



STATE OF NEVADA
457(b) Deferred Compensation and OBRA Plans
September 30, 2022 Performance Report

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TABLE OF CONTENTS

Section 1 Market Overview

Section 2 Plan Reviews

Plan Review – Combined 457(b) DC Plans

Plan Review – State Employees 457(b) DC Plan

Plan Review – Political Subdivisions 457(b) DC Plan

Plan Review – Nevada System of Higher Education 457(b) DC Plan

Plan Review – FICA Alternative OBRA Plan

Section 3 Investment Performance Review

Section 4 Plan Fee/Revenue Reviews

Plan Fee/Revenue Review – Combined 457(b) DC Plans

Plan Fee/Revenue Review – FICA Alternative OBRA Plan

Section 5 Fund Attributions

Section 1



THE NOMINALLY OBSCURE MOLODOVSKY EFFECT

The Molodovsky Effect (ME) is typically not the first topic of conversation at financial planning sessions though the subject is relevant at this economic juncture. Stemming from Nicholas Molodovsky's 1953 article in the Financial Analysts Journal, the ME is the observation that price-to-earnings ratios of stocks (P/E) tend to increase in economic downturns. The supporting intuition is simple: if earnings drop more than prices during a recession, a P/E ratio may increase, leaving stocks more expensive than they started. Logical as this sounds, it may counter other market intuition, such as that stocks tend to fare well when they are cheap but they also fare well when the economy is recovering. How could stocks start out expensive but still provide above-average returns? Either way, is the ME still valid?¹

The disconnect notwithstanding, the ME observations have continued to hold accurate. To wit, US Large Cap Stocks have tended to provide above-average returns when the P/E was below-average. This same category of stocks has also averaged 9.9% for the first two years coming out of recessions since 1953 versus their average of 7.3% for the entire period. As for the ME's real-time accuracy, the P/E of the S&P Large Cap Composite Index has increased in nine of the eleven recessions from 1953 to present by an average of 12% (by 52% if you include the great financial crisis). What reconciles these seemingly conflicting tendencies? Likely the combination of improving sentiment bolstered by reduced borrowing costs found at the end of recessions. Earnings have tended to grow well above their long-term averages for the two years coming out of recessions while long-term interest rates tend to stay relatively low. The resulting combination of improving stock fundamentals which compare more favorably to bond yields can serve as a market tailwind. It is also worth considering that the stock market, as a forward-looking mechanism, tends to move ahead of improvement in the broader economy. As such, the P/E ratio tends to bottom before the end of a recession even though earnings have not, meaning that some of the ratio's increase relative to the ME may reflect increasing optimism.²

If the United States is currently in recession, the ME will get another chance to demonstrate its validity. Regardless of this, the market and economic history orbiting the ME is of greater practical insight to investors than the phenomenon itself; namely that market timing around recessions is a challenging endeavor. There is no rule around how long it takes for the National Bureau of Economic Research to declare a recession (it once took twenty-one months) or that it must be declared before it is over. Timing one's market exposure around such announcements could lead to selling after recessionary fears have been priced in or re-entering the market long after a rebound. Moving this subject to the present, the S&P 500 Index returned -23.9% for the first three quarters of 2022. Whether or not the stock market will end the year lower or if a recession will be declared by then, investors may note that valuations ended the third quarter at levels more in line with longer-term averages. Investors with an adequate time horizon and risk-tolerance may see this as reason enough to look beyond near-term recessionary fears.³

¹ Sources: "A Theory of Price Earnings Ratios", Financial Analysts Journal, 1953; P/E ratio refers to the price of the S&P Composite Index divided by the trailing twelve months of nominal earnings, derived from data from Robert J. Shiller.

² Sources: Robert J. Shiller S&P Data. St. Louis Federal Reserve, Standard and Poors, Morningstar.

³ Sources: National Bureau of Economic Research, JP Morgan.

GLOBAL ECONOMIC LANDSCAPE

- In October 2022, the International Monetary Fund lowered its global growth expectations for 2023 to 2.7%, down from 2.9% in July; its lowest since 2001. Within this was the expectation that over a third of the global economy will see two quarters of contraction while larger ones such as the United States, China, and the European Union will stall. These growth scenarios include a battery of negative scenarios including persistently high inflation, aggressive monetary policies, energy shortages in Europe, the war in Ukraine, and financial market fragility.⁴
- Treasury yields continued their climb throughout the third quarter of 2022 with the 10-year rising from 2.98% to 3.83%. The Federal Reserve's release of its economic projections on September 21, which forecast a federal funds rate of 4.6% for 2023, added fuel to the run-up. In contrast, market-based indicators of rate expectations (such as the fed fund futures) are pricing in moderately lower rates than what the Fed is expecting for the next several quarters.⁵
- US job openings fell by over one million in August 2022, their largest drop since April 2020 and eliciting speculation that the labor market may indeed be cooling. In agreement with economists' views that job openings may continue to decrease, some equity sector analysts have reported that companies may be closing out non-essential job openings, reducing the demand for labor and contrasting the Fed's view that an "extraordinarily" tight job market may tolerate additional rate increases.⁶
- September's inflation reading showed that the core Consumer Price Index increased 6.6% for the trailing year, its highest reading since 1982. Despite this high reading, forward-looking inflation expectations remain muted. Five-year inflation expectations implied from the US Treasury market ended the quarter at 2.14%, down from 2022's high of 3.59%. Part of the explanation for this divergence may be because corporations currently sit on high inventory levels. The extent to which this overstock crimps corporate demand and induces write-downs and discounted selling may work against inflation.⁷

GLOBAL FINANCIAL MARKETS

- Bond markets continued their collective slump, with the Bloomberg US and Global Aggregate Bond indexes returning -4.75% and -6.94% respectively for the third quarter. In partial offset, rising yields work against duration, leaving bonds marginally less sensitive to future rate increases. The durations of the US and international bond markets are 7% and 11% lower than they stood on September 30, 2021.⁸
- Going into the third quarter, a variety of leading indicators continue to bode ominously for the US stock market. A composite of consumer confidence, housing starts, manufacturing, and credit spreads, all of which tend to lead earnings growth in the S&P 500 suggest a year-over-

⁴ Source: International Monetary Fund, World Economic Outlook, "Countering the Cost-of-Living Crisis", October 2022.

⁵ Sources: Federal Reserve "Summary of Economic Projections", September 2022, and Morgan Stanley's "GIC Weekly" October 10, 2022.

⁶ Sources: Bloomberg "US Job Openings Drop to 10.1 Million, Lowest Since June 2021", October 4, 2022, and Morgan Stanley's "Job Gains Start to Fade", October 4, 2022.

⁷ Source: Morgan Stanley's "Monthly Perspectives", October 2022, Morgan Stanley's "Daily Positioning", October 13, 2022, and data from St. Louis Federal Reserve.

⁸ Source: JP Morgan's "Guide to the Markets", September 30, 2022.

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year earnings decline. Similarly, measures of corporate profitability such as the difference between final demand and wages as well as producer versus consumer prices imply that operating margins are likely to decline in the coming quarters.⁹

- Thirty-year mortgage rates ended the third quarter at 6.70%, rising by 1.00% over the three-month period to their highest level since 2007. Mortgage-backed securities ended the quarter trading at spreads well above their longer-term averages. The extent to which these valuations attract institutional investors may offset the upward price pressure stemming from monetary policy.¹⁰
- Exchange rates continued to exhibit extreme movements through the third quarter, with currency volatility at its highest in ten years, the US Dollar at its highest valuation in two decades, and the British Pound approaching a near all-time low. Many investors continue to be net long the US Dollar and decelerating global growth coupled with a still-tightening Federal Reserve may provide a further tailwind for the greenback.¹¹

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⁹ Source: Morgan Stanley's "Monthly Perspectives", October 2022.

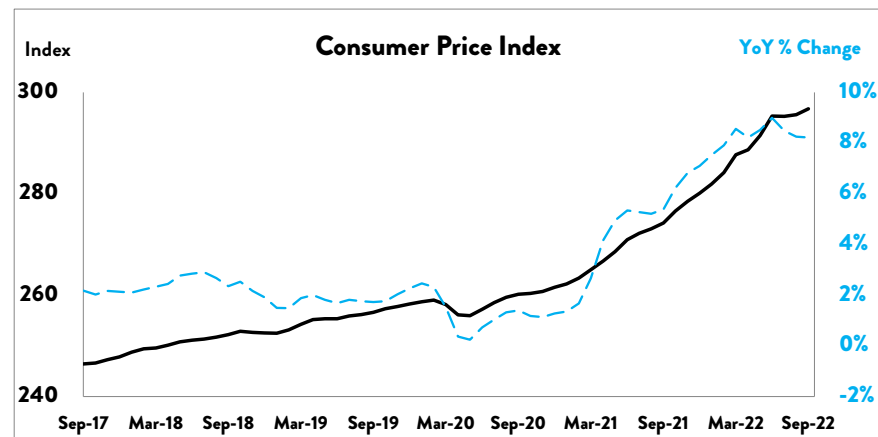
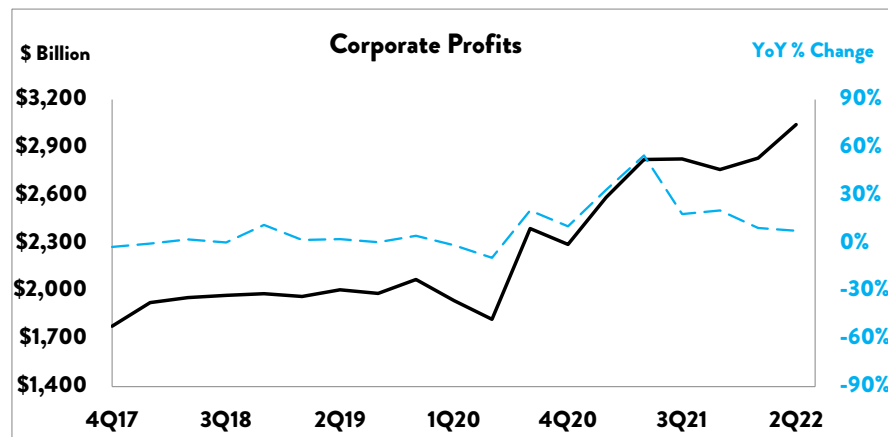
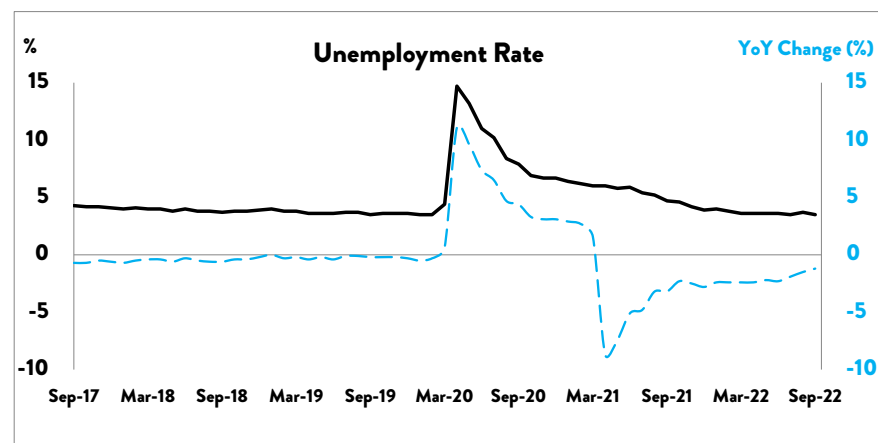
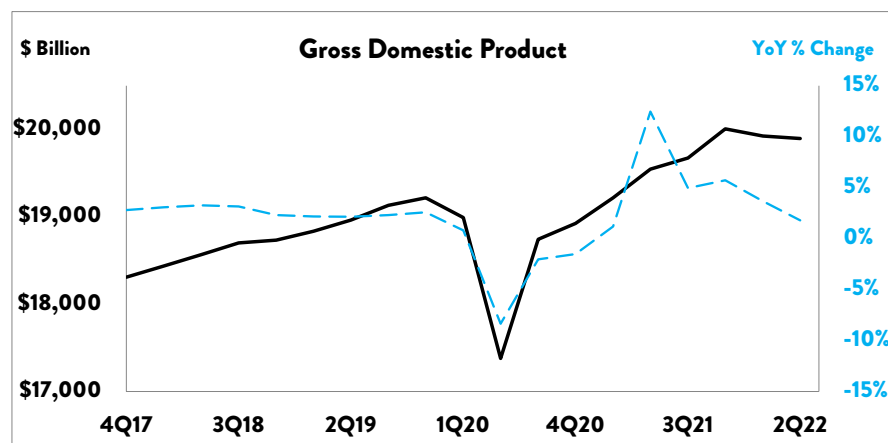
¹⁰ Sources: Data from St. Louis Federal Reserve, and Morgan Stanley's, "GIC Weekly", October 3, 2022.

¹¹ Source: Morgan Stanley's "Global Insights", October 12, 2022.

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3Q2022 Economic Data



Key: — Economic Series

--- Year-Over-Year Change

Labor Market Statistics (Monthly)					
Category	Recent	5-Yr High	5-Yr Low	5-Yr Avg.	Date
Jobs Added/Lost Monthly	263,000	4,505,000	-20,493,000	100,100	Sep-22
Unemployment Rate	3.5%	14.7%	3.5%	4.9%	Sep-22
Median Unemployment Length (Weeks)	8.8	22.2	4.0	11.2	Sep-22
Average Hourly Earnings	\$32.46	\$32.46	\$26.49	\$29.14	Sep-22

Source: Federal Reserve Bank of St. Louis and Bureau of Labor Statistics

Other Prices and Indexes (Monthly)					
Category	Recent	5-Yr High	5-Yr Low	% Off Peak	Date
Gas: Price per Gallon	\$3.65	\$4.84	\$1.80	-24.6%	Sep-22
Spot Oil	\$84.26	\$114.84	\$16.55	-26.6%	Sep-22
Case-Shiller Home Price Index	314.8	316.2	201.0	56.6%*	Jul-22
Medical Care CPI	557.4	557.4	477.7	16.7%*	Sep-22

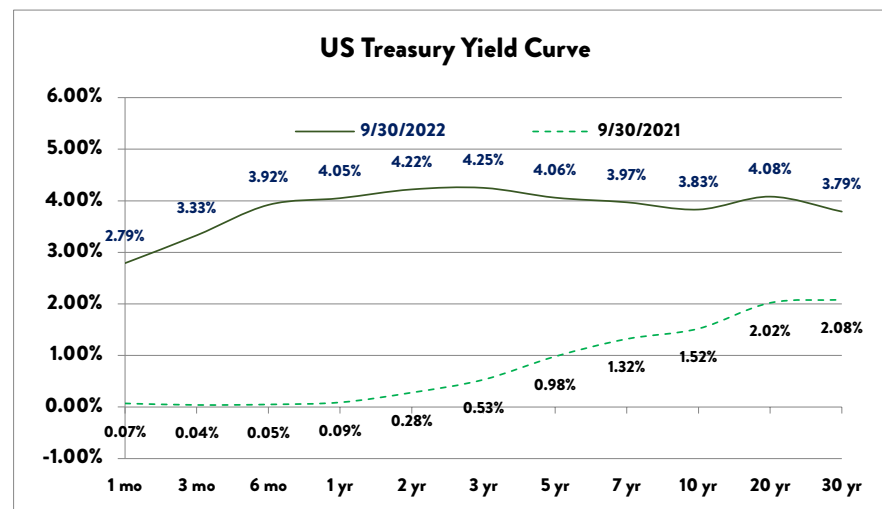
*% Off Low

Morningstar data as of 9/30/2022

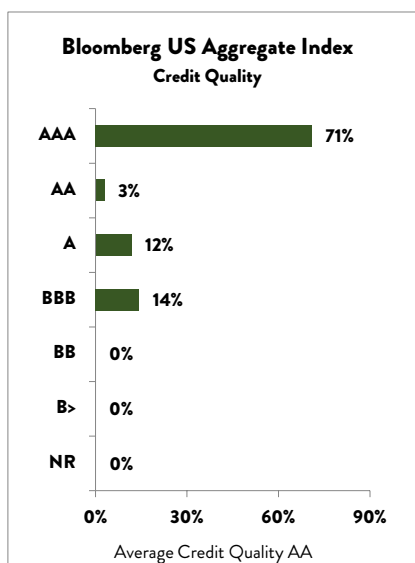
3Q2022 Bond Market Data

Index	QTR	YTD	1 yr.	3 yrs.	5 yrs.	10 yrs.
90-Day T-Bill	0.67%	1.02%	1.04%	0.61%	1.16%	0.69%
Bloomberg US Aggregate	-4.75%	-14.61%	-14.60%	-3.26%	-0.27%	0.89%
Bloomberg Short US Treasury	0.28%	0.13%	0.11%	0.54%	1.13%	0.72%
Bloomberg Int. US Treasury	-3.08%	-8.70%	-9.23%	-1.72%	0.17%	0.59%
Bloomberg Long US Treasury	-9.63%	-28.84%	-26.65%	-8.51%	-1.62%	0.59%
Bloomberg US TIPS	-5.14%	-13.61%	-11.57%	0.79%	1.95%	0.98%
Bloomberg US Credit	-4.95%	-18.07%	-17.89%	-3.61%	-0.05%	1.58%
Bloomberg US Mortgage-Backed	-5.35%	-13.66%	-13.98%	-3.67%	-0.92%	0.51%
Bloomberg US Asset-Backed	-1.34%	-5.06%	-5.61%	-0.24%	1.02%	1.17%
Bloomberg US 20-Yr Municipal	-4.38%	-15.44%	-14.43%	-2.51%	0.69%	2.22%
Bloomberg US High Yield	-0.65%	-14.74%	-14.14%	-0.45%	1.57%	3.94%
Bloomberg Global	-6.94%	-19.89%	-20.43%	-5.74%	-2.32%	-0.93%
Bloomberg International	-8.85%	-23.88%	-24.77%	-7.78%	-4.03%	-2.39%
Bloomberg Emerging Market	-4.06%	-20.50%	-20.92%	-5.26%	-1.56%	1.39%

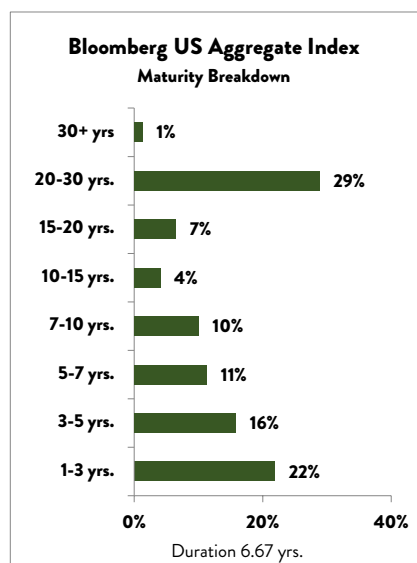
Source: Morningstar



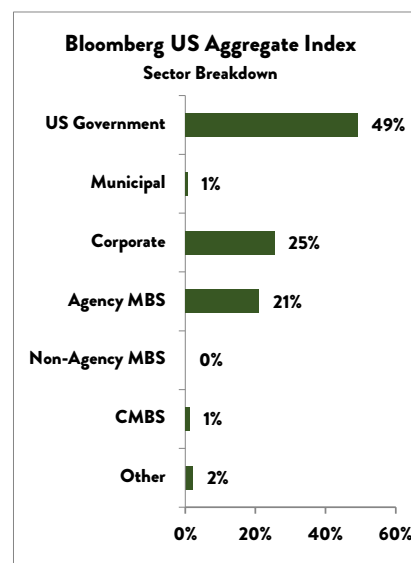
Source: Department of US Treasury



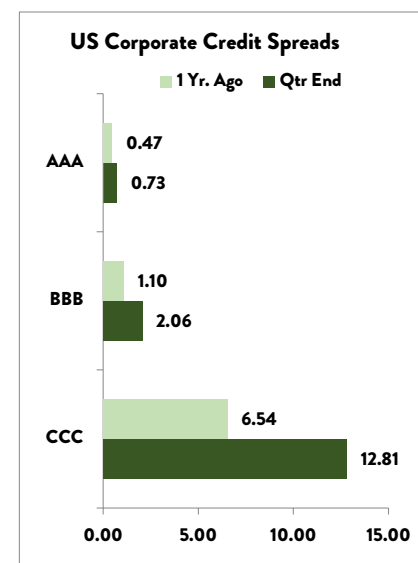
Source: Morningstar



Source: Morningstar



Source: Morningstar



Source: Federal Reserve / Bank of America

3Q2022 US Equity Market Data

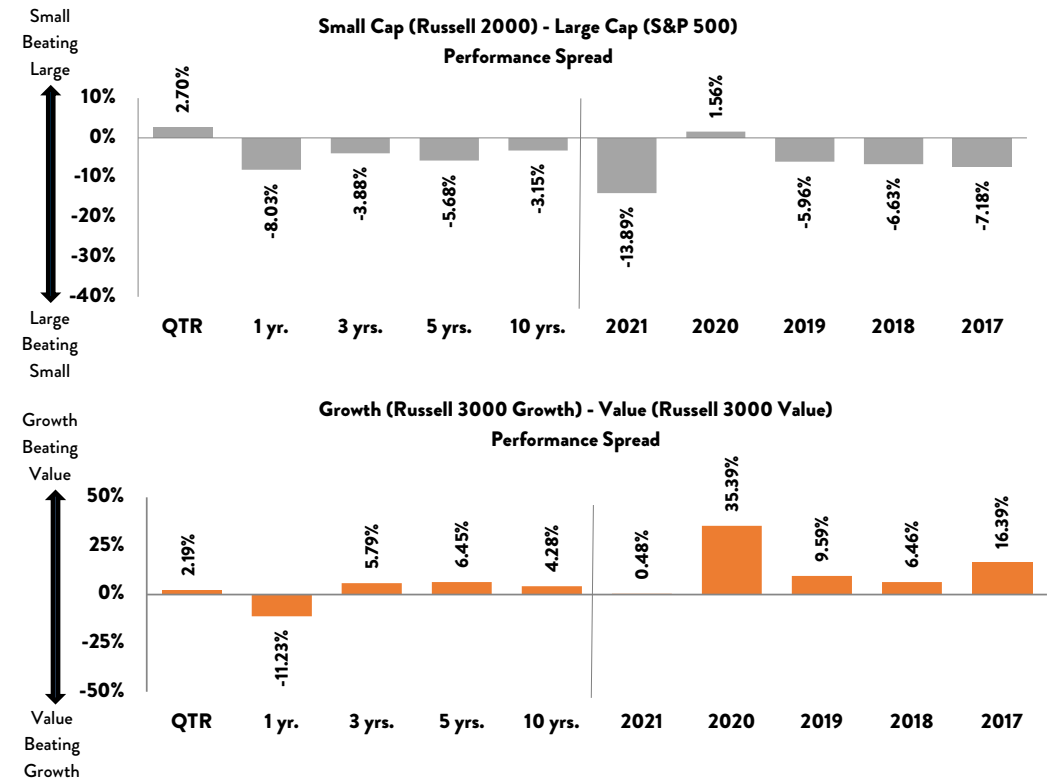
Sectors Weights/Returns (ranked by quarter performance)

S&P 500 Index	Wgt.	Sector	QTR	YTD	1 yr.
	12%	Consumer Discretionary	4.36%	-29.89%	-20.89%
	5%	Energy	2.35%	34.94%	45.70%
	11%	Financials	-3.10%	-21.25%	-17.65%
	8%	Industrials	-4.72%	-20.72%	-13.87%
	15%	Health Care	-5.18%	-13.08%	-3.37%
	3%	Utilities	-5.99%	-6.51%	5.58%
	26%	Information Technology	-6.21%	-31.44%	-20.00%
	7%	Consumer Staples	-6.62%	-11.83%	-0.09%
	3%	Materials	-7.13%	-23.74%	-12.15%
S&P Midcap 400 Index	Wgt.	Sector	QTR	YTD	1 yr.
	5%	Energy	5.53%	23.70%	27.20%
	19%	Industrials	1.31%	-21.52%	-12.40%
	16%	Financials	0.54%	-11.51%	-5.29%
	4%	Consumer Staples	-1.92%	-11.07%	-4.47%
	12%	Information Technology	-2.15%	-27.28%	-21.28%
	14%	Consumer Discretionary	-2.90%	-30.87%	-27.99%
	2%	Communication Services	-3.60%	-23.68%	-25.77%
	10%	Health Care	-5.05%	-24.02%	-23.00%
	7%	Materials	-6.21%	-20.22%	-9.35%
S&P Smallcap 600 Index	Wgt.	Sector	QTR	YTD	1 yr.
	5%	Energy	-2.12%	22.78%	13.30%
	19%	Financials	-2.59%	-19.80%	-15.46%
	13%	Health Care	-4.04%	-26.68%	-27.95%
	6%	Materials	-4.10%	-15.78%	-10.58%
	13%	Consumer Discretionary	-4.20%	-34.92%	-32.49%
	16%	Industrials	-4.43%	-20.99%	-13.40%
	13%	Information Technology	-4.44%	-28.17%	-20.33%
	5%	Consumer Staples	-7.35%	-14.79%	-5.79%
	2%	Utilities	-8.47%	-12.86%	2.95%
	Wgt.	Sector	QTR	YTD	1 yr.
	2%	Communication Services	-10.54%	-32.30%	-34.70%
	8%	Real Estate	-14.51%	-35.32%	-29.66%

Source: Morningstar

Index Performance Data

Index	QTR	YTD	1 yr.	Annualized		
				3 yrs.	5 yrs.	10 yrs.
S&P 500	-4.88%	-23.87%	-15.47%	8.16%	9.24%	11.70%
Russell 1000 Value	-5.62%	-17.75%	-11.36%	4.36%	5.29%	9.17%
Russell 1000 Growth	-3.60%	-30.66%	-22.59%	10.67%	12.17%	13.70%
Russell Mid Cap	-3.44%	-24.27%	-19.39%	5.19%	6.48%	10.30%
Russell Mid Cap Value	-4.93%	-20.36%	-13.56%	4.50%	4.76%	9.44%
Russell Mid Cap Growth	-0.65%	-31.45%	-29.50%	4.26%	7.62%	10.85%
Russell 2000	-2.19%	-25.10%	-23.50%	4.29%	3.55%	8.55%
Russell 2000 Value	-4.61%	-21.12%	-17.69%	4.72%	2.87%	7.94%
Russell 2000 Growth	0.24%	-29.28%	-29.27%	2.94%	3.60%	8.81%
Russell 3000	-4.46%	-24.62%	-17.63%	7.70%	8.62%	11.39%
DJ US Select REIT	-10.37%	-29.32%	-17.15%	-3.29%	1.95%	5.49%

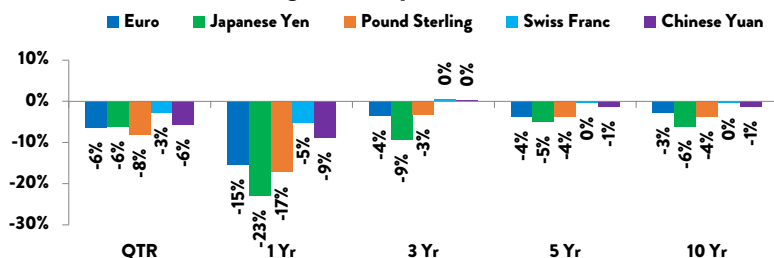


3Q2022 International Market Data

Index Performance Data (net)

Index (US\$)	QTR	YTD	1 yr.	3 yrs.	5 yrs.	10 yrs.
MSCI ACWI ex-US	-9.91%	-26.50%	-25.17%	-1.52%	-0.81%	3.01%
MSCI EAFE	-9.36%	-27.09%	-25.13%	-1.83%	-0.84%	3.67%
Europe	-10.15%	-28.83%	-24.80%	-1.72%	-1.24%	3.45%
United Kingdom	-10.76%	-18.65%	-14.08%	-1.73%	-1.06%	1.88%
Germany	-12.59%	-37.66%	-37.15%	-6.97%	-6.68%	1.25%
France	-8.88%	-29.07%	-24.03%	-1.45%	-0.36%	5.11%
Pacific	-8.09%	-23.80%	-25.87%	-2.15%	-0.16%	4.11%
Japan	-7.67%	-26.38%	-29.30%	-2.65%	-0.63%	4.84%
Hong Kong	-16.97%	-19.39%	-22.25%	-4.18%	-2.34%	3.60%
Australia	-6.74%	-18.09%	-16.37%	0.54%	2.40%	3.15%
Canada	-7.94%	-18.89%	-13.06%	4.12%	3.44%	3.00%
MSCI EM	-11.57%	-27.16%	-28.11%	-2.07%	-1.81%	1.05%
MSCI EM Latin America	3.61%	3.02%	0.24%	-3.39%	-2.64%	-2.28%
MSCI EM Asia	-14.03%	-28.82%	-29.51%	-0.81%	-1.07%	3.08%
MSCI EM Eur/Mid East	-2.60%	-36.13%	-38.07%	-7.42%	-3.51%	-3.54%
MSCI ACWI Value ex-US	-10.44%	-21.00%	-20.02%	-2.15%	-2.12%	1.87%
MSCI ACWI Growth ex-US	-9.37%	-31.84%	-30.22%	-1.38%	0.18%	3.95%
MSCI ACWI Sm Cap ex-US	-8.37%	-29.37%	-28.93%	0.38%	-0.56%	4.44%

Foreign Currency v. US\$ Returns

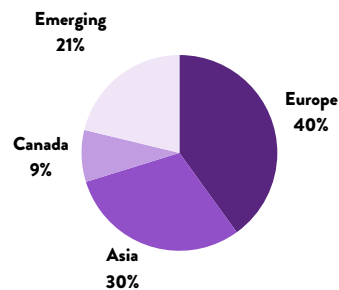


Exchange Rates	QTR	2Q22	1Q22	4Q21	3Q21	2Q21
Japanese Yen	144.71	135.69	121.44	115.17	111.50	111.05
Euro	1.02	0.96	0.90	0.88	0.86	0.84
British Pound	0.90	0.82	0.76	0.74	0.74	0.72
Swiss Franc	0.98	0.96	0.92	0.91	0.93	0.93
Chinese Yuan	7.11	6.70	6.34	6.37	6.44	6.46

Source: Federal Reserve Bank of St. Louis

Regional Exposure

MSCI ACWI ex-USA

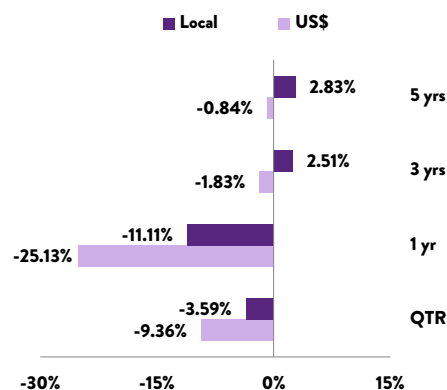


Top 10 Countries (MSCI AC World ex-USA)

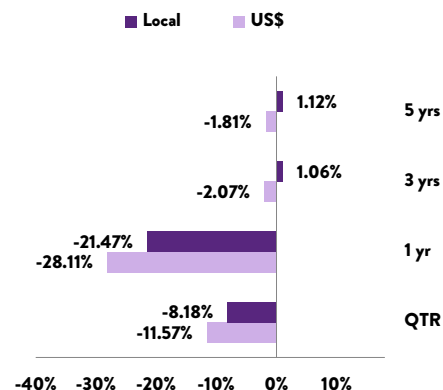
Japan	14%
UK	10%
China	9%
Canada	8%
France	7%
Switzerland	7%
Australia	5%
Germany	5%
India	4%
Taiwan	4%

Source: Morningstar

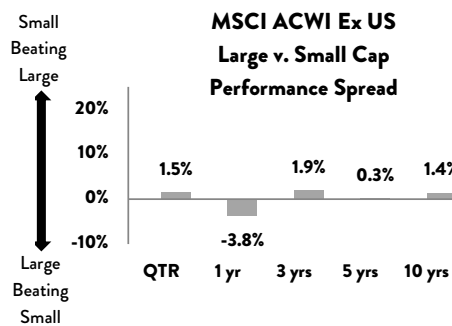
MSCI EAFE Index Return



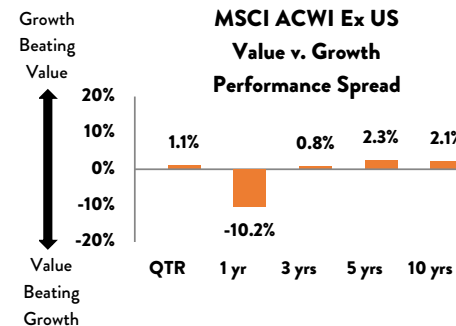
MSCI Emerging Index Return



MSCI ACWI Ex US Large v. Small Cap Performance Spread



MSCI ACWI Ex US Value v. Growth Performance Spread



Performance Source: Morningstar

Historical Market Returns

Ranked by Performance

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD	3Q22
Emerging Markets 39.42%	US Bonds 5.24%	Emerging Markets 78.51%	Small Cap 26.85%	Core Real Estate 14.96%	Emerging Markets 18.22%	Small Cap 38.82%	Large Cap 13.68%	Core Real Estate 13.95%	Small Cap 21.30%	Emerging Markets 37.28%	Core Real Estate 7.36%	Large Cap 31.49%	Small Cap 19.96%	Large Cap 28.71%	Commod. 13.57%	Cash 0.67%
Intl 16.65%	Global Bonds 4.79%	High Yield 58.21%	Mid Cap 25.48%	TIPS 13.56%	Mid Cap 17.28%	Mid Cap 34.76%	Mid Cap 13.21%	Large Cap 1.38%	High Yield 17.12%	Intl 27.19%	Cash 1.69%	Mid Cap 30.54%	Large Cap 18.40%	Commod. 27.11%	Core Real Estate 12.40%	Core Real Estate 0.35%
Commod. 16.23%	Cash 1.39%	Intl 41.45%	Emerging Markets 18.88%	US Bonds 7.84%	Intl 16.83%	Large Cap 32.39%	Core Real Estate 11.44%	US Bonds 0.55%	Mid Cap 13.79%	Large Cap 21.83%	US Bonds 0.01%	Small Cap 25.52%	Emerging Markets 18.31%	Mid Cap 22.58%	Cash 1.02%	High Yield -0.65%
Core Real Estate 14.84%	TIPS -2.35%	Mid Cap 40.48%	Commod. 16.83%	Global Bonds 5.64%	Small Cap 16.35%	Intl 15.29%	US Bonds 5.97%	Cash 0.03%	Large Cap 11.95%	Mid Cap 18.52%	Global Bonds -1.20%	Intl 21.51%	Mid Cap 17.10%	Core Real Estate 21.06%	TIPS -13.61%	Small Cap 2.19%
TIPS 11.64%	Core Real Estate -10.70%	Small Cap 27.17%	Core Real Estate 15.26%	High Yield 4.98%	Large Cap 16.00%	Global Balanced 14.46%	Small Cap 4.89%	TIPS -1.43%	Commod. 11.76%	Global Balanced 15.87%	TIPS -1.26%	Global Balanced 18.86%	Global Balanced 13.93%	Small Cap 14.82%	US Bonds -14.61%	Mid Cap -3.44%
Global Bonds 9.48%	Global Balanced 24.51%	Large Cap 26.46%	High Yield 15.12%	Large Cap 2.11%	High Yield 15.81%	Core Real Estate 12.95%	TIPS 3.64%	Global Balanced 1.45%	Emerging Markets 11.18%	Small Cap 14.65%	High Yield -2.08%	Emerging Markets 18.42%	TIPS 10.99%	Global Balanced 10.94%	High Yield -14.74%	Commod. -4.11%
Global Balanced 9.07%	High Yield -26.16%	Global Balanced 20.49%	Large Cap 15.06%	Cash 0.06%	Global Balanced 11.06%	High Yield 7.44%	Global Balanced 3.17%	Mid Cap -2.43%	Core Real Estate 7.76%	High Yield 7.50%	Large Cap -4.38%	High Yield 14.32%	Intl 10.65%	Intl 7.82%	Global Bonds -19.89%	US Bonds -4.75%
US Bonds 6.97%	Small Cap -33.79%	Commod. 18.91%	Intl 11.15%	Global Balanced 0.97%	Core Real Estate 9.76%	Cash 0.07%	High Yield 2.45%	Global Bonds -3.15%	Global Balanced 5.38%	Global Bonds 7.39%	Global Balanced -5.30%	US Bonds 8.72%	Global Bonds 9.20%	TIPS 5.96%	Global Balanced 22.23%	Large Cap 4.88%
Mid Cap 5.60%	Commod. -35.65%	TIPS 11.41%	Global Balanced 9.40%	Mid Cap -1.55%	TIPS 6.98%	US Bonds -2.02%	Global Bonds 0.59%	Small Cap 4.41%	TIPS 4.68%	Core Real Estate 6.66%	Mid Cap -9.06%	TIPS 8.43%	US Bonds 7.51%	High Yield 5.28%	Large Cap -23.87%	TIPS -5.14%
Large Cap 5.49%	Large Cap 37.00%	Global Bonds 6.93%	US Bonds 6.54%	Small Cap 4.18%	Global Bonds 4.32%	Global Bonds -2.60%	Cash 0.04%	High Yield -4.46%	Intl 4.50%	US Bonds 3.54%	Small Cap 11.01%	Commod. 7.69%	High Yield 7.11%	Cash 0.05%	Mid Cap -24.27%	Global Balanced 6.11%
Cash 4.44%	Mid Cap -41.46%	US Bonds 5.93%	TIPS 6.31%	Commod. -13.32%	US Bonds 4.21%	Emerging Markets -2.60%	Emerging Markets -2.18%	Intl 5.66%	US Bonds 2.65%	TIPS 3.01%	Commod. -11.25%	Global Bonds 6.84%	Cash 0.37%	US Bonds -1.54%	Small Cap 25.10%	Global Bonds -6.94%
High Yield 1.87%	Intl 45.53%	Cash 0.16%	Global Bonds 5.54%	Intl 13.71%	Cash 0.08%	TIPS -8.61%	Intl 3.86%	Emerging Markets -14.90%	Global Bonds 2.09%	Commod. 1.70%	Intl 14.20%	Core Real Estate 4.41%	Core Real Estate 0.35%	Emerging Markets -2.54%	Intl 26.50%	Intl 9.91%
Small Cap 1.57%	Emerging Markets -53.33%	Core Real Estate -30.40%	Cash 0.15%	Emerging Markets -18.42%	Commod. -1.06%	Commod. -9.52%	Commod. -17.00%	Commod. -24.60%	Cash 0.25%	Cash 0.71%	Emerging Markets -14.58%	Cash 2.30%	Commod. -3.12%	Global Bonds -4.71%	Emerging Markets -27.16%	Emerging Markets -11.57%

Global Balanced is composed of 60% MSCI World Stock Index, 35% BBgBarc Global Aggregate Bond Index, and 5% US 90-Day T-Bills.

Source: Morningstar; Core Real Estate Source: NCREIF

Section 2

STATE OF NEVADA

Combined 457(b) DC Plans

PLAN ASSET ALLOCATION

Third Quarter 2022

Fixed Income	Ticker	Assets	%
Voya Fixed Account	-	\$346,352,534	37.8%
Vanguard Total Bond Market Index I	VBPIX	\$32,839,572	3.6%
Sterling Capital Total Return Bond R6	STRDX	\$1,574,360	0.2%
Total		\$380,766,466	41.5%

Large Cap	Ticker	Assets	%
MFS Value R4	MEIUX	\$19,043,126	2.1%
Vanguard Institutional Index Instl Plus	VIIIIX	\$115,116,246	12.5%
T. Rowe Price Growth Stock I	PRUFIX	\$53,283,892	5.8%
Total		\$187,443,264	20.4%

Mid Cap	Ticker	Assets	%
Vanguard Mid-Cap Value Index Adm	VMVAX	\$6,897,596	0.8%
Vanguard Extended Market Index Instl Plus	VEMPX	\$86,387,377	9.4%
Vanguard Mid-Cap Growth Index Adm	VMGMX	\$17,859,557	1.9%
Total		\$111,144,530	12.1%

International	Ticker	Assets	%
Vanguard Total Intl Stock Index I	VTSNX	\$33,686,282	3.7%
American Funds EuroPacific Growth R6	REGRX	\$5,572,137	0.6%
Total		\$39,258,418	4.3%

Asset Allocation	Ticker	Assets	%
Vanguard Target Retirement Income	VTINX	\$39,033,584	4.3%
Vanguard Target Retirement 2020	VTWNX	\$10,828,047	1.2%
Vanguard Target Retirement 2025	VTTVX	\$38,795,976	4.2%
Vanguard Target Retirement 2030	VTHRX	\$12,722,906	1.4%
Vanguard Target Retirement 2035	VTHHX	\$44,636,567	4.9%
Vanguard Target Retirement 2040	VFORX	\$6,881,989	0.8%
Vanguard Target Retirement 2045	VTIVX	\$21,762,198	2.4%
Vanguard Target Retirement 2050	VFIFX	\$4,469,952	0.5%
Vanguard Target Retirement 2055	VFFVX	\$6,202,341	0.7%
Vanguard Target Retirement 2060	VTTSX	\$1,654,404	0.2%
Vanguard Target Retirement 2065	VLXVX	\$1,367,738	0.1%
Total		\$188,355,703	20.5%

Miscellaneous	Ticker	Assets	%
Self-Directed Brokerage Account	-	\$7,009,668	0.8%
Participant Loans	-	\$3,402,830	0.4%
Total		\$10,412,499	1.1%

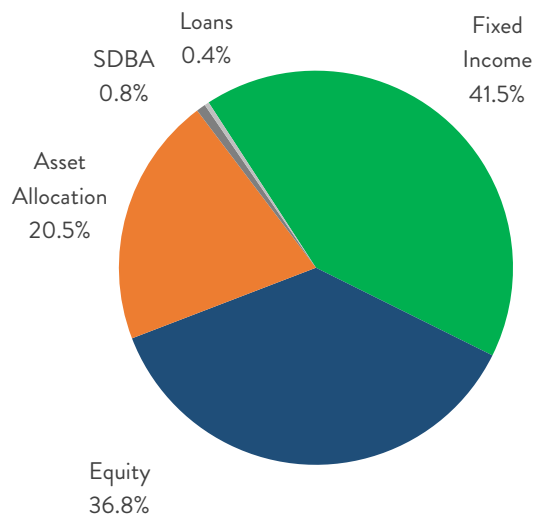
TOTAL PLAN ASSETS **\$917,380,881**
 Administrative Account Balance (10/18/22) \$270,892

STATE OF NEVADA

Combined 457(b) DC Plans

PLAN ASSET ALLOCATION

Third Quarter 2022

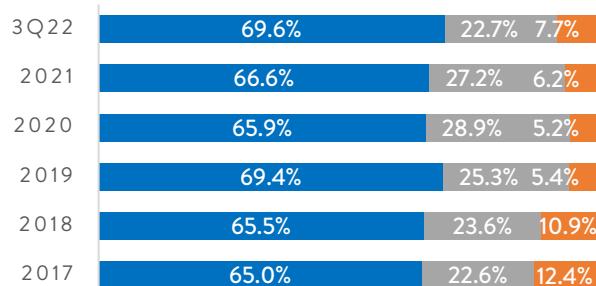


HISTORICAL PLAN ALLOCATION

Asset Class	3Q22	2021	2020	2019	2018	2017	2016	2015
Fixed Income	41.5%	34.0%	36.7%	38.1%	43.8%	41.5%	N/A	N/A
Large Cap	20.4%	24.4%	22.4%	21.8%	18.8%	20.4%	N/A	N/A
Mid Cap	12.1%	14.5%	14.9%	14.4%	13.4%	14.2%	N/A	N/A
International	4.3%	4.7%	4.3%	4.2%	4.0%	4.4%	N/A	N/A
Asset Allocation	20.5%	21.3%	20.7%	20.7%	19.2%	18.7%	N/A	N/A
SDBA	0.8%	0.9%	0.6%	0.4%	0.3%	0.3%	N/A	N/A
Loans	0.4%	0.3%	0.3%	0.4%	0.5%	0.4%	N/A	N/A

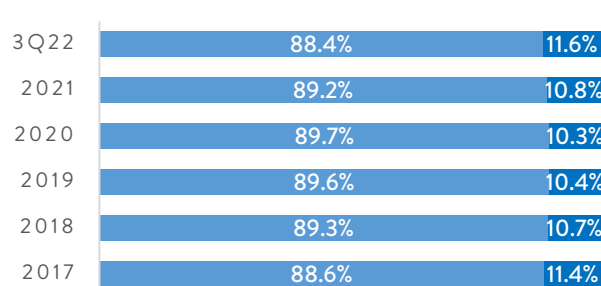
EQUITY STYLE*

■ Core ■ Growth ■ Value



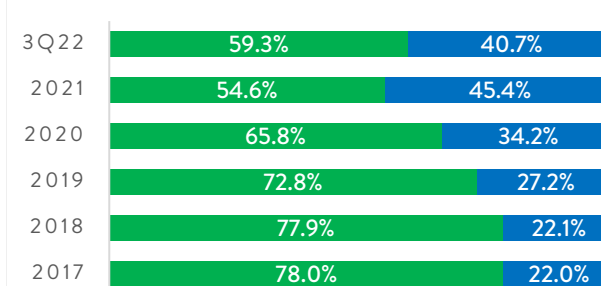
BY EQUITY REGION*

■ US ■ Non-US



ACTIVE V PASSIVE**

■ Active ■ Passive



*Excludes Fixed Income, Asset Allocation, Brokerage, and Loan assets

**Excludes Asset Allocation, Brokerage, and Loan assets

STATE OF NEVADA

Combined 457(b) DC Plans

PLAN ASSET ALLOCATION

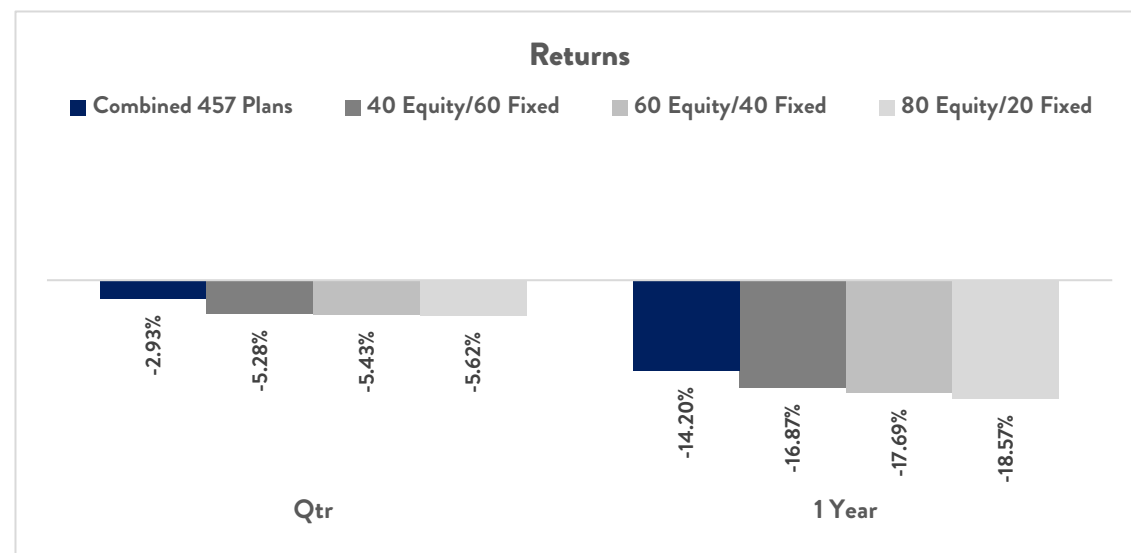
Third Quarter 2022

PLAN LEVEL CASH FLOWS

	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$381,983,004	\$4,233,250	(\$7,914,159)	\$1,554,299	\$910,072	\$380,766,466
Large Cap	\$196,000,069	\$2,648,646	(\$2,458,690)	(\$3,099)	(\$8,743,661)	\$187,443,264
Mid Cap	\$114,421,142	\$1,570,412	(\$1,183,779)	(\$294,408)	(\$3,368,838)	\$111,144,530
International	\$42,848,167	\$810,596	(\$525,483)	\$653,232	(\$4,528,094)	\$39,258,418
Asset Allocation	\$198,564,410	\$6,256,024	(\$2,939,506)	(\$2,045,146)	(\$11,480,079)	\$188,355,703
SDBA	\$7,080,221	\$0	\$0	\$265,938	(\$336,491)	\$7,009,668
Total	\$940,897,013	\$15,518,928	(\$15,021,617)	\$130,817	(\$27,547,090)	\$913,978,050

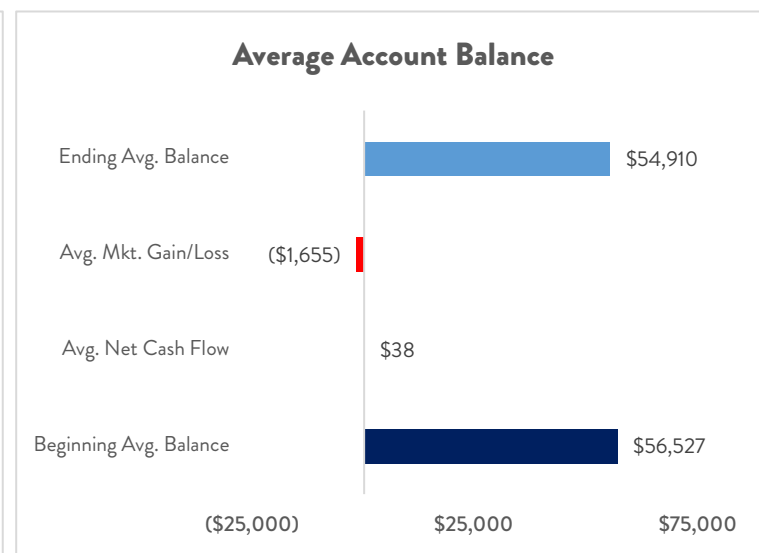
HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q22	\$940,897,013	\$628,128	(\$27,547,090)	\$913,978,050
YTD	\$1,103,984,931	(\$1,903,036)	(\$188,103,845)	\$913,978,050
2021	\$1,012,211,305	(\$19,402,347)	\$111,175,973	\$1,103,984,931
2020	\$890,766,732	\$942,462	\$120,502,111	\$1,012,211,305
2019	\$771,229,524	(\$7,494,189)	\$127,031,396	\$890,766,732
2018	\$801,580,360	(\$9,496,515)	(\$20,854,320)	\$771,229,524



Equity Indices: Russell 3000, MSCI ACWI ex USA; Fixed Indices: US Treasury 3 Mo T-Bill, Bloomberg Global

Aggregate Bond (rebalanced quarterly)



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STATE EMPLOYEES PLAN

457(b) Deferred Compensation Plan

PLAN ASSET ALLOCATION

Third Quarter 2022

Fixed Income	Ticker	Assets	%
Voya Fixed Account	-	\$244,054,056	39.8%
Vanguard Total Bond Market Index I	VBPIX	\$20,877,979	3.4%
Sterling Capital Total Return Bond R6	STRDX	\$898,538	0.1%
Total		\$265,830,573	43.4%

Large Cap	Ticker	Assets	%
MFS Value R4	MEIUX	\$12,517,477	2.0%
Vanguard Institutional Index Instl Plus	VIIIIX	\$74,188,397	12.1%
T. Rowe Price Growth Stock I	PRUFIX	\$33,895,536	5.5%
Total		\$120,601,410	19.7%

Mid Cap	Ticker	Assets	%
Vanguard Mid-Cap Value Index Adm	VMVAX	\$3,845,220	0.6%
Vanguard Extended Market Index Instl Plus	VEMPX	\$56,453,764	9.2%
Vanguard Mid-Cap Growth Index Adm	VMGMX	\$11,574,249	1.9%
Total		\$71,873,232	11.7%

International	Ticker	Assets	%
Vanguard Total Intl Stock Index I	VTSNX	\$20,135,746	3.3%
American Funds EuroPacific Growth R6	REGRX	\$3,349,152	0.5%
Total		\$23,484,898	3.8%

Asset Allocation	Ticker	Assets	%
Vanguard Target Retirement Income	VTINX	\$30,195,867	4.9%
Vanguard Target Retirement 2020	VTWVX	\$6,440,649	1.1%
Vanguard Target Retirement 2025	VTVVX	\$25,391,096	4.1%
Vanguard Target Retirement 2030	VTHRX	\$7,187,957	1.2%
Vanguard Target Retirement 2035	VTHX	\$31,516,023	5.1%
Vanguard Target Retirement 2040	VFORX	\$3,819,645	0.6%
Vanguard Target Retirement 2045	VTIVX	\$12,493,968	2.0%
Vanguard Target Retirement 2050	VFIFX	\$2,121,801	0.3%
Vanguard Target Retirement 2055	VFFVX	\$3,458,589	0.6%
Vanguard Target Retirement 2060	VTTX	\$729,856	0.1%
Vanguard Target Retirement 2065	VLXVX	\$529,227	0.1%
Total		\$123,884,680	20.2%

Miscellaneous	Ticker	Assets	%
Self-Directed Brokerage Account	-	\$4,035,768	0.7%
Participant Loans	-	\$3,396,149	0.6%
Total		\$7,431,917	1.2%

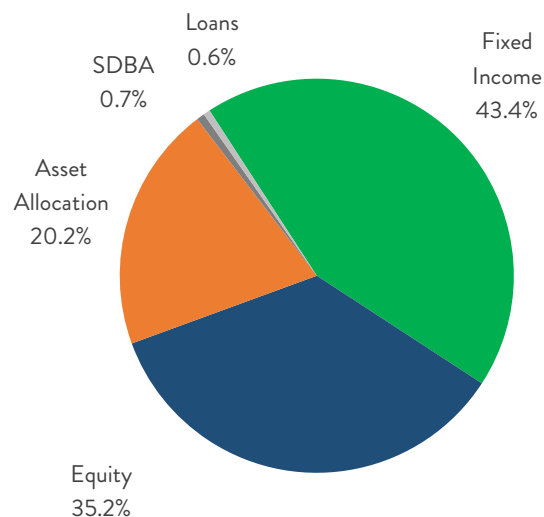
TOTAL PLAN ASSETS **\$613,106,710**
Administrative Account Balance (10/18/22) \$270,892

STATE EMPLOYEES PLAN

457(b) Deferred Compensation Plan

PLAN ASSET ALLOCATION

Third Quarter 2022



HISTORICAL PLAN ALLOCATION

Asset Class	3Q22	2021	2020	2019	2018	2017	2016	2015
Fixed Income	43.4%	35.4%	38.0%	40.1%	44.9%	42.8%	N/A	N/A
Large Cap	19.7%	23.7%	21.5%	20.6%	18.6%	19.1%	N/A	N/A
Mid Cap	11.7%	14.2%	14.5%	13.8%	12.6%	13.6%	N/A	N/A
International	3.8%	4.2%	3.8%	3.5%	3.4%	4.0%	N/A	N/A
Asset Allocation	20.2%	21.3%	21.2%	21.1%	19.4%	19.6%	N/A	N/A
SDDBA	0.7%	0.7%	0.5%	0.3%	0.3%	0.3%	N/A	N/A
Loans	0.6%	0.5%	0.5%	0.6%	0.7%	0.6%	N/A	N/A

EQUITY STYLE*

■ Core ■ Growth ■ Value

3 Q 22	69.8%	22.6%	7.6%
2021	66.9%	27.0%	6.1%
2020	66.0%	28.7%	5.2%
2019	69.0%	25.6%	5.4%
2018	65.1%	24.1%	10.8%
2017	64.8%	23.1%	12.2%

BY EQUITY REGION*

■ US ■ Non-US

3 Q 22	89.1%	10.9%
2021	90.0%	10.0%
2020	90.5%	9.5%
2019	90.7%	9.3%
2018	90.1%	9.9%
2017	89.2%	10.8%

ACTIVE V PASSIVE**

■ Active ■ Passive

3 Q 22	61.2%	38.8%
2021	56.1%	43.9%
2020	68.6%	31.4%
2019	75.3%	24.7%
2018	80.1%	19.9%
2017	80.2%	19.8%

*Excludes Fixed Income, Asset Allocation, Brokerage, and Loan assets

**Excludes Asset Allocation, Brokerage, and Loan assets

STATE EMPLOYEES PLAN

457(b) Deferred Compensation Plan

PLAN ASSET ALLOCATION

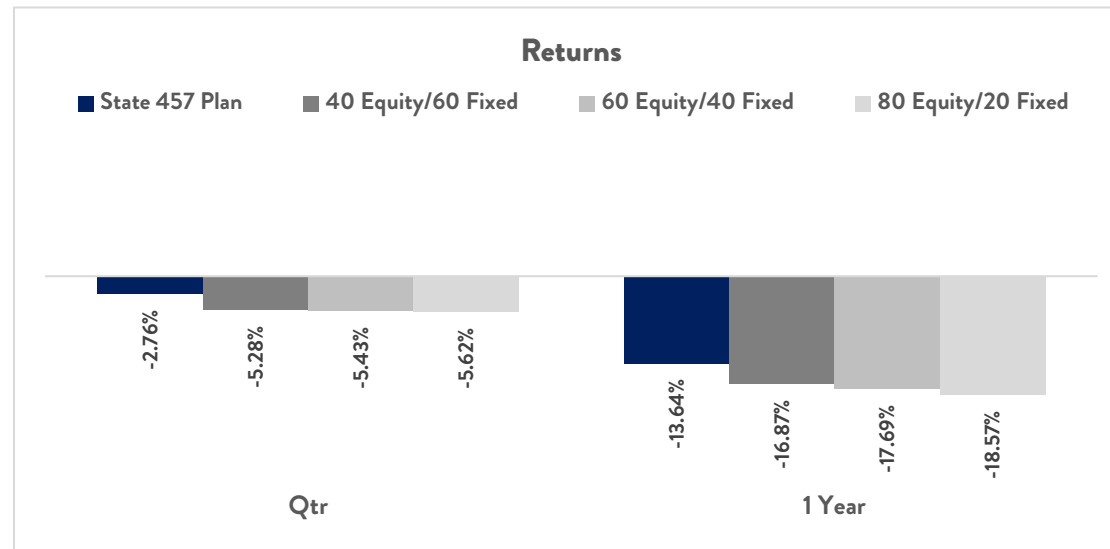
Third Quarter 2022

PLAN LEVEL CASH FLOWS

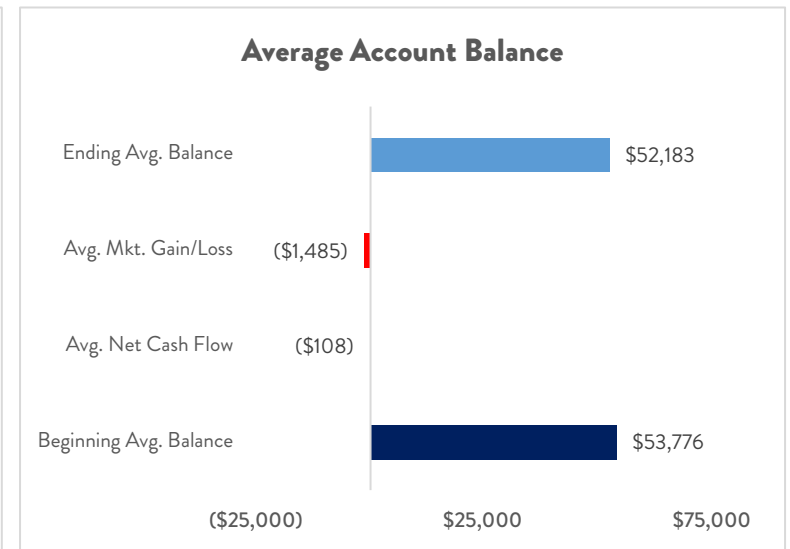
	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$266,043,146	\$2,383,189	(\$4,899,244)	\$1,547,004	\$756,478	\$265,830,573
Large Cap	\$126,512,053	\$1,586,194	(\$1,927,147)	\$27,541	(\$5,597,231)	\$120,601,410
Mid Cap	\$74,649,777	\$876,620	(\$976,857)	(\$544,951)	(\$2,131,357)	\$71,873,232
International	\$25,505,384	\$469,735	(\$383,832)	\$594,793	(\$2,701,182)	\$23,484,898
Asset Allocation	\$131,580,329	\$3,675,883	(\$2,194,349)	(\$1,725,293)	(\$7,451,891)	\$123,884,680
SDBA	\$4,026,504	\$0	\$0	\$232,938	(\$223,675)	\$4,035,768
Total	\$628,317,193	\$8,991,622	(\$10,381,430)	\$132,033	(\$17,348,857)	\$609,710,561

HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q22	\$628,317,193	(\$1,257,775)	(\$17,348,857)	\$609,710,561
YTD	\$736,232,396	(\$5,990,551)	(\$120,531,284)	\$609,710,561
2021	\$680,605,231	(\$16,866,120)	\$72,493,284	\$736,232,396
2020	\$608,234,330	(\$6,442,157)	\$78,813,059	\$680,605,231
2019	\$537,863,111	(\$14,358,576)	\$84,729,795	\$608,234,330
2018	\$562,293,890	(\$11,362,468)	(\$13,068,311)	\$537,863,111



Equity Indices: Russell 3000, MSCI ACWI ex USA; Fixed Indices: US Treasury 3 Mo T-Bill, Bloomberg Global Aggregate Bond (rebalanced quarterly)



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POLITICAL SUBDIVISIONS

457(b) Deferred Compensation Plan

PLAN ASSET ALLOCATION

Third Quarter 2022

Fixed Income	Ticker	Assets	%
Voya Fixed Account	-	\$85,923,092	38.3%
Vanguard Total Bond Market Index I	VBPIX	\$7,891,009	3.5%
Sterling Capital Total Return Bond R6	STRDX	\$318,100	0.1%
Total		\$94,132,201	41.9%

Large Cap	Ticker	Assets	%
MFS Value R4	MEIUX	\$5,157,510	2.3%
Vanguard Institutional Index Instl Plus	VIIIIX	\$28,475,928	12.7%
T. Rowe Price Growth Stock I	PRUFIX	\$14,897,604	6.6%
Total		\$48,531,041	21.6%

Mid Cap	Ticker	Assets	%
Vanguard Mid-Cap Value Index Adm	VMVAX	\$1,823,424	0.8%
Vanguard Extended Market Index Instl Plus	VEMPX	\$22,187,959	9.9%
Vanguard Mid-Cap Growth Index Adm	VMGMX	\$3,846,701	1.7%
Total		\$27,858,084	12.4%

International	Ticker	Assets	%
Vanguard Total Intl Stock Index I	VTSNX	\$9,889,633	4.4%
American Funds EuroPacific Growth R6	REGRX	\$1,191,741	0.5%
Total		\$11,081,373	4.9%

Asset Allocation	Ticker	Assets	%
Vanguard Target Retirement Income	VTINX	\$4,423,018	2.0%
Vanguard Target Retirement 2020	VTWNX	\$2,050,517	0.9%
Vanguard Target Retirement 2025	VTTVX	\$7,621,998	3.4%
Vanguard Target Retirement 2030	VTHRX	\$2,814,547	1.3%
Vanguard Target Retirement 2035	VTHHX	\$8,865,212	4.0%
Vanguard Target Retirement 2040	VFORX	\$1,886,298	0.8%
Vanguard Target Retirement 2045	VTIVX	\$7,183,423	3.2%
Vanguard Target Retirement 2050	VFIFX	\$1,744,985	0.8%
Vanguard Target Retirement 2055	VFFVX	\$2,277,582	1.0%
Vanguard Target Retirement 2060	VTTSX	\$862,919	0.4%
Vanguard Target Retirement 2065	VLXVX	\$612,317	0.3%
Total		\$40,342,816	18.0%

Miscellaneous	Ticker	Assets	%
Self-Directed Brokerage Account	-	\$2,460,611	1.1%
Participant Loans	-	\$6,681	0.0%
Total		\$2,467,292	1.1%

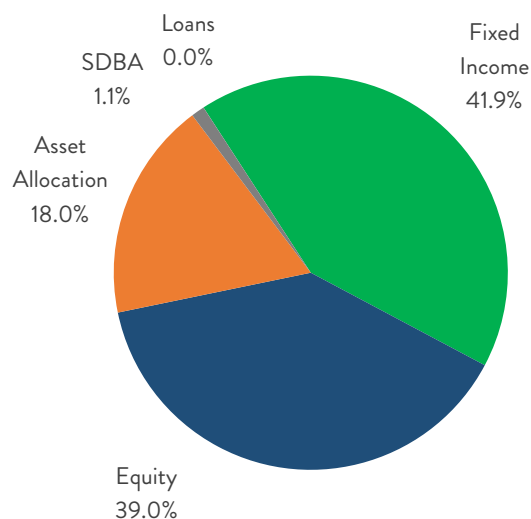
TOTAL PLAN ASSETS **\$224,412,808**

POLITICAL SUBDIVISIONS

457(b) Deferred Compensation Plan

PLAN ASSET ALLOCATION

Third Quarter 2022

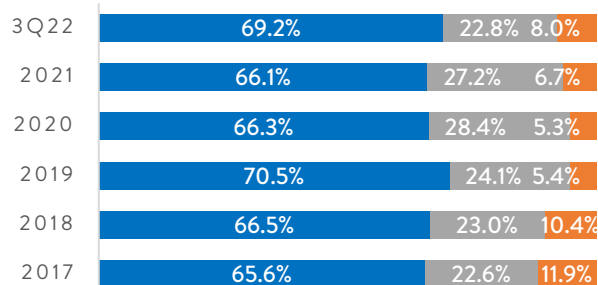


HISTORICAL PLAN ALLOCATION

Asset Class	3Q22	2021	2020	2019	2018	2017	2016	2015
Fixed Income	41.9%	34.5%	37.9%	37.5%	46.2%	42.5%	N/A	N/A
Large Cap	21.6%	25.5%	24.5%	24.4%	17.5%	22.8%	N/A	N/A
Mid Cap	12.4%	15.1%	15.2%	15.3%	15.1%	15.0%	N/A	N/A
International	4.9%	5.5%	5.3%	5.5%	5.2%	5.1%	N/A	N/A
Asset Allocation	18.0%	18.0%	16.2%	16.6%	15.6%	14.0%	N/A	N/A
SDDBA	1.1%	1.5%	0.9%	0.7%	0.5%	0.6%	N/A	N/A
Loans	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	N/A	N/A

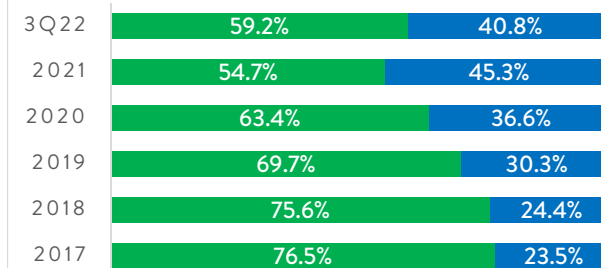
EQUITY STYLE*

■ Core ■ Growth ■ Value



ACTIVE V PASSIVE**

■ Active ■ Passive



*Excludes Fixed Income, Asset Allocation, Brokerage, and Loan assets

**Excludes Asset Allocation, Brokerage, and Loan assets

POLITICAL SUBDIVISIONS

457(b) Deferred Compensation Plan

PLAN ASSET ALLOCATION

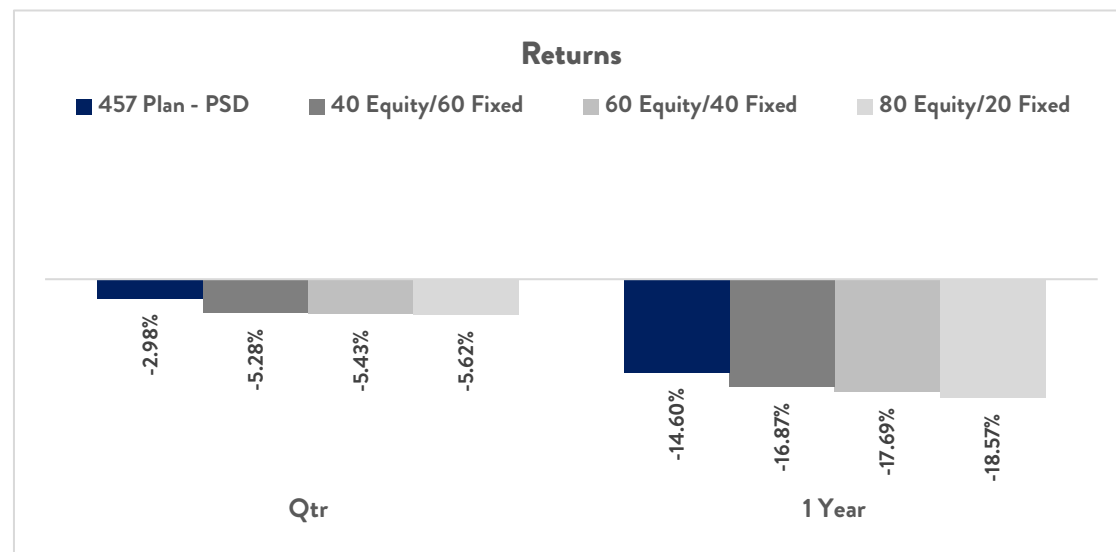
Third Quarter 2022

PLAN LEVEL CASH FLOWS

	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$94,669,486	\$1,593,901	(\$2,649,307)	\$266,797	\$251,322	\$94,132,201
Large Cap	\$50,591,309	\$743,315	(\$456,417)	(\$66,805)	(\$2,280,362)	\$48,531,041
Mid Cap	\$28,456,364	\$538,531	(\$170,949)	(\$84,960)	(\$880,902)	\$27,858,084
International	\$12,232,107	\$264,257	(\$112,990)	(\$8,923)	(\$1,293,076)	\$11,081,373
Asset Allocation	\$41,516,736	\$1,885,112	(\$347,266)	(\$136,663)	(\$2,575,103)	\$40,342,816
SDBA	\$2,520,976	\$0	\$0	\$33,000	(\$93,365)	\$2,460,611
Total	\$229,986,979	\$5,025,116	(\$3,736,929)	\$2,446	(\$6,871,486)	\$224,406,127

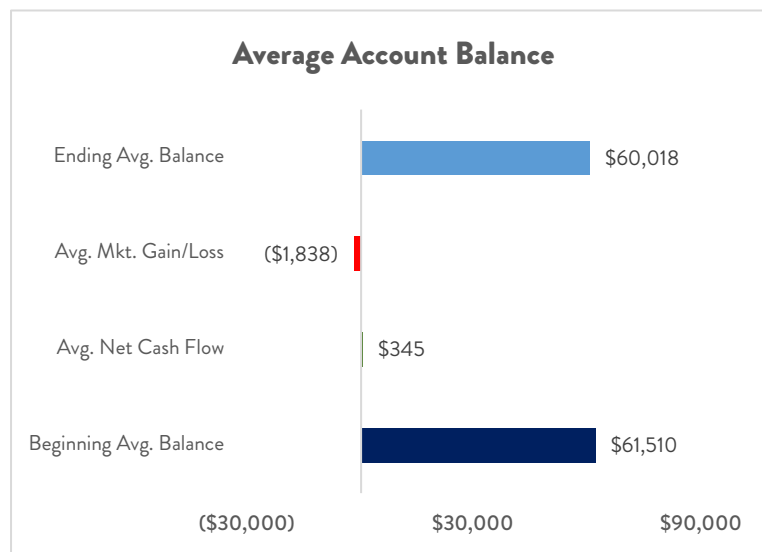
HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q22	\$229,986,979	\$1,290,633	(\$6,871,486)	\$224,406,127
YTD	\$268,237,618	\$3,473,277	(\$47,304,769)	\$224,406,127
2021	\$244,053,779	(\$3,563,244)	\$27,747,083	\$268,237,618
2020	\$211,520,904	\$2,964,561	\$29,568,315	\$244,053,779
2019	\$174,082,438	\$7,146,048	\$30,292,417	\$211,520,904
2018	\$178,524,895	\$683,229	(\$5,125,686)	\$174,082,438



Equity Indices: Russell 3000, MSCI ACWI ex USA; Fixed Indices: US Treasury 3 Mo T-Bill, Bloomberg Global

Aggregate Bond (rebalanced quarterly)



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NEVADA SYSTEM OF HIGHER EDUCATION

457(b) Deferred Compensation Plan

PLAN ASSET ALLOCATION

Third Quarter 2022

Fixed Income	Ticker	Assets	%
Voya Fixed Account	-	\$16,375,386	20.5%
Vanguard Total Bond Market Index I	VBPIX	\$4,070,584	5.1%
Sterling Capital Total Return Bond R6	STRDX	\$357,722	0.4%
Total		\$20,803,692	26.0%

Large Cap	Ticker	Assets	%
MFS Value R4	MEIUX	\$1,368,139	1.7%
Vanguard Institutional Index Instl Plus	VIIIIX	\$12,451,921	15.6%
T. Rowe Price Growth Stock I	PRUFIX	\$4,490,752	5.6%
Total		\$18,310,813	22.9%

Mid Cap	Ticker	Assets	%
Vanguard Mid-Cap Value Index Adm	VMVAX	\$1,228,952	1.5%
Vanguard Extended Market Index Instl Plus	VEMPX	\$7,745,655	9.7%
Vanguard Mid-Cap Growth Index Adm	VMGMX	\$2,438,607	3.1%
Total		\$11,413,214	14.3%

International	Ticker	Assets	%
Vanguard Total Intl Stock Index I	VTSNX	\$3,660,903	4.6%
American Funds EuroPacific Growth R6	REGRX	\$1,031,244	1.3%
Total		\$4,692,147	5.9%

Asset Allocation	Ticker	Assets	%
Vanguard Target Retirement Income	VTINX	\$4,414,700	5.5%
Vanguard Target Retirement 2020	VTWNX	\$2,336,881	2.9%
Vanguard Target Retirement 2025	VTTVX	\$5,782,882	7.2%
Vanguard Target Retirement 2030	VTHRX	\$2,720,402	3.4%
Vanguard Target Retirement 2035	VTHHX	\$4,255,332	5.3%
Vanguard Target Retirement 2040	VFORX	\$1,176,046	1.5%
Vanguard Target Retirement 2045	VTIVX	\$2,084,806	2.6%
Vanguard Target Retirement 2050	VFIFX	\$603,166	0.8%
Vanguard Target Retirement 2055	VFFVX	\$466,170	0.6%
Vanguard Target Retirement 2060	VTTSX	\$61,629	0.1%
Vanguard Target Retirement 2065	VLXVX	\$226,194	0.3%
Total		\$24,128,208	30.2%

Miscellaneous	Ticker	Assets	%
Self-Directed Brokerage Account	-	\$513,289	0.6%
Total		\$513,289	0.6%

TOTAL PLAN ASSETS

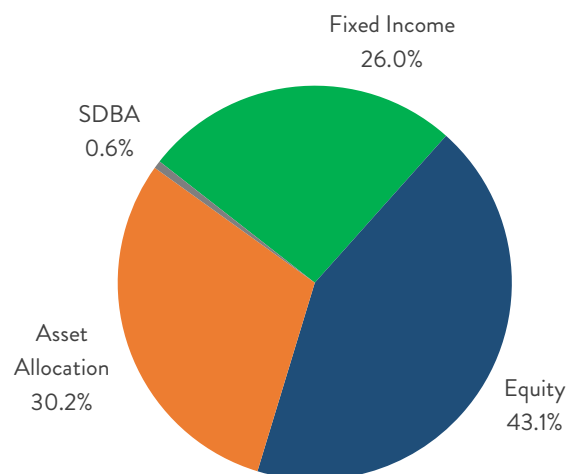
\$79,861,363

NEVADA SYSTEM OF HIGHER EDUCATION

457(b) Deferred Compensation Plan

PLAN ASSET ALLOCATION

Third Quarter 2022

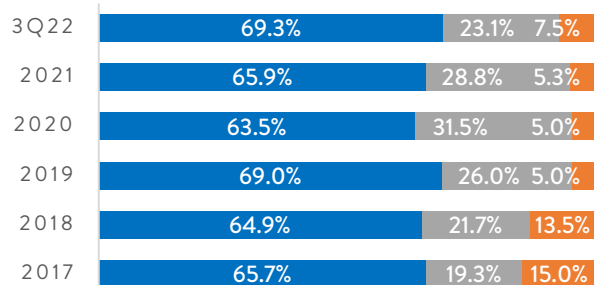


HISTORICAL PLAN ALLOCATION

Asset Class	3Q22	2021	2020	2019	2018	2017	2016	2015
Fixed Income	26.0%	22.3%	22.9%	22.4%	27.3%	26.9%	N/A	N/A
Large Cap	22.9%	26.1%	24.4%	24.4%	24.1%	24.7%	N/A	N/A
Mid Cap	14.3%	15.6%	17.3%	17.1%	15.7%	16.8%	N/A	N/A
International	5.9%	6.1%	5.8%	5.9%	5.8%	6.8%	N/A	N/A
Asset Allocation	30.2%	29.4%	29.1%	29.9%	26.8%	24.7%	N/A	N/A
SDBA	0.6%	0.6%	0.5%	0.3%	0.3%	0.1%	N/A	N/A

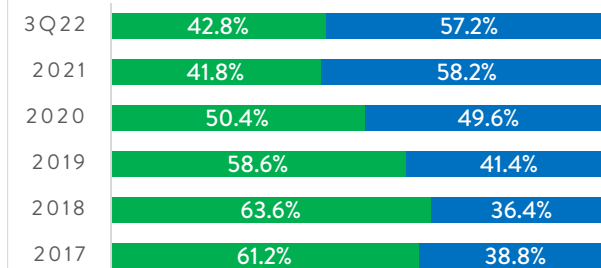
EQUITY STYLE*

■ Core ■ Growth ■ Value



ACTIVE V PASSIVE**

■ Active ■ Passive



*Excludes Fixed Income, Asset Allocation, and Brokerage assets

**Excludes Asset Allocation and Loan assets

NEVADA SYSTEM OF HIGHER EDUCATION

457(b) Deferred Compensation Plan

PLAN ASSET ALLOCATION

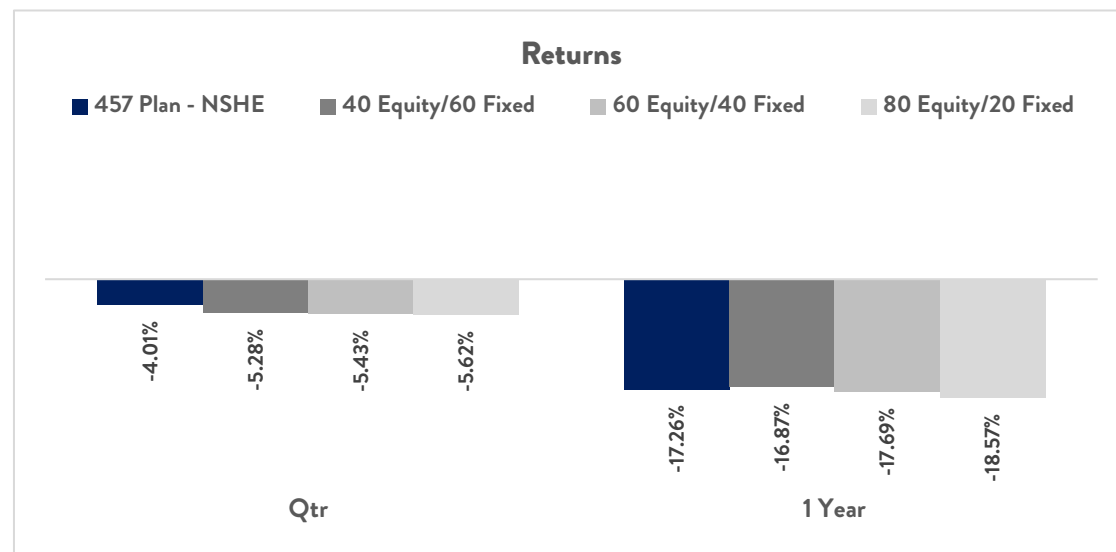
Third Quarter 2022

PLAN LEVEL CASH FLOWS

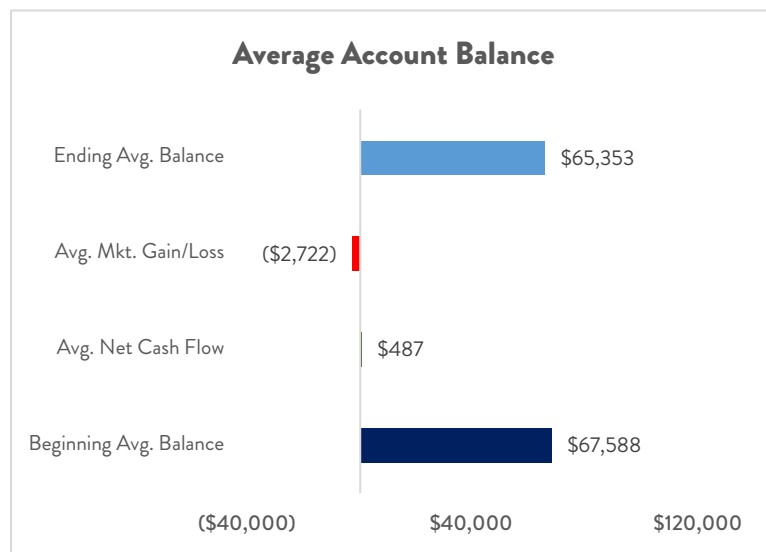
	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$21,270,371	\$256,160	(\$365,608)	(\$259,502)	(\$97,728)	\$20,803,692
Large Cap	\$18,896,707	\$319,136	(\$75,127)	\$36,164	(\$866,068)	\$18,310,813
Mid Cap	\$11,315,001	\$155,261	(\$35,972)	\$335,503	(\$356,579)	\$11,413,214
International	\$5,110,676	\$76,605	(\$28,661)	\$67,362	(\$533,835)	\$4,692,147
Asset Allocation	\$25,467,345	\$695,029	(\$397,890)	(\$183,190)	(\$1,453,085)	\$24,128,208
SDBA	\$532,740	\$0	\$0	\$0	(\$19,451)	\$513,289
Total	\$82,592,840	\$1,502,190	(\$903,258)	(\$3,662)	(\$3,326,747)	\$79,861,363

HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q22	\$82,592,840	\$595,270	(\$3,326,747)	\$79,861,363
YTD	\$99,514,917	\$614,238	(\$20,267,792)	\$79,861,363
2021	\$87,552,294	\$1,027,017	\$10,935,606	\$99,514,917
2020	\$71,011,498	\$4,420,058	\$12,120,738	\$87,552,294
2019	\$59,283,975	(\$281,661)	\$12,009,184	\$71,011,498
2018	\$60,761,575	\$1,182,723	(\$2,660,323)	\$59,283,975



Equity Indices: Russell 3000, MSCI ACWI ex USA; Fixed Indices: US Treasury 3 Mo T-Bill, Bloomberg Global Aggregate Bond (rebalanced quarterly)



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Fixed Income	Ticker	Assets	%
Voya Fixed Account - FICA	-	\$56,967,459	100.0%
Total		\$56,967,459	100.0%

HISTORICAL PLAN CASH FLOWS

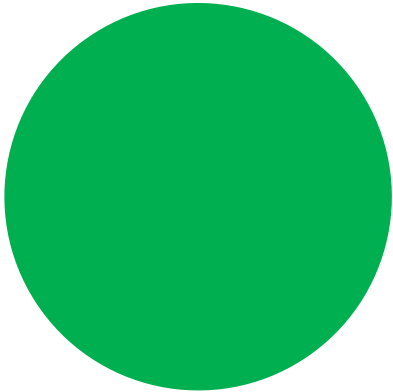
	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q22	\$55,070,239	\$1,581,923	\$315,297	\$56,967,459
YTD	\$53,114,954	\$2,940,300	\$912,205	\$56,967,459
2021	\$48,389,052	\$3,600,343	\$1,125,559	\$53,114,954
2020	\$45,103,420	\$2,240,312	\$1,045,320	\$48,389,052
2019	\$40,981,957	\$3,480,620	\$640,843	\$45,103,420
2018	\$36,814,369	\$3,585,657	\$581,931	\$40,981,957

TOTAL PLAN ASSETS

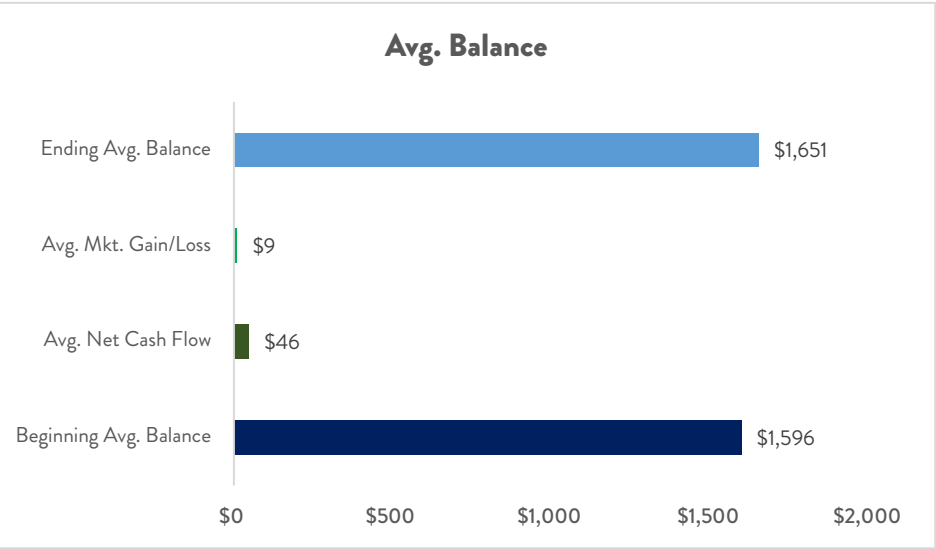
\$56,967,459

Administrative Account Balance (10/18/22)

\$24,798



Fixed Income
100.0%



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Section 3

STATE OF NEVADA

Combined Retirement Plans

INVESTMENT POLICY STATEMENT COMPLIANCE REPORT

Third Quarter 2022

		Investment Policy Status			
Key: Ⓟ Pass / Ⓢ Caution / ● Fail		Performance Factors	Qualitative Factors	On-Watch Information	Notes
Voya Fixed Account		Ⓟ	Ⓟ	-	
Voya Fixed Account - FICA		Ⓟ	Ⓟ	-	
Vanguard Total Bond Market Index I		Ⓟ	Ⓟ	-	
Sterling Capital Total Return Bond R6		Ⓟ	Ⓟ	-	
MFS Value R4		Ⓟ	Ⓟ	-	
Vanguard Institutional Index Instl Plus		Ⓟ	Ⓟ	-	
T. Rowe Price Growth Stock I		●	Ⓟ	1Q22 (Performance)	Trailing benchmark and Peer Group for 5-year period. Underperformance versus benchmark is largely driven by an underweight to Technology, an overweight to Communications, and security selection in both Technology and Consumer Cyclical.
Vanguard Mid-Cap Value Index Adm		Ⓟ	Ⓟ	-	
Vanguard Extended Market Index Instl Plus		Ⓟ	Ⓟ	-	
Vanguard Mid-Cap Growth Index Adm		Ⓟ	Ⓟ	-	
Vanguard Total Intl Stock Index I		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
American Funds EuroPacific Growth R6		Ⓟ	Ⓟ	-	
Vanguard Target Retirement Income		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2020		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2025		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2030		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2035		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2040		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2045		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2050		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2055		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2060		Ⓟ	Ⓟ	-	Replaced by CIT share class on October 7, 2022.
Vanguard Target Retirement 2065		●	Ⓟ	-	Trailing benchmark and Peer Group for 5-year period. Underperformance versus benchmark is largely driven by tracking error. Replaced by CIT share class on October 7, 2022.

STATE OF NEVADA

Combined Retirement Plans

	QTR	YTD	1Yr	Annualized				2021	2020	2019	2018	2017
				3Yr	5Yr	10Yr	15Yr					
Voya Fixed Account	0.74	2.24	3.02	3.05	2.87			3.10	3.10	2.70	2.54	2.75
5 Yr Constant Maturity US Treasury Yield	0.80	1.99	2.29	1.26	1.72	1.59	1.72	0.85	0.54	1.96	2.75	1.91
+/- Index	(0.06)	0.25	0.73	1.79	1.15	-	-	2.25	2.56	0.74	(0.21)	0.84
US Stable Value	1	1	1	1	1	-	N/A	2	1	4	5	1
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Voya Fixed Account FICA	0.56	1.68	2.25	2.19	1.91			2.25	2.25	1.50	1.50	1.50
5 Yr Constant Maturity US Treasury Yield	0.80	1.99	2.29	1.26	1.72	1.59	1.72	0.85	0.54	1.96	2.75	1.91
+/- Index	(0.24)	(0.31)	(0.04)	0.93	0.19	-	-	1.40	1.71	(0.46)	(1.25)	(0.41)
US Stable Value	15	6	5	8	31	-	N/A	3	10	97	83	56
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Total Bond Market Index I	4.65	14.58	14.65	3.26	0.24	0.86	2.73	1.65	7.74	8.73	0.01	3.57
Bloomberg US Aggregate Bond Index	-4.75	-14.61	-14.60	-3.26	-0.27	0.89	2.74	-1.54	7.51	8.72	0.01	3.54
+/- Index	0.10	0.03	(0.05)	0.00	0.03	(0.03)	(0.01)	(0.11)	0.23	0.01	(0.02)	0.03
US Fund Intermediate Core Bond	39	36	32	52	37	47	N/A	55	54	34	27	38
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Sterling Capital Total Return Bond R6	4.42	14.50	14.72	2.54	0.29	1.46	3.45	1.12	9.35	9.37	0.27	4.33
Bloomberg US Aggregate Bond Index	-4.75	-14.61	-14.60	-3.26	-0.27	0.89	2.74	-1.54	7.51	8.72	0.01	3.54
+/- Index	0.33	0.11	(0.12)	0.72	0.56	0.57	0.71	0.42	1.84	0.65	(0.28)	0.79
US Fund Intermediate Core Bond	20	32	35	15	9	7	N/A	28	15	18	42	10
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
MFS Value R4	4.58	17.16	10.06	4.96	5.85	9.85	6.67	25.42	3.91	30.08	9.87	17.74
Russell 1000 Value Index	-5.62	-17.75	-11.36	4.36	5.29	9.17	5.71	25.16	2.80	26.54	-8.27	13.66
+/- Index	1.04	0.59	1.30	0.60	0.56	0.68	0.96	0.26	1.11	3.54	(1.60)	4.08
US Fund Large Value	20	58	57	55	45	21	N/A	59	37	7	68	31

STATE OF NEVADA

Combined Retirement Plans

	QTR	YTD	1Yr	Annualized				2021	2020	2019	2018	2017
				3Yr	5Yr	10Yr	15Yr					
Vanguard Institutional Index Instl Plus	4.89	23.88	15.49	8.15	9.23	11.69	8.05	28.69	18.41	31.48	4.41	21.82
S&P 500 Index	-4.88	-23.87	-15.47	8.16	9.24	11.70	8.03	28.71	18.40	31.49	-4.38	21.83
+/- Index	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	0.02	(0.02)	0.01	0.00	(0.02)	(0.02)
US Fund Large Blend	44	46	36	20	15	11	N/A	21	32	22	22	32
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
T. Rowe Price Growth Stock I	3.29	38.69	35.76	3.60	6.83	11.48	8.40	20.18	37.09	30.98	0.89	33.84
Russell 1000 Growth Index	-3.60	-30.66	-22.59	10.67	12.17	13.70	10.10	27.60	38.49	36.39	-1.51	30.21
+/- Index	0.31	(8.03)	(13.17)	(7.07)	(5.34)	(2.22)	(1.70)	(7.42)	(1.40)	(5.41)	0.62	3.63
US Fund Large Growth	25	89	85	83	82	53	N/A	60	40	63	40	16
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Mid-Cap Value Index Adm	5.54	17.83	11.08	4.86	5.24	10.10	7.34	28.76	2.54	27.99	12.42	17.04
Vanguard US Mid Cap Value Index	-5.54	-17.80	-11.03	4.88	5.26	10.15	7.38	28.83	2.50	28.05	-12.42	17.12
+/- Index	0.00	(0.03)	(0.05)	(0.02)	(0.02)	(0.05)	(0.04)	(0.07)	0.04	(0.06)	0.00	(0.08)
US Fund Mid-Cap Value	61	47	52	48	32	9	N/A	47	52	42	36	15
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Extended Market Index Instl Plus	2.73	30.03	29.54	4.26	4.84	9.45	7.13	12.48	32.24	28.07	9.35	18.13
Vanguard Extended Market Index	-2.78	-30.09	-29.62	4.16	4.72	9.31	7.03	12.35	32.17	27.95	-9.57	18.11
+/- Index	0.05	0.06	0.08	0.10	0.12	0.14	0.10	0.13	0.07	0.12	0.22	0.02
US Fund Mid-Cap Blend	26	96	98	70	64	45	N/A	95	2	43	29	30
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Mid-Cap Growth Index Adm	2.58	32.67	27.45	5.44	7.68	10.52	7.39	20.48	34.48	33.86	5.60	21.83
Vanguard US Mid Cap Growth Index	-2.57	-32.67	-27.45	5.48	7.73	10.53	7.35	20.51	34.56	33.93	-5.57	21.92
+/- Index	(0.01)	0.00	0.00	(0.04)	(0.05)	(0.01)	0.04	(0.03)	(0.08)	(0.07)	(0.04)	(0.10)
US Fund Mid-Cap Growth	63	53	33	38	48	40	N/A	15	54	49	56	79

STATE OF NEVADA

Combined Retirement Plans

	QTR	YTD	1Yr	Annualized				2021	2020	2019	2018	2017
				3Yr	5Yr	10Yr	15Yr					
Vanguard Total Intl Stock Index I	10.52	26.76	25.20	1.15	0.68	3.33	0.66	8.68	11.28	21.56	14.39	27.55
Vanguard Total International Stock Index	-9.66	-26.49	-25.20	-0.93	-0.50	3.41	0.73	8.84	11.24	21.81	-14.62	27.41
+/- Index	(0.86)	(0.27)	0.00	(0.22)	(0.18)	(0.08)	(0.07)	(0.16)	0.04	(0.25)	0.22	0.14
US Fund Foreign Large Blend	56	27	29	35	37	48	N/A	64	40	60	39	29
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
American Funds EuroPacific Growth R6	9.33	32.09	32.85	1.24	0.23	4.52	2.31	2.84	25.27	27.40	14.91	31.17
MSCI ACWI Ex-USA (Net) Index	-9.91	-26.50	-25.17	-1.52	-0.81	3.01	0.57	7.82	10.65	21.51	-14.20	27.19
+/- Index	0.58	(5.59)	(7.68)	0.28	0.58	1.51	1.74	(4.98)	14.61	5.89	(0.71)	3.98
US Fund Foreign Large Blend	19	93	98	37	22	10	N/A	95	2	10	47	6
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Target Retirement Income	4.64	15.89	14.19	0.02	1.96	3.31	3.89	5.25	10.02	13.16	1.99	8.47
Vanguard Retirement Income Index	-4.56	-15.77	-14.04	0.33	2.22	3.54	4.02	5.43	10.70	13.40	-1.98	8.67
+/- Index	(0.08)	(0.12)	(0.15)	(0.35)	(0.26)	(0.23)	(0.13)	(0.18)	(0.68)	(0.24)	(0.01)	(0.19)
US Fund Target-Date Retirement	51	45	44	25	24	29	N/A	64	30	48	18	50
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Target Retirement 2020	5.12	18.21	15.83	1.17	2.91	5.46	4.40	8.17	12.04	17.63	4.24	14.08
Vanguard Retirement 2020 Index	-4.93	-17.97	-15.53	1.62	3.26	5.74	4.60	8.43	12.86	17.87	-4.14	14.22
+/- Index	(0.19)	(0.24)	(0.30)	(0.45)	(0.35)	(0.28)	(0.20)	(0.26)	(0.82)	(0.24)	(0.10)	(0.14)
US Fund Target-Date 2020	48	40	36	39	26	21	N/A	62	41	32	47	23
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Target Retirement 2025	5.59	20.35	17.53	1.40	3.15	5.96	4.52	9.80	13.30	19.63	5.15	15.94
Vanguard Retirement 2025 Index	-5.32	-19.95	-17.09	1.97	3.58	6.29	4.77	10.10	14.19	19.93	-5.01	16.08
+/- Index	(0.27)	(0.40)	(0.44)	(0.57)	(0.43)	(0.33)	(0.25)	(0.30)	(0.89)	(0.30)	(0.14)	(0.14)
US Fund Target-Date 2025	59	62	61	38	27	21	N/A	47	34	20	48	22

STATE OF NEVADA

Combined Retirement Plans

	QTR	YTD	1Yr	Annualized				2021	2020	2019	2018	2017
				3Yr	5Yr	10Yr	15Yr					
Vanguard Target Retirement 2030	5.93	21.60	18.42	1.82	3.43	6.46	4.65	11.38	14.10	21.07	5.86	17.52
Vanguard Retirement 2030 Index	-5.58	-21.16	-17.96	2.39	3.86	6.78	4.89	11.65	14.96	21.33	-5.74	17.65
+/- Index	(0.35)	(0.44)	(0.46)	(0.57)	(0.43)	(0.32)	(0.24)	(0.27)	(0.86)	(0.26)	(0.12)	(0.13)
US Fund Target-Date 2030	65	48	55	46	36	27	N/A	54	35	37	39	37
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Target Retirement 2035	6.09	22.40	18.87	2.39	3.78	6.99	4.90	12.96	14.79	22.44	6.58	19.12
Vanguard Retirement 2035 Index	-5.75	-22.00	-18.48	2.94	4.22	7.31	5.14	13.24	15.67	22.76	-6.48	19.24
+/- Index	(0.34)	(0.40)	(0.39)	(0.55)	(0.44)	(0.32)	(0.24)	(0.28)	(0.87)	(0.33)	(0.10)	(0.12)
US Fund Target-Date 2035	58	32	42	47	38	27	N/A	78	38	49	31	40
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Target Retirement 2040	6.33	23.27	19.42	2.91	4.11	7.40	5.19	14.56	15.47	23.86	7.32	20.71
Vanguard Retirement 2040 Index	-5.93	-22.86	-19.01	3.47	4.55	7.75	5.43	14.85	16.31	24.19	-7.22	20.87
+/- Index	(0.40)	(0.41)	(0.41)	(0.56)	(0.44)	(0.35)	(0.24)	(0.29)	(0.83)	(0.33)	(0.11)	(0.16)
US Fund Target-Date 2040	57	27	32	43	35	21	N/A	80	39	49	35	30
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Target Retirement 2045	6.51	24.10	19.93	3.46	4.42	7.61	5.32	16.16	16.30	24.94	7.90	21.42
Vanguard Retirement 2045 Index	-6.11	-23.70	-19.54	3.99	4.85	7.96	5.56	16.45	17.03	25.36	-7.77	21.54
+/- Index	(0.40)	(0.40)	(0.39)	(0.53)	(0.43)	(0.35)	(0.24)	(0.29)	(0.73)	(0.42)	(0.13)	(0.11)
US Fund Target-Date 2045	58	28	36	28	23	18	N/A	65	34	40	41	24
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Target Retirement 2050	6.64	24.43	20.18	3.41	4.39	7.60	5.31	16.41	16.39	24.98	7.90	21.39
Vanguard Retirement 2050 Index	-6.21	-24.05	-19.81	3.97	4.84	7.95	5.56	16.77	17.18	25.36	-7.77	21.54
+/- Index	(0.43)	(0.38)	(0.37)	(0.56)	(0.45)	(0.35)	(0.25)	(0.36)	(0.79)	(0.38)	(0.13)	(0.14)
US Fund Target-Date 2050	59	27	37	30	25	20	N/A	70	35	45	37	31

STATE OF NEVADA

Combined Retirement Plans

	QTR	YTD	1Yr	<i>Annualized</i>				2021	2020	2019	2018	2017
				3Yr	5Yr	10Yr	15Yr					
Vanguard Target Retirement 2055	6.63	24.44	20.17	3.40	4.38	7.58		16.44	16.32	24.98	7.89	21.38
Vanguard Retirement 2055 Index	-6.21	-24.05	-19.81	3.97	4.84	7.95	-	16.77	17.18	25.36	-7.77	21.54
+/- Index	(0.42)	(0.39)	(0.36)	(0.57)	(0.46)	(0.37)	-	(0.33)	(0.86)	(0.38)	(0.12)	(0.16)
US Fund Target-Date 2055	59	27	37	33	28	28	N/A	75	40	47	35	39
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Target Retirement 2060	6.64	24.44	20.16	3.40	4.38	7.58		16.44	16.32	24.96	7.87	21.36
Vanguard Retirement 2060 Index	-6.21	-24.05	-19.81	3.97	4.84	7.95	-	16.77	17.18	25.36	-7.77	21.54
+/- Index	(0.43)	(0.39)	(0.35)	(0.57)	(0.46)	(0.37)	-	(0.33)	(0.85)	(0.40)	(0.10)	(0.18)
US Fund Target-Date 2060	61	24	35	36	30	50	N/A	77	41	56	30	43
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	15Yr	2021	2020	2019	2018	2017
Vanguard Target Retirement 2065	6.60	24.38	20.10	3.38	4.36			16.46	16.17	24.96	7.95	
Vanguard Retirement 2065 Index	-6.21	-24.05	-19.81	3.97	4.84	-	-	16.77	17.18	25.36	-7.77	-
+/- Index	(0.39)	(0.33)	(0.29)	(0.59)	(0.48)	-	-	(0.31)	(1.00)	(0.39)	(0.18)	-
US Fund Target-Date 2065+	52	22	24	46	60	-	N/A	67	56	59	12	-

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Section 4

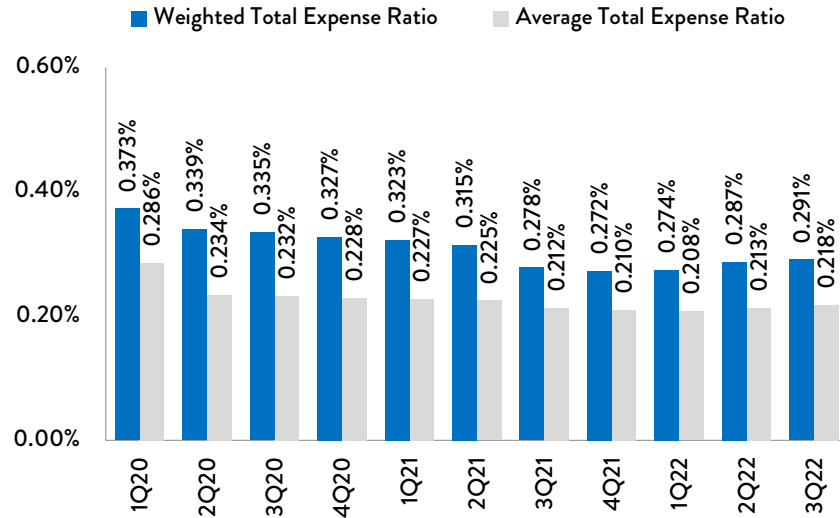
STATE OF NEVADA

Combined 457(b) DC Plans

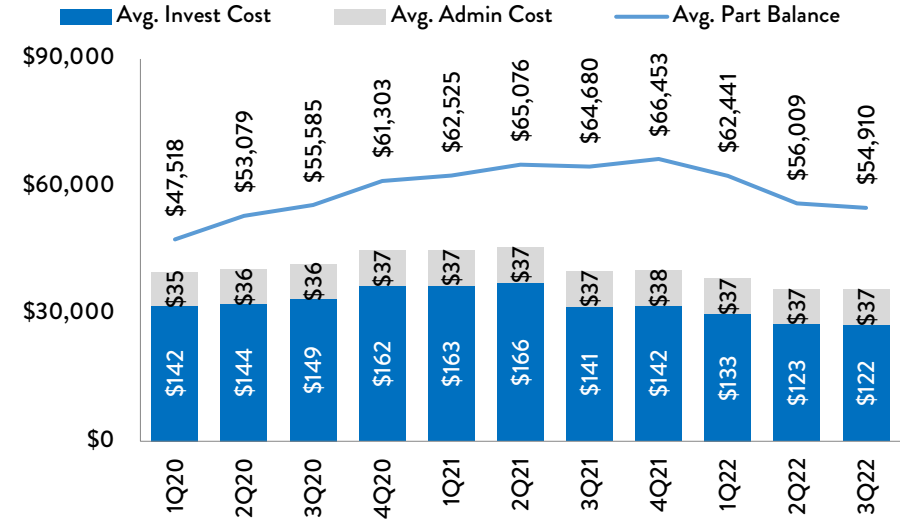
PLAN FEE ANALYSIS

Third Quarter 2022

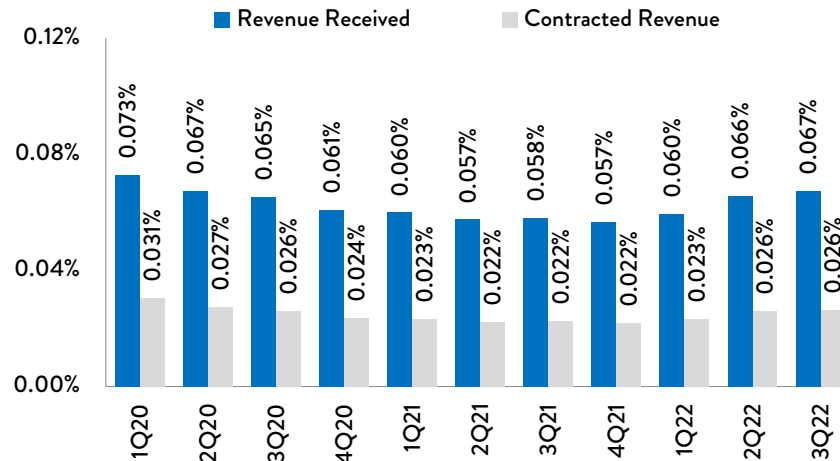
Annualized Plan Cost (%)



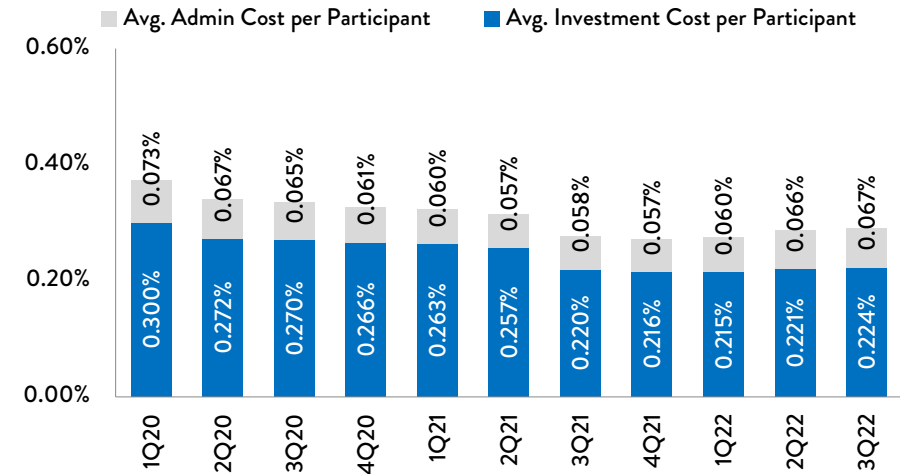
Average Participant Balance and Cost (\$)



Annualized Contracted Revenue v. Revenue Received (as a % of total assets)



Annualized Total Cost Summary (as a % of total assets)



*Administration costs are only charged to accounts with balances over \$1,000. For reporting purposes the total amounts charged are displayed relative to all participant accounts with a balance.

STATE OF NEVADA
Combined 457(b) DC Plans

PLAN FEE ANALYSIS
Third Quarter 2022

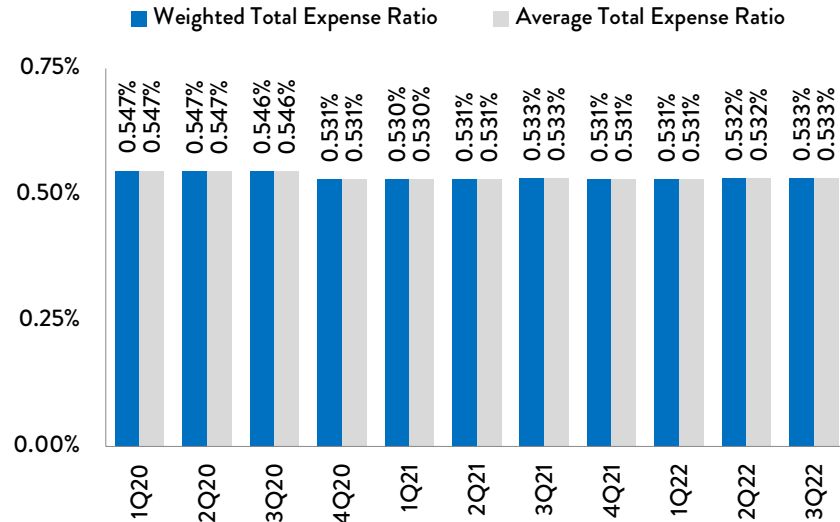
Annualized

Fund	Ticker	Quarter End Balance	Net Expense Ratio	Admin Fee	Est. Total Invest. Cost	Est. Total Admin. Cost
Voya Fixed Account	-	\$346,352,534	0.40%	0.07%	\$1,385,410	\$232,961
Vanguard Total Bond Market Index I	VBPIX	\$32,839,572	0.04%	0.07%	\$11,494	\$22,088
Sterling Capital Total Return Bond R6	STRDX	\$1,574,360	0.35%	0.07%	\$5,510	\$1,059
MFS Value R4*	MEIJX	\$19,043,126	0.40%	0.07%	\$76,173	\$12,809
Vanguard Institutional Index Instl Plus	VIIIX	\$115,116,246	0.02%	0.07%	\$23,023	\$77,429
T. Rowe Price Growth Stock I	PRUFX	\$53,283,892	0.51%	0.07%	\$271,748	\$35,839
Vanguard Mid-Cap Value Index Adm	VMVAX	\$6,897,596	0.07%	0.07%	\$4,828	\$4,639
Vanguard Extended Market Index Instl Plus	VEMPX	\$86,387,377	0.04%	0.07%	\$34,555	\$58,105
Vanguard Mid-Cap Growth Index Adm	VMGMX	\$17,859,557	0.07%	0.07%	\$12,502	\$12,013
Vanguard Total Intl Stock Index I	VTSNX	\$33,686,282	0.08%	0.07%	\$26,949	\$22,658
American Funds EuroPacific Growth R6	RERGX	\$5,572,137	0.46%	0.07%	\$25,632	\$3,748
Vanguard Target Retirement Income	VTINX	\$39,033,584	0.08%	0.07%	\$31,227	\$26,255
Vanguard Target Retirement 2020	VTWNX	\$10,828,047	0.08%	0.07%	\$8,662	\$7,283
Vanguard Target Retirement 2025	VTTVX	\$38,795,976	0.08%	0.07%	\$31,037	\$26,095
Vanguard Target Retirement 2030	VTHRX	\$12,722,906	0.08%	0.07%	\$10,178	\$8,558
Vanguard Target Retirement 2035	VTTHX	\$44,636,567	0.08%	0.07%	\$35,709	\$30,023
Vanguard Target Retirement 2040	VFORX	\$6,881,989	0.08%	0.07%	\$5,506	\$4,629
Vanguard Target Retirement 2045	VTIVX	\$21,762,198	0.08%	0.07%	\$17,410	\$14,638
Vanguard Target Retirement 2050	VFIFX	\$4,469,952	0.08%	0.07%	\$3,576	\$3,007
Vanguard Target Retirement 2055	VFFVX	\$6,202,341	0.08%	0.07%	\$4,962	\$4,172
Vanguard Target Retirement 2060	VTTSX	\$1,654,404	0.08%	0.07%	\$1,324	\$1,113
Vanguard Target Retirement 2065	VLXVX	\$1,367,738	0.08%	0.07%	\$1,094	\$920
Self-Directed Brokerage Account	-	\$7,009,668	-	0.07%	-	\$4,715
TOTAL		\$913,978,050			\$2,028,508	\$614,754

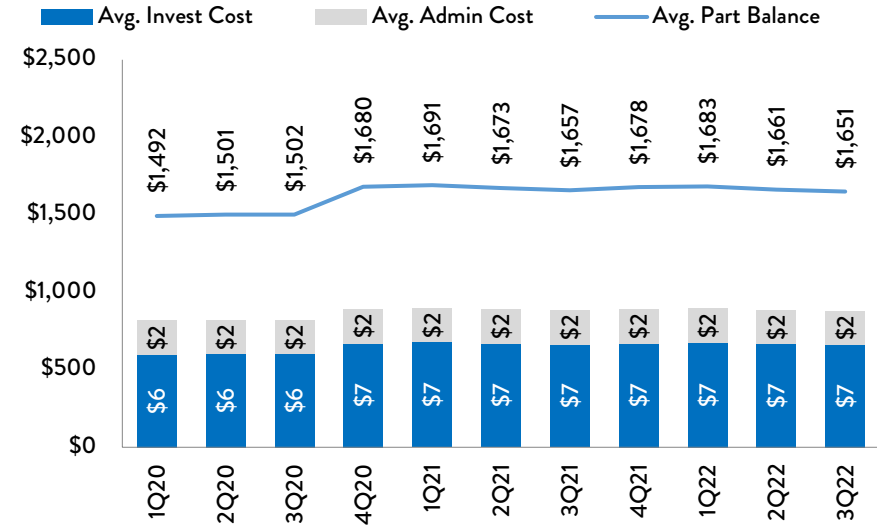
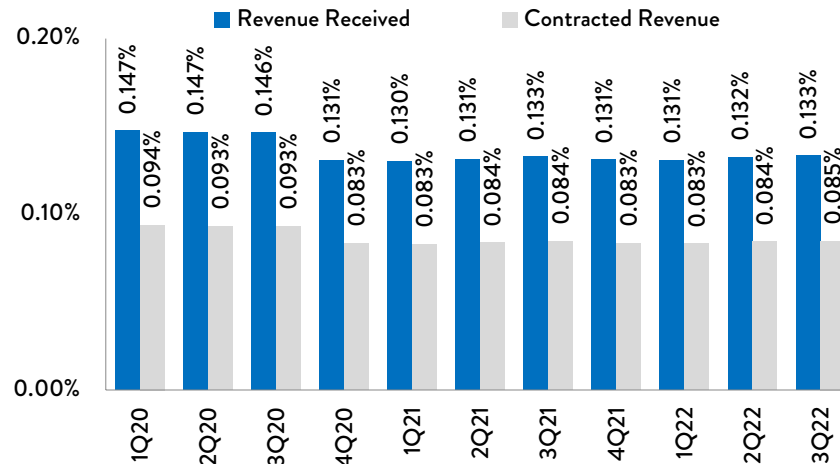
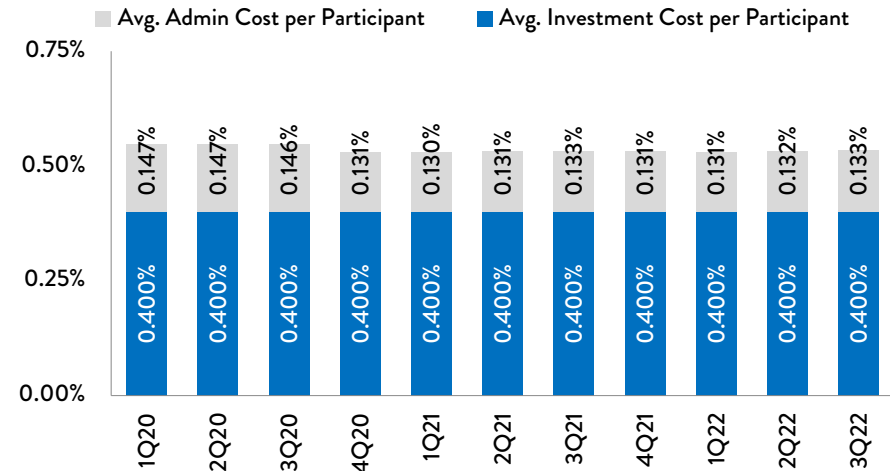
Plan Administration Cost	Quarter	Annualized
Plan Generated Revenue (\$41.00 per ppt with >\$1,000 bal) (est):	\$153,689	\$614,754
Contracted Revenue (\$14.50 per participant) (est):	\$60,338	\$241,353
Net Excess/(Deficit) (est):	\$93,350	\$373,402

*Revenue derived from funds credited to participant accounts in which they are held. For fee reporting purposes, the credit has been used to offset the reported fund expense ratio.
An expense ratio of 0.40% was assumed for the Voya Fixed Account.

Annualized Plan Cost (%)



Average Participant Balance and Cost (\$)

Annualized Contracted Revenue v. Revenue Received
(as a % of total assets)Annualized Total Cost Summary
(as a % of total assets)

STATE OF NEVADA
FICA Alternative OBRA Plan

PLAN FEE ANALYSIS
Third Quarter 2022

Annualized

Fund	Ticker	Quarter End Balance	Net Expense Ratio	Admin Fee	Est. Total Invest. Cost	Est. Total Admin. Cost
Voya Fixed Account - FICA	-	\$56,967,459	0.40%	0.13%	\$227,870	\$75,926
TOTAL		\$56,967,459			\$227,870	\$75,926

Plan Administration Cost	Quarter	Annualized
Plan Generated Revenue (\$2.20 per participant) (est):	\$18,982	\$75,926
Contracted Revenue (\$1.40 per participant) (est):	\$12,079	\$48,317
Net Excess/(Deficit) (est):	\$6,902	\$27,610

An expense ratio of 0.40% was assumed for the Voya Fixed Account.

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Section 5

Morningstar Analyst Rating	Overall Morningstar Rating	Standard Index	Category Index	Morningstar Cat
★★★★★	★★★★★	MSCI ACWI / Ex	MSCI ACWI / Ex	US Fund Foreign Large
07-29-2022	390 US Fund Foreign Large Growth	USA NR USD	USA Growth NR USD	Growth

Investment Style	Equity Stocks %	History
Growth of \$10,000		
American Funds Europacific Growth	88	12.809
Category Average	95	14.392
Standard Index	97	15.282
American Funds Europacific Growth h6	92	17.809
	92	
	92	
	97	
	92	
	92	
	92	
	86	
	92	
	90	
	91	
	88	

							+/- Category Index				
0.90	2.97	5.09	0.36	0.77	0.89	-0.84	-0.48	0.06	3.06	-2.26	-0.25
—	—	—	27	66	20	44	58	59	33	80	—
—	—	—	341	361	363	399	439	469	447	450	452
										No. of Funds in Cat	

Portfolio Analysis 09-30-2022						
Asset Allocation %	Net %	Long %	Short %	Share Cng since 06-2022	Share Amount	Holdings : 361 Total Stocks , 0 Total Fixed-Income, 29% Turnover Ratio
Cash	11.24	11.24	0.00			
US Stocks	2.18	2.18	0.00			

[illegible]

Equity Style						
Portfolio Statistics			Port	Rel	Rel	
Value	Brand	Growth	Avg	Index	Cat	
			P/E Ratio TTM	15.9	1.43	0.89
			P/C Ratio TTM	11.1	1.39	0.86
			P/B Ratio TTM	2.6	1.76	0.98
			Geo Avg Mkt Cap	46728	1.34	1.09
			\$mil			
<hr/>						
Fixed-Income Style						
Ltd	Md	Ert	Avg Eff Maturity	—	—	⊖
			Avg Eff Duration	27 mli	Seal Ltd ADR	⊕
			Avg Wld Coupon	5 mli	Kweichow Moutai Co Ltd Class A	⊕
<hr/>						
			Recruit Holdings Co Ltd	57 mli	1.37	⊕
			Nestle SA	15 mli	1.36	⊖
			Sea Ltd ADR	27 mli	1.27	⊕
			Kweichow Moutai Co Ltd Class A	5 mli	1.17	⊕
				1.17	1.17	⊕

Avg Wtd Price		—	
High			
Low			
⊕ 117 mil Fortescue Metals Group Ltd 1.05			
Sector Weightings		Stocks %	Rel Std Index
🔹 Cyclical	34.6	0.82	
🏠 Basic Materials	8.0	0.98	
🏢 Consumer Cyclical	12.7	1.16	
🏦 Financial Services	13.2	0.64	
🏠 Real Estate	0.7	0.27	
⚡ Sensitive	41.6	1.18	
🏢 Communication Services	2.9	0.46	
⚡ Energy	9.9	1.56	
⚙️ Industrials	13.0	1.09	
💻 Technology	15.8	1.45	
→ Defensive	23.8	1.07	
🛡️ Consumer Defensive	7.4	0.81	
🏥 Healthcare	15.1	1.52	
💡 Utilities	1.3	0.40	
Credit Quality Breakdown —			
AAA	Bond %		
AA	—		
A	—		
BBB	—		
BB	—		
B	—		
Below B	—		
NR	—		
Regional Exposure			
Americas	Stocks %	Rel Std Index	
Greater Europe	14.7	1.26	
	43.4	1.00	
Greater Asia	41.9	0.93	

agreement, you may use, in the country in which its original distributor is based, the information, data, analysis and information, (2) may include, or be derived from, account information provided by your financial professional, which cannot be verified by a source other than Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, as required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information. The data and information contained herein are not warranted, represented or guaranteed by Morningstar, Inc. and the data and information are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be preceded by important disclosures at the end of this report.

MFS Value R4 (USD)

Morningstar Analyst Rating™

★★★★

1,153 US Fund Large Value

Overall Morningstar Rating™

★★★★★

SGP 500 TR USD

Category Index

Russell 1000 Value

US Fund Large Value

Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-23.77	14.30	5.93	12.57	3.91
2021	8.66	5.63	0.65	8.57	25.42
2022	-3.64	-9.91	-4.58	—	-17.16
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-10.06	4.96	5.85	9.85	7.78
Std 09-30-2022	-10.06	—	5.85	9.85	7.78
Total Return	-10.06	4.96	5.85	9.85	7.78
+/- Std Index	5.41	-3.20	-3.39	-1.85	—
+/- Cat Index	1.31	0.60	0.56	0.68	—
% Rank Cat	57	56	50	25	—
No. in Cat	1215	1153	1094	800	—

Performance Disclosure

The overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate, thus an investor's shares, when sold or redeemed, may be worth more or less than their original cost.

Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-225-2806 or visit <http://www.mfs.com>.

Fees and Expenses

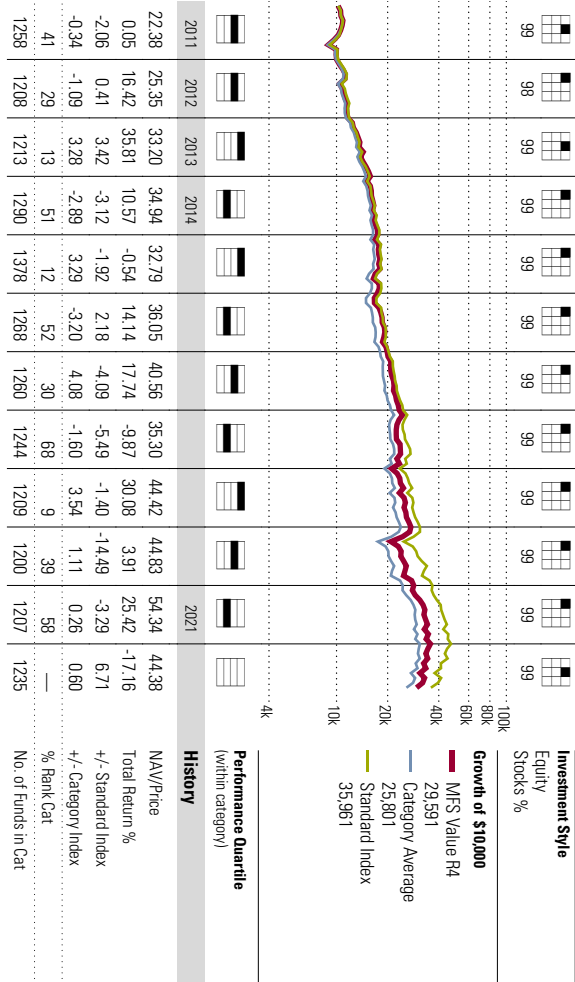
Sales Charges	
Front-End Load %	NA
Deferred Load %	NA

Fund Expenses	
Management Fees %	0.44
12bt Expense %	NA
Net Expense Ratio %	0.55
Gross Expense Ratio %	0.55
Risk and Return Profile	

Morningstar Rating™	3★	1,153 funds	3★	1,094 funds	4★	800 funds
Morningstar Risk	-Avg	-Avg	-Avg	-Avg	-Avg	+Avg
Morningstar Return	Avg	Avg	Avg	Avg	Avg	+Avg
Standard Deviation	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr
Mean	18.95	17.13	13.99	4.96	5.85	9.85
Sharpe Ratio	0.32	0.35	0.69	0.32	0.35	0.69
MPT Statistics	Standard Index	Best Fit Index	Morningstar US LM	Best Val TR USD	Morningstar US LM	Best Val TR USD
Alpha	-2.25	-0.78	0.89	0.95	-0.78	0.89
Beta	0.89	0.95	90.87	98.35	1.90%	1.90%
R-Squared	90.87	98.35	1.90%	51.24%	51.24%	51.24%
12-Month Yield	1.90%	51.24%	51.24%	51.24%	51.24%	51.24%
Potential Cap Gains Exp	51.24%	51.24%	51.24%	51.24%	51.24%	51.24%

Operations

Family:	MFS
Manager:	Multiple
Tenure:	16.4 Years
Objective:	Growth



Asset Allocation %				Net %				Share Clng				Holdings :				Net Assets			
Cash				0.79				0.79				0.00				0.00			
US Stocks				91.58				91.58				0.00				0.00			
Non-US Stocks				7.63				7.63				0.00				0.00			
Bonds				0.00				0.00				0.00				0.00			
Other/Not Clsfd				0.00				0.00				0.00				0.00			
Total				100.00				100.00				0.00				0.00			
Equity Style				Portfolio Statistics				Port Avg				Index Cat				Rel Index			
Value				Brand Growth				P/E Ratio TTM				16.1				0.89			
Large				P/C Ratio TTM				128				0.94				1.31			
Small				P/B Ratio TTM				2.8				0.81				1.30			
				Geo Avg Mkt Cap				84522				0.51				0.89			

Fixed-Income Style				Avg Eff Maturity				Avg Eff Duration				Avg Wtd Coupon				Avg Wtd Price			
Ltd				Med				Ext				High				Med			

Credit Quality Breakdown				Bond %			
AAA				—			
AA				—			
A				—			
BBB				—			
BB				—			
Below B				—			
NR				—			

Regional Exposure				Stocks %				Rel Std Index			
Americas				92.9				0.94			
Greater Europe				7.1				7.09			
Greater Asia				0.0				0.00			
Sector Weightings				Stocks %				Rel Std Index			
Cyclical				33.6				1.13			
Basic Materials				4.0				1.80			
Consumer Cyclical				3.1				0.27			
Financial Services				25.8				1.97			
Real Estate				0.7				0.24			
Sensitive				33.2				0.74			
Communication Services				3.0				0.37			
Energy				4.6				1.02			
Industrials				18.3				2.20			
Technology				7.2				0.30			
Defensive				33.2				1.30			
Consumer Defensive				7.1				0.97			
Healthcare				19.2				1.27			
Utilities				6.9				2.24			

Base Currency:	USD	Purchase Constraints:	A
Ticker:	MELX	Incept:	04-01-2005
SIN:	US55273H6356	Type:	Mf
Minimum Initial Purchase:	\$0	Total Assets:	\$56,483.67 mil

Release date 09-30-2022 | Note: Portions of the analysis are based on pre-inception returns. Please read disclosure for more information.

Sterling Capital Total Return Bond R6 (USD)

Morningstar Quantitative Rating™ Neutral^a

Overall Morningstar Rating™★★★★

401 US Fund Intermediate Core Bond

Bloomberg US Agg Bond TR USD

Bloomberg US Agg TR USD

Morningstar Cat US Fund Intermediate Core Bond

Performance 09-30-2022										
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %					
2020	0.73	5.10	1.59	1.67	9.35					
2021	-3.00	2.16	0.04	-0.26	-1.12					
2022	-6.15	-4.69	-4.42	—	-14.50					
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept					
Load-adj Mthly	-14.72	-2.54	—	—	0.41					
Std 09-30-2022	-14.72	—	—	—	0.41					
Total Return	-14.72	-2.54	0.29	1.46	0.41					
+/- Std Index	-0.12	0.71	0.56	0.57	—					
+/- Cat Index	-0.12	0.71	0.56	0.57	—					
% Rank Cat	42	15	9	6						
No. in Cat	445	401	363	269						

Investment Style										
Fixed-Income Bond %										
Growth of \$10,000										
Sterling Capital Total Return Bond R6										
13.048										
Category Average										
12.184										
Standard Index										
12.254										

Performance Quartile (within category)										
History										
2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
—	—	—	—	—	—	—	—	—	—	—
6.73	6.14	-0.97	5.99	0.54	3.75	4.33	10.22	10.82	11.35	10.87
-1.17	1.93	1.05	0.03	-0.01	1.10	0.79	-0.27	9.37	9.35	-1.12
-1.11	1.93	1.05	0.03	-0.01	1.10	0.79	-0.28	0.65	1.84	0.42
—	—	—	—	—	—	—	-0.29	0.65	1.84	0.42
—	—	—	—	—	—	—	—	17	10	23
—	—	—	—	—	—	—	—	430	415	423
—	—	—	—	—	—	—	—	454	454	454

NAV/Price										
Total Return %										
+/- Standard Index										
+/- Category Index										
% Rank Cat										
No. of Funds in Cat										

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when sold or redeemed, may be worth more or less than their original cost.

Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-228-1872 or visit www.sterlingcapitalfunds.com.

Fees and Expenses										
Sales Charges										
Front-End Load %										
Deferred Load %										
Fund Expenses										
Management Fees %										
1201 Expense %										
Net Expense Ratio %										
Gross Expense Ratio %										
Risk and Return Profile										
Morningstar Rating™ 4★										
Morningstar Risk Avg										
Morningstar Return +Avg										
Standard Deviation										
Mean										
Shape Ratio										
MPF Statistics										
Alpha										
Beta										
R-Squared										
12-Month Yield										
Potential Cap Gains Exp										
Operations										
Family:										
Manager:										
Tenure:										
Objective:										
Base Currency:										

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Vanguard Extended Market Index InstiPlus (USD)

Morningstar Analyst Rating™

★★★★

532 US Fund Mid-Cap Growth

Standard Index

SGP 500 TR USD

Category Index

Russell Mid Cap Growth TR USD

Morningstar Cat

US Fund Mid-Cap Growth

Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-27.99	31.16	9.87	27.44	32.24
2021	-7.79	7.12	-3.27	0.70	12.48
2022	-9.33	-20.67	-2.73	—	-30.03
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly Std 09-30-2022	-29.54	4.26	4.84	9.45	8.67
	-29.54	—	4.84	9.45	8.67
Total Return	-29.54	4.26	4.84	9.45	8.67
+/- Std Index	-14.07	-3.90	-4.40	-2.26	—
+/- Cat Index	-0.04	0.00	-2.79	-1.41	—
% Rank Cat	57	61	84	68	—
No. in Cat	582	532	491	379	—

7-day Yield	Subsidized	Unsubsidized
30-day SEC Yield 10-24-22	1.32	1.20

Performance Disclosure
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Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 888-809-8102 or visit www.vanguard.com.

Fees and Expenses

Sales Charges	
Front-End Load %	NA
Deferred Load %	NA

Fund Expenses	
Management Fees %	0.04
12b1 Expense %	NA

Net Expense Ratio %	0.04
Gross Expense Ratio %	0.04

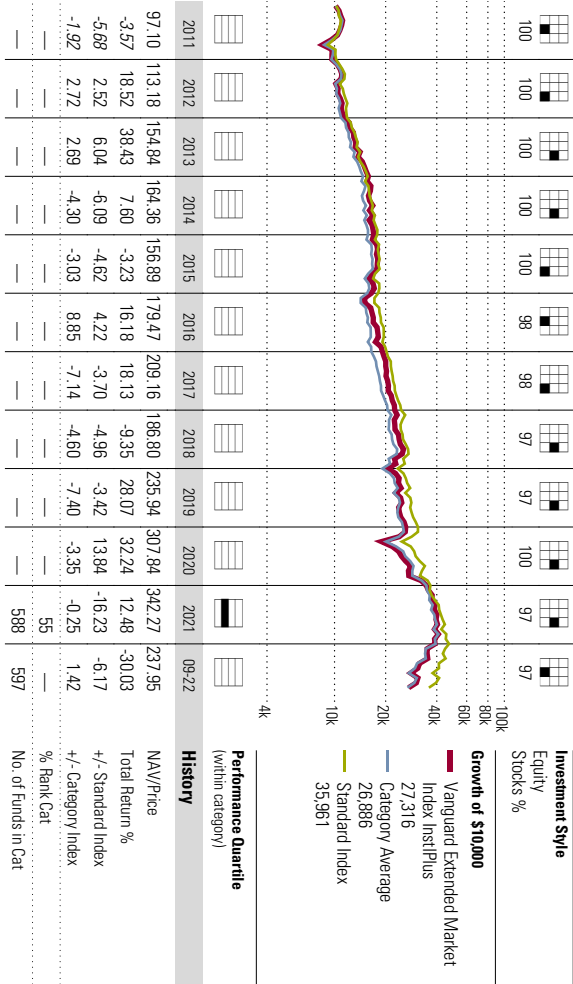
Risk and Return Profile					
Morningstar Rating™	3 Yr	5 Yr	10 Yr		
	532 funds	491 funds	379 funds		
	2★	2★	2★		
	Morningstar Risk Avg	+Avg	+Avg	+Avg	
Morningstar Return	Avg	-Avg	-Avg		

Standard Deviation	3 Yr	5 Yr	10 Yr
	26.28	23.00	18.35
Mean	4.26	4.84	9.45
Sharpe Ratio	0.27	0.27	0.55

MPT Statistics	Standard Index	Best Fit Index
	Morningstar US Sml Brd Grt Ext TR USD	2.26
Alpha	-4.08	1.03
Beta	1.19	1.03
R-Squared	85.29	97.30

12-Month Yield	1.29%
Potential Cap Gains Exp	28.24%

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	24.8 Years
Objective:	Growth



Portfolio Analysis 09-30-2022					
Asset Allocation %	Net %	Long %	Short %	Share Clng since 08-2022	Share Holdings: Amount 19% Turnover Ratio
Cash	2.68	2.68	0.00		
US Stocks	96.22	96.22	0.00		9 mil Blackstone Inc
Non-US Stocks	1.09	1.09	0.00		27 mil Uber Technologies Inc
Bonds	0.00	0.00	0.00		4 mil Palo Alto Networks Inc
Other/Not Clsfd	0.00	0.00	0.00		4 mil Snowflake Inc Ordinary Shares - Cl
Total	100.00	100.00	0.00		3 mil Chemiere Energy Inc

Equity Style	Portfolio Statistics	Port Avg Index	Rel Index Cat	Rel Index Cat
Value Blend Growth	P/E Ratio TTM	11.7	0.65	0.48
	P/C Ratio TTM	10.6	0.78	0.56
	P/B Ratio TTM	2.1	0.63	0.58
	Geo Avg Mkt Cap \$mil	5205	0.03	0.36

Fixed-Income Style	Ang Eff Maturity	Ang Eff Duration	Ang Wtd Coupon	Ang Wtd Price
Ltd Med Ext				
High Med Low				

Credit Quality Breakdown	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—

Regional Exposure	Stocks %	Rel Std Index
Americas	99.2	1.00
Greater Europe	0.6	0.60
Greater Asia	0.2	6.74

Base Currency:	USD
Ticker:	VEMPX
SIN:	US9229083715
Minimum Initial Purchase:	\$100 mil
Purchase Constraints:	—
Incept:	01-14-2011
Type:	MF
Total Assets:	\$12,710.45 mil

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Vanguard Institutional Index
Instl PI (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat

★★★★★

1,237 US Fund Large Blend

SGP 500 TR USD Russell 1000 TR US Fund Large Blend

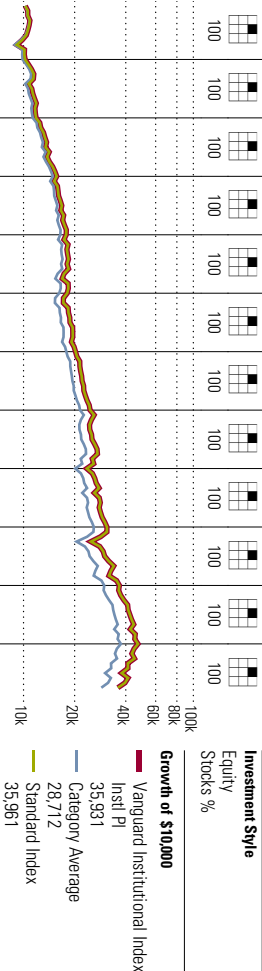
Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-19.59	20.55	8.93	12.15	18.41
2021	6.18	8.54	0.57	11.02	28.69
2022	-4.61	-16.11	-4.89	—	-23.88
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-15.49	8.15	9.23	11.69	7.59
Std 09-30-2022	-15.49	—	9.23	11.69	7.59
Total Return	-15.49	8.15	9.23	11.69	7.59
+/- Std Index	-0.02	-0.01	-0.01	-0.01	—
+/- Cat Index	1.72	0.21	0.23	0.09	—
% Rank Cat	41	22	19	11	—
No. in Cat	1366	1237	1118	820	—

Performance Disclosure
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Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 888-809-8102 or visit www.vanguard.com.

Sales Charges	
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	
Management Fees %	0.02
12b1 Expense %	NA
Net Expense Ratio %	0.02
Gross Expense Ratio %	0.02
Risk and Return Profile	

Morningstar Rating™					
3 Yr	5 Yr	10 Yr	1237 funds	1,118 funds	820 funds
4★	4★	4★	Avg	Avg	Avg
Morningstar Risk					
+Avg	+Avg	+Avg	Avg	Avg	Avg
Morningstar Return					
3 Yr	5 Yr	10 Yr	20.30	18.07	14.40
Standard Deviation	20.30	18.07	14.40	8.15	9.23
Mean	8.15	9.23	11.69	0.45	0.51
Sharpe Ratio	0.45	0.51	0.79	MPT Statistics	
Standard Index		Best Fit Index		SGP 500 TR USD	
Alpha	-0.01	-0.01	-0.01	Beta	1.00
Beta	1.00	1.00	1.00	R-Squared	100.00
12-Month Yield	1.74%	1.74%	68.18%	Potential Cap Gains Exp	

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	21.8 Years
Objective:	Growth and Income



Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	09-22
NAV/Price	115.05	130.53	169.28	188.68	186.63	203.84	243.48	227.57	290.25	331.48	405.80	303.58
Total Return %	2.12	16.00	32.37	13.68	1.39	11.95	21.82	-4.41	31.48	18.41	28.69	-23.88
+/- Standard Index	0.01	0.00	-0.02	-0.01	0.01	-0.01	-0.02	-0.02	0.00	0.01	-0.02	-0.01
+/- Category Index	0.62	-0.42	-0.75	0.44	0.47	-0.10	0.13	0.38	0.06	-2.56	2.23	0.71
% Rank Cat	17	34	41	18	20	26	28	25	23	36	23	—
No. of Funds in Cat	1786	1686	1559	1568	1606	1409	1396	1402	1367	1363	1362	1367

Portfolio Analysis 09-30-2022					
Asset Allocation %		Net %	Long %	Short %	Share Clng
Cash	0.44	0.44	0.00	0.00	since 08-2022
US Stocks	98.54	98.54	0.00	0.00	Amount 3% Turnover Ratio
Non-US Stocks	1.02	1.02	0.00	0.00	110 mil Apple Inc
Bonds	0.00	0.00	0.00	0.00	54 mil Microsoft Corp
Other/Not Clsfd	0.00	0.00	0.00	0.00	64 mil Amazon.com Inc
Total	100.00	100.00	0.00	0.00	19 mil Tesla Inc

Equity Style		Portfolio Statistics						
Value	Brand Growth	P/E Ratio TTM	Port Avg Index	Rel Index Cat	Rel Index Cat			
		18.0	1.00	0.99	1	43 mil	Alphabet Inc Class A	
		P/C Ratio TTM	13.6	1.00	0.98	1	39 mil	Alphabet Inc Class C
		P/B Ratio TTM	3.4	1.00	0.94	1	13 mil	Berkshire Hathaway Inc Class B
		Geo Avg Mkt Cap	163963	1.00	0.78	1	7 mil	UnitedHealth Group Inc
						1	19 mil	Johnson & Johnson
						1	30 mil	Exxon Mobil Corp
Fixed-Income Style						1	17 mil	Meta Platforms Inc Class A
						1	21 mil	JPMorgan Chase & Co
						1	18 mil	NVIDIA Corp
						1	17 mil	Procter & Gamble Co
						1	12 mil	Visa Inc Class A

Regional Exposure		Stocks %	Rel Std Index	Rel Std Index
Americas	99.0	1.00	1.00	1.00
Greater Europe	1.0	1.00	1.00	1.00
Greater Asia	0.0	1.00	1.00	1.00
Sector Weightings		Stocks %	Rel Std Index	Rel Std Index
Cyclical	29.6	1.00	1.00	1.00
Basic Materials	2.2	1.00	1.00	1.00
Consumer Cyclical	11.4	1.00	1.00	1.00
Financial Services	13.1	1.00	1.00	1.00
Real Estate	2.9	1.00	1.00	1.00
Sensitive	44.8	1.00	1.00	1.00
Communication Services	8.1	1.00	1.00	1.00
Energy	4.6	1.01	1.01	1.01
Industrials	8.3	1.00	1.00	1.00
Technology	23.8	1.00	1.00	1.00
Defensive	25.6	1.00	1.00	1.00
Consumer Defensive	7.3	1.00	1.00	1.00
Healthcare	15.2	1.00	1.00	1.00
Utilities	3.1	1.02	1.02	1.02

Purchase Constraints:	
Incept:	07-07-1997
Type:	MIF
Total Assets:	\$219,663.16 mil

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Vanguard Mid-Cap Growth Index Admiral (USD)

Morningstar Analyst Rating™

★★★★

532 US Fund Mid-Cap Growth

Standard Index

SGP 500 TR USD

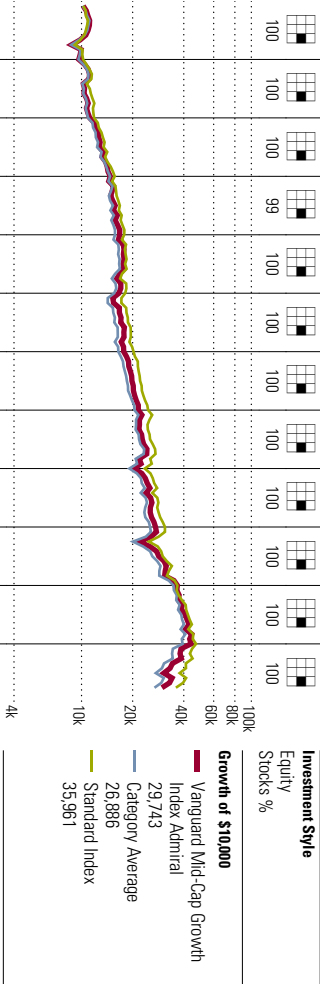
Category Index

Russell Mid Cap Growth TR USD

Morningstar Cat

US Fund Mid-Cap Growth

Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-20.05	30.58	9.26	17.90	34.48
2021	1.25	10.25	0.16	7.76	20.48
2022	-12.32	-21.19	-2.58	—	-32.67
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly Std 09-30-2022	-27.45	5.44	7.68	10.52	11.09
Total Return	-27.45	5.44	7.68	10.52	11.09
+/- Std Index	-11.98	-2.72	-1.56	-1.18	—
+/- Cat Index	2.04	1.18	0.06	-0.33	—
% Rank Cat	42	43	44	40	—
No. in Cat	582	532	491	379	—



2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	09-22	History				
25.66	29.55	38.83	43.72	42.94	45.46	54.96	51.48	68.34	91.26	109.55	73.37	NAV/Price				
-3.68	15.96	32.22	13.48	-0.98	6.75	21.83	-5.60	33.86	34.48	20.48	-32.67	Total Return %				
-5.79	-0.05	-0.17	-0.21	-0.78	-5.21	0.00	-1.22	2.37	16.08	-8.23	-8.81	+/- Standard Index				
-2.03	0.15	-3.52	1.58	-0.78	-0.58	-3.44	-0.85	-1.61	-1.11	7.75	-1.22	+/- Category Index				
—	30	68	5	51	40	65	46	42	44	19	—	% Rank Cat				
—	737	703	749	733	644	617	605	618	604	588	597	No. of Funds in Cat				

Performance Disclosure
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Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-662-7447 or visit www.vanguard.com.

Portfolio Analysis 09-30-2022					
Asset Allocation %		Net %	Long %	Short %	Share Clng since 08-2022
Cash	0.42	0.42	0.00	0.00	Amount 17.4 Total Stocks: 0 Total Fixed-Income, 25% Turnover Ratio
US Stocks	98.25	98.25	0.00	0.00	2 mil Cadence Design Systems Inc
Non-US Stocks	1.33	1.33	0.00	0.00	2 mil Chemiere Energy Inc
Bonds	0.00	0.00	0.00	0.00	4 mil Ampheron Corp Class A
Other/Not Clsfd	0.00	0.00	0.00	0.00	4 mil Devon Energy Corp
Total	100.00	100.00	0.00	0.00	908.171 Enphase Energy Inc

Equity Style		Portfolio Statistics		Port Avg	Rel Index	Rel Cat
Value	Brand Growth	P/E Ratio TTM	24.7	1.37	1.02	1.43
		P/C Ratio TTM	18.2	1.33	0.95	1.37
		P/B Ratio TTM	4.2	1.23	1.15	1.33
		Geo Avg Mkt Cap \$mil	21601	0.13	1.50	1.29

Fixed-Income Style		Credit Quality Breakdown		Sector Weightings		Stocks %	Rel Std Index
Lat	Med	Ext	Avg Eff Maturity	AAA	AA	27.2	0.92
			Avg Eff Duration	BBB	BB	4.1	1.81
			Avg Wtd Coupon	A	NR	9.7	0.85
			Avg Wtd Price	AAA	AA	6.1	0.46
				BBB	BB	7.4	2.54
				BB	B	56.3	1.26
				Below B	NR	6.3	0.78
				Regional Exposure	Americas	100.0	1.49
					Greater Europe	0.0	1.57
					Greater Asia	0.0	1.27

Morningstar Rating™		3 Yr	5 Yr	10 Yr	Bond %
Morningstar Risk	3★	3★	3★	3★	—
Morningstar Return	Avg	Avg	Avg	Avg	—
Standard Deviation	24.28	21.21	16.83	—	—
Mean	5.44	7.68	10.52	—	—
Sharpe Ratio	0.31	0.40	0.64	—	—
MPT Statistics		Standard Index	Best Fit Index	Morningstar US Mid	Bid Ctr TR USD
Alpha	-2.80	1.12	1.04	-0.64	—
Beta	1.12	1.12	1.04	0.64	—
R-Squared	87.78	99.26	99.26	0.77%	0.00
12-Month Yield	0.77%	0.77%	0.77%	0.77%	0.00
Potential Cap Gains Exp	33.06%	33.06%	33.06%	33.06%	0.00

Operations		Base Currency:	USD	Purchase Constraints:	—
Family:	Vanguard	Ticker:	VMGMX	Incept:	09-27-2011
Manager:	Multiple	SIN:	US9219377283	Type:	MIF
Tenure:	9.7 Years	Minimum Initial Purchase:	\$3,000	Total Assets:	\$9,080.61 mil
Objective:	Growth				

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Release date 09-30-2022 | Note: Portions of the analysis are based on pre-inception returns. Please read disclosure for more information.

Vanguard Mid-Cap Value Index Admiral (USD)

Morningstar Analysis Rating™ Overall Morningstar Rating™★★★★★
01-27-2022391 US Fund Mid-Cap Value

Category IndexMorningstar Cat
Russell Mid CapUS Fund Mid-Cap
Value TR USDValue

Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-31.36	18.65	6.58	18.14	2.54
2021	13.70	4.84	-0.19	8.21	28.76
2022	0.04	-13.05	-5.55	—	-17.85
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-11.10	4.86	5.23	10.10	11.16
Std 09-30-2022	-11.10	—	5.23	10.10	11.16
Total Return	-11.10	4.86	5.23	10.10	11.16
+/- Std Index	4.37	-3.31	-4.00	-1.60	—
+/- Cat Index	2.46	0.36	0.48	0.66	—
% Rank Cat	51	54	36	12	—
No. in Cat	405	391	364	270	—

Performance Disclosure
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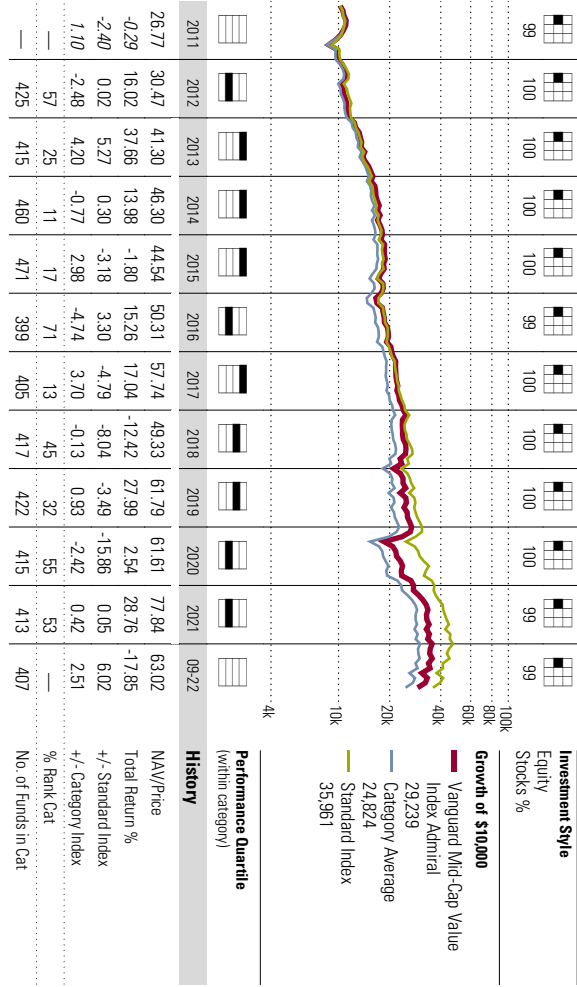
7-day Yield	Subsidized	Unsubsidized
30-day SEC Yield 10-24-22	2.46	2.22

Fees and Expenses
Front-End Load % NA
Deferred Load % NA
Fund Expenses 0.06
Management Fees % NA
12b1 Expense % NA
Net Expense Ratio % 0.07
Gross Expense Ratio % 0.07
Risk and Return Profile

Morningstar Rating™				
3 Yr	5 Yr	10 Yr	391 funds	364 funds
3★	4★	5★	-Avg	-Avg
Morningstar Risk	Avg	Avg	-Avg	-Avg
Morningstar Return	Avg	Avg	+Avg	+Avg

Standard Deviation	22.98	20.34	16.09
Mean	4.86	5.23	10.10
Sharpe Ratio	0.30	0.30	0.64
MPT Statistics	Standard Index	Best Fit Index	Morningstar US Mid
Alpha	-2.80	1.04	-0.40
Beta	0.97	1.04	0.97
R-Squared	84.26	99.39	99.39
12-Month Yield	2.32%	2.32%	21.96%
Potential Cap Gains Exp	Greater Asia	10.77	4.46

Operations
Family: Vanguard
Manager: Multiple
Tenure: 16.2 Years
Objective: Growth



Portfolio Analysis 09-30-2022									
Asset Allocation %		Net %		Long %		Short %		Share Clng	
Cash	26.77	30.47	41.30	46.30	44.54	50.31	57.74	49.33	61.79
US Stocks	-0.29	16.02	37.66	13.98	-1.80	15.26	17.04	-12.42	27.99
Non-US Stocks	-2.40	0.02	5.27	0.30	-3.18	3.30	-4.79	-8.04	-3.49
Bonds	1.10	-2.48	4.20	-0.77	2.98	-4.74	3.70	-0.13	0.93
Other/Not Clsfd	—	57	25	11	17	71	13	45	32
Total	425	415	460	471	399	405	417	422	415

Equity Style		Portfolio Statistics	
Value	Brand Growth	P/E Ratio TTM	12.3
Large	Mid	P/C Ratio TTM	9.5
Mid	Small	P/B Ratio TTM	1.9
Small	Geo Avg Mkt Cap	Geo Avg Mkt Cap	19475

Fixed-Income Style		Credit Quality Breakdown	
Mid	Ext	Avg Eff Maturity	—
High	Med	Avg Eff Duration	—
Med	Low	Avg Wtd Coupon	—
Low	—	Avg Wtd Price	—
AAA		Bond %	—
AA		—	—
A		—	—
BBB		—	—
BB		—	—
B		—	—
Below B		—	—
NR		—	—
Regional Exposure		Stocks %	98.4
Americas		Rel Std Index	0.99
Greater Europe		1.2	1.24
Greater Asia		0.4	10.77

Base Currency: USD
Ticker: VVWVX
ISIN: US9219376947
Minimum Initial Purchase: \$3,000

Purchase Constraints: —
Incept: 09-27-2011
Type: MIF
Total Assets: \$14,969.63 mil

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Vanguard Target Retirement 2020 Fund (USD)

Morningstar Analyst Rating™

★★★★

Overall Morningstar Rating™

Morningstar Cat

US Fund Target-Date

2020

146 US Fund Target-Date

Tgt Risk TR USD

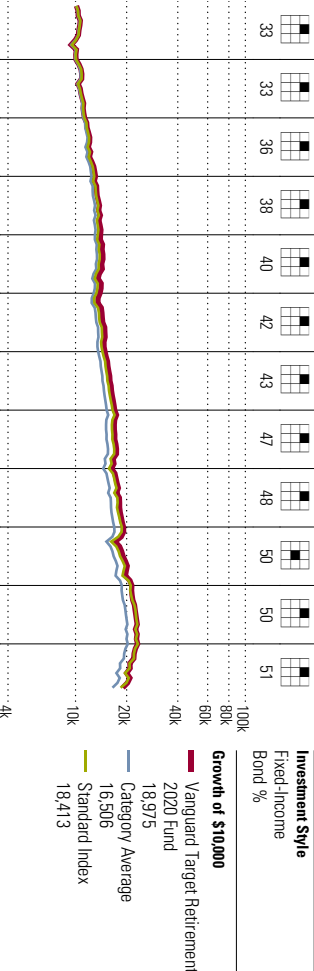
TR USD

02-24-2022

Morningstar Mod

Morningstar Lifetime Mod 2020

Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-10.76	11.40	4.48	7.86	12.04
2021	1.28	4.20	-0.41	2.91	8.17
2022	-5.06	-9.20	-5.12	—	-18.21
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-15.83	1.17	2.91	5.46	5.30
Std 09-30-2022	-15.83	—	2.91	5.46	5.30
Total Return	-15.83	1.17	2.91	5.46	5.30
+/- Std Index	2.37	0.02	-0.04	0.29	—
+/- Cat Index	3.05	0.99	0.43	0.84	—
% Rank Cat	36	48	35	24	—
No. in Cat	156	146	119	56	—



7-day Yield —
30-day SEC Yield 10-24-22 2.49 2.57

Performance Disclosure
The overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-662-7447 or visit www.vanguard.com.

Fees and Expenses

Sales Charges	
Front-End Load %	NA
Deferred Load %	NA

Fund Expenses	
Management Fees %	0.00
12b1 Expense %	NA
Net Expense Ratio %	0.08
Gross Expense Ratio %	0.08
Risk and Return Profile	

Morningstar Rating™	3★	4★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	Avg	+Avg

Standard Deviation	10.98	9.59	7.96
Mean	1.17	2.91	5.46
Sharpe Ratio	0.10	0.22	0.62

MPT Statistics	Standard Index	Best Fit Index
Alpha	-0.01	0.69
Beta	0.83	0.80
R-Squared	98.87	99.05

12-Month Yield	2.57%
Potential Cap Gains Exp	43.35%

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.7 Years
Objective:	Asset Allocation

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NAV/Price	21.69	23.83	27.11	28.46	27.15	28.26	31.38	28.63	32.53	34.29	31.02	25.37
Total Return %	0.60	12.35	15.65	7.11	-0.68	6.95	14.08	-4.24	17.63	12.04	8.17	-18.21
+/- Standard Index	0.01	0.31	1.54	2.22	1.11	-1.62	-0.58	0.52	-1.39	-0.78	-2.02	2.70
+/- Category Index	-1.14	-0.18	2.87	1.24	1.20	-0.71	1.29	-0.08	-0.10	-1.28	-0.87	3.50
% Rank Cat	32	36	18	1	23	29	17	42	28	46	68	—
No. of Funds in Cat	205	208	222	228	237	221	234	250	233	178	171	156

Portfolio Analysis 09-30-2022					
Asset Allocation %	Net %	Long %	Short %	Share Clng since 08-2022	Share Amount
Cash	2.57	11.67	9.30	10,700 Total Stocks	18,749 Total Fixed-Income,
US Stocks	24.47	24.47	0.00	5% Turnover Ratio	
Non-US Stocks	16.48	16.48	0.00	1,357 mil	Vanguard Total Bond Market II ldx
Bonds	55.95	55.96	0.02	60 mil	Vanguard Total Stock Mkt ldx instl
Other/Not Clsfd	0.53	0.53	0.00	458 mil	Vanguard Total Intl Stock Index Inv
Total	100.00	109.31	9.31	225 mil	Vanguard Total Intl Bnd II ldx instl
Equity Style	Portfolio Statistics	Port Index	Rel Cat	Holdings : 185 mil	Vanguard Shrt-Term Infl-Prot Sec I

Value	Brand	Growth
Large	Med	Small

Fixed-Income Style		
Ltd	Med	Ext

Avg Eff Maturity	7.69
Avg Eff Duration	6.12
Avg Wtd Coupon	1.92
Avg Wtd Price	93.16

Credit Quality Breakdown 08-31-2022	
AAA	64.81
AA	8.11
A	14.02

BBB	12.38
BB	0.00
B	0.00
Below B	0.39
NR	0.30

Regional Exposure	Stocks %	Rel Std Index
Americas	64.0	1.04
Greater Europe	17.0	0.95
Greater Asia	19.0	0.93

Base Currency:	USD
Ticker:	VTVWNX
ISIN:	US92202E057
Minimum Initial Purchase:	\$1,000

Purchase Constraints:	—
Incept:	06-07-2006
Type:	MF
Total Assets:	\$39,834.77 mil

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Vanguard Target Retirement 2030 Fund (USD)

Morningst
 **Silver**
02-24-2022

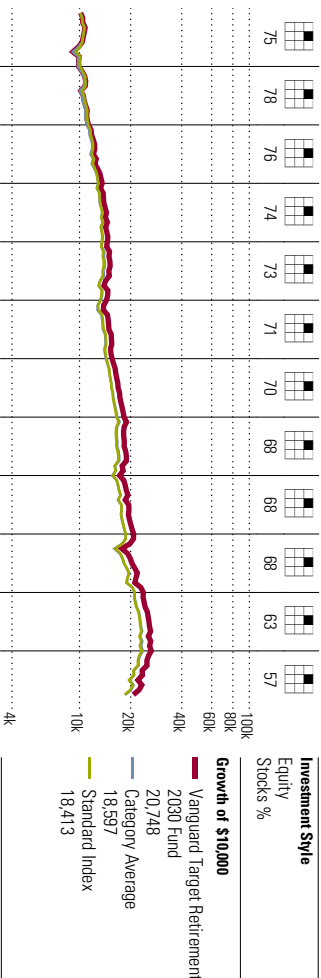
★★★★
200 US\$
2030

Morningstar Mo
Tgt Risk TR USD

Morningstar
Lifetime Mod 20

US Fund Target-Date
2030

Performance 09-30-2022									
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %				
2020	-14.76	14.58	5.70	10.52	14.10				
2021	2.49	5.25	-0.78	4.06	11.38				
2022	-5.65	-11.67	-5.93	—	-21.60				
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept				
Load-adj Mthly	-18.42	1.82	3.43	6.46	5.69				
Std 09-30-2022	-18.42	—	3.43	6.46	5.69				
Total Return	-18.42	1.82	3.43	6.46	5.69				
+/- Std Index	-0.22	0.68	0.48	1.29	—				
+/- Cat Index	2.10	1.18	0.51	0.57	—				
% Rank Cat	50	50	44	27					
No. in Cat	224	200	168	96					



	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 10-24-22	2.36	2.24

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when sold or redeemed, may be worth more or less than their original cost.

Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-662-7447 or visit www.vanguard.com.

Fees and Expenses

Sales Charges	NA
Front-End Load %	NA
Deferred Load %	NA

Fund Expenses	
Management Fees %	0.00
12b1 Expense %	NA

Net Expense Ratio %	0.08
Gross Expense Ratio %	0.08
Risk and Return Profile	

Morningstar Rating™	3 Yr 200 funds	5 Yr 168 funds	10 Yr 96 funds
Morningstar Risk	3★ Avg	3★ Avg	4★ Avg
Morningstar Return	Avg	Avg	+Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	14.11	12.38	10.14
Mean	1.82	3.43	6.46
Sharpe Ratio	0.15	0.24	0.66

M/P Statistics	Standard Index	Best Fit Index
Alpha	0.71	Morningstar Mod
Beta	1.07	Tgr Risk Tr USD
R-Squared	99.34	99.34

12-Month Yield	2.28%
Potential Cap Gains Exp	50.16%

Operations

Family:	Vanguard
Manager:	Multiple
Tenure:	9.7 Years
Objective:	Asset Allocation

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	09-22	History
	20.92	23.38	27.64	29.04	27.72	29.20	33.63	30.82	36.45	40.55	38.42	30.12	NAV/Price
	-1.27	14.24	20.49	7.17	-1.03	7.85	17.52	-5.86	21.07	14.10	11.38	-21.60	Total Return %
	-1.86	2.20	6.18	2.28	0.76	-0.72	2.87	-1.10	2.05	1.28	1.19	-0.69	+/- Standard Index
	-0.04	-0.43	0.85	1.16	1.27	-1.41	0.93	-0.03	-0.17	0.41	-0.31	2.19	+/- Category Index
	22	38	25	5	31	32	34	37	32	38	61	—	% Rank Cat
	205	208	222	228	237	221	234	239	241	224	221	225	No. of Funds in Cat

Portfolio Analysis 09-30-2022

Asset Allocation %	Net %	long %	Short %	Share Chg since 08-2022	Share Amount	Holdings: 11,065 Total Stocks, 18,445 Total Fixed Income, 6% Turnover Ratio	Net Assets
Cash	2.81	9.98	7.18				
US Stocks	37.16	37.16	0.00	+	166 mil	Vanguard Total Stock Mkt Ix Instl	37
Non-US Stocks	24.08	24.08	0.00	+	1,961 mil	Vanguard Total Bond Market Ix Ixx	25
Bonds	35.53	35.54	0.01	+	1,210 mil	Vanguard Total Intl Stock Index Inv	24
Other/Not Ctrfd	0.42	0.42	0.00	+	314 mil	Vanguard Total Intl Bd Ix Instl	11
total	100.00	107.19	7.19	+			

Equity Style				Portfolio Statistics				Sector Weightings				Stocks %		Real Estate	
Value Blend Growth				Port Avg	Rel Index	Rel Cat	🔄 Cyclical	Basic Materials		Consumer Cyclical		Financial Services		Real Estate	
Large				P/E Ratio TTM	13.7	1.04	0.93	4.8		11.3		15.5		3.7	
Mid				P/C Ratio TTM	10.4	1.02	0.93	0.1		1.0		0.1		0.1	
Small				P/B Ratio TTM	2.1	1.08	0.91	0.1		0.1		0.1		0.1	
				Geo Avg Mkt Cap	54319	1.51	0.84								
				\$mil											

Fixed-Income Style					
LtBd	MdL	Ext			
			Avg Eff Maturity	8.93	
		High	Avg Eff Duration	6.98	
	Med		Avg Wtd Coupon	2.29	
	Low		Avg Wtd Price	91.69	
				Sensitive	422
				Communication Services	7.0
				Energy	5.2
				Industrials	10.9
				Technology	19.1
Defensive				226	0.1

Credit Quality Breakdown 08-31-2022	
AAA	7.2
AA	12.2
A	3.2
	0.0

A	17.31
BBB	15.37
BB	0.00
B	0.00
Below B	0.47
NR	0.33

Regional Exposure	Stocks %	Rel Std Index
Americas	64.8	1.05
Greater Europe	16.6	0.93
Greater Asia	18.6	0.91

Base Currency:	USD	Purchase Constraints:	—
Ticker:	VTHRX	Incept:	06-07-2006
SIN:	US932202EB883	Type:	M/F
Minimum Initial Purchase:	\$1,000	Total Assets:	\$72,115.54 mil

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Vanguard Target Retirement 2035 Fund (USD)

Morningstar Analyst Rating™

★★★★

Overall Morningstar Rating™

Morningstar Cat

US Fund Target-Date

2035

193 US Fund Target-Date

Tgt Risk TR USD

TR USD

Category Index

Morningstar

US Fund Target-Date

2035

2024-2022

Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-16.52	15.90	6.29	11.62	14.79
2021	3.17	5.65	-0.87	4.55	12.96
2022	-5.66	-12.41	-6.09	—	-22.40
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-18.87	2.39	3.78	6.99	6.52
Std 09-30-2022	-18.87	—	3.78	6.99	6.52
Total Return	-18.87	2.39	3.78	6.99	6.52
+/- Std Index	-0.67	1.25	0.84	1.82	—
+/- Cat Index	1.87	1.17	0.51	0.53	—
% Rank Cat	39	49	44	28	
No. in Cat	217	193	167	90	

Performance Disclosure
The overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when sold or redeemed, may be worth more or less than their original cost.

Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-662-7447 or visit www.vanguard.com.

Fees and Expenses

Sales Charges	
Front-End Load %	NA
Deferred Load %	NA

Fund Expenses	
Management Fees %	0.00
12b1 Expense %	NA
Net Expense Ratio %	0.08
Gross Expense Ratio %	0.08
Risk and Return Profile	

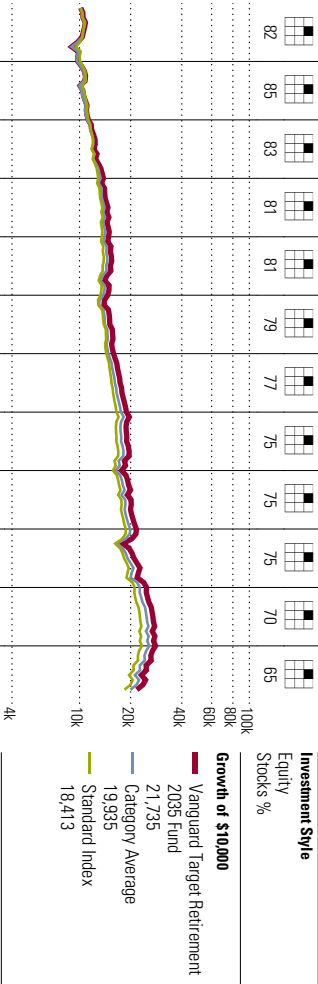
Morningstar Rating™	3★	3★	4★
Morningstar Risk	-Avg	-Avg	-Avg
Morningstar Return	Avg	Avg	+Avg

Standard Deviation	3 Yr	5 Yr	10 Yr
Mean	15.35	13.52	11.10
Beta	2.39	3.78	6.99
Sharpe Ratio	0.19	0.25	0.60

MPT Statistics	Standard Index	Best Fit Index
	Lifetime Mod 2035	Morningstar TR USD

Alpha	1.32	1.12
Beta	1.16	0.94
R-Squared	99.22	99.43
12-Month Yield	2.47%	
Potential Cap Gains Exp	55.22%	

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.7 Years
Objective:	Asset Allocation



Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	09-22
12.51	14.09	16.98	17.84	16.94	17.74	20.69	18.82	22.52	25.22	23.94	18.50	NAV/Price
-2.24	15.16	22.62	7.24	-1.26	8.26	19.12	-6.58	22.44	14.79	12.96	-22.40	Total Return %
-2.83	3.12	8.52	2.35	0.53	-0.31	4.46	-1.82	3.41	1.97	2.77	-1.49	+/- Standard Index
0.04	-0.20	0.79	1.44	1.32	-1.80	0.60	0.24	-0.60	1.41	-0.67	1.87	+/- Category Index
19	40	23	10	37	32	35	32	42	43	79	—	% Rank Cat
139	154	181	185	205	195	208	221	229	207	213	218	No. of Funds in Cat

Portfolio Analysis 09-30-2022					
Asset Allocation %	Net %	Long %	Short %	Share Clng since 08-2022	Share Holdings: 11,153 Total Stocks , 18,102 Total Fixed-Income, 6% Turnover Ratio
Cash	2.92	8.57	5.66		
US Stocks	41.38	41.38	0.00		
Non-US Stocks	27.17	27.17	0.00		
Bonds	28.19	28.20	0.01		
Other/Not Cstfd	0.34	0.34	0.00		
Total	100.00	105.67	5.67		

Equity Style	Portfolio Statistics	Port Avg Index	Rel Index Cat	Rel Index Cat	Stocks %
Value Blend Growth	P/E Ratio TTM	13.7	1.04	0.94	35.3
Large	P/C Ratio TTM	10.4	1.02	0.94	4.8
Mid	P/B Ratio TTM	2.1	1.08	0.92	11.3
Small	Geo Avg Mkt Cap \$mil	54061	1.50	0.86	15.5

Fixed-Income Style	Portfolio Statistics	Port Avg Index	Rel Index Cat	Rel Index Cat	Stocks %
Ltd	Avg Eff Maturity	8.93			42.2
Med	Avg Eff Duration	6.98			7.0
Ext	Avg Wtd Coupon	2.29			5.2
High	Avg Wtd Price	91.70			10.9
Med					19.1
Low					22.6

Credit Quality Breakdown 08-31-2022		Bond %
AAA		56.72
AA		9.86
A		17.26
BBB		15.36
BB		0.00
B		0.00
Below B		0.47
NR		0.33

Regional Exposure	Stocks %	Rel Std Index
Americas	64.5	1.04
Greater Europe	16.7	0.94
Greater Asia	18.8	0.92

Base Currency:	USD	Purchase Constraints:	—
Ticker:	VTTHX	Incept:	10-27-2003
ISIN:	US92202E9087	Type:	MF
Minimum Initial Purchase:	\$1,000	Total Assets:	\$70,249.96 mil

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Vanguard Target Retirement 2040 Fund (USD)

Morningst
Silver
02-24-2022

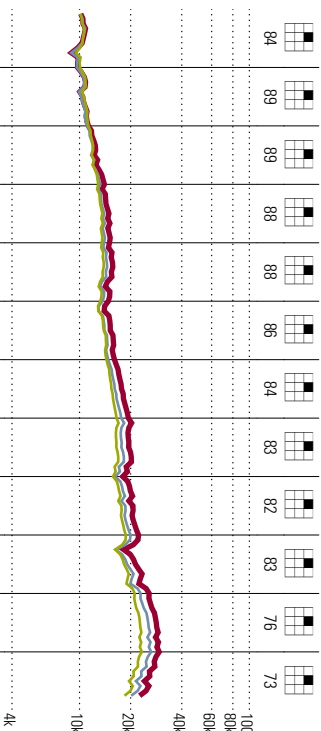
Overall
★★★★
194 US\$
2040

Standard Index
Morningstar Mo
Tgt Risk TR USD

Category Index	Morningstar
Morningstar	US F
Lifetime Mod 2040	2040

Morningstar Cat
US Fund Target-Date

Performance 09-30-2022									
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %				
2020	-18.25	17.29	6.80	12.76	15.47				
2021	3.82	6.11	-0.98	5.02	14.56				
2022	-5.66	-13.17	-6.33	—	-23.27				
Trading Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept				
Load-adj Mthly	-19.42	2.91	4.11	7.40	6.18				
Std 09-30-2022	-19.42	—	4.11	7.40	6.18				
Total Return	-19.42	2.91	4.11	7.40	6.18				
+/- Std Index	-1.22	1.77	1.17	2.23	—				
+/- Cat Index	1.37	1.13	0.56	0.61	—				
% Rank Cat	33	46	39	22					
No. in Cat	218	194	168	96					



	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 10-24-22	2.49	2.32

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when sold or redeemed, may be worth more or less than their original cost.

Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-662-7447 or visit www.vanquard.com

Fees and Expenses

Sales Charges	NA
Front-End Load %	NA
Deferred Load %	NA

Fund Expenses	
Management Fees %	0.00
12b1 Expense %	NA

Net Expense Ratio %	0.08
Gross Expense Ratio %	0.08
Risk and Return Profile	

Morningstar Rating™	3 Yr	5 Yr	10 Yr
	194 funds	168 funds	96 funds
Morningstar Risk	3★	4★	4★
Morningstar Return	Avg	Avg	-Avg +Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	16.61	14.69	12.03
Mean	2.91	4.11	7.40
Sharpe Ratio	0.22	0.27	0.60

MPT Statistics	Standard Index	Best Fit Index	
		MSQ	ACW/NF
Alpha	1.90	-0.55	
Beta	1.25	0.85	
R-Squared	99.00	99.45	

12-Month Yield	2.51%
Potential Cap Gains Exp	23.59%






Operations

Family:	Vanguard
Manager:	Multiple
Tenure:	9.7 Years
Objective:	Asset Allocation

Investment Style	Equity	Stocks %
Growth of \$10,000	Vanguard Target Retirement 2040 Fund	—
Category Average	22,586	—
Standard Index	20,148	—
Standard Index	18,413	—
Performance Quartile (within category)	History	NAV/P/Rice
Total Return %	2011	2012
+/- Standard Index	2013	2014
+/- Category Index	2015	2016
% Rank Cat	2017	2018
No. of Funds in Cat	2019	2020
	2021	2022

Portfolio Analysis 09-30-2022

Asset Allocation %	Net %	Long %	Short %	Share Chg since 08-2022	Share Amount	Holdings: 11,202 Total Stocks, 17,520 Total Fixed-Income, 7% Turnover Ratio	Net Asset %
Cash	2.95	7.11	4.16				
US Stocks	45.84	45.84	0.00				
Non-US Stocks	30.11	30.11	0.00	⊕	171 mli	Vanguard Total Stock Mkt Idx Instl	46.41
Bonds	20.83	20.84	0.01	⊕	1,267 mli	Vanguard Total Intl Stock Index Inv	30.81
Other/Not Cstd	0.26	0.26	0.00	⊕	969 mli	Vanguard Total Bond Market II Idx	14.9
Total	100.00	104.17	4.17	⊖	152 mli	Vanguard Total Intl Bd II Idx Instl	6.41

Equity Style	Portfolio Statistics				Sector Weightings		Stocks %	Rel Std Ind
	P/E Ratio	Port Avg	Rel Index	Rel Cat		Cyclical	0.9%	
Value	P/C Ratio	13.7	1.04	0.95		Basic Materials	4.8	0.9%
Blend	P/B Ratio	10.4	1.02	0.94		Consumer Cyclical	11.3	1.0%
Growth	Geo Avg Mkt Cap	2.1	1.08	0.93		Financial Services	15.5	0.9%
	\$mil	54054	1.50	0.90		Real Estate	3.7	0.5%
	Large							
	Mid							
	Small							

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Credit Quality Breakdown 08-31-2022	
Bond %	
AAA	56.83
AA	9.80
	Consumer Defensive
	Healthcare
	Utilities

A	17.22
BBB	15.35
BB	0.00
B	0.00
Below B	0.46
NR	0.33

Regional Exposure	Stocks %	Rel Std Index
Americas	64.5	1.04
Greater Europe	16.7	0.94
Greater Asia	18.8	0.92

Base Currency:	USD	Purchase Constraints:	—
Ticker:	WFORX	Incept:	06-07-2006
SIN:	US92202E8701	Type:	MF
Minimum Initial Purchase:	\$1,000	Total Assets:	\$60,363.33 mil

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Vanguard Target Retirement 2050 Fund (USD)

Morningstar Analyst Rating™

★★★★★

Overall Morningstar Rating™

Morningstar Cat

US Fund Target-Date

2050

2050

194 US Fund Target-Date

Tgt Risk TR USD

TR USD

Category Index

Morningstar

US Fund Target-Date

2050

2050

Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-19.86	18.67	7.35	14.01	16.39
2021	-4.53	6.61	-1.11	5.63	16.41
2022	-5.65	-14.21	-6.64	—	-24.43
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-20.18	3.41	4.39	7.60	6.33
Std 09-30-2022	-20.18	—	4.39	7.60	6.33
Total Return	-20.18	3.41	4.39	7.60	6.33
+/- Std Index	-1.98	2.27	1.45	2.43	—
+/- Cat Index	0.73	1.24	0.73	0.75	—
% Rank Cat	38	35	33	20	—
No. in Cat	218	194	168	94	—

Performance Disclosure
The overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-662-7447 or visit www.vanguard.com.

Fees and Expenses

Sales Charges	
Front-End Load %	NA
Deferred Load %	NA

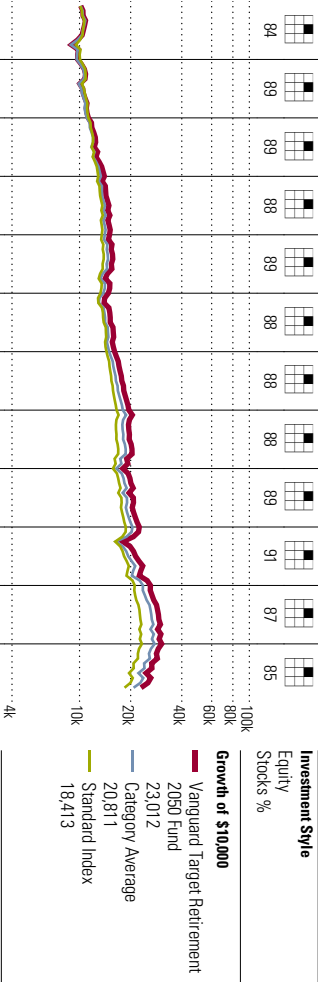
Fund Expenses	
Management Fees %	0.00
12b1 Expense %	NA
Net Expense Ratio %	0.08
Gross Expense Ratio %	0.08

Risk and Return Profile				
Morningstar Rating™	3 Yr	5 Yr	10 Yr	
	194 funds	188 funds	94 funds	
	4★	4★	4★	
	-Avg	-Avg	-Avg	
Morningstar Risk	-Avg	-Avg	-Avg	
Morningstar Return	Avg	Avg	+Avg	

Standard Deviation	3 Yr	5 Yr	10 Yr
	18.01	15.86	12.76
Mean	3.41	4.39	7.60
Sharpe Ratio	0.24	0.28	0.58
MPT Statistics			
	Standard Index	Best Fit Index	
		MSD ACWI NR	
Alpha	2.49	-0.22	USD
Beta	1.36	0.93	
R-Squared	98.79	99.64	

12-Month Yield	2.54%
Potential Cap Gains Exp	22.99%

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.7 Years
Objective:	Asset Allocation



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	09-22	History
20.41	23.09	28.19	29.62	28.49	30.39	36.20	32.52	39.77	45.45	46.90	35.44	NAV/Price	
-2.54	15.58	24.34	7.18	-1.58	8.85	21.39	-7.90	24.98	16.39	16.41	-24.43	Total Return %	
-3.13	3.54	10.04	2.29	0.22	0.28	6.73	-3.14	5.96	3.57	6.22	-3.52	+/- Standard Index	
0.93	-0.35	1.51	2.18	1.62	-2.04	0.61	0.51	-0.10	3.48	-0.19	0.36	+/- Category Index	
14	44	30	16	45	29	38	37	47	37	74	—	% Rank Cat	
168	177	202	212	226	213	230	239	241	217	215	219	No. of Funds in Cat	

Portfolio Analysis 09-30-2022					
Asset Allocation %			Net %		
Cash	2.99	5.09	2.99	5.09	
US Stocks	52.12	52.12	52.12	52.12	
Non-US Stocks	34.74	34.74	34.74	34.74	
Bonds	10.01	10.01	10.01	10.01	
Other/Not Cstfd	0.14	0.14	0.14	0.14	
Total	100.00	102.10	102.10	102.10	

Equity Style		Portfolio Statistics		Share Clng		Share Holdings :		Sector Weightings		Stocks %	
Value	Brand Growth	P/E Ratio TTM	13.7	1.04	0.95	11,264 Total Stocks	15,506 Total Fixed-Income,	Basic Materials	4.8	0.92	0.90
Large	Mid	P/C Ratio TTM	10.4	1.02	0.94	5% Turnover Ratio		Consumer Cyclical	11.3	1.05	
Mid	Small	P/B Ratio TTM	2.1	1.08	0.94			Financial Services	15.5	0.96	
Small		Geo Avg Mkt Cap	53771	1.49	0.94			Real Estate	3.7	0.52	

Fixed-Income Style		Avg Eff Maturity		8.93		Sensitive		42.1		1.16	
Mid	Ext	Avg Eff Duration	6.99			Communication Services	7.0			1.20	
High	Low	Avg Wtd Coupon	2.29			Energy	5.2			0.96	
Mid	Low	Avg Wtd Price	—			Industrials	10.9			0.98	
						Technology	19.0			1.35	

Credit Quality Breakdown 08-31-2022		Bond %		Defensive		22.6		0.93	
AAA	AA	56.23		Consumer Defensive	7.2			0.92	
AA	A	10.10		Healthcare	12.2			0.97	
A	BBB	15.41		Utilities	3.2			0.85	
BB	B	0.00							
B	Below B	0.00							
Below B	NR	0.48							
		0.34							

Regional Exposure		Stocks %		Rel Std Index	
Americas	64.2	1.04			
Greater Europe	16.9	0.95			
Greater Asia	18.9	0.93			

Base Currency:	USD
Ticker:	VFIIX
ISIN:	US92202E8628
Minimum Initial Purchase:	\$1,000

Purchase Constraints:	—
Incept:	06-07-2006
Type:	MF
Total Assets:	\$44,736.23 mil

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Release date 09-30-2022

Vanguard Target Retirement 2055 Fund (USD)

Morningstar Analyst Rating™

★★★★

Overall Morningstar Rating™

Category Index

Morningstar Cat

US Fund Target-Date

2055

193 US Fund Target-Date

Tgt Risk TR USD

02-24-2022

Morningstar Mod

Lifetime Mod 2055

2055

TR USD

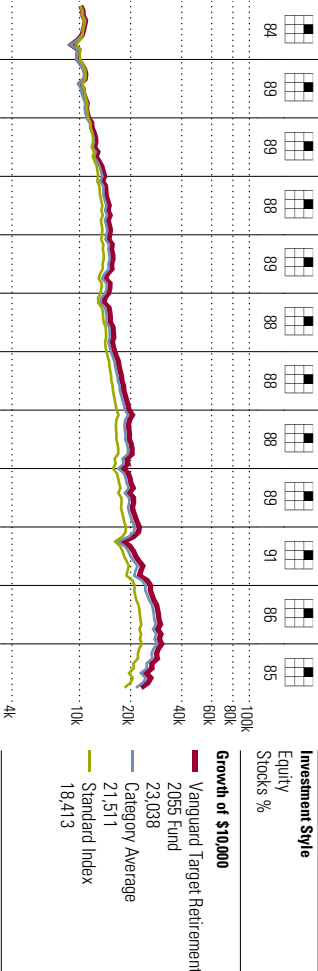
Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-19.89	18.64	7.38	13.97	16.32
2021	4.54	6.61	-1.11	5.65	16.44
2022	-5.69	-14.19	-6.63	—	-24.44
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-20.17	3.40	4.38	7.58	8.37
Std 09-30-2022	-20.17	—	4.38	7.58	8.37
Total Return	-20.17	3.40	4.38	7.58	8.37
+/- Std Index	-1.97	2.26	1.44	2.41	—
+/- Cat Index	0.87	1.28	0.80	0.82	—
% Rank Cat	37	35	38	26	—
No. in Cat	217	193	167	71	—

Performance Disclosure
The overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.
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Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-662-7447 or visit www.vanguard.com.

Fees and Expenses	
Sales Charges	NA
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	0.00
Management Fees %	0.00
12b1 Expense %	NA
Net Expense Ratio %	0.08
Gross Expense Ratio %	0.08
Risk and Return Profile	0.08

Standard Deviation	18.02	15.86	12.75
Mean	3.40	4.38	7.58
Sharpe Ratio	0.24	0.27	0.58
MPT Statistics	Standard Index	Best Fit Index	MSD ACWI NR
Alpha	2.48	-0.23	USD
Beta	1.36	0.93	-0.23
R-Squared	98.80	99.65	
12-Month Yield	2.52%		
Potential Cap Gains Exp	20.49%		

Family:	Vanguard
Manager:	Multiple
Tenure:	9.7 Years
Objective:	Asset Allocation



Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	09-22
21.86	24.80	30.35	31.98	30.83	32.91	39.23	35.30	43.19	49.34	52.22	39.46	NAV/Price
-2.27	15.58	24.33	7.19	-1.72	8.88	21.38	-7.89	24.98	16.32	16.44	-24.44	Total Return %
-2.86	3.54	10.02	2.31	0.07	0.31	6.72	-3.13	5.95	3.50	6.25	-3.52	+/- Standard Index
1.48	-0.42	1.84	2.45	1.62	-2.03	0.43	0.68	-0.07	3.41	-0.06	0.45	+/- Category Index
9	48	36	16	53	27	48	37	51	41	78	—	% Rank Cat
235	102	130	156	238	193	206	221	229	207	213	218	No. of Funds in Cat

Portfolio Analysis 09-30-2022					
Asset Allocation %	Net %	Long %	Short %	Share Clng since 08-2022	Share Holdings: 11,264 Total Stocks , 15,484 Total Fixed-Income, 5% Turnover Ratio
Cash	3.02	5.08	2.07		
US Stocks	52.09	52.09	0.00		
Non-US Stocks	34.81	34.81	0.00		
Bonds	9.93	9.94	0.00		
Other/Not Clsfd	0.14	0.14	0.00		
Total	100.00	102.07	2.07		

Equity Style		Portfolio Statistics		Sector Weightings	
Value	Brand Growth	P/E Ratio TTM	Port Avg Index	Basic Materials	Stocks %
Large	Mid	P/C Ratio TTM	10.4	Consumer Cyclical	Rel Std Index
Mid	Small	P/B Ratio TTM	2.1	Financial Services	
Small		Geo Avg Mkt Cap	53720	Real Estate	

Fixed-Income Style		Credit Quality Breakdown 08-31-2022		Sensitive	
Mid	Ext	Avg Eff Maturity	8.93	Communication Services	42.1
High	Low	Avg Eff Duration	6.98	Energy	7.0
Mid		Avg Wtd Coupon	2.29	Industrials	5.2
Low		Avg Wtd Price	—	Technology	10.9

Regional Exposure		Bond %		Defensive	
AAA	AA	56.36		Consumer Defensive	22.6
AA	BBB	10.03		Healthcare	7.2
A	BB	17.40		Utilities	12.2
BBB	B	15.39			3.2
BB	Below B	0.00			
Below B	NR	0.48			
NR		0.34			

Regional Exposure		Stocks %		Purchase Constraints:	
Americas	64.1	1.04		—	
Greater Europe	16.9	0.95		08-18-2010	
Greater Asia	19.0	0.93		M/F	

Base Currency:	USD	Purchase Constraints:	—
Ticker:	VFFX	Incept:	08-18-2010
ISIN:	US92202E8479	Type:	M/F
Minimum Initial Purchase:	\$1,000	Total Assets:	\$27,570.03 mil

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Release date 09-30-2022

Vanguard Target Retirement Income Fund (USD)

Morningstar Analyst Rating™

★★★★

Overall Morningstar Rating™

Standard Index

Category Index

Morningstar Cat

US Fund Target-Date Retirement

144 US Fund Target-Date

Tgt Risk TR USD

144 US Fund Target-Date

Tgt Risk TR USD

Retirement

TR USD

Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-5.91	7.84	3.12	5.15	10.02
2021	0.08	3.23	-0.13	2.01	5.25
2022	-4.77	-7.37	-4.64	—	-15.69
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-14.19	-0.02	1.96	3.31	4.43
Std 09-30-2022	-14.19	—	1.96	3.31	4.43
Total Return	-14.19	-0.02	1.96	3.31	4.43
+/- Std Index	4.01	-1.16	-0.98	-1.85	—
+/- Cat Index	0.08	-0.87	-0.45	-0.03	—
% Rank Cat	49	31	27	36	—
No. in Cat	160	144	121	80	—

Performance Disclosure
The overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

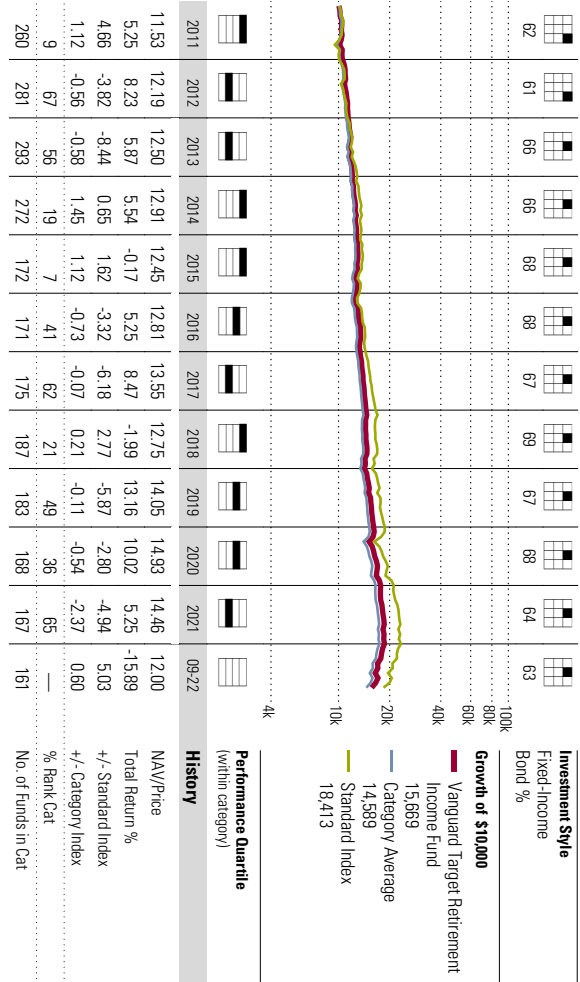
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Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-662-7447 or visit www.vanguard.com.

Sales Charges	—
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	0.00
Management Fees %	0.00
12b1 Expense %	NA
Net Expense Ratio %	0.08
Gross Expense Ratio %	0.08
Risk and Return Profile	0.08

Standard Deviation	8.10	6.82	5.40	10 Yr
Mean	-0.02	1.96	3.31	10 Yr
Sharpe Ratio	-0.04	0.14	0.50	10 Yr
MPT Statistics	Standard Index	Best Fit Index	Morningstar US	Mod Con Tgt-Alice
Alpha	-1.15	-0.61	NR	NR
Beta	0.60	0.83	NR	NR
R-Squared	94.81	98.82	98.82	98.82
12-Month Yield	2.97%	2.97%	2.97%	2.97%
Potential Cap Gains Exp	27.65%	27.65%	27.65%	27.65%

Family:	Vanguard
Manager:	Multiple
Tenure:	9.7 Years
Objective:	Asset Allocation



Portfolio Analysis 09-30-2022					
Asset Allocation %	Net %	Long %	Short %	NAV/Price	History
Cash	2.38	12.86	10.48	15.89	Total Return %
US Stocks	16.68	16.68	0.00	5.03	+/- Standard Index
Non-US Stocks	11.20	11.20	0.00	2.37	+/- Category Index
Bonds	69.14	69.16	0.02	—	% Rank Cat
Other/Not Cstfd	0.60	0.60	0.00	161	No. of Funds in Cat
Total	100.00	110.50	10.50	161	

Equity Style					Portfolio Statistics				
Value	Blend	Growth	Port Avg	Rel Index	Rel Cat	Rel Index	Rel Cat	Rel Index	

Regional Exposure	Stocks %	Rel Std Index
Americas	64.1	1.04
Greater Europe	16.9	0.95
Greater Asia	19.0	0.93

Base Currency:	USD	Purchase Constraints:	—
Ticker:	VTINX	Incept:	10-27-2003
ISIN:	US9220221029	Type:	MF
Minimum Initial Purchase:	\$1,000	Total Assets:	\$36,518.22 mil

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Release date 09-30-2022

Vanguard Total Bond Market Index I (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
★★★★ 401 US Fund Intermediate Bloomberg US Bloomberg US Agg US Fund Intermediate
06-30-2022 Agg Bond TR USD Bond TR USD Core Bond

Performance 09-30-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	3.28	2.98	0.62	0.67	7.74
2021	-3.61	2.00	0.11	-0.08	-1.65
2022	-5.98	-4.71	-4.65	—	-14.38
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-14.65	-3.26	-0.24	0.86	4.20
Std 09-30-2022	-14.65	—	-0.24	0.86	4.20
Total Return	-14.65	-3.26	-0.24	0.86	4.20
+/- Std Index	-0.05	0.00	0.03	-0.03	—
+/- Cat Index	-0.05	0.00	0.03	-0.03	—
% Rank Cat	38	46	33	39	—
No. in Cat	445	401	363	269	—

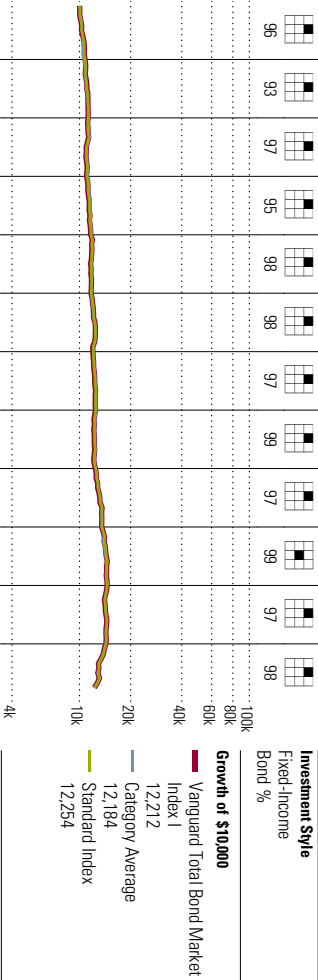
7-day Yield — Subsidized Unsusidized
30-day SEC Yield 10-24-22 4.43 3.98

Performance Disclosure
The overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.
The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate, thus an investor's shares, when sold or redeemed, may be worth more or less than their original cost.
Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 888-809-8102 or visit www.vanguard.com.

Sales Charges
Front-End Load % NA
Deferred Load % NA
Fund Expenses
Management Fees % 0.03
12b1 Expense % NA
Net Expense Ratio % 0.04
Gross Expense Ratio % 0.04
Risk and Return Profile

Morningstar Rating™	3 Yr	5 Yr	10 Yr
Morningstar Risk	3★	4★	3★
Morningstar Return	Avg	Avg	Avg
	Avg	+Avg	Avg
Standard Deviation	3 Yr 5.39	5 Yr 4.81	10 Yr 3.99
Mean	-3.26	-0.24	0.86
Sharpe Ratio	-0.70	-0.27	0.06
MPT Statistics	Standard Index	Best Fit Index	Bloomberg US Agg Bond TR USD
Alpha	0.01	0.01	0.01
Beta	1.00	1.00	1.00
R-Squared	99.61	99.61	99.61
12-Month Yield	2.41%		
Potential Cap Gains Exp	2.82%		

Operations
Family: Vanguard
Manager: Joshua Barrickman
Tenure: 9.7 Years
Objective: Income



Portfolio Analysis 09-30-2022											
Asset Allocation %			Net %			Long %			Short %		
Cash	0.80	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Stocks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bonds	98.06	98.06	98.13	0.07	1.52	98.13	0.07	1.52	0.07	1.52	0.07
Other/Not Cstfd	1.14	1.14	1.14	0.00	1.52	1.14	0.00	1.52	0.00	1.52	0.00
Total	100.00	100.00	100.07	0.07	1.52	100.07	0.07	1.52	0.07	1.52	0.07

Portfolio Analysis 09-30-2022											
Equity Style			Portfolio Statistics			Port			Rel		
Value	Brand	Growth	P/E Ratio TTM	—	—	Avg	Index	Rel	Cat	Rel	Cat
Large	Mid	Small	P/C Ratio TTM	—	—	—	—	—	—	—	—
—	—	—	P/B Ratio TTM	—	—	—	—	—	—	—	—
—	—	—	Geo Avg Mkt Cap	—	—	—	—	—	—	—	—
—	—	—	\$mil	—	—	—	—	—	—	—	—
Fixed-Income Style											
Mid	Med	Ext	Avg Eff Maturity	8.90	—	—	—	—	—	—	—
—	—	—	Avg Eff Duration	6.52	—	—	—	—	—	—	—
—	—	—	Avg Wtd Coupon	—	—	—	—	—	—	—	—
—	—	—	Avg Wtd Price	88.94	—	—	—	—	—	—	—
Credit Quality Breakdown 09-30-2022											
AAA	—	—	Bond %	71.22	—	—	—	—	—	—	—
AA	—	—	Bond %	2.97	—	—	—	—	—	—	—
A	—	—	Bond %	11.75	—	—	—	—	—	—	—
BBB	—	—	Bond %	13.97	—	—	—	—	—	—	—
BB	—	—	Bond %	0.00	—	—	—	—	—	—	—
B	—	—	Bond %	0.00	—	—	—	—	—	—	—
Below B	—	—	Bond %	0.00	—	—	—	—	—	—	—
NR	—	—	Bond %	0.09	—	—	—	—	—	—	—

Sector Weightings											
Cyclical			Stocks %			Rel Std Index			Defensive		
Basic Materials	—	—	—	—	—	—	—	—	—	—	—
Consumer Cyclical	—	—	—	—	—	—	—	—	—	—	—
Financial Services	—	—	—	—	—	—	—	—	—	—	—
Real Estate	—	—	—	—	—	—	—	—	—	—	—
Sensitive	—	—	—	—	—	—	—	—	—	—	—
Communication Services	—	—	—	—	—	—	—	—	—	—	—
Energy	—	—	—	—	—	—	—	—	—	—	—
Industrials	—	—	—	—	—	—	—	—	—	—	—
Technology	—	—	—	—	—	—	—	—	—	—	—
Utilities	—	—	—	—	—	—	—	—	—	—	—

Regional Exposure
Americas —
Greater Europe —
Greater Asia —
Base Currency: USD
Ticker: VBTIX
ISIN: US9219375048
Minimum Initial Purchase: \$5 mil
Purchase Constraints: —
Incept: 09-18-1995
Type: MIF
Total Assets: \$78,483.15 mil

Morningstar Cat
US Fund Foreign Large
Blend

Investment Style	Equity Stocks %
Growth of \$10,000	
■ Vanguard Total Intl Stock Index I	13,156
■ Category Average	12,883
■ Standard Index	12,809

Performance Quartile
(within category)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	09-22	History
	87.32	100.18	112.01	103.98	96.94	98.50	122.03	101.46	119.47	129.79	136.77	98.31	NAV/Price
	-1.51	18.28	15.15	-4.15	-4.24	4.70	27.55	-14.39	21.56	11.28	8.68	-26.76	Total Return %
	-0.80	1.45	-0.13	-0.29	1.42	0.20	0.36	-0.20	0.04	0.63	0.85	-0.26	+/- Standard Index
	-0.80	1.45	-0.13	-0.29	1.42	0.20	0.36	-0.20	0.04	0.63	0.85	-0.26	+/- Category Index
	60	48	83	33	79	12	23	50	51	30	68	—	% Rank Cat
	817	786	791	750	788	762	756	741	732	785	767	758	No. of Funds in Cat

11-29-2010
MF
\$43,462.71 mil

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Standardized and Tax Adjusted Returns Disclosure Statement

The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end please visit <http://advisor.morningstar.com/familyinfo.asp>.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and

Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2022											
Standardized Returns (%)	7-day Yield Subsidized as of date	7-day Yield Unsubsidized as of date	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio % Redemption %
American Funds EuroPacific Growth R6	—	—	-32.85	-0.23	4.52	6.36	05-01-2009	NA	NA	0.46	0.46
MFS Value R4	—	—	-10.06	5.85	9.85	7.78	04-01-2005	NA	NA	0.55	0.55
Sterling Capital Total Return Bond R6	—	—	-14.72	—	—	0.41	02-01-2018	NA	NA	0.35 ¹	0.46
T. Rowe Price Growth Stock I	—	—	-35.76	6.83	—	8.99	08-28-2015	NA	NA	0.51	0.51
Vanguard Extended Market Index InstPlus	—	—	-29.54	4.84	9.45	8.67	01-14-2011	NA	NA	0.04	0.04
Vanguard Institutional Index Instl Pl	—	—	-15.49	9.23	11.69	7.59	07-07-1997	NA	NA	0.02	0.02
Vanguard Mid-Cap Growth Index Admiral	—	—	-27.45	7.68	10.52	11.09	09-27-2011	NA	NA	0.07	0.07

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Annualized returns 09-30-2022													
Standardized Returns (%)		7-day Yield Subsidized as of date	7-day Yield Unsubsidized as of date	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
Vanguard Mid-Cap Value Index Admiral		—	—	-11.10	5.23	10.10	11.16	09-27-2011	NA	NA	0.07	0.07	NA
Vanguard Target Retirement 2020 Fund		—	—	-15.83	2.91	5.46	5.30	06-07-2006	NA	NA	0.08	0.08	NA
Vanguard Target Retirement 2025 Fund		—	—	-17.53	3.15	5.96	5.88	10-27-2003	NA	NA	0.08	0.08	NA
Vanguard Target Retirement 2030 Fund		—	—	-18.42	3.43	6.46	5.69	06-07-2006	NA	NA	0.08	0.08	NA
Vanguard Target Retirement 2035 Fund		—	—	-18.87	3.78	6.99	6.52	10-27-2003	NA	NA	0.08	0.08	NA
Vanguard Target Retirement 2040 Fund		—	—	-19.42	4.11	7.40	6.18	06-07-2006	NA	NA	0.08	0.08	NA
Vanguard Target Retirement 2045 Fund		—	—	-19.93	4.42	7.61	7.02	10-27-2003	NA	NA	0.08	0.08	NA
Vanguard Target Retirement 2050 Fund		—	—	-20.18	4.39	7.60	6.33	06-07-2006	NA	NA	0.08	0.08	NA
Vanguard Target Retirement 2055 Fund		—	—	-20.17	4.38	7.58	8.37	08-18-2010	NA	NA	0.08	0.08	NA
Vanguard Target Retirement 2060 Fund		—	—	-20.16	4.38	7.58	7.91	01-19-2012	NA	NA	0.08	0.08	NA
Vanguard Target Retirement 2065 Fund		—	—	-20.10	4.36	—	4.95	07-12-2017	NA	NA	0.08	0.08	NA
Vanguard Target Retirement Income Fund		—	—	-14.19	1.96	3.31	4.43	10-27-2003	NA	NA	0.08	0.08	NA
Vanguard Total Bond Market Index I		—	—	-14.65	-0.24	0.86	4.20	09-18-1995	NA	NA	0.04	0.04	NA
Vanguard Total Intl Stock Index I		—	—	-25.20	-0.68	3.33	2.94	11-29-2010	NA	NA	0.08	0.08	NA
Bloomberg US Agg Bond TR USD				-14.60	-0.27	0.89	—	01-03-1980					
Bloomberg US Universal TR USD				-14.92	-0.18	1.17	—	12-31-1998					
Morningstar Gbl Allocation TR USD				-20.42	2.12	—	—	06-18-2013					
Morningstar Gbl xUS Growth TME NR USD				—	—	—	—	11-24-2021					
Morningstar Lifetime Mod 2020 TR USD				-18.89	2.47	4.62	—	02-18-2009					
Morningstar Lifetime Mod 2025 TR USD				-19.88	2.63	5.22	—	02-18-2009					
Morningstar Lifetime Mod 2030 TR USD				-20.52	2.92	5.89	—	02-18-2009					
Morningstar Lifetime Mod 2035 TR USD				-20.74	3.27	6.46	—	02-18-2009					
Morningstar Lifetime Mod 2040 TR USD				-20.78	3.56	6.79	—	02-18-2009					
Morningstar Lifetime Mod 2045 TR USD				-20.83	3.68	6.89	—	02-18-2009					
Morningstar Lifetime Mod 2050 TR USD				-20.91	3.67	6.85	—	02-18-2009					
Morningstar Lifetime Mod 2055 TR USD				-21.04	3.59	6.76	—	02-18-2009					
Morningstar Lifetime Mod 2060 TR USD				-21.18	3.49	—	—	06-23-2014					
Morningstar Lifetime Mod Incm TR USD				-14.27	2.41	3.35	—	02-18-2009					
Morningstar Mod Tgt Risk TR USD				-18.20	2.95	5.17	—	02-18-2009					
Morningstar US Core Bd TR USD				-14.54	—	—	—	05-01-2019					
Morningstar US LM Brd Growth TR USD				-25.98	—	—	—	12-21-2020					
Morningstar US LM Brd Val TR USD				-9.18	—	—	—	12-21-2020					
Morningstar US Mid Brd Gt TR USD				-26.35	—	—	—	12-21-2020					
Morningstar US Mid Brd Val TR USD				-9.44	—	—	—	12-21-2020					
Morningstar US Mod Con Tgt Alloc NR USD				-15.50	—	—	—	06-30-2020					
Morningstar US SmI Brd Gt Ext TR USD				-29.08	—	—	—	12-21-2020					
MSCI ACWI Ex USA Growth NR USD				-30.22	0.18	3.95	—	01-01-2001					
MSCI ACWI Ex USA NR USD				-25.17	-0.81	3.01	—	01-01-2001					
MSCI ACWI NR USD				-20.66	4.44	7.28	—	01-01-2001					
MSCI EAFE NR USD				-25.13	-0.84	3.67	—	03-31-1986					
Russell 1000 Growth TR USD				-22.59	12.17	13.70	—	01-01-1987					
Russell 1000 TR USD				-17.22	9.00	11.60	—	12-31-1978					
Russell 1000 Value TR USD				-11.36	5.29	9.17	—	01-01-1987					
Russell Mid Cap Growth TR USD				-29.50	7.62	10.85	—	02-01-1995					
Russell Mid Cap Value TR USD				-13.56	4.76	9.44	—	12-31-1985					
S&P 500 TR USD				-15.47	9.24	11.70	—	01-30-1970					
USTREAS T-Bill Auction Ave 3 Mon				1.08	1.19	0.71	—	02-28-1941					

1. Contractual waiver, Expires 01-31-2023

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Annualized returns 09-30-2022

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares				
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception	
American Funds Europacific Growth R6	-33.96	-1.35	3.55	5.50	05-01-2009	-18.52	-0.01	3.52	5.11	
MMS Value R4	-11.12	4.60	8.46	6.58	04-01-2005	-5.53	4.15	7.49	5.98	
Sterling Capital Total Return Bond R6	-15.78	—	—	-0.92	02-01-2018	-8.53	—	—	-0.16	
T. Rowe Price Growth Stock I	-37.36	4.86	—	7.24	08-28-2015	-19.47	5.34	—	6.99	
Vanguard Extended Market Index InstPlus	-29.73	4.45	8.97	8.24	01-14-2011	-17.33	3.70	7.60	7.02	
Vanguard Institutional Index Instl Pl	-16.43	8.38	10.91	7.01	07-07-1997	-8.23	7.26	9.56	6.36	
Vanguard Mid-Cap Growth Index Admiral	-27.57	7.49	10.27	10.85	09-27-2011	-16.15	6.02	8.63	9.20	
Vanguard Mid-Cap Value Index Admiral	-11.55	4.64	9.45	10.49	09-27-2011	-6.21	4.01	8.15	9.12	
Vanguard Target Retirement 2020 Fund	-19.31	1.05	4.07	4.24	06-07-2006	-6.29	2.23	4.16	4.10	
Vanguard Target Retirement 2025 Fund	-20.42	1.65	4.73	4.97	10-27-2003	-7.65	2.44	4.54	4.65	
Vanguard Target Retirement 2030 Fund	-21.43	2.03	5.33	4.84	06-07-2006	-7.91	2.72	5.00	4.50	
Vanguard Target Retirement 2035 Fund	-22.13	2.34	5.81	5.69	10-27-2003	-7.85	3.06	5.46	5.29	
Vanguard Target Retirement 2040 Fund	-22.82	2.69	6.29	5.36	06-07-2006	-7.98	3.37	5.86	4.97	
Vanguard Target Retirement 2045 Fund	-22.58	3.22	6.60	6.28	10-27-2003	-9.04	3.57	6.02	5.75	
Vanguard Target Retirement 2050 Fund	-22.44	3.30	6.68	5.61	06-07-2006	-9.60	3.50	6.01	5.08	
Vanguard Target Retirement 2055 Fund	-22.00	3.42	6.78	7.65	08-18-2010	-10.09	3.39	6.01	6.78	
Vanguard Target Retirement 2060 Fund	-21.33	3.61	6.89	7.26	01-19-2012	-10.94	3.33	5.98	6.30	
Vanguard Target Retirement 2065 Fund	-20.53	3.89	—	4.50	07-12-2017	-11.57	3.32	—	3.80	
Vanguard Target Retirement Income Fund	-16.19	0.63	2.17	3.30	10-27-2003	-7.14	1.27	2.29	3.18	
Vanguard Total Bond Market Index I	-15.45	-1.25	-0.21	2.52	09-18-1995	-8.59	-0.55	0.23	2.59	
Vanguard Total Intl Stock Index I	-25.92	-1.48	2.41	2.04	11-29-2010	-14.46	-0.56	2.41	2.13	

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Mutual Fund Detail Report

Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publicly-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject

to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

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asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance

The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns

The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share classes) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b-1 Expense %

A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha

Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation

Asset Allocation reflects asset class weightings of the portfolio. The "Other"

category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefiting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration

Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity

Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon

A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price

Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

Best Fit Index

Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta

Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown

Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %

The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %

The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %

The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization

Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000

For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %

The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %

The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean

Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates investment products based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe investment products are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a 10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process, price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Morningstar Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of investment products using alternative investment strategies, the modification by alpha dispersion is not used.

Separately managed accounts are rated using the methodology for actively managed funds. A proxy fee is deducted from all separately managed accounts in a given Morningstar Category. The proxy fee is based on a survey of separately managed account model-delivery fees.

The Morningstar Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. For active investment products, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active investment product will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active investment products. For passive investment products, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an investment product will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive investment products. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of investment products using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an investment product will deliver a weighted pillar score above a predetermined threshold within its peer group. Morningstar Analyst Ratings ultimately reflect the Manager

Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to <http://global.morningstar.com/equitydisclosure>.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating an investment product, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the investment product.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the "Quantitative Fund Ratings"). The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

• **Morningstar Quantitative Rating:** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to <https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx> for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

• **Quantitative Parent pillar:** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

• **Quantitative People pillar:** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

• **Quantitative Process Pillar:** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit <https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx>

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managedisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is

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measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Style Analysis

The Morningstar Style Box reveals a fund's investment style as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth). A darkened cell in the style box matrix indicates the weighted average style of the portfolio.

For portfolios holding fixed-income investments, a Fixed Income Style Box is calculated. The vertical axis shows the credit quality based on credit ratings and the horizontal axis shows interest-rate sensitivity as measured by effective duration. There are three credit categories: "High", "Medium", and "Low", and there are three interest rate sensitivity categories: "Limited", "Moderate", and "Extensive" resulting in nine possible combinations. As in the equity Style Box the combination of credit and interest rate sensitivity for a portfolio is represented by a darkened cell in the matrix.

Morningstar uses credit rating information from credit rating agencies (CRA's) that have been designated Nationally Recognized Statistical Rating Organizations (NRSRO's) by the Securities and Exchange Commission (SEC) in the United States. For a list of all NRSROs, please visit <https://www.sec.gov/ocf/ocf-learn-nrsros.html>. Additionally, Morningstar will use credit ratings from CRA's which have been recognized by foreign regulatory institutions that are deemed the equivalent of the NRSRO designation.

To determine the rating applicable to a holding and the subsequent holding weighted value of a portfolio two methods may be employed. First is a common methodology approach where if a case exists such that two rating organizations/ agencies have rated a holding, the lower rating of the two should be applied; if three or more CRA's have rated a holding the median rating should be applied, and in cases where there are more than two ratings and a median rating cannot be determined the lower of the two middle ratings should be applied. Alternatively, if there is more than one rating available an average can be calculated from all and applied. Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. Credit ratings for any security held in a portfolio may change over time.

Morningstar uses the credit rating information to calculate a weighted-average credit quality value for the portfolio. This value is based only upon those holdings which are considered to be classified as "fixed income", such as government, corporate, or securitized issues. Other types of holdings such as equities and many, though not all, types of derivatives are excluded. The weighted-average credit quality value is represented by a rating symbol which

corresponds to the long-term rating symbol schemas employed by most CRA's. Note that this value is not explicitly published but instead serves as an input in Style Box calculation. This symbol is then used to map to a Style Box credit quality category of "low", "medium", or "high". Funds with a "low" credit quality category are those whose weighted-average credit quality is determined to be equivalent to the commonly used High Yield classification, meaning a rating below "BBB", portfolios assigned to the "high" credit category have either a "AAA" or "Aa+" average credit quality value, while "medium" are those with an average rating of "AA" inclusive to "BBB-". It is expected and intended that the majority of portfolios will be assigned a credit category of "medium".

For assignment to an interest-rate sensitivity category Morningstar uses the average effective duration of the portfolio. From this value there are three distinct methodologies employed to determine assignment to category.

Portfolios which are assigned to Morningstar municipal-bond categories employ static breakpoints between categories. These breakpoints are "Limited" equal to 4.5 years or less; (i) "Moderate" equal to 4.5 years to less than 7 years, and "Extensive" equal to more than 7 years. For portfolios assigned to Morningstar categories other than U.S. Taxable, including all domiciled outside the United States, static duration breakpoints are also used. The values differ from the municipal category values; (i) "Limited" equals less than or equal to 3.5 years, "Moderate" equals greater than 3.5 years but less than or equal to 6 years, "Extensive" is assigned to portfolios with effective durations of more than 6 years. Note: Interest-rate sensitivity for non-U.S. domiciled portfolios (excluding those in Morningstar convertible categories) may be assigned using average modified duration when average effective duration is not available.

For portfolios Morningstar classifies as U.S. Taxable Fixed-Income, interest-rate sensitivity category assignment is based on the effective duration of the Morningstar Core Bond Index (MCBI). The classification assignment is dynamically determined relative to the benchmark index value. A "Limited" category will be assigned to portfolios whose average effective duration is between 25% to 75% of MCBI average effective duration, where the average effective duration is between 75% to 125% of the MCBI the portfolio will be classified as "Moderate", and those portfolios with an average effective duration value 125% or greater of the average effective duration of the MCBI will be classified as "Extensive".

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

P/E Ratio TTM

The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such

stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category

Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile

Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure

Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns

Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared

R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure

The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings

Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the Defensive Super Sector generally have betas greater than 1. The Sensitive Super Sector includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change

Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio

Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation

Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility

of return.

Standardized Returns

Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return

Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns

Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and

are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below \$10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDERS: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDER might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses

are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDER trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDERS, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDERS can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

Bloomberg US Agg Bond TR USD

This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. Bloomberg Indexes and its associated data, Copyright © 2022 Bloomberg Index Services Limited. Bloomberg® is a trademark and service mark of Bloomberg Finance L.P. and its affiliates (collectively "Bloomberg"). Bloomberg or Bloomberg's licensors own all proprietary rights in the Bloomberg Indices. Bloomberg does not approve or endorse this material or guarantee the accuracy or completeness of any information herein, nor does Bloomberg make any warranty, express or implied, as to the results to be obtained therefrom and, to the maximum extent allowed by law, Bloomberg shall not have any liability or responsibility for injury or damages arising in connection therewith. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

Bloomberg US Universal TR USD

BarCap U.S. Universal Bond Index: The U.S. Universal Index mirrors the increasingly popular "Core Plus" choice set used by many U.S.-dollar investors. It is the union of the U.S. Aggregate Index, the U.S. High Yield Corporate Index, the 144A Index, the Eurodollar Index, the Emerging Markets Index, the non-

ERISA portion of the CMBS Index, and the CMBS High Yield Index. Municipal debt, private placements, and non-dollar-denominated issues are excluded from the Universal Index. The constituents displayed for this index are from the following proxy: iShares Core Total USD Bond Market ETF.

Morningstar Gbl Allocation TR USD

The index measures the performance of a multi-asset class portfolio of global equities, global bonds and cash. This portfolio is held in a static allocation that is appropriate for investors who seek average exposure to global equity market risk and returns. This Index does not incorporate Environmental, Social, or Governance (ESG) criteria.

Morningstar Gbl xUS Growth TME NR USD

The index measures the performance of large and mid-cap stocks representing the faster-growing half of global markets excluding US. This Index does not incorporate Environmental, Social, or Governance (ESG) criteria.

Morningstar Lifetime Mod 2020 TR USD

The Morningstar Lifetime Moderate 2020 Index represents a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a U.S. investor who is about ten years away from retirement. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Morningstar Lifetime Mod 2025 TR USD

The Morningstar Lifetime Moderate 2025 Index represents a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a U.S. investor who is about 15 years away from retirement. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Morningstar Lifetime Mod 2030 TR USD

The Morningstar Lifetime Moderate 2030 Index represents a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a U.S. investor who is about 20 years away from retirement. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Morningstar Lifetime Mod 2035 TR USD

The Morningstar Lifetime Moderate 2035 Index represents a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a U.S. investor who is about 25 years away from retirement. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Morningstar Lifetime Mod 2040 TR USD

The Morningstar Lifetime Moderate 2040 Index represents a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a U.S. investor who is about 30 years away from retirement. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Morningstar Lifetime Mod 2045 TR USD

The Morningstar Lifetime Moderate 2045 Index represents a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a U.S. investor who is about 35 years away from retirement. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Morningstar Lifetime Mod 2050 TR USD

The Morningstar Lifetime Moderate 2050 Index represents a portfolio of global

equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a U.S. investor who is about 40 years away from retirement. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Morningstar Lifetime Mod 2055 TR USD

The Morningstar Lifetime Moderate 2055 Index represents a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a U.S. investor who is about 45 years away from retirement. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Morningstar Lifetime Mod 2060 TR USD

The index measures the performance of a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a US investor who has a target maturity date of 2060. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility. This Index does not incorporate Environmental, Social, or Governance (ESG) criteria.

Morningstar Lifetime Mod Incm TR USD

The Morningstar Lifetime Moderate Income Index represents a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a U.S. investor who is at least ten years into retirement. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Morningstar Mod Tgt Risk TR USD

The Morningstar Moderate Target Risk Index represents a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in a static allocation appropriate for U.S. investors who seek average exposure to equity market risk and returns.

Morningstar US Core Bd TR USD

The index measures the performance of fixed-rate, investment-grade USD-denominated securities with maturities greater than one year. It is market-capitalization weighted. This Index does not incorporate Environmental, Social, or Governance (ESG) criteria.

Morningstar US LM Brd Growth TR USD

The index provides a comprehensive depiction of the performance and fundamental characteristics of the Large-Mid Cap Growth segment of U.S. equity markets. It targets stocks representing the faster growing half of the U.S. large- and mid-cap market. This Index does not incorporate Environmental, Social, or Governance (ESG) criteria.

Morningstar US LM Brd Val TR USD

The index provides a comprehensive depiction of the performance and fundamental characteristics of the Large-Mid Cap Value segment of U.S. equity markets. It targets stocks representing the cheaper half of the U.S. large- and mid-cap market. This Index does not incorporate Environmental, Social, or Governance (ESG) criteria.

Morningstar US Mid Brd Grt TR USD

The index measures the performance of US mid-cap growth stocks. It targets stocks representing the faster growing half of the mid-cap market. This Index does not incorporate Environmental, Social, or Governance (ESG) criteria.

Morningstar US Mid Brd Val TR USD

The index measures the performance of US mid-cap value stocks. It targets stocks representing the cheaper half of the U.S. mid-cap market. This Index does

not incorporate Environmental, Social, or Governance (ESG) criteria.

Morningstar US Mod Con Tgt Alloc NR USD

The Morningstar Target Allocation Index family consists of indexes that offer a diversified mix of stocks and bonds created for local investors to benchmark their allocation funds. Morningstar's Category classification system defines the level of equity and bond exposure for each index. The Morningstar US Moderately Conservative Target Allocation Index seeks 40% exposure to global equity markets.

Morningstar US SmI Brd Grt Ext TR USD

The index provides a comprehensive depiction of the performance and fundamental characteristics of the Small Growth segment of U.S. equity markets. It targets stocks representing the faster growing half of the U.S. small-cap market. This Index does not incorporate Environmental, Social, or Governance (ESG) criteria.

MSCI ACWI Ex USA Growth NR USD

The index measures the performance of the growth large and mid cap segments of the particular regions, excluding USA equity securities, including developed and emerging market. It is free float-adjusted market-capitalization weighted. The constituents displayed for this index are from the following proxy: iShares MSCI ACWI ETF.

MSCI ACWI Ex USA NR USD

The MSCI AC World ex USA is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets. The index consists of 48 developed and emerging market country indices. The returns we publish for the index are total returns, which include reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares MSCI ACWI ex US ETF.

MSCI ACWI NR USD

The index measures the performance of the large and mid cap segments of all country markets. It is free float-adjusted market-capitalization weighted. The constituents displayed for this index are from the following proxy: iShares MSCI ACWI ETF.

MSCI EAFE NR USD

This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information. The constituents displayed for this index are from the following proxy: Schwab International Index Fund®.

Russell 1000 Growth TR USD

Tracks the companies within the Russell 1000 with higher price-to-book ratios and higher forecasted growth values. The constituents displayed for this index are from the following proxy: iShares Russell 1000 Growth ETF.

Russell 1000 TR USD

Consists of the 1000 largest companies within the Russell 3000 index, which represents approximately 98% of the investable US equity market. Also known as the Market-Oriented Index, because it represents the group of stocks from

which most active money managers choose. The constituents displayed for this index are from the following proxy: iShares Russell 1000 ETF.

Russell 1000 Value TR USD

Tracks the companies within the Russell 1000 with lower price-to-book ratios and lower forecasted growth values. The constituents displayed for this index are from the following proxy: iShares Russell 1000 Value ETF.

Russell Mid Cap Growth TR USD

Tracks the companies within the Russell Midcap Index with higher price-to-book ratios and higher forecasted growth values. The constituents displayed for this index are from the following proxy: iShares Russell Mid-Cap Growth ETF.

Russell Mid Cap Value TR USD

Tracks the companies within the Russell Midcap Index having lower price-to-book ratios and lower forecasted growth values. The constituents displayed for this index are from the following proxy: iShares Russell Mid-Cap Value ETF.

S&P 500 TR USD

A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) Indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon

Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

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Performance. Performance results illustrated herein do not reflect a deduction of any investment advisory fees charged by Hyas Group or any investment manager but do include the fund's internal expenses. Performance results are annualized for time periods greater than one year and include all cash and cash equivalents, realized and unrealized capital gains and losses, and dividends, interest, and income. The investment results depicted herein represent historical performance. As a result of recent market activity, current performance may vary from the figures shown. Past performance is not a guarantee of future results.

The underlying fund's internal expenses (also known as the expense ratio) generally covers investment management fees, marketing, and distribution fees (also known as 12b-1 fees) and other operating expenses of the fund. The expense ratios being displayed for mutual funds reflect each fund's prospectus "net" expenses as provided by Morningstar. Such "net" expenses are subject to change and may increase at any time.

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Performance data quoted is historical. Past performance does not guarantee future results. Current performance may be higher or lower than the performance quoted. You can obtain performance data current to the most recent month-end for each fund by visiting the fund company website. The investment return and principal value of an investment will fluctuate such that an investor's shares, when redeemed, may be worth more or less than their original cost. Total returns include reinvestment of dividends and capital gains and are net of all fund fees and expenses.

Performance figures are based on Net Asset Value (NAV) within a qualified retirement plan. If an individual were to purchase shares outside of a qualified plan, they would likely be subject to all, or a portion of, any applicable sales charges. These charges would lower the performance indicated above.

Each fund's performance may, from time to time, have been affected significantly by material market and economic conditions, including interest rates, market trends, and general business and economic cycles, which may or may not be repeated in the future. Also, keep in mind that any double-digit returns are highly unusual and cannot be sustained. Such returns are primarily achieved during favorable market conditions.

Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns include the reinvestment of all dividends, but do not reflect the payment of transaction costs, advisory fees or expenses that are associated with an investment. The indices selected by Hyas Group to measure performance are representative of broad asset classes. Hyas Group retains the right to change representative indices at any time. Performance of indices may be more or less volatile than any investment product. The risk of loss in value of a specific investment is not the same as the risk of loss in a broad market index. Therefore, the historical returns of an index will not be the same as the historical returns of a particular investment a client selects. Past performance does not guarantee future results.

The "Investment Policy Statement Compliance Report" indicates funds that are on the Plan's Watch List, as based on investment monitoring criteria which is provided to Hyas Group by the plan sponsor. The plan sponsor should inform its Hyas Group Consultant of any changes to the plan's investment policy.

Fund data provided by Morningstar.

Peer Groups. Peer Groups are a collection of similar investment strategies that essentially group investment products that share the same investment approach. Peer Groups are used for comparison purposes to compare and illustrate a client's investment portfolio versus its peer across various quantitative metrics like performance and risk. Peer Group comparison is conceptually another form of benchmark comparison whereby the actual investment can be ranked versus its peer across various quantitative metrics.

Peer Group Ranking Methodology. A percentile rank denotes the value of a product in which a certain percent of observations falls within a peer group. The range of percentile rankings is between 1 and 100, where 1 represents a high statistical value and 100 represents a low statistical value. The 30th percentile, for example, is the value in which 30% of the highest observations may be found, the 65th percentile is the value in which 65% of the highest observations may be found, and so on.

Percentile rankings are calculated based on a normalized distribution ranging from 1 to 100 for all products in each peer group, where a ranking of 1 denotes a high statistical value and a ranking of 100 denotes a low statistical value. It is important to note that the same ranking methodology applies to all statistics, implying that a ranking of 1 will always mean highest value across all statistics.

For example, consider a risk/return assessment using standard deviation as a measure of risk. A percentile ranking equal to 1 for return denotes highest return, whereas a percentile ranking of 1 for standard deviation denotes highest risk among peers.

In addition, values may be used to demonstrate quartile rankings. For example, the third quartile is also known as the 75th percentile, and the median is the 50th percentile.

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