inc	0.6	0.0	33.3	0.2
Utilities	0.9	5.7	-4.95	-1.70	0.29	-0.03	0.27					

<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	0.0	3.5	0.00	6.40	-0.16	0.00	-0.16	First Republic Bank	0.1	0.0	-88.5	-0.1
Large Neutral	0.0	2.3	0.00	0.37	0.12	0.00	0.12	Ovintiv Inc	8.0	0.1	-28.4	-0.2
Large Value	0.0	2.1	0.00	-1.21	0.11	0.00	0.11	United Therapeutics Corp	1.6	0.1	-19.5	-0.3
Mid Growth	15.9	15.8	12.27	10.32	-0.06	0.25	0.19	M&T Bank Corp	1.0	0.2	-16.9	-0.2
Mid Neutral	36.2	31.2	6.33	5.19	0.09	0.47	0.56	Alnylam Pharmaceuticals Inc	0.8	0.3	-15.7	-0.1
Mid Value	25.9	33.6	-3.86	0.03	0.35	-0.98	-0.63	Neurocrine Biosciences Inc	0.7	0.1	-15.3	-0.1
Small Growth	3.6	0.4	15.12	16.53	0.39	-0.06	0.34	Berkley (W.R.) Corp	0.5	0.1	-13.5	-0.1
Small Neutral	5.6	0.8	12.22	5.50	0.13	0.35	0.49	Ultragenyx Pharmaceutical Inc	8.0	0.0	-13.4	-0.1
Small Value	4.8	1.6	17.86	1.89	-0.12	0.83	0.70	CommScope Holding Co Inc	0.1	0.0	-13.3	0.0
Unclassified	8.0	8.6	6.81	4.84	0.01	0.16	0.16	Marathon Oil Corp	1.2	0.2	-11.2	-0.1
Total	100.0	100.0	5.94	4.06	0.85	1.03	1.87					

0.11

1.87

1.76

4.06



Total

100.0

100.0

5.94

## **Historical Activity**

### Sep-2020

Hotchkis & Wiley Mid Cap Value (HWMIX) fund removed from the fund line-up.

#### 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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