

Executive Summary  
Period Ending September 30, 2022

# Town of Palm Beach Retirement System DC

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# 3rd Quarter 2022 Market Environment



## The Economy

- Broadly, global markets declined during the 3rd quarter as inflation remained elevated, causing global central banks further drain liquidity from the market, and geopolitical risks increased as the conflict in Ukraine escalated.
- While inflation moderated slightly in the US, it showed signs of increasing, especially in Europe, where UK and German inflation reached multi-decade highs. US CPI was 8.3% in August, down from 9.1% at the end of the 2nd quarter.
- The US Federal Reserve Bank (the Fed) continued to increase interest rates during the quarter by raising 0.75% at the July and September meetings. Importantly, the Fed signaled it was committed to fight inflation by additional rate hikes if needed.
- The US labor market showed its resiliency during the quarter by adding an estimated 1.1 million jobs. As a result, the unemployment rate fell to 3.5% in September. The number of workers re-entering the workforce increased slightly during the period as wage growth remained strong.
- Real estate markets were under pressure during the quarter as rising interest rates pushed mortgages to their highest levels since 2007. As of September, the average 30-year fixed mortgage was roughly 6.7%, up from roughly 3.0% last year at the same time.

## Equity (Domestic and International)

- US equities declined during the 3rd quarter as concerns regarding inflation, the path of interest rates, and a slowing global economy acted as headwinds. Small cap growth was the best performing domestic segment of the equity market relative to other US market capitalizations and styles during the period while large cap value performed the worst.
- Momentum was decidedly negative in international stocks during the 3rd quarter. The escalating conflict in Ukraine, rising inflation in Europe, and tightening monetary policy all contributed to the decline. The continued strength of the US dollar, which rose against most major developed market and emerging market currencies, also acted as a headwind. Finally, China continued its zero-tolerance policy regarding Covid-19, which led to additional restrictions.

## Fixed Income

- While inflation fell slightly during the quarter, the Fed continued increasing interest rates which acted as a headwind for fixed income performance during the quarter. US interest rates moved significantly higher during the quarter with the US 10-Year Treasury bond rising 83 basis points to close at 3.80%.
- Performance across all bond market sectors was negative during the quarter, with US high yield corporate bonds and US Treasury bonds down the least.
- The combination of higher coupons and a shorter maturity profile relative to high quality government bonds was the primary driver of the relative outperformance of high yield bonds during the period.
- US Treasury bonds declined less than other investment grade bond market sectors during the quarter. During periods of increased volatility, investors have historically preferred the safety of government bonds over those with credit risk.

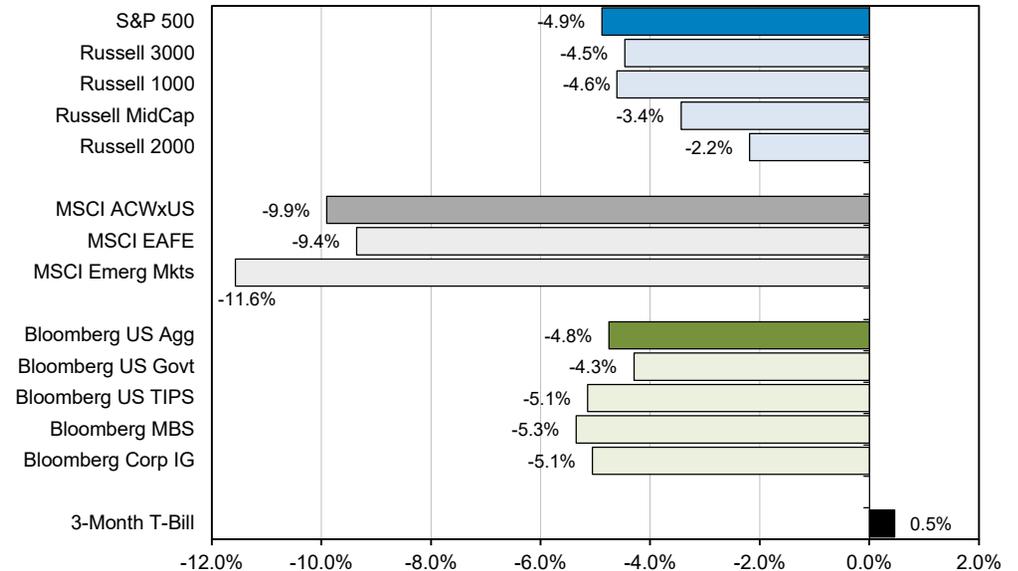
## Market Themes

- Central banks remained hawkish during the quarter with several banks raising interest rates to fight higher inflation. The Fed, the Bank of England, and European Central Bank all raised rates during the quarter. Additionally, the Fed is currently allowing bonds to mature without reinvesting (quantitative tightening), while other banks are also considering similar actions. The outcome would be additional liquidity from the market.
- The escalating crisis in Ukraine spilled over as several gas pipelines were attacked in the Baltic Sea. The result was further disruption of energy supplies to Europe, Germany in particular. Energy costs have risen significantly since the start of the conflict which have negatively impacted economic activity in the region.
- US equity markets experienced their third consecutive quarter of negative performance during the 3rd quarter. Growth-oriented stocks outperformed value stocks as investors believe the Fed will begin slowing the rise of interest rates as economic growth declines. Historically, growth stocks have outperformed value stocks as the economy reaches the trough following a recession.
- Interest rates rose across the Treasury yield curve during the quarter as the Fed hiked interest rates by 0.75% at both the July and September meetings. The 3rd quarter marks the third consecutive quarter the bond market has suffered negative absolute returns. Long-term mortgage and investment grade corporate bonds underperformed during the quarter given their maturity profiles. High yield bonds outperformed primarily due to their shorter maturity profile and higher coupons.

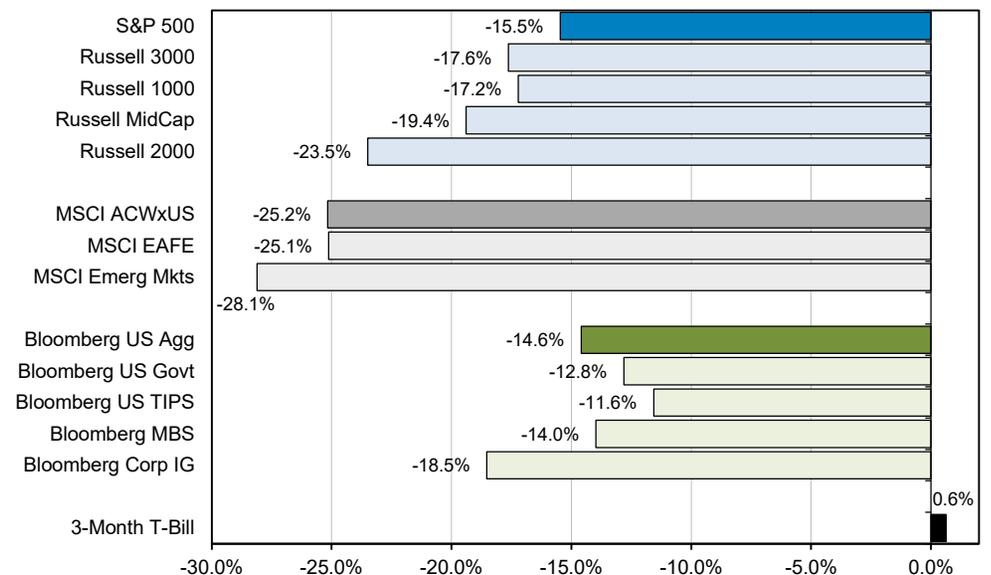


- Negative momentum continued during the 3rd quarter as broad US equity markets experienced negative returns. Factors that contributed to performance included elevated inflation, tighter monetary policy, continued geopolitical events in Ukraine, and expectations of slower economic growth. For the period, the S&P 500 large cap benchmark returned -4.9%, compared to -3.4% for mid-cap and -2.2% for small cap indices.
- Like domestic equities, developed markets international equities also suffered negative results for the 3rd quarter. Europe was negatively impacted by higher-than-expected inflation, the conflict in Ukraine, uncertainty regarding energy supplies, and rising interest rates. Emerging markets were also negatively impacted by war in Ukraine and a strengthening USD. During the period, the MSCI EAFE Index returned -9.4% while the MSCI Emerging Markets Index declined by -11.6%.
- For the quarter, performance of the bond market was broadly negative due to continued concerns about inflation and the FOMC's decision to raise interest rates twice during the period. The Bloomberg (BB) US Aggregate Index returned -4.8%, for the period while Investment Grade Corporate bonds posted a return of -5.1%.
- Performance for developed equity markets was strongly negative over the trailing 1-year period. The primary drivers of return during the period were weakening global economic growth, more restrictive monetary policy from global central banks, and elevated inflation. The S&P 500 large cap stock index led equity market performance for the year with a return of -15.5%. The outlier was the MSCI ACWI ex-US index which declined by -25.2% for the year.
- Over the trailing 1-year period, international markets fell with the developed market MSCI EAFE Index returning -25.1% while the MSCI Emerging Markets Index fell by -28.1%. Global economic growth slowed throughout the year and both developed and emerging markets were negatively impacted by a strong USD and continued geopolitical concerns.
- Bond market returns disappointed over the trailing 1-year period due primarily to concerns about rising inflation and the expectation of higher future interest rates. US TIPS were the best performing sector returning -11.6% while investment grade corporate bonds was the worst, falling -18.5%.

### Quarter Performance



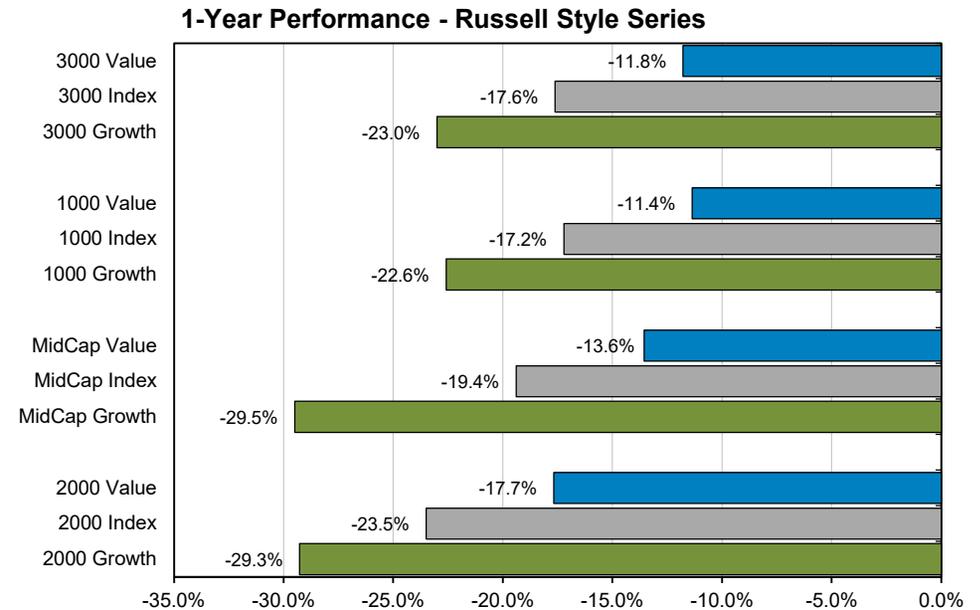
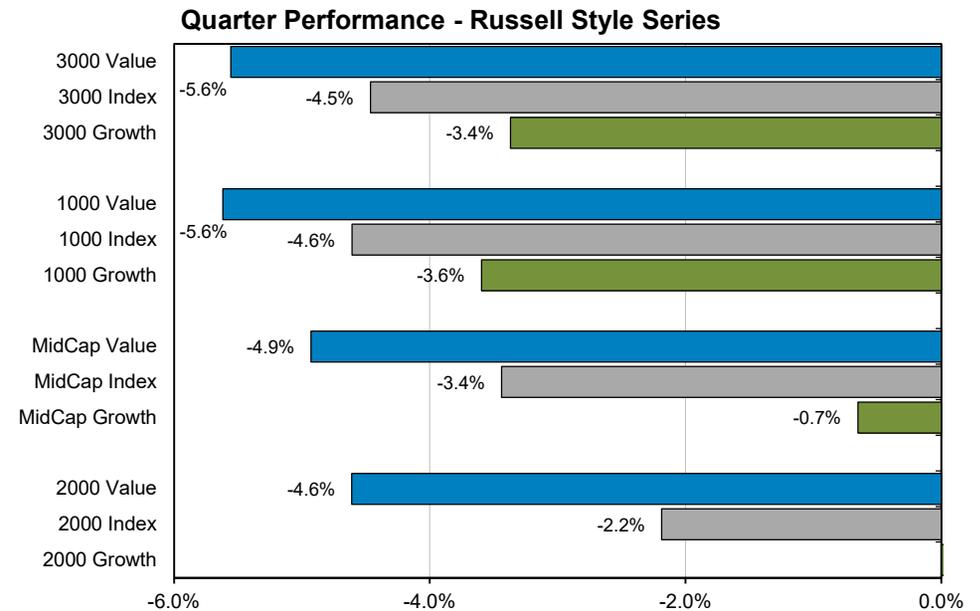
### 1-Year Performance



Source: Investment Metrics



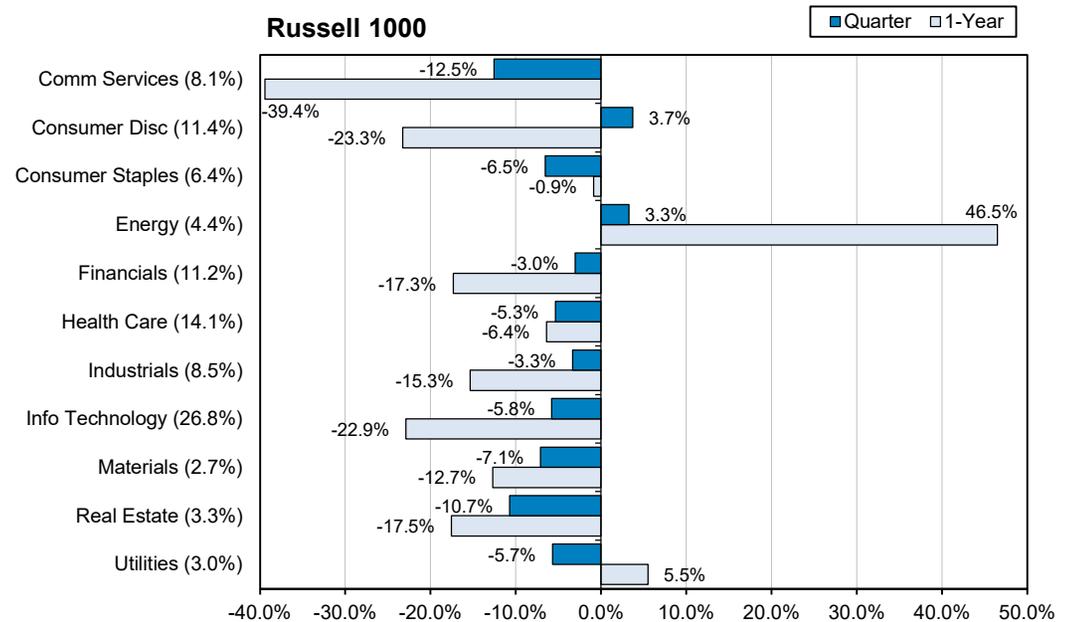
- Volatility was high during the 3rd quarter as broad US equity markets rose sharply before falling to close the period with negative results across both the style and market capitalization spectrums. Leadership switched during the quarter with small cap stocks outperforming, followed by mid and large cap issues. The Russell 2000 Index declined by -2.2% for the quarter while the Russell Mid Cap Index and the Russell 1000 Index fell by -3.4% and -4.6%, respectively.
- Performance across styles and market capitalizations was disparate during the quarter. Large, mid, and small cap growth stocks all outperformed their value counterparts. For the period, the Russell 2000 Growth Index was the best relative performing style index, posting a return of 0.0%. Large and mid cap value stocks were the laggards during the period with the Russell Large Cap Value Index and Russell Mid Cap Value Index falling by -5.6% and -4.9%, respectively.
- Performance across all market capitalizations and styles was negative over the trailing 1-year period. Unlike the 3rd quarter, large cap stocks outperformed mid and small cap stocks for the year. The Russell 1000 Index return of -17.2% for the year, significantly outperformed both its mid and small cap growth index counterparts. The outlier during the period was the Russell 2000 Index which returned -23.5%.
- There was wide performance dispersion within across all style-based indexes. Value significantly outperformed growth over the year. Within large cap stocks, the Russell 1000 Value returned -11.4% compared to -22.6% for the Russell 1000 Growth benchmark. The Russell Mid Cap Value Index returned -13.6% while the Russell 2000 Value Index returned -17.7% for the period. In comparison, the Russell Mid Cap Growth Index returned -29.5%, while the Russell 2000 Growth Index declined by -29.3%.



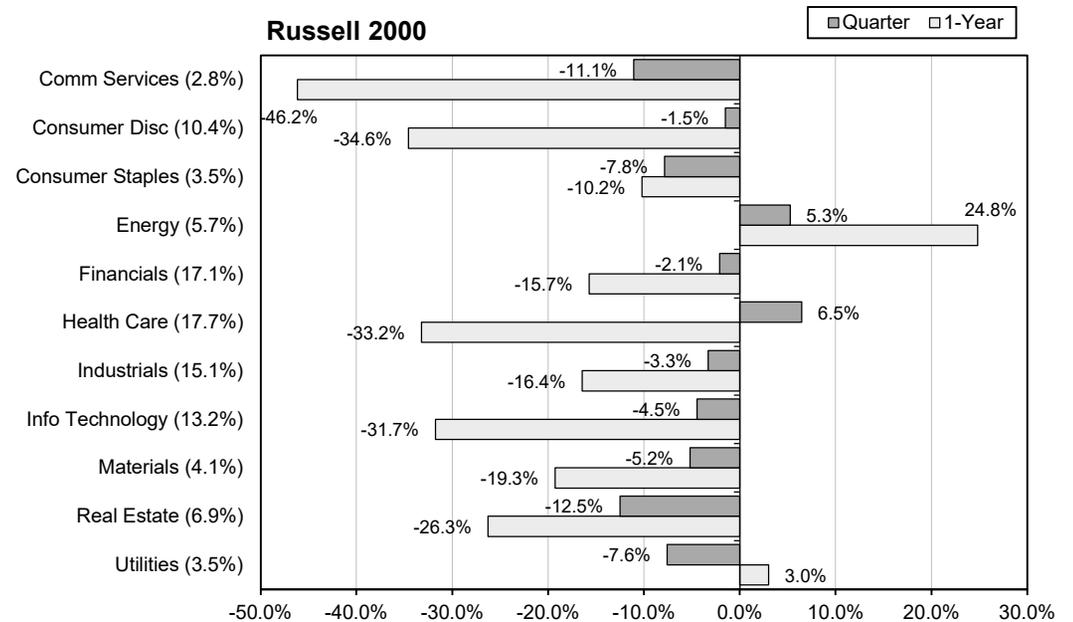
Source: Investment Metrics



- Economic sector performance was negative across nine of the eleven large cap economic sectors for the 3rd quarter. Four sectors outpaced the return of the broad index on a relative basis during the period.
- Consumer Discretionary (3.7%) and Energy (3.3%) were the only sectors with positive absolute performance during the period. Additionally, Financials (-3.0%) and Industrials (-3.3%) outperformed the broad index. Strong consumer demand acted as a tailwind for consumer-related stocks during the quarter. Energy continued its relative outperformance as the price of oil remained elevated.
- For the full year, six sectors exceeded the return of the broad large cap benchmark: Energy (46.5%), Utilities (5.5%), Consumer Staples (-0.9%), Health Care (-6.4%), Materials (-12.7%), and Industrials (-15.3%). The weakest economic sector performance in the Russell 1000 for the year was Communication Services which declined by returns (-39.4%).



- Small cap sector performance was also mixed during the quarter with two economic sectors posting positive performance relative to return of the broader Russell 2000 Index (-2.2%). Health Care (6.5%), and Energy (5.3%) were the best performing sectors for the period. Real Estate (-12.5%), and Communication Services (-11.1%) were the worst performing sectors for the quarter.
- For the trailing 1-year period, six of the eleven sectors outpaced the broad benchmark's return. Not surprisingly, sector performance was led by Energy (24.8%), Utilities (3.0%), Consumer Staples (-10.2%), Financials (-15.7%), and Industrials (-16.4%). The weakest sector over the full year was Communication Services (-46.2%), followed by Consumer Discretionary (-34.6%).



Source: Morningstar Direct  
 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.



**The Market Environment**  
**Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000**  
As of September 30, 2022

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.31%	1.22%	-1.79%	Information Technology
Microsoft Corp	5.21%	-9.12%	-16.69%	Information Technology
Amazon.com Inc	3.00%	6.39%	-31.20%	Consumer Discretionary
Tesla Inc	2.02%	18.17%	2.61%	Consumer Discretionary
Alphabet Inc Class A	1.72%	-12.22%	-28.45%	Communication Services
Alphabet Inc Class C	1.55%	-12.09%	-27.85%	Communication Services
Berkshire Hathaway Inc Class B	1.44%	-2.20%	-2.17%	Financials
UnitedHealth Group Inc	1.41%	-1.36%	30.94%	Health Care
Johnson & Johnson	1.28%	-7.35%	3.82%	Health Care
Exxon Mobil Corp	1.09%	2.91%	55.15%	Energy

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Signify Health Inc Ordinary Shares	0.01%	111.23%	63.12%	Health Care
First Solar Inc	0.04%	94.14%	38.56%	Information Technology
Wolfspeed Inc	0.04%	62.90%	28.03%	Information Technology
Penumbra Inc	0.02%	52.26%	-28.86%	Health Care
Oak Street Health Inc Ordinary Shares	0.01%	49.15%	-42.35%	Health Care
Sarepta Therapeutics Inc	0.03%	47.47%	19.53%	Health Care
Constellation Energy Corp	0.08%	45.54%	N/A	Energy
The Trade Desk Inc Class A	0.08%	42.64%	-15.01%	Information Technology
Nutanix Inc Class A	0.01%	42.38%	-44.75%	Information Technology
Enphase Energy Inc	0.11%	42.12%	85.02%	Energy

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Sotera Health Co Ordinary Shares	0.00%	-65.2%	-73.9%	Health Care
Novavax Inc	0.00%	-64.6%	-91.2%	Health Care
Spectrum Brands Holdings Inc	0.00%	-52.1%	-58.4%	Consumer Staples
AMC Entertainment Holdings Inc	0.01%	-48.6%	-81.7%	Communication Services
WeWork Inc	0.00%	-47.2%	N/A	Real Estate
The Scotts Miracle Gro Co A	0.01%	-45.4%	-70.1%	Materials
AppLovin Corp Ordinary Shares	0.01%	-43.4%	-73.1%	Information Technology
Azenta Inc	0.01%	-40.6%	-58.1%	Health Care
NCR Corp	0.01%	-38.9%	-51.0%	Information Technology
Enhabit Inc Shs	0.00%	-38.9%	N/A	Health Care

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
ShockWave Medical Inc	0.45%	45.5%	35.1%	Health Care
Biohaven Pharmaceutical Holding Co	0.43%	3.7%	8.8%	Health Care
Chart Industries Inc	0.31%	10.1%	-3.5%	Industrials
Karuna Therapeutics Inc	0.30%	77.8%	83.9%	Health Care
Apellis Pharmaceuticals Inc	0.28%	51.0%	107.2%	Health Care
Murphy USA Inc	0.28%	18.2%	65.3%	Consumer Discretionary
Texas Roadhouse Inc	0.27%	19.8%	-2.4%	Consumer Discretionary
SouthState Corp	0.27%	3.2%	8.5%	Financials
RBC Bearings Inc	0.27%	12.4%	-2.1%	Industrials
EMCOR Group Inc	0.27%	12.3%	0.5%	Information Technology

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Akero Therapeutics Inc	0.04%	260.3%	52.3%	Health Care
Forma Therapeutics Holdings Inc	0.03%	189.6%	-14.0%	Health Care
Velo3D Inc	0.01%	185.5%	-52.9%	Industrials
Ventyx Biosciences Inc	0.04%	185.4%	N/A	Health Care
Verve Therapeutics Inc	0.06%	124.8%	-26.9%	Health Care
AN2 Therapeutics Inc	0.00%	124.3%	N/A	Health Care
Prothena Corp PLC	0.10%	123.3%	-14.9%	Health Care
Target Hospitality Corp Class A	0.02%	121.0%	238.3%	Consumer Discretionary
1Life Healthcare Inc Ordinary Shares	0.14%	118.8%	-15.3%	Health Care
Global Blood Therapeutics Inc	0.19%	113.1%	167.3%	Health Care

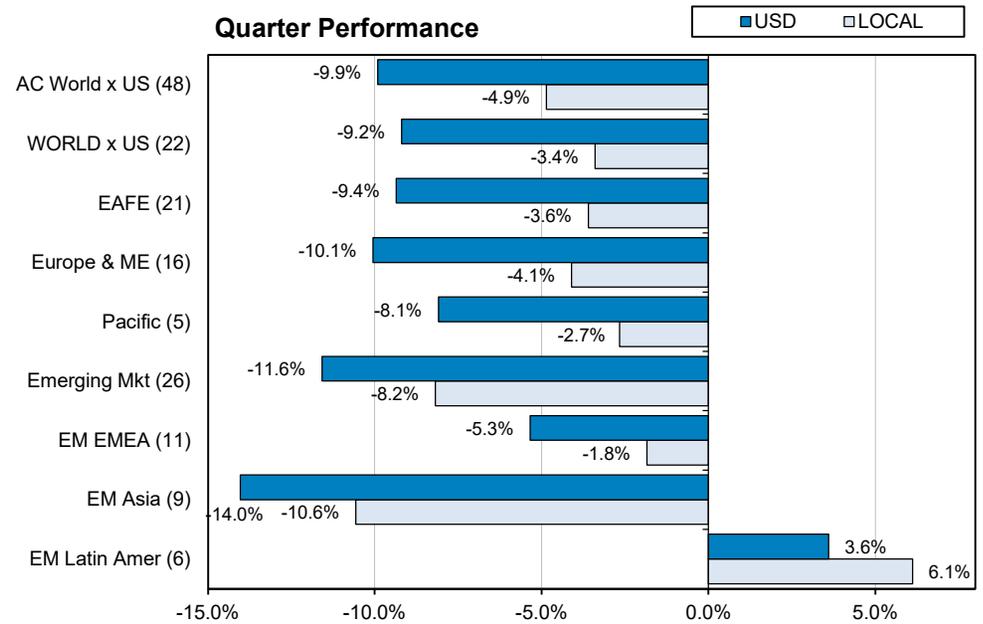
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Leafly Holdings Inc	0.00%	-84.9%	0.0%	Communication Services
VistaGen Therapeutics Inc	0.00%	-82.7%	N/A	Health Care
Faraday Future Intelligent Electric Inc	0.00%	-75.5%	N/A	Consumer Discretionary
SelectQuote Inc Ordinary Shares	0.00%	-70.6%	-94.4%	Financials
IronNet Inc	0.00%	-68.8%	N/A	Information Technology
Core Scientific Inc Ord Shs - Class A	0.00%	-67.9%	N/A	Consumer Discretionary
Rockley Photonics Holdings Ltd	0.00%	-67.4%	N/A	Information Technology
Loyalty Ventures Inc Ordinary Shares	0.00%	-66.1%	0.0%	Communication Services
Cryptyde Inc	0.00%	-65.9%	0.0%	Materials
Vintage Wine Estates Inc	0.00%	-64.8%	-72.9%	Consumer Staples

Source: Morningstar Direct



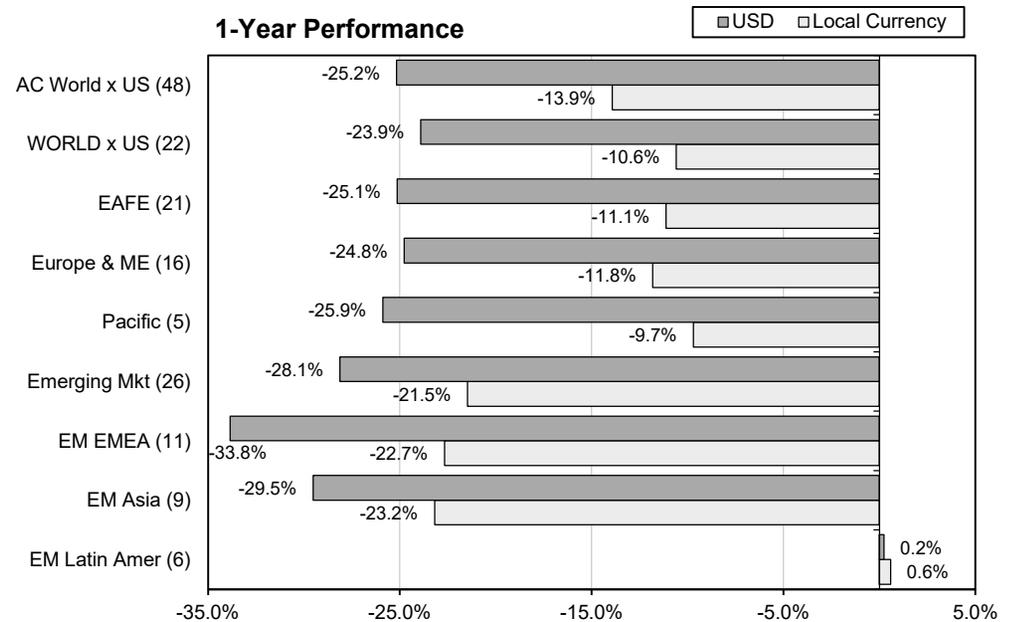
- Most developed and emerging market international equity indexes tracked in the chart posted negative returns in both US dollar (USD) and local currency (LC) terms for the 3rd quarter. The outlier during the period was the Latin America region. Higher commodity prices and demand benefited export-driven countries like Brazil. The developed market MSCI EAFE Index returned -9.4% in USD and -3.6% in LC terms for the period, while the MSCI Emerging Markets Index declined by -11.6% in USD and -8.2% in LC terms.

**Quarter Performance**



- The trailing 1-year results for international developed and emerging markets were broadly negative across most regions and currencies. The MSCI EAFE Index returned -25.1% in USD for the year and -11.1% in LC terms. Similarly, returns across emerging markets were broadly lower with the exception being Latin America with the MSCI Emerging Markets Index declining by -28.1% in USD and -21.5% in LC terms. Latin America regional index's return were the outlier, rising by 0.2% in USD and 0.6% in LC term. In contrast, performance in the EMEA regional benchmark significantly detracted from emerging market index performance with the EMEA Index returning -33.8% in USD and -22.7% in LC terms, respectively, due primarily to concerns related to Ukraine.

**1-Year Performance**



Source: MSCI Global Index Monitor (Returns are Net)



**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of September 30, 2022

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.8%	-13.7%	-28.6%
Consumer Discretionary	11.3%	-9.8%	-32.3%
Consumer Staples	11.3%	-7.1%	-17.3%
Energy	4.9%	-5.0%	6.0%
Financials	17.6%	-9.6%	-22.1%
Health Care	13.5%	-10.6%	-19.8%
Industrials	15.0%	-8.3%	-31.5%
Information Technology	7.9%	-8.3%	-38.9%
Materials	7.5%	-8.9%	-21.3%
Real Estate	2.8%	-13.1%	-29.1%
Utilities	3.4%	-13.3%	-20.3%
<b>Total</b>	<b>100.0%</b>	<b>-9.4%</b>	<b>-25.1%</b>

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.1%	-16.5%	-32.0%
Consumer Discretionary	11.4%	-13.0%	-32.3%
Consumer Staples	9.4%	-6.4%	-16.7%
Energy	6.2%	-6.3%	-5.0%
Financials	20.7%	-7.9%	-18.3%
Health Care	9.6%	-11.0%	-23.5%
Industrials	12.1%	-8.2%	-28.7%
Information Technology	10.8%	-12.1%	-39.3%
Materials	8.2%	-7.9%	-21.1%
Real Estate	2.4%	-14.5%	-29.8%
Utilities	3.4%	-10.9%	-16.0%
<b>Total</b>	<b>100.0%</b>	<b>-9.9%</b>	<b>-25.2%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	9.7%	-19.3%	-36.2%
Consumer Discretionary	14.0%	-18.7%	-33.7%
Consumer Staples	6.6%	-4.5%	-17.8%
Energy	5.3%	-2.6%	-30.1%
Financials	22.6%	-5.1%	-14.3%
Health Care	3.9%	-13.8%	-42.8%
Industrials	5.8%	-9.9%	-20.8%
Information Technology	18.3%	-15.5%	-36.1%
Materials	8.7%	-7.4%	-26.3%
Real Estate	2.0%	-19.3%	-31.9%
Utilities	3.2%	-4.3%	-8.0%
<b>Total</b>	<b>100.0%</b>	<b>-11.6%</b>	<b>-28.1%</b>

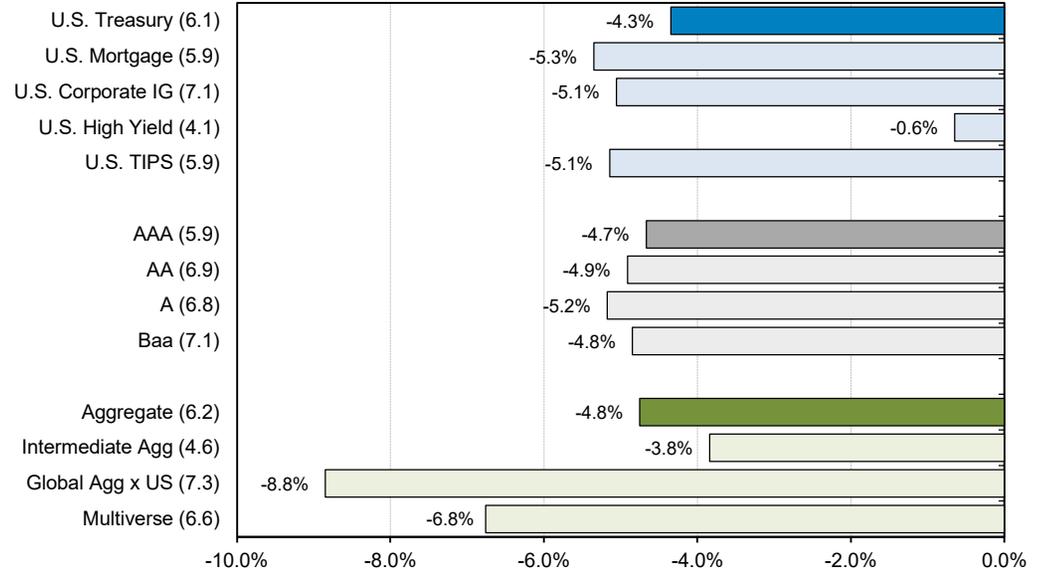
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	22.6%	14.1%	-7.7%	-29.3%
United Kingdom	15.5%	9.7%	-10.8%	-14.1%
France	11.3%	7.1%	-8.9%	-24.0%
Switzerland	10.7%	6.7%	-7.5%	-16.5%
Australia	8.0%	5.0%	-6.7%	-16.4%
Germany	7.6%	4.7%	-12.6%	-37.1%
Netherlands	4.1%	2.6%	-10.7%	-38.2%
Sweden	3.4%	2.1%	-8.8%	-35.7%
Hong Kong	3.0%	1.9%	-17.0%	-22.3%
Denmark	2.6%	1.7%	-12.3%	-23.5%
Spain	2.4%	1.5%	-14.1%	-25.6%
Italy	2.3%	1.4%	-8.5%	-28.5%
Singapore	1.6%	1.0%	-1.5%	-22.1%
Belgium	1.0%	0.6%	-13.2%	-27.3%
Finland	1.0%	0.6%	-7.2%	-25.0%
Norway	0.8%	0.5%	-15.3%	-20.7%
Israel	0.8%	0.5%	-1.9%	-21.8%
Ireland	0.6%	0.4%	-5.5%	-38.9%
Portugal	0.2%	0.1%	-11.0%	-12.9%
Austria	0.2%	0.1%	-15.2%	-40.9%
New Zealand	0.2%	0.1%	-8.6%	-33.4%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>62.5%</b>	<b>-9.4%</b>	<b>-25.1%</b>
Canada		8.2%	-7.8%	-12.6%
<b>Total Developed Countries</b>		<b>70.7%</b>	<b>-9.2%</b>	<b>-23.9%</b>
China		9.2%	-22.5%	-35.4%
Taiwan		4.0%	-14.5%	-30.5%
India		4.5%	6.5%	-9.9%
Korea		3.1%	-16.4%	-40.7%
Brazil		1.7%	8.5%	4.3%
Saudi Arabia		1.4%	-0.1%	1.9%
South Africa		1.0%	-12.3%	-19.2%
Mexico		0.7%	-5.4%	-7.4%
Thailand		0.6%	-2.9%	-6.8%
Indonesia		0.6%	7.8%	14.3%
Malaysia		0.4%	-7.1%	-15.9%
United Arab Emirates		0.4%	-2.5%	5.1%
Qatar		0.4%	3.1%	12.7%
Kuwait		0.3%	-5.5%	6.4%
Philippines		0.2%	-13.6%	-26.3%
Poland		0.2%	-25.1%	-51.9%
Chile		0.2%	3.2%	0.6%
Turkey		0.1%	16.3%	3.8%
Peru		0.1%	-0.9%	3.0%
Greece		0.1%	-7.5%	-25.2%
Colombia		0.0%	-18.5%	-23.6%
Czech Republic		0.0%	-19.2%	-9.8%
Hungary		0.0%	-15.0%	-54.3%
Egypt		0.0%	-1.3%	-28.8%
<b>Total Emerging Countries</b>		<b>29.3%</b>	<b>-11.6%</b>	<b>-28.1%</b>
<b>Total ACWixUS Countries</b>		<b>100.0%</b>	<b>-9.9%</b>	<b>-25.2%</b>

Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)  
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

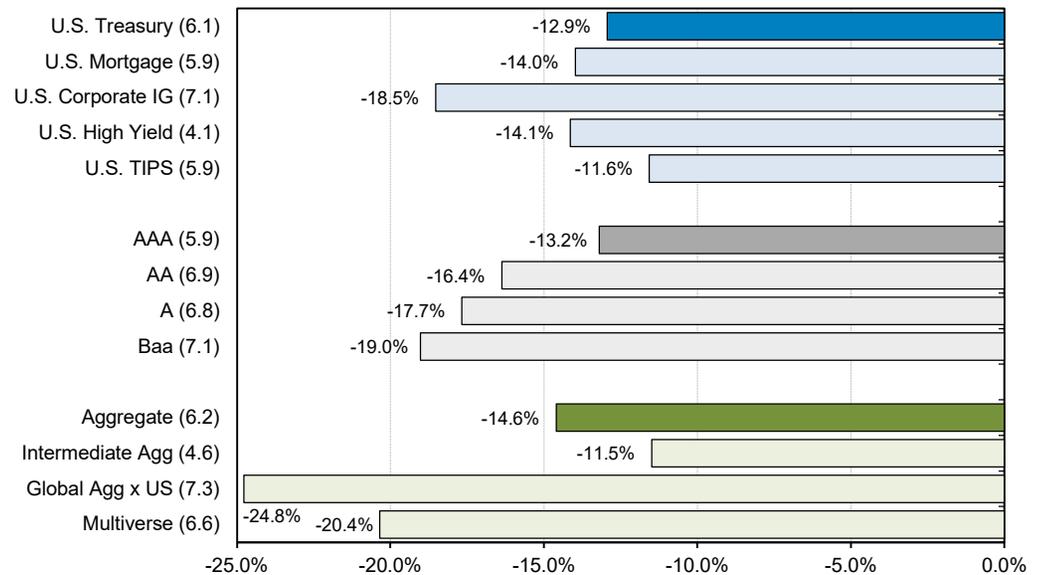


- Fixed income market results were broadly negative during the 3rd quarter. Investors' concerns about rising inflation, combined with expectations of higher US interest rates, detracted from performance. As a result, US Treasury yields continued to rise across the maturity curve throughout the quarter.
- The return for the BB US Aggregate Bond Index, the bellwether investment grade benchmark, was down -4.8% for the period.
- Performance across the investment grade index's segments was also negative during the period with the US Corporate Investment Grade bonds returning -5.1% and the US Mortgage index component posting a return of -5.3%.
- High yield bonds outperformed their investment grade counterparts, but still declined by -0.6%. US TIPS, which have delivered strong performance in recent periods, posted a decline of -5.1% as investors' expectations of future inflation declined.
- Outside of domestic markets, the BB Global Aggregate ex US Index posted a return of -8.8% for the quarter. Like domestic bonds, global bond index performance was negatively impacted by rising interest rates and a strengthening USD, which acted as a drag on domestic index returns.
- Over the trailing 1-year period, domestic investment grade benchmark performance was negative, led lower by investment grade corporate bonds (-18.5%), followed by mortgage-backed bonds (-14.0%), US Treasury bonds (-12.9%), and US TIPS (-11.6%). The bellwether Bloomberg US Aggregate Bond Index (-14.6%) declined for the year.
- Lower quality high yield corporate bonds outperformed their investment grade counterparts on a relative basis with the Bloomberg US High Yield Index returning -14.1% for the period.
- Performance for non-US bonds was broadly negative for the year with the developed market Bloomberg Global Aggregate ex US Index falling by -24.9%. The combination of rising interest rates overseas, persistent inflation, and USD strength hindered index performance for the year.

**Quarter Performance**



**1-Year Performance**

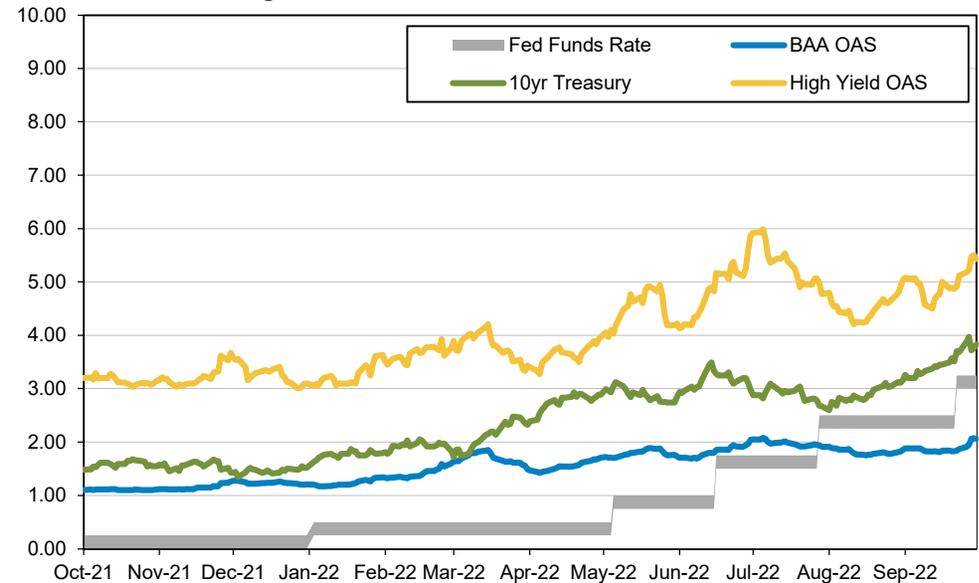


Source: Bloomberg

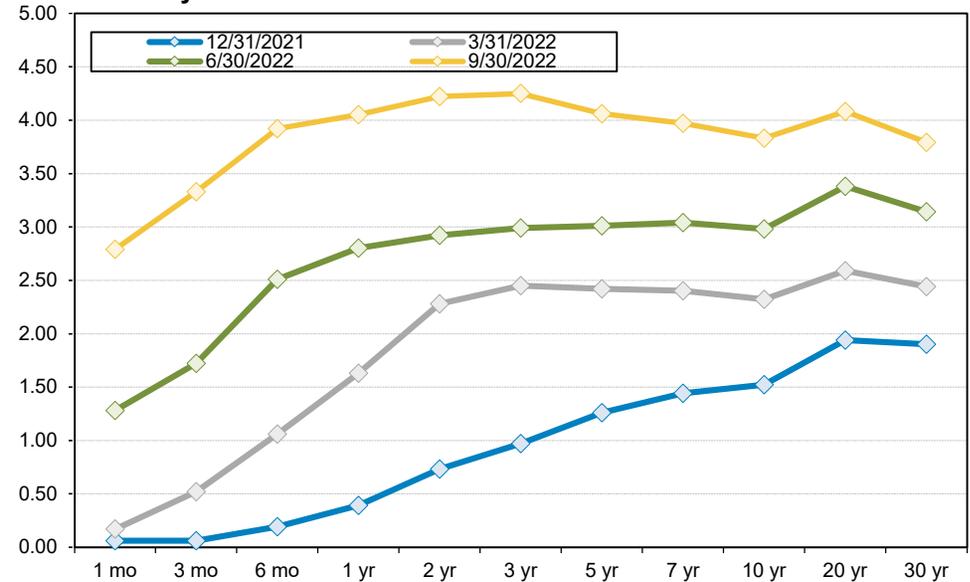


- The gray band across the graph illustrates the range of the current Fed Funds Rate. In the 3rd quarter this year, the Fed raised its target rate range from 1.75% to 3.25%. During its recent September meeting, the Federal Open Market Committee (FOMC) stated it intends to continue to remove liquidity from the market by raising interest rates and also allowing bonds held on its balance sheet to mature without reinvesting those proceeds. Importantly, the FOMC stated that it will remain vigilant in its fight against persistently higher inflation.
- The yield on the US 10-year Treasury (green line) ended the period higher as concerns over the pace of inflation, combined with the Fed's announced rate increase, drove yields higher. Interest rates continued to climb during the quarter, reaching a high of roughly 4.00% during the latter part of September 2022, before settling at 3.83% at the end of the month.
- 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 1.10% to 2.06%. High Yield OAS was largely unchanged during the year as spreads rose from 3.17% to 5.43%. High Yield spreads reached as high as 5.80% in early July before trading lower the remainder 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 3rd quarter as the FOMC continued raising rates to combat rising inflation. Both intermediate and longer-term rates were modestly higher across the curve, albeit less dramatically than short-term rates. The curve remained inverted between 2-year rates and 10-year rates. Said differently, the short-term rate was higher than the long-term rate. Historically, a persistent inversion of these two key rates has been an indication of a future recession withing 6- to 24-months.

**1-Year Trailing Market Rates**



**Treasury Yield Curve**



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



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**Asset Allocation**  
**Total 457 and 401a Plans**  
**As of September 30, 2022**

Asset Allocation Attributes	Sep-2022		Jun-2022		Mar-2022		Dec-2021	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%
<b>Total 457 &amp; 401a Plans</b>	<b>58,557,032</b>	<b>100.00</b>	<b>60,078,650</b>	<b>100.00</b>	<b>66,795,441</b>	<b>100.00</b>	<b>70,218,119</b>	<b>100.00</b>
457 Plan- 300786	42,570,920	72.70	43,561,868	72.51	48,067,797	71.96	50,149,807	71.42
401a Plan- 106397	13,572,691	23.18	14,032,657	23.36	15,793,930	23.65	16,919,945	24.10
401a Fire Share-106796	2,413,421	4.12	2,484,125	4.13	2,933,714	4.39	3,148,367	4.48



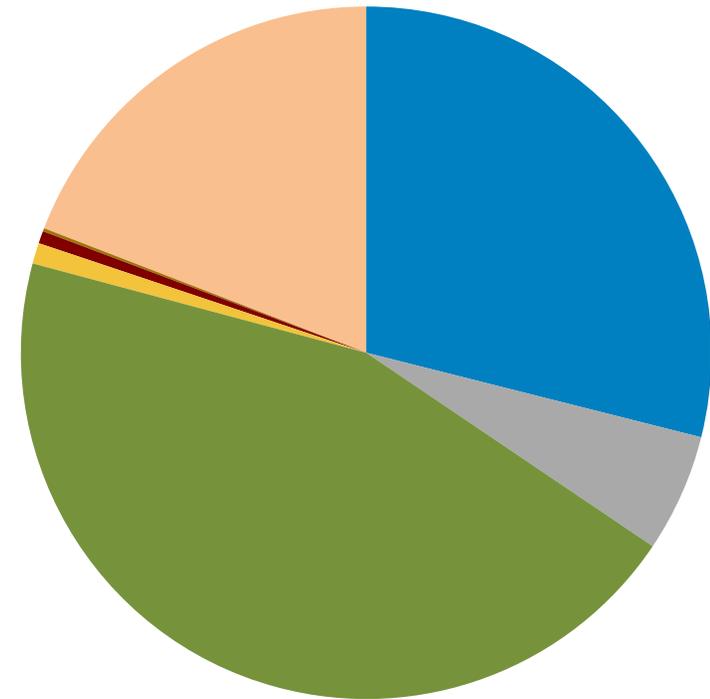
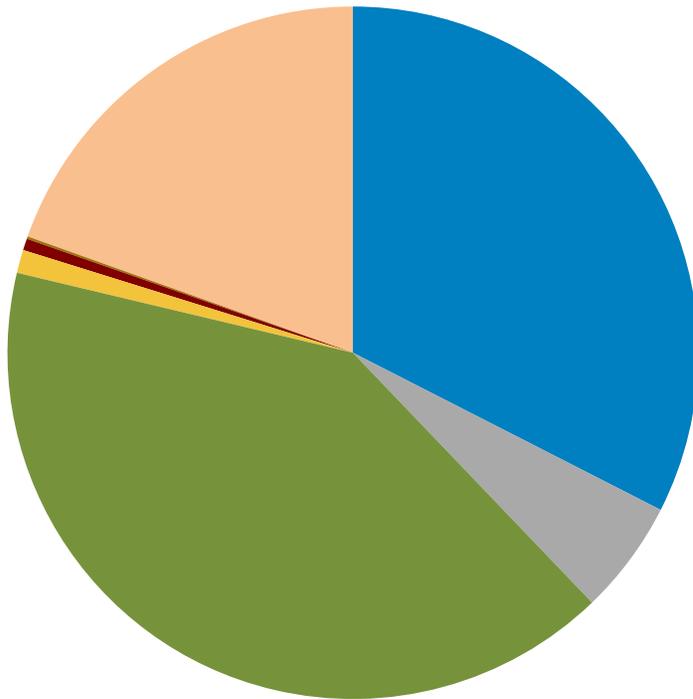
**Asset Allocation**  
**Total Fund RHS Plans**  
**As of September 30, 2022**

Asset Allocation Attributes	Sep-2022		Jun-2022		Mar-2022		Dec-2021	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%
<b>Total RHS Plans</b>	<b>4,880,918</b>	<b>100.00</b>	<b>5,135,344</b>	<b>100.00</b>	<b>5,663,672</b>	<b>100.00</b>	<b>5,745,876</b>	<b>100.00</b>
RHS Old Plan	412,021	8.44	453,221	8.83	522,376	9.22	573,334	9.98
RHS Current Plan- 803116	4,468,896	91.56	4,682,123	91.17	5,141,296	90.78	5,172,541	90.02



June 30, 2022 : \$43,561,868

September 30, 2022 : \$42,570,920



Asset Allocation by Segment

Segments	Market Value	Allocation
Domestic Equity	14,155,646	32.5
International Equity	2,321,803	5.3
Domestic Fixed Income	17,811,283	40.9
Real Estate	473,398	1.1
Hedge Fund	234,353	0.5
Cash Equivalent	50,153	0.1
Balanced	8,515,232	19.5

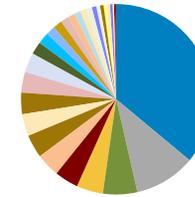
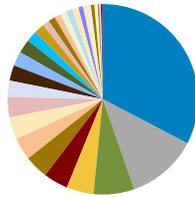
Asset Allocation by Segment

Segments	Market Value	Allocation
Domestic Equity	12,312,770	28.9
International Equity	2,347,193	5.5
Domestic Fixed Income	19,035,984	44.7
Real Estate	414,610	1.0
Hedge Fund	249,573	0.6
Cash Equivalent	59,982	0.1
Balanced	8,150,806	19.1



June 30, 2022 : \$43,561,868

September 30, 2022 : \$42,570,920

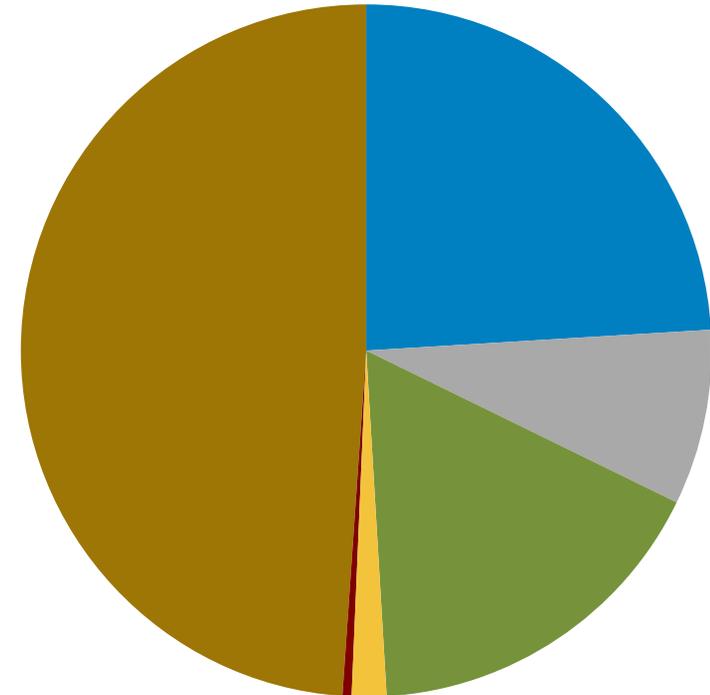
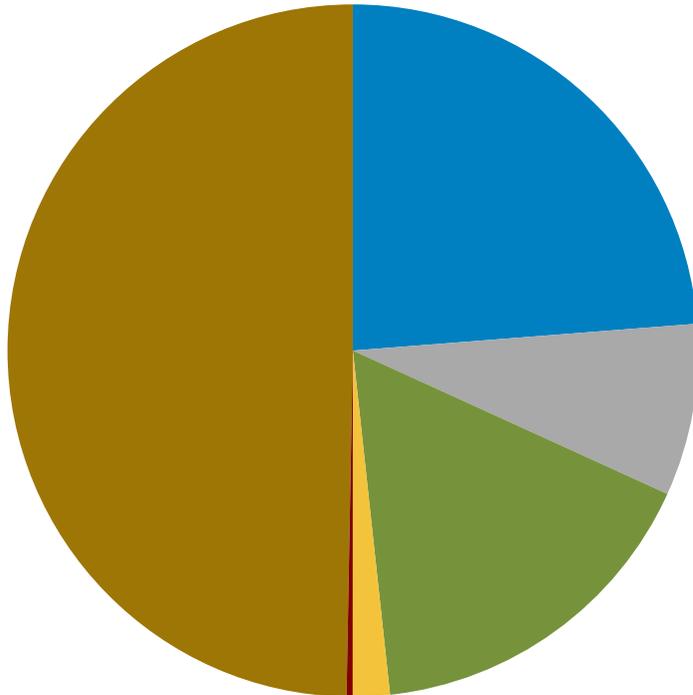


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
MissionSquare Plus Fund	14,227,394	32.7	MissionSquare Plus Fund	15,347,446	36.1
Vanguard 500 Index Fund (VFIAX)	5,226,015	12.0	Vanguard 500 Index Fund (VFIAX)	4,417,677	10.4
T. Rowe Price Blue Chip Growth (TBCIX)	3,023,322	6.9	T. Rowe Price Blue Chip Growth (TBCIX)	2,476,400	5.8
Vanguard Target Retirement 2030 (VTHR)	1,992,049	4.6	Vanguard Target Retirement 2030 (VTHR)	1,910,852	4.5
Vanguard Target Retirement 2025 (VTTVX)	1,811,928	4.2	Vanguard Target Retirement 2025 (VTTVX)	1,729,324	4.1
TCW Total Return Bond Fund (TGLMX)	1,748,093	4.0	MSQ Invesco Discovery Fund (ODIYX)	1,701,282	4.0
MSQ Invesco Discovery Fund (ODIYX)	1,656,795	3.8	TCW Total Return Bond Fund (TGLMX)	1,679,269	3.9
Vanguard Target Retirement 2020 (VTWNX)	1,655,778	3.8	Vanguard Target Retirement 2020 (VTWNX)	1,590,886	3.7
Vanguard Total Int'l Stock Index (VTIAX)	1,495,881	3.4	Vanguard Target Retirement Income (VTINX)	1,552,261	3.6
MissionSquare Inflation Focused	1,210,938	2.8	Vanguard Total Int'l Stock Index (VTIAX)	1,503,805	3.5
Vanguard Target Retirement 2015 (VTXVX)	1,148,234	2.6	MissionSquare Inflation Focused	1,404,699	3.3
Vanguard Mid Cap Index (VIMAX)	1,059,284	2.4	Brandywine Dynamic Large Cap Value (LMBGX)	913,074	2.1
Brandywine Dynamic Large Cap Value (LMBGX)	1,022,806	2.3	MSQ Fidelity Diversified International (FDIVX)	843,389	2.0
MSQ Fidelity Diversified International (FDIVX)	825,922	1.9	Vanguard Mid Cap Index (VIMAX)	662,090	1.6
MSQ TimesSquare Mid Cap Growth (TMDPX)	742,298	1.7	MSQ TimesSquare Mid Cap Growth (TMDPX)	652,192	1.5
Vanguard Small Cap Index (VSMAX)	512,071	1.2	Vanguard Small Cap Index (VSMAX)	590,981	1.4
Vanguard Target Retirement Income (VTINX)	500,695	1.1	MSQ Victory Sycamore Est Value (VEVYX)	500,485	1.2
MSQ Victory Sycamore Est Value (VEVYX)	474,238	1.1	Vanguard Target Retirement 2035 (VTTHX)	459,863	1.1
MSQ Cohen & Steers Realty R5	473,398	1.1	Vanguard Target Retirement 2050 (VFIFX)	445,167	1.0
Vanguard Target Retirement 2035 (VTTHX)	472,350	1.1	MSQ Cohen & Steers Realty R5	414,610	1.0
Vanguard Target Retirement 2050 (VFIFX)	462,332	1.1	Neuberger Berman High Yield Fixed Income (NHILX)	334,074	0.8
Neuberger Berman High Yield Fixed Income (NHILX)	344,097	0.8	MSQ Retirement Income Advantage	270,495	0.6
MissionSquare Small Cap Discovery	293,376	0.7	Vanguard Target Retirement 2045 (VTIVX)	252,787	0.6
MSQ Retirement Income Advantage	280,762	0.6	Self Directed Brokerage Account	249,573	0.6
Vanguard Target Retirement 2045 (VTIVX)	266,756	0.6	MissionSquare Small Cap Discovery	206,736	0.5
Self Directed Brokerage Account	234,353	0.5	MSQ Parnassus Core Equity (PRBLX)	191,852	0.5
MSQ Parnassus Core Equity (PRBLX)	145,440	0.3	Vanguard Target Retirement 2055 (VFFVX)	109,115	0.3
Vanguard Target Retirement 2055 (VFFVX)	94,814	0.2	Vanguard Target Retirement 2040 (VFORX)	77,709	0.2
Vanguard Target Retirement 2040 (VFORX)	91,165	0.2	MSQ Cash Management	59,982	0.1
MSQ Cash Management	50,153	0.1	Vanguard Target Retirement 2060 (VTTSX)	22,749	0.1
Vanguard Target Retirement 2060 (VTTSX)	19,031	0.0	Vanguard Target Retirement 2065 (VLXVX)	93	0.0
Vanguard Target Retirement 2065 (VLXVX)	99	0.0	Vanguard Target Retirement 2015 (VTXVX)	-	0.0



June 30, 2022 : \$14,032,657

September 30, 2022 : \$13,572,691



Asset Allocation by Segment

Segments	Market Value	Allocation
Domestic Equity	3,334,127	23.8
International Equity	1,127,102	8.0
Domestic Fixed Income	2,314,307	16.5
Real Estate	241,652	1.7
Cash Equivalent	40,424	0.3
Balanced	6,975,045	49.7

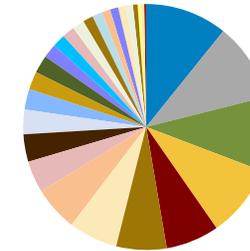
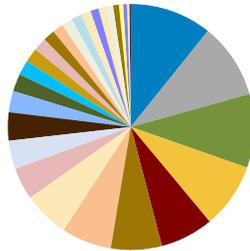
Asset Allocation by Segment

Segments	Market Value	Allocation
Domestic Equity	3,262,169	24.0
International Equity	1,111,776	8.2
Domestic Fixed Income	2,284,685	16.8
Real Estate	220,017	1.6
Cash Equivalent	57,167	0.4
Balanced	6,636,877	48.9



June 30, 2022 : \$14,032,657

September 30, 2022 : \$13,572,691

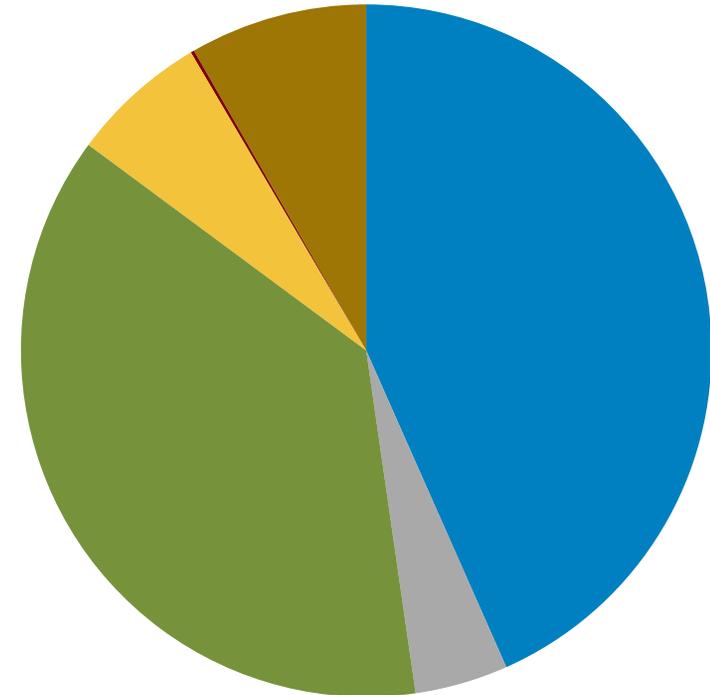
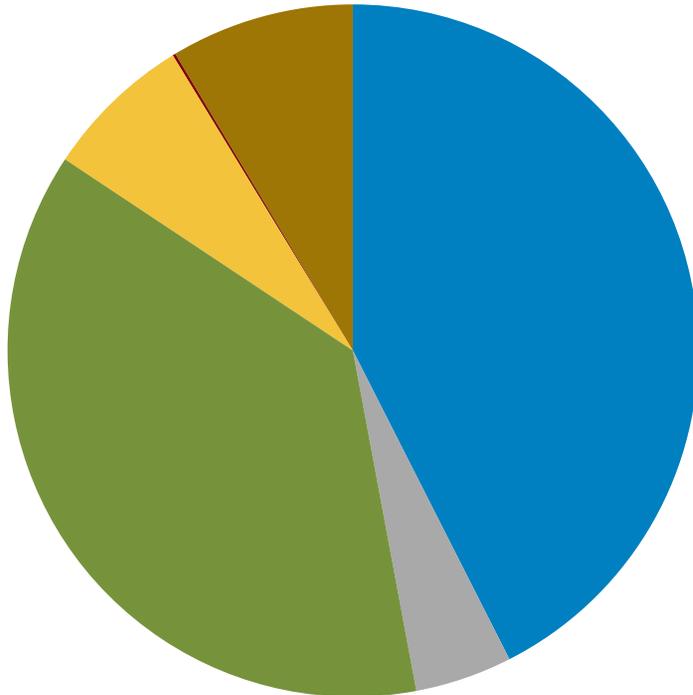


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vanguard Target Retirement 2030 (VTHR)	1,509,258	10.8	Vanguard Target Retirement 2030 (VTHR)	1,460,250	10.8
Vanguard 500 Index Fund (VFIAX)	1,390,841	9.9	Vanguard 500 Index Fund (VFIAX)	1,399,289	10.3
Vanguard Target Retirement 2020 (VTWNX)	1,360,352	9.7	Vanguard Target Retirement 2020 (VTWNX)	1,317,794	9.7
MissionSquare Plus Fund	1,206,435	8.6	MissionSquare Plus Fund	1,297,760	9.6
Vanguard Target Retirement 2025 (VTTVX)	980,463	7.0	Vanguard Target Retirement 2025 (VTTVX)	949,604	7.0
Vanguard Target Retirement 2035 (VTTHX)	937,389	6.7	Vanguard Target Retirement 2035 (VTTHX)	895,338	6.6
Vanguard Target Retirement 2040 (VFORX)	919,818	6.6	Vanguard Total Int'l Stock Index (VTIAX)	875,829	6.5
Vanguard Total Int'l Stock Index (VTIAX)	852,320	6.1	Vanguard Target Retirement 2040 (VFORX)	799,310	5.9
Vanguard Target Retirement 2045 (VTIVX)	592,077	4.2	Vanguard Target Retirement 2045 (VTIVX)	564,909	4.2
TCW Total Return Bond Fund (TGLMX)	523,219	3.7	MSQ Invesco Discovery Fund (ODIYX)	489,151	3.6
MSQ Invesco Discovery Fund (ODIYX)	522,945	3.7	TCW Total Return Bond Fund (TGLMX)	439,539	3.2
Vanguard Target Retirement 2050 (VFIFX)	393,921	2.8	Vanguard Target Retirement 2050 (VFIFX)	366,887	2.7
MissionSquare Inflation Focused	320,223	2.3	Vanguard Small Cap Index (VSMAX)	321,612	2.4
MSQ Diversified International	274,782	2.0	MissionSquare Inflation Focused	317,571	2.3
Vanguard Small Cap Index (VSMAX)	264,670	1.9	Vanguard Target Retirement Income (VTINX)	246,704	1.8
MSQ Cohen & Steers Realty R5	241,652	1.7	MSQ Diversified International	235,947	1.7
T. Rowe Price Blue Chip Growth (TBCIX)	220,984	1.6	MSQ Cohen & Steers Realty R5	220,017	1.6
Brandywine Dynamic Large Cap Value (LMBGX)	202,117	1.4	Vanguard Mid Cap Index (VIMAX)	214,865	1.6
Vanguard Mid Cap Index (VIMAX)	198,913	1.4	T. Rowe Price Blue Chip Growth (TBCIX)	183,441	1.4
MSQ Victory Sycamore Est Value (VEVYX)	188,446	1.3	MSQ Victory Sycamore Est Value (VEVYX)	181,627	1.3
Vanguard Target Retirement 2015 (VTXVX)	180,106	1.3	Brandywine Dynamic Large Cap Value (LMBGX)	148,901	1.1
MSQ Retirement Income Advantage	154,102	1.1	MSQ Retirement Income Advantage	146,700	1.1
MSQ TimesSquare Mid Cap Growth (TMDPX)	143,796	1.0	MSQ TimesSquare Mid Cap Growth (TMDPX)	131,905	1.0
MSQ Parnassus Core Equity (PRBLX)	124,609	0.9	MSQ Parnassus Core Equity (PRBLX)	131,256	1.0
Neuberger Berman High Yield Fixed Income (NHILX)	110,328	0.8	Neuberger Berman High Yield Fixed Income (NHILX)	83,116	0.6
MissionSquare Small Cap Discovery	76,807	0.5	MissionSquare Small Cap Discovery	60,123	0.4
Vanguard Target Retirement Income (VTINX)	71,950	0.5	MSQ Cash Management	57,167	0.4
MSQ Cash Management	40,424	0.3	Vanguard Target Retirement 2055 (VFFVX)	30,770	0.2
Vanguard Target Retirement 2055 (VFFVX)	27,035	0.2	Vanguard Target Retirement 2060 (VTTSX)	5,312	0.0
Vanguard Target Retirement 2060 (VTTSX)	2,675	0.0	Vanguard Target Retirement 2015 (VTXVX)	-	0.0



June 30, 2022 : \$2,484,125

September 30, 2022 : \$2,413,421

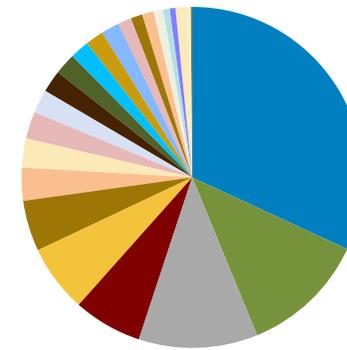
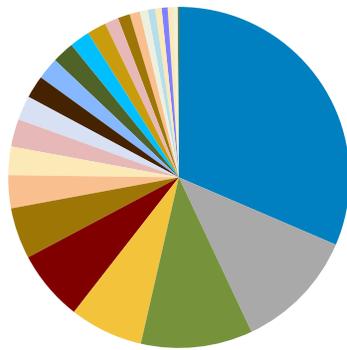


Asset Allocation by Segment			Asset Allocation by Segment		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
■ Domestic Equity	1,056,158	42.5	■ Domestic Equity	1,046,403	43.4
■ International Equity	112,851	4.5	■ International Equity	105,299	4.4
■ Domestic Fixed Income	925,613	37.3	■ Domestic Fixed Income	902,745	37.4
■ Real Estate	172,499	6.9	■ Real Estate	154,325	6.4
■ Cash Equivalent	3,295	0.1	■ Cash Equivalent	3,869	0.2
■ Balanced	213,709	8.6	■ Balanced	200,780	8.3



June 30, 2022 : \$2,484,125

September 30, 2022 : \$2,413,421



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ MissionSquare Plus Fund	781,355	31.5	■ MissionSquare Plus Fund	770,094	31.9
■ T. Rowe Price Blue Chip Growth (TBCIX)	286,950	11.6	■ MSQ Invesco Discovery Fund (ODIYX)	287,079	11.9
■ MSQ Invesco Discovery Fund (ODIYX)	262,833	10.6	■ T. Rowe Price Blue Chip Growth (TBCIX)	271,747	11.3
■ MSQ Cohen & Steers Realty R5	172,499	6.9	■ Vanguard 500 Index Fund (VFIAX)	157,445	6.5
■ Vanguard 500 Index Fund (VFIAX)	166,836	6.7	■ MSQ Cohen & Steers Realty R5	154,325	6.4
■ Vanguard Mid Cap Index (VIMAX)	120,228	4.8	■ Vanguard Mid Cap Index (VIMAX)	116,352	4.8
■ MSQ Victory Sycamore Est Value (VEVYX)	77,744	3.1	■ MSQ Victory Sycamore Est Value (VEVYX)	75,199	3.1
■ MSQ TimesSquare Mid Cap Growth (TMDPX)	67,152	2.7	■ MSQ TimesSquare Mid Cap Growth (TMDPX)	66,699	2.8
■ Vanguard Total Int'l Stock Index (VTIAX)	64,840	2.6	■ Vanguard Total Int'l Stock Index (VTIAX)	61,574	2.6
■ Vanguard Target Retirement 2035 (VTTHX)	57,483	2.3	■ Vanguard Target Retirement 2035 (VTTHX)	53,961	2.2
■ MissionSquare Inflation Focused	53,293	2.1	■ MissionSquare Inflation Focused	50,863	2.1
■ TCW Total Return Bond Fund (TGLMX)	51,898	2.1	■ Vanguard Target Retirement 2025 (VTTVX)	48,640	2.0
■ Vanguard Target Retirement 2025 (VTTVX)	51,542	2.1	■ MSQ Diversified International	43,725	1.8
■ MSQ Diversified International	48,011	1.9	■ Vanguard Target Retirement 2040 (VFORX)	41,950	1.7
■ Vanguard Target Retirement 2040 (VFORX)	44,802	1.8	■ TCW Total Return Bond Fund (TGLMX)	41,946	1.7
■ Vanguard Target Retirement 2045 (VTIVX)	32,316	1.3	■ Vanguard Target Retirement 2045 (VTIVX)	30,201	1.3
■ MissionSquare Small Cap Discovery	28,439	1.1	■ MissionSquare Small Cap Discovery	27,080	1.1
■ MSQ Retirement Income Advantage	24,103	1.0	■ MSQ Retirement Income Advantage	26,600	1.1
■ Vanguard Small Cap Index (VSMAX)	18,908	0.8	■ Vanguard Small Cap Index (VSMAX)	21,195	0.9
■ Brandywine Dynamic Large Cap Value (LMBGX)	17,556	0.7	■ Brandywine Dynamic Large Cap Value (LMBGX)	15,334	0.6
■ Neuberger Berman High Yield Fixed Income (NHILX)	14,965	0.6	■ Vanguard Target Retirement 2030 (VTHR)	13,292	0.6
■ Vanguard Target Retirement 2030 (VTHR)	14,136	0.6	■ Neuberger Berman High Yield Fixed Income (NHILX)	13,243	0.5
■ Vanguard Target Retirement 2020 (VTWNX)	13,429	0.5	■ Vanguard Target Retirement 2020 (VTWNX)	12,736	0.5
■ MSQ Parnassus Core Equity (PRBLX)	9,513	0.4	■ MSQ Parnassus Core Equity (PRBLX)	8,274	0.3
■ MSQ Cash Management	3,295	0.1	■ MSQ Cash Management	3,869	0.2
■ Vanguard Target Retirement 2015 (VTXVX)	-	0.0	■ Vanguard Target Retirement 2015 (VTXVX)	-	0.0

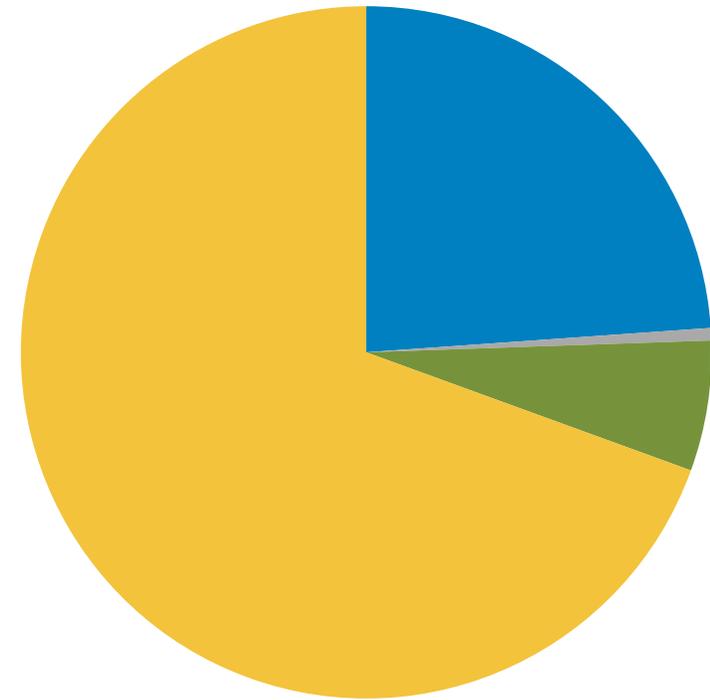
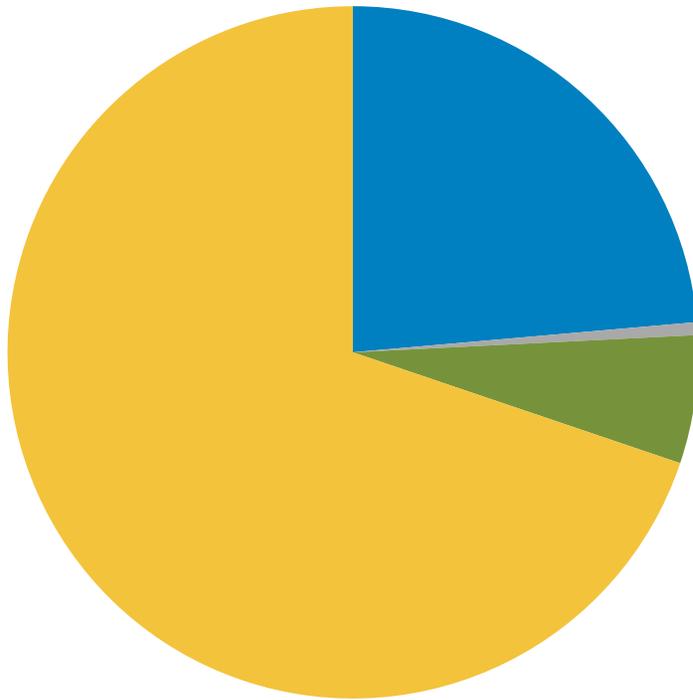


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June 30, 2022 : \$4,682,123

September 30, 2022 : \$4,468,896

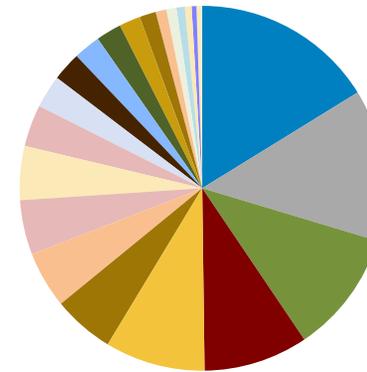
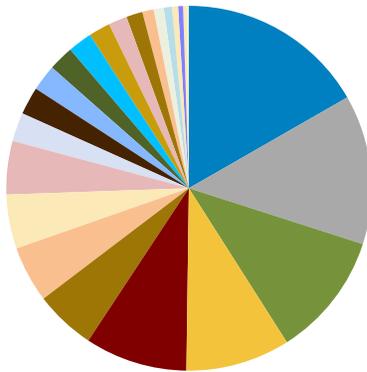


Asset Allocation by Segment			Asset Allocation by Segment		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	1,105,347	23.6	Domestic Equity	1,066,931	23.9
International Equity	27,878	0.6	International Equity	25,924	0.6
Domestic Fixed Income	280,129	6.0	Domestic Fixed Income	272,053	6.1
Balanced	3,268,769	69.8	Balanced	3,103,988	69.5



June 30, 2022 : \$4,682,123

September 30, 2022 : \$4,468,896

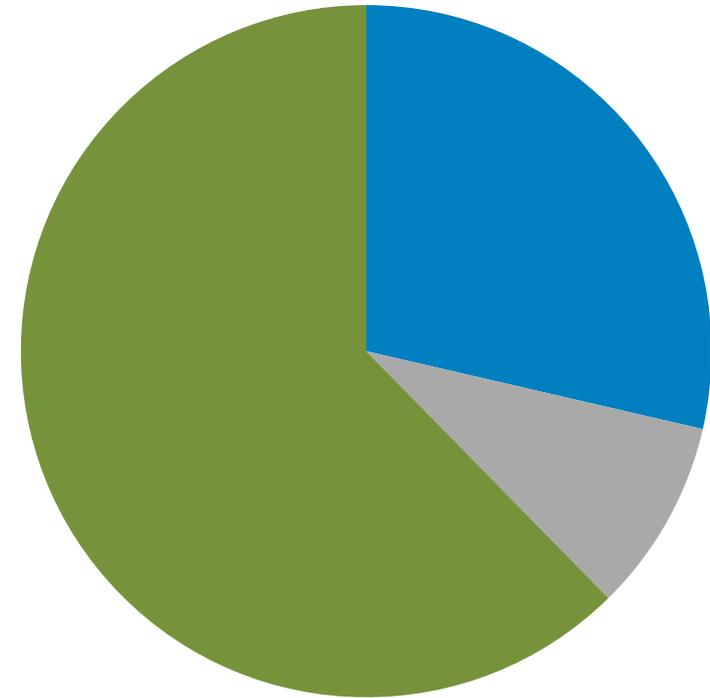
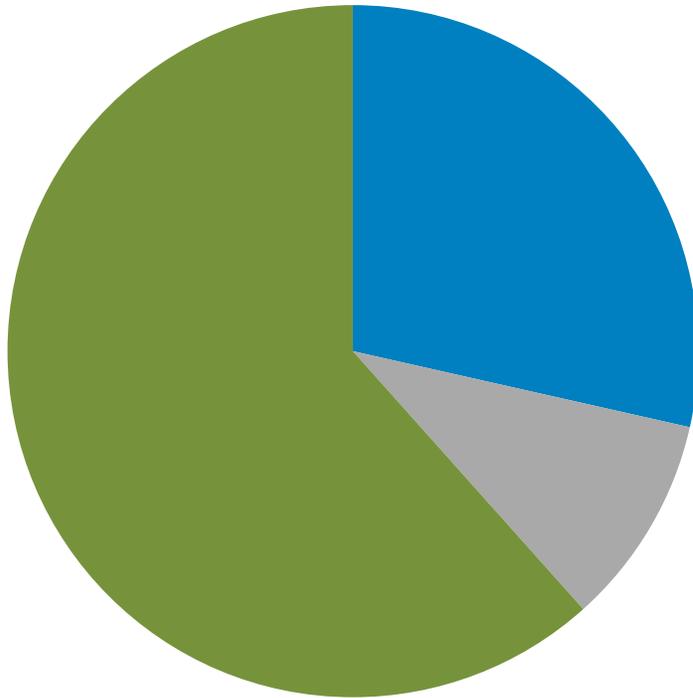


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ Vanguard Target Retirement 2030 (VTHR)	781,995	16.7	■ Vanguard Target Retirement 2030 (VTHR)	723,500	16.2
■ Vanguard Target Retirement 2025 (VTTV)	620,386	13.3	■ Vanguard Target Retirement 2025 (VTTV)	601,055	13.4
■ Vanguard Target Retirement 2035 (VTTH)	516,634	11.0	■ Vanguard Target Retirement 2035 (VTTH)	488,022	10.9
■ Vanguard Target Retirement 2020 (VTWN)	432,431	9.2	■ Vanguard 500 Index Fund (VFIAX)	413,007	9.2
■ Vanguard 500 Index Fund (VFIAX)	424,392	9.1	■ Vanguard Target Retirement 2020 (VTWN)	396,157	8.9
■ Vanguard Target Retirement 2045 (VTIV)	251,626	5.4	■ Vanguard Target Retirement 2045 (VTIV)	242,436	5.4
■ Vanguard Target Retirement 2040 (VFOR)	233,431	5.0	■ Vanguard Target Retirement 2040 (VFOR)	224,141	5.0
■ T. Rowe Price Blue Chip Growth (TBCIX)	224,862	4.8	■ MissionSquare PLUS Fund S3	216,446	4.8
■ MissionSquare PLUS Fund S3	221,530	4.7	■ T. Rowe Price Blue Chip Growth (TBCIX)	214,154	4.8
■ Vanguard Target Retirement 2055 (VFFV)	119,866	2.6	■ Vanguard Target Retirement Income (VTIN)	165,093	3.7
■ AMG TimesSquare Mid Cap Growth (TMDPX)	114,811	2.5	■ Vanguard Target Retirement 2055 (VFFV)	130,381	2.9
■ Vanguard Target Retirement 2050 (VFIF)	108,428	2.3	■ AMG TimesSquare Mid Cap Growth (TMDPX)	114,652	2.6
■ Victory Sycamore Est Value (VEVY)	104,662	2.2	■ Vanguard Target Retirement 2050 (VFIF)	106,251	2.4
■ Vanguard Target Retirement 2015 (VTXV)	100,515	2.1	■ Victory Sycamore Est Value (VEVY)	100,229	2.2
■ Brandywine Dynamic Large Cap Value (LMBGX)	88,619	1.9	■ Brandywine Dynamic Large Cap Value (LMBGX)	84,422	1.9
■ Vanguard Target Retirement Income (VTIN)	77,976	1.7	■ MissionSquare Small Cap Discovery Fund	65,252	1.5
■ MissionSquare Small Cap Discovery Fund	67,297	1.4	■ Parnassus Core Equity (PRBLX)	42,441	0.9
■ Parnassus Core Equity (PRBLX)	47,052	1.0	■ TCW Total Return Bond Fund (TGLMX)	39,902	0.9
■ TCW Total Return Bond Fund (TGLMX)	42,048	0.9	■ Vanguard Small Cap Index (VSMAX)	32,774	0.7
■ Vanguard Small Cap Index (VSMAX)	33,652	0.7	■ Vanguard Target Retirement 2060 (VTTS)	26,954	0.6
■ Vanguard Target Retirement 2060 (VTTS)	25,483	0.5	■ Fidelity Diversified International (FDIV)	18,736	0.4
■ Fidelity Diversified International (FDIV)	20,476	0.4	■ MissionSquare Inflation Focused Fund	14,311	0.3
■ MissionSquare Inflation Focused Fund	15,151	0.3	■ Vanguard Total Int'l Stock Index (VTIAX)	7,188	0.2
■ Vanguard Total Int'l Stock Index (VTIAX)	7,402	0.2	■ Neuberger Berman High Yield Fixed Income (NHILX)	1,395	0.0
■ Neuberger Berman High Yield Fixed Income (NHILX)	1,400	0.0	■ Vanguard Target Retirement 2015 (VTXV)	-	0.0



June 30, 2022 : \$453,221

September 30, 2022 : \$412,021



Asset Allocation by Segment

Segments	Market Value	Allocation
Domestic Equity	129,280	28.5
Domestic Fixed Income	44,660	9.9
Balanced	279,281	61.6

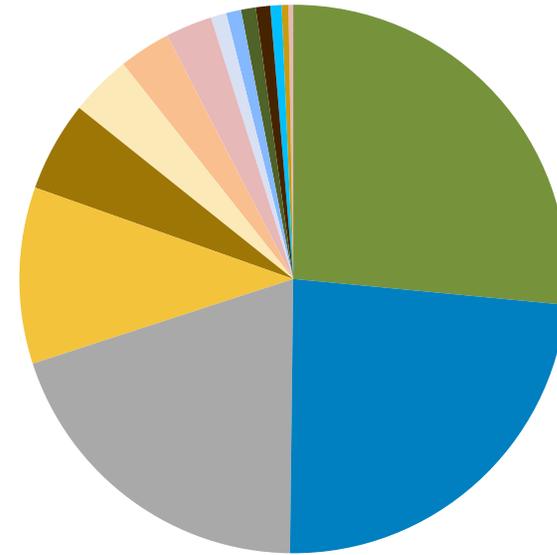
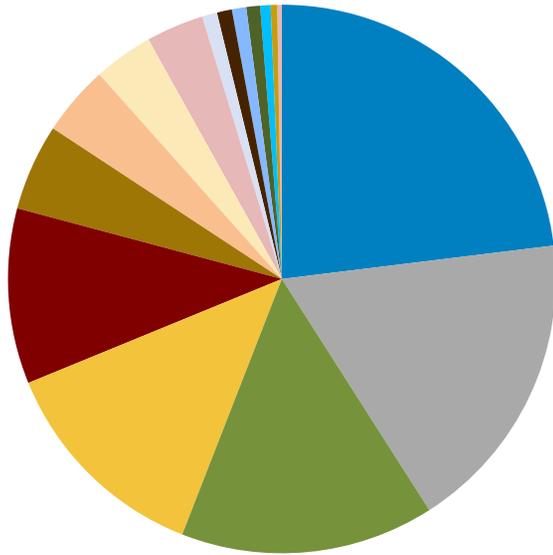
Asset Allocation by Segment

Segments	Market Value	Allocation
Domestic Equity	117,899	28.6
Domestic Fixed Income	37,183	9.0
Balanced	256,939	62.4



June 30, 2022 : \$453,221

September 30, 2022 : \$412,021



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vanguard 500 Index Fund (VFIAX)	104,470	23.1	Vanguard Target Retirement Income (VTINX)	109,213	26.5
Vanguard Target Retirement 2025 (VTTVX)	81,131	17.9	Vanguard 500 Index Fund (VFIAX)	97,579	23.7
Vanguard Target Retirement Income (VTINX)	67,884	15.0	Vanguard Target Retirement 2025 (VTTVX)	81,652	19.8
Vanguard Target Retirement 2020 (VTWNX)	58,397	12.9	Vanguard Target Retirement 2020 (VTWNX)	42,881	10.4
Vanguard Target Retirement 2015 (VTXVX)	46,861	10.3	MissionSquare Inflation Focused Fund	21,859	5.3
MissionSquare Inflation Focused Fund	23,085	5.1	Vanguard Target Retirement 2030 (VTHRX)	14,899	3.6
MissionSquare PLUS Fund S3	18,791	4.1	MissionSquare PLUS Fund S3	12,584	3.1
Vanguard Target Retirement 2030 (VTHRX)	15,886	3.5	AMG TimesSquare Mid Cap Growth (TMDPX)	11,300	2.7
AMG TimesSquare Mid Cap Growth (TMDPX)	15,394	3.4	T. Rowe Price Blue Chip Growth (TBCIX)	3,812	0.9
T. Rowe Price Blue Chip Growth (TBCIX)	4,018	0.9	Vanguard Target Retirement 2035 (VTTHX)	3,619	0.9
Vanguard Target Retirement 2045 (VTIVX)	3,999	0.9	Vanguard Small Cap Index (VSMAX)	3,578	0.9
Vanguard Target Retirement 2035 (VTTHX)	3,865	0.9	Vanguard Target Retirement 2045 (VTIVX)	3,511	0.9
Vanguard Small Cap Index (VSMAX)	3,680	0.8	TCW Total Return Bond Fund (TGLMX)	2,740	0.7
TCW Total Return Bond Fund (TGLMX)	2,785	0.6	Brandywine Dynamic Large Cap Value (LMBGX)	1,630	0.4
Brandywine Dynamic Large Cap Value (LMBGX)	1,718	0.4	Vanguard Target Retirement 2040 (VFORX)	1,164	0.3
Vanguard Target Retirement 2040 (VFORX)	1,257	0.3	Vanguard Target Retirement 2015 (VTXVX)	-	0.0



**Town of Palm Beach DC Plans  
Investment Option Performance Review**

As of September 30, 2022

Active Funds	Manager Tenure	*Consecutive Qtr Return & Rank	3 & 5 Year Return > Index		3 & 5 Year Return < 50th %-tile		3 & 5 Year Sharpe < 50th %-tile		Positive 3 & 5 Year Alpha		Heightened Scrutiny
MSQ Parnassus Core Equity (PRBLX)	21.3	Yes Yes	No (4)	Yes	60 (1)	26	51 (1)	14	-0.62 (1)	0.89	No
Brandywine Dynamic Large Cap Value (LMBGX)	7.8	Yes Yes	Yes	Yes	15	18	11	27	3.44	2.12	No
T. Rowe Price Blue Chip Growth (TBCIX)	0.8	Yes Yes	No (5)	No (5)	93 (5)	85 (3)	93 (5)	86 (3)	-7.09 (5)	-4.52 (4)	No
MSQ Victory Sycamore Est Value (VEVYX)	24.1	Yes Yes	Yes	Yes	3	1	2	1	4.61	3.81	No
MSQ TimesSquare Mid Cap Growth (TMDPX)	17.4	Yes Yes	Yes	Yes	14	12	14	5	3.36	2.68	No
MissionSquare Small Cap Discovery	12.3	Yes Yes	No (1)	Yes	69 (3)	35	70 (3)	35	-0.90 (1)	0.74	No
MSQ Invesco Discovery Fund (ODIYX)	16.3	Yes Yes	Yes	Yes	10	5	10	4	5.82	7.23	No
MSQ Diversified International	21.3	Yes Yes	Yes	Yes	30	20	34	23	1.18	1.19	No
MSQ Cohen & Steers Realty R5	14.3	Yes Yes	Yes	Yes	15	4	17	5	1.27	1.88	No
TCW Total Return Bond Fund (TGLMX)	12.5	Yes Yes	No (4)	No (2)	93 (5)	86 (5)	92 (3)	81 (3)	-0.52 (3)	-0.46 (3)	No
MissionSquare Inflation Focused	12.3	Yes Yes	No (5)	No (5)	59 (2)	53 (1)	59 (2)	54 (1)	-0.20 (5)	-0.25 (5)	No
Neuberger Berman High Yield Fixed Income (NHILX)	4.1	Yes Yes	No (5)	No (5)	56 (2)	50 (2)	54 (2)	49	-0.39 (5)	-0.39 (5)	No

Index Funds	Manager Tenure	3 & 5 Year Tracking Error Rank		Heightened Scrutiny
Vanguard 500 Index Fund (VFIAX)	6.3	1	1	No
Vanguard Mid Cap Index (VIMAX)	24.3	1	1	No
Vanguard Small Cap Index (VSMAX)	6.3	1	1	No
Vanguard Total Int'l Stock Index (VTIAX)	14.0	1	1	No

Target Date Funds/Risk Based Allocation Funds	Manager Tenure	3 & 5 Year Return < 50th %-tile		3 & 5 Year Sharpe < 50th %-tile		Heightened Scrutiny
Vanguard Target Retirement Income (VTINX)	9.5	35	24	38	20	No
Vanguard Target Retirement 2020 (VTW NX)	9.5	43	28	43	26	No
Vanguard Target Retirement 2025 (VTTVX)	9.5	41	29	41	31	No
Vanguard Target Retirement 2030 (VTHR X)	9.5	47	36	47	32	No
Vanguard Target Retirement 2035 (VTTH X)	9.5	49	39	49	38	No
Vanguard Target Retirement 2040 (VFOR X)	9.5	44	34	42	30	No
Vanguard Target Retirement 2045 (VTIV X)	9.5	30	25	30	24	No
Vanguard Target Retirement 2050 (VFIF X)	9.5	32	26	31	23	No
Vanguard Target Retirement 2055 (VFFV X)	9.5	33	30	32	26	No
Vanguard Target Retirement 2060 (VTTS X)	9.5	36	33	35	31	No
Vanguard Target Retirement 2065 (VLXV X)	5.1	43	N/A (5)	35	N/A (5)	No

Fund meets criteria  
Fund does not currently meet criteria  
Fund has not met criteria for more than 4 quarters

"More than 4 quarters" evaluation criteria excludes Index Funds

**Comparative Performance**  
**Town of Palm Beach DC Plans**  
As of September 30, 2022

Comparative Performance														
	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
<b>US Stock Funds</b>														
MSQ Parnassus Core Equity (PRBLX)	-6.95	(93)	-25.73	(70)	-17.76	(62)	2.57	(68)	6.85	(60)	7.50	(18)	9.25	(26)
S&P 500 Index	-4.88	(42)	-23.87	(40)	-15.47	(31)	4.83	(27)	8.16	(24)	7.17	(27)	9.24	(26)
Difference	-2.07		-1.86		-2.29		-2.26		-1.31		0.33		0.01	
IM U.S. Large Cap Core Equity (MF) Median	-5.16		-24.48		-17.11		3.39		7.23		6.44		8.43	
Brandywine Dynamic Large Cap Value (LMBGX)	-4.62	(22)	-17.63	(59)	-13.03	(76)	11.03	(30)	7.82	(15)	5.81	(25)	7.50	(18)
Russell 1000 Value Index	-5.62	(52)	-17.75	(60)	-11.36	(67)	9.39	(47)	4.36	(74)	4.27	(66)	5.29	(74)
Difference	1.00		0.12		-1.67		1.64		3.46		1.54		2.21	
IM U.S. Large Cap Value Equity (MF) Median	-5.57		-16.74		-9.58		9.14		5.34		4.91		6.09	
T. Rowe Price Blue Chip Growth (TBCIX)	-4.69	(58)	-37.35	(87)	-34.74	(88)	-10.62	(90)	2.89	(93)	2.69	(91)	7.22	(85)
Russell 1000 Growth Index	-3.60	(26)	-30.66	(25)	-22.59	(20)	-0.72	(16)	10.67	(8)	8.89	(8)	12.16	(8)
Difference	-1.09		-6.69		-12.15		-9.90		-7.78		-6.20		-4.94	
IM U.S. Large Cap Growth Equity (MF) Median	-4.41		-33.10		-27.73		-4.88		7.08		5.82		9.29	
MSQ Victory Sycamore Est Value (VEVYX)	-3.29	(6)	-13.75	(8)	-6.82	(4)	17.10	(15)	9.19	(3)	7.63	(2)	8.57	(1)
Russell Midcap Value Index	-4.93	(47)	-20.36	(92)	-13.56	(90)	10.95	(92)	4.50	(65)	3.77	(53)	4.76	(49)
Difference	1.64		6.61		6.74		6.15		4.69		3.86		3.81	
IM U.S. Mid Cap Value Equity (MF) Median	-5.00		-17.62		-10.23		14.16		4.99		3.88		4.70	
MSQ TimesSquare Mid Cap Growth (TMDPX)	-0.32	(26)	-25.53	(11)	-21.75	(16)	0.86	(19)	7.47	(14)	7.47	(3)	9.76	(12)
Russell Midcap Growth Index	-0.65	(30)	-31.45	(41)	-29.50	(49)	-4.10	(55)	4.26	(61)	4.50	(50)	7.62	(54)
Difference	0.33		5.92		7.75		4.96		3.21		2.97		2.14	
IM U.S. Mid Cap Growth Equity (MF) Median	-1.99		-33.10		-29.66		-3.32		5.03		4.45		7.74	
MissionSquare Small Cap Discovery	-4.42	(49)	-25.63	(83)	-23.26	(86)	5.98	(87)	3.28	(69)	1.14	(56)	4.27	(35)
Russell 2000 Index	-2.19	(17)	-25.10	(77)	-23.50	(89)	6.29	(85)	4.29	(56)	0.82	(63)	3.55	(51)
Difference	-2.23		-0.53		0.24		-0.31		-1.01		0.32		0.72	
IM U.S. Small Cap Core Equity (MF) Median	-4.48		-23.02		-18.44		11.60		4.60		1.39		3.57	
MSQ Invesco Discovery Fund (ODIYX)	2.70	(7)	-32.77	(72)	-30.19	(61)	-2.17	(56)	8.55	(10)	6.10	(5)	10.68	(5)
Russell 2000 Growth Index	0.24	(24)	-29.28	(40)	-29.27	(54)	-2.91	(65)	2.94	(78)	-0.36	(82)	3.60	(79)
Difference	2.46		-3.49		-0.92		0.74		5.61		6.46		7.08	
IM U.S. Small Cap Growth Equity (MF) Median	-1.36		-30.40		-29.12		-1.49		4.73		1.90		5.95	
Vanguard 500 Index Fund (VFIAX)	-4.89	(42)	-23.89	(40)	-15.51	(32)	4.79	(28)	8.12	(25)	7.14	(29)	9.20	(27)
S&P 500 Index	-4.88	(42)	-23.87	(40)	-15.47	(31)	4.83	(27)	8.16	(24)	7.17	(27)	9.24	(26)
Difference	-0.01		-0.02		-0.04		-0.04		-0.04		-0.03		-0.04	
IM U.S. Large Cap Core Equity (MF) Median	-5.16		-24.48		-17.11		3.39		7.23		6.44		8.43	

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



**Comparative Performance  
Town of Palm Beach DC Plans**

As of September 30, 2022

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Vanguard Mid Cap Index (VIMAX)	-4.14	(43)	-25.43	(93)	-19.48	(91)	4.68	(87)	5.47	(37)	5.01	(27)	6.64	(19)
Vanguard Mid Cap Hybrid	-4.14	(43)	-25.42	(93)	-19.47	(91)	4.70	(87)	5.48	(36)	5.03	(27)	6.66	(19)
Difference	0.00		-0.01		-0.01		-0.02		-0.01		-0.02		-0.02	
IM U.S. Mid Cap Core Equity (MF) Median	-4.32		-20.76		-14.07		8.66		4.68		3.86		5.27	
Vanguard Small Cap Index (VSMAX)	-2.61	(24)	-23.70	(62)	-20.74	(75)	6.85	(81)	4.98	(45)	2.71	(25)	5.37	(15)
Vanguard Small Cap Hybrid	-2.63	(24)	-23.71	(62)	-20.75	(75)	6.84	(81)	4.96	(46)	2.70	(25)	5.35	(15)
Difference	0.02		0.01		0.01		0.01		0.02		0.01		0.02	
IM U.S. Small Cap Core Equity (MF) Median	-4.48		-23.02		-18.44		11.60		4.60		1.39		3.57	
<b>International/Global Funds</b>														
MSQ Diversified International	-8.74	(21)	-33.66	(79)	-30.93	(67)	-8.58	(67)	-0.70	(30)	-0.22	(22)	0.29	(20)
MSCI EAFE (Net) Index	-9.36	(30)	-27.09	(33)	-25.13	(28)	-2.98	(29)	-1.83	(49)	-1.71	(45)	-0.84	(37)
Difference	0.62		-6.57		-5.80		-5.60		1.13		1.49		1.13	
IM International Equity (MF) Median	-10.39		-28.99		-28.15		-5.96		-1.90		-1.97		-1.50	
Vanguard Total Int'l Stock Index (VTIAX)	-10.51	(53)	-26.76	(31)	-25.21	(29)	-3.56	(34)	-1.18	(38)	-1.27	(37)	-0.70	(34)
FTSE Global ex USA All Cap Index (Net)	-9.66	(36)	-26.49	(29)	-25.20	(29)	-3.16	(30)	-0.93	(34)	-1.11	(34)	-0.50	(30)
Difference	-0.85		-0.27		-0.01		-0.40		-0.25		-0.16		-0.20	
IM International Equity (MF) Median	-10.39		-28.99		-28.15		-5.96		-1.90		-1.97		-1.50	
<b>Real Estate</b>														
MSQ Cohen & Steers Realty R5	-10.96	(62)	-27.67	(27)	-16.06	(21)	5.83	(26)	0.17	(15)	5.57	(8)	5.62	(4)
FTSE NAREIT All Equity REITs	-10.83	(56)	-27.93	(33)	-16.27	(25)	4.94	(45)	-1.10	(48)	3.95	(33)	4.10	(28)
Difference	-0.13		0.26		0.21		0.89		1.27		1.62		1.52	
IM Real Estate Sector (MF) Median	-10.74		-28.99		-17.59		4.71		-1.30		3.36		3.31	
<b>Bond Funds</b>														
TCW Total Return Bond Fund (TGLMX)	-5.89	(98)	-17.15	(93)	-17.13	(92)	-9.44	(98)	-4.02	(93)	-0.69	(88)	-0.76	(86)
Blmbg. U.S. Aggregate Index	-4.75	(60)	-14.61	(28)	-14.60	(24)	-8.00	(50)	-3.26	(55)	-0.03	(45)	-0.27	(44)
Difference	-1.14		-2.54		-2.53		-1.44		-0.76		-0.66		-0.49	
IM U.S. Broad Market Core Fixed Income (MF) Median	-4.67		-15.17		-15.29		-8.01		-3.22		-0.09		-0.33	
MissionSquare Inflation Focused	-5.18	(57)	-14.07	(72)	-12.10	(61)	-3.81	(57)	0.61	(59)	2.10	(50)	1.73	(53)
Bloomberg U.S. TIPS Index	-5.14	(57)	-13.61	(58)	-11.57	(46)	-3.55	(47)	0.79	(49)	2.34	(30)	1.95	(32)
Difference	-0.04		-0.46		-0.53		-0.26		-0.18		-0.24		-0.22	
IM U.S. TIPS (MF) Median	-5.04		-13.53		-11.72		-3.65		0.76		2.09		1.75	

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



**Comparative Performance**  
**Town of Palm Beach DC Plans**  
**As of September 30, 2022**

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Neuberger Berman High Yield Fixed Income (NHILX)	-0.66	(41)	-15.04	(70)	-14.55	(69)	-2.74	(62)	-1.09	(56)	0.70	(48)	1.00	(50)
ICE BofA U.S. High Yield Index	-0.70	(44)	-14.65	(56)	-14.10	(55)	-2.15	(44)	-0.69	(39)	1.01	(35)	1.40	(29)
Difference	0.04		-0.39		-0.45		-0.59		-0.40		-0.31		-0.40	
IM U.S. High Yield Bonds (MF) Median	-0.78		-14.45		-13.92		-2.39		-0.94		0.64		1.00	
<b>Lifetime Income Fund</b>														
MSQ Retirement Income Advantage	-5.67	(77)	-20.97	(77)	-17.28	(69)	-2.15	(68)	1.53	(48)	4.31	(5)	4.66	(8)
60% S&P 500 / 40% Barclays Aggregate	-4.75	(37)	-20.10	(61)	-14.85	(33)	-0.22	(33)	3.85	(7)	4.65	(4)	5.70	(4)
Difference	-0.92		-0.87		-2.43		-1.93		-2.32		-0.34		-1.04	
IM Mixed-Asset Target Alloc Moderate (MF) Median	-5.03		-19.50		-16.36		-1.33		1.40		1.99		2.69	
<b>Stable Value/Cash Management Funds</b>														
MissionSquare Plus Fund	0.50	(24)	1.42	(1)	1.88	(1)	1.92	(1)	2.05	(1)	2.15	(1)	2.16	(1)
90 Day U.S. Treasury Bill	0.46	(43)	0.61	(35)	0.62	(32)	0.34	(19)	0.59	(5)	1.04	(5)	1.15	(7)
Difference	0.04		0.81		1.26		1.58		1.46		1.11		1.01	
IM U.S. Taxable Money Market (MF) Median	0.45		0.55		0.55		0.28		0.42		0.81		0.90	
MissionSquare PLUS Fund S3	0.38	(78)	1.06	(1)	1.41	(1)	1.45	(1)	1.58	(1)	1.66	(1)	1.61	(1)
90 Day U.S. Treasury Bill	0.46	(43)	0.61	(35)	0.62	(32)	0.34	(19)	0.59	(5)	1.04	(5)	1.15	(7)
Difference	-0.08		0.45		0.79		1.11		0.99		0.62		0.46	
IM U.S. Taxable Money Market (MF) Median	0.45		0.55		0.55		0.28		0.42		0.81		0.90	
VT Cash Management	0.41	(68)	0.49	(68)	0.49	(67)	0.25	(67)	0.37	(64)	0.76	(62)	0.84	(60)
90 Day U.S. Treasury Bill	0.46	(43)	0.61	(35)	0.62	(32)	0.34	(19)	0.59	(5)	1.04	(5)	1.15	(7)
Difference	-0.05		-0.12		-0.13		-0.09		-0.22		-0.28		-0.31	
IM U.S. Taxable Money Market (MF) Median	0.45		0.55		0.55		0.28		0.42		0.81		0.90	
<b>Target Date Funds</b>														
Vanguard Target Retirement Income (VTINX)	-4.64	(56)	-15.89	(31)	-14.19	(29)	-3.52	(55)	-0.02	(35)	1.63	(19)	1.96	(24)
Vanguard Target Income Composite Index	-4.56	(52)	-15.77	(31)	-14.03	(27)	-3.33	(48)	0.33	(27)	1.92	(10)	2.23	(16)
Difference	-0.08		-0.12		-0.16		-0.19		-0.35		-0.29		-0.27	
IM Mixed-Asset Target Alloc Consv (MF) Median	-4.50		-17.17		-15.44		-3.37		-0.52		0.87		1.21	
Vanguard Target Retirement 2020 (VTW NX)	-5.12	(51)	-18.21	(43)	-15.83	(37)	-2.32	(52)	1.17	(43)	2.18	(33)	2.91	(28)
Vanguard Target 2020 Composite Index	-4.93	(39)	-17.97	(37)	-15.53	(29)	-2.02	(44)	1.62	(22)	2.56	(15)	3.26	(8)
Difference	-0.19		-0.24		-0.30		-0.30		-0.45		-0.38		-0.35	
IM Mixed-Asset Target 2020 (MF) Median	-5.12		-18.70		-16.29		-2.21		0.99		1.85		2.61	

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



**Comparative Performance**  
**Town of Palm Beach DC Plans**  
As of September 30, 2022

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Vanguard Target Retirement 2025 (VTTVX)	-5.59	(65)	-20.35	(66)	-17.53	(65)	-2.22	(50)	1.40	(41)	2.26	(34)	3.15	(29)
Vanguard Target 2025 Composite Index	-5.32	(55)	-19.95	(49)	-17.09	(46)	-1.79	(36)	1.97	(18)	2.72	(12)	3.58	(8)
Difference	-0.27		-0.40		-0.44		-0.43		-0.57		-0.46		-0.43	
IM Mixed-Asset Target 2025 (MF) Median	-5.23		-19.99		-17.19		-2.23		1.11		1.98		2.82	
Vanguard Target Retirement 2030 (VTHRX)	-5.93	(71)	-21.60	(53)	-18.42	(59)	-1.76	(63)	1.82	(47)	2.40	(39)	3.43	(36)
Vanguard Target 2030 Composite Index	-5.58	(50)	-21.16	(44)	-17.96	(46)	-1.32	(43)	2.39	(20)	2.87	(15)	3.87	(14)
Difference	-0.35		-0.44		-0.46		-0.44		-0.57		-0.47		-0.44	
IM Mixed-Asset Target 2030 (MF) Median	-5.59		-21.54		-18.17		-1.55		1.67		2.27		3.24	
Vanguard Target Retirement 2035 (VTTHX)	-6.09	(62)	-22.40	(35)	-18.87	(46)	-1.08	(67)	2.39	(49)	2.64	(43)	3.78	(39)
Vanguard Target 2035 Composite Index	-5.75	(40)	-22.01	(30)	-18.48	(32)	-0.65	(47)	2.94	(25)	3.10	(13)	4.22	(18)
Difference	-0.34		-0.39		-0.39		-0.43		-0.55		-0.46		-0.44	
IM Mixed-Asset Target 2035 (MF) Median	-5.87		-22.90		-19.06		-0.73		2.36		2.50		3.62	
Vanguard Target Retirement 2040 (VFORX)	-6.33	(62)	-23.27	(27)	-19.42	(31)	-0.44	(59)	2.91	(44)	2.84	(40)	4.11	(34)
Vanguard Target 2040 Composite Index	-5.93	(42)	-22.86	(22)	-19.01	(22)	0.02	(39)	3.47	(20)	3.31	(12)	4.55	(13)
Difference	-0.40		-0.41		-0.41		-0.46		-0.56		-0.47		-0.44	
IM Mixed-Asset Target 2040 (MF) Median	-6.13		-24.21		-19.89		-0.24		2.71		2.66		3.89	
Vanguard Target Retirement 2045 (VTIVX)	-6.51	(61)	-24.10	(29)	-19.93	(37)	0.21	(47)	3.46	(30)	3.10	(26)	4.42	(25)
Vanguard Target 2045 Composite Index	-6.11	(35)	-23.71	(25)	-19.55	(23)	0.67	(29)	3.99	(11)	3.57	(12)	4.85	(11)
Difference	-0.40		-0.39		-0.38		-0.46		-0.53		-0.47		-0.43	
IM Mixed-Asset Target 2045 (MF) Median	-6.40		-24.94		-20.31		0.13		3.02		2.84		4.08	
Vanguard Target Retirement 2050 (VFIFX)	-6.64	(62)	-24.43	(28)	-20.18	(38)	0.15	(51)	3.41	(32)	3.07	(26)	4.39	(26)
Vanguard Target 2050 Composite Index	-6.21	(38)	-24.04	(24)	-19.81	(26)	0.63	(34)	3.97	(8)	3.55	(9)	4.84	(11)
Difference	-0.43		-0.39		-0.37		-0.48		-0.56		-0.48		-0.45	
IM Mixed-Asset Target 2050 (MF) Median	-6.47		-25.19		-20.67		0.15		3.08		2.78		4.09	
Vanguard Target Retirement 2055 (VFFVX)	-6.63	(60)	-24.44	(28)	-20.17	(38)	0.14	(55)	3.40	(33)	3.07	(27)	4.38	(30)
Vanguard Target 2055 Composite Index	-6.21	(35)	-24.04	(22)	-19.81	(25)	0.63	(37)	3.97	(9)	3.55	(9)	4.84	(10)
Difference	-0.42		-0.40		-0.36		-0.49		-0.57		-0.48		-0.46	
IM Mixed-Asset Target 2055 (MF) Median	-6.51		-25.14		-20.79		0.25		3.11		2.81		4.11	
Vanguard Target Retirement 2060 (VTTSX)	-6.64	(63)	-24.44	(24)	-20.16	(37)	0.14	(61)	3.40	(36)	3.07	(31)	4.38	(33)
Vanguard Target 2060 Composite Index	-6.21	(37)	-24.04	(18)	-19.81	(27)	0.63	(41)	3.97	(10)	3.55	(10)	4.84	(12)
Difference	-0.43		-0.40		-0.35		-0.49		-0.57		-0.48		-0.46	
IM Mixed-Asset Target 2060 (MF) Median	-6.45		-25.12		-20.84		0.37		3.19		2.82		4.20	
Vanguard Target Retirement 2065 (VLXVX)	-6.60	(56)	-24.38	(23)	-20.10	(26)	0.17	(48)	3.38	(43)	3.06	(22)	4.36	(43)
Vanguard Target 2065 Composite Index (Net)	-6.21	(38)	-24.04	(17)	-19.81	(22)	0.63	(31)	3.97	(11)	3.55	(1)	4.84	(1)
Difference	-0.39		-0.34		-0.29		-0.46		-0.59		-0.49		-0.48	
IM Mixed-Asset Target 2065+ (MF) Median	-6.47		-25.57		-21.09		0.00		3.22		2.47		4.33	

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



Comparative Performance														
	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
<b>US Stock Funds</b>														
Parnassus Core Equity (PRBLX)	-6.93	(93)	-25.73	(70)	-17.76	(62)	2.58	(68)	6.85	(60)	7.91	(11)	9.58	(19)
S&P 500 Index	-4.88	(42)	-23.87	(40)	-15.47	(31)	4.83	(27)	8.16	(24)	7.17	(27)	9.24	(26)
Difference	-2.05		-1.86		-2.29		-2.25		-1.31		0.74		0.34	
IM U.S. Large Cap Core Equity (MF) Median	-5.16		-24.48		-17.11		3.39		7.23		6.44		8.43	
Brandywine Dynamic Large Cap Value (LMBGX)	-4.62	(22)	-17.63	(59)	-13.03	(76)	11.03	(30)	7.82	(15)	5.81	(25)	7.50	(18)
Russell 1000 Value Index	-5.62	(52)	-17.75	(60)	-11.36	(67)	9.39	(47)	4.36	(74)	4.27	(66)	5.29	(74)
Difference	1.00		0.12		-1.67		1.64		3.46		1.54		2.21	
IM U.S. Large Cap Value Equity (MF) Median	-5.57		-16.74		-9.58		9.14		5.34		4.91		6.09	
T. Rowe Price Blue Chip Growth (TBCIX)	-4.69	(58)	-37.35	(87)	-34.74	(88)	-10.62	(90)	2.89	(93)	2.69	(91)	7.22	(85)
Russell 1000 Growth Index	-3.60	(26)	-30.66	(25)	-22.59	(20)	-0.72	(16)	10.67	(8)	8.89	(8)	12.16	(8)
Difference	-1.09		-6.69		-12.15		-9.90		-7.78		-6.20		-4.94	
IM U.S. Large Cap Growth Equity (MF) Median	-4.41		-33.10		-27.73		-4.88		7.08		5.82		9.29	
Victory Sycamore Est Value (VEVYX)	-3.30	(7)	-13.75	(8)	-6.82	(4)	17.10	(15)	9.18	(4)	7.63	(2)	8.56	(2)
Russell Midcap Value Index	-4.93	(47)	-20.36	(92)	-13.56	(90)	10.95	(92)	4.50	(65)	3.77	(53)	4.76	(49)
Difference	1.63		6.61		6.74		6.15		4.68		3.86		3.80	
IM U.S. Mid Cap Value Equity (MF) Median	-5.00		-17.62		-10.23		14.16		4.99		3.88		4.70	
AMG TimesSquare Mid Cap Growth (TMDPX)	-0.31	(26)	-25.52	(11)	-21.75	(16)	0.86	(19)	7.48	(14)	7.48	(3)	9.76	(12)
Russell Midcap Growth Index	-0.65	(30)	-31.45	(41)	-29.50	(49)	-4.10	(55)	4.26	(61)	4.50	(50)	7.62	(54)
Difference	0.34		5.93		7.75		4.96		3.22		2.98		2.14	
IM U.S. Mid Cap Growth Equity (MF) Median	-1.99		-33.10		-29.66		-3.32		5.03		4.45		7.74	
MissionSquare Small Cap Discovery Fund	-4.53	(51)	-25.87	(84)	-23.57	(89)	5.59	(90)	2.87	(73)	0.71	(66)	3.83	(44)
Russell 2000 Index	-2.19	(17)	-25.10	(77)	-23.50	(89)	6.29	(85)	4.29	(56)	0.82	(63)	3.55	(51)
Difference	-2.34		-0.77		-0.07		-0.70		-1.42		-0.11		0.28	
IM U.S. Small Cap Core Equity (MF) Median	-4.48		-23.02		-18.44		11.60		4.60		1.39		3.57	
Vanguard 500 Index Fund (VFIAX)	-4.89	(42)	-23.89	(40)	-15.51	(32)	4.79	(28)	8.12	(25)	7.14	(29)	9.20	(27)
S&P 500 Index	-4.88	(42)	-23.87	(40)	-15.47	(31)	4.83	(27)	8.16	(24)	7.17	(27)	9.24	(26)
Difference	-0.01		-0.02		-0.04		-0.04		-0.04		-0.03		-0.04	
IM U.S. Large Cap Core Equity (MF) Median	-5.16		-24.48		-17.11		3.39		7.23		6.44		8.43	
Vanguard Small Cap Index (VSMAX)	-2.61	(24)	-23.70	(62)	-20.74	(75)	6.85	(81)	4.98	(45)	2.71	(25)	5.37	(15)
Vanguard Small Cap Hybrid	-2.63	(24)	-23.71	(62)	-20.75	(75)	6.84	(81)	4.96	(46)	2.70	(25)	5.35	(15)
Difference	0.02		0.01		0.01		0.01		0.02		0.01		0.02	
IM U.S. Small Cap Core Equity (MF) Median	-4.48		-23.02		-18.44		11.60		4.60		1.39		3.57	

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



## Comparative Performance

## Total RHS Plans

As of September 30, 2022

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
<b>International/Global Funds</b>														
Fidelity Diversified International (FDIVX)	-8.71	(21)	-33.67	(79)	-30.95	(67)	-8.59	(67)	-0.70	(30)	-0.23	(22)	0.29	(20)
MSCI EAFE (Net) Index	-9.36	(30)	-27.09	(33)	-25.13	(28)	-2.98	(29)	-1.83	(49)	-1.71	(45)	-0.84	(37)
Difference	0.65		-6.58		-5.82		-5.61		1.13		1.48		1.13	
IM International Equity (MF) Median	-10.39		-28.99		-28.15		-5.96		-1.90		-1.97		-1.50	
Vanguard Total Int'l Stock Index (VTIAX)	-10.51	(53)	-26.76	(31)	-25.21	(29)	-3.56	(34)	-1.18	(38)	-1.27	(37)	-0.70	(34)
FTSE Global ex USA All Cap Index (Net)	-9.66	(36)	-26.49	(29)	-25.20	(29)	-3.16	(30)	-0.93	(34)	-1.11	(34)	-0.50	(30)
Difference	-0.85		-0.27		-0.01		-0.40		-0.25		-0.16		-0.20	
IM International Equity (MF) Median	-10.39		-28.99		-28.15		-5.96		-1.90		-1.97		-1.50	
<b>Bond Funds</b>														
TCW Total Return Bond Fund (TGLMX)	-5.89	(98)	-17.15	(93)	-17.13	(92)	-9.44	(98)	-4.02	(93)	-0.69	(88)	-0.76	(86)
Blmbg. U.S. Aggregate Index	-4.75	(60)	-14.61	(28)	-14.60	(24)	-8.00	(50)	-3.26	(55)	-0.03	(45)	-0.27	(44)
Difference	-1.14		-2.54		-2.53		-1.44		-0.76		-0.66		-0.49	
IM U.S. Broad Market Core Fixed Income (MF) Median	-4.67		-15.17		-15.29		-8.01		-3.22		-0.09		-0.33	
MissionSquare Inflation Focused Fund	-5.30	(66)	-14.32	(83)	-12.46	(75)	-4.20	(71)	0.20	(75)	1.68	(74)	1.32	(75)
Bloomberg U.S. TIPS Index	-5.14	(57)	-13.61	(58)	-11.57	(46)	-3.55	(47)	0.79	(49)	2.34	(30)	1.95	(32)
Difference	-0.16		-0.71		-0.89		-0.65		-0.59		-0.66		-0.63	
IM U.S. TIPS (MF) Median	-5.04		-13.53		-11.72		-3.65		0.76		2.09		1.75	
Neuberger Berman High Yield Fixed Income (NHILX)	-0.66	(41)	-15.04	(70)	-14.55	(69)	-2.74	(62)	-1.09	(56)	0.70	(48)	1.00	(50)
ICE BofA U.S. High Yield Index	-0.70	(44)	-14.65	(56)	-14.10	(55)	-2.15	(44)	-0.69	(39)	1.01	(35)	1.40	(29)
Difference	0.04		-0.39		-0.45		-0.59		-0.40		-0.31		-0.40	
IM U.S. High Yield Bonds (MF) Median	-0.78		-14.45		-13.92		-2.39		-0.94		0.64		1.00	
<b>Stable Value/Cash Management Funds</b>														
MissionSquare PLUS Fund S3	0.38	(78)	1.06	(1)	1.41	(1)	1.45	(1)	1.58	(1)	1.66	(1)	1.61	(1)
90 Day U.S. Treasury Bill	0.46	(43)	0.61	(35)	0.62	(32)	0.34	(19)	0.59	(5)	1.04	(5)	1.15	(7)
Difference	-0.08		0.45		0.79		1.11		0.99		0.62		0.46	
IM U.S. Taxable Money Market (MF) Median	0.45		0.55		0.55		0.28		0.42		0.81		0.90	
<b>Target Date Funds</b>														
Vanguard Target Retirement Income (VTINX)	-4.64	(56)	-15.89	(31)	-14.19	(29)	-3.52	(55)	-0.02	(35)	1.63	(19)	1.96	(24)
Vanguard Target Income Composite Index	-4.56	(52)	-15.77	(31)	-14.03	(27)	-3.33	(48)	0.33	(27)	1.92	(10)	2.23	(16)
Difference	-0.08		-0.12		-0.16		-0.19		-0.35		-0.29		-0.27	
IM Mixed-Asset Target Alloc Consv (MF) Median	-4.50		-17.17		-15.44		-3.37		-0.52		0.87		1.21	

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



Comparative Performance

Total RHS Plans

As of September 30, 2022

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Vanguard Target Retirement 2020 (VTWNX)	-5.12	(51)	-18.21	(43)	-15.83	(37)	-2.32	(52)	1.17	(43)	2.18	(33)	2.91	(28)
Vanguard Target 2020 Composite Index	-4.93	(39)	-17.97	(37)	-15.53	(29)	-2.02	(44)	1.62	(22)	2.56	(15)	3.26	(8)
Difference	-0.19		-0.24		-0.30		-0.30		-0.45		-0.38		-0.35	
IM Mixed-Asset Target 2020 (MF) Median	-5.12		-18.70		-16.29		-2.21		0.99		1.85		2.61	
Vanguard Target Retirement 2025 (VTTVX)	-5.59	(65)	-20.35	(66)	-17.53	(65)	-2.22	(50)	1.40	(41)	2.26	(34)	3.15	(29)
Vanguard Target 2025 Composite Index	-5.32	(55)	-19.95	(49)	-17.09	(46)	-1.79	(36)	1.97	(18)	2.72	(12)	3.58	(8)
Difference	-0.27		-0.40		-0.44		-0.43		-0.57		-0.46		-0.43	
IM Mixed-Asset Target 2025 (MF) Median	-5.23		-19.99		-17.19		-2.23		1.11		1.98		2.82	
Vanguard Target Retirement 2030 (VTHR30)	-5.93	(71)	-21.60	(53)	-18.42	(59)	-1.76	(63)	1.82	(47)	2.40	(39)	3.43	(36)
Vanguard Target 2030 Composite Index	-5.58	(50)	-21.16	(44)	-17.96	(46)	-1.32	(43)	2.39	(20)	2.87	(15)	3.87	(14)
Difference	-0.35		-0.44		-0.46		-0.44		-0.57		-0.47		-0.44	
IM Mixed-Asset Target 2030 (MF) Median	-5.59		-21.54		-18.17		-1.55		1.67		2.27		3.24	
Vanguard Target Retirement 2035 (VTTH35)	-6.09	(62)	-22.40	(35)	-18.87	(46)	-1.08	(67)	2.39	(49)	2.64	(43)	3.78	(39)
Vanguard Target 2035 Composite Index	-5.75	(40)	-22.01	(30)	-18.48	(32)	-0.65	(47)	2.94	(25)	3.10	(13)	4.22	(18)
Difference	-0.34		-0.39		-0.39		-0.43		-0.55		-0.46		-0.44	
IM Mixed-Asset Target 2035 (MF) Median	-5.87		-22.90		-19.06		-0.73		2.36		2.50		3.62	
Vanguard Target Retirement 2040 (VFOR40)	-6.33	(62)	-23.27	(27)	-19.42	(31)	-0.44	(59)	2.91	(44)	2.84	(40)	4.11	(34)
Vanguard Target 2040 Composite Index	-5.93	(42)	-22.86	(22)	-19.01	(22)	0.02	(39)	3.47	(20)	3.31	(12)	4.55	(13)
Difference	-0.40		-0.41		-0.41		-0.46		-0.56		-0.47		-0.44	
IM Mixed-Asset Target 2040 (MF) Median	-6.13		-24.21		-19.89		-0.24		2.71		2.66		3.89	
Vanguard Target Retirement 2045 (VTIV45)	-6.51	(61)	-24.10	(29)	-19.93	(37)	0.21	(47)	3.46	(30)	3.10	(26)	4.42	(25)
Vanguard Target 2045 Composite Index	-6.11	(35)	-23.71	(25)	-19.55	(23)	0.67	(29)	3.99	(11)	3.57	(12)	4.85	(11)
Difference	-0.40		-0.39		-0.38		-0.46		-0.53		-0.47		-0.43	
IM Mixed-Asset Target 2045 (MF) Median	-6.40		-24.94		-20.31		0.13		3.02		2.84		4.08	
Vanguard Target Retirement 2050 (VFIF50)	-6.64	(62)	-24.43	(28)	-20.18	(38)	0.15	(51)	3.41	(32)	3.07	(26)	4.39	(26)
Vanguard Target 2050 Composite Index	-6.21	(38)	-24.04	(24)	-19.81	(26)	0.63	(34)	3.97	(8)	3.55	(9)	4.84	(11)
Difference	-0.43		-0.39		-0.37		-0.48		-0.56		-0.48		-0.45	
IM Mixed-Asset Target 2050 (MF) Median	-6.47		-25.19		-20.67		0.15		3.08		2.78		4.09	
Vanguard Target Retirement 2055 (VFFV55)	-6.63	(60)	-24.44	(28)	-20.17	(38)	0.14	(55)	3.40	(33)	3.07	(27)	4.38	(30)
Vanguard Target 2055 Composite Index	-6.21	(35)	-24.04	(22)	-19.81	(25)	0.63	(37)	3.97	(9)	3.55	(9)	4.84	(10)
Difference	-0.42		-0.40		-0.36		-0.49		-0.57		-0.48		-0.46	
IM Mixed-Asset Target 2055 (MF) Median	-6.51		-25.14		-20.79		0.25		3.11		2.81		4.11	
Vanguard Target Retirement 2060 (VTTS60)	-6.64	(61)	-24.44	(28)	-20.16	(37)	0.14	(56)	3.40	(33)	3.07	(28)	4.38	(30)
Vanguard Target 2060 Composite Index	-6.21	(35)	-24.04	(22)	-19.81	(25)	0.63	(37)	3.97	(9)	3.55	(9)	4.84	(10)
Difference	-0.43		-0.40		-0.35		-0.49		-0.57		-0.48		-0.46	
IM Mixed-Asset Target 2055 (MF) Median	-6.51		-25.14		-20.79		0.25		3.11		2.81		4.11	

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



	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
MSQ Parnassus Core Equity (PRBLX)	191,852	0.82	1,573
Brandywine Dynamic Large Cap Value (LMBGX)	913,074	0.65	5,935
T. Rowe Price Blue Chip Growth (TBCIX)	2,476,400	0.56	13,868
MSQ Victory Sycamore Est Value (VEVYX)	500,485	0.61	3,053
MSQ TimesSquare Mid Cap Growth (TMDPX)	652,192	1.18	7,696
MissionSquare Small Cap Discovery	206,736	0.60	1,240
MSQ Invesco Discovery Fund (ODIYX)	1,701,282	0.78	13,270
MSQ Fidelity Diversified International (FDIVX)	843,389	1.01	8,518
MSQ Cohen & Steers Realty R5	414,610	0.88	3,649
TCW Total Return Bond Fund (TGLMX)	1,679,269	0.49	8,228
MissionSquare Inflation Focused	1,404,699	0.39	5,478
Neuberger Berman High Yield Fixed Income (NHILX)	334,074	0.69	2,305
Vanguard 500 Index Fund (VFIAX)	4,417,677	0.04	1,767
Vanguard Mid Cap Index (VIMAX)	662,090	0.05	331
Vanguard Small Cap Index (VSMAX)	590,981	0.05	295
Vanguard Total Int'l Stock Index (VTIAX)	1,503,805	0.11	1,654
Vanguard Target Retirement Income (VTINX)	1,552,261	0.08	1,242
Vanguard Target Retirement 2020 (VTWNX)	1,590,886	0.08	1,273
Vanguard Target Retirement 2025 (VTTVX)	1,729,324	0.08	1,383
Vanguard Target Retirement 2030 (VTHR X)	1,910,852	0.08	1,529
Vanguard Target Retirement 2035 (VTTHX)	459,863	0.08	368
Vanguard Target Retirement 2040 (VFORX)	77,709	0.08	62
Vanguard Target Retirement 2045 (VTIVX)	252,787	0.08	202
Vanguard Target Retirement 2050 (VFIFX)	445,167	0.08	356
Vanguard Target Retirement 2055 (VFFVX)	109,115	0.08	87
Vanguard Target Retirement 2060 (VTT SX)	22,749	0.08	18
Vanguard Target Retirement 2065 (VLXVX)	93	0.08	-
MSQ Retirement Income Advantage	270,495	1.67	4,517
MissionSquare Plus Fund	15,347,446	0.52	79,807
<b>457 Plan- 300786</b>	<b>42,570,920</b>	<b>0.40</b>	<b>169,706</b>



	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
MSQ Parnassus Core Equity (PRBLX)	131,256	0.82	1,076
Brandywine Dynamic Large Cap Value (LMBGX)	148,901	0.65	968
T. Rowe Price Blue Chip Growth (TBCIX)	183,441	0.56	1,027
MSQ Victory Sycamore Est Value (VEVYX)	181,627	0.61	1,108
MSQ TimesSquare Mid Cap Growth (TMDPX)	131,905	1.18	1,556
MissionSquare Small Cap Discovery	60,123	0.60	361
MSQ Invesco Discovery Fund (ODIYX)	489,151	0.78	3,815
MSQ Diversified International	235,947	1.01	2,383
MSQ Cohen & Steers Realty R5	220,017	0.88	1,936
TCW Total Return Bond Fund (TGLMX)	439,539	0.49	2,154
MissionSquare Inflation Focused	317,571	0.39	1,239
Neuberger Berman High Yield Fixed Income (NHILX)	83,116	0.69	574
Vanguard 500 Index Fund (VFIAX)	1,399,289	0.04	560
Vanguard Mid Cap Index (VIMAX)	214,865	0.05	107
Vanguard Small Cap Index (VSMAX)	321,612	0.05	161
Vanguard Total Int'l Stock Index (VTIAX)	875,829	0.11	963
Vanguard Target Retirement Income (VTINX)	246,704	0.08	197
Vanguard Target Retirement 2020 (VTWNX)	1,317,794	0.08	1,054
Vanguard Target Retirement 2025 (VTTVX)	949,604	0.08	760
Vanguard Target Retirement 2030 (VTHRXX)	1,460,250	0.08	1,168
Vanguard Target Retirement 2035 (VTTHX)	895,338	0.08	716
Vanguard Target Retirement 2040 (VFORX)	799,310	0.08	639
Vanguard Target Retirement 2045 (VTIVX)	564,909	0.08	452
Vanguard Target Retirement 2050 (VFIFX)	366,887	0.08	294
Vanguard Target Retirement 2055 (VFFVX)	30,770	0.08	25
Vanguard Target Retirement 2060 (VTTTSX)	5,312	0.08	4
MissionSquare Plus Fund	1,297,760	0.52	6,748
MSQ Retirement Income Advantage	146,700	1.67	2,450
<b>401a Plan- 106397</b>	<b>13,572,691</b>	<b>0.25</b>	<b>34,496</b>

**Town of Palm Beach Retirement System DC 401a Fire Share  
Fee Analysis**

As of September 30, 2022

	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
MSQ Parnassus Core Equity (PRBLX)	8,274	0.82	68
Brandywine Dynamic Large Cap Value (LMBGX)	15,334	0.65	100
T. Rowe Price Blue Chip Growth (TBCIX)	271,747	0.56	1,522
MSQ Victory Sycamore Est Value (VEVYX)	75,199	0.61	459
MSQ TimesSquare Mid Cap Growth (TMDPX)	66,699	1.18	787
MissionSquare Small Cap Discovery	27,080	0.60	162
MSQ Invesco Discovery Fund (ODIYX)	287,079	0.78	2,239
MSQ Diversified International	43,725	1.01	442
MSQ Cohen & Steers Realty R5	154,325	0.88	1,358
TCW Total Return Bond Fund (TGLMX)	41,946	0.49	206
MissionSquare Inflation Focused	50,863	0.39	198
Neuberger Berman High Yield Fixed Income (NHILX)	13,243	0.69	91
Vanguard 500 Index Fund (VFIAX)	157,445	0.04	63
Vanguard Mid Cap Index (VIMAX)	116,352	0.05	58
Vanguard Small Cap Index (VSMAX)	21,195	0.05	11
Vanguard Total Int'l Stock Index (VTIAX)	61,574	0.11	68
Vanguard Target Retirement Income (VTINX)	-	0.08	-
Vanguard Target Retirement 2020 (VTWNX)	12,736	0.08	10
Vanguard Target Retirement 2025 (VTTVX)	48,640	0.08	39
Vanguard Target Retirement 2030 (VTHR X)	13,292	0.08	11
Vanguard Target Retirement 2035 (VTTHX)	53,961	0.08	43
Vanguard Target Retirement 2040 (VFORX)	41,950	0.08	34
Vanguard Target Retirement 2045 (VTIVX)	30,201	0.08	24
Vanguard Target Retirement 2050 (VFIFX)	-	0.08	-
Vanguard Target Retirement 2055 (VFFVX)	-	0.08	-
Vanguard Target Retirement 2060 (VTTSX)	-	0.08	-
MSQ Retirement Income Advantage	26,600	1.67	444
MissionSquare Plus Fund	770,094	0.53	4,082
<b>401a Fire Share-106796</b>	<b>2,413,421</b>	<b>0.52</b>	<b>12,518</b>



Town of Palm Beach Retirement System DC RHS

Fee Analysis

As of September 30, 2022

	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
Parnassus Core Equity (PRBLX)	42,441	0.82	348
Brandywine Dynamic Large Cap Value (LMBGX)	84,422	0.65	549
T. Rowe Price Blue Chip Growth (TBCIX)	214,154	0.56	1,199
Victory Sycamore Est Value (VEVYX)	100,229	0.61	611
AMG TimesSquare Mid Cap Growth (TMDPX)	114,652	1.18	1,353
MissionSquare Small Cap Discovery Fund	65,252	1.00	653
Fidelity Diversified International (FDIVX)	18,736	1.01	189
TCW Total Return Bond Fund (TGLMX)	39,902	0.49	196
MissionSquare Inflation Focused Fund	14,311	0.79	113
Neuberger Berman High Yield Fixed Income (NHILX)	1,395	0.69	10
Vanguard 500 Index Fund (VFIAX)	413,007	0.04	165
Vanguard Small Cap Index (VSMAX)	32,774	0.05	16
Vanguard Total Int'l Stock Index (VTIAX)	7,188	0.11	8
Vanguard Target Retirement Income (VTINX)	165,093	0.08	132
Vanguard Target Retirement 2020 (VTWNX)	396,157	0.08	317
Vanguard Target Retirement 2025 (VTTVX)	601,055	0.08	481
Vanguard Target Retirement 2030 (VTHR)	723,500	0.08	579
Vanguard Target Retirement 2035 (VTTHX)	488,022	0.08	390
Vanguard Target Retirement 2040 (VFORX)	224,141	0.08	179
Vanguard Target Retirement 2045 (VTIVX)	242,436	0.08	194
Vanguard Target Retirement 2050 (VFIFX)	106,251	0.08	85
Vanguard Target Retirement 2055 (VFFVX)	130,381	0.08	104
Vanguard Target Retirement 2060 (VTTSX)	26,954	0.08	22
MissionSquare PLUS Fund S3	216,446	0.97	2,100
<b>RHS Current Plan- 803116</b>	<b>4,468,896</b>	<b>0.22</b>	<b>9,992</b>



**Town of Palm Beach Retirement System DC Prior RHS  
Fee Analysis**

As of September 30, 2022

	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
Parnassus Core Equity (PRBLX)	-	0.82	-
Brandywine Dynamic Large Cap Value (LMBGX)	1,630	0.65	11
T. Rowe Price Blue Chip Growth (TBCIX)	3,812	0.56	21
Victory Sycamore Est Value (VEVYX)	-	0.61	-
AMG TimesSquare Mid Cap Growth (TMDPX)	11,300	1.18	133
MissionSquare Small Cap Discovery Fund	-	1.00	-
Fidelity Diversified International (FDIVX)	-	1.01	-
TCW Total Return Bond Fund (TGLMX)	2,740	0.49	13
MissionSquare Inflation Focused Fund	21,859	0.79	173
Neuberger Berman High Yield Fixed Income (NHILX)	-	0.69	-
Vanguard 500 Index Fund (VFIAX)	97,579	0.04	39
Vanguard Small Cap Index (VSMAX)	3,578	0.05	2
Vanguard Total Int'l Stock Index (VTIAX)	-	0.11	-
Vanguard Target Retirement Income (VTINX)	109,213	0.08	87
Vanguard Target Retirement 2020 (VTWNX)	42,881	0.08	34
Vanguard Target Retirement 2025 (VTTVX)	81,652	0.08	65
Vanguard Target Retirement 2030 (VTHRXX)	14,899	0.08	12
Vanguard Target Retirement 2035 (VTTHX)	3,619	0.08	3
Vanguard Target Retirement 2040 (VFORX)	1,164	0.08	1
Vanguard Target Retirement 2045 (VTIVX)	3,511	0.08	3
Vanguard Target Retirement 2050 (VFIFX)	-	0.08	-
Vanguard Target Retirement 2055 (VFFVX)	-	0.08	-
Vanguard Target Retirement 2060 (VTTSX)	-	0.08	-
MissionSquare PLUS Fund S3	12,584	0.97	122
<b>RHS Old Plan - 800533</b>	<b>412,021</b>	<b>0.17</b>	<b>720</b>



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Vanguard Target Retirement Inv  
Target Date Fund Universe Ranges

September 30, 2022

Asset Class	2060+	2055	2050	2045	2040	2035	2030	2025	2020	2015	Retirement
<b>Equity Range</b>											
Maximum	100%	100%	100%	95%	95%	90%	85%	75%	65%	55%	45%
Minimum	50%	50%	50%	45%	45%	40%	35%	25%	15%	10%	5%
<b>Fixed Income Range</b>											
Maximum	20%	20%	30%	35%	40%	50%	55%	65%	70%	75%	85%
Minimum	0%	0%	0%	5%	5%	10%	15%	20%	25%	35%	45%
<b>Cash Range</b>											
Maximum	20%	20%	30%	30%	30%	30%	30%	30%	35%	35%	35%
Minimum	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Other Range</b>											
Maximum	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Minimum	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Target Date Universe</b>	<b>60</b>	<b>51</b>	<b>53</b>	<b>50</b>	<b>52</b>	<b>51</b>	<b>49</b>	<b>55</b>	<b>54</b>	<b>37</b>	<b>39</b>

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.



**Vanguard Target Retirement Inv**  
**Target Date Fund Asset Allocation**  
September 30, 2022

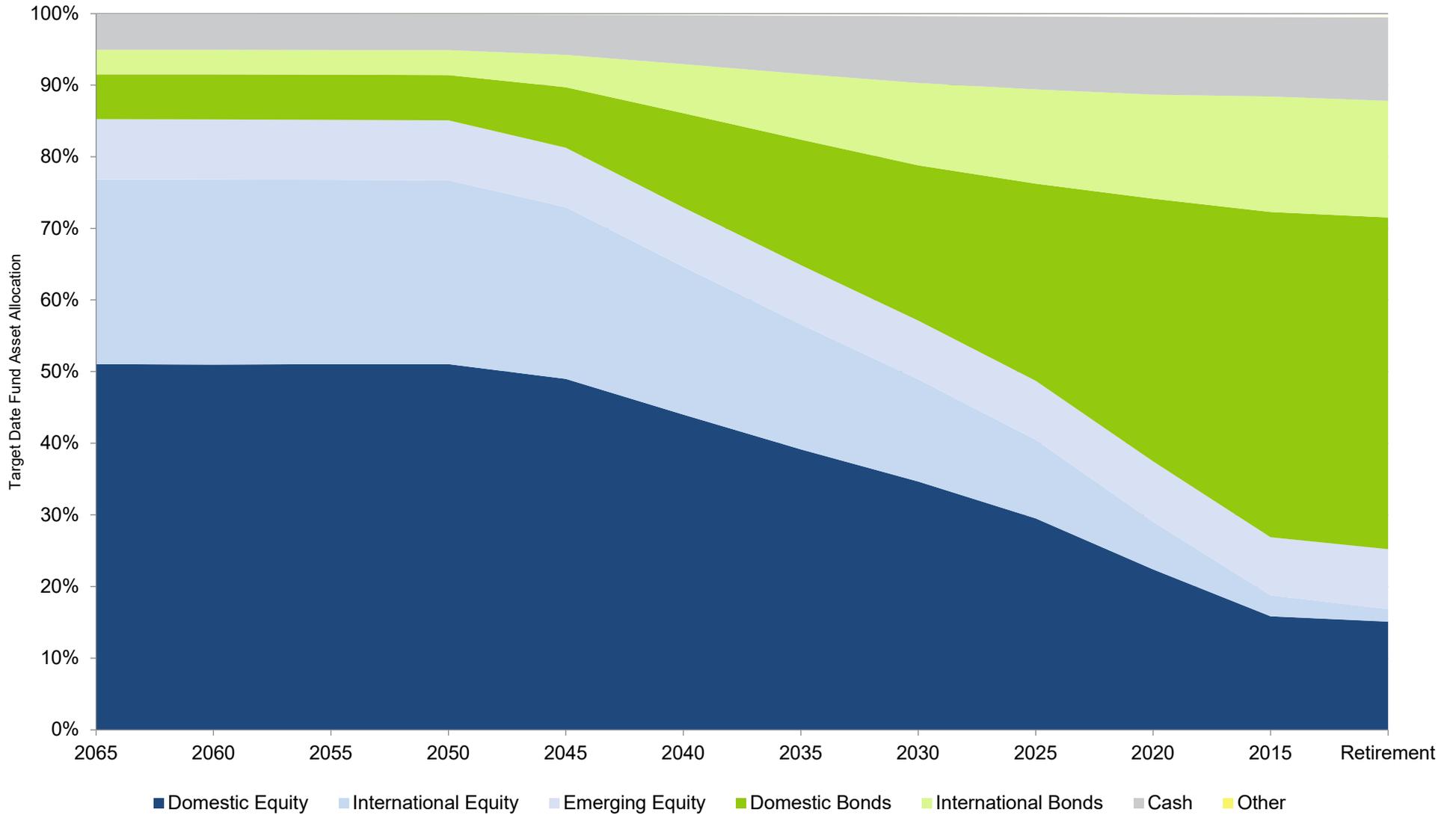
Asset Class	2065	2060	2055	2050	2045	2040	2035	2030	2025	2020	2015	Retirement
<b>Total Equity</b>	<b>85%</b>	<b>85%</b>	<b>85%</b>	<b>85%</b>	<b>81%</b>	<b>73%</b>	<b>65%</b>	<b>57%</b>	<b>49%</b>	<b>37%</b>	<b>27%</b>	<b>25%</b>
Domestic Equity	51%	51%	51%	51%	49%	44%	39%	35%	29%	22%	16%	15%
International Equity	26%	26%	26%	26%	24%	21%	17%	14%	11%	7%	3%	2%
Emerging Equity	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
<b>Total Fixed Income</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>13%</b>	<b>20%</b>	<b>27%</b>	<b>33%</b>	<b>41%</b>	<b>51%</b>	<b>62%</b>	<b>63%</b>
Domestic Bonds	6%	6%	6%	6%	8%	13%	17%	22%	28%	37%	45%	46%
International Bonds	3%	3%	3%	3%	5%	7%	9%	11%	13%	15%	16%	16%
<b>Cash</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>6%</b>	<b>7%</b>	<b>8%</b>	<b>9%</b>	<b>10%</b>	<b>11%</b>	<b>11%</b>	<b>12%</b>
<b>Other</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>									
<b>Total</b>	<b>100%</b>	<b>99%</b>	<b>99%</b>									

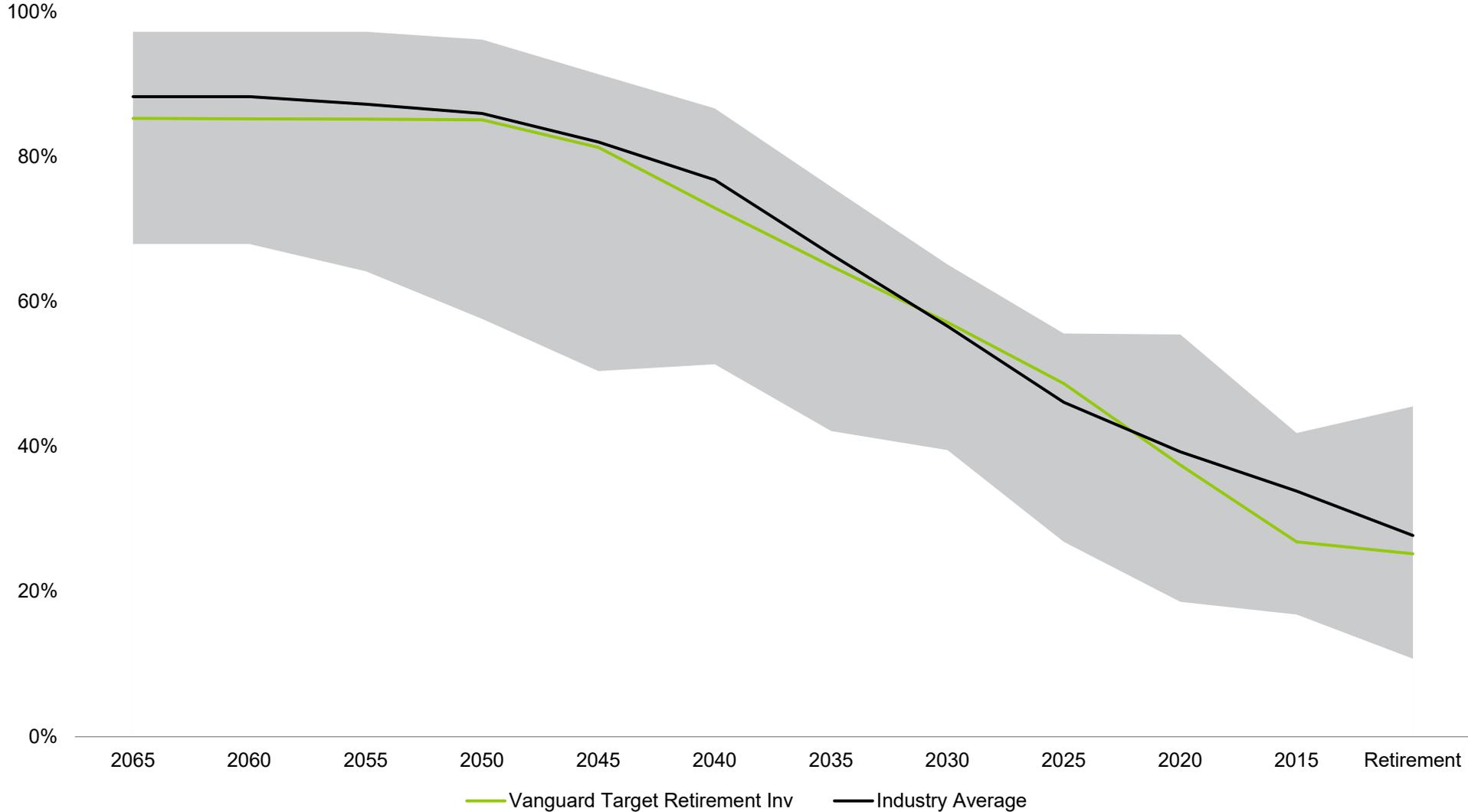
Terminal Equity Date:	7 years after Retirement
Active/Passive/Blend Allocation:	Passive

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%.







1. Industry Range (Gray Bar) - Represents the equity allocation range of the Target Date Funds in the universe.

2. Industry Average - The average equity allocation of the investments included in the universe.



## **Plan Sponsor**

- Usually, the employer
- Online account usage
- May delegate responsibilities to a Board/Committee, including the designation 'Named Fiduciary'
- Retirement readiness

## **Plan Administrator**

- Oversee Plan operations; commonly supported by a third-party administrator (TPA)
- May be a single individual or designated Board/Committee
- May delegate to TPA serving as a fiduciary 3(16) plan administrator, but retains fiduciary responsibility
- Prepare and provide participant notices such as blackouts, terminations, fee disclosures and benefit statements
- Maintain qualified status of the Plan through amendments, restatements and filing required reports
- Administer loans, hardship distributions, payroll changes and other participant events

## **Plan Trustee**

- May be a single individual, a designated Board/Committee, or a third-party serving in either a directed or discretionary manner
- Safekeep Plan assets
- May delegate to a 3(21) advisor and/or 3(38) investment manager but retains fiduciary responsibility
- Prudently select and monitor service providers
- Ensure expenses paid by the Plan are reasonable and pursue monies owed to the Plan
- Follow participant directions consistent with Plan guidelines

## **Advisor**

- Plan consultant
- Assist in education
- Assist with Plan conversions
- Assist in the addition and monitoring of other service providers
- Coordinate with various service providers

## **Investment Advisor (3(21))**

- Render investment advice for a fee, on a regular basis, that will serve as the primary basis of committee investment decisions
- Assist with drafting, maintaining and executing the investment policy statement
- Advise on fund menus and provides ongoing monitoring
- Recommend changes in accordance with the investment policy statement
- No administrative responsibilities

## **Investment Manager (3(38))**

- “Discretionary” fiduciary
- Power to manage, acquire and dispose of Plan assets
- Assist with drafting, maintaining and executing the investment policy statement
- Determine the fund menu
- Authority to change investment options in accordance with the investment policy statement

## **Attorney**

- Provide interpretations on retirement plan provisions
- Create legal Plan documents, summary plan descriptions (when applicable) and other forms
- Prepare forms required for plan qualification purposes
- IRS and DOL audit support
- Consulted during plan level changes

## **Independent Auditor**

- Offer an opinion on Plan assets
- Audit financial statements / payroll information
- Assist in the confirmation of Plan sponsor tax status
- Coordinate with TPAs and Recordkeepers on compliance issues found in audit

## **Recordkeeper**

- Handling and processing of participant “money-in” and “money-out” transactions
- Invest / track participant fund positions according to participant elections
- Create required notices and report to participants and the Plan Sponsor
- Provide participants with account access and updating system with daily investment pricing

## **Third Party Administrator**

- Services commonly performed by the recordkeeper
- Determine participant eligibility
- Perform nondiscrimination testing and top-heavy testing required
- Monitor limits (compensation, deferral, deductions) and annual additions/catchups
- Assure Plan operation is in compliance with Plan documents and regulations
- Preparing participant notices and disclosures

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



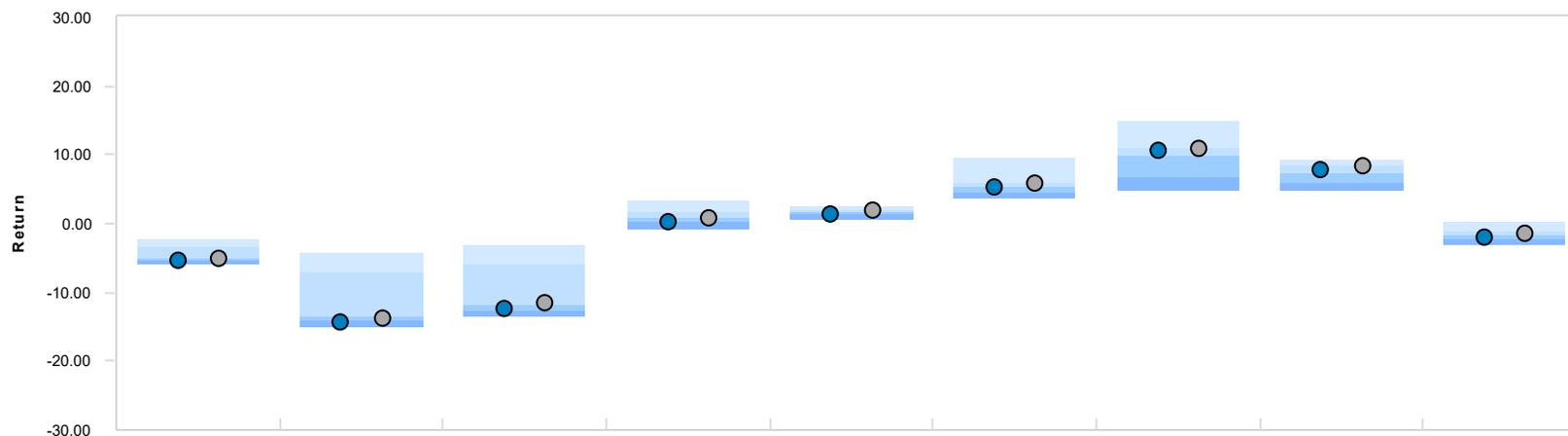
Mutual Fund Info from Lipper

No data found.

Summary Description

No data found.

Peer Group Analysis - IM U.S. TIPS (MF)



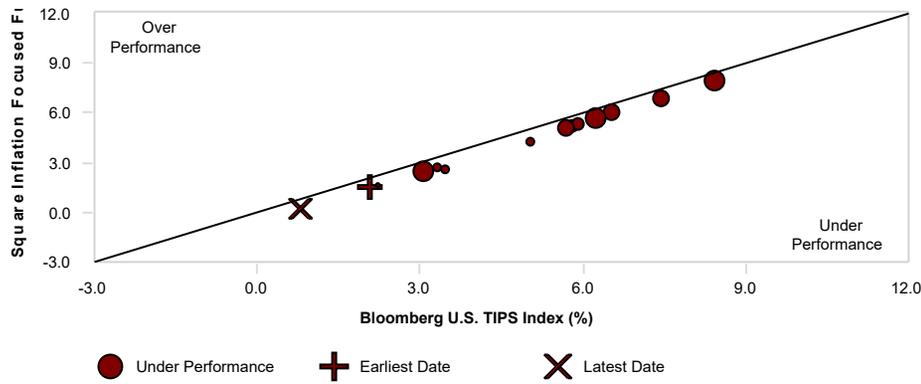
	QTR	YTD	1 YR	3 YR	5 YR	2021	2020	2019	2018
● MissionSquare Inflation Focused Fund	-5.30 (66)	-14.32 (83)	-12.46 (75)	0.20 (75)	1.32 (75)	5.41 (44)	10.62 (34)	7.84 (43)	-2.02 (70)
● Bloomberg U.S. TIPS Index	-5.14 (57)	-13.61 (58)	-11.57 (46)	0.79 (49)	1.95 (32)	5.96 (23)	10.99 (26)	8.43 (16)	-1.26 (36)
Median	-5.04	-13.53	-11.72	0.76	1.75	5.26	9.70	7.41	-1.57

Comparative Performance

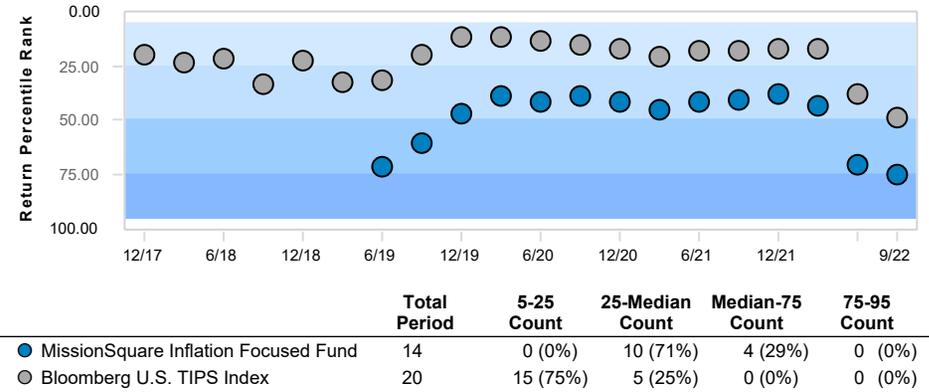
	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021
MissionSquare Inflation Focused Fund	-6.60 (87)	-3.13 (77)	2.17 (19)	1.56 (55)	3.12 (30)	-1.49 (61)
Bloomberg U.S. TIPS Index	-6.08 (50)	-3.02 (70)	2.36 (9)	1.75 (24)	3.25 (17)	-1.47 (61)
IM U.S. TIPS (MF) Median	-6.09	-2.62	1.71	1.60	2.70	-1.26



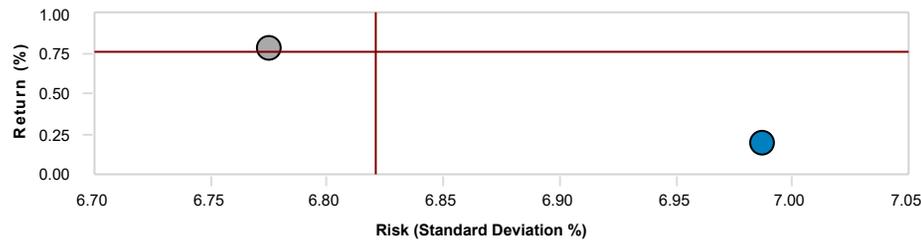
**3 Yr Rolling Under/Over Performance - 5 Years**



**3 Yr Rolling Percentile Ranking - 5 Years**

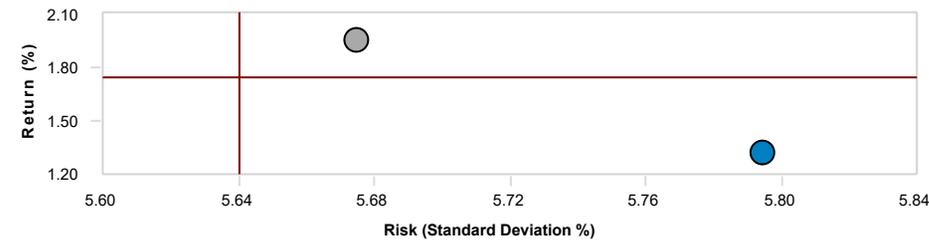


**Peer Group Scattergram - 3 Years**



	Return	Standard Deviation
● MissionSquare Inflation Focused Fund	0.20	6.99
● Bloomberg U.S. TIPS Index	0.79	6.77
— Median	0.76	6.82

**Peer Group Scattergram - 5 Years**



	Return	Standard Deviation
● MissionSquare Inflation Focused Fund	1.32	5.79
● Bloomberg U.S. TIPS Index	1.95	5.67
— Median	1.75	5.64

**Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
MissionSquare Inflation Focused Fund	0.64	98.37	105.13	-0.60	-0.90	-0.02	1.03	5.48
Bloomberg U.S. TIPS Index	0.00	100.00	100.00	0.00	N/A	0.06	1.00	5.18

**Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
MissionSquare Inflation Focused Fund	0.53	95.72	104.14	-0.65	-1.16	0.06	1.02	4.41
Bloomberg U.S. TIPS Index	0.00	100.00	100.00	0.00	N/A	0.17	1.00	4.18



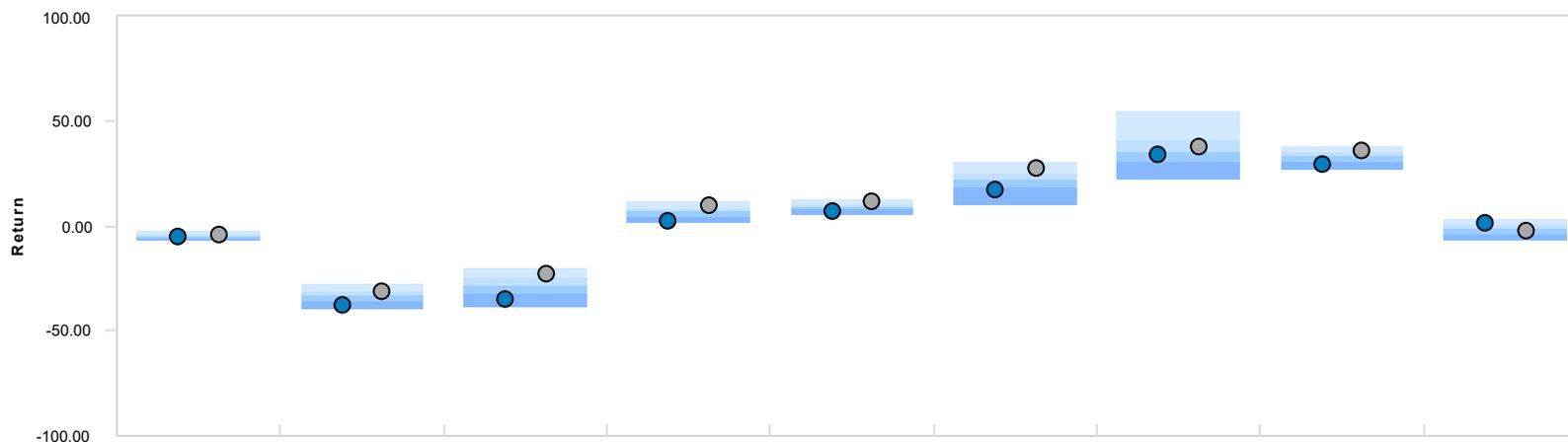
**Mutual Fund Info from Lipper**

Product Name : T Rowe Price BC Gro:I (TBCIX)  
 Fund Family : T. Rowe Price  
 Ticker : TBCIX  
 Peer Group : IM U.S. Large Cap Growth Equity (MF)  
 Benchmark : Russell 1000 Growth Index  
 Fund Inception : 12/17/2015  
 Portfolio Manager : Paul D. Greene II  
 Total Assets : \$29,094 Million  
 Total Assets Date : 08/31/2022  
 Gross Expense : 0.56%  
 Net Expense : 0.56%  
 Turnover : 39%

**Summary Description**

The Fund seeks to provide long-term capital growth with income as a secondary objective. The Fund invests at least 80% of its net assets in the common stocks of large and medium-sized blue chip growth companies, focusing on companies with leading market positions, seasoned management and strong financial fundamentals.

**Peer Group Analysis - IM U.S. Large Cap Growth Equity (MF)**



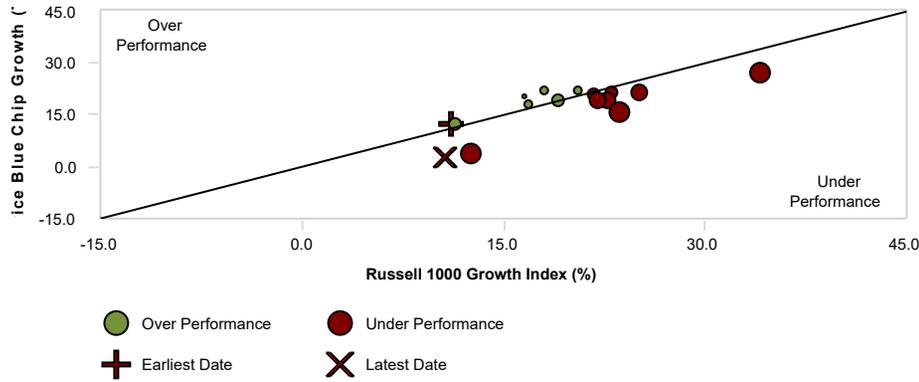
	QTR	YTD	1 YR	3 YR	5 YR	2021	2020	2019	2018
● T. Rowe Price Blue Chip Growth (TBCIX)	-4.69 (58)	-37.35 (87)	-34.74 (88)	2.89 (93)	7.22 (85)	17.85 (78)	34.90 (53)	30.13 (80)	2.14 (17)
○ Russell 1000 Growth Index	-3.60 (26)	-30.66 (25)	-22.59 (20)	10.67 (8)	12.16 (8)	27.60 (17)	38.49 (34)	36.39 (19)	-1.51 (54)
Median	-4.41	-33.10	-27.73	7.08	9.29	22.39	35.62	33.26	-1.22

**Comparative Performance**

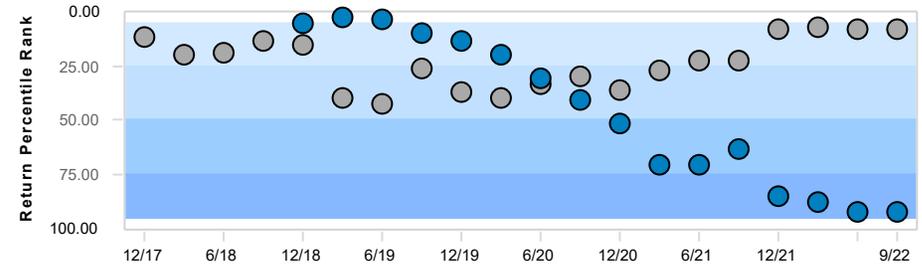
	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021
T. Rowe Price Blue Chip Growth (TBCIX)	-24.98 (88)	-12.38 (73)	4.17 (88)	0.45 (51)	12.08 (29)	0.48 (67)
Russell 1000 Growth Index	-20.92 (40)	-9.04 (18)	11.64 (11)	1.16 (23)	11.93 (33)	0.94 (58)
IM U.S. Large Cap Growth Equity (MF) Median	-21.94	-10.62	7.91	0.46	11.34	1.22



**3 Yr Rolling Under/Over Performance - 5 Years**

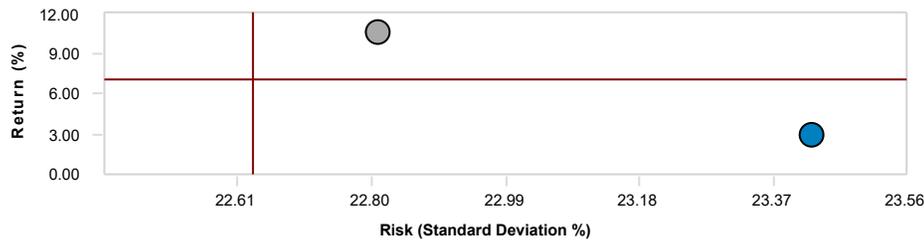


**3 Yr Rolling Percentile Ranking - 5 Years**



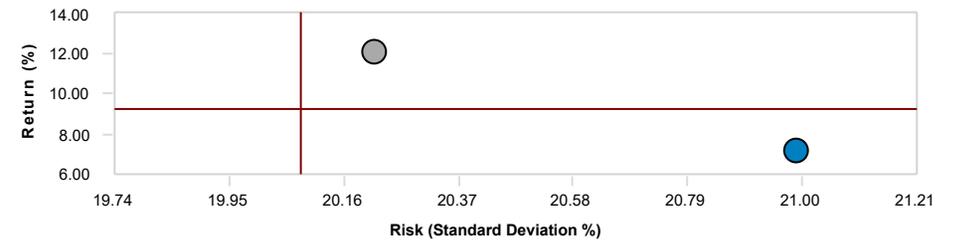
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● T. Rowe Price Blue Chip Growth (TBCIX)	16	6 (38%)	2 (13%)	4 (25%)	4 (25%)
● Russell 1000 Growth Index	20	11 (55%)	9 (45%)	0 (0%)	0 (0%)

**Peer Group Scattergram - 3 Years**



	Return	Standard Deviation
● T. Rowe Price Blue Chip Growth (TBCIX)	2.89	23.43
● Russell 1000 Growth Index	10.67	22.81
— Median	7.08	22.63

**Peer Group Scattergram - 5 Years**



	Return	Standard Deviation
● T. Rowe Price Blue Chip Growth (TBCIX)	7.22	20.99
● Russell 1000 Growth Index	12.16	20.21
— Median	9.29	20.08

**Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
T. Rowe Price Blue Chip Growth (TBCIX)	3.84	87.19	107.38	-7.09	-1.87	0.21	1.01	16.21
Russell 1000 Growth Index	0.00	100.00	100.00	0.00	N/A	0.53	1.00	14.52

**Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
T. Rowe Price Blue Chip Growth (TBCIX)	4.17	91.04	105.12	-4.52	-1.05	0.38	1.02	14.09
Russell 1000 Growth Index	0.00	100.00	100.00	0.00	N/A	0.61	1.00	12.97



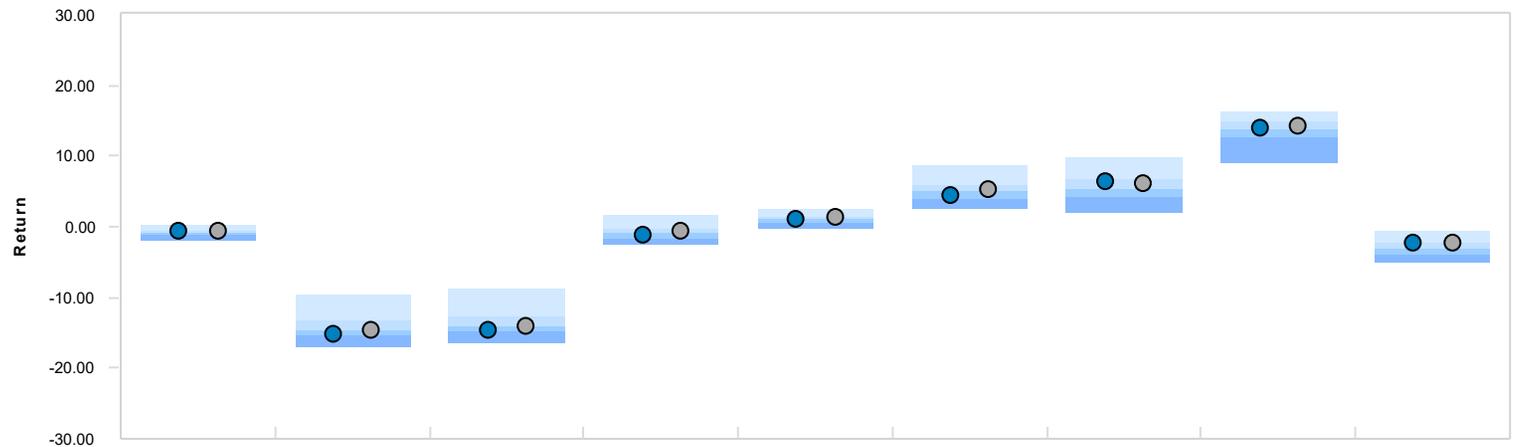
**Mutual Fund Info from Lipper**

Product Name : Neuberger Hi Inc B;Inst (NHILX)  
 Fund Family : Neuberger Berman Investment Advisers  
 Ticker : NHILX  
 Peer Group : IM U.S. High Yield Bonds (MF)  
 Benchmark : ICE BofA U.S. High Yield Index  
 Fund Inception : 05/27/2009  
 Portfolio Manager : Team Managed  
 Total Assets : \$646 Million  
 Total Assets Date : 08/31/2022  
 Gross Expense : 0.69%  
 Net Expense : 0.69%  
 Turnover : 98%

**Summary Description**

The Fund seeks high total return consistent with capital preservation. To pursue its goal, the Fund normally invests mainly in a diversified portfolio of U.S. dollar-denominated, High-Yield Bonds (as defined below), with an emphasis on debt securities rated below investment grade or commonly known as junk bonds.

**Peer Group Analysis - IM U.S. High Yield Bonds (MF)**



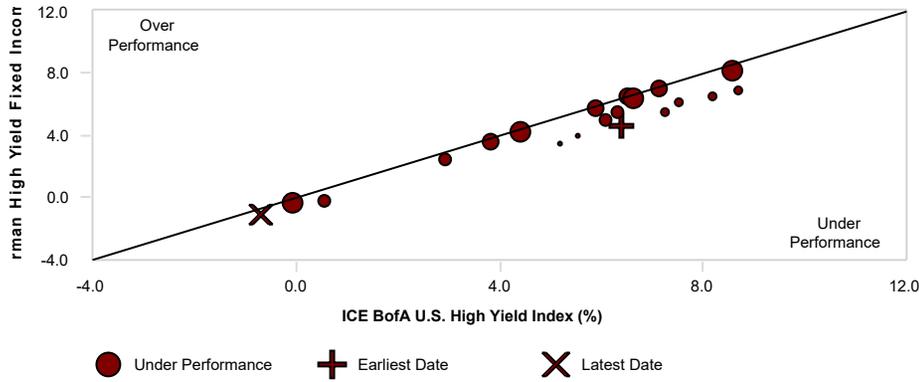
	QTR	YTD	1 YR	3 YR	5 YR	2021	2020	2019	2018
● Neuberger Berman High Yield Fixed Income (NHILX)	-0.66 (41)	-15.04 (70)	-14.55 (69)	-1.09 (56)	1.00 (50)	4.56 (60)	6.41 (31)	13.90 (48)	-2.35 (28)
○ ICE BofA U.S. High Yield Index	-0.70 (44)	-14.65 (56)	-14.10 (55)	-0.69 (39)	1.40 (29)	5.35 (40)	6.17 (34)	14.41 (36)	-2.27 (27)
Median	-0.78	-14.45	-13.92	-0.94	1.00	4.93	5.43	13.83	-2.97

**Comparative Performance**

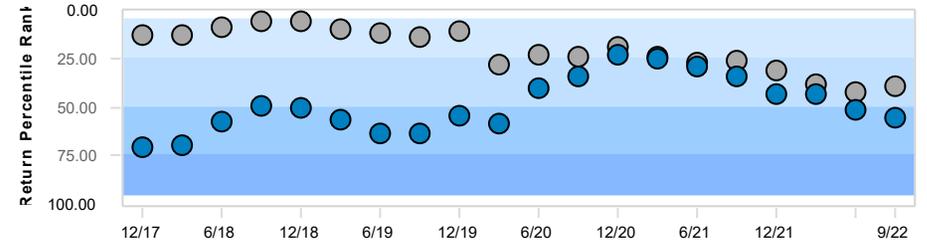
	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021
Neuberger Berman High Yield Fixed Income (NHILX)	-10.57 (77)	-4.37 (61)	0.58 (52)	0.27 (94)	2.73 (42)	0.92 (51)
ICE BofA U.S. High Yield Index	-9.99 (60)	-4.51 (70)	0.64 (42)	0.94 (19)	2.77 (37)	0.90 (52)
IM U.S. High Yield Bonds (MF) Median	-9.83	-4.20	0.59	0.71	2.65	0.92



**3 Yr Rolling Under/Over Performance - 5 Years**

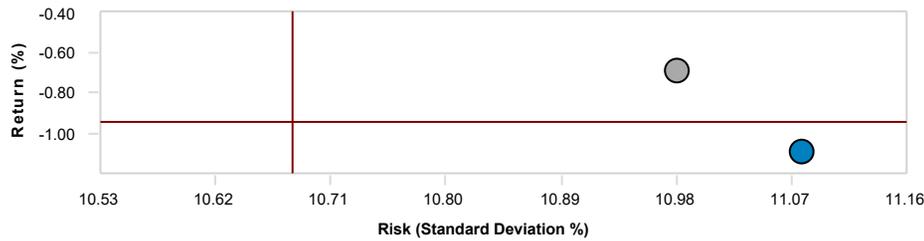


**3 Yr Rolling Percentile Ranking - 5 Years**



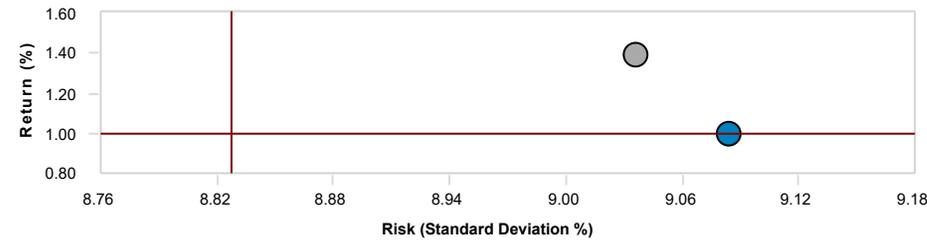
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Neuberger Berman High Yield Fixed Income (NHILX)	20	2 (10%)	7 (35%)	11 (55%)	0 (0%)
● ICE BofA U.S. High Yield Index	20	13 (65%)	7 (35%)	0 (0%)	0 (0%)

**Peer Group Scattergram - 3 Years**



	Return	Standard Deviation
● Neuberger Berman High Yield Fixed Income (NHILX)	-1.09	11.08
● ICE BofA U.S. High Yield Index	-0.69	10.98
— Median	-0.94	10.68

**Peer Group Scattergram - 5 Years**



	Return	Standard Deviation
● Neuberger Berman High Yield Fixed Income (NHILX)	1.00	9.08
● ICE BofA U.S. High Yield Index	1.40	9.04
— Median	1.00	8.83

**Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Neuberger Berman High Yield Fixed Income (NHILX)	0.97	97.88	101.09	-0.39	-0.41	-0.09	1.01	8.81
ICE BofA U.S. High Yield Index	0.00	100.00	100.00	0.00	N/A	-0.06	1.00	8.83

**Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Neuberger Berman High Yield Fixed Income (NHILX)	0.82	97.16	100.90	-0.39	-0.47	0.03	1.00	6.99
ICE BofA U.S. High Yield Index	0.00	100.00	100.00	0.00	N/A	0.07	1.00	7.00



<b>Active Return</b>	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
<b>Alpha</b>	- 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.
<b>Beta</b>	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
<b>Consistency</b>	- 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.
<b>Distributed to Paid In (DPI)</b>	- 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.
<b>Down Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
<b>Downside Risk</b>	- 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.
<b>Excess Return</b>	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
<b>Excess Risk</b>	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
<b>Information Ratio</b>	- 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.
<b>Public Market Equivalent (PME)</b>	- 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.
<b>R-Squared</b>	- 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.
<b>Return</b>	- Compounded rate of return for the period.
<b>Sharpe Ratio</b>	- 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.
<b>Standard Deviation</b>	- 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.
<b>Total Value to Paid In (TVPI)</b>	- 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
<b>Tracking Error</b>	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
<b>Treynor Ratio</b>	- 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.
<b>Up Market Capture</b>	- 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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