



City of Santa Clara

Meeting Agenda

Deferred Compensation Committee

Thursday, February 16, 2023

10:00 AM

Hybrid Meeting
City Hall Council
Chambers/Virtual
1500 Warburton Avenue
Santa Clara, CA 95050

The City of Santa Clara is conducting the Deferred Compensation Committee in a hybrid manner (in-person and a method for the public to participate remotely).

To join Zoom Meeting please use this URL to join:

<https://santaclaraca.zoom.us/j/82387509120?pwd=WGlaanRDTEpFbFR2VGtOeHRVRzU3QT09>

Webinar ID: 823 8750 9120

Passcode: 343408

Or

Phone: 1 (669) 444 - 9171

CALL TO ORDER AND ROLL CALL

CONSENT CALENDAR

1A 23-227 [Action to Approve the Deferred Compensation Committee Meeting Minutes of November 17, 2022](#)

Recommendation: Approve the Meeting Minutes of November 17, 2022

PUBLIC PRESENTATIONS

[This item is reserved for persons to address the body on any matter not on the agenda that is within the subject matter jurisdiction of the body. The law does not permit action on, or extended discussion of, any item not on the agenda except under special circumstances. The governing body, or staff, may briefly respond to statements made or questions posed, and appropriate body may request staff to report back at a subsequent meeting.]

GENERAL BUSINESS

2A 23-226 [Informational Report on Fourth Quarter 2022 Performance and Quarterly Plan Review presented by the Hyas Group](#)

2B 23-239 [Informational Report on External Training Opportunities presented by the Hyas Group](#)

- 2C 23-228 [Informational Report on Fourth Quarter 2022 Performance Presented by Nationwide](#)

- 2D 23-230 [Informational Report Regarding the SECURE 2.0 Act of 2022 presented by Nationwide](#)

- 2E 23-229 [Action to Review and Adopt the Investment Policy Statement \(IPS\) for the City's 457 Deferred Compensation Plan](#)

STAFF REPORT

COMMISSIONERS REPORT

ADJOURNMENT

MEETING DISCLOSURES

The time limit within which to commence any lawsuit or legal challenge to any quasi-adjudicative decision made by the City is governed by Section 1094.6 of the Code of Civil Procedure, unless a shorter limitation period is specified by any other provision. Under Section 1094.6, any lawsuit or legal challenge to any quasi-adjudicative decision made by the City must be filed no later than the 90th day following the date on which such decision becomes final. Any lawsuit or legal challenge, which is not filed within that 90-day period, will be barred. If a person wishes to challenge the nature of the above section in court, they may be limited to raising only those issues they or someone else raised at the meeting described in this notice, or in written correspondence delivered to the City of Santa Clara, at or prior to the meeting. In addition, judicial challenge may be limited or barred where the interested party has not sought and exhausted all available administrative remedies.

If a member of the public submits a speaker card for any agenda items, their name will appear in the Minutes. If no speaker card is submitted, the Minutes will reflect "Public Speaker."

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 ("ADA"), the City of Santa Clara will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs, or activities, and will ensure that all existing facilities will be made accessible to the maximum extent feasible. The City of Santa Clara will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities including those with speech, hearing, or vision impairments so they can participate equally in the City's programs, services, and activities. The City of Santa Clara will make all reasonable modifications to policies and programs to ensure that people with disabilities have an equal opportunity to enjoy all of its programs, services, and activities.

Agendas and other written materials distributed during a public meeting that are public record will be made available by the City in an appropriate alternative format. Contact the City Clerk's Office at 1 408-615-2220 with your request for an alternative format copy of the agenda or other written materials.

Individuals who require an auxiliary aid or service for effective communication, or any other disability-related modification of policies or procedures, or other accommodation, in order to participate in a program, service, or activity of the City of Santa Clara, should contact the City's ADA Coordinator at 408-615-3000 as soon as possible but no later than 48 hours before the scheduled event.



City of Santa Clara

1500 Warburton Avenue
Santa Clara, CA 95050
santaclaraca.gov
@SantaClaraCity

Agenda Report

23-227

Agenda Date: 2/16/2023

REPORT TO DEFERRED COMPENSATION COMMITTEE

SUBJECT

Action to Approve the Deferred Compensation Committee Meeting Minutes of November 17, 2022

RECOMMENDATION

Approve the Meeting Minutes of November 17, 2022



City of Santa Clara

Meeting Minutes

Deferred Compensation Committee

11/17/2022

10:00 AM

Virtual Meeting
1500 Warburton Avenue
Santa Clara, CA 95050

Pursuant to California Government Code Section 54953(e) and City of Santa Clara Resolution 22-9150, the Deferred Compensation Committee will be held by teleconference only. No physical location will be available for this meeting, however, the City of Santa Clara continues to have methods for the public to participate remotely:

To join Zoom Meeting please use this URL to join:

<https://santaclaraca.zoom.us/j/84342019217?pwd=QldJT09ZeTViWCtpSWcrRzBKTHRIQT09>

Meeting ID: 843 4201 9217

Passcode: 383348

CALL TO ORDER AND ROLL CALL

Chair Lee called the Deferred Compensation Committee Meeting to order at 10:03 AM.

Present 4 - Chair Kenn Lee, Member Steve Hance, Member Kathy Bunce, and Member Jason Beals

Absent 1 - Member Cory Morgan

CONSENT CALENDAR

1a [22-1387](#) Action to Approve the Deferred Compensation Committee Meeting Minutes of August 18, 2022

A motion was made by Committee Member Beals, seconded by Committee Member Bunce, to approve the Deferred Compensation Committee Meeting Minutes of August 18, 2022.

Aye: 4 - Chair Lee, Member Hance, Member Bunce, and Member Beals

Absent: 1 - Member Morgan

PUBLIC PRESENTATIONS

GENERAL BUSINESS

- 2a** [22-1385](#) Informational Report on Third Quarter 2022 Performance and Quarterly Plan Review presented by the Hyas Group
- 2b** [22-1393](#) Informational Report on Third Quarter 2022 Performance Presented by Nationwide
- 2c** [22-1388](#) Informational Report on amendments to the Deferred Compensation Plan Document presented by Nationwide
- Committee Member Bunce would like Human Resources to notify employees about being able to put leave payouts into deferred compensation.

STAFF REPORT

COMMITTEE REPORT

Vincent Galindo (the Hyas Group) informed the Committee of the 2023 NAGDA conference in Seattle in October and encouraged committee members to attend.

ADJOURNMENT

The meeting was adjourned at 10:54 AM.

A motion was made by Committee Member Bunce, seconded by Committee Member Hance, to adjourn the Deferred Compensation Committee Meeting.

Aye: 4 - Chair Lee, Member Hance, Member Bunce, and Member Beals

Absent: 1 - Member Morgan

MEETING DISCLOSURES

The time limit within which to commence any lawsuit or legal challenge to any quasi-adjudicative decision made by the City is governed by Section 1094.6 of the Code of Civil Procedure, unless a shorter limitation period is specified by any other provision. Under Section 1094.6, any lawsuit or legal challenge to any quasi-adjudicative decision made by the City must be filed no later than the 90th day following the date on which such decision becomes final. Any lawsuit or legal challenge, which is not filed within that 90-day period, will be barred. If a person wishes to challenge the nature of the above section in court, they may be limited to raising only those issues they or someone else raised at the meeting described in this notice, or in written correspondence delivered to the City of Santa Clara, at or prior to the meeting. In addition, judicial challenge may be limited or barred where the interested party has not sought and exhausted all available administrative remedies.

If a member of the public submits a speaker card for any agenda items, their name will appear in the Minutes. If no speaker card is submitted, the Minutes will reflect "Public Speaker."

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 ("ADA"), the City of Santa Clara will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs, or activities, and will ensure that all existing facilities will be made accessible to the maximum extent feasible. The City of Santa Clara will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities including those with speech, hearing, or vision impairments so they can participate equally in the City's programs, services, and activities. The City of Santa Clara will make all reasonable modifications to policies and programs to ensure that people with disabilities have an equal opportunity to enjoy all of its programs, services, and activities.

Agendas and other written materials distributed during a public meeting that are public record will be made available by the City in an appropriate alternative format. Contact the City Clerk's Office at 1 408-615-2220 with your request for an alternative format copy of the agenda or other written materials.

Individuals who require an auxiliary aid or service for effective communication, or any other disability-related modification of policies or procedures, or other accommodation, in order to participate in a program, service, or activity of the City of Santa Clara, should contact the City's ADA Coordinator at 408-615-3000 as soon as possible but no later than 48 hours before the scheduled event.



City of Santa Clara

1500 Warburton Avenue
Santa Clara, CA 95050
santaclaraca.gov
@SantaClaraCity

Agenda Report

23-226

Agenda Date: 2/16/2023

REPORT TO DEFERRED COMPENSATION COMMITTEE

SUBJECT

Informational Report on Fourth Quarter 2022 Performance and Quarterly Plan Review presented by the Hyas Group

DISCUSSION

This is an informational report to the City's 457 Deferred Compensation Plan Committee on the City Plan's fourth quarter 2022 performance. This report will be presented by the Hyas Group and will cover the following topics: a) market commentary, b) fund review, and c) fee and revenue analysis.

As this is an informational report only, no action is taken by the Committee.

1. Hyas - City of Santa Clara 12-31-22 Performance Report
2. Hyas - City of Santa Clara 4Q2022 Executive Summary



CITY OF SANTA CLARA
457 Deferred Compensation Plan
December 31, 2022 Performance Report

Vincent Galindo
Senior Consultant
vgalindo@hyasgroup.com

Geoff Hildreth
Performance Analyst
ghildreth@hyasgroup.com

TABLE OF CONTENTS

Section 1	Market Overview
Section 2	Account Review
Section 3	Investment Performance Review
Section 4	Plan Fee/Revenue Review
Section 5	Fund Attribution

Section 1



CONSTRUCTIVE VIEWS ON PRODUCTIVITY

2022 contained no shortage of high-level events across the spectrum: military conflicts, continued pandemic, a bear market, inflation, aggressive monetary policy, and many more which continue into 2023. The importance of these notwithstanding, this article pivots to discuss a longer-term subject whose course has been influenced by 2022 and the era leading up to it: productivity. From the aftermath of the Great Financial Crisis (GFC) up to the start of COVID, productivity growth lagged longer-term averages and was not broadly dispersed throughout the myriad of sectors in the broader economy. Looking forward, factors on the supply side, which combined with demographic trends offer several avenues for new and productivity-enhancing capital expansion. After all last year's difficulties, it's nice to talk about something positive for a change!

Households and corporations still have substantially healthy balance sheets. Corporate cash levels are high, debt maturities are several years out, and leverage ratios are well below long-term trends. Banks in particular, the proverbial switch-board of capital, maintain excess capital thanks in part to controls set after the GFC. Good to know the funds are there, but who and what will the productivity come from? The US workforce is expected to get younger on average in the years to come, ushering in workers with a more natural proclivity to new technology and the potential for increased automation. This demographic transformation comes on the back of several recent years of increased venture capital funding bringing superior computing products to a more tractable labor market. More expensive financing via higher interest rates may also compel companies to leverage new technology to remain profitable.

The ingredients for productivity growth being there, where in particular might the capital expenditure money go? One of the offshoots more directly linked to the pandemic is the digitization of business models, wherein artificial intelligence and machine learning was originally substituted in for traditional R&D to help expedite the production of mRNA technologies, it has the potential for application across many other industries. Another is the adoption of hybrid or remote working, allowing increased labor mobility, reduced time lost to commuting, and more business start-ups bringing unique, new products to market. Spending on decarbonization from the Inflation Reduction Act, to come via fiscal and public/private partnership spending, also has the potential to add hundreds of billions of dollars to domestic output in new technologies. While other areas such as increases in defense and infrastructure spending also can bolster productivity, the economy-wide possibilities are varied and endless.

This article's optimistic hypotheses, which may take years to unfold, illustrate one of the benefits of a dynamic and open economy that is easily overlooked in stressful times: the potential for positive surprises. COVID's damages being what they are, many of the financial reactions to it when combined with other technological and demographic trends have the potential to positively transform economic lives for years to come. Such transformation arguably could not be as easily achieved in a more economically stagnant, sedate, or otherwise closed environment. Although the productivity gains we are hoping for are by no means guaranteed; the ingredients are there and the prospect reminds investors that the long-run can pack a lot of upside, even if the recent past has been anything but easy.¹

¹Source: Morgan Stanley Global Investment Committee Special Report by Lisa Shalett, The Next American Productivity Renaissance, January 4, 2023

GLOBAL ECONOMIC LANDSCAPE

- As expected by a consensus of forecasters, inflation as measured by CPI came down in December 2022 for a second month; 7.0% at the headline level and 6.0% at core. In turn, the Fed lowered the pace of rate hikes to 50 basis points at its December meeting, bringing the fed funds rate to 4.5%. While there is reason to be sanguine about inflation, sticky prices in services and the tightness of the labor market are wildcards which the Fed has explicitly cited as risks. Despite the Fed's hawkish rhetoric which raised the terminal rate and pushed out guidance on first rate cuts, the market discounted only 25 to 50 basis points more in hikes and aggressive rate cuts by June. With financial conditions quite loose, the Fed has room to deliver negative surprises².
- The rise in Treasury yields may well challenge the US Government's ability to finance operations. For example, as of year-end 2022, nearly 30% of US Government debt was scheduled to mature within one year and approximately another 20% has a maturity date of between one and three years. One implication is that increased borrowing costs will crowd out discretionary spending. Another is that the Treasury may seek to issue longer-term debt which, thanks to an inverted yield curve, entails lower borrowing costs³.
- According to a Federal Reserve Report in November 2022 ("What Happens in China Does Not Stay in China"), policy-driven increases in China's credit may provide a tailwind for energy and commodity prices. For example, the International Energy Agency noted that China's demand for oil dropped by the greatest amount in over three decades due to lockdowns. Factors such as a re-opening in travel, an uptick in property demand, combined with relatively low inventory levels of copper and aluminum have the potential to stoke demand⁴.

GLOBAL FINANCIAL MARKETS

- In 2022, persistent global inflationary pressures and coordinated central bank rate hikes led equities to decline to bear market lows and fixed income to experience the sharpest losses in decades. This was the first time in modern history where both US stocks and long-term bonds declined by double digits in a year. The traditional 60% stock/40% bond portfolio lost -16.1% in 2022, the worst return in more than 50 years⁵.
- The US Dollar retreated in value from its peak on September 28, 2022, suggesting that investors believe the Fed is near the end of its tightening cycle. This in turn has been viewed positively for Emerging Markets in terms of their ability to attract, compete in export markets, raise capital by issuing dollar-denominated debt, and otherwise develop economically⁶.
- Despite being viewed as an inflation-hedge, Real Estate Investment Trusts (REITs) saw their second worst year on record in 2022 (the worst being 2008), returning -24.5% versus -18.1% for the S&P 500. Although operating income growth was above historical averages, valuation metrics such as rising interest rates and credit spreads, as well as declining earnings expectations and falling private market valuations presented a formidable headwind for the sector⁷.
- Gold typically trades inversely with real, or inflation-adjusted, yields. Falling real yields support the yellow metal and rising yields on inflation-protection securities drive losses. With the 10-year US Treasury real yield having backed up by nearly 280 basis points in 2022 to 1.6% from an extremely negative

² Source: Morgan Stanley Global Investment Committee Weekly December 19, 2022

³ Source: Morgan Stanley Global Investment Committee Weekly January 9, 2023

⁴ Source: Morgan Stanley, A Few Things We're Thinking About, by Christopher Baxter, January 5, 2023

⁵ Source: Morgan Stanley, Client Commentary, January 2023

⁶ Source: Morgan Stanley, A Few Things We're Thinking About, by Christopher Baxter January 5, 2023

⁷ Source: Morgan Stanley, The REIT Cheat Sheet, North America by Ronald Kamden, January 3, 2023

position, it should have been a horrendous year for gold. However, demand has remained strong as shifting geopolitics and currency market turmoil have led central banks, especially those in China and Russia, to build their reserves⁸.

Disclosure: The views and opinions expressed in this commentary are those of the portfolio manager at the time of this writing and do not necessarily represent those of Hyas Group, Morgan Stanley, its affiliates or its other employees. Of course, these views may change without notice in response to changing circumstances and market conditions. Furthermore, this commentary contains forward-looking statements and there can be no guarantee that they will come to pass. Historical data shown represents past performance and does not guarantee comparable future results. The information and statistical data contained herein have been obtained from sources that are believed to be reliable but in no way are guaranteed by Hyas Group as to accuracy or completeness.

It is not an offer to buy or sell or a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. This material does not provide individually tailored investment advice and has been prepared without regard to the individual financial circumstances and objectives of persons who receive it.

The 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.

Hyas Group, a business of Morgan Stanley.

For further information please contact Tom Breaden (tbreaden@hyasgroup.com).

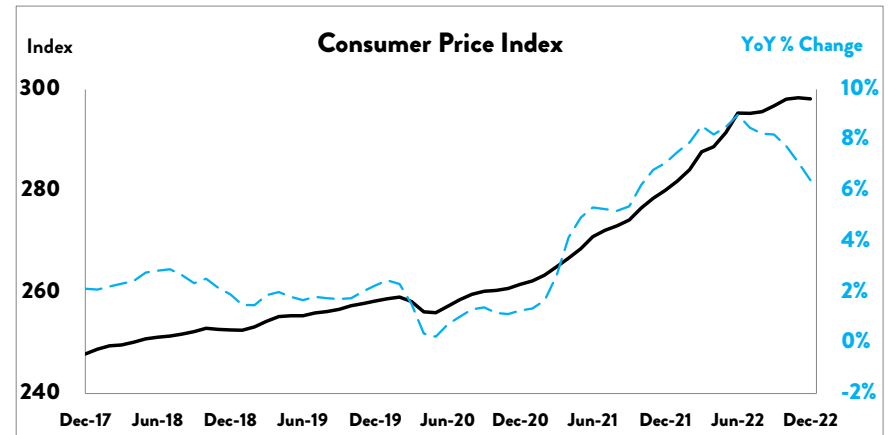
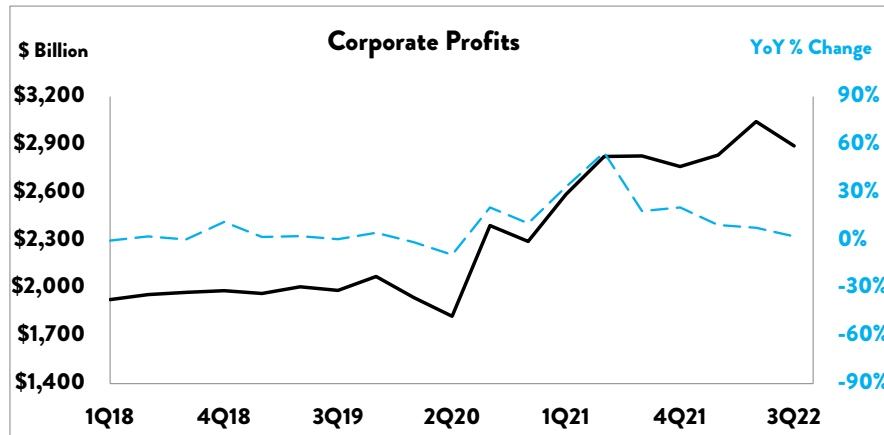
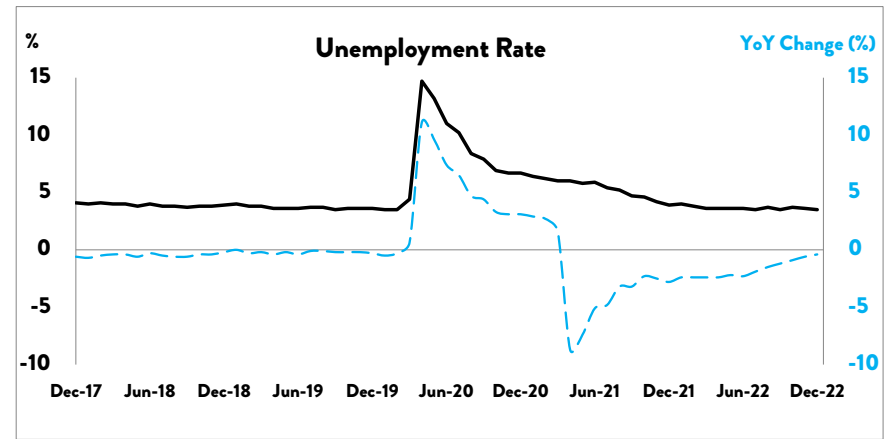
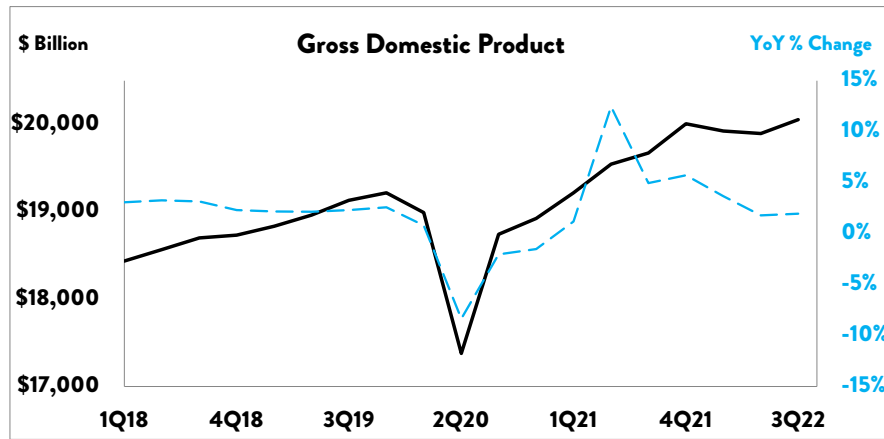
Hyas Group, 9755 SW Barnes Road, Suite 660, Portland, Oregon 97225; 503-634-1500

⁸ Source: Morgan Stanley Global Investment Committee Weekly January 3, 2023

This report is being provided for informational purposes only. The information and opinions presented in this report do not constitute investment advice and have been obtained from sources believed by Hyas Group to be reliable. Hyas Group makes no representation as to their accuracy or completeness. All opinions expressed herein are subject to change.

©Morgan Stanley, 2023 CRC 5416715- 1/23

4Q2022 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	223,000	4,505,000	-20,493,000	103,567	Dec-22
Unemployment Rate	3.5%	14.7%	3.5%	4.9%	Dec-22
Median Unemployment Length (Weeks)	7.5	22.2	4.0	11.2	Dec-22
Average Hourly Earnings	\$32.82	\$32.82	\$26.73	\$29.45	Dec-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	\$3.17	\$4.84	\$1.80	-34.5%	Dec-22
Spot Oil	\$76.44	\$114.84	\$16.55	-33.4%	Dec-22
Case-Shiller Home Price Index	304.2	316.2	204.7	48.7%*	Oct-22
Medical Care CPI	552.3	557.4	480.8	14.9%*	Dec-22

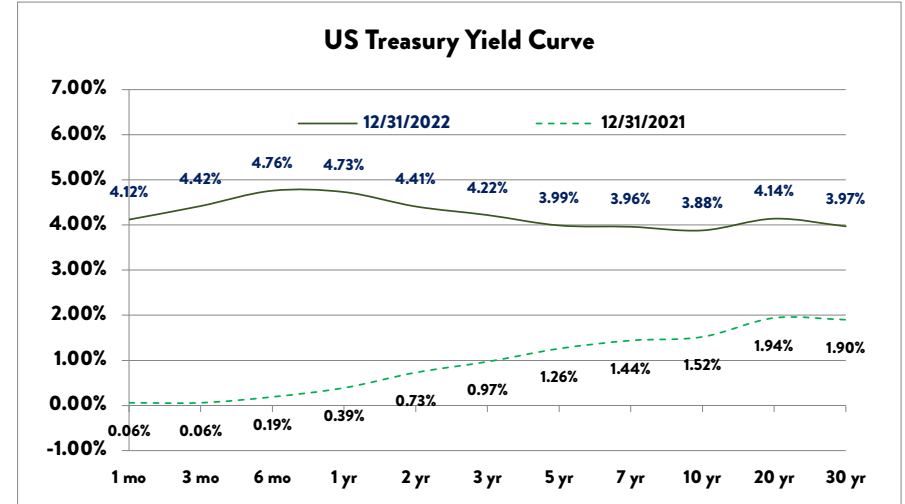
*% Off Low

Morningstar data as of 12/31/2022

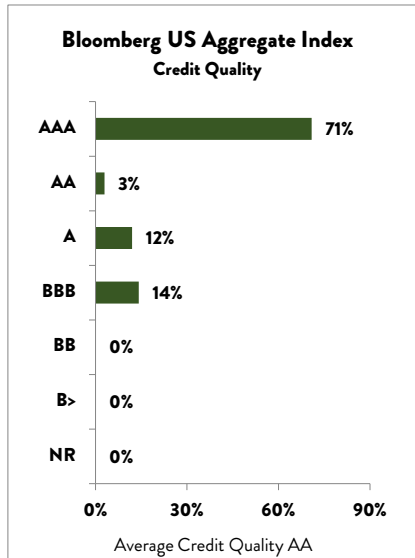
4Q2022 Bond Market Data

Index	QTR	YTD	1 yr.	3 yrs.	5 yrs.	10 yrs.
90-Day T-Bill	1.02%	2.05%	2.05%	0.82%	1.31%	0.79%
Bloomberg US Aggregate	1.87%	-13.01%	-13.01%	-2.71%	0.02%	1.06%
Bloomberg Short US Treasury	0.85%	0.98%	0.98%	0.66%	1.26%	0.80%
Bloomberg Int. US Treasury	1.02%	-7.77%	-7.77%	-1.39%	0.46%	0.69%
Bloomberg Long US Treasury	-0.59%	-29.26%	-29.26%	-7.40%	-2.20%	0.60%
Bloomberg US TIPS	2.04%	-11.85%	-11.85%	1.21%	2.11%	1.12%
Bloomberg US Credit	3.44%	-15.26%	-15.26%	-2.86%	0.42%	1.82%
Bloomberg US Mortgage-Backed	2.14%	-11.81%	-11.81%	-3.22%	-0.53%	0.74%
Bloomberg US Asset-Backed	0.81%	-4.30%	-4.30%	-0.11%	1.18%	1.23%
Bloomberg US 20-Yr Municipal	5.23%	-11.02%	-11.02%	-1.05%	1.37%	2.64%
Bloomberg US High Yield	4.17%	-11.19%	-11.19%	0.05%	2.31%	4.03%
Bloomberg Global	4.55%	-16.25%	-16.25%	-4.48%	-1.66%	-0.44%
Bloomberg International	6.81%	-18.70%	-18.70%	-5.94%	-3.07%	-1.64%
Bloomberg Emerging Market	6.59%	-15.26%	-15.26%	-3.89%	-0.42%	1.71%

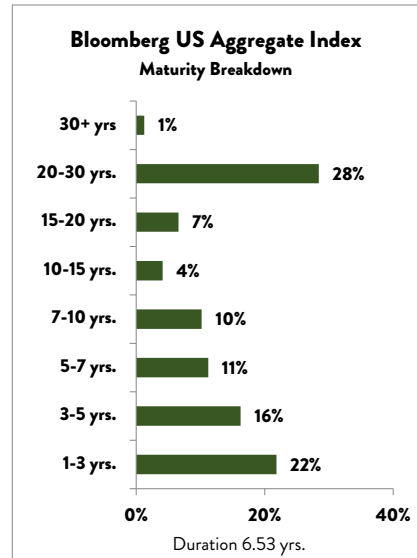
Source: Morningstar



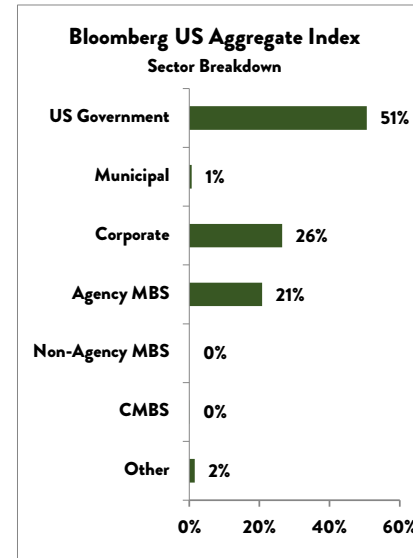
Source: Department of US Treasury



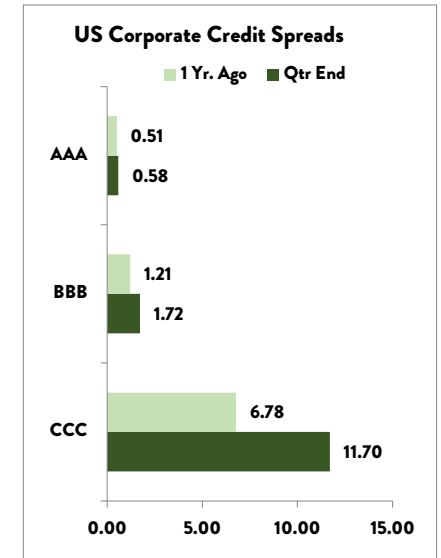
Source: Morningstar



Source: Morningstar



Source: Morningstar



Source: Federal Reserve / Bank of America

4Q2022 US Equity Market Data

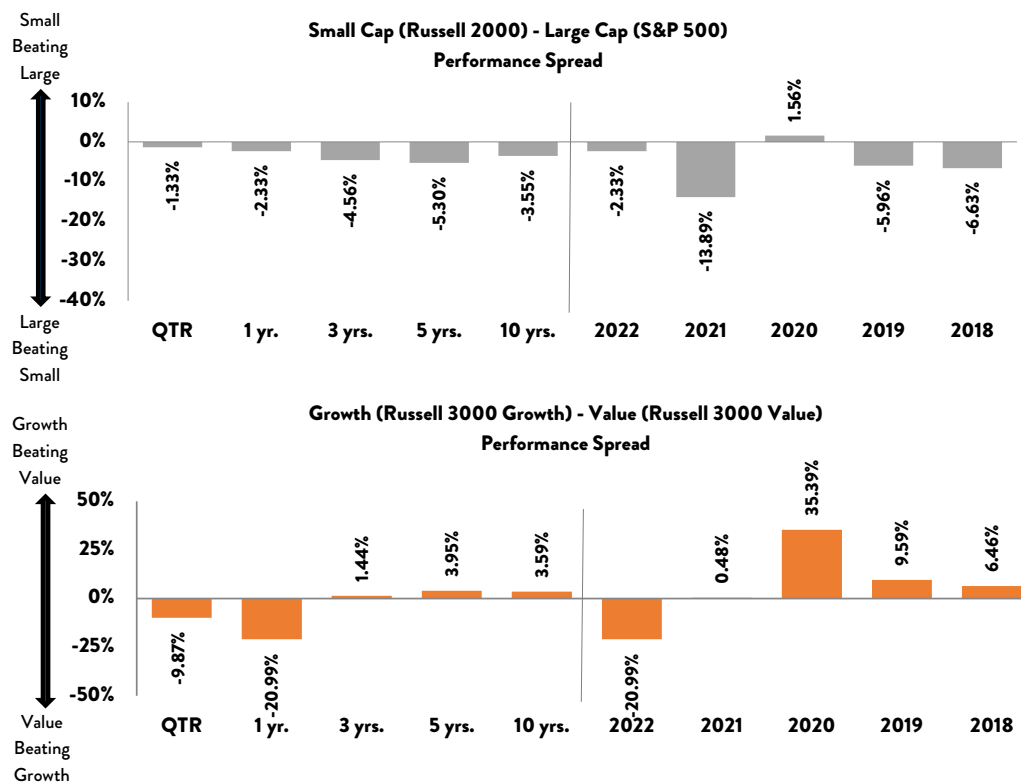
Sectors Weights/Returns (ranked by quarter performance)

	Wgt.	Sector	QTR	YTD	1 yr.
S&P 500 Index	5%	Energy	22.81%	65.72%	65.72%
	9%	Industrials	19.22%	-5.48%	-5.48%
	3%	Materials	15.05%	-12.27%	-12.27%
	12%	Financials	13.61%	-10.53%	-10.53%
	16%	Health Care	12.80%	-1.95%	-1.95%
	7%	Consumer Staples	12.72%	-0.62%	-0.62%
	3%	Utilities	8.64%	1.57%	1.57%
	26%	Information Technology	4.74%	-28.19%	-28.19%
	3%	Real Estate	3.82%	-26.13%	-26.13%
	7%	Communication Services	-1.38%	-39.89%	-39.89%
10%	Consumer Discretionary	-10.18%	-37.03%	-37.03%	
S&P Midcap 400 Index	7%	Materials	21.92%	-2.73%	-2.73%
	14%	Consumer Discretionary	14.24%	-21.03%	-21.03%
	20%	Industrials	12.77%	-11.50%	-11.50%
	4%	Utilities	11.62%	-0.15%	-0.15%
	4%	Consumer Staples	11.59%	-0.77%	-0.77%
	4%	Energy	10.45%	36.62%	36.62%
	15%	Financials	9.57%	-3.04%	-3.04%
	12%	Information Technology	9.36%	-20.47%	-20.47%
	10%	Health Care	5.22%	-20.05%	-20.05%
	2%	Communication Services	4.31%	-20.39%	-20.39%
8%	Real Estate	3.74%	-26.35%	-26.35%	
S&P Smallcap 600 Index	5%	Energy	20.45%	47.89%	47.89%
	17%	Industrials	14.66%	-9.40%	-9.40%
	3%	Utilities	12.64%	-1.84%	-1.84%
	6%	Materials	11.51%	-6.09%	-6.09%
	13%	Consumer Discretionary	10.91%	-27.82%	-27.82%
	5%	Consumer Staples	9.76%	-6.47%	-6.47%
	8%	Real Estate	9.01%	-29.50%	-29.50%
	13%	Information Technology	8.09%	-22.36%	-22.36%
	18%	Financials	7.21%	-14.02%	-14.02%
	11%	Health Care	0.48%	-26.32%	-26.32%
2%	Communication Services	-3.18%	-34.46%	-34.46%	

Source: Morningstar

Index Performance Data

Index	QTR	YTD	1 yr.	Annualized		
				3 yrs.	5 yrs.	10 yrs.
S&P 500	7.56%	-18.11%	-18.11%	7.66%	9.42%	12.56%
Russell 1000 Value	12.42%	-7.54%	-7.54%	5.96%	6.67%	10.29%
Russell 1000 Growth	2.20%	-29.14%	-29.14%	7.79%	10.96%	14.10%
Russell Mid Cap	9.18%	-17.32%	-17.32%	5.88%	7.10%	10.96%
Russell Mid Cap Value	10.45%	-12.03%	-12.03%	5.82%	5.72%	10.11%
Russell Mid Cap Growth	6.90%	-26.72%	-26.72%	3.85%	7.64%	11.41%
Russell 2000	6.23%	-20.44%	-20.44%	3.10%	4.13%	9.01%
Russell 2000 Value	8.42%	-14.48%	-14.48%	4.70%	4.13%	8.48%
Russell 2000 Growth	4.13%	-26.36%	-26.36%	0.65%	3.51%	9.20%
Russell 3000	7.18%	-19.21%	-19.21%	7.07%	8.79%	12.13%
DJ US Select REIT	4.76%	-25.96%	-25.96%	-1.37%	2.50%	5.74%



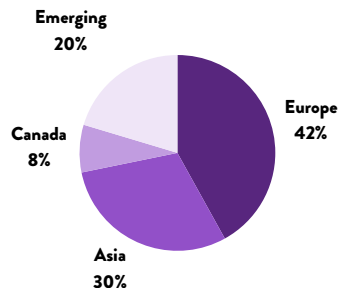
4Q2022 International Market Data

Index Performance Data (net)

Index (US\$)	QTR	YTD	1 yr.	3 yrs.	5 yrs.	10 yrs.
MSCI ACWI ex-US	14.28%	-16.00%	-16.00%	0.07%	0.88%	3.80%
MSCI EAFE	17.34%	-14.45%	-14.45%	0.87%	1.54%	4.67%
Europe	19.35%	-15.06%	-15.06%	1.35%	1.87%	4.58%
United Kingdom	16.98%	-4.84%	-4.84%	0.32%	0.96%	3.07%
Germany	24.57%	-22.34%	-22.34%	-3.01%	-3.02%	2.66%
France	22.19%	-13.33%	-13.33%	2.53%	3.41%	6.14%
Pacific	14.13%	-13.04%	-13.04%	-0.03%	0.95%	4.89%
Japan	13.23%	-16.65%	-16.65%	-0.99%	0.23%	5.55%
Hong Kong	18.21%	-4.71%	-4.71%	-1.05%	-0.29%	4.77%
Australia	15.68%	-5.25%	-5.25%	4.07%	4.05%	3.97%
Canada	7.42%	-12.87%	-12.87%	4.95%	4.06%	3.68%
MSCI EM	9.70%	-20.09%	-20.09%	-2.69%	-1.40%	1.44%
MSCI EM Latin America	5.73%	8.92%	8.92%	-4.79%	-1.08%	-2.15%
MSCI EM Asia	10.83%	-21.11%	-21.11%	-1.31%	-0.62%	3.55%
MSCI EM Eur/Mid East	1.25%	-35.34%	-35.34%	-9.53%	-4.07%	-4.02%
MSCI ACWI Value ex-US	15.70%	-8.59%	-8.59%	0.06%	-0.05%	2.72%
MSCI ACWI Growth ex-US	12.89%	-23.05%	-23.05%	-0.40%	1.49%	4.68%
MSCI ACWI Sm Cap ex-US	13.31%	-19.97%	-19.97%	1.07%	0.67%	5.24%

Regional Exposure

MSCI ACWI ex-USA

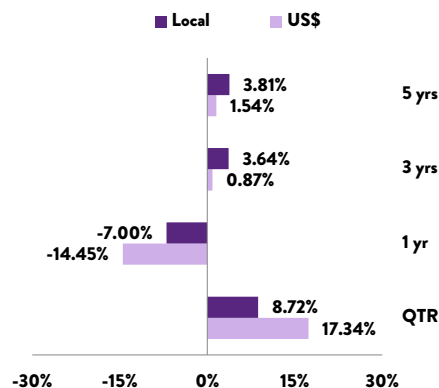


Top 10 Countries (MSCI AC World ex-USA)

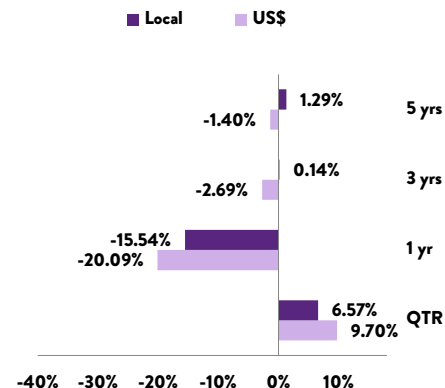
Japan	14%
UK	10%
China	9%
Canada	8%
France	8%
Switzerland	7%
Germany	5%
Australia	5%
India	4%
Taiwan	4%

Source: Morningstar

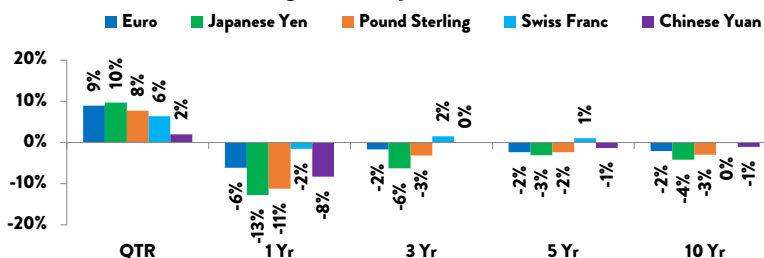
MSCI EAFE Index Return



MSCI Emerging Index Return



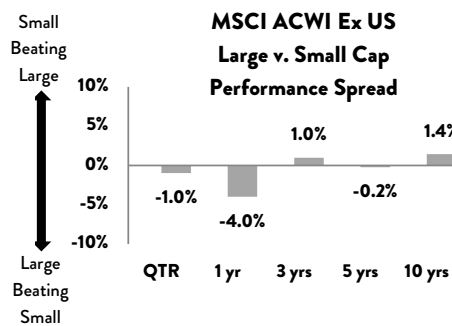
Foreign Currency v. US\$ Returns



Exchange Rates	QTR	3Q22	2Q22	1Q22	4Q21	3Q21
Japanese Yen	131.81	144.71	135.69	121.44	115.17	111.50
Euro	0.93	1.02	0.96	0.90	0.88	0.86
British Pound	0.83	0.90	0.82	0.76	0.74	0.74
Swiss Franc	0.92	0.98	0.96	0.92	0.91	0.93
Chinese Yuan	6.90	7.11	6.70	6.34	6.37	6.44

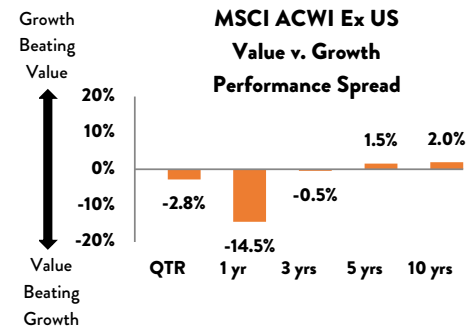
Source: Federal Reserve Bank of St. Louis

MSCI ACWI Ex US Large v. Small Cap Performance Spread



Performance Source: Morningstar

MSCI ACWI Ex US Value v. Growth Performance Spread



Historical Market Returns

Ranked by Performance

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	4Q22
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. 16.09%	Intl 14.28%
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 6.59%	Emerging Markets 9.70%
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 2.05%	Mid Cap 9.18%
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%	High Yield -11.19%	Large Cap 7.56%
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%	TIPS -11.85%	Global Balanced 7.50%
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%	US Bonds -13.01%	Small Cap 6.23%
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%	Intl -16.00%	Global Bonds 4.55%
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 Bonds -16.25%	High Yield 4.17%
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%	Global Balanced -16.40%	Commod. 2.22%
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 -17.32%	TIPS 2.04%
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%	Large Cap -18.11%	US Bonds 1.87%
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%	Emerging Markets -20.09%	Cash 1.02%
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%	Small Cap -20.44%	Core Real Estate -5.13%

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

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PLAN ASSET ALLOCATION

Fourth Quarter 2022

Fixed Income	Ticker	Assets	%
Nationwide Fixed Fund	-	\$62,329,404	30.1%
Fidelity US Bond Index	FXNAX	\$2,471,481	1.2%
Sterling Capital Total Return Bond R6	STRDX	\$3,643,656	1.8%
Hotchkis & Wiley High Yield Z	HWHZX	\$1,415,585	0.7%
Total		\$69,860,126	33.7%

Large Cap	Ticker	Assets	%
DFA US Large Cap Value I	DFLVX	\$8,080,316	3.9%
Fidelity 500 Index	FXAIX	\$34,402,962	16.6%
T. Rowe Price Large Cap Growth I	TRLGX	\$15,439,327	7.4%
Total		\$57,922,605	27.9%

Mid Cap	Ticker	Assets	%
MFS Mid Cap Value R6	MVCKX	\$2,041,837	1.0%
Fidelity Mid Cap Index	FSMDX	\$3,273,435	1.6%
JPMorgan Mid Cap Growth R6	JMGMX	\$6,656,385	3.2%
Total		\$11,971,657	5.8%

Small Cap	Ticker	Assets	%
DFA US Targeted Value I	DFVFX	\$4,003,056	1.9%
Fidelity Small Cap Index	FSSNX	\$1,889,802	0.9%
Vanguard Small Growth Index Adm	VSGAX	\$2,911,282	1.4%
Total		\$8,804,140	4.2%

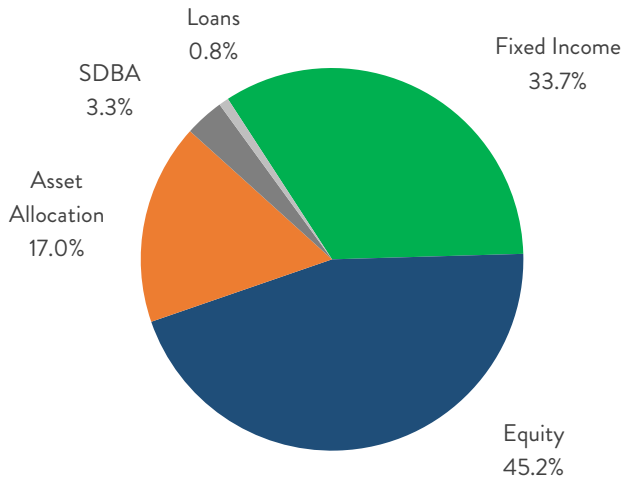
International	Ticker	Assets	%
Vanguard International Value Inv	VTRIX	\$3,477,463	1.7%
Fidelity Total International Index	FTIHX	\$5,156,053	2.5%
Vanguard International Growth Adm	VWILX	\$6,273,203	3.0%
Total		\$14,906,719	7.2%

Asset Allocation	Ticker	Assets	%
Vanguard Target Retirement Income	VTINX	\$1,544,413	0.7%
Vanguard Target Retirement 2025	VTTVX	\$12,772,831	6.2%
Vanguard Target Retirement 2030	VTHRX	\$1,090,113	0.5%
Vanguard Target Retirement 2035	VTTHX	\$7,007,213	3.4%
Vanguard Target Retirement 2040	VFORX	\$1,027,053	0.5%
Vanguard Target Retirement 2045	VTIVX	\$8,356,134	4.0%
Vanguard Target Retirement 2050	VFIFX	\$1,020,792	0.5%
Vanguard Target Retirement 2055	VFFVX	\$1,882,228	0.9%
Vanguard Target Retirement 2060	VTTSX	\$481,701	0.2%
Vanguard Target Retirement 2065	VLXVX	\$2,745	0.0%
Vanguard Target Retirement 2070	VSVNX	\$0	0.0%
Total		\$35,185,222	17.0%

Miscellaneous	Ticker	Assets	%
Self Directed Option	-	\$6,861,670	3.3%
Loans	-	\$1,734,203	0.8%
Total		\$8,595,873	4.1%

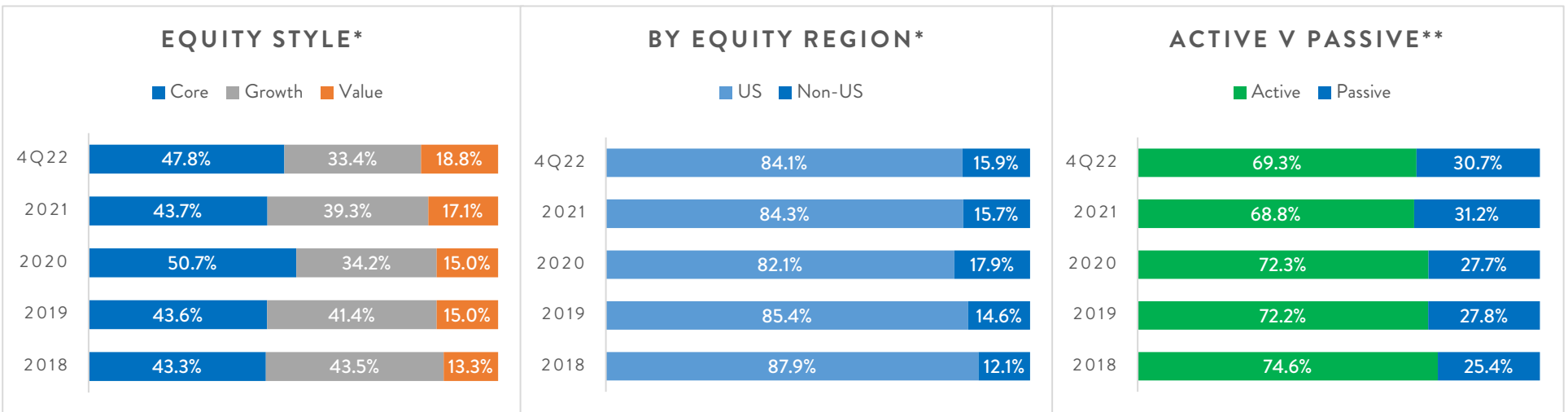
TOTAL PLAN ASSETS

\$207,246,343



HISTORICAL PLAN ALLOCATION

Asset Class	4Q22	2021	2020	2019	2018	2017	2016	2015
Fixed Income	33.7%	28.5%	33.4%	35.5%	38.7%	N/A	N/A	N/A
Large Cap	27.9%	30.6%	27.0%	26.3%	26.1%	N/A	N/A	N/A
Mid Cap	5.8%	6.5%	6.4%	7.7%	6.7%	N/A	N/A	N/A
Small Cap	4.2%	4.5%	3.9%	3.9%	4.1%	N/A	N/A	N/A
International	7.2%	7.8%	8.1%	6.5%	5.1%	N/A	N/A	N/A
Asset Allocation	17.0%	16.9%	16.3%	16.6%	16.3%	N/A	N/A	N/A
SDDBA	3.3%	4.4%	3.9%	2.8%	2.6%	N/A	N/A	N/A
Loans	0.8%	0.8%	1.0%	0.7%	0.5%	N/A	N/A	N/A



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

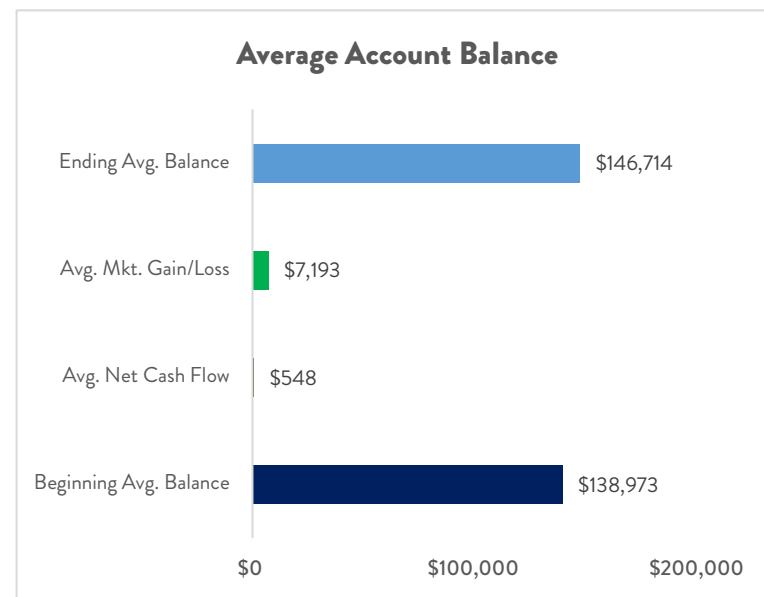
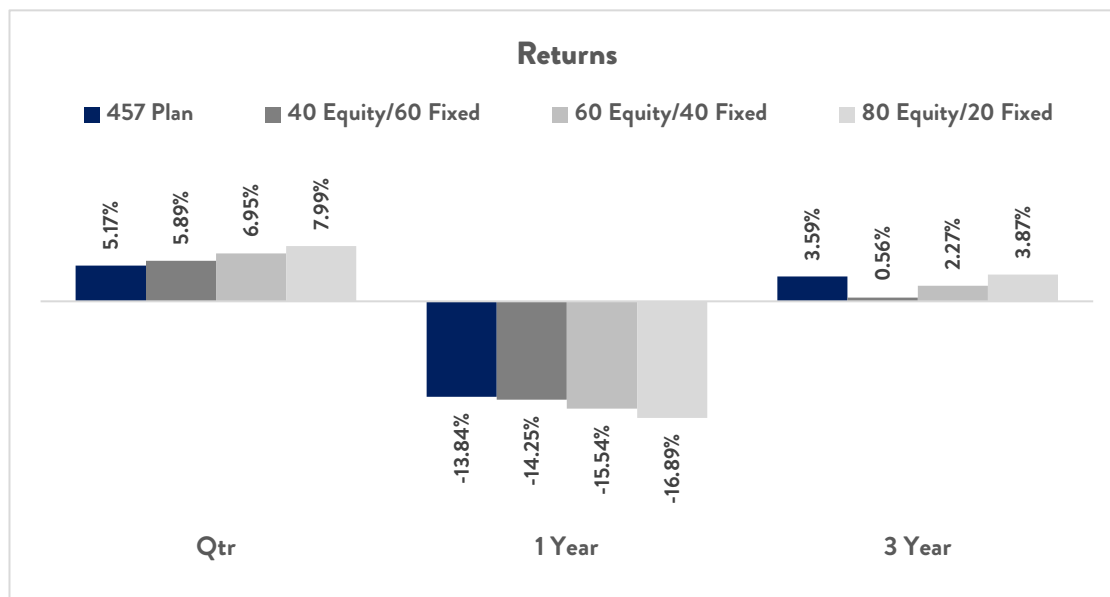
**Excludes Asset Allocation, Brokerage, and Loan assets

PLAN LEVEL CASH FLOWS

	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$69,207,209	\$598,192	(\$1,002,102)	\$437,137	\$619,691	\$69,860,126
Large Cap	\$53,655,612	\$794,958	(\$566,243)	\$710,717	\$3,327,559	\$57,922,605
Mid Cap	\$11,143,093	\$183,222	(\$98,583)	(\$138,902)	\$882,828	\$11,971,657
Small Cap	\$8,276,979	\$128,754	(\$51,287)	(\$213,531)	\$663,227	\$8,804,140
International	\$13,151,973	\$250,220	(\$216,172)	(\$132,507)	\$1,853,205	\$14,906,719
Asset Allocation	\$32,734,545	\$975,861	(\$255,074)	(\$662,914)	\$2,392,804	\$35,185,222
Total	\$188,169,411	\$2,931,206	(\$2,189,460)	\$0	\$9,739,313	\$198,650,470

HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
4Q22	\$188,169,411	\$741,746	\$9,739,313	\$198,650,470
YTD	\$228,093,930	\$2,016,434	(\$31,459,895)	\$198,650,470
2021	\$203,711,702	(\$1,066,724)	\$25,448,953	\$228,093,930
2020	\$174,412,951	\$3,320,382	\$25,978,370	\$203,711,702
2019	\$150,093,203	(\$2,185,094)	\$26,504,842	\$174,412,951
2018	N/A	N/A	N/A	\$150,093,203



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

This page left blank intentionally.

Section 3

Key: Ⓟ Pass / ● Fail

Investment Policy Status

	Performance Factors	Qualitative Factors	On-Watch Date Initiated	Notes
Nationwide Fixed Fund	Ⓟ	Ⓟ	-	
Fidelity US Bond Index	Ⓟ	Ⓟ	-	
Sterling Capital Total Return Bond R6	Ⓟ	Ⓟ	-	
Hotchkis & Wiley High Yield Z	●	Ⓟ	4Q2019	Trailing Benchmark and Peer Group for 5 year period. Sharpe Ratio trailing median for five-year period.
DFA US Large Cap Value I	●	Ⓟ	4Q2019	Trailing Benchmark and Peer Group for 5 year period. Sharpe Ratio trailing median for five-year period.
Fidelity 500 Index	Ⓟ	Ⓟ	-	
T. Rowe Price Large Cap Growth I	Ⓟ	Ⓟ	-	
MFS Mid Cap Value R6	Ⓟ	Ⓟ	-	
Fidelity Mid Cap Index	Ⓟ	Ⓟ	-	
JPMorgan Mid Cap Growth R6	Ⓟ	Ⓟ	-	
DFA US Targeted Value I	Ⓟ	Ⓟ	-	
Fidelity Small Cap Index	Ⓟ	Ⓟ	-	
Vanguard Small Growth Index Adm	Ⓟ	Ⓟ	-	
Vanguard International Value Inv	Ⓟ	Ⓟ	-	
Fidelity Total International Index	Ⓟ	Ⓟ	-	
Vanguard International Growth Adm	Ⓟ	Ⓟ	-	
Vanguard Target Retirement Income	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2025	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2030	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2035	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2040	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2045	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2050	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2055	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2060	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2065	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2070	Ⓟ	Ⓟ	-	

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Nationwide Fixed Fund	0.74	3.00	3.00	3.21	-	-	3.13	3.50	3.50	-	-	-
5 Yr Constant Maturity US Treasury Yield	0.99	3.00	3.00	1.46	1.81	1.68	0.85	0.54	1.96	2.75	1.91	1.44
+/- Index	(0.25)	0.00	0.00	1.75	-	-	2.28	2.96	1.54	-	-	-
Fidelity US Bond Index	1.68	-13.03	-13.03	-2.72	-0.02	1.01	-1.79	7.80	8.48	0.01	3.50	2.52
Bloomberg US Aggregate Bond Index	1.87	-13.01	-13.01	-2.71	0.02	1.06	-1.54	7.51	8.72	0.01	3.54	2.65
+/- Index	(0.19)	(0.02)	(0.02)	(0.01)	(0.04)	(0.05)	(0.25)	0.29	(0.23)	0.00	(0.04)	(0.13)
US Fund Intermediate Core Bond	43	29	29	46	38	42	65	50	48	26	43	55
Sterling Capital Total Return Bond R6	1.57	-13.15	-13.15	-2.08	0.48	1.58	-1.12	9.35	9.37	-0.27	4.33	3.75
Bloomberg US Aggregate Bond Index	1.87	-13.01	-13.01	-2.71	0.02	1.06	-1.54	7.51	8.72	0.01	3.54	2.65
+/- Index	(0.30)	(0.14)	(0.14)	0.63	0.46	0.52	0.42	1.84	0.65	(0.28)	0.79	1.10
US Fund Intermediate Core Bond	57	34	34	15	11	6	28	15	18	42	10	12
Hotchkis & Wiley High Yield Z	4.66	-9.69	-9.69	0.06	1.23	3.45	6.83	3.83	9.77	-3.34	8.24	16.02
Bloomberg US Corp High Yield Index	4.17	-11.19	-11.19	0.05	2.31	4.03	5.28	7.11	14.32	-2.08	7.50	17.13
+/- Index	0.49	1.50	1.50	0.01	(1.08)	(0.58)	1.55	(3.29)	(4.54)	(1.26)	0.73	(1.11)
US Fund High Yield Bond	18	29	29	34	73	39	13	74	87	64	15	17
DFA US Large Cap Value I	14.05	-5.78	-5.78	6.25	5.86	10.86	28.07	-0.61	25.45	-11.65	18.97	18.89
Russell 1000 Value Index	12.42	-7.54	-7.54	5.96	6.67	10.29	25.16	2.80	26.54	-8.27	13.66	17.34
+/- Index	1.63	1.76	1.76	0.29	(0.81)	0.57	2.91	(3.40)	(1.09)	(3.38)	5.30	1.55
US Fund Large Value	23	53	53	64	78	27	27	79	49	82	20	13

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Fidelity 500 Index	7.56	-18.13	-18.13	7.65	9.41	12.55	28.69	18.40	31.47	-4.40	21.81	11.97
S&P 500 Index	7.56	-18.11	-18.11	7.66	9.42	12.56	28.71	18.40	31.49	-4.38	21.83	11.96
+/- Index	0.00	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	0.00	(0.01)	(0.02)	(0.02)	0.01
US Fund Large Blend	56	49	49	30	20	11	21	33	22	22	32	27
T. Rowe Price Large Cap Growth I	-0.18	-35.18	-35.18	3.67	8.35	13.85	23.18	39.56	28.49	4.32	37.82	2.85
Russell 1000 Growth Index	2.20	-29.14	-29.14	7.79	10.96	14.10	27.60	38.49	36.39	-1.51	30.21	7.08
+/- Index	(2.38)	(6.04)	(6.04)	(4.12)	(2.61)	(0.25)	(4.42)	1.07	(7.90)	5.83	7.61	(4.22)
US Fund Large Growth	81	77	77	65	50	10	39	31	82	7	4	52
MFS Mid Cap Value R6	12.06	-8.64	-8.64	7.71	7.75	10.94	31.00	4.40	31.08	-11.31	13.84	15.86
Russell Mid Cap Value Index	10.45	-12.03	-12.03	5.82	5.72	10.11	28.34	4.96	27.06	-12.29	13.34	20.00
+/- Index	1.61	3.39	3.39	1.89	2.03	0.83	2.66	(0.57)	4.02	0.98	0.50	(4.14)
US Fund Mid-Cap Value	45	55	55	32	14	10	27	34	10	23	45	66
Fidelity Mid Cap Index	9.21	-17.28	-17.28	5.89	7.10	10.95	22.56	17.11	30.51	-9.05	18.47	13.86
Russell Mid Cap Index	9.18	-17.32	-17.32	5.88	7.10	10.96	22.58	17.10	30.54	-9.06	18.52	13.80
+/- Index	0.03	0.04	0.04	0.01	0.00	(0.01)	(0.02)	0.01	(0.03)	0.01	(0.05)	0.07
US Fund Mid-Cap Blend	51	67	67	53	30	16	66	24	24	25	26	57
JPMorgan Mid Cap Growth R6	6.05	-26.96	-26.96	6.38	9.87	13.04	10.99	48.51	39.96	-4.97	29.72	0.37
Russell Mid Cap Growth Index	6.90	-26.72	-26.72	3.85	7.64	11.41	12.73	35.59	35.47	-4.75	25.27	7.33
+/- Index	(0.85)	(0.24)	(0.24)	2.53	2.23	1.63	(1.74)	12.92	4.49	(0.22)	4.46	(6.96)
US Fund Mid-Cap Growth	41	41	41	17	10	9	61	24	9	46	17	91

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
DFA US Targeted Value I	12.63	-4.62	-4.62	11.16	7.04	10.49	38.80	3.77	21.47	-15.78	9.59	26.86
Russell 2000 Value Index	8.42	-14.48	-14.48	4.70	4.13	8.48	28.27	4.63	22.39	-12.86	7.84	31.74
+/- Index	4.21	9.86	9.86	6.46	2.91	2.01	10.53	(0.87)	(0.92)	(2.92)	1.75	(4.88)
US Fund Small Value	25	11	11	9	15	11	8	46	54	54	47	35
Fidelity Small Cap Index	6.25	-20.27	-20.27	3.15	4.22	9.17	14.71	19.99	25.71	-10.88	14.85	21.63
Russell 2000 Index	6.23	-20.44	-20.44	3.10	4.13	9.01	14.82	19.96	25.52	-11.01	14.65	21.31
+/- Index	0.02	0.17	0.17	0.05	0.09	0.16	(0.11)	0.03	0.18	0.14	0.20	0.32
US Fund Small Blend	89	79	79	73	61	48	89	12	36	34	26	46
Vanguard Small Growth Index Adm	3.02	-28.39	-28.39	0.79	5.10	9.27	5.70	35.28	32.76	-5.68	21.92	10.73
Vanguard US Small Cap Growth Index	3.00	-28.44	-28.44	0.79	5.09	9.22	5.71	35.35	32.75	-5.68	21.90	10.62
+/- Index	0.02	0.05	0.05	0.00	0.01	0.05	(0.01)	(0.07)	0.01	0.00	0.02	0.11
US Fund Small Growth	71	51	51	78	67	70	65	57	36	59	56	46
Vanguard International Value Inv	15.76	-11.66	-11.66	1.30	1.36	4.31	7.97	8.99	20.39	-14.52	27.96	4.46
MSCI ACWI Ex-USA Value (Net) Index	15.70	-8.59	-8.59	0.06	-0.05	2.72	10.46	-0.77	15.71	-13.97	22.66	8.92
+/- Index	0.06	(3.07)	(3.07)	1.24	1.41	1.59	(2.49)	9.76	4.68	(0.55)	5.30	(4.46)
US Fund Foreign Large Value	86	69	69	43	22	26	88	5	23	20	10	31
Fidelity Total International Index	14.78	-16.28	-16.28	0.29	0.96	-	8.47	11.07	21.48	-14.38	27.63	-
MSCI ACWI Ex-USA IMI (Net) Index	14.15	-16.58	-16.58	0.20	0.85	3.98	8.53	11.12	21.63	-14.76	27.81	4.41
+/- Index	0.63	0.30	0.30	0.09	0.11	-	(0.06)	(0.04)	(0.16)	0.37	(0.18)	-
US Fund Foreign Large Blend	78	55	55	58	58	-	65	42	62	39	27	-

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Vanguard International Growth Adm	12.62	-30.79	-30.79	3.14	4.75	7.84	-0.74	59.74	31.48	-12.58	43.16	1.84
MSCI ACWI Ex-USA Growth (Net) Index	12.89	-23.05	-23.05	-0.40	1.49	4.68	5.09	22.20	27.34	-14.43	32.01	0.12
+/- Index	(0.27)	(7.74)	(7.74)	3.54	3.26	3.16	(5.83)	37.54	4.14	1.84	11.15	1.72
US Fund Foreign Large Growth	71	82	82	8	9	5	87	2	23	34	7	16
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement Income	3.74	-12.74	-12.74	0.34	2.30	3.62	5.25	10.02	13.16	-1.99	8.47	5.25
Vanguard Retirement Income Index	3.95	-12.44	-12.44	0.72	2.58	3.86	5.43	10.70	13.40	-1.98	8.67	5.35
+/- Index	(0.21)	(0.30)	(0.30)	(0.38)	(0.28)	(0.24)	(0.18)	(0.68)	(0.24)	(0.01)	(0.19)	(0.10)
US Fund Target-Date Retirement	62	49	49	32	32	30	64	30	48	18	50	30
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2025	6.03	-15.55	-15.55	1.66	3.58	6.43	9.80	13.30	19.63	-5.15	15.94	7.48
Vanguard Retirement 2025 Index	6.16	-15.02	-15.02	2.23	4.01	6.77	10.10	14.19	19.93	-5.01	16.08	7.66
+/- Index	(0.13)	(0.53)	(0.53)	(0.57)	(0.43)	(0.34)	(0.30)	(0.89)	(0.30)	(0.14)	(0.14)	(0.18)
US Fund Target-Date 2025	40	52	52	39	31	18	47	34	20	48	22	21
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2030	6.81	-16.27	-16.27	2.09	3.94	6.99	11.38	14.10	21.07	-5.86	17.52	7.85
Vanguard Retirement 2030 Index	6.92	-15.71	-15.71	2.66	4.35	7.33	11.65	14.96	21.33	-5.74	17.65	8.11
+/- Index	(0.11)	(0.56)	(0.56)	(0.57)	(0.41)	(0.34)	(0.27)	(0.86)	(0.26)	(0.12)	(0.13)	(0.26)
US Fund Target-Date 2030	39	47	47	46	39	26	54	35	37	39	37	27
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2035	7.45	-16.62	-16.62	2.64	4.34	7.57	12.96	14.79	22.44	-6.58	19.12	8.26
Vanguard Retirement 2035 Index	7.41	-16.22	-16.22	3.14	4.73	7.91	13.24	15.67	22.76	-6.48	19.24	8.55
+/- Index	0.04	(0.40)	(0.40)	(0.50)	(0.39)	(0.34)	(0.28)	(0.87)	(0.33)	(0.10)	(0.12)	(0.29)
US Fund Target-Date 2035	62	38	38	52	42	30	78	38	49	31	40	32

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Vanguard Target Retirement 2040	8.20	-16.98	-16.98	3.17	4.74	8.06	14.56	15.47	23.86	-7.32	20.71	8.73
Vanguard Retirement 2040 Index	8.23	-16.51	-16.51	3.70	5.14	8.42	14.85	16.31	24.19	-7.22	20.87	8.98
+/- Index	(0.03)	(0.47)	(0.47)	(0.53)	(0.40)	(0.36)	(0.29)	(0.83)	(0.33)	(0.11)	(0.16)	(0.25)
US Fund Target-Date 2040	63	34	34	49	40	23	80	39	49	35	30	23
Vanguard Target Retirement 2045	8.89	-17.36	-17.36	3.74	5.14	8.34	16.16	16.30	24.94	-7.90	21.42	8.87
Vanguard Retirement 2045 Index	8.99	-16.84	-16.84	4.26	5.55	8.71	16.45	17.03	25.36	-7.77	21.54	9.13
+/- Index	(0.10)	(0.52)	(0.52)	(0.52)	(0.41)	(0.37)	(0.29)	(0.73)	(0.42)	(0.13)	(0.11)	(0.26)
US Fund Target-Date 2045	53	31	31	32	27	19	65	34	40	41	24	26
Vanguard Target Retirement 2050	9.23	-17.46	-17.46	3.80	5.18	8.36	16.41	16.39	24.98	-7.90	21.39	8.85
Vanguard Retirement 2050 Index	9.18	-17.07	-17.07	4.30	5.58	8.72	16.77	17.18	25.36	-7.77	21.54	9.13
+/- Index	0.05	(0.39)	(0.39)	(0.50)	(0.40)	(0.36)	(0.36)	(0.79)	(0.38)	(0.13)	(0.14)	(0.28)
US Fund Target-Date 2050	44	29	29	32	28	20	70	35	45	37	31	27
Vanguard Target Retirement 2055	9.23	-17.46	-17.46	3.79	5.18	8.34	16.44	16.32	24.98	-7.89	21.38	8.88
Vanguard Retirement 2055 Index	9.18	-17.07	-17.07	4.30	5.58	8.72	16.77	17.18	25.36	-7.77	21.54	9.13
+/- Index	0.05	(0.39)	(0.39)	(0.51)	(0.40)	(0.38)	(0.33)	(0.86)	(0.38)	(0.12)	(0.16)	(0.25)
US Fund Target-Date 2055	48	26	26	36	29	26	75	40	47	35	39	26
Vanguard Target Retirement 2060	9.23	-17.46	-17.46	3.79	5.18	8.34	16.44	16.32	24.96	-7.87	21.36	8.84
Vanguard Retirement 2060 Index	9.18	-17.07	-17.07	4.30	5.58	8.72	16.77	17.18	25.36	-7.77	21.54	9.13
+/- Index	0.05	(0.39)	(0.39)	(0.51)	(0.40)	(0.38)	(0.33)	(0.85)	(0.40)	(0.10)	(0.18)	(0.28)
US Fund Target-Date 2060	53	25	25	38	32	50	77	41	56	30	43	23

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

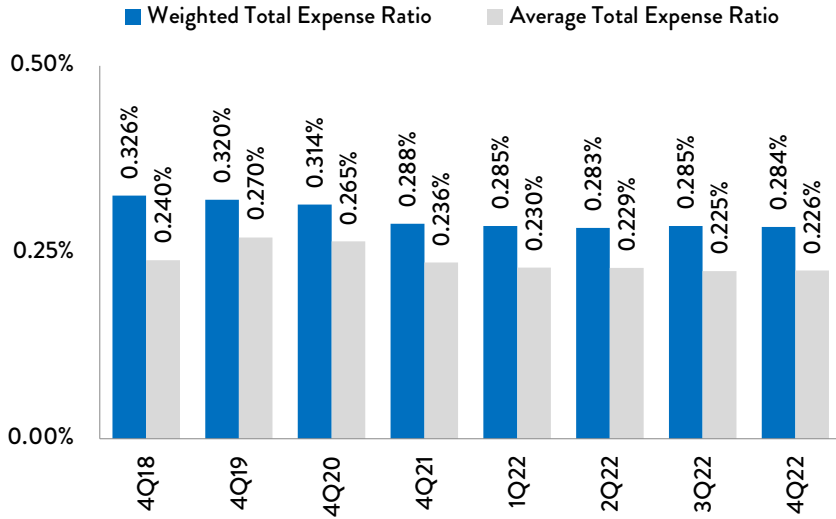
Fourth Quarter 2022

	QTR	YTD	1Yr	<i>Annualized</i>			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Vanguard Target Retirement 2065	9.24	-17.39	-17.39	3.78	5.15	-	16.46	16.17	24.96	-7.95	-	-
Vanguard Retirement 2065 Index	9.18	-17.07	-17.07	4.30	5.58	-	16.77	17.18	25.36	-7.77	-	-
+/- Index	0.06	(0.32)	(0.32)	(0.52)	(0.43)	-	(0.31)	(1.00)	(0.39)	(0.18)	-	-
US Fund Target-Date 2065+	51	18	18	31	31	-	67	56	59	12	-	-
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2070	9.21	-	-	-	-	-	-	-	-	-	-	-
Vanguard Retirement 2070 Index	9.18	-	-	-	-	-	-	-	-	-	-	-
+/- Index	0.03	-	-	-	-	-	-	-	-	-	-	-
US Fund Target-Date 2065+	54	-	-	-	-	-	-	-	-	-	-	-

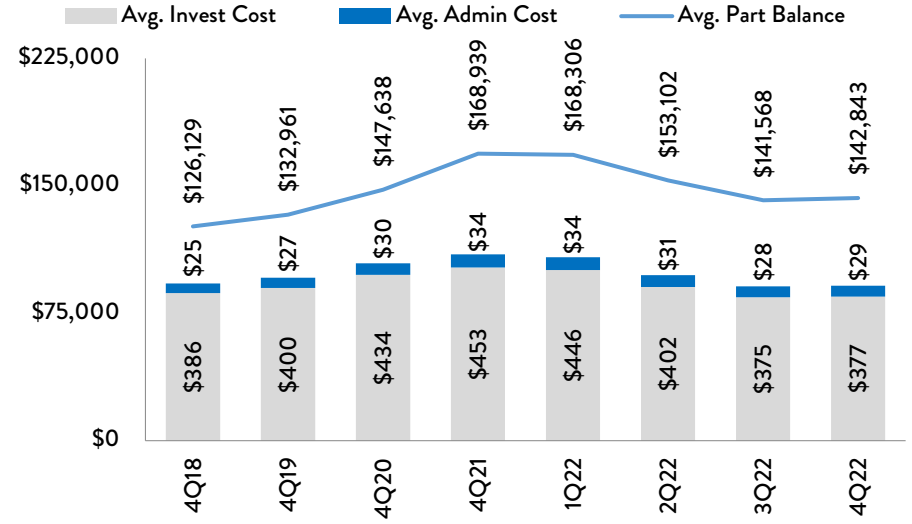
This page left blank intentionally.

Section 4

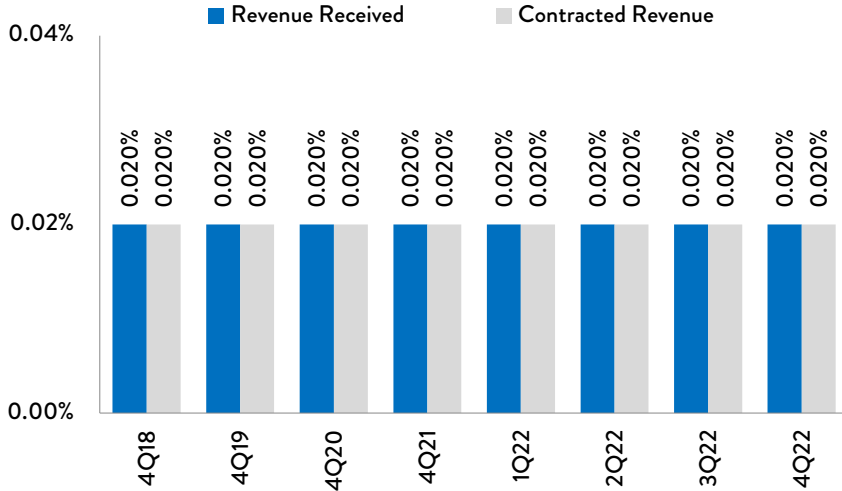
Annualized Plan Cost (%)



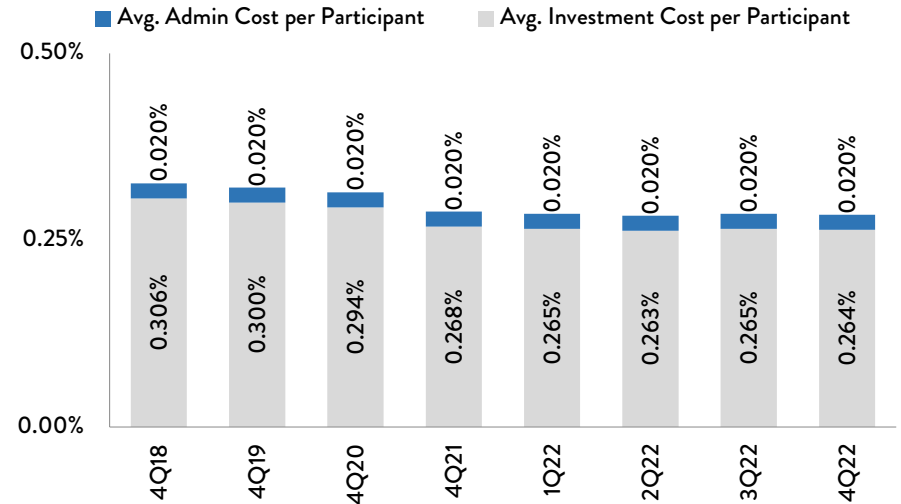
Average Participant Balance and Cost (\$)



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



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



CITY OF SANTA CLARA
457 Deferred Compensation Plan

PLAN FEE ANALYSIS
Fourth Quarter 2022

Annualized

Fund	Ticker	Quarter Average Assets	Net Expense Ratio	Admin Fee	Est. Total Invest. Cost	Est. Total Admin. Cost
Nationwide Fixed Fund*	-	\$62,152,294	0.40%	0.02%	\$248,609	\$12,430
Fidelity US Bond Index	FXNAX	\$2,419,015	0.03%	0.02%	\$605	\$484
Sterling Capital Total Return Bond R6	STRDX	\$3,587,724	0.35%	0.02%	\$12,557	\$718
Hotchkis & Wiley High Yield Z	HWHZX	\$1,374,635	0.60%	0.02%	\$8,248	\$275
DFA US Large Cap Value I	DFLVX	\$7,678,311	0.22%	0.02%	\$16,892	\$1,536
Fidelity 500 Index	FXAIX	\$32,701,076	0.02%	0.02%	\$4,905	\$6,540
T. Rowe Price Large Cap Growth I	TRLGX	\$15,409,722	0.55%	0.02%	\$84,753	\$3,082
MFS Mid Cap Value R6	MVCKX	\$1,936,266	0.64%	0.02%	\$12,392	\$387
Fidelity Mid Cap Index	FSMDX	\$3,169,050	0.03%	0.02%	\$792	\$634
JPMorgan Mid Cap Growth R6	JMGMX	\$6,452,059	0.70%	0.02%	\$45,164	\$1,290
DFA US Targeted Value I	DFFVX	\$3,832,289	0.29%	0.02%	\$11,114	\$766
Fidelity Small Cap Index	FSSNX	\$1,852,323	0.03%	0.02%	\$463	\$370
Vanguard Small Growth Index Adm	VSGAX	\$2,855,948	0.07%	0.02%	\$1,999	\$571
Vanguard International Value Inv	VTRIX	\$3,287,404	0.36%	0.02%	\$11,835	\$657
Fidelity Total International Index	FTIHX	\$4,753,665	0.06%	0.02%	\$2,852	\$951
Vanguard International Growth Adm	VWILX	\$5,988,276	0.34%	0.02%	\$20,360	\$1,198
Vanguard Target Retirement Income	VTINX	\$1,557,230	0.08%	0.02%	\$1,246	\$311
Vanguard Target Retirement 2025	VTTVX	\$12,407,822	0.08%	0.02%	\$9,926	\$2,482
Vanguard Target Retirement 2030	VTHRX	\$989,894	0.08%	0.02%	\$792	\$198
Vanguard Target Retirement 2035	VTTHX	\$6,952,736	0.08%	0.02%	\$5,562	\$1,391
Vanguard Target Retirement 2040	VFORX	\$955,243	0.08%	0.02%	\$764	\$191
Vanguard Target Retirement 2045	VTIVX	\$7,988,250	0.08%	0.02%	\$6,391	\$1,598
Vanguard Target Retirement 2050	VFIFX	\$946,439	0.08%	0.02%	\$757	\$189
Vanguard Target Retirement 2055	VFFVX	\$1,711,053	0.08%	0.02%	\$1,369	\$342
Vanguard Target Retirement 2060	VTTSX	\$448,832	0.08%	0.02%	\$359	\$90
Vanguard Target Retirement 2065	VLXVX	\$2,384	0.08%	0.02%	\$2	\$0
Vanguard Target Retirement 2070	VSVNX	\$0	0.08%	0.02%	\$0	\$0
TOTAL		\$193,409,940			\$510,709	\$38,682

Plan Administration Cost	Quarter	Annualized
Plan Generated Revenue (0.02% - est):	\$9,670	\$38,682

*No explicit expense ratio stated for the fund. For reporting purposes, an expense of 0.40% is assumed.

Section 5

DFA US Large Cap Value I (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
Silver **★★★★** S&P 500 TR USD Russell 1000 Value US Fund Large Value
 11-30-2022 1,155 US Fund Large Value TR USD

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-31.52	16.42	5.20	18.52	-0.61
2021	14.72	5.22	-1.47	7.69	28.07
2022	-0.35	-12.13	-5.65	14.05	-5.78
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-5.78	6.25	5.86	10.86	9.75
Std 12-31-2022	-5.78	—	5.86	10.86	9.75
Total Return	-5.78	6.25	5.86	10.86	9.75
+/- Std Index	12.34	-1.41	-3.56	-1.71	—
+/- Cat Index	1.76	0.29	-0.81	0.56	—
% Rank Cat	51	64	80	32	—
No. in Cat	1229	1155	1099	819	—

7-day Yield Subsidized Unsubsidized
 30-day SEC Yield — —

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 888-576-1167 or visit www.dimensional.com.

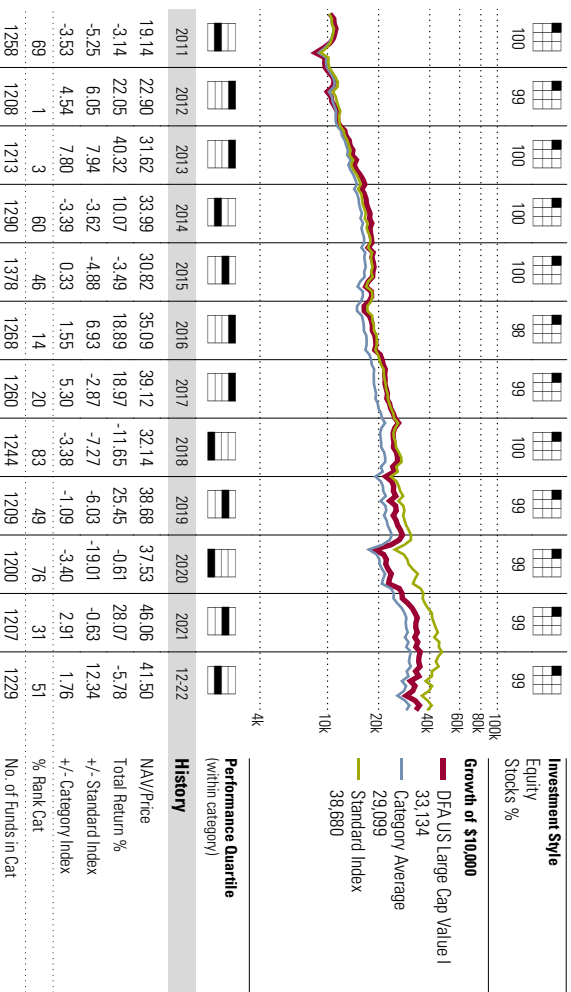
Fees and Expenses	
Sales Charges	NA
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	0.29
Management Fees %	NA
12b1 Expense %	NA
Net Expense Ratio %	0.22
Gross Expense Ratio %	0.32
Risk and Return Profile	

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	2★	2★	3★
Morningstar Risk	+Avg	+Avg	+Avg
Morningstar Return	Avg	-Avg	+Avg
Standard Deviation	24.31	21.34	17.00
Mean	6.25	5.86	10.86
Sharpe Ratio	0.34	0.31	0.65
MPT Statistics	Standard Index	Best Fit Index	Russell 1000 Value TR USD
Alpha	-0.95	0.07	1.12
Beta	1.04	—	0.98
R-Squared	82.61	—	98.08
12-Month Yield	—	—	—
Potential Cap Gains Exp	—	—	40.03%

Operations
 Family: Dimensional Fund Advisors
 Manager: Multiple
 Tenure: 10.9 Years
 Objective: Growth and Income

Base Currency: USD
 Ticker: DELVX
 ISIN: US2332038270
 Minimum Initial Purchase: \$0

Purchase Constraints: A
 Incept: 02-19-1993
 Type: MF
 Total Assets: \$23,825.91 mil



Portfolio Analysis 11-30-2022

Asset Allocation %	Net %	Long %	Short %
Cash	0.58	0.69	0.11
US Stocks	97.64	97.64	0.00
Non-US Stocks	1.78	1.78	0.00
Bonds	0.00	0.00	0.00
Other/Not Cstfd	0.00	0.00	0.00
Total	100.00	100.11	0.11

Equity Style

Value	Brand	Growth	Port	Rel	Rel
			Avg	Index	Cat
Large	Med	Ext	P/E Ratio TTM	12.1	0.64
Med	Med	Low	P/C Ratio TTM	9.0	0.63
Small	Med	Low	P/B Ratio TTM	2.1	0.58
			Geo Avg Mkt Cap	73194	0.45
			Geo Avg Mkt Cap	73194	0.45
			Smll		0.67

Fixed-Income Style

Value	Brand	Growth	Port	Rel	Rel
			Avg	Index	Cat
Large	Med	Ext	Avg Eff Maturity		
Med	Med	Low	Avg Eff Duration		
Small	Med	Low	Avg Wtd Coupon		
			Avg Wtd Price		

Credit Quality Breakdown —

	AAA	AA	A	BBB	BB	B	Below B	Bond %
AAA	—	—	—	—	—	—	—	—
AA	—	—	—	—	—	—	—	—
A	—	—	—	—	—	—	—	—
BBB	—	—	—	—	—	—	—	—
BB	—	—	—	—	—	—	—	—
B	—	—	—	—	—	—	—	—
Below B	—	—	—	—	—	—	—	—

Regional Exposure

	Stocks %	Rel Std Index
Americas	98.2	0.99
Greater Europe	1.7	1.55
Greater Asia	0.1	3.35

Sector Weightings

	Stocks %	Rel Std Index
Cyclical	33.5	1.17
Basic Materials	7.7	3.13
Consumer Cyclical	5.1	0.54
Financial Services	20.3	1.46
Real Estate	0.4	0.15
Sensitive	43.3	0.97
Communication Services	7.7	1.05
Energy	15.4	2.95
Industrials	11.6	1.28
Technology	8.5	0.37
Defensive	23.2	0.87
Consumer Defensive	6.0	0.79
Healthcare	16.9	1.07
Utilities	0.3	0.08

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



DFA US Targeted Value I (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
Silver **★★★★** 453 US Fund Small Value S&P 500 TR USD Russell 2000 Value US Fund Small Value
 01-19-2023

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-39.19	23.56	4.02	32.77	3.77
2021	25.10	4.21	-0.55	7.06	38.80
2022	-0.11	-12.88	-2.68	12.63	-4.62
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-4.62	11.16	7.04	10.49	10.78
Std 12-31-2022	-4.62	—	7.04	10.49	10.78
Total Return	-4.62	11.16	7.04	10.49	10.78
+/- Std Index	13.49	3.50	-2.38	-2.07	—
+/- Cat Index	9.86	6.46	2.92	2.02	—
% Rank Cat	14	15	15	10	—
No. in Cat	481	453	426	322	—

7-day Yield Subsidized Unsubsidized
 30-day SEC Yield — —

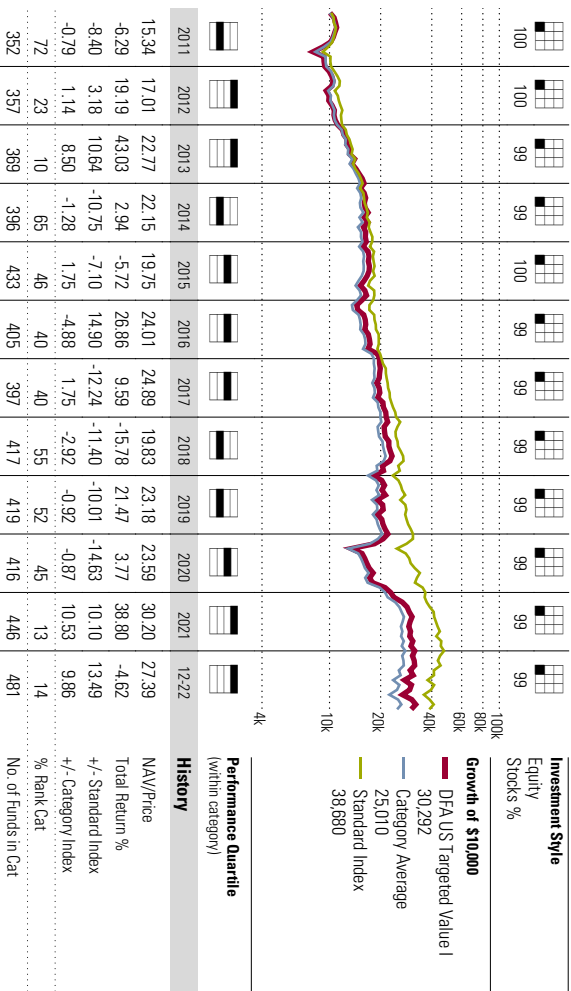
Performance Disclosure
 The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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 888-576-1167 or visit www.dimensional.com.

Fees and Expenses	
Sales Charges	NA
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	0.27
Management Fees %	NA
12bt Expense %	NA
Net Expense Ratio %	0.29
Gross Expense Ratio %	0.29
Risk and Return Profile	
Morningstar Rating™	4★
Morningstar Risk	+Avg
Morningstar Return	+Avg
Standard Deviation	29.44
Mean	11.16
Sharpe Ratio	0.48
MPT Statistics	Standard Index
Alpha	3.75
Beta	1.20
R-Squared	74.07
12-Month Yield	—
Potential Cap Gains Exp	35.33%

Operations	
Family:	Dimensional Fund Advisors
Manager:	Multiple
Tenure:	10.9 Years
Objective:	Growth and Income



Portfolio Analysis 11-30-2022			
Asset Allocation %	Net %	Long %	Short %
Cash	0.77	0.87	0.09
US Stocks	96.84	96.84	0.00
Non-US Stocks	2.34	2.34	0.00
Bonds	0.00	0.00	0.00
Other/Not Cstfd	0.04	0.04	0.00
Total	100.00	100.09	0.09
Equity Style			
Value	Brand	Growth	
Large	Mid	Ext	
High	Med	Low	
Ang Eff Maturity	—	—	
Ang Eff Duration	—	—	
Ang Wtd Coupon	—	—	
Ang Wtd Price	—	—	
Fixed-Income Style			
P/E Ratio TTM	8.9	0.47	0.77
P/C Ratio TTM	7.1	0.50	0.78
P/B Ratio TTM	1.4	0.40	0.89
Geo Avg Mkt Cap	314.3	0.02	0.84
Sector Weightings			
⊖ Cyclical	50.0	1.74	
⊕ Real Estate	0.9	0.32	
⊖ Defensive	10.4	0.39	
⊕ Utilities	0.5	0.15	

Credit Quality Breakdown	
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—
Regional Exposure	
Americas	98.8
Greater Europe	0.3
Greater Asia	0.9
Sector Weightings	
⊖ Cyclical	50.0
⊕ Real Estate	0.9
⊖ Defensive	10.4
⊕ Utilities	0.5

Base Currency:	
USD	DFPX
US\$232,035,953	SIN:
Minimum Initial Purchase: \$0	Total Assets: \$12,420.63 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted, in whole or in part, to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Release date 12-31-2022 | Note: Portions of the analysis are based on pre- inception returns. Please read disclosure for more information.

Fidelity® 500 Index (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index **Morningstar Cat**
★★★★★ S&P 500 TR USD Russell 1000 TR US Fund Large Blend
 02-16-2022 1,223 US Fund Large Blend USD

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-19.59	20.53	8.94	12.14	18.40
2021	6.18	8.55	0.58	11.02	28.69
2022	-4.60	-16.10	-4.89	7.56	-18.13
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-18.13	7.65	9.41	12.55	11.57
Std 12-31-2022	-18.13	—	9.41	12.55	11.57
Total Return	-18.13	7.65	9.41	12.55	11.57
+/- Std Index	-0.02	-0.01	-0.01	-0.01	—
+/- Cat Index	1.00	0.30	0.28	0.18	—
% Rank Cat	51	32	23	12	—
No. in Cat	1358	1223	1116	818	—

7-day Yield Subsidized Unsubsidized
 30-day SEC Yield — —

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 202-551-8090 or visit www.institutional.fidelity.com.

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

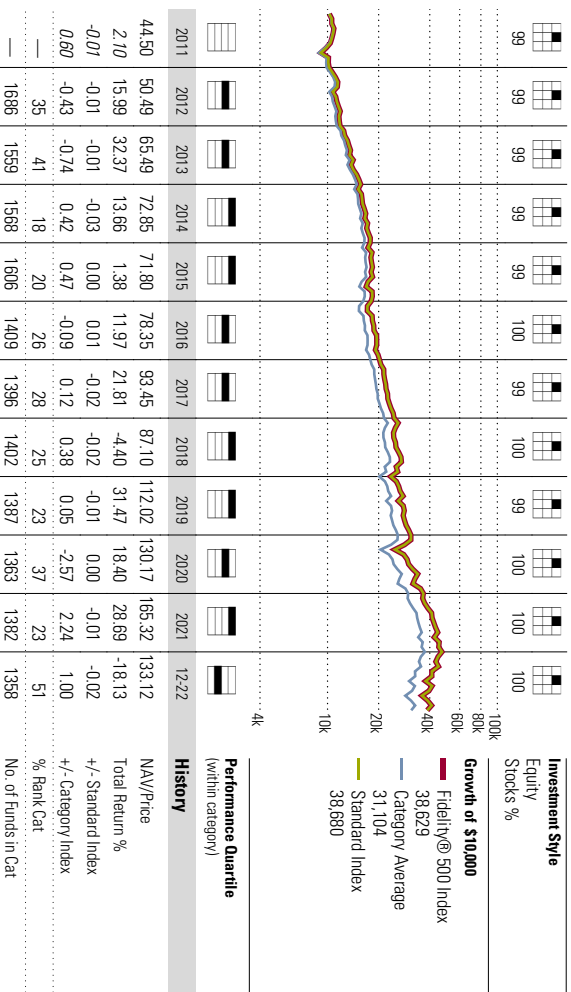
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	4★	4★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	+Avg	+Avg	+Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	21.16	18.69	14.77
Mean	7.65	9.41	12.55
Sharpe Ratio	0.41	0.50	0.82
MPI Statistics	Standard Index	Best Fit Index	S&P 500 TR USD
Alpha	-0.01	-0.01	-0.01
Beta	1.00	1.00	1.00
R-Squared	100.00	100.00	100.00
12-Month Yield	—	—	—
Potential Cap Gains Exp	—	—	48.33%

Operations
 Family: Fidelity Investments
 Manager: Multiple
 Tenure: 14.0 Years
 Objective: Growth and Income

Base Currency: USD
 Ticker: FXAIX
 ISIN: US3159117502
 Minimum Initial Purchase: \$0

Purchase Constraints: A
 Incept: 05-04-2011
 Type: MIF
 Total Assets: \$352,765.08 mil



Portfolio Analysis 11-30-2022	
Asset Allocation %	Net %
Cash	0.02
US Stocks	98.88
Non-US Stocks	1.10
Bonds	0.00
Other/Not Cstfd	0.00
Total	100.00

Equity Style	
Value	Share Growth
Large	High
Mid	Med
Small	Low

Fixed-Income Style	
Value	Share Growth
Large	High
Mid	Med
Small	Low

Credit Quality Breakdown —

Regional Exposure	
Region	Stocks %
Americas	98.9
Greater Europe	1.1
Greater Asia	0.0

Sector Weightings	
Sector	Weighting %
Cyclical	29.1
Basic Materials	2.4
Consumer Cyclical	10.2
Financial Services	13.8
Real Estate	2.8
Sensitive	45.2
Communication Services	7.5
Energy	5.1
Industrials	8.9
Technology	23.7
Defensive	25.7
Consumer Defensive	7.4
Healthcare	15.3
Utilities	3.0

Growth of \$10,000	
Equity	Stocks %
Fidelity@500 Index	38,629
Category Average	31,104
Standard Index	38,680

Performance Quartile (within category)	
History	NAV/Price
2011	112.02
2012	31.47
2013	18.40
2014	-0.01
2015	0.00
2016	-0.02
2017	0.05
2018	-2.57
2019	2.24
2020	1.00
2021	2.24
2022	51

Share Cng	Share	Holdings:	Net Assets %
10-2022	503 Total Stocks, 0 Total Fixed-Income, 2% Turnover Ratio		
164 mil	Apple Inc	6.51	
81 mil	Microsoft Corp	5.54	
96 mil	Amazon.com Inc	2.49	
65 mil	Alphabet Inc Class A	1.76	
20 mil	Berkshire Hathaway Inc Class B	1.67	
58 mil	Alphabet Inc Class C	1.58	
29 mil	Tesla Inc	1.51	
10 mil	Unitedhealth Group Inc	1.49	
29 mil	Johnson & Johnson	1.36	
45 mil	Exxon Mobil Corp	1.35	
27 mil	NVIDIA Corp	1.23	
32 mil	JPMorgan Chase & Co	1.18	
26 mil	Procter & Gamble Co	1.04	
18 mil	Visa Inc Class A	1.03	
11 mil	The Home Depot Inc	0.97	

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analysis and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analysis or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. This report is supplemental sales literature. If applicable it must be predated.



Fidelity® Mid Cap Index (USD)

Morningstar Quantitative Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat Rating™ **★★★★** S&P 500 TR USD Russell Mid Cap TR US Fund Mid-Cap Blend **Gold** 370 US Fund Mid-Cap Blend USD Blend

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-27.04	24.55	7.49	19.89	17.11
2021	8.15	7.47	-0.93	6.44	22.56
2022	-5.69	-16.85	-3.42	9.21	-17.28
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-17.28	5.89	7.10	10.95	11.60
Std 12-31-2022	-17.28	—	7.10	10.95	11.60
Total Return	-17.28	5.89	7.10	10.95	11.60
+/- Std Index	0.83	-1.77	-2.32	-1.61	—
+/- Cat Index	0.03	0.01	0.00	-0.01	—
% Rank Cat	7/6	60	36	20	—
No. in Cat	405	370	342	219	—

7-day Yield Subsidized Unsubsidized
 30-day SEC Yield — —

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 800-544-8544 or visit www.institutional.fidelity.com.

Fees and Expenses

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

Fund Expenses

Management Fees % 0.03
 12b1 Expense % NA
Net Expense Ratio % **0.03**
Gross Expense Ratio % **0.03**

Risk and Return Profile

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	3★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	Avg	+Avg

Standard Deviation 23.94 20.91 16.46
 Mean 5.89 7.10 10.95
 Sharpe Ratio 0.32 0.37 0.67

MPI Statistics

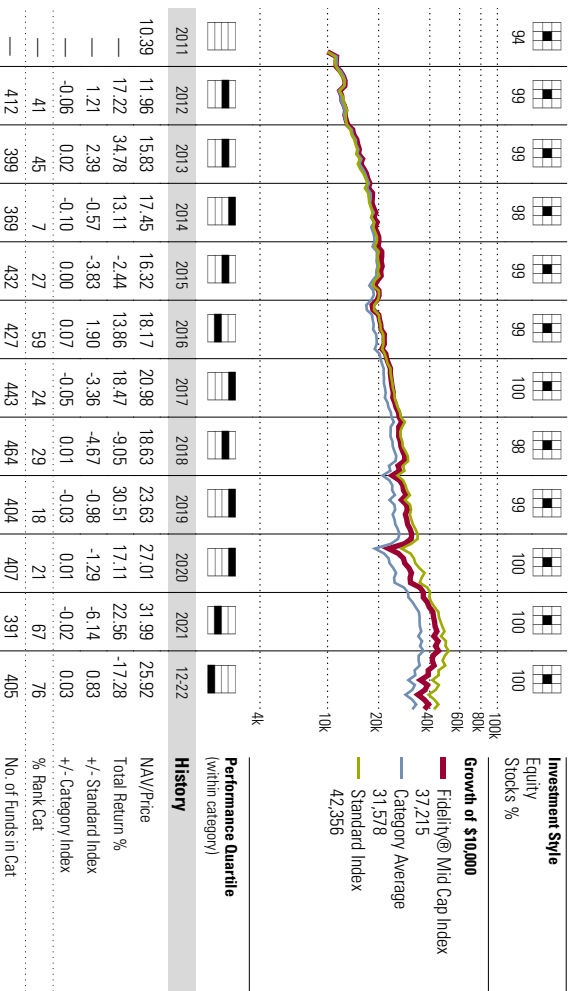
	Standard Index	Best Fit Index
Alpha	-1.76	0.01
Beta	1.09	1.00
R-Squared	92.37	100.00
12-Month Yield	—	—
Potential Cap Gains Exp	—	16.53%

Operations

Family: Fidelity Investments
 Manager: Multiple
 Tenure: 11.3 Years
 Objective: Growth

Base Currency: USD
 Ticker: FSMDX
 ISIN: US3161462656
 Minimum Initial Purchase: \$0

Purchase Constraints: A
 Incept: 09-08-2011
 Type: MF
 Total Assets: \$24,593.65 mil



Portfolio Analysis 11-30-2022

Asset Allocation %	Net %	Long %	Short %
Cash	0.04	0.15	0.11
US Stocks	99.02	99.02	0.00
Non-US Stocks	0.94	0.94	0.00
Bonds	0.00	0.00	0.00
Other/Not Cstfd	0.00	0.00	0.00
Total	100.00	100.11	0.11

Equity Style

Value	Brand	Geom	Port	Rel	Rel
Avg	Index	Cat	Avg	Index	Cat
P/E Ratio TTM	16.9	0.89	1.18	1.18	1.18
P/C Ratio TTM	13.3	0.93	1.19	1.19	1.19
P/B Ratio TTM	2.8	0.77	1.15	1.15	1.15
Geo Avg Mkt Cap \$mil	18129	0.11	1.88	1.88	1.88

Fixed-Income Style

Value	Brand	Geom	Port	Rel	Rel
Avg	Index	Cat	Avg	Index	Cat
Avg Eff Maturity	—	—	—	—	—
Avg Eff Duration	—	—	—	—	—
Avg Wtd Coupon	—	—	—	—	—
Avg Wtd Price	—	—	—	—	—

Credit Quality Breakdown

	AAA	AA	A	BBB	BB	B	Below B	NR
Stocks %	99.1	0.8	0.73	1.00	0.8	0.73	2.74	—
Rel Std Index	—	—	—	—	—	—	—	—

Regional Exposure

	Stocks %	Rel Std Index
Americas	99.1	1.00
Greater Europe	0.8	0.73
Greater Asia	0.1	2.74

Sector Weightings

	Stocks %	Rel Std Index
Cyclical	39.5	1.38
Basic Materials	5.1	2.08
Consumer Cyclical	12.7	1.33
Financial Services	13.6	0.98
Real Estate	8.0	2.86
Sensitive	40.1	0.90
Communication Services	3.4	0.47
Energy	5.5	1.05
Industrials	15.3	1.69
Technology	16.0	0.69
Defensive	20.3	0.76
Consumer Defensive	3.9	0.52
Healthcare	10.6	0.67
Utilities	5.7	1.80

Investment Style

	Equity	Stocks %
Fidelity® Mid Cap Index	37.215	—
Category Average	31.578	—
Standard Index	42.356	—

Performance Quartile (within category)

Year	NAV/Price	Total Return %	+/- Standard Index	+/- Category Index	% Rank Cat	No. of Funds in Cat
2011	18.63	23.63	27.01	31.99	25.92	—
2012	-9.05	30.51	17.11	22.56	-17.28	—
2013	-4.67	-0.98	-1.29	-6.14	0.83	—
2014	0.01	-0.03	0.01	-0.02	0.03	—
2015	29	18	21	67	76	—
2016	464	404	407	391	405	—

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted, in whole or in part, to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Fidelity® Small Cap Index (USD)

Morningstar Quantitative Rating™
Bronze 0
 11-30-2022

Overall Morningstar Rating™
★★★★
 585 US Fund Small Blend

Standard Index
 S&P 500 TR USD

Category Index
 Russell 2000 TR
 USD

Morningstar Cat
 US Fund Small Blend

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-30.62	25.49	4.98	31.28	19.99
2021	12.73	4.26	-4.40	2.10	14.71
2022	-7.47	-17.18	-2.08	6.25	-20.27
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-20.27	3.15	4.22	9.17	10.19
Std 12-31-2022	-20.27	—	4.22	9.17	10.19
Total Return	-20.27	3.15	4.22	9.17	10.19
+/- Std Index	-2.16	-4.51	-5.21	-3.39	—
+/- Cat Index	0.16	0.05	0.09	0.16	—
% Rank Cat	84	79	68	52	—
No. in Cat	611	585	543	363	—

7-day Yield
 30-day SEC Yield

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 800-544-8544 or visit www.institutional.fidelity.com.

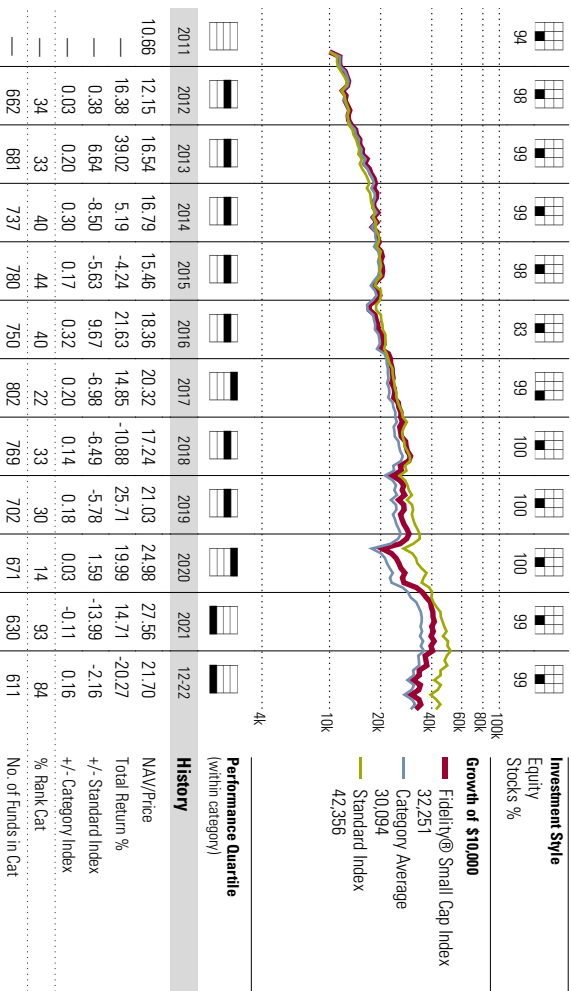
Fees and Expenses	
Sales Charges	NA
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	0.03
Management Fees %	0.03
12bt Expense %	NA
Net Expense Ratio %	0.03
Gross Expense Ratio %	0.03
Risk and Return Profile	

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	2★	3★	3★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	-Avg	-Avg	Avg
Standard Deviation	26.38	23.49	19.25
Mean	3.15	4.22	9.17
Sharpe Ratio	0.22	0.24	0.51
MPI Statistics	Standard Index	Best Fit Index Russell 2000TR	USD
Alpha	-4.05	0.05	0.05
Beta	1.12	1.00	1.00
R-Squared	80.38	100.00	100.00
12-Month Yield	—	—	—
Potential Cap Gains Exp	5.18%	—	—

Operations
 Family: Fidelity Investments
 Manager: Multiple
 Tenure: 11.3 Years
 Objective: Small Company

Base Currency: USD
 Ticker: FSSNX
 ISIN: US3161461823
 Minimum Initial Purchase: \$0

Purchase Constraints: A
 Incept: 09-08-2011
 Type: MF
 Total Assets: \$18,628.35 mil



Portfolio Analysis 10-31-2022

Asset Allocation %	Net %	Long %	Short %
Cash	0.05	0.81	0.77
US Stocks	98.24	98.24	0.00
Non-US Stocks	1.71	1.71	0.00
Bonds	0.01	0.01	0.00
Other/Not Cstfd	0.00	0.00	0.00
Total	100.00	100.77	0.77

Equity Style

Value	Brand	Geom	Port	Rel	Rel
Avg	Index	Cat	Avg	Index	Cat
P/E Ratio TTM	11.6	0.61	0.97		
P/C Ratio TTM	9.7	0.68	0.96		
P/B Ratio TTM	1.9	0.53	0.91		
Geo Avg Mkt Cap	2200	0.01	0.53		

Fixed-Income Style

Value	Brand	Geom	Port	Rel	Rel
Avg Eff Maturity	Avg Eff Duration	Avg Wtd Coupon	Avg Wtd Price		
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—

Credit Quality Breakdown

AAA	AA	A	BBB	BB	B	Below B	Bond %
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

Regional Exposure

Stocks %	Rel Std Index
Americas	99.3
Greater Europe	0.4
Greater Asia	0.3
10-29	10.29

Share Cng

Share Cng since 09-2022	Share Amount	Holdings: 1,950 Total Stocks - 1 Total Fixed-Income, 24% Turnover Ratio	Net Assets %
1.675	E-mini Russell 2000 Index Future D	0.81	
134 mil	Fidelity Reverse Str Tr	0.70	
281.165	ShockWave Medical Inc	0.43	
290.129	Chart Industries Inc	0.34	
889.228	Matador Resources Co	0.31	
224.912	RBC Bearings Inc	0.30	
1 mil	Murphy Oil Corp	0.30	
384.416	EMCOR Group Inc	0.28	
171.027	Kinsale Capital Group Inc	0.28	
592.489	SouthState Corp	0.28	
169.856	Murphy USA Inc	0.28	
528.542	Texas Roadhouse Inc	0.27	
1 mil	Iridium Communications Inc	0.27	
235.260	Karuna Therapeutics Inc	0.27	
1 mil	Halozyme Therapeutics Inc	0.27	

Sector Weightings

Cyclical	Stocks %	Rel Std Index
Basic Materials	38.1	1.33
Consumer Cyclical	4.1	1.66
Financial Services	10.1	1.05
Real Estate	16.4	1.18
Real Estate	7.5	2.69
Sensitive	37.6	0.84
Communication Services	2.6	0.36
Energy	6.8	1.30
Industrials	14.7	1.62
Technology	13.5	0.59
Defensive	24.3	0.91
Consumer Defensive	4.0	0.53
Healthcare	16.8	1.06
Utilities	3.4	1.07

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted, in whole or in part, to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Fidelity® Total International Index (USD)

Morningstar Quantitative Rating™
Gold ^o
 11-30-2022

Overall Morningstar Rating™ Standard Index
★★★★
 704 US Fund Foreign Large Blend

MSCI ACWI EX USA NR USD
 MSCI ACWI EX USA NR USD
 US Fund Foreign Large Blend

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-24.15	17.41	6.78	16.81	11.07
2021	3.91	5.53	-3.02	2.01	8.47
2022	-6.21	-13.16	-10.45	14.78	-16.28
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-16.28	0.29	0.96	—	4.62
Std 12-31-2022	-16.28	—	0.96	—	4.62
Total Return	-16.28	0.29	0.96	—	4.62
+/- Std Index	-0.27	0.22	0.08	—	—
+/- Cat Index	-0.27	0.22	0.08	—	—
% Rank Cat	60	59	61	—	—
No. in Cat	744	704	611	—	—

7-day Yield
 30-day SEC Yield

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.

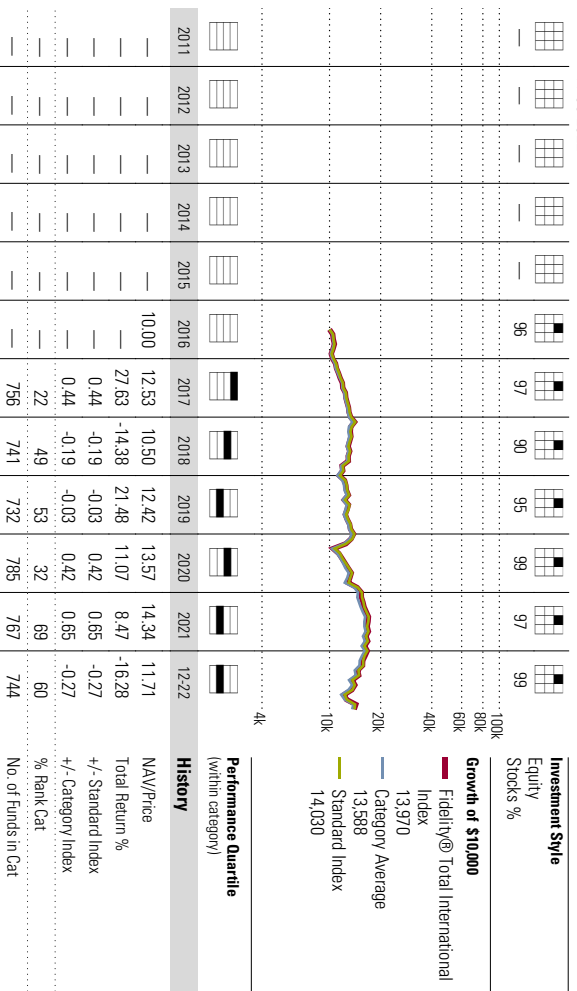
Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-544-8544 or visit www.institutional.fidelity.com.

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

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	3★	—
Morningstar Risk	Avg	Avg	—
Morningstar Return	Avg	Avg	—

	3 Yr	5 Yr	10 Yr
Standard Deviation	20.32	17.75	—
Mean	0.29	0.96	—
Sharpe Ratio	0.07	0.07	—
MPI Statistics	Standard Index	Best Fit Index	MSCI ACWI Ex USA NR USD
Alpha	0.34	0.34	1.03
Beta	1.03	1.03	98.87
R-Squared	98.87	98.87	—
12-Month Yield	—	—	-18.74%
Potential Cap Gains Exp	—	—	—

Operations
 Family: Fidelity Investments
 Manager: Multiple
 Tenure: 6.6 Years
 Objective: Foreign Stock



Portfolio Analysis 11-30-2022

Asset Allocation %	Net %	Long %	Short %
Cash	-0.24	1.31	1.55
US Stocks	0.79	0.79	0.00
Non-US Stocks	99.29	99.29	0.00
Bonds	0.00	0.00	0.00
Other/Not Cstfd	0.16	0.16	0.00
Total	100.00	101.55	1.55

Equity Style

Value	Share	Port	Rel	Rel
Brand	Grwth	Avg	Index	Cat
Large	—	12.1	1.01	0.95
Mid	—	8.6	1.02	0.97
Small	—	1.6	1.00	0.91
Geo Avg Mkt Cap	28542 \$mil	0.67	0.56	—

Fixed-Income Style

Value	Share	Port	Rel	Rel
Brand	Grwth	Avg	Index	Cat
Large	—	—	—	—
Mid	—	—	—	—
Small	—	—	—	—
Geo Avg Mkt Price	—	—	—	—

Credit Quality Breakdown —

	AAA	AA	A	BBB	BB	B	Below B	Bond %
AAA	—	—	—	—	—	—	—	—
AA	—	—	—	—	—	—	—	—
A	—	—	—	—	—	—	—	—
BBB	—	—	—	—	—	—	—	—
BB	—	—	—	—	—	—	—	—
B	—	—	—	—	—	—	—	—
Below B	—	—	—	—	—	—	—	—
NR	—	—	—	—	—	—	—	—

Regional Exposure

	Stocks %	Rel Std Index
Americas	11.2	1.04
Greater Europe	43.7	0.97
Greater Asia	45.1	1.02

Share Cng since 10-2022

Share Cng	Share Amount	Holdings: 5,078 Total Stocks, 2 Total Fixed-Income, 3% Turnover Ratio	Net Assets %
8 mil	Taiwan Semiconductor Manufacturing	1.46	
1,194	MSCI EAFE Index Future Dec 22	1.29	
948,290	Nestle SA	1.23	
109 mil	Fidelity Reverse Str Tr	1.19	
137,044	ASML Holding NV	0.91	
2 mil	Tencent Holdings Ltd	0.87	
2 mil	Samsung Electronics Co Ltd	0.85	
224,560	Roche Holding AG	0.80	
3 mil	Shell PLC	0.80	
93,202	LVMH Moet Hennessy Louis Vuitton SE	0.79	
522,480	Astrazeneca PLC	0.77	
558,158	Novo Nordisk A/S Class B	0.77	
726,618	Novartis AG	0.71	
5 mil	Alibaba Group Holding Ltd Ordinary	0.61	
2 mil	BHP Group Ltd	0.58	

Sector Weightings

Sector	Weightings	Stocks %	Rel Std Index
Cyclical		42.5	1.00
Basic Materials		8.8	1.05
Consumer Cyclical		11.1	1.02
Financial Services		19.4	0.93
Real Estate		3.3	1.28
Sensitive		36.7	1.03
Communication Services		5.8	0.92
Energy		6.0	0.99
Industrials		13.3	1.10
Technology		11.5	1.05
Defensive		20.8	0.95
Consumer Defensive		8.2	0.94
Healthcare		9.5	0.95
Utilities		3.2	0.98

Purchase Constraints:
 Incept: 06-07-2016
 Type: MF
 Total Assets: \$8,917.73 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analysis and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analysis or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Fidelity® US Bond Index (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index **Category Index** **Morningstar Cat**
★★★★ **★★★★** **★★★★**
Gold 405 US Fund Intermediate **Bloomberg US** **Bloomberg US Agg**
 03-30-2022 **Core Bond** **Agg Bond TR USD** **Bond TR USD** **US Fund Intermediate** **Core Bond**

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	3.66	2.77	0.43	0.75	7.80
2021	-3.48	1.85	0.02	-0.12	-1.79
2022	-5.88	-4.66	-4.69	1.68	-13.03
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-13.03	-2.72	-0.02	1.01	1.71
Std 12-31-2022	-13.03	—	-0.02	1.01	1.71
Total Return	-13.03	-2.72	-0.02	1.01	1.71
+/- Std Index	-0.02	0.00	-0.04	-0.05	—
+/- Cat Index	-0.02	0.00	-0.04	-0.05	—
% Rank Cat	33	40	36	38	—
No. in Cat	453	405	372	275	—

7-day Yield **Subsidized** Unsubsidized
 30-day SEC Yield **—** **—**

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 800-544-8544 or visit www.institutional.fidelity.com.

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

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	405 funds 3★	372 funds 3★	275 funds 3★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	Avg	Avg

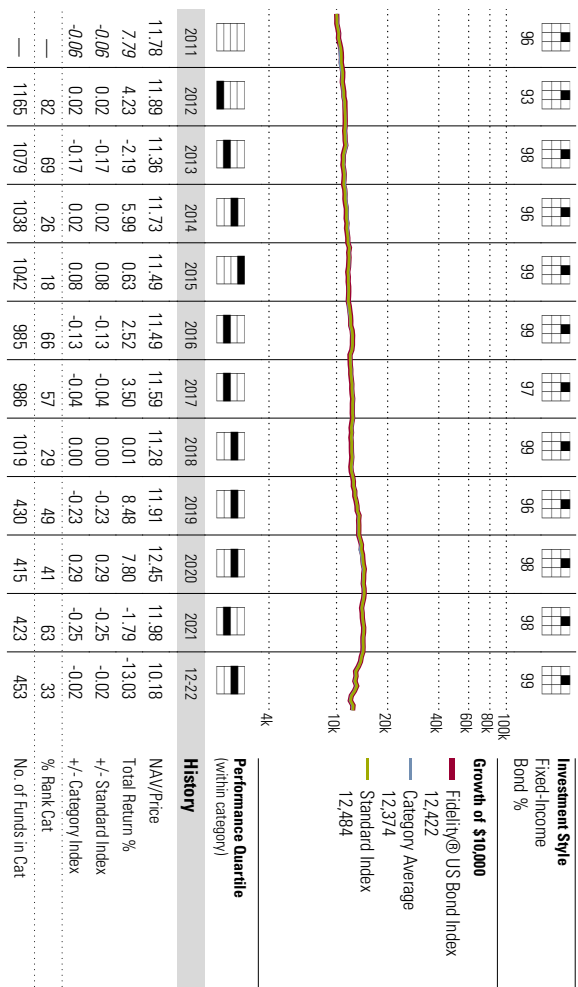
	3 Yr	5 Yr	10 Yr
Standard Deviation	5.86	5.10	4.18
Mean	-2.72	-0.02	1.01
Sharpe Ratio	-0.58	-0.24	0.07

MPI Statistics	Standard Index	Best Fit Index
Alpha	0.00	0.00
Beta	1.00	1.00
R-Squared	99.68	99.68
12-Month Yield	—	—
Potential Cap Gains Exp	—	-0.01%

Operations
 Family: Fidelity Investments
 Manager: Multiple
 Tenure: 8.7 Years
 Objective: Multisector Bond

Base Currency: USD
 Ticker: FXMAX
 ISIN: US3161463563
 Minimum Initial Purchase: \$0

Purchase Constraints: A
 Incept: 05-04-2011
 Type: MF
 Total Assets: \$55,695.79 mil



Portfolio Analysis 11-30-2022			
Asset Allocation %	Net %	Long %	Short %
Cash	0.93	0.93	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	99.07	99.07	0.00
Other/Not Cstfd	0.00	0.00	0.00
Total	100.00	100.00	0.00

Equity Style		Portfolio Statistics	
Value	Brand Growth	Port Index	Rel Index
Large	—	—	—
Mid	—	—	—
Small	—	—	—
	P/E Ratio TTM	—	—
	P/C Ratio TTM	—	—
	P/B Ratio TTM	—	—
	Geo Avg Mkt Cap	—	—
	Geo Avg Mkt Cap \$mil	—	—

Fixed-Income Style			
Val	Mod	Ext	Rel
High	—	—	—
Med	—	—	—
Low	—	—	—
	Avg Eff Maturity	—	6.16
	Avg Eff Duration	—	—
	Avg Wtd Coupon	—	90.04
	Avg Wtd Price	—	—

Share Cng	Share	Holdings:	Net Assets
since	Amount	0 Total Stocks: 8,666 Total Fixed-Income, 10-2022	%
⊕	901 mil	United States Treasury Notes 2.75%	1.51
	724 mil	United States Treasury Notes 1.5%	1.13
	642 mil	United States Treasury Notes 2.625%	1.08
	584 mil	United States Treasury Notes 2.25%	1.02
	681 mil	Federal Home Loan Mortgage Corpora	1.02
⊖	507 mil	United States Treasury Notes 1.5%	0.83
	461 mil	United States Treasury Notes 3%	0.81
	430 mil	United States Treasury Notes 0.5%	0.72
	420 mil	United States Treasury Notes 2.25%	0.71
	411 mil	United States Treasury Notes 1%	0.69
	409 mil	United States Treasury Notes 2.75%	0.62
	349 mil	Federal National Mortgage Associat	0.61
	372 mil	United States Treasury Notes 1.5%	0.61
	372 mil	United States Treasury Notes 1.25%	0.59
	337 mil	United States Treasury Notes 1.75%	0.58

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

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Hotchkis & Wiley High Yield Z (USD)

Morningstar Analyst Rating™
 Silver
 02-09-2022

Overall Morningstar Rating™ **Standard Index**
 **★★★★**
 625 US Fund High Yield Bond Agg Bond TR USD

Category Index **Morningstar Cat**
 Bloomberg US ICE BofA US High Yield TR USD US Fund High Yield Bond

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-17.15	10.12	5.22	8.15	3.83
2021	2.04	2.87	0.71	1.07	6.83
2022	-3.36	-9.55	-1.29	4.66	-9.69
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly Std 12-31-2022	-9.69	0.06	—	—	1.42
Total Return	-9.69	0.06	1.23	3.45	1.42
+/- Std Index	3.32	2.77	1.20	2.39	—
+/- Cat Index	1.53	0.29	-0.89	-0.50	—
% Rank Cat	31	38	75	37	—
No. in Cat	682	625	579	414	—

7-day Yield 01-24-23 5.61 1
 30-day SEC Yield 12-31-22 8.13 1
 1-Contractual waiver- Expires 08-31-2023 8.06

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 866-493-8637 or visit www.hwm.com.

Fees and Expenses

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

Fund Expenses

Management Fees % 0.55
 12b1 Expense % NA
Net Expense Ratio % **0.60**
Gross Expense Ratio % **0.65**
Risk and Return Profile

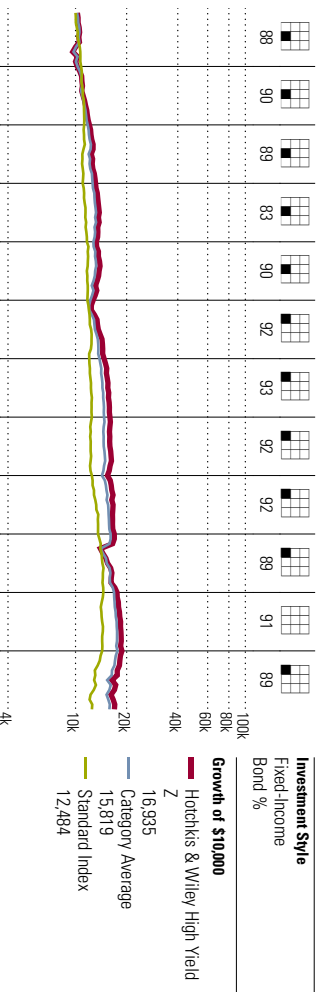
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	2★	3★
Morningstar Risk	High	+Avg	+Avg
Morningstar Return	Avg	-Avg	Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	12.64	10.20	8.06
Mean	0.06	1.23	3.45
Shape Ratio	0.00	0.04	0.36

MPI Statistics	Standard Index	Best Fit Index
Alpha	3.29	0.52
Beta	0.95	1.10
R-Squared	19.37	95.72
12-Month Yield Potential Cap Gains Exp	5.60%	-22.57%

Operations

Family: Hotchkis & Wiley
 Manager: Multiple
 Tenure: 13.8 Years
 Objective: Corporate Bond - High Yield
 Base Currency: USD



Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NAV/Price	—	—	—	—	—	—	—	11.16	11.54	11.29	11.52	9.86
Total Return %	2.28	17.96	8.71	1.09	-4.30	16.02	8.24	-3.34	9.77	3.83	6.83	-9.69
+/- Standard Index	-5.56	13.75	10.73	-4.87	-4.85	13.37	4.70	-3.36	1.06	-3.68	8.37	3.32
+/- Category Index	-2.10	2.38	1.29	-1.41	0.34	-1.47	0.76	-1.09	-4.64	-2.34	1.47	1.53
% Rank Cat	—	—	—	—	—	—	—	—	82	71	11	31
No. of Funds in Cat	—	—	—	—	—	—	—	—	711	676	678	682

Portfolio Analysis 11-30-2022			Net %	Long %	Short %	Share Cng	Share Holdings:	Net Assets
Asset Allocation %			2.79	2.79	0.00	since	5 Total Stocks - 1,941 Total Fixed-Income.	%
Cash	—	—	2.79	2.79	0.00	10-2022	Amount	156
US Stocks	—	—	1.90	1.90	0.00	—	40% Turnover Ratio	1.47
Non-US Stocks	—	—	0.00	0.00	0.00	—	116,127 Horsehead Equity	1.41
Bonds	—	—	89.17	89.17	0.00	—	11 mil General Electric Company 6.6257%	1.22
Other/Not Cstfd	—	—	6.14	6.14	0.00	—	12 mil COO Holdings, LLC/ COO Holdings Ca	1.20
Total	—	—	100.00	100.00	0.00	—	10 mil Virgin Media Sec Finance PLC 5.5%	—

Equity Style		Portfolio Statistics		Port	Rel	Rel
Value	Brand	P/E Ratio TTM	P/C Ratio TTM	Avg	Index	Cat
Large	Small	—	—	—	—	—
Med	Med	—	—	—	—	—
Small	Small	—	—	—	—	—
Geo Avg Mkt Cap		—		—		—

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

Credit Quality Breakdown 11-30-2022		Bond %
AAA	—	0.00
AA	—	0.00
A	—	0.00
BBB	—	4.65
BB	—	45.23
B	—	37.33
Below B	—	3.17
NR	—	9.62

Regional Exposure		Stocks %	Rel Std Index
Americas	—	—	—
Greater Europe	—	—	—
Greater Asia	—	—	—

-  Denstive
-  Consumer Defensive
-  Healthcare
-  Utilities

Ticker: HWHZX
 ISIN: US4413485292
 Minimum Initial Purchase: \$1 mil
 Min Auto Investment Plan: \$1 mil
 Purchase Constraints: A

Incept: 03-29-2018
 Type: MF
 Total Assets: \$781.14 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.





Nationwide Fixed Account

Group Annuity Contract

Retirement Solutions

Fact sheet

Q3 2022

AS OF 09/30/22

The Nationwide Fixed Account¹ is a General Account Product that seeks to provide a low-risk, stable investment option offering consistently competitive returns for retirement plan investors.



Plan Liquidity

- Five-year book value payout
- OR
- Subject to a market value adjustment (MVA)



Participant Liquidity

- Fully liquid or with restrictions for a higher crediting rate
- Subject to 90-day equity wash if competing funds are offered



Crediting Rates

- Quarterly reset
- Pooled investment



Available to All Contractually

Applicable Retirement Plans, Including:

- Governmental 457(b)

Investment Objective & Strategy

The General Account is managed by a team of investment professionals with deep market knowledge, multi-asset class capabilities, and broad market cycle experience. The team uses a disciplined, research-driven approach, supported by a robust risk management framework, to provide diversification and strong risk-adjusted returns.

Investment Information

Fund Inception	01/10/1931
Total Market Value (Billions)	\$46.52
Total Number of Unique Holdings	5,289
Average Quality	A-
Weighted Average Maturity	11.4 Years
Weighted Average Life	9.3 Years
Effective Duration	5.97 Years
Market to Book Ratio ²	90%

Fees and Expenses

Spread-Based General Account

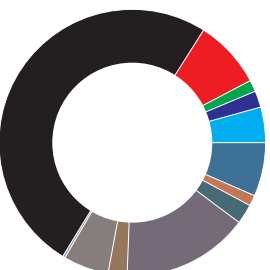
Portfolio Manager

David Fritz, CFA, Tenure since 1999

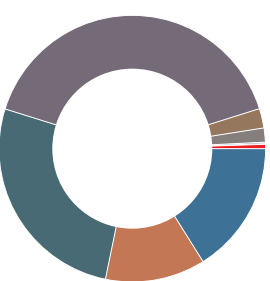
Net Crediting Rate

The rate currently being credited to your account can be found on your statement, on the web at NRSFORU.com or by contacting our solutions center at 1-877-677-3678.

Investment Allocation (%)



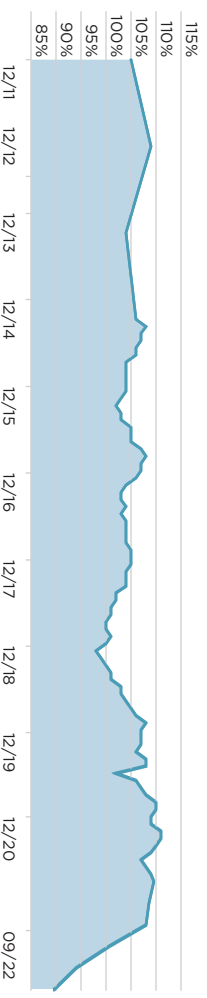
Credit Quality (%)



Abs/CLO	6.5%
Agency MBS	1.3%
CMBS	2.4%
CML	15.4%
EMD	2.3%
Equity/AIts/Other	5.5%
Government	0.3%
Investment Grade Corp	50.2%
Municipal	8.3%
Non-Agency MBS	1.4%
Non-Investment Grade	2.0%
Short Term	4.3%

AAA	16.1%
AA	12.1%
A	26.6%
BBB	40.3%
BB	2.4%
B	1.7%
CCC	0.2%
Below CCC	0.1%
Not Rated	0.5%

Market-to-Book Ratio Over Time (12/31/11-09/30/22)



Nationwide Fixed Account

Q3 2022
AS OF 09/30/22

Nationwide Life Insurance Company Ratings³

A+ A.M. Best Affirmed 12/22/21	A1 Moody's Affirmed 5/27/20	A+ Standard & Poor's Affirmed 5/7/21
---	--	---

³Nationwide Fixed Account is backed by the General Account of Nationwide Life Insurance Company and is backed solely by the claims paying ability of Nationwide Life Insurance Company. Information about the securities held in the General Account does not imply ownership by plan participants or by plan sponsors as the owners of the group annuity contract. This account is not a mutual fund.

⁴The market to book ratio is specific to the Nationwide Life Insurance Company and represents assets on an aggregate basis. However, each product contract experiences its own ratio that differs from the aggregate. The market to book ratio may fluctuate from time to time in accordance with market trends.

⁵These ratings and rankings reflect Rating Agency assessment of the financial strength and claims-paying ability of Nationwide Life Insurance Company and are subject to change at any time. They are not intended to reflect the investment experience or financial strength of any variable account, which is subject to market risk. Because the dates are only updated when there is a change in the rating, the dates reflect the most recent ratings we have received.

Your contract may contain liquidation (exchange and/or transfer) restrictions. The unregistered group variable and fixed annuity contracts are issued by Nationwide Life Insurance Company, Columbus, Ohio. For more information, please contact your Plan Sponsor.

Please contact the Solutions Center at 1-877-677-3678 for assistance.
Nationwide and the Nationwide N and Eagle are service marks of Nationwide Mutual Insurance Company © 2022 Nationwide

DEFINITIONS: Average Quality (AQ): the book value weighted average quality rating of the bond portfolio. The AQ of this investment portfolio is calculated using the second lowest of four (including internal), median of three, lowest of two, or one rating for each security including but not limited to the following NRSROs: S&P, Moody's, Fitch, and internal ratings. Asset Backed Securities, Commercial Mortgage Backed Securities, and Non-Agency Mortgage Backed Securities will only use internal rating. **Average Maturity (AM):** the book value weighted length of time (in years) to the stated maturity for fixed-income securities. Since this measure ignores the possibility of pre-payment, it generally overstates the average length of time to return of principal. The AM of this investment portfolio is based on scheduled maturities and does not reflect prepayments. **Average Weighted Life (AWL):** for debt securities, the dollar-weighted average time until the return of all principal in years. AWL for this investment portfolio is weighted by book value. **Effective Duration:** effective duration specifically takes into account the way changes in yield will affect expected cash flows. It takes into account both the discounting that occurs at different interest rates as well as changes in cash flows. **Market to Book Ratio:** market to book ratio is equal to market value divided by book value. **Exchange:** An exchange is the movement of money between the Nationwide Fixed Account and any other investment option available to the plan. **Transfer:** a transfer is the movement of money between product providers within the same plan or another financial institution.

STAY CONNECTED



@NWFfinancial

nationwidefunds.com



Members: 1-877-677-3678



Nationwide®

JPMorgan Mid Cap Growth R6 (USD)

Morningstar Analyst Rating™
Bronze

Overall Morningstar Rating™
★★★★★
534 US Fund Mid-Cap Growth

Standard Index
S&P 500 TR USD

Category Index
Russell Mid Cap Growth TR USD

Morningstar Cat
US Fund Mid-Cap Growth

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-15.56	32.50	10.14	20.51	48.51
2021	1.34	7.25	-1.50	3.66	10.99
2022	-11.75	-20.60	-1.70	6.05	-26.96
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-26.96	6.38	9.87	13.04	13.08
Std 12-31-2022	-26.96	—	9.87	13.04	13.08
Total Return	-26.96	6.38	9.87	13.04	13.08
+/- Std Index	-8.85	-1.28	0.45	0.48	—
+/- Cat Index	-0.24	2.53	2.23	1.63	—
% Rank Cat	48	21	11	10	—
No. in Cat	586	534	499	389	—

7-day Yield
30-day SEC Yield

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 800-480-4111 or visit www.jpmorganfunds.com.

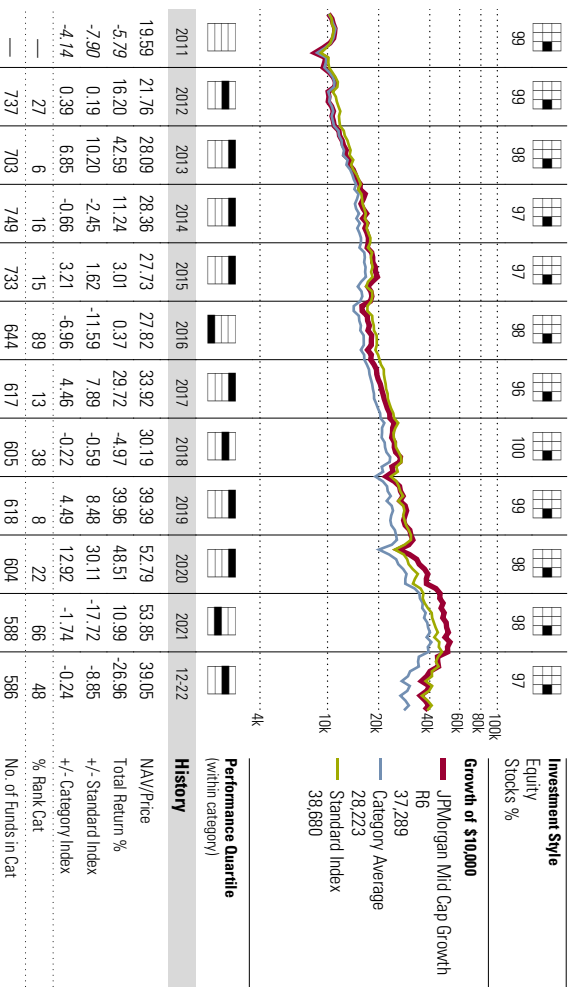
Fees and Expenses			
Sales Charges			
Front-End Load %			NA
Deferred Load %			NA
Fund Expenses			
Management Fees %	0.65		
12b1 Expense %	NA		
Net Expense Ratio %	0.70		
Gross Expense Ratio %	0.75		
Risk and Return Profile			
Morningstar Rating™	3 Yr 534 funds 4★	5 Yr 499 funds 4★	10 Yr 389 funds 5★
Morningstar Risk	-Avg	Avg	Avg
Morningstar Return	+Avg	+Avg	High

MPT Statistics					
	3 Yr	5 Yr	10 Yr	Best Fit Index	Russell Mid Cap Growth TR USD
Alpha	-0.85			2.46	
Beta	1.03			0.96	
R-Squared	82.26			98.07	
12-Month Yield	—			—	
Potential Cap Gains Exp	—			4.61%	

Operations
Family: JPMorgan
Manager: Multiple
Tenure: 18.3 Years
Objective: Growth

Base Currency: USD
Ticker: JMGMX
ISIN: US4812C22886
Minimum Initial Purchase: \$15 mil

Purchase Constraints: A
Incept: 11-01-2011
Type: MF
Total Assets: \$8,053.79 mil



Portfolio Analysis 11-30-2022					
Asset Allocation %			Net %	Long %	Short %
Cash	2.84	2.84	0.00	0.00	0.00
US Stocks	96.73	96.73	0.00	0.00	0.00
Non-US Stocks	0.43	0.43	0.00	0.00	0.00
Bonds	0.00	0.00	0.00	0.00	0.00
Other/Not Cstfd	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	0.00	0.00	0.00

Equity Style		Portfolio Statistics	
Value	Brand Growth	Port Avg Index	Rel Cat
Large	High	31.0	1.63
Mid	Med	18.7	1.32
Small	Low	4.6	1.28
		Geo Avg Mkt Cap	22293
		Geo Avg Mkt Cap	0.14
		Geo Avg Mkt Cap	1.39

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

Credit Quality Breakdown —

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

Regional Exposure		
Stocks %	Rel Std Index	
Americas	99.6	1.01
Greater Europe	0.4	0.41
Greater Asia	0.0	0.00

Sector Weightings		
Stocks %	Rel Std Index	
Cyclical	25.5	0.89
Basic Materials	0.6	0.25
Consumer Cyclical	14.1	1.47
Financial Services	10.9	0.78
Real Estate	0.0	0.00
Sensitive	47.5	1.06
Communication Services	1.0	0.13
Energy	4.5	0.86
Industrials	16.7	1.84
Technology	25.3	1.10
Defensive	27.0	1.01
Consumer Defensive	1.7	0.22
Healthcare	25.3	1.58
Utilities	0.0	0.00

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and there are not an offer to buy or sell a security, and (6) are not warranted as correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

MFS Mid Cap Value R6 (USD)

Morningstar Analyst Rating™
Silver

Overall Morningstar Rating™
12-11-2022

Standard Index
SP500 TR USD

Category Index
Russell Mid Cap Value TR USD

Morningstar Cat
US Fund Mid-Cap Value

★★★★★
393 US Fund Mid-Cap Value

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-30.83	19.78	5.36	19.59	4.40
2021	13.45	5.04	-0.26	10.22	31.00
2022	-2.53	-12.40	-4.51	12.06	-8.64
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-8.64	7.71	7.75	—	10.25
Std 12-31-2022	-8.64	—	7.75	—	10.25
Total Return	-8.64	7.71	7.75	10.94	10.25
+/- Std Index	9.47	0.05	-1.67	-1.62	—
+/- Cat Index	3.39	1.89	2.03	0.84	—
% Rank Cat	56	38	17	13	—
No. in Cat	405	393	372	272	—

7-day Yield — Subsidized
30-day SEC Yield — Unsubsidized

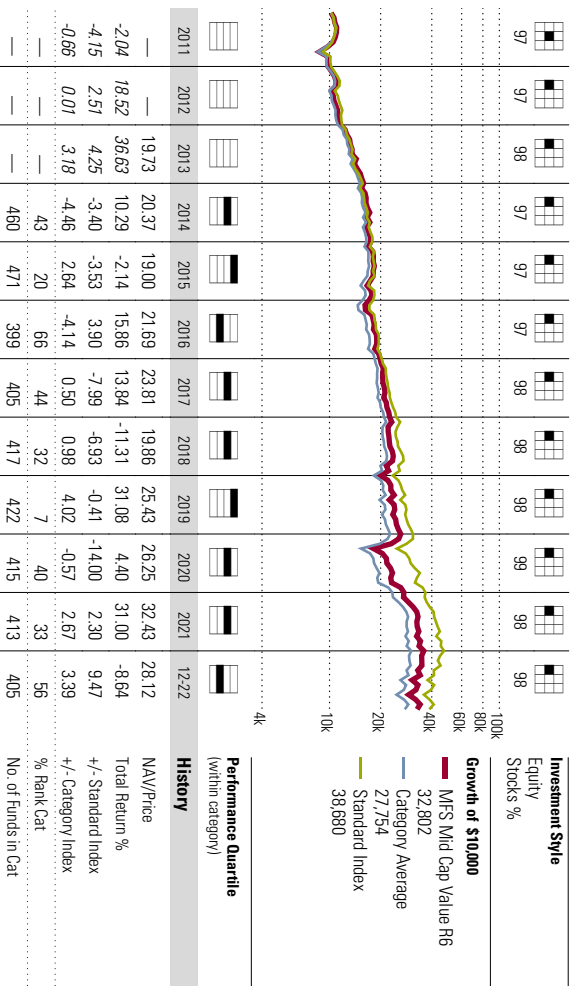
Performance Disclosure
The overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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	NA
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	0.62
Management Fees %	NA
12B1 Expense %	NA
Net Expense Ratio %	0.64
Gross Expense Ratio %	0.64
Risk and Return Profile	
Morningstar Rating™	3 Yr: 393 funds 5 Yr: 372 funds 10 Yr: 272 funds
Morningstar Risk	4★ 4★ 5★
Morningstar Return	-Avg -Avg -Avg
	Avg +Avg +Avg
Standard Deviation	3 Yr: 23.74 5 Yr: 20.78 10 Yr: 16.39
Mean	7.71 7.75 10.94
Sharpe Ratio	0.40 0.40 0.67
MPI Statistics	Standard Index Best Fit Index Russell Mid Cap Value TR USD
Alpha	0.43 1.89
Beta	1.03 0.95
R-Squared	84.80 98.70
12-Month Yield	—
Potential Cap Gains Exp	14.46%

Operations	
Family:	MFS
Manager:	Multiple
Tenure:	14.2 Years
Objective:	Growth
Base Currency:	USD
Ticker:	MNCKX
ISIN:	US55273WW4758
Minimum Initial Purchase:	\$0
Purchase Constraints:	A
Incept:	02-01-2013
Type:	MF
Total Assets:	\$16,107.34 mil



Portfolio Analysis 11-30-2022	
Asset Allocation %	Net % Long % Short %
Cash	1.63 1.63 0.00
US Stocks	92.98 92.98 0.00
Non-US Stocks	5.39 5.39 0.00
Bonds	0.00 0.00 0.00
Other/Not Cstfd	0.00 0.00 0.00
Total	100.00 100.00 0.00
Equity Style	Portfolio Statistics
Value Brand Growth	Port Avg Rel
Large	P/E Ratio TTM 14.4 0.76 1.12
Mid	P/C Ratio TTM 11.0 0.78 1.12
Small	P/B Ratio TTM 2.2 0.62 1.19
	Geo Avg Mkt Cap 15805 0.10 1.28
	Avg Eff Maturity
	Avg Eff Duration
	Avg Wtd Coupon
	Avg Wtd Price
	Share Clng
	Share Holdings
	151 Total Stocks: 0 Total Fixed-Income, 17% Turnover Ratio
	14 mil PG&E Corp
	3 mil The Hartford Financial Services Gr
	1 mil Arthur J. Gallagher & Co
	3 mil Johnson Controls International PLC
	4 mil LKQ Corp
	4 mil KBR Inc
	1 mil Hess Corp
	1 mil Eaton Corp PLC
	2 mil Raymond James Financial Inc
	6 mil The AES Corp
	5 mil VICI Properties Inc Ordinary Shares
	701,021 Pioneer Natural Resources Co
	486,312 Everest Re Group Ltd
	5 mil Equitable Holdings Inc
	951,168 AmerisourceBergen Corp
	Stocks %
	Rel Std Index

Fixed-Income Style	
High	Avg Eff Maturity
Med	Avg Eff Duration
Low	Avg Wtd Coupon
	Avg Wtd Price
	Bond %
	Credit Quality Breakdown
	AAA
	AA
	A
	BBB
	BB
	Below B
	NR
	Regional Exposure
	Americas 95.2
	Greater Europe 3.8
	Greater Asia 1.0
	Utilities
	Denensive
	Consumer Defensive
	Healthcare
	Technology
	Communication Services
	Energy
	Industrials
	Real Estate
	Sensitive
	Consumer Services
	Financial Services
	Real Estate
	Cyclical
	Basic Materials
	Consumer Cyclical
	Financial Services
	Real Estate
	Sensitive
	Communication Services
	Energy
	Industrials
	Real Estate
	Sensitive
	Consumer Defensive
	Healthcare
	Utilities
	Denensive
	Consumer Defensive
	Healthcare
	Technology
	Communication Services
	Energy
	Industrials
	Real Estate
	Sensitive
	Consumer Services
	Financial Services
	Real Estate
	Cyclical
	Basic Materials
	Consumer Cyclical
	Financial Services
	Real Estate
	Sensitive
	Communication Services
	Energy
	Industrials
	Real Estate
	Sensitive
	Consumer Defensive
	Healthcare
	Utilities

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted, in whole or in part, for accuracy, completeness or reliability. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

Sterling Capital Total Return Bond R6 (USD)

Morningstar Quantitative Rating™ **Neutral**^a **Overall Morningstar Rating™** **Standard Index** **Category Index** **Morningstar Cat**
★★★★ 405 US Fund Intermediate Core Bond Agg Bond TR USD Bond TR USD US Fund Intermediate Core Bond

Performance 12-31-2022

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	1.57	-13.15

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly Std 12-31-2022	-13.15	-2.08	—	—	0.71
Total Return	-13.15	-2.08	0.48	1.58	0.71
+/- Std Index	-0.14	0.64	0.46	0.53	—
+/- Cat Index	-0.14	0.64	0.46	0.53	—
% Rank Cat	40	15	10	5	—
No. in Cat	453	405	372	275	—

7-day Yield 01-24-23 3.13 1
 30-day SEC Yield 12-31-22 3.81 1
 1. Contractual waiver. Expires 01-31-2023

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	NA
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	0.25
Management Fees %	0.00
1201 Expense %	0.35
Net Expense Ratio %	0.46
Gross Expense Ratio %	0.46

Risk and Return Profile

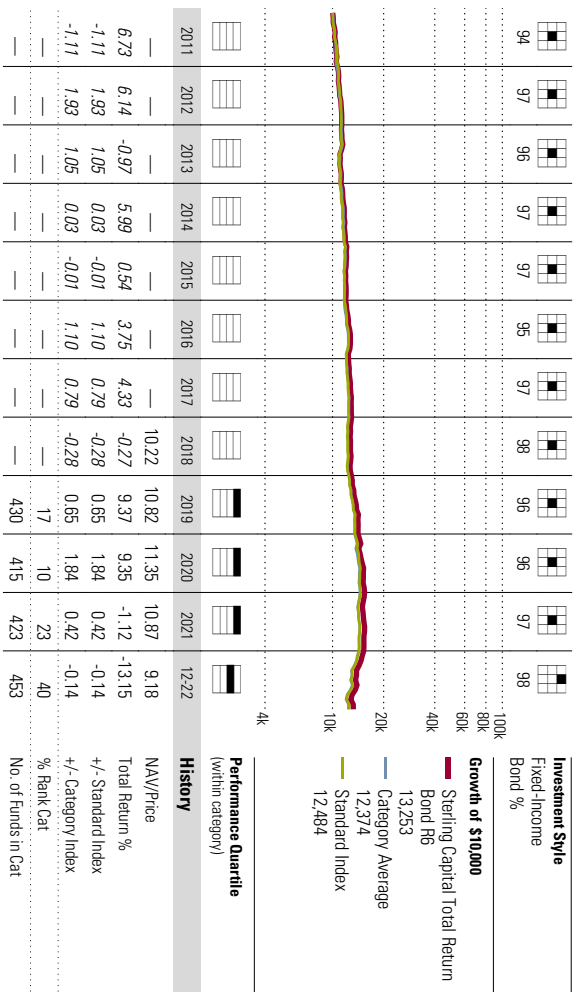
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	4★	4★	5★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	+Avg	High	High

	3 Yr	5 Yr	10 Yr
Standard Deviation	6.00	5.13	4.11
Mean	-2.08	0.48	1.56
Shapre Ratio	-0.46	-0.14	0.21

MPI Statistics

	Standard Index	Best Fit Index
Alpha	0.57	0.42
Beta	0.97	0.98
R-Squared	90.07	95.84
12-Month Yield	2.93%	2.93%
Potential Cap Gains Exp	-19.17%	-19.17%

Operations
 Family: Sterling Capital Funds
 Manager: Multiple
 Tenure: 15.0 Years
 Objective: Growth and Income
 Base Currency: USD



Portfolio Analysis 12-31-2022

Asset Allocation %	Net %	Long %	Short %
Cash	1.60	1.60	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	98.13	98.13	0.00
Other/Not Cstfd	0.27	0.27	0.00
Total	100.00	100.00	0.00

Equity Style	Value	Brand	Grwth
	Large	Med	Ext
	Med	Med	Med
	Small	Med	Low

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	—	—	—
P/C Ratio TTM	—	—	—
P/B Ratio TTM	—	—	—
Geo Avg Mkt Cap \$mil	—	—	—

Fixed-Income Style

	Mid	Ext
	High <td>Med </td>	Med
	Low	Low

Fixed-Income Style	Value	Brand	Grwth
	Large	Med	Ext
	Med	Med	Med
	Small	Med	Low

Credit Quality Breakdown 12-31-2022	Bond %
AAA	66.46
AA	8.48
A	12.58
BBB	12.40
BB	0.06
B	0.00
Below B	0.02
NR	0.00

Regional Exposure	Stocks %	Rel Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

Sector Weightings

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

Operations
 Ticker: STRDX
 ISIN: US8591806242
 Minimum Initial Purchase: \$10 mil
 Min Auto Investment Plan: \$10 mil
 Purchase Constraints: A

Incept: 02-01-2018
 Type: MF
 Total Assets: \$1,059.05 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



T. Rowe Price Lrg Cp Gr I (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
Silver **★★★★** **S&P 500 TR USD** **Russell 1000** **US Fund Large Growth**
 08-12-2022 1,131 US Fund Large Growth

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-13.87	28.60	11.46	13.05	39.56
2021	3.66	12.53	-0.50	6.14	23.18
2022	-13.25	-22.92	-2.89	-0.18	-35.18
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load adj Mthly	-35.18	3.67	8.35	13.85	9.87
Std 12-31-2022	-35.18	—	8.35	13.85	9.87
Total Return	-35.18	3.67	8.35	13.85	9.87
+/- Std Index	-17.07	-3.99	-1.07	1.29	—
+/- Cat Index	-6.05	-4.11	-2.61	-0.25	—
% Rank Cat	77	68	55	11	—
No. in Cat	1235	1131	1054	804	—

7-day Yield 01-24-23 0.00 Unsubsidized
 30-day SEC Yield —

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 800-638-5660 or visit www.troweprice.com.

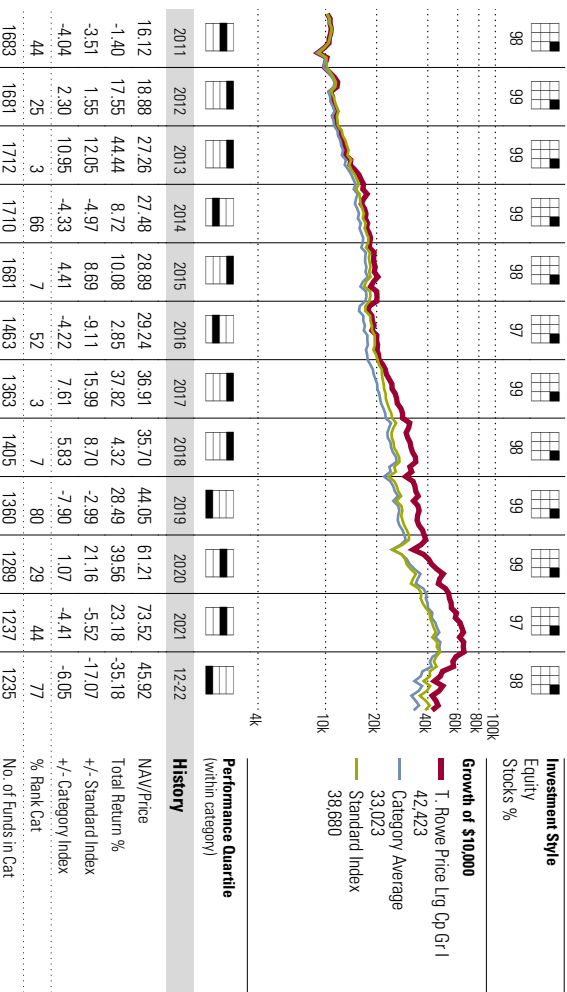
Fees and Expenses	
Sales Charges	
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	0.54
Management Fees %	0.54
12bt Expense %	NA
Net Expense Ratio %	0.55
Gross Expense Ratio %	0.55
Risk and Return Profile	

	1,131 funds			1,054 funds		
	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr
Morningstar Rating™	2★	3★	4★	2★	3★	4★
Morningstar Risk	Avg	Avg	+Avg	Avg	Avg	+Avg
Morningstar Return	-Avg	Avg	+Avg	-Avg	Avg	+Avg
Standard Deviation	23.72	20.87	16.99	23.72	20.87	16.99
Mean	3.67	8.35	13.85	3.67	8.35	13.85
Sharpe Ratio	0.23	0.42	0.80	0.23	0.42	0.80
MPI Statistics	Standard Index	Best Fit Index	Morningstar US LTM	Standard Index	Best Fit Index	Morningstar TR USD
Alpha	-3.69		-1.92	-3.69		-1.92
Beta	1.05		0.97	1.05		0.97
R-Squared	88.03		97.98	88.03		97.98
12-Month Yield	—		—	—		—
Potential Cap Gains Exp	—		59.77%	—		59.77%

Operations
 Family: T. Rowe Price
 Manager: Taymour Tamaddon
 Tenure: 6.0 Years
 Objective: Growth

Base Currency: USD
 Ticker: TRLGX
 ISIN: US45775L4086
 Minimum Initial Purchase: \$500,000

Purchase Constraints: A
 Incept: 10-31-2001
 Type: MF
 Total Assets: \$15,194.28 mil



Portfolio Analysis 09-30-2022

Asset Allocation %	Net %	Long %	Short %
Cash	2.11	2.11	0.00
US Stocks	95.51	95.51	0.00
Non-US Stocks	2.38	2.38	0.00
Bonds	0.00	0.00	0.00
Other/Not Cstfd	0.00	0.00	0.00
Total	100.00	100.00	0.00

Equity Style

Value	Brand	Geogr	Port	Rel	Rel
Large	Mid	Ext	Avg Index	Index	Cat
Large	Mid	Ext	P/E Ratio TTM	28.1	1.48
Large	Mid	Ext	P/C Ratio TTM	19.7	1.39
Large	Mid	Ext	P/B Ratio TTM	5.2	1.45
Large	Mid	Ext	Geo Avg Mkt Cap	245186	1.52
Large	Mid	Ext	Geo Avg Mkt Cap	245186	1.52

Fixed-Income Style

Value	Brand	Geogr	Port	Rel	Rel
Large	Mid	Ext	Avg Eff Maturity	Index	Cat
Large	Mid	Ext	Avg Eff Maturity <td>—</td> <td>—</td>	—	—
Large	Mid	Ext	Avg Eff Duration <td>—</td> <td>—</td>	—	—
Large	Mid	Ext	Avg Wtd Coupon <td>—</td> <td>—</td>	—	—
Large	Mid	Ext	Avg Wtd Price <td>—</td> <td>—</td>	—	—

Credit Quality Breakdown

Credit Quality	Percentage
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure

Region	Stocks %	Rel Std Index
Americas	97.6	0.99
Greater Europe	1.4	1.29
Greater Asia	1.0	32.94

Share Clng Holdings

Share Clng	Share	Holdings	Net Assets %
since	Amount	59 Total Stocks, 0 Total Fixed-Income, 18% Turnover Ratio	%
06-2022	7 mil	Microsoft Corp	11.53
06-2022	13 mil	Rivian Automotive Inc Class A	9.81
06-2022	4 mil	Fiserv Inc	8.01
06-2022	2 mil	Visa Inc Class A	7.23
06-2022	305 mil	T. Rowe Price Gov. Reseve	4.70
06-2022	2 mil	Stryker Corp	3.53
06-2022	2 mil	Salesforce Inc	3.49
06-2022	900.978	Mastercard Inc Class A	3.03
06-2022	3 mil	Ross Stores Inc	2.80
06-2022	3 mil	Ross Stores Inc	2.13

Sector Weightings

Sector	Weightings	Stocks %	Rel Std Index
Cyclical	24.0	0.84	0.29
Basic Materials	0.7	0.29	0.29
Consumer Cyclical	19.3	2.02	0.29
Financial Services	4.0	0.29	0.00
Real Estate	0.0	0.00	0.00
Sensitive	55.4	1.24	1.80
Communication Services	13.1	0.00	0.00
Energy	0.0	0.00	0.00
Industrials	2.9	0.32	0.00
Technology	39.4	1.71	0.00
Defensive	20.6	0.77	0.29
Consumer Defensive	2.2	0.29	1.16
Healthcare	18.4	1.16	0.00
Utilities	0.0	0.00	0.00

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc., including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard International Growth Adm (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index **Category Index** **Morningstar Cat**
Silver **★★★★** **MSCI ACWI EX** **MSCI ACWI EX**
 06-30-2022 **399 US Fund Foreign Large Growth** **USA NR USD** **USA Growth NR** **US Fund Foreign Large Growth**

Performance 12-31-2022

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-15.52	33.01	16.27	22.26	59.74
2021	-1.03	7.49	-4.05	-2.76	-0.74
2022	-16.45	-18.13	-10.16	12.62	-30.79

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-30.79	3.14	4.75	7.84	7.12
Std 12-31-2022	-30.79	—	4.75	7.84	7.12
Total Return	-30.79	3.14	4.75	7.84	7.12
+/- Std Index	-14.79	3.07	3.87	4.04	—
+/- Cat Index	-7.74	3.54	3.26	3.16	—
% Rank Cat	82	9	13	4	—
No. in Cat	443	399	346	226	—

7-day Yield — Subsidized
 30-day SEC Yield — Unsubsidized

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 % 0.32
 12b1 Expense % NA
Net Expense Ratio % 0.34
Gross Expense Ratio % 0.34
Risk and Return Profile

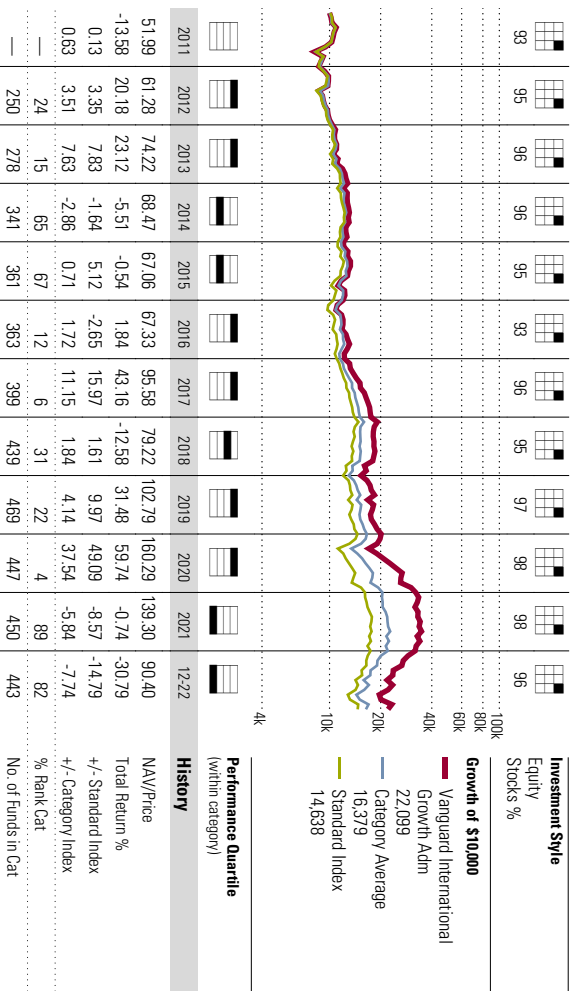
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	4★	4★	4★
Morningstar Risk	High	High	High
Morningstar Return	High	+Avg	High

	3 Yr	5 Yr	10 Yr
Standard Deviation	24.95	22.14	18.15
Mean	3.14	4.75	7.84
Sharpe Ratio	0.21	0.26	0.46

MFT Statistics

	Standard Index	Best Fit Index
Alpha	3.99	MSCI ACWI EX USA Growth NR USD 4.54
Beta	1.13	1.23
R-Squared	78.67	89.80
12-Month Yield	—	—
Potential Cap Gains Exp	—	21.25%

Operations
 Family: Vanguard
 Manager: Multiple
 Tenure: 13.1 Years
 Objective: Foreign Stock



Portfolio Analysis 10-31-2022

Asset Allocation %

Asset Class	Net %	Long %	Short %
Cash	2.01	2.83	0.81
US Stocks	14.61	14.61	0.00
Non-US Stocks	82.30	82.30	0.00
Bonds	0.00	0.00	0.00
Other/Not Cstfd	1.07	1.07	0.00
Total	100.00	100.81	0.81

Equity Style

Value	Brand	Score	Portfolio Statistics
Large	Med	Ext	P/E Ratio TTM 15.7
Med	Med	Med	P/C Ratio TTM 13.1
Small	Low	Low	P/B Ratio TTM 3.0
			Geo Avg Mkt Cap 48088 \$mil

Fixed-Income Style

Value	Brand	Score	Portfolio Statistics
High	Med	Ext	Avg Eff Maturity
Med	Med	Med	Avg Eff Duration
Low	Low	Low	Avg Wtd Coupon
			Avg Wtd Price

Credit Quality Breakdown —

	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure

Region	Stocks %	Rel Std Index
Americas	23.0	2.13
Greater Europe	49.1	1.10
Greater Asia	27.9	0.63

Base Currency: USD
Issuer: VWIIX
Ticker: VWIIX
SIN: US9219105015
Minimum Initial Purchase: \$50,000

Share Clg

Share Clg	Share Amount	Holdings: 118 Total Stocks, 0 Total Fixed-Income, 15% Turnover Ratio	Net Assets %
09-2022	4 ml	ASML Holding NV	5.25
	2 ml	Merckolliore Inc	4.63
	10 ml	Moderna Inc	3.88
	952.616	Adven NV	3.54
	5 ml	Tesla Inc	2.86
	2 ml	Kering SA	2.75
	84 ml	Taiwan Semiconductor Manufacturing	2.63
	38 ml	Tencent Holdings Ltd	2.58
	3 ml	Gannab A/S	2.56
	2 ml	argenx SE	2.36
	4 ml	Illumina Inc	2.32
	49 ml	Meituan Class B	2.05
	9 ml	Spotify Technology SA	1.88
	4 ml	Ferrari NV	1.87
	23 ml	M3 Inc	1.79

Sector Weightings

Sector	Weightings	Stocks %	Rel Std Index
Cyclical		36.3	0.85
Basic Materials		0.5	0.06
Consumer Cyclical		25.6	2.37
Financial Services		10.2	0.49
Real Estate		0.0	0.00
Sensitive		38.0	1.07
Communication Services		6.0	0.95
Energy		2.0	0.33
Industrials		10.7	0.88
Technology		19.2	1.76
Defensive		25.7	1.17
Consumer Defensive		5.3	0.61
Healthcare		19.3	1.93
Utilities		1.1	0.33

Purchase Constraints: A
 Incept: 08-13-2001
 Type: MF
 Total Assets: \$40,551.61 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be presented or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard International Value Inv (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
Bronze **★★★★** MSCI ACWI EX US Fund Foreign Large
 10-13-2022 321 US Fund Foreign Large USA NR USD USA Value NR USD Value

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-26.30	15.08	3.99	23.57	8.99
2021	5.74	3.97	-3.66	1.95	7.97
2022	-5.10	-11.38	-9.27	15.76	-11.66
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-11.66	1.30	1.36	4.31	8.07
Std 12-31-2022	-11.66	—	1.36	4.31	8.07
Total Return	-11.66	1.30	1.36	4.31	8.07
+/- Std Index	4.34	1.23	0.48	0.51	—
+/- Cat Index	-3.07	1.24	1.41	1.58	—
% Rank Cat	75	40	27	25	—
No. in Cat	354	321	298	177	—

7-day Yield — Subsidized
 30-day SEC Yield — Unsubsidized

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.

Sales Charges

Front-End Load % NA
Deferred Load % NA

Fund Expenses

Management Fees % 0.35
 1201 Expense % NA
Net Expense Ratio % 0.36
Gross Expense Ratio % 0.36

Risk and Return Profile

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	4★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	+Avg	+Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	21.95	18.83	15.66
Mean	1.30	1.36	4.31
Shapero Ratio	0.13	0.09	0.30

MPT Statistics	Standard Index	Best Fit Index Morningstar Intl
Alpha	1.60	0.57
Beta	1.09	1.01
R-Squared	94.52	97.00

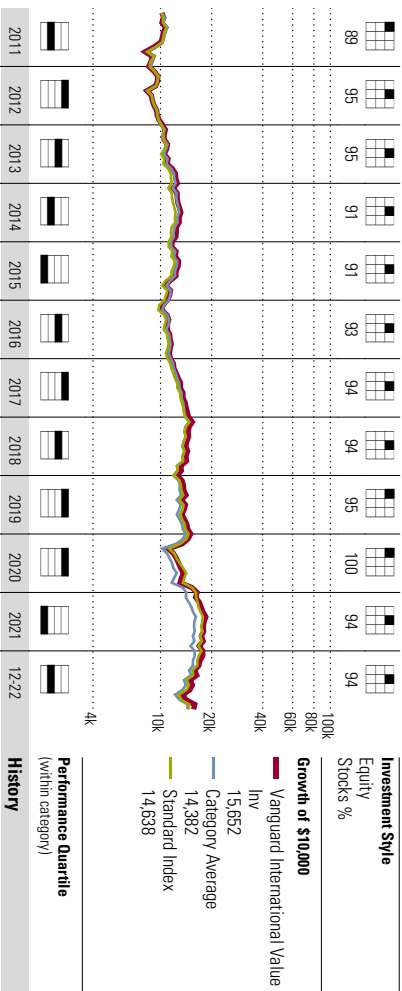
12-Month Yield —
 Potential Cap Gains Exp -11.12%

Operations

Family: Vanguard
 Manager: Multiple
 Tenure: 12.7 Years
 Objective: Foreign Stock

Base Currency: USD
 Ticker: VTRIX
 SIN: US921939Z035
 Minimum Initial Purchase: \$3,000

Purchase Constraints: —
 Incept: 05-16-1983
 Type: MF
 Total Assets: \$12,558.63 mil



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	12-22	History
26.63	31.18	37.98	33.95	31.09	31.75	39.88	32.10	37.53	40.25	41.58	35.74	NAV/Price	
-14.58	20.18	22.15	-6.69	-6.44	4.46	27.96	-14.52	20.39	8.99	7.97	-11.66	Total Return %	
-0.87	3.35	6.86	-2.82	-0.78	-0.04	0.77	-0.33	-1.12	-1.67	0.15	4.34	+/- Standard Index	
-1.38	3.21	7.11	-1.59	3.62	-4.46	5.30	-0.55	4.68	9.76	-2.48	-3.07	+/- Category Index	
72	16	43	53	79	30	8	34	21	5	87	75	% Rank Cat	
376	369	338	348	358	337	317	315	346	352	348	354	No. of Funds in Cat	

Portfolio Analysis 10-31-2022

Asset Allocation %	Net %	Long %	Short %
Cash	6.02	6.26	0.24
US Stocks	4.52	4.52	0.00
Non-US Stocks	89.46	89.46	0.00
Bonds	0.00	0.00	0.00
Other/Not Cstfd	0.00	0.00	0.00
Total	100.00	100.24	0.24

Equity Style	Portfolio Statistics	Port Avg Index	Rel Index Cat	Rel Index
Value Blend Growth	P/E Ratio TTM	11.3	0.95	1.22
Large Mid Small	P/C Ratio TTM	7.7	0.90	1.25
	P/B Ratio TTM	1.4	0.88	1.21
	Geo Avg Mkt Cap \$mil	25315	0.64	0.77

Fixed-Income Style	Ang Eff Maturity	Ang Eff Duration	Ang Wtd Coupon	Ang Wtd Price
Mid Ex	—	—	—	—
High Med Low	—	—	—	—

Credit Quality Breakdown

	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure	Stocks %	Rel Std Index
Americas	12.0	1.11
Greater Europe	50.2	1.12
Greater Asia	37.8	0.85

Share Cng	Share Amount	Holdings: 196 Total Stocks, 0 Total Fixed-Income, 37% Turnover Ratio	Net Assets %
09-2022	32 mil	BP PLC	1.51
	2 mil	Airbus SE	1.50
	4 mil	Holcim Ltd	1.48
	3 mil	TotalEnergies SE	1.40
	21 mil	Alibaba Group Holding Ltd Ordinary	1.39
	43 mil	Bank Bradesco SA ADR	1.37
	29 mil	HSBC Holdings PLC	1.27
	19 mil	AAA Group Ltd	1.21
	5 mil	RELX PLC	1.20
	6 mil	ICICI Bank Ltd ADR	1.14
	5 mil	Shell PLC	1.10
	2 mil	Novartis AG	1.04
	902,385	Air Liquide SA	1.00
	416,187	Aon PLC Class A	0.99
	628,158	MTU Aero Engines AG	0.95

Sector Weightings

	Stocks %	Rel Std Index
Cyclical	43.1	1.01
Basic Materials	10.6	1.27
Consumer Cyclical	14.8	1.37
Financial Services	16.4	0.79
Real Estate	1.3	0.51
Sensitive	40.3	1.13
Communication Services	6.0	0.96
Energy	8.4	1.38
Industrials	18.4	1.52
Technology	7.5	0.88
Defensive	16.6	0.76
Consumer Defensive	6.2	0.72
Healthcare	7.9	0.79
Utilities	2.4	0.75

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

Vanguard Small Cap Growth Index Admiral (USD)

Morningstar Analyst Rating™
Gold
02-18-2022

Overall Morningstar Rating™
★★★★
576 US Fund Small Growth

Standard Index
S&P 500 TR USD

Category Index
Russell 2000 Growth TR USD

Morningstar Cat
US Fund Small Growth

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-24.22	32.92	7.74	24.65	35.28
2021	2.56	5.81	-3.16	0.58	5.70
2022	-11.94	-20.44	-0.79	3.02	-28.39
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-28.39	0.79	5.10	9.27	10.51
Std 12-31-2022	-28.39	—	5.10	9.27	10.51
Total Return	-28.39	0.79	5.10	9.27	10.51
+/- Std Index	-10.28	-6.87	-4.33	-3.30	—
+/- Cat Index	-2.04	0.14	1.59	0.07	—
% Rank Cat	55	80	71	72	—
No. in Cat	604	576	530	399	—

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 01-23-23	0.60	0.60

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 %	0.06
12b1 Expense %	NA
Net Expense Ratio %	0.07
Gross Expense Ratio %	0.07

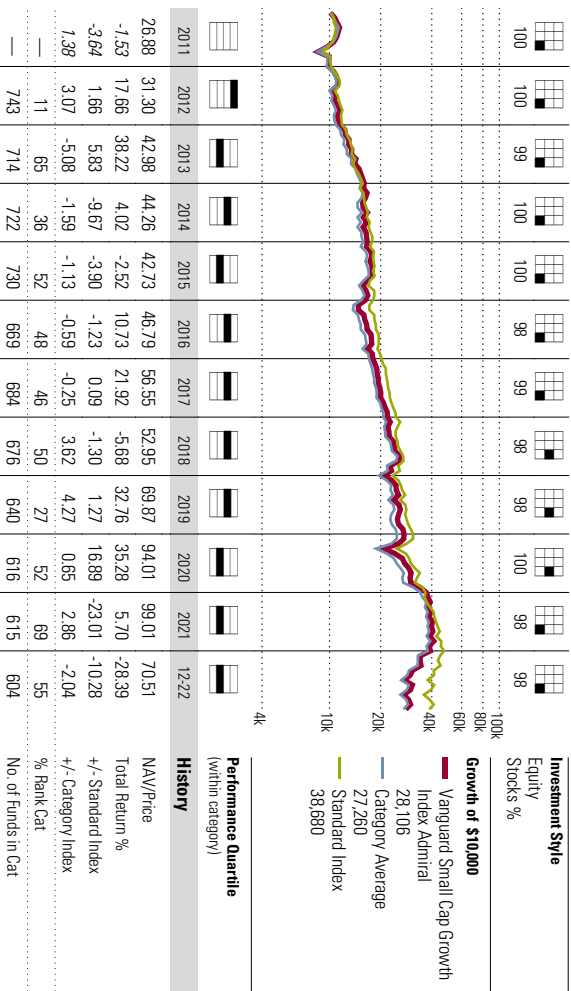
Risk and Return Profile

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	2★	3★	3★
Morningstar Risk	-Avg	-Avg	-Avg
Morningstar Return	-Avg	-Avg	-Avg
Standard Deviation	25.67	23.06	18.46
Mean	0.79	5.10	9.27
Shapero Ratio	0.12	0.27	0.53

MFT Statistics	Standard Index	Best Fit Index
Alpha	-6.35	Morningstar US SmI
Beta	1.09	Best Fit Index
R-Squared	80.85	98.05
12-Month Yield	0.55%	21.09%
Potential Cap Gains Exp		

Operations

Family:	Vanguard
Manager:	Multiple
Tenure:	18.1 Years
Objective:	Small Company



Portfolio Analysis 12-31-2022					
Asset Allocation %	Net %	Long %	Short %	Share Clng	Share Holdings:
Cash	1.98	2.00	0.02	11-2022	694 Total Stocks: 0 Total Fixed-Income, 29% Turnover Ratio
US Stocks	97.36	97.36	0.00	3 mil	Targa Resources Corp
Non-US Stocks	0.66	0.66	0.00	371,603	Fair Isaac Corp
Bonds	0.00	0.00	0.00	2 mil	Bio-Techne Corp
Other/Not Clsfd	0.00	0.00	0.00	2 mil	PTC Inc
Total	100.00	100.00	0.02	766,033	Nordson Corp

Equity Style	Portfolio Statistics	Port	Rel	Rel
Value	P/E Ratio TTM	200	1.05	0.95
Brand	P/C Ratio TTM	15.5	1.10	0.92
Growth	P/B Ratio TTM	3.3	0.91	0.91
Large	Geo Avg Mkt Cap	4849	0.03	1.07
Mid				
Small				

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

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

Regional Exposure	Stocks %	Rel Std Index
Americas	99.3	1.00
Greater Europe	0.0	0.02
Greater Asia	0.6	20.84

Base Currency:	USD	Purchase Constraints:	—
Ticker:	VSGAX	Incept:	09-27-2011
ISIN:	US9219377101	Type:	MF
Minimum Initial Purchase:	\$3,000	Total Assets:	\$13,027.43 mil

Sector Weightings	Stocks %	Rel Std Index
Cyclical	24.8	0.86
Basic Materials	2.2	0.91
Consumer Cyclical	12.0	1.25
Financial Services	4.3	0.31
Real Estate	6.3	2.25
Sensitive	49.4	1.11
Communication Services	2.6	0.36
Energy	4.9	0.93
Industrials	15.9	1.75
Technology	26.1	1.13
Defensive	25.7	0.96
Consumer Defensive	3.7	0.48
Healthcare	21.5	1.35
Utilities	0.6	0.18

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

Vanguard Target Retirement 2025 Fund (USD)

Morningstar Analyst Rating™
Silver
02-24-2022

Overall Morningstar Rating™
★★★★★
195 US Fund Target-Date
2025

Standard Index
Morningstar Mod
Tgt Risk TR USD

Category Index
Morningstar
Lifetime Mod 2025
TR USD

Morningstar Cat
US Fund Target-Date
2025

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-12.95	13.20	5.17	9.33	13.30
2021	1.86	4.79	-0.65	3.55	9.80
2022	-5.51	-10.72	-5.59	6.03	-15.55
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-15.55	1.66	3.58	6.43	6.13
Std 12-31-2022	-15.55	—	3.58	6.43	6.13
Total Return	-15.55	1.66	3.58	6.43	6.13
+/- Std Index	-0.77	-0.29	-0.16	0.61	—
+/- Cat Index	2.03	0.62	0.37	0.64	—
% Rank Cat	52	46	39	18	—
No. in Cat	219	195	170	102	—

7-day Yield	
30-day SEC Yield 01-24-23	2.36
Subsidized	—
Unsubsidized	2.36

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	

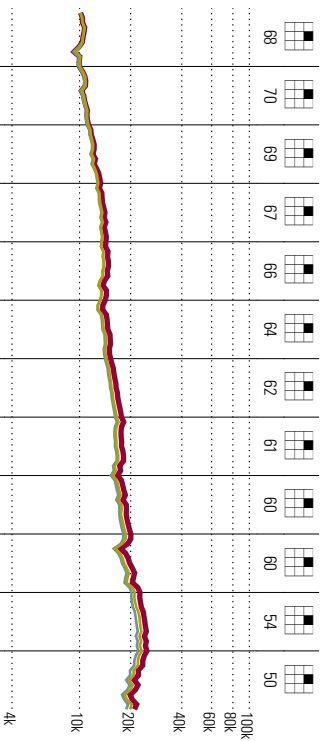
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	3★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	Avg	+Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	13.38	11.61	9.43
Mean	1.66	3.58	6.43
Sharpe Ratio	0.13	0.25	0.62

MPT Statistics	Standard Index	Best Fit Index
		Morningstar
		Lifetime Mod 2020
		TR USD

Alpha	-0.27	0.22
Beta	0.97	0.87
R-Squared	99.13	99.19
12-Month Yield	2.19%	2.19%
Potential Cap Gains Exp	9.02%	9.02%

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.9 Years
Objective:	Asset Allocation



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
12-27	13.59	15.75	16.53	15.62	16.35	18.50	17.01	19.84	21.54	20.34	16.68	NAV/Price
-0.37	13.29	18.14	7.17	-0.85	7.48	15.94	-5.15	19.63	13.30	9.80	-15.55	Total Return %
-0.96	1.25	3.83	2.28	0.94	-1.09	1.28	-0.39	0.60	0.47	-0.39	-0.77	+/- Standard Index
-0.61	-0.37	1.87	1.13	1.21	-0.91	1.40	-0.25	0.26	-0.37	-0.30	2.03	+/- Category Index
16	43	24	4	24	23	21	42	22	40	57	52	% Rank Cat
145	154	181	185	206	195	208	226	232	214	220	219	No. of Funds in Cat

Portfolio Analysis 12-31-2022

Asset Allocation %	
Cash	2.99
US Stocks	31.84
Non-US Stocks	22.19
Bonds	42.94
Other/Not Cstfd	0.03
Total	100.00

Equity Style	Value	Brand	Growth
	Large	Mid	Small

Fixed-Income Style		Portfo	Rel	Rel
		Index	Index	Cat

Credit Quality Breakdown 11-30-2022

AAA	60.35	Bond %
AA	8.97	
A	15.80	
BBB	14.15	
BB	0.00	
B	0.00	
Below B	0.36	
NR	0.37	

Regional Exposure		Stocks %	Rel Std Index
Americas	63.2	1.02	
Greater Europe	18.0	0.99	
Greater Asia	18.9	0.95	

Base Currency:	USD
Ticker:	VTTVX
ISIN:	US92202E4098
Minimum Initial Purchase:	\$1,000

Purchase Constraints:	—
Incept:	10-27-2003
Type:	MF
Total Assets:	\$71,647.29 mil

Share Clg	Share	Holdings	Net Assets
since 11-2022	Amount	10,797 Total Stocks, 17,230 Total Fixed-Income, 14% Turnover Ratio	%
⊕	133 mil	Vanguard Total Stock Mkt Idx Instl	32.26
⊕	2,159 mil	Vanguard Total Bond Market II Idx	28.14
⊕	978 mil	Vanguard Total Intl Stock Index Inv	22.68
⊖	343 mil	Vanguard Total Intl Bnd II Idx Instl	12.13
⊕	107 mil	Vanguard Shrt-Term Intl-Prot Sec I	3.48

Sector Weightings	Stocks %	Rel Std Index
Cyclical	35.4	0.88
Basic Materials	5.1	0.94
Consumer Cyclical	10.7	0.97
Financial Services	16.1	0.98
Real Estate	3.5	0.49

Sensitive	41.6	1.16
Communication Services	6.4	1.23
Energy	5.4	1.01
Industrials	11.4	0.99
Technology	18.4	1.33

Defensive	23.0	0.96
Consumer Defensive	7.2	0.97
Healthcare	12.8	1.00
Utilities	3.0	0.81

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be precatod or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement 2030 Fund (USD)

Morningstar Analyst Rating™
Silver
02-24-2022

Overall Morningstar Rating™
★★★★★
195 US Fund Target-Date
2030

Standard Index
Morningstar Mod
Tgt Risk TR USD

Category Index
Morningstar
Lifetime Mod 2030
TR USD

Morningstar Cat
US Fund Target-Date
2030

Performance 12-31-2022					
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	6.81	-16.27
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-16.27	2.09	3.94	6.99	6.02
Std 12-31-2022	-16.27	—	3.94	6.99	6.02
Total Return	-16.27	2.09	3.94	6.99	6.02
+/- Std Index	-1.49	0.15	0.20	1.17	—
+/- Cat Index	1.67	0.71	0.40	0.48	—
% Rank Cat	44	51	45	25	—
No. in Cat	221	195	170	96	—

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 01-23-23	2.21	2.21

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.

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

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	3★	4★
Morningstar Risk	Avg	Avg	-Avg
Morningstar Return	Avg	Avg	+Avg
Standard Deviation	14.76	12.85	10.42
Mean	2.09	3.94	6.99
Sharpe Ratio	0.16	0.26	0.62
MPT Statistics	Standard Index	Best Fit Index	Morningstar
	Lifetime Mod 2030	TR USD	TR USD
Alpha	0.15	0.13	0.13
Beta	1.07	0.87	0.87
R-Squared	99.20	99.22	99.22
12-Month Yield	2.04%	2.04%	2.04%
Potential Cap Gains Exp	7.70%	7.70%	7.70%

Operations

Family: Vanguard

Manager: Multiple

Tenure: 9.9 Years

Objective: Asset Allocation

Base Currency: USD

Ticker: VTHHX

ISIN: US92202E8883

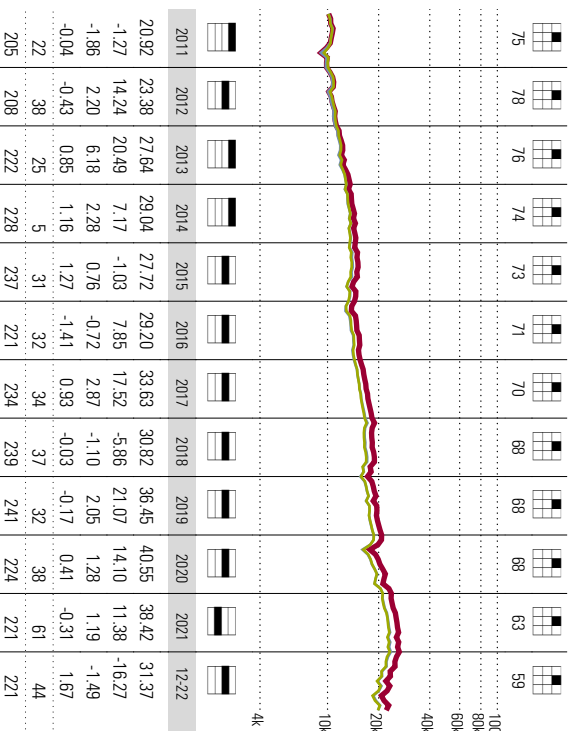
Minimum Initial Purchase: \$1,000

Purchase Constraints: —

Incept: 06-07-2006

Type: MF

Total Assets: \$76,003.52 mil



	NAV/Price	Total Return %	+/- Standard Index	+/- Category Index	% Rank Cat	No. of Funds in Cat
2011	20.92	23.38	27.64	29.04	27.72	29.20
2012	-1.27	14.24	20.49	7.17	-1.03	7.85
2013	-1.86	2.20	6.18	2.28	0.76	-0.72
2014	-0.04	-0.43	0.95	1.16	1.27	-1.41
2015	22	38	25	5	31	32
2016	208	222	228	237	234	234
2017	208	222	228	237	234	234
2018	208	222	228	237	234	234
2019	208	222	228	237	234	234
2020	208	222	228	237	234	234
2021	208	222	228	237	234	234
12-22	208	222	228	237	234	234

Portfolio Analysis 12-31-2022

Asset Allocation %

Asset Class	Net %	Long %	Short %
Cash	2.80	9.52	6.72
US Stocks	36.80	36.80	0.00
Non-US Stocks	25.81	25.81	0.00
Bonds	34.56	34.57	0.02
Other/Not Cstfd	0.04	0.04	0.00
Total	100.00	106.73	6.73

Share Cng

Share Cng since 11-2022	Share Amount	Holdings: 10,900 Total Stocks, 17,024 Total Fixed-Income, 11% Turnover Ratio	Net Assets %
163 mil	Vanguard Total Stock Mkt Idx Instl	37.27	
1,207 mil	Vanguard Total Intl Stock Index Inv	26.38	
2,005 mil	Vanguard Total Bond Market II Idx	24.64	
312 mil	Vanguard Total Intl Bd II Idx Instl	10.42	

Equity Style

Value	Brand	Growth
Large	Med	Small

Portfolio Statistics

Metric	Value
P/E Ratio TTM	14.7
P/C Ratio TTM	10.9
P/B Ratio TTM	2.2
Geo Avg Mkt Cap	56718
Avg Eff Maturity	8.93
Avg Eff Duration	6.83
Avg Wtd Coupon	2.44
Avg Wtd Price	89.56

Sector Weightings

Sector	Weighting %	Rel Std Index
Cyclical	35.4	0.88
Basic Materials	5.1	0.94
Consumer Cyclical	10.7	0.97
Financial Services	16.1	0.98
Real Estate	3.5	0.49
Sensitive	41.6	1.16
Communication Services	6.4	1.23
Energy	5.4	1.01
Industrials	11.4	0.99
Technology	18.4	1.33
Defensive	23.0	0.96
Consumer Defensive	7.2	0.97
Healthcare	12.8	1.00
Utilities	3.0	0.81

Credit Quality Breakdown 11-30-2022

AAA	AA	A	BBB	BB	B
17.03	9.61	17.03	15.29	0.00	0.00
57.30	6.83	2.44	89.56	0.39	0.39
Below B	NR	NR	NR	NR	NR

Fixed-Income Style

Lat	Med	Ext
High <td>Med <td>Low</td> </td>	Med <td>Low</td>	Low

Regional Exposure

Region	Stocks %	Rel Std Index
Americas	63.0	1.02
Greater Europe	18.1	0.99
Greater Asia	18.9	0.95

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be precatred or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement 2035 Fund (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
Silver **★★★★** **US Fund Target-Date**
 02-24-2022 188 US Fund Target-Date Tgt Risk TR USD Lifetime Mod 2035 2035
 2035 TR USD

Performance 12-31-2022					
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	7.45	-16.62
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-16.62	2.64	4.34	7.57	6.83
Std 12-31-2022	-16.62	—	4.34	7.57	6.83
Total Return	-16.62	2.64	4.34	7.57	6.83
+/- Std Index	-1.84	0.69	0.61	1.75	—
+/- Cat Index	1.14	0.69	0.37	0.43	—
% Rank Cat	37	55	49	29	—
No. in Cat	212	188	167	99	—

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 01-23-23	2.23	2.23

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

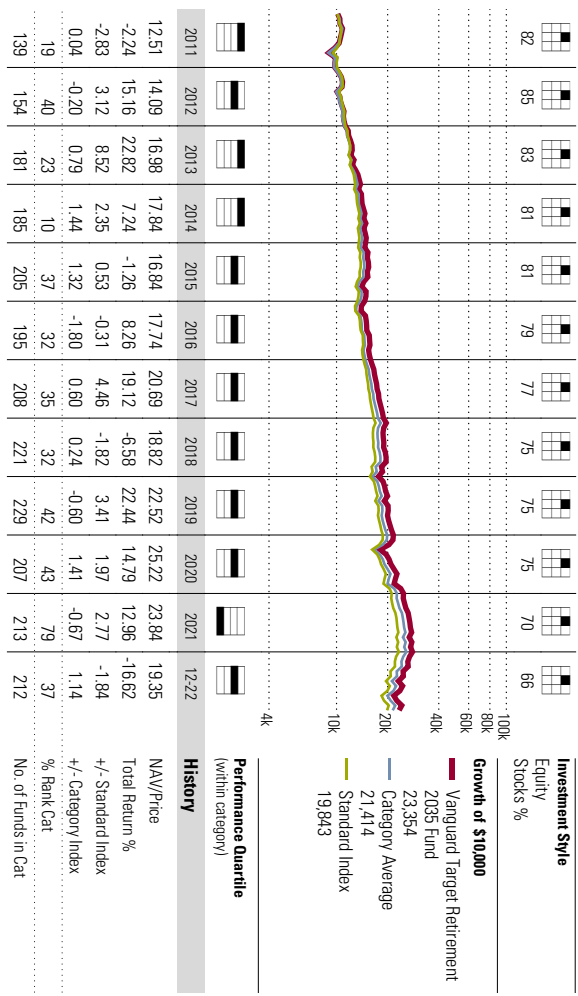
Risk and Return Profile

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

	3 Yr	5 Yr	10 Yr
Standard Deviation	16.04	14.03	11.40
Mean	2.64	4.34	7.57
Sharpe Ratio	0.19	0.28	0.63

MFT Statistics	Standard Index	Best Fit Index Morningstar TR USD	Lifetime Mod 2035 TR USD
Alpha	0.69	0.66	0.66
Beta	1.16	0.95	0.95
R-Squared	99.08	99.34	99.34
12-Month Yield	2.07%	2.07%	2.07%
Potential Cap Gains Exp	10.78%	10.78%	10.78%

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.9 Years
Objective:	Asset Allocation



Portfolio Analysis 12-31-2022			
Asset Allocation %	Net %	Long %	Short %
Cash	2.92	8.21	5.28
US Stocks	40.88	40.88	0.00
Non-US Stocks	28.75	28.75	0.00
Bonds	27.41	27.42	0.01
Other/Not Cstfd	0.04	0.04	0.00
Total	100.00	105.29	5.29

Equity Style	Portfolio Statistics	Part	Rel	Rel	Rel
		Index	Index	Index	Cat
Value	P/E Ratio TTM	14.7	1.03	0.94	
Small Growth	P/C Ratio TTM	10.9	1.01	0.94	
Large	P/B Ratio TTM	2.2	1.07	0.91	
Mid	Geo Avg Mkt Cap	56688	1.37	0.87	
Small					

Fixed-Income Style		
Value	Med	Ext
High	High	High
Med	Med	Med
Low	Low	Low

Sector Weightings		
Weightings	Stocks %	Rel Std Index
Cyclical	35.4	0.88
Basic Materials	5.1	0.94
Consumer Cyclical	10.7	0.97
Financial Services	16.1	0.98
Real Estate	3.5	0.49
Sensitive	41.6	1.16
Communication Services	6.4	1.23
Energy	5.4	1.01
Industrials	11.4	0.99
Technology	18.4	1.33
Defensive	23.0	0.96
Consumer Defensive	7.2	0.97
Healthcare	12.8	1.00
Utilities	3.0	0.81

Credit Quality Breakdown 11-30-2022		
AAA	AA	A
AAA	AA	A
BBB	BB	B
BB	B	B
Below B	NR	NR

Regional Exposure		
Regional Exposure	Stocks %	Rel Std Index
Americas	63.0	1.02
Greater Europe	18.1	0.99
Greater Asia	19.0	0.95

Base Currency:	USD
Ticker:	VTHHX
ISIN:	US92202E9087
Minimum Initial Purchase:	\$1,000
Purchase Constraints:	—
Incept:	10-27-2003
Type:	MF
Total Assets:	\$74,832.71 mil

Share Clng	11-2022	Share Amount	10,927 Total Stocks , 16,722 Total Fixed-Income, 9% Turnover Ratio	Holdings:	178 mil Vanguard Total Stock Mkt Idx Instl	41.41
					1,323 mil Vanguard Total Intl Stock Index Inv	29.39
					1,570 mil Vanguard Total Bond Market II Idx	19.62
					241 mil Vanguard Total Intl Bd II Idx Instl	8.18

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement 2040 Fund (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
Silver **★★★★** **189 US Fund Target-Date** **Morningstar Mod** **US Fund Target-Date**
 02-24-2022 **Tgt Risk TR USD** **Lifetime Mod 2040 2040**

Performance 12-31-2022					
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	8.20	-16.98
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-16.98	3.17	4.74	8.06	6.59
Std 12-31-2022	-16.98	—	4.74	8.06	6.59
Total Return	-16.98	3.17	4.74	8.06	6.59
+/- Std Index	-2.20	1.23	1.01	2.24	—
+/- Cat Index	0.39	0.64	0.38	0.50	—
% Rank Cat	36	50	45	26	—
No. in Cat	216	189	170	96	—

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 01-24-23	2.24	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	
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

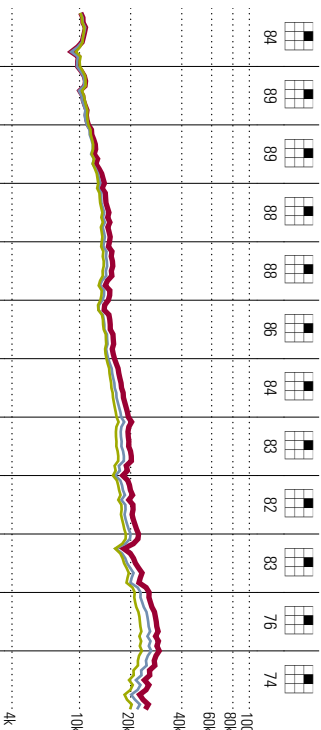
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	3★	4★
Morningstar Risk	-Avg	Avg	-Avg
Morningstar Return	Avg	Avg	+Avg

Standard Deviation	17.33	15.22	12.34
Mean	3.17	4.74	8.06
Sharpe Ratio	0.22	0.29	0.62

MPT Statistics	Standard Index	Best Fit Index
	MSCI ACWI/NR	USD
Alpha	1.24	-0.60
Beta	1.25	0.86
R-Squared	98.83	99.42

12-Month Yield	2.09%
Potential Cap Gains Exp	10.64%

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.9 Years
Objective:	Asset Allocation



Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NAV/Price	20.50	23.18	28.32	29.76	28.45	30.21	35.77	32.31	39.13	44.27	42.03	34.00
Total Return %	-2.55	15.56	24.37	7.15	-1.59	8.73	20.71	-7.32	23.86	15.47	14.56	-16.98
+/- Standard Index	-3.14	3.52	10.07	2.26	0.21	0.16	6.05	-2.57	4.83	2.65	4.37	-2.20
+/- Category Index	0.30	-0.15	1.32	1.63	1.25	-1.88	0.84	0.33	-0.49	2.38	-0.80	0.39
% Rank Cat	19	31	15	12	43	27	25	37	43	40	81	36
No. of Funds in Cat	202	204	218	227	237	221	234	239	241	218	215	216

Portfolio Analysis 12-31-2022

Asset Allocation %		
Cash	2.84	6.70
US Stocks	45.29	45.29
Non-US Stocks	31.70	31.70
Bonds	20.13	20.14
Other/Not Cstfd	0.04	0.04
Total	100.00	103.87

Equity Style					
Value	Small	Mid	Large	Value	Small
Brand	Med	Med	Med	Med	Med
Growth	Ext	Ext	Ext	Ext	Ext
P/E Ratio TTM	14.7	1.03	0.95	8.93	6.82
P/C Ratio TTM	10.9	1.01	0.94	6.82	2.45
P/B Ratio TTM	2.2	1.07	0.92	2.45	89.56
Geo Avg Mkt Cap	56761	1.38	0.90	89.56	89.56

Fixed-Income Style					
Lat	Med	Ext	High	High	High
Eff Maturity	High	High	High	High	High
Avg Eff Duration	8.93	6.82	2.45	8.93	6.82
Avg Wtd Coupon	6.82	2.45	89.56	6.82	2.45
Avg Wtd Price	2.45	89.56	89.56	2.45	89.56

Credit Quality Breakdown 11-30-2022

AAA	57.51
AA	9.50
A	16.95
BBB	15.27
BB	0.00
B	0.00
Below B	0.38
NR	0.39

Regional Exposure		
Americas	63.1	
Greater Europe	18.0	
Greater Asia	18.9	

Base Currency:	USD
Ticker:	VFORX
SIN:	US92202EB701
Minimum Initial Purchase:	\$1,000

Share Clng		
11-2022	11,009	
Amount	7%	
170 mil	Vanguard Total Stock Mkt Idx Instl	
1,261 mil	Vanguard Total Intl Stock Index Inv	
1,000 mil	Vanguard Total Bond Market II Idx	
152 mil	Vanguard Total Intl Bd II Idx Instl	

Sector Weightings		
Basic Materials	5.1	
Consumer Cyclical	10.7	
Financial Services	16.1	
Real Estate	3.5	
Communication Services	6.4	
Energy	5.4	
Industrials	11.4	
Technology	18.4	
Consumer Defensive	7.2	
Healthcare	12.8	
Utilities	3.0	

Defensive		
Consumer Defensive	23.0	
Healthcare	7.2	
Utilities	3.0	

Purchase Constraints:	
Incept:	06-07-2006
Type:	MF
Total Assets:	\$64,733.14 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement 2045 Fund (USD)

Morningstar Analyst Rating™
Silver
 02-24-2022

Overall Morningstar Rating™ **Standard Index** **Category Index** **Morningstar Cat**
★★★★ Morningstar Mod Morningstar US Fund Target-Date
 188 US Fund Target-Date Tgt Risk TR USD Lifetime Mod 2045 2045
 2045 TR USD

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-19.88	18.70	7.36	13.90	16.30
2021	4.47	6.55	-1.08	5.49	16.16
2022	-5.67	-13.93	-6.51	8.89	-17.36
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-17.36	3.74	5.14	8.34	7.40
Std 12-31-2022	-17.36	—	5.14	8.34	7.40
Total Return	-17.36	3.74	5.14	8.34	7.40
+/- Std Index	-2.58	1.79	1.41	2.52	—
+/- Cat Index	-0.29	0.82	0.56	0.64	—
% Rank Cat	31	37	34	21	—
No. in Cat	212	188	167	98	—

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 01-23-23	2.26	2.26

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

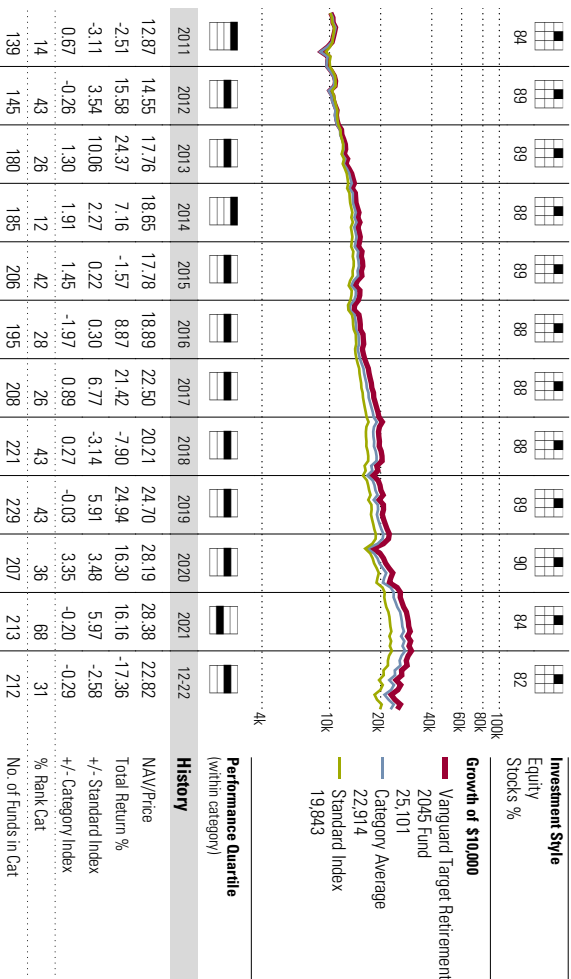
Morningstar Rating™	3★	3★	4★
Morningstar Risk	Avg	Avg	-Avg
Morningstar Return	Avg	Avg	+Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	18.64	16.33	13.04
Mean	3.74	5.14	8.34
Sharpe Ratio	0.24	0.31	0.62

MFT Statistics	Standard Index	Best Fit Index
Alpha	1.84	-0.15
Beta	1.34	0.92
R-Squared	98.52	99.59

12-Month Yield	2.11%
Potential Cap Gains Exp	13.04%

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.9 Years
Objective:	Asset Allocation



Portfolio Analysis 12-31-2022				
Asset Allocation %	Net %	Long %	Short %	Share Clng
Cash	2.69	5.17	2.48	11-2022
US Stocks	49.69	49.69	0.00	Amount
Non-US Stocks	34.62	34.62	0.00	174 mil Vanguard Total Stock Mkt Idx Instl
Bonds	12.96	12.97	0.01	1,286 mil Vanguard Total Int'l Stock Index Inv
Other/Not Clsfd	0.04	0.04	0.00	603 mil Vanguard Total Bond Market II Idx
Total	100.00	102.49	2.49	91 mil Vanguard Total Int'l Bd II Idx Instl

Equity Style	Value	Brand	Growth	Portfolio Statistics	Part	Rel	Rel
	Large	Med	Small	P/E Ratio TTM	14.7	1.03	0.95
				P/C Ratio TTM	10.9	1.01	0.95
				P/B Ratio TTM	2.2	1.07	0.93
				Geo Avg Mkt Cap	56844	1.38	0.91

Fixed-Income Style	Ltd	Med	Ext	Avg Eff Maturity	8.93
				Avg Eff Duration	6.82
				Avg Wtd Coupon	2.45
				Avg Wtd Price	—

Credit Quality Breakdown	11-30-2022	Bond %
AAA	AA	57.61
AA	AA	9.46
A	A	16.91
BBB	B	15.26
BB	B	0.00
B	Below B	0.00
Below B	NR	0.38

Regional Exposure	Stocks %	Rel Std Index
Americas	63.2	1.02
Greater Europe	18.0	0.99
Greater Asia	18.9	0.95

Sector Weightings	Stocks %	Rel Std Index
Cyclical	35.4	0.88
Basic Materials	5.1	0.94
Consumer Cyclical	10.7	0.97
Financial Services	16.1	0.98
Real Estate	3.5	0.49
Sensitive	41.6	1.16
Communication Services	6.4	1.23
Energy	5.4	1.01
Industrials	11.4	0.99
Technology	18.4	1.33
Defensive	23.0	0.96
Consumer Defensive	7.2	0.97
Healthcare	12.8	1.00
Utilities	3.0	0.81

Base Currency:	USD	Purchase Constraints:	—
Ticker:	VTIVX	Incept:	10-27-2003
ISIN:	US92202E6077	Type:	MF
Minimum Initial Purchase:	\$1,000	Total Assets:	\$60,448.67 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement 2050 Fund (USD)

Morningstar Analyst Rating™
Silver
 02-24-2022

Overall Morningstar Rating™
★★★★
 189 US Fund Target-Date
 2050

Standard Index
 Morningstar Mod
 Tgt Risk TR USD

Category Index
 Morningstar
 Lifetime Mod 2050
 TR USD

Morningstar Cat
 US Fund Target-Date
 2050

Performance 12-31-2022					
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	9.23	-17.46
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-17.46	3.80	5.18	8.36	6.79
Std 12-31-2022	-17.46	—	5.18	8.36	6.79
Total Return	-17.46	3.80	5.18	8.36	6.79
+/- Std Index	-2.68	1.85	1.45	2.54	—
+/- Cat Index	-0.55	0.76	0.56	0.68	—
% Rank Cat	29	36	37	22	—
No. in Cat	213	189	170	95	—

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 01-24-23	2.26	2.26

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

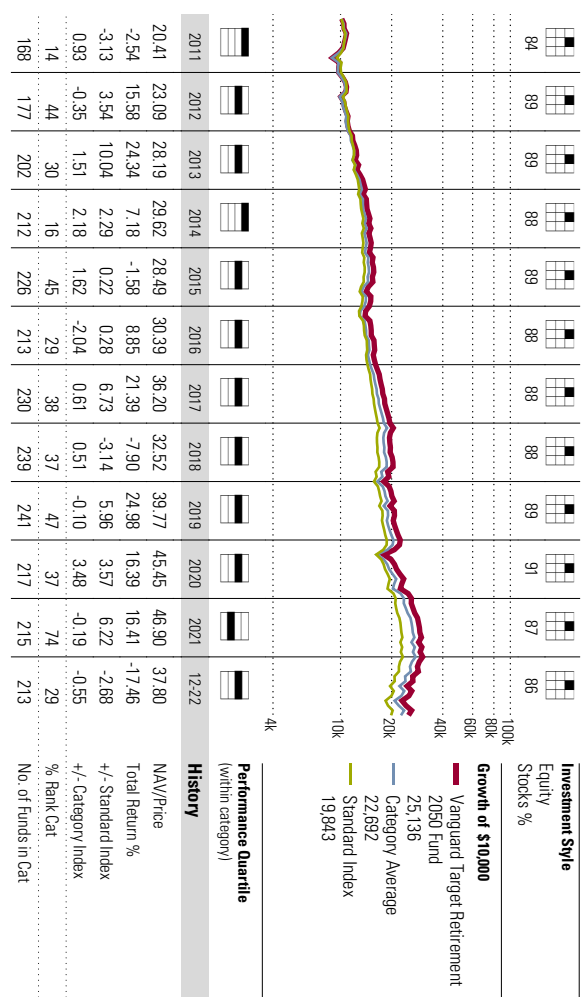
Risk and Return Profile

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

Standard Deviation	3 Yr 18.83	5 Yr 16.47	10 Yr 13.12
Mean	3.80	5.18	8.36
Sharpe Ratio	0.25	0.31	0.62

MPT Statistics	Standard Index	Best Fit Index
Alpha	1.90	-0.11
Beta	1.35	0.93
R-Squared	98.59	99.62
12-Month Yield	2.12%	9.24%
Potential Cap Gains Exp		

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.9 Years
Objective:	Asset Allocation



Portfolio Analysis 12-31-2022			
Asset Allocation %	Net %	Long %	Short %
Cash	2.64	4.46	1.82
US Stocks	51.89	51.89	0.00
Non-US Stocks	36.11	36.11	0.00
Bonds	9.33	9.33	0.00
Other/Not Cstfd	0.04	0.04	0.00
Total	100.00	101.82	1.82

Equity Style	Value	Brand	Growth	Portfolio Statistics
	Large	Med	Small	P/E Ratio TTM
				P/C Ratio TTM
				P/B Ratio TTM
				Geo Avg Mkt Cap

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

Credit Quality Breakdown	AAA	AA	A	BBB	BB	B	Below B	NR
11-30-2022	57.39	9.56	16.99	15.28	0.00	0.00	0.39	0.39

Regional Exposure	Stocks %	Rel Std Index
Americas	63.2	1.02
Greater Europe	18.0	0.99
Greater Asia	18.8	0.94

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

Share Cng	Share	Holdings	NAV/Price	Total Return %	+/- Standard Index	+/- Category Index	% Rank Cat	No. of Funds in Cat
11-2022	Amount	11,057 Total Stocks , 14,145 Total Fixed-Income, 4% Turnover Ratio	37.80	-17.46	-2.68	-0.55	29	213
1,078 mil	Vanguard Total Stock Mkt Idx Instl		16.41	-17.46	-2.68	-0.55	29	213
346 mil	Vanguard Total Int Stock Index Inv		6.22	-2.68	-0.55	29	213	
53 mil	Vanguard Total Bond Market II Idx		0.19	-0.55	-0.55	29	213	
	Vanguard Total Intl Bd II Idx Instl		0.29	-0.55	-0.55	29	213	

Sector Weightings	Stocks %	Rel Std Index
Cyclical	35.4	0.88
Basic Materials	5.1	0.94
Consumer Cyclical	10.7	0.97
Financial Services	16.1	0.98
Real Estate	3.5	0.49
Sensitive	41.6	1.16
Communication Services	6.4	1.23
Energy	5.4	1.01
Industrials	11.4	0.99
Technology	18.4	1.33
Defensive	23.0	0.96
Consumer Defensive	7.2	0.97
Healthcare	12.8	1.00
Utilities	3.0	0.81

Purchase Constraints:	—
Incept:	06-07-2006
Type:	MF
Total Assets:	\$48,606.42 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement 2055 Fund (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
Silver **★★★★** **188 US Fund Target-Date** **US Fund Target-Date**
 02-24-2022 **IGT Risk TR USD** **Lifetime Mod 2055 2055**

Performance 12-31-2022					
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	9.23	-17.46
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-17.46	3.79	5.18	8.34	8.97
Std 12-31-2022	-17.46	—	5.18	8.34	8.97
Total Return	-17.46	3.79	5.18	8.34	8.97
+/- Std Index	-2.68	1.84	1.44	2.52	—
+/- Cat Index	-0.53	0.79	0.62	0.75	—
% Rank Cat	24	38	39	25	—
No. in Cat	212	188	167	80	—

	Subsidized	Unsubsidized
7-day Yield	—	2.26
30-day SEC Yield 01-24-23	2.26	2.26

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.

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

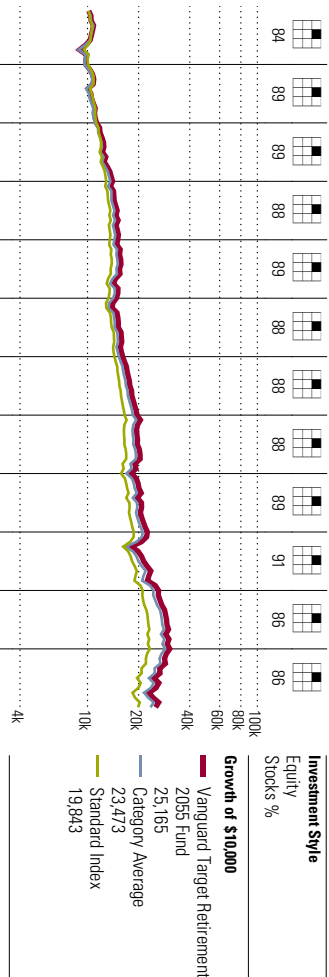
Risk and Return Profile	3 Yr	5 Yr	10 Yr
Morningstar Rating™	4★	4★	4★
Morningstar Risk	-Avg	-Avg	-Avg
Morningstar Return	Avg	Avg	+Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	18.83	16.46	13.11
Mean	3.79	5.18	8.34
Sharpe Ratio	0.25	0.31	0.62

MFT Statistics	Standard Index	Best Fit Index
Alpha	1.89	-0.12
Beta	1.35	0.93
R-Squared	98.60	99.63

12-Month Yield	2.10%
Potential Cap Gains Exp	2.34%

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.9 Years
Objective:	Asset Allocation



Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NAV/Price	21.86	24.80	30.35	31.98	30.83	32.91	39.23	35.30	43.19	49.34	52.22	42.17
Total Return %	-2.27	15.58	24.33	7.19	-1.72	8.88	21.38	-7.89	24.98	16.32	16.44	-17.46
+/- Standard Index	-2.86	3.54	10.02	2.31	0.07	0.31	6.72	-3.13	5.95	3.50	6.25	-2.68
+/- Category Index	1.48	-0.42	1.84	2.45	1.62	-2.03	0.43	0.68	-0.07	3.41	-0.06	-0.53
% Rank Cat	9	48	36	16	53	27	48	37	51	41	78	24
No. of Funds in Cat	235	102	130	156	238	193	206	221	229	207	213	212

Portfolio Analysis 12-31-2022		Asset Allocation %		Net %		Long %		Short %		Share Clng		Share Holdings		NAV/Price	
Cash	2.73	4.52	1.79	14.7	1.03	0.96	6.82	8.93	1.79	35.30	43.19	49.34	52.22	42.17	16.44
US Stocks	51.89	51.89	0.00	10.9	1.01	0.95	2.45	6.82	0.00	-7.89	24.98	16.32	16.44	-17.46	16.44
Non-US Stocks	36.04	36.04	0.00	2.2	1.07	0.94	9.30	0.00	0.00	3.13	5.95	3.50	6.25	-2.68	6.25
Bonds	9.30	9.30	0.00	Geo Avg Mkt Cap	56904	1.38	0.94	0.00	0.00	0.68	-0.07	3.41	-0.06	-0.53	-0.06
Other/Not Clsfd	0.04	0.04	0.00					0.00	0.00	0.37	51	41	78	24	24
Total	100.00	101.80	1.80							229	229	207	213	212	212

Equity Style	Value	Brand	Growth	Port	Rel	Index	Rel	Index	Rel	Index	Rel	Index
Large	■	■	■	14.7	1.03	0.96	6.82	8.93	1.79	35.30	43.19	49.34
Mid	■	■	■	10.9	1.01	0.95	2.45	6.82	0.00	-7.89	24.98	16.32
Small	■	■	■	2.2	1.07	0.94	9.30	0.00	0.00	3.13	5.95	3.50

Fixed-Income Style	Value	Brand	Growth	Port	Rel	Index	Rel	Index	Rel	Index	Rel	Index
High	■	■	■	10.9	1.01	0.95	2.45	6.82	0.00	-7.89	24.98	16.32
Med	■	■	■	2.2	1.07	0.94	9.30	0.00	0.00	3.13	5.95	3.50
Low	■	■	■									

Credit Quality Breakdown	11-30-2022	Bond %
AAA	57.57	57.57
AA	9.48	9.48
A	16.93	16.93
BBB	15.26	15.26
BB	0.00	0.00
B	0.00	0.00
Below B	0.38	0.38
NR	0.38	0.38

Regional Exposure	Stocks %	Rel Std Index
Americas	63.2	1.02
Greater Europe	18.0	0.99
Greater Asia	18.8	0.94

Base Currency:	USD	Purchase Constraints:	—
Ticker:	VFVX	Incept:	08-18-2010
SIIN:	US92202E8479	Type:	MF
Minimum Initial Purchase:	\$1,000	Total Assets:	\$30,271.36 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement 2060 Fund (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
Silver **★★★★** **183 US Fund Target-Date** **Morningstar Mod** **US Fund Target-Date**
 02-24-2022 **Tgt Risk TR USD** **Lifetime Mod 2060 2060**

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-19.86	18.61	7.39	13.96	16.32
2021	4.54	6.61	-1.11	5.66	16.44
2022	-5.68	-14.19	-6.64	9.23	-17.46
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-17.46	3.79	5.18	8.34	8.59
Std 12-31-2022	-17.46	—	5.18	8.34	8.59
Total Return	-17.46	3.79	5.18	8.34	8.59
+/- Std Index	-2.68	1.84	1.44	2.52	—
+/- Cat Index	-0.48	0.86	0.71	0.85	—
% Rank Cat	25	43	46	1	—
No. in Cat	212	183	157	1	—

7-day Yield	
30-day SEC Yield 01-24-23	2.26
	2.26

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

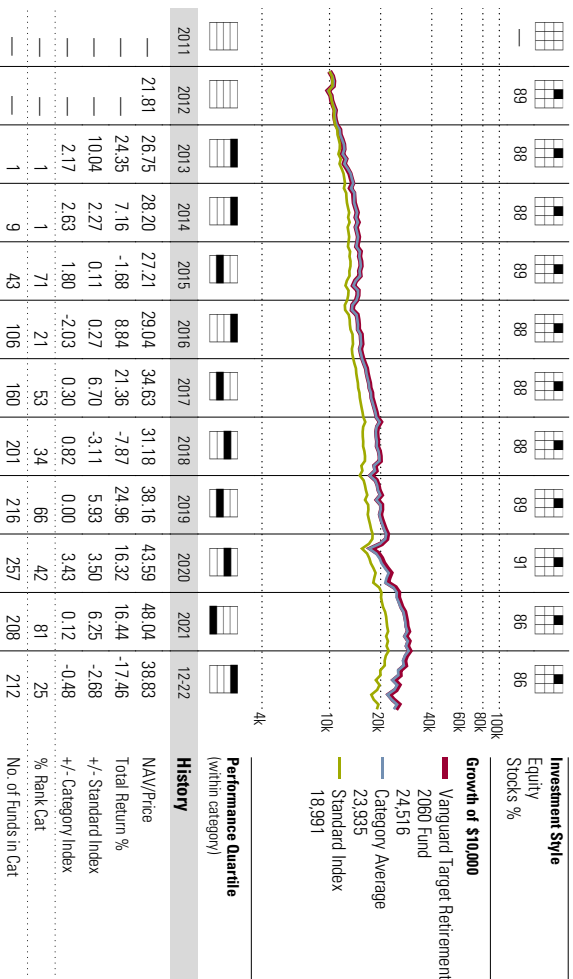
Risk and Return Profile				
Morningstar Rating™	3 Yr	5 Yr	10 Yr	1 funds
	183 funds	157 funds	1 funds	
Morningstar Risk	4★	4★	—	—
	-Avg	-Avg	—	—
Morningstar Return	Avg	Avg	—	—

Standard Deviation	3 Yr	5 Yr	10 Yr
	18.81	16.45	13.11
Mean	3.79	5.18	8.34
Sharpe Ratio	0.25	0.31	—

MFT Statistics			
Alpha	Standard Index	Best Fit Index	MSD ACMI NR
	1.89	-0.12	USD
Beta	1.35	0.93	—
R-Squared	98.59	99.62	—

12-Month Yield	2.09%
Potential Cap Gains Exp	-2.09%

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	9.9 Years
Objective:	Asset Allocation



Portfolio Analysis 12-31-2022											
Asset Allocation %			Net %			Long %			Short %		
Cash	21.81	26.75	28.20	27.21	29.04	34.63	31.18	38.16	43.59	48.04	38.83
US Stocks	—	24.35	7.16	-1.88	8.84	21.36	-7.87	24.96	16.44	-17.46	16.44
Non-US Stocks	—	10.04	2.27	0.11	0.27	6.70	-3.11	5.93	3.50	-2.68	-2.68
Bonds	—	2.17	2.63	1.80	-2.03	0.30	0.82	0.00	3.43	0.12	-0.48
Other/Not Cstfd	—	—	1	1	—	21	53	34	66	42	81
Total	—	—	9	43	106	160	201	216	257	208	212

Equity Style		Portfolio Statistics	
Value	Small Growth	P/E Ratio TTM	14.7
Large	Mid	P/C Ratio TTM	10.9
Mid	Small	P/B Ratio TTM	2.2
Small	—	Geo Avg Mkt Cap	56952
		—	1.38

Fixed-Income Style			
High	Med	Ext	—
Low	—	—	—
—	—	—	—

Credit Quality Breakdown 11-30-2022

AAA	8.93
AA	6.83
A	9.56
BBB	16.99
BB	15.28
B	0.00
Below B	0.00
NR	0.39

Regional Exposure		
Americas	Stocks %	63.3
Greater Europe	Rel Std Index	1.02
Greater Asia		17.9
		0.99
		18.8
		0.94

Base Currency:	USD
Ticker:	VWTSX
ISIN:	US92202E8396
Minimum Initial Purchase:	\$1,000

Sector Weightings			Share Clng		Share Holdings	
Cyclical	35.4	Stocks %	11-2022	Amount	11,057 Total Stocks	14,109 Total Fixed-Income,
Basic Materials	5.1	0.94		3% Turnover Ratio		
Consumer Cyclical	10.7	0.97		46 mil	Vanguard Total Stock Mkt Idx Instl	52.56
Financial Services	16.1	0.98		338 mil	Vanguard Total Intl Stock Index Inv	36.73
Real Estate	3.5	0.49		108 mil	Vanguard Total Bond Market Idx	6.63
				17 mil	Vanguard Total Intl Bd Idx Instl	2.78

Sensitive	41.6	1.16
Communication Services	6.4	1.23
Energy	5.4	1.00
Industrials	11.3	0.99
Technology	18.4	1.33
Defensive	23.0	0.96
Consumer Defensive	7.2	0.97
Healthcare	12.8	1.00
Utilities	3.0	0.81

Purchase Constraints:	—
Incept:	01-19-2012
Type:	MF
Total Assets:	\$15,318.32 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement 2065 Fund (USD)

Morningstar Analyst Rating™
Silver
 02-24-2022

Overall Morningstar Rating™
★★★★
 51 US Fund Target-Date
 2065+

Standard Index
 Morningstar Mod
 Tgt Risk TR USD

Category Index
 Morningstar
 Lifetime Mod 2060
 TR USD

Morningstar Cat
 US Fund Target-Date
 2065+

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	-19.92	18.59	7.36	13.95	16.17
2021	4.55	6.61	-1.11	5.66	16.46
2022	-5.63	-14.20	-6.60	9.24	-17.39
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-17.39	3.78	5.15	—	6.42
Std 12-31-2022	-17.39	—	5.15	—	6.42
Total Return	-17.39	3.78	5.15	—	6.42
+/- Std Index	-2.62	1.83	1.42	—	—
+/- Cat Index	-0.41	0.85	0.69	—	—
% Rank Cat	16	47	49	—	—
No. in Cat	162	51	14	—	—

7-day Yield	
Subsidized	—
Unsubsidized	—

30-day SEC Yield 12-31-22	
Subsidized	2.25
Unsubsidized	2.25

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

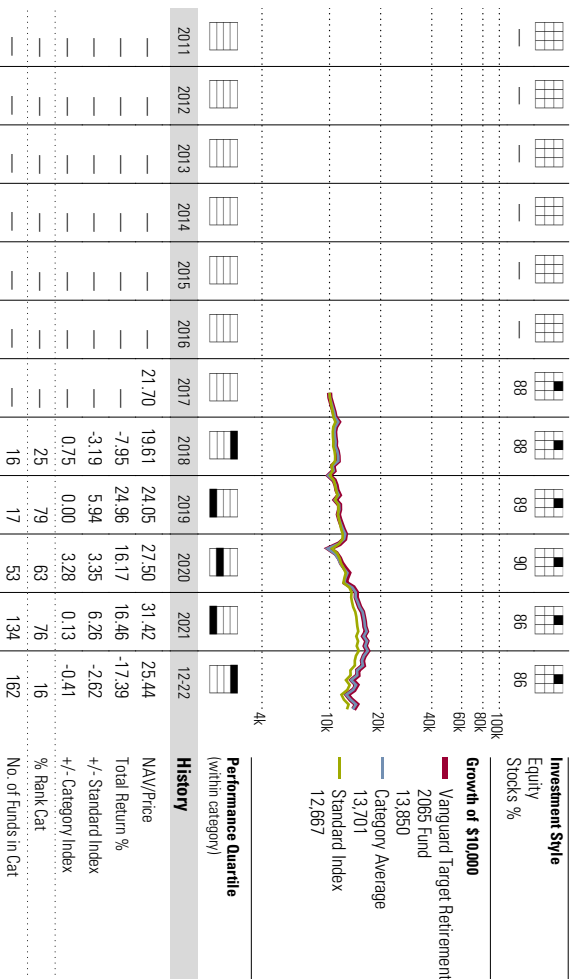
Morningstar Rating™	3 Yr	5 Yr	10 Yr
	51 funds	14 funds	—
Morningstar Risk	4★	—	—
Morningstar Return	Low	—	—
	Avg	—	—
Standard Deviation	3 Yr	5 Yr	10 Yr
	18.82	16.46	—
Mean	3.78	5.15	—
Sharpe Ratio	0.24	0.31	—

MPT Statistics	Standard Index	Best Fit Index
	MSCI ACWI NR	MSD ACWI NR
Alpha	1.88	-0.13
Beta	1.35	0.93
R-Squared	98.58	99.63

12-Month Yield	2.00%
Potential Cap Gains Exp	-11.77%

Operations

Family:	Vanguard
Manager:	Multiple
Tenure:	5.5 Years
Objective:	Asset Allocation



Portfolio Analysis 12-31-2022											
Asset Allocation %			Net %	Long %	Short %	History					
Cash	2.99	4.90	1.91	—	21.70	19.61	24.05	27.50	31.42	25.44	NAV/Price
US Stocks	52.34	52.34	0.00	—	—	-7.95	24.96	16.17	16.46	-17.39	Total Return %
Non-US Stocks	35.51	35.51	0.00	—	—	-3.19	5.94	3.35	6.26	-2.62	+/- Standard Index
Bonds	9.11	9.12	0.00	—	—	0.75	0.00	3.28	0.13	-0.41	+/- Category Index
Other/Not Cstfd	0.04	0.04	0.00	—	—	25	79	63	76	16	% Rank Cat
Total	100.00	101.91	1.91	—	—	16	17	53	134	162	No. of Funds in Cat

Equity Style		Portfolio Statistics	
Value	Brand Growth	P/E Ratio TTM	P/C Ratio TTM
Large	Med	10.9	1.01
Med	Small	2.2	1.07
Small	—	Geo Avg Mkt Cap	57351
—	—		1.39
—	—		0.97

Fixed-Income Style		Portfolio Statistics	
Ltd	Med	Ext	Avg Eff Maturity
High	Med	Low	Avg Wtd Duration
Low	—	—	Avg Wtd Coupon
—	—	—	Avg Wtd Price

Credit Quality Breakdown 11-30-2022

AAA	56.39	Bond %
AA	10.05	
A	17.35	
BBB	15.38	
BB	0.00	
B	0.00	
Below B	0.41	
NR	0.41	

Regional Exposure		Stocks %	Rel Std Index
Americas	63.7	1.08	
Greater Europe	17.7	0.97	
Greater Asia	18.6	0.93	

Base Currency:	USD
Ticker:	VIXVX
SIN:	US92202E6804
Minimum Initial Purchase:	\$1,000

Sector Weightings		Stocks %	Rel Std Index
Cyclical		35.3	0.88
Basic Materials	5.1	0.93	
Consumer Cyclical	10.7	0.97	
Financial Services	16.1	0.98	
Real Estate	3.5	0.49	
Sensitive		41.6	1.16
Communication Services	6.4	1.23	
Energy	5.4	1.00	
Industrials	11.3	0.98	
Technology	18.5	1.34	
Defensive		23.1	0.96
Consumer Defensive	7.2	0.97	
Healthcare	12.8	1.00	
Utilities	3.0	0.81	

Purchase Constraints:	—
Incept:	07-12-2017
Type:	MF
Total Assets:	\$3,616,971 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement 2070 Fund (USD)

Standard Index Morningstar Mod Tgt Risk TR USD
Category Index Morningstar Lifetime Mod 2060 TR USD
Morningstar Cat US Fund Target-Date 2065+

Performance 12-31-2022					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2020	—	—	—	—	—
2021	—	—	—	—	—
2022	—	-6.57	9.21	—	—
Trailing Returns					
1 Yr	3 Yr	5 Yr	10 Yr	Incept	
Load-adj Mthly	—	—	—	1.02	
Std 12-31-2022	—	—	—	1.02	
Total Return	—	—	—	1.02	
+/- Std Index	—	—	—	—	
+/- Cat Index	—	—	—	—	
% Rank Cat	—	—	—	—	
No. in Cat	—	—	—	—	
7-day Yield	Subsidized				
30-day SEC Yield	Unsubsidized				

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

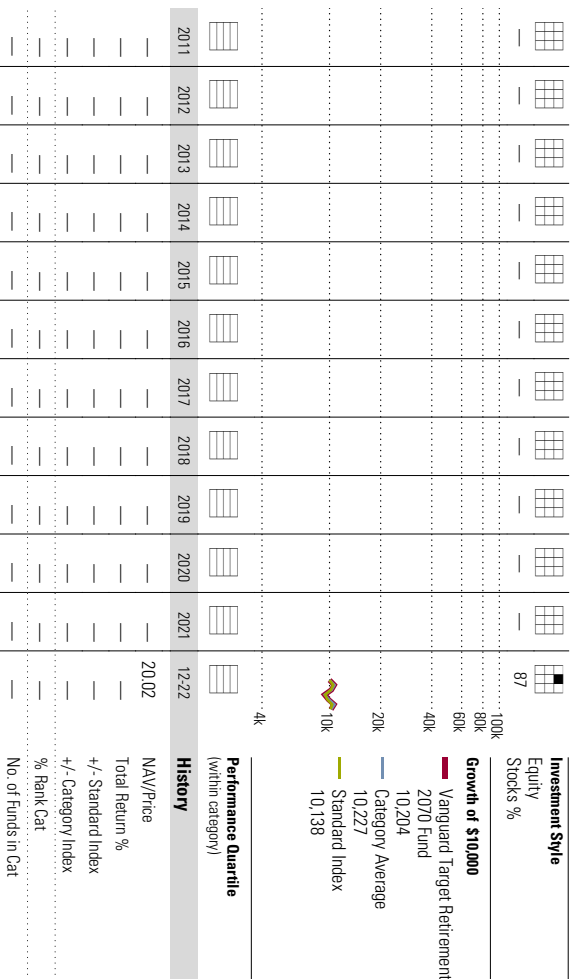
Sales Charges	
Front-End Load %	NA
Deferred Load %	NA

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 Yr	5 Yr	10 Yr
Morningstar Risk	51 funds	14 funds	10 funds
Morningstar Return	—	—	—
Standard Deviation	3 Yr	5 Yr	10 Yr
Mean	—	—	—
Sharpe Ratio	—	—	—
MPT Statistics	Standard Index	Best Ft Index	
Alpha	—	—	—
Beta	—	—	—
R-Squared	—	—	—
12-Month Yield	—	—	—
Potential Cap Gains Exp	—	-11.54%	—

Operations
 Family: Vanguard
 Manager: Multiple
 Tenure: 0.6 Year
 Objective: Asset Allocation



Portfolio Analysis 12-31-2022					
Asset Allocation %	Net %	Long %	Short %	Share Cng since 11-2022	Share Holdings: Amount
Cash	1.89	3.82	1.93	—	11,057 Total Stocks, 14,341 Total Fixed-Income, 44% Turnover Ratio
US Stocks	53.23	53.23	0.00	⊕	221,022 Vanguard Total Stock Mkt Idx Instl
Non-US Stocks	35.06	35.06	0.00	⊕	2 mil Vanguard Total Intl Stock Index Inv
Bonds	9.77	9.78	0.00	⊕	530,740 Vanguard Total Bond Market II Idx
Other/Not Cstfd	0.04	0.04	0.00	⊕	83,278 Vanguard Total Intl Bd II Idx Insl
Total	100.00	101.93	1.93		

Equity Style	Value	Brand	Growth	Port Avg Index	Rel Index	Rel Cat	Sector Weightings	Stocks %	Rel Std Index
Large	—	—	—	P/E Ratio TTM	14.8	1.04	0.98	35.2	0.88
Mid	—	—	—	P/C Ratio TTM	11.0	1.02	0.98	5.0	0.92
Small	—	—	—	P/B Ratio TTM	2.2	1.08	0.97	10.7	0.97
	—	—	—	Geo Avg Mkt Cap	57920	1.40	0.98	16.1	0.97
	—	—	—					3.5	0.49

Fixed-Income Style	Ltd	Med	Ext	Avg Eff Maturity	Avg Eff Duration	Avg Wtd Coupon	Avg Wtd Price	Rel Std Index
High	—	—	—	8.93	6.83	—	—	41.7
Med	—	—	—	6.83	—	—	—	6.4
Low	—	—	—	15.30	0.00	—	—	1.23

Credit Quality Breakdown	AAA	AA	A	BBB	BB	B	NR	Rel Std Index
11-30-2022	57.22	9.65	17.05	15.30	0.00	0.00	0.39	23.1
	57.22	9.65	17.05	15.30	0.00	0.00	0.39	7.2
	57.22	9.65	17.05	15.30	0.00	0.00	0.39	12.9
	57.22	9.65	17.05	15.30	0.00	0.00	0.39	3.0

Regional Exposure	Stocks %	Rel Std Index
Americas	64.4	1.04
Greater Europe	17.4	0.96
Greater Asia	18.2	0.91

Operations
 Base Currency: USD
 Ticker: VSVNX
 ISIN: US92202E6648
 Minimum Initial Purchase: \$1,000
 Purchase Constraints: —
 Incept: 06-28-2022
 Type: M/F
 Total Assets: \$71.64 mil

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc., including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Vanguard Target Retirement Income Fund (USD)

Morningstar Analyst Rating™
 Silver
 02-24-2022

Overall Morningstar Rating™ Standard Index

 145 US Fund Target-Date Retirement
 Morningstar Mod Tgt Risk TR USD
Category Index Morningstar US Fund Target-Date Retirement
Morningstar Cat US Fund Target-Date Retirement
 Lifetime Mod Incm TR USD

Performance 12-31-2022					
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	3.74	-12.74
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-12.74	0.34	2.30	3.62	4.57
Std 12-31-2022	-12.74	—	2.30	3.62	4.57
Total Return	-12.74	0.34	2.30	3.62	4.57
+/- Std Index	2.03	-1.60	-1.43	-2.20	—
+/- Cat Index	-0.50	-1.11	-0.65	-0.20	—
% Rank Cat	54	38	36	40	—
No. in Cat	161	145	127	81	—

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 01-24-23	2.91	2.91

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.

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

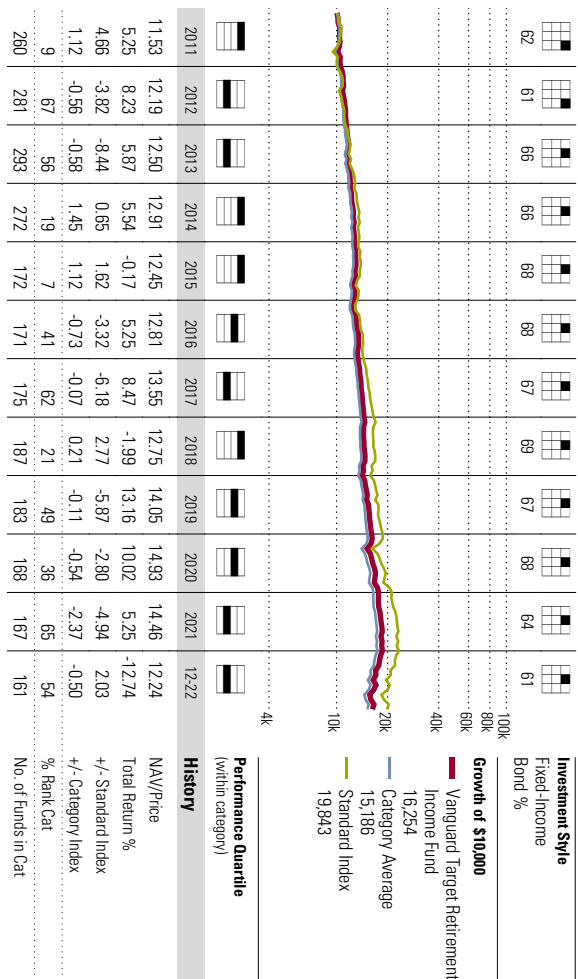
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	4★	4★	3★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	Avg	Avg
Standard Deviation	3 Yr: 8.59	5 Yr: 7.16	10 Yr: 5.62
Mean	0.34	2.30	3.62
Sharpe Ratio	-0.02	0.17	0.52
MPT Statistics	Standard Index	Best Fit Index	Morningstar US
		Morningstar US	Med Com Tgt-Alice
		NR USD	-0.61

	3 Yr	5 Yr	10 Yr
Alpha	-1.37	0.61	0.84
Beta	0.61	0.84	0.84
R-Squared	94.85	98.74	98.74
12-Month Yield	2.70%		
Potential Cap Gains Exp	3.19%		

Operations
 Family: Vanguard
 Manager: Multiple
 Tenure: 9.9 Years
 Objective: Asset Allocation

Base Currency: USD
 Ticker: VTINX
 ISIN: US92202E1029
 Minimum Initial Purchase: \$1,000

Purchase Constraints: —
 Incept: 10-27-2003
 Type: MF
 Total Assets: \$36,654.33 mil



Portfolio Analysis 12-31-2022

Asset Allocation %	Net %	Long %	Short %
Cash	3.60	13.85	10.25
US Stocks	16.96	16.96	0.00
Non-US Stocks	11.83	11.83	0.00
Bonds	67.58	67.60	0.02
Other/Not Cstfd	0.02	0.02	0.00
Total	100.00	110.27	10.27

Equity Style

Value	Brand	Growth	Port	Rel	Index	Rel	Cap
Large	High	Med	14.7	1.03	0.97	5.81	5.81
Med	High	Med	10.9	1.01	0.99	1.99	1.99
Small	High	Low	2.2	1.07	0.98	91.13	91.13

Portfolio Statistics

P/E Ratio TTM	P/C Ratio TTM	P/B Ratio TTM	Geo Avg Mkt Cap
14.7	10.9	2.2	56815
1.03	1.01	1.07	1.38
0.97	0.99	0.98	0.98

Fixed-Income Style

Lat	Med	Ext	Avg Eff Maturity	7.45
High	High	Ext	Avg Eff Duration <td>5.81</td>	5.81
High	Med	Low	Avg Wtd Coupon <td>1.99</td>	1.99
High	Med	Low	Avg Wtd Price <td>91.13</td>	91.13

Credit Quality Breakdown 11-30-2022

AAA	AA	A	BBB	BB	B	Below B	NR
66.95	7.47	13.17	11.80	0.00	0.00	0.30	0.31
66.95	7.47	13.17	11.80	0.00	0.00	0.30	0.31

Share Clng 11-2022

Share	Amount	Holdings	Net Assets
1,446 mil	Vanguard Total Bond Market II Idx	10,038 Total Stocks, 17,503 Total Fixed-Income, 19% Turnover Ratio	36.94
36 mil	Vanguard Total Bond Mkt Idx Instl		17.18
260 mil	Vanguard Shrt-Term Infl-Prot Sec I		16.60
229 mil	Vanguard Total Intl Bd II Idx Intl		15.92
266 mil	Vanguard Total Intl Stock Index Inv		12.10

Sector Weightings

Cyclical	Non-Cyclical	Stocks %	Rel Std Index
35.4	64.6	35.4	0.88
5.1	94.9	5.1	0.94
10.7	89.3	10.7	0.97
16.1	83.9	16.1	0.98
3.5	96.5	3.5	0.49
41.6	58.4	41.6	1.16
5.4	94.6	5.4	1.23
6.4	93.6	6.4	1.01
11.4	88.6	11.4	0.99
18.4	81.6	18.4	1.33
23.0	77.0	23.0	0.96
7.2	92.8	7.2	0.97
12.8	87.2	12.8	1.00
3.0	97.0	3.0	0.81

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



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

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 12-31-2022												
Standardized Returns (%)	7-day Yield		1Yr	5Yr	10Yr	Since Inception		Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
	Subsidized as of date	Unsubsidized as of date				Inception	Inception Date					
DFA US Large Cap Value I	—	-5.78	5.86	10.86	9.75	02-19-1993	NA	NA	0.22 ¹	0.32	NA	NA
DFA US Targeted Value I	—	-4.62	7.04	10.49	10.78	02-23-2000	NA	NA	0.29	0.29	NA	NA
Fidelity@ 500 Index	—	-18.13	9.41	12.55	11.57	05-04-2011	NA	NA	0.02	0.02	NA	NA
Fidelity@ Mid Cap Index	—	-17.28	7.10	10.95	11.60	09-08-2011	NA	NA	0.03	0.03	NA	NA
Fidelity@ Small Cap Index	—	-20.27	4.22	9.17	10.19	09-08-2011	NA	NA	0.03	0.03	NA	NA
Fidelity@ Total International Index	—	-16.28	0.96	—	4.62	06-07-2016	NA	NA	0.06	0.06	NA	NA
Fidelity@ US Bond Index	—	-13.03	-0.02	1.01	1.71	05-04-2011	NA	NA	0.03	0.03	NA	NA

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analysis and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analysis or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be preceded or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

Annualized returns 12-31-2022													
Standardized Returns (%)	7-day Yield Substidized as of date	7-day Yield Unsubstidized as of date	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Redemption %	Max
Hochtkis & Wiley High Yield Z	—	—	-9.69	—	—	1.42	03-29-2018	NA	NA	0.60 ²	0.65	—	NA
JPMorgan Mid Cap Growth R6	—	—	-26.96	9.87	13.04	13.08	11-01-2011	NA	NA	0.70 ²	0.75	—	NA
MFS Mid Cap Value R6	—	—	-8.64	7.75	—	10.25	02-01-2013	NA	NA	0.64	0.64	—	NA
Sterling Capital Total Return Bond R6	—	—	-13.15	—	—	0.71	02-01-2018	NA	NA	0.35 ⁴	0.46	—	NA
T. Rowe Price Lrg Cp Gr I	—	—	-35.18	8.35	13.85	9.87	10-31-2001	NA	NA	0.55	0.55	—	NA
Vanguard International Growth Adm	—	—	-30.79	4.75	7.84	7.12	08-13-2001	NA	NA	0.34	0.34	—	NA
Vanguard International Value Inv	—	—	-11.66	1.36	4.31	8.07	05-16-1983	NA	NA	0.36	0.36	—	NA
Vanguard Small Cap Growth Index Admiral	—	—	-28.39	5.10	9.27	10.51	09-21-2011	NA	NA	0.07	0.07	—	NA
Vanguard Target Retirement 2025 Fund	—	—	-15.55	3.58	6.43	6.13	10-27-2003	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement 2030 Fund	—	—	-16.27	3.94	6.99	6.02	06-07-2006	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement 2035 Fund	—	—	-16.62	4.34	7.57	6.83	10-21-2003	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement 2040 Fund	—	—	-16.98	4.74	8.06	6.59	06-07-2006	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement 2045 Fund	—	—	-17.36	5.14	8.34	7.40	10-27-2003	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement 2050 Fund	—	—	-17.46	5.18	8.36	6.79	06-07-2006	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement 2055 Fund	—	—	-17.46	5.18	8.34	8.97	08-18-2010	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement 2060 Fund	—	—	-17.46	5.18	8.34	8.59	01-19-2012	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement 2065 Fund	—	—	-17.39	5.15	—	6.42	07-12-2017	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement 2070 Fund	—	—	—	—	—	1.02	06-28-2022	NA	NA	0.08	0.08	—	NA
Vanguard Target Retirement Income Fund	—	—	-12.74	2.30	3.62	4.57	10-27-2003	NA	NA	0.08	0.08	—	NA
Bloomberg US Agg Bond TR USD	—	—	-13.01	0.02	1.06	—	01-03-1980	—	—	—	—	—	NA
Bloomberg US Universal TR USD	—	—	-12.99	0.18	1.33	—	12-31-1998	—	—	—	—	—	NA
ICE BofA US High Yield TR USD	—	—	-11.22	2.12	3.94	—	08-29-1986	—	—	—	—	—	NA
Morningstar Gbl xUS Val TME NR USD	—	—	-9.04	—	—	—	11-24-2021	—	—	—	—	—	NA
Morningstar Lifetime Mod 2025 TR USD	—	—	-17.58	3.20	5.79	—	02-18-2009	—	—	—	—	—	NA
Morningstar Lifetime Mod 2030 TR USD	—	—	-17.94	3.54	6.51	—	02-18-2009	—	—	—	—	—	NA
Morningstar Lifetime Mod 2035 TR USD	—	—	-17.75	3.97	7.14	—	02-18-2009	—	—	—	—	—	NA
Morningstar Lifetime Mod 2040 TR USD	—	—	-17.37	4.36	7.55	—	02-18-2009	—	—	—	—	—	NA
Morningstar Lifetime Mod 2045 TR USD	—	—	-17.06	4.58	7.70	—	02-18-2009	—	—	—	—	—	NA
Morningstar Lifetime Mod 2050 TR USD	—	—	-16.91	4.62	7.68	—	02-18-2009	—	—	—	—	—	NA
Morningstar Lifetime Mod 2055 TR USD	—	—	-16.33	4.55	7.59	—	02-18-2009	—	—	—	—	—	NA
Morningstar Lifetime Mod 2060 TR USD	—	—	-16.98	4.46	—	—	06-23-2014	—	—	—	—	—	NA
Morningstar Lifetime Mod Incm TR USD	—	—	-12.24	2.95	3.82	—	02-18-2009	—	—	—	—	—	NA
Morningstar Mod Tgt Risk TR USD	—	—	-14.77	3.73	5.82	—	02-18-2009	—	—	—	—	—	NA
Morningstar US Core Bd TR USD	—	—	-12.99	—	—	—	05-01-2019	—	—	—	—	—	NA
Morningstar US LM Brd Growth TR USD	—	—	-31.71	—	—	—	12-21-2020	—	—	—	—	—	NA
Morningstar US Mod Con Tgt Alloc NR USD	—	—	-14.06	—	—	—	06-30-2020	—	—	—	—	—	NA
Morningstar US Sml Brd Grt Ext TR USD	—	—	-26.74	—	—	—	12-21-2020	—	—	—	—	—	NA
Morningstar US Sml Brd Val Ext TR USD	—	—	-10.45	—	—	—	12-21-2020	—	—	—	—	—	NA
MSCI ACWI Ex USA Growth NR USD	—	—	-23.05	1.49	4.68	—	01-01-2001	—	—	—	—	—	NA
MSCI ACWI Ex USA NR USD	—	—	-16.00	0.88	3.80	—	01-01-2001	—	—	—	—	—	NA
MSCI ACWI Ex USA Value NR USD	—	—	-8.59	-0.05	2.72	—	01-01-2001	—	—	—	—	—	NA
MSCI ACWI NR USD	—	—	-18.36	5.23	7.98	—	01-01-2001	—	—	—	—	—	NA
MSCI EAFE NR USD	—	—	-14.45	1.54	4.67	—	03-31-1986	—	—	—	—	—	NA
Russell 1000 Growth TR USD	—	—	-29.14	10.96	14.10	—	01-01-1987	—	—	—	—	—	NA
Russell 1000 TR USD	—	—	-19.13	9.13	12.37	—	12-31-1978	—	—	—	—	—	NA
Russell 1000 Value TR USD	—	—	-7.54	6.67	10.29	—	01-01-1987	—	—	—	—	—	NA
Russell 2000 Growth TR USD	—	—	-26.36	3.51	9.20	—	12-31-1978	—	—	—	—	—	NA
Russell 2000 TR USD	—	—	-20.44	4.13	9.01	—	12-31-1978	—	—	—	—	—	NA
Russell 2000 Value TR USD	—	—	-14.48	4.13	8.48	—	12-31-1978	—	—	—	—	—	NA
Russell Mid Cap Growth TR USD	—	—	-26.72	7.64	11.41	—	02-01-1995	—	—	—	—	—	NA
Russell Mid Cap TR USD	—	—	-17.32	7.10	10.96	—	12-31-1978	—	—	—	—	—	NA
Russell Mid Cap Value TR USD	—	—	-12.03	5.72	10.11	—	12-31-1985	—	—	—	—	—	NA

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein: (1) include the confidential and proprietary information of Morningstar; (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar; (3) may not be copied or redistributed; (4) do not constitute investment advice offered by Morningstar; (5) are provided solely for informational purposes and there are not an offer to buy or sell a security; and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be preceded or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.



Annualized returns 12-31-2022												
Standardized Returns (%)	7-day Yield		1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
	Subsidized as of date	Unsubsidized as of date										
S&P 500 TR USD												
USTREAS T-Bill Auction Ave 3 Mon			-18.11	9.42	12.56	—	01-30-1970					
			2.13	1.34	0.82	—	02-28-1941					

1. Contractual waiver that may expire at any time
2. Contractual waiver; Expires 08-31-2023
3. Contractual waiver; Expires 10-31-2023
4. Contractual waiver; Expires 01-31-2023

Return after Tax (%)	On Distribution						On Distribution and Sales of Shares					
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception			
DFA US Large Cap Value I	-7.09	4.61	9.65	8.50	02-19-1993	-3.04	4.30	8.68	8.02			
DFA US Targeted Value I	-5.96	5.68	9.04	9.23	02-23-2000	-2.15	5.23	8.23	8.72			
Fidelity@ 500 Index	-18.88	8.79	11.82	10.82	05-04-2011	-10.73	7.26	10.18	9.38			
Fidelity@ Mid Cap Index	-17.91	6.31	10.08	10.77	09-08-2011	-10.17	5.41	8.77	9.44			
Fidelity@ Small Cap Index	-20.68	3.42	8.20	9.25	09-08-2011	-12.00	3.14	7.19	8.15			
Fidelity@ Total International Index	-17.12	0.26	—	3.91	06-07-2016	-9.64	0.58	—	3.42			
Fidelity@ US Bond Index	-13.54	-0.74	0.10	0.76	05-04-2011	-7.38	-0.09	0.48	1.02			
Hotchkis & Wiley High Yield Z	-11.64	—	—	-0.84	03-29-2018	-5.72	—	—	0.15			
JPMorgan Mid Cap Growth R6	-27.08	8.09	11.28	11.29	11-01-2011	-15.86	7.74	10.51	10.59			
M&S Mid Cap Value R6	-10.03	6.38	—	8.82	02-01-2013	-4.59	5.67	—	7.87			
Sterling Capital Total Return Bond R6	-14.14	—	—	-0.62	02-01-2018	-7.77	—	—	0.05			
T. Rowe Price Lrg Cp Gr I	-35.75	7.32	12.67	9.23	10-31-2001	-20.41	6.42	11.32	8.41			
Vanguard International Growth Adm	-31.83	3.30	6.80	6.14	08-13-2001	-17.43	3.82	6.30	5.82			
Vanguard International Value Inv	-12.26	0.38	3.44	6.14	05-16-1983	-6.54	0.87	3.17	6.04			
Vanguard Small Cap Growth Index Admiral	-28.50	4.93	8.99	10.23	09-27-2011	-16.76	3.94	7.51	8.67			
Vanguard Target Retirement 2025 Fund	-16.29	2.05	5.15	5.18	10-27-2003	-8.95	2.64	4.89	4.84			
Vanguard Target Retirement 2030 Fund	-16.88	2.52	5.82	5.14	06-07-2006	-9.40	2.96	5.40	4.75			
Vanguard Target Retirement 2035 Fund	-17.25	2.87	6.35	5.96	10-27-2003	-9.57	3.31	5.90	5.53			
Vanguard Target Retirement 2040 Fund	-17.58	3.28	6.90	5.73	06-07-2006	-9.79	3.66	6.36	5.29			
Vanguard Target Retirement 2045 Fund	-17.97	3.89	7.29	6.63	10-27-2003	-9.98	3.97	6.59	6.07			
Vanguard Target Retirement 2050 Fund	-18.00	4.06	7.41	6.05	06-07-2006	-10.08	3.99	6.61	5.47			
Vanguard Target Retirement 2055 Fund	-17.96	4.19	7.50	8.21	08-18-2010	-10.11	3.97	6.62	7.28			
Vanguard Target Retirement 2060 Fund	-17.94	4.38	7.61	7.90	01-19-2012	-10.12	3.93	6.60	6.87			
Vanguard Target Retirement 2065 Fund	-17.85	4.61	—	5.88	07-12-2017	-10.09	3.92	—	4.94			
Vanguard Target Retirement 2070 Fund	—	—	—	0.76	06-28-2022	—	—	—	0.72			
Vanguard Target Retirement Income Fund	-13.67	0.94	2.44	3.43	10-27-2003	-7.40	1.47	2.49	3.28			

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be preceded or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

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, publically-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

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analysis and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analysis or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be preceded or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

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.)

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein: (1) include the confidential and proprietary information of Morningstar; (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar; (3) may not be copied or redistributed; (4) do not constitute investment advice offered by Morningstar; (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by Morningstar, Inc., including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be preceded or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

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

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analysis and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analysis or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be preceded or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

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/manageddisclosures

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

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analysis and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analysis or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc., including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

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 (GRA'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 GRA'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 GRA's. Note that this value is not explicitly published but instead serves 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; (ii) "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 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

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by Subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be preceded or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

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 © 2023 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-

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein (1) include the confidential and proprietary information of Morningstar, (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar, (3) may not be copied or redistributed, (4) do not constitute investment advice offered by Morningstar, (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

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.

ICE BofA US High Yield TR USD

The US High Yield Master II Index tracks the performance of below investment grade US dollar-denominated corporate bonds publicly issued in the US domestic market. "Yankee" bonds are included in the Index provided the issuer is domiciled in a country having an investment grade foreign currency long-term debt rating. 144a issues are not included in the index until they are exchanged for registered securities. Qualifying bonds must have at least one year remaining term to maturity, a fixed coupon schedule and a minimum amount outstanding of USD 100 million.

Morningstar Gbl xUS Val TME NR USD

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

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 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 Sm1 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.

Morningstar US Sm1 Brd Val Ext TR USD

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

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analysis and opinions contained herein: (1) include the confidential and proprietary information of Morningstar; (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar; (3) may not be copied or redistributed; (4) do not constitute investment advice offered by Morningstar; (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analysis or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be predated or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

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 Ex USA Value NR USD

The index measures the performance of the value 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 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 2000 Growth TR USD

Tracks the companies within the Russell 2000 Index that have higher price-to-book ratios and higher forecasted growth values. The constituents displayed for this index are from the following proxy: iShares Russell 2000 Growth ETF.

Russell 2000 TR USD

Consists of the 2000 smallest companies in the Russell 3000 Index. The constituents displayed for this index are from the following proxy: iShares Russell 2000 ETF.

Russell 2000 Value TR USD

Tracks the companies within the Russell 2000 Index that have lower price-to-book ratios and lower forecasted growth values. The constituents displayed for this index are from the following proxy: iShares Russell 2000 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 TR USD

Measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 25% of the total market capitalization of the Russell 1000 Index. The constituents displayed for this index are from the following proxy: iShares Russell Mid-Cap 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.

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses and opinions contained herein: (1) include the confidential and proprietary information of Morningstar; (2) may include, or be derived from, account information provided by your financial professional which cannot be verified by Morningstar; (3) may not be copied or redistributed; (4) do not constitute investment advice offered by Morningstar; (5) are provided solely for informational purposes and therefore are not an offer to buy or sell a security; and (6) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. Opinions expressed are as of the date written and are subject to change without notice. Investment research is produced and issued by subsidiaries of Morningstar, Inc., including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. This report is supplemental sales literature. If applicable it must be precatod or accompanied by a prospectus, or equivalent, and disclosure statement. Please see important disclosures at the end of this report.

Important Disclosures:

The material in this Report is not to be reproduced or distributed to any other persons (other than professional advisors of the investors) and is intended solely for the use of the persons to whom it has been delivered. This material is not for distribution to the general public.

This information is being provided as a service of your Hyas Group Consultant and does not supersede or replace your customer account statement provided by your custodian ("Custodial Statement"). Information in this Report may vary from the information in your Custodial Statement as a result of differences in accounting procedures, reporting dates, or valuation methodologies of certain securities. The market values reflected in this Report may vary slightly from the market values in your Custodial Statement. The information in this Report is as of the date(s) noted and subject to daily market fluctuation.

Sources of Information. Material in this Report has been obtained from sources that we believe to be reliable, but we do not guarantee its accuracy, completeness, or timeliness. The performance produced herein is calculated utilizing custodian data downloads and manually entered material. Although we take every precaution to ensure accuracy, we are not able to guarantee complete accuracy.

No Tax or Legal Advice. When Hyas Group, its affiliates and Hyas Group Consultants provide "investment advice" regarding a retirement or welfare benefit plan account, an individual retirement account or a Coverdell education savings account ("Retirement Account"), Hyas Group is a "fiduciary" as those terms are defined under the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and/or the Internal Revenue Code of 1986 (the "Code"), as applicable. When Hyas Group provides investment education or otherwise does not provide "investment advice", Hyas Group will not be considered a "fiduciary" under ERISA and/or the Code. Tax laws are complex and subject to change. Hyas Group does not provide tax or legal advice.

Key Asset Class Risk Disclosures. Investing involves market risk, including possible loss of principal. Please refer to Hyas Group's Form ADV Brochure for more information about the risks associated with certain investment products. The Hyas Group's Form ADV Brochure is available upon request.

ALL MUTUAL FUND PRODUCTS AND EXCHANGE-TRADED FUNDS ARE SOLD BY PROSPECTUS, WHICH CONTAINS MORE COMPLETE INFORMATION ABOUT A FUND, ITS EXPENSES AND MATERIAL RISKS RELATED TO THAT FUND'S INVESTMENT STRATEGY.

PLEASE CONTACT YOUR HYAS GROUP CONSULTANT FOR A COPY OF A FUND'S PROSPECTUS.

PLEASE READ THE PROSPECTUS AND CONSIDER THE FUND'S INVESTMENT OBJECTIVES, RISKS, CHARGES AND EXPENSES CAREFULLY BEFORE INVESTING. THE PROSPECTUS CONTAINS THIS AND OTHER IMPORTANT INFORMATION ABOUT THE FUND.

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.

To learn more about the Hyas Group advisory services, please see the Hyas Group ADV Brochure for more information. It is available from your Hyas Group Consultant.

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.

Hyas Group, a business of Morgan Stanley. © Morgan Stanley, 2023.



CITY of SANTA CLARA

RETIREMENT PLAN

457 DEFERRED COMPENSATION PLAN

Fourth Quarter Performance Report 2022



CONSTRUCTIVE VIEWS ON PRODUCTIVITY

2022 contained no shortage of high-level events across the spectrum: military conflicts, continued pandemic, a bear market, inflation, aggressive monetary policy, and many more which continue into 2023. The importance of these notwithstanding, this article pivots to discuss a longer-term subject whose course has been influenced by 2022 and the era leading up to it: productivity. From the aftermath of the Great Financial Crisis (GFC) up to the start of COVID, productivity growth lagged longer-term averages and was not broadly dispersed throughout the myriad of sectors in the broader economy. Looking forward, factors on the supply side, which combined with demographic trends offer several avenues for new and productivity-enhancing capital expansion. After all last year's difficulties, it's nice to talk about something positive for a change!

Households and corporations still have substantially healthy balance sheets. Corporate cash levels are high, debt maturities are several years out, and leverage ratios are well below long-term trends. Banks in particular, the proverbial switch-board of capital, maintain excess capital thanks in part to controls set after the GFC. Good to know the funds are there, but who and what will the productivity come from? The US workforce is expected to get younger on average in the years to come, ushering in workers with a more natural proclivity to new technology and the potential for increased automation. This demographic transformation comes on the back of several recent years of increased venture capital funding bringing superior computing products to a more tractable labor market. More expensive financing via higher interest rates may also compel companies to leverage new technology to remain profitable.

The ingredients for productivity growth being there, where in particular might the capital expenditure money go? One of the offshoots more directly linked to the pandemic is the digitization of business models, wherein artificial intelligence and machine learning was originally substituted in for traditional R&D to help expedite the production of mRNA technologies, it has the potential for application across many other industries. Another is the adoption of hybrid or remote working, allowing increased labor mobility, reduced time lost to commuting, and more business start-ups bringing unique, new products to market. Spending on decarbonization from the Inflation Reduction Act, to come via fiscal and public/private partnership spending, also has the potential to add hundreds of billions of dollars to domestic output in new technologies. While other areas such as increases in defense and infrastructure spending also can bolster productivity, the economy-wide possibilities are varied and endless.

This article's optimistic hypotheses, which may take years to unfold, illustrate one of the benefits of a dynamic and open economy that is easily overlooked in stressful times: the potential for positive surprises. COVID's damages being what they are, many of the financial reactions to it when combined with other technological and demographic trends have the potential to positively transform economic lives for years to come. Such transformation arguably could not be as easily achieved in a more economically stagnant, sedate, or otherwise closed environment. Although the productivity gains we are hoping for are by no means guaranteed; the ingredients are there and the prospect reminds investors that the long-run can pack a lot of upside, even if the recent past has been anything but easy.¹

¹Source: Morgan Stanley Global Investment Committee Special Report by Lisa Shalett, The Next American Productivity Renaissance, January 4, 2023

GLOBAL ECONOMIC LANDSCAPE

- As expected by a consensus of forecasters, inflation as measured by CPI came down in December 2022 for a second month; 7.0% at the headline level and 6.0% at core. In turn, the Fed lowered the pace of rate hikes to 50 basis points at its December meeting, bringing the fed funds rate to 4.5%. While there is reason to be sanguine about inflation, sticky prices in services and the tightness of the labor market are wildcards which the Fed has explicitly cited as risks. Despite the Fed's hawkish rhetoric which raised the terminal rate and pushed out guidance on first rate cuts, the market discounted only 25 to 50 basis points more in hikes and aggressive rate cuts by June. With financial conditions quite loose, the Fed has room to deliver negative surprises².
- The rise in Treasury yields may well challenge the US Government's ability to finance operations. For example, as of year-end 2022, nearly 30% of US Government debt was scheduled to mature within one year and approximately another 20% has a maturity date of between one and three years. One implication is that increased borrowing costs will crowd out discretionary spending. Another is that the Treasury may seek to issue longer-term debt which, thanks to an inverted yield curve, entails lower borrowing costs³.
- According to a Federal Reserve Report in November 2022 ("What Happens in China Does Not Stay in China"), policy-driven increases in China's credit may provide a tailwind for energy and commodity prices. For example, the International Energy Agency noted that China's demand for oil dropped by the greatest amount in over three decades due to lockdowns. Factors such as a re-opening in travel, an uptick in property demand, combined with relatively low inventory levels of copper and aluminum have the potential to stoke demand⁴.

GLOBAL FINANCIAL MARKETS

- In 2022, persistent global inflationary pressures and coordinated central bank rate hikes led equities to decline to bear market lows and fixed income to experience the sharpest losses in decades. This was the first time in modern history where both US stocks and long-term bonds declined by double digits in a year. The traditional 60% stock/40% bond portfolio lost -16.1% in 2022, the worst return in more than 50 years⁵.
- The US Dollar retreated in value from its peak on September 28, 2022, suggesting that investors believe the Fed is near the end of its tightening cycle. This in turn has been viewed positively for Emerging Markets in terms of their ability to attract, compete in export markets, raise capital by issuing dollar-denominated debt, and otherwise develop economically⁶.
- Despite being viewed as an inflation-hedge, Real Estate Investment Trusts (REITs) saw their second worst year on record in 2022 (the worst being 2008), returning -24.5% versus -18.1% for the S&P 500. Although operating income growth was above historical averages, valuation metrics such as rising interest rates and credit spreads, as well as declining earnings expectations and falling private market valuations presented a formidable headwind for the sector⁷.
- Gold typically trades inversely with real, or inflation-adjusted, yields. Falling real yields support the yellow metal and rising yields on inflation-protection securities drive losses. With the 10-year US Treasury real yield having backed up by nearly 280 basis points in 2022 to 1.6% from an extremely negative

² Source: Morgan Stanley Global Investment Committee Weekly December 19, 2022

³ Source: Morgan Stanley Global Investment Committee Weekly January 9, 2023

⁴ Source: Morgan Stanley, A Few Things We're Thinking About, by Christopher Baxter, January 5, 2023

⁵ Source: Morgan Stanley, Client Commentary, January 2023

⁶ Source: Morgan Stanley, A Few Things We're Thinking About, by Christopher Baxter January 5, 2023

⁷ Source: Morgan Stanley, The REIT Cheat Sheet, North America by Ronald Kamden, January 3, 2023

position, it should have been a horrendous year for gold. However, demand has remained strong as shifting geopolitics and currency market turmoil have led central banks, especially those in China and Russia, to build their reserves⁸.

Disclosure: The views and opinions expressed in this commentary are those of the portfolio manager at the time of this writing and do not necessarily represent those of Hyas Group, Morgan Stanley, its affiliates or its other employees. Of course, these views may change without notice in response to changing circumstances and market conditions. Furthermore, this commentary contains forward-looking statements and there can be no guarantee that they will come to pass. Historical data shown represents past performance and does not guarantee comparable future results. The information and statistical data contained herein have been obtained from sources that are believed to be reliable but in no way are guaranteed by Hyas Group as to accuracy or completeness.

It is not an offer to buy or sell or a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. This material does not provide individually tailored investment advice and has been prepared without regard to the individual financial circumstances and objectives of persons who receive it.

The 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.

Hyas Group, a business of Morgan Stanley.

For further information please contact Tom Breaden (tbreaden@hyasgroup.com).

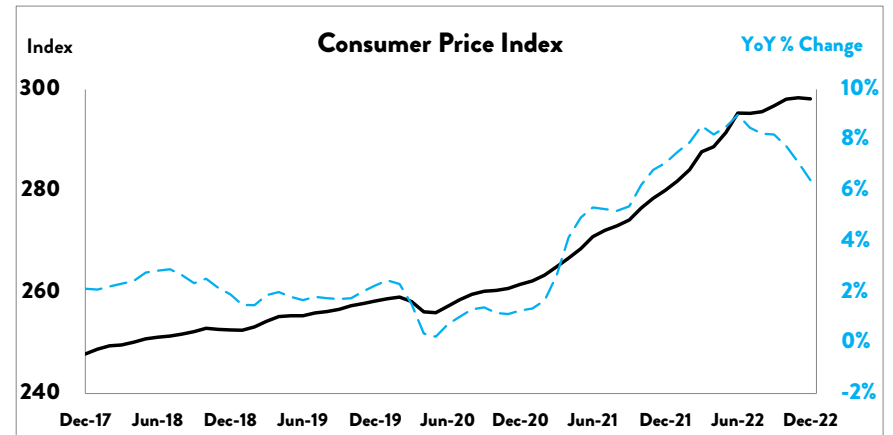
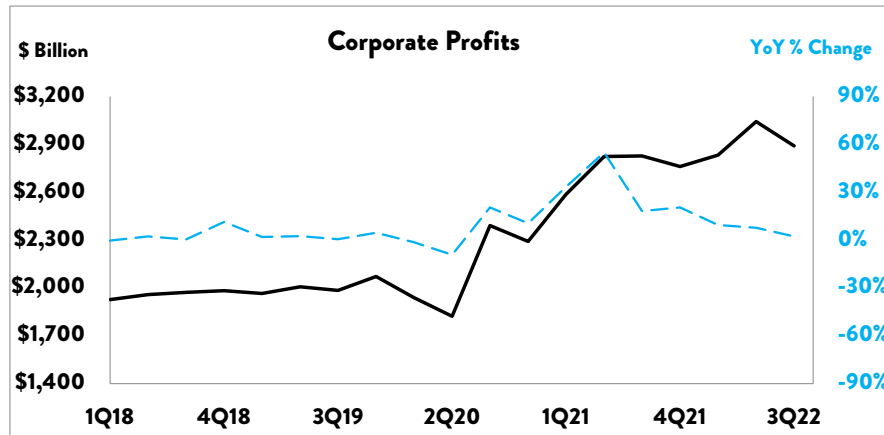
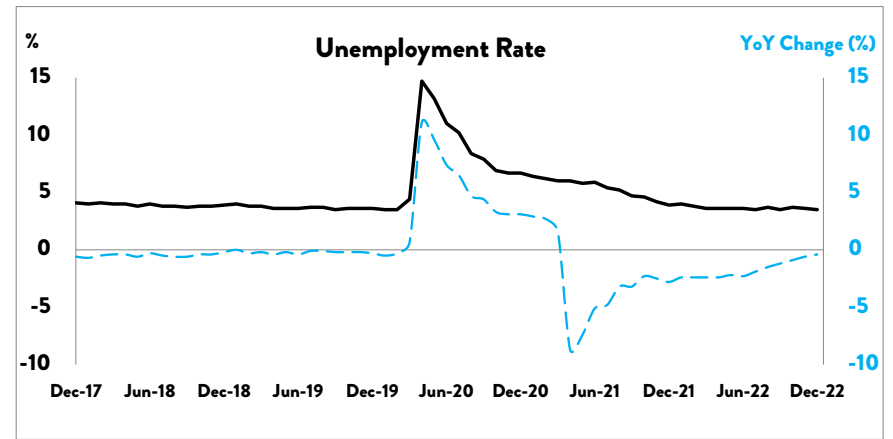
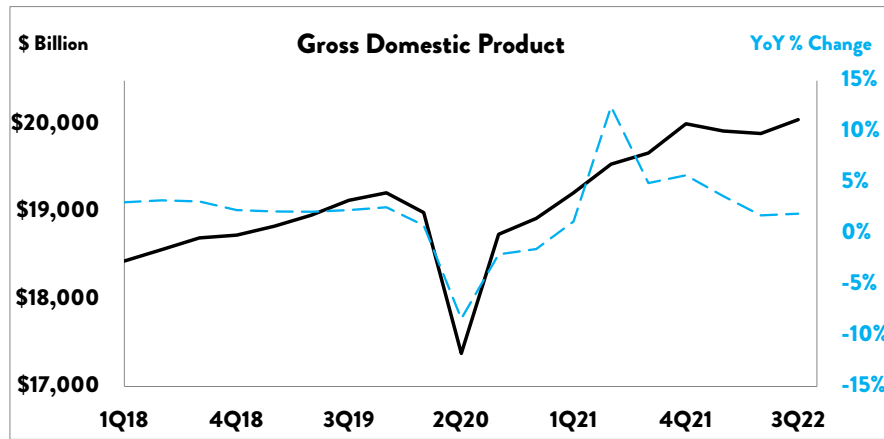
Hyas Group, 9755 SW Barnes Road, Suite 660, Portland, Oregon 97225; 503-634-1500

⁸ Source: Morgan Stanley Global Investment Committee Weekly January 3, 2023

This report is being provided for informational purposes only. The information and opinions presented in this report do not constitute investment advice and have been obtained from sources believed by Hyas Group to be reliable. Hyas Group makes no representation as to their accuracy or completeness. All opinions expressed herein are subject to change.

©Morgan Stanley, 2023 CRC 5416715- 1/23

4Q2022 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	223,000	4,505,000	-20,493,000	103,567	Dec-22
Unemployment Rate	3.5%	14.7%	3.5%	4.9%	Dec-22
Median Unemployment Length (Weeks)	7.5	22.2	4.0	11.2	Dec-22
Average Hourly Earnings	\$32.82	\$32.82	\$26.73	\$29.45	Dec-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	\$3.17	\$4.84	\$1.80	-34.5%	Dec-22
Spot Oil	\$76.44	\$114.84	\$16.55	-33.4%	Dec-22
Case-Shiller Home Price Index	304.2	316.2	204.7	48.7%*	Oct-22
Medical Care CPI	552.3	557.4	480.8	14.9%*	Dec-22

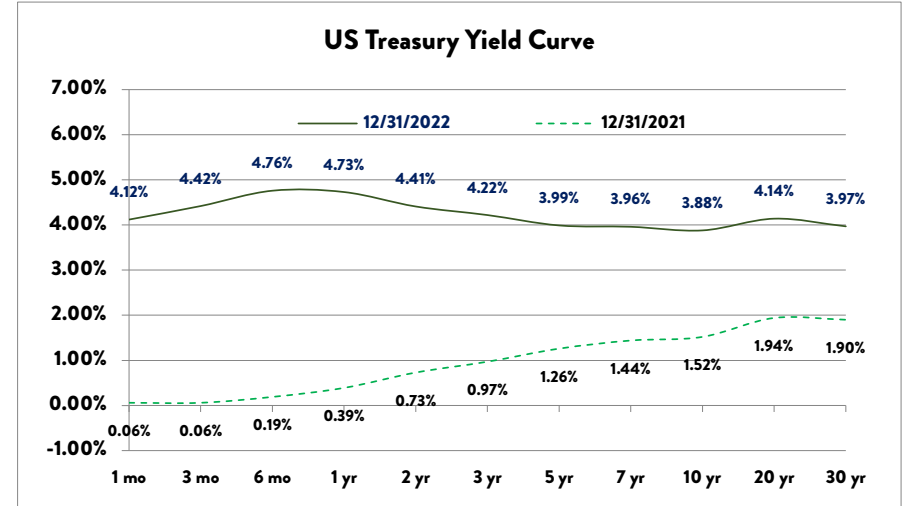
*% Off Low

Morningstar data as of 12/31/2022

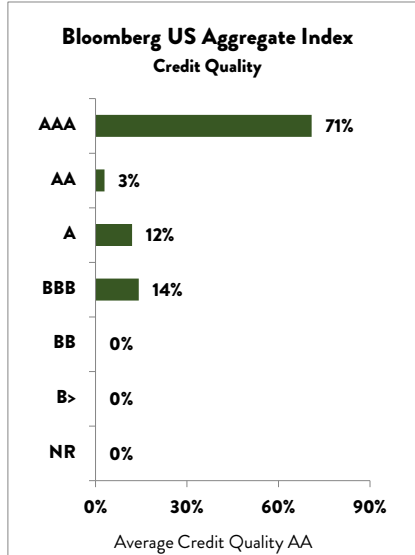
4Q2022 Bond Market Data

Index	QTR	YTD	1 yr.	3 yrs.	5 yrs.	10 yrs.
90-Day T-Bill	1.02%	2.05%	2.05%	0.82%	1.31%	0.79%
Bloomberg US Aggregate	1.87%	-13.01%	-13.01%	-2.71%	0.02%	1.06%
Bloomberg Short US Treasury	0.85%	0.98%	0.98%	0.66%	1.26%	0.80%
Bloomberg Int. US Treasury	1.02%	-7.77%	-7.77%	-1.39%	0.46%	0.69%
Bloomberg Long US Treasury	-0.59%	-29.26%	-29.26%	-7.40%	-2.20%	0.60%
Bloomberg US TIPS	2.04%	-11.85%	-11.85%	1.21%	2.11%	1.12%
Bloomberg US Credit	3.44%	-15.26%	-15.26%	-2.86%	0.42%	1.82%
Bloomberg US Mortgage-Backed	2.14%	-11.81%	-11.81%	-3.22%	-0.53%	0.74%
Bloomberg US Asset-Backed	0.81%	-4.30%	-4.30%	-0.11%	1.18%	1.23%
Bloomberg US 20-Yr Municipal	5.23%	-11.02%	-11.02%	-1.05%	1.37%	2.64%
Bloomberg US High Yield	4.17%	-11.19%	-11.19%	0.05%	2.31%	4.03%
Bloomberg Global	4.55%	-16.25%	-16.25%	-4.48%	-1.66%	-0.44%
Bloomberg International	6.81%	-18.70%	-18.70%	-5.94%	-3.07%	-1.64%
Bloomberg Emerging Market	6.59%	-15.26%	-15.26%	-3.89%	-0.42%	1.71%

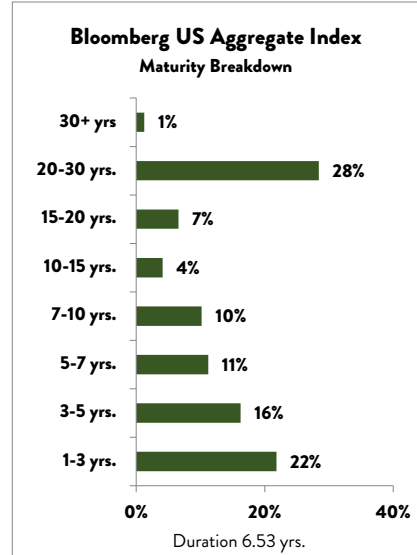
Source: Morningstar



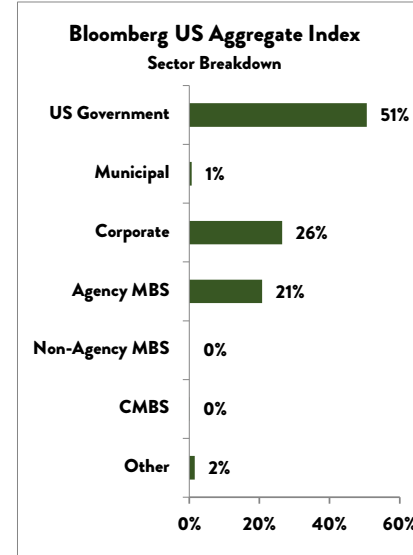
Source: Department of US Treasury



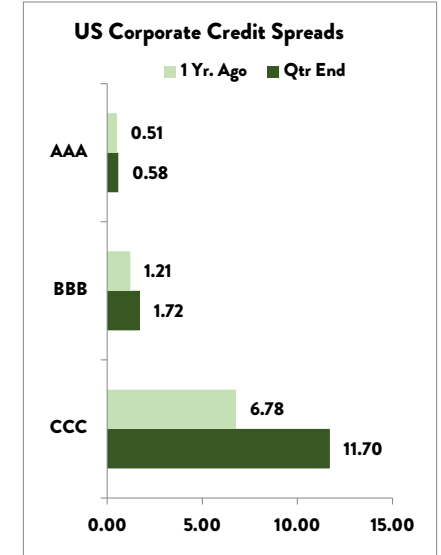
Source: Morningstar



Source: Morningstar



Source: Morningstar



Source: Federal Reserve / Bank of America

4Q2022 US Equity Market Data

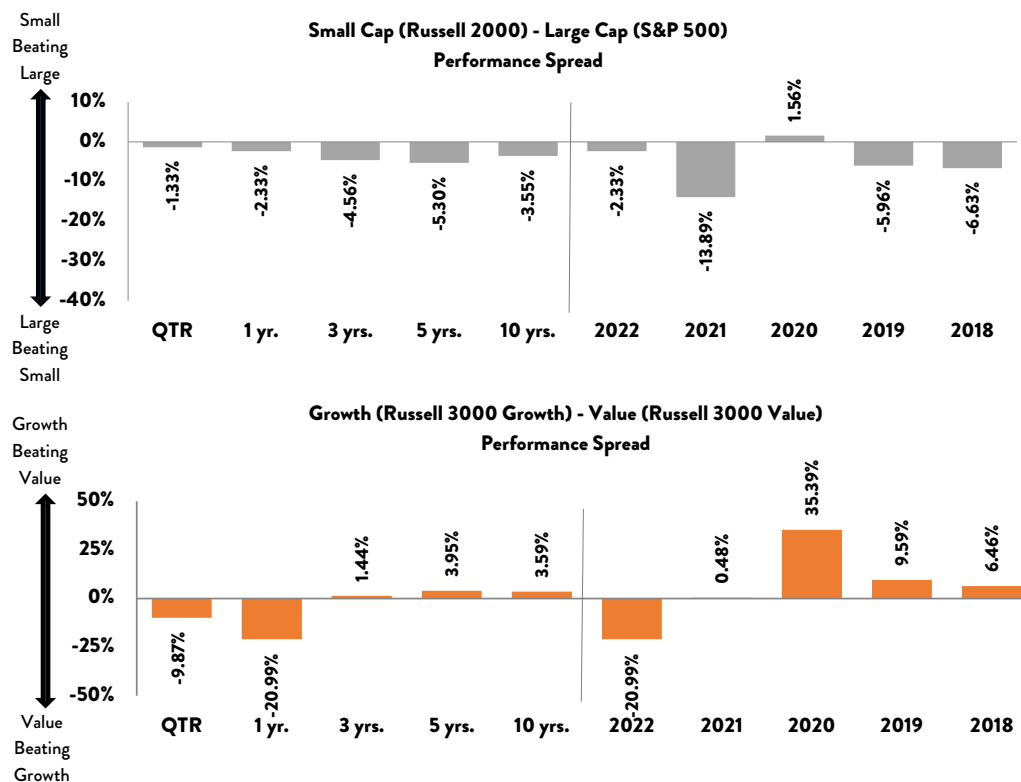
Sectors Weights/Returns (ranked by quarter performance)

	Wgt.	Sector	QTR	YTD	1 yr.
S&P 500 Index	5%	Energy	22.81%	65.72%	65.72%
	9%	Industrials	19.22%	-5.48%	-5.48%
	3%	Materials	15.05%	-12.27%	-12.27%
	12%	Financials	13.61%	-10.53%	-10.53%
	16%	Health Care	12.80%	-1.95%	-1.95%
	7%	Consumer Staples	12.72%	-0.62%	-0.62%
	3%	Utilities	8.64%	1.57%	1.57%
	26%	Information Technology	4.74%	-28.19%	-28.19%
	3%	Real Estate	3.82%	-26.13%	-26.13%
	7%	Communication Services	-1.38%	-39.89%	-39.89%
10%	Consumer Discretionary	-10.18%	-37.03%	-37.03%	
S&P Midcap 400 Index	7%	Materials	21.92%	-2.73%	-2.73%
	14%	Consumer Discretionary	14.24%	-21.03%	-21.03%
	20%	Industrials	12.77%	-11.50%	-11.50%
	4%	Utilities	11.62%	-0.15%	-0.15%
	4%	Consumer Staples	11.59%	-0.77%	-0.77%
	4%	Energy	10.45%	36.62%	36.62%
	15%	Financials	9.57%	-3.04%	-3.04%
	12%	Information Technology	9.36%	-20.47%	-20.47%
	10%	Health Care	5.22%	-20.05%	-20.05%
	2%	Communication Services	4.31%	-20.39%	-20.39%
8%	Real Estate	3.74%	-26.35%	-26.35%	
S&P Smallcap 600 Index	5%	Energy	20.45%	47.89%	47.89%
	17%	Industrials	14.66%	-9.40%	-9.40%
	3%	Utilities	12.64%	-1.84%	-1.84%
	6%	Materials	11.51%	-6.09%	-6.09%
	13%	Consumer Discretionary	10.91%	-27.82%	-27.82%
	5%	Consumer Staples	9.76%	-6.47%	-6.47%
	8%	Real Estate	9.01%	-29.50%	-29.50%
	13%	Information Technology	8.09%	-22.36%	-22.36%
	18%	Financials	7.21%	-14.02%	-14.02%
	11%	Health Care	0.48%	-26.32%	-26.32%
2%	Communication Services	-3.18%	-34.46%	-34.46%	

Source: Morningstar

Index Performance Data

Index	QTR	YTD	1 yr.	Annualized		
				3 yrs.	5 yrs.	10 yrs.
S&P 500	7.56%	-18.11%	-18.11%	7.66%	9.42%	12.56%
Russell 1000 Value	12.42%	-7.54%	-7.54%	5.96%	6.67%	10.29%
Russell 1000 Growth	2.20%	-29.14%	-29.14%	7.79%	10.96%	14.10%
Russell Mid Cap	9.18%	-17.32%	-17.32%	5.88%	7.10%	10.96%
Russell Mid Cap Value	10.45%	-12.03%	-12.03%	5.82%	5.72%	10.11%
Russell Mid Cap Growth	6.90%	-26.72%	-26.72%	3.85%	7.64%	11.41%
Russell 2000	6.23%	-20.44%	-20.44%	3.10%	4.13%	9.01%
Russell 2000 Value	8.42%	-14.48%	-14.48%	4.70%	4.13%	8.48%
Russell 2000 Growth	4.13%	-26.36%	-26.36%	0.65%	3.51%	9.20%
Russell 3000	7.18%	-19.21%	-19.21%	7.07%	8.79%	12.13%
DJ US Select REIT	4.76%	-25.96%	-25.96%	-1.37%	2.50%	5.74%



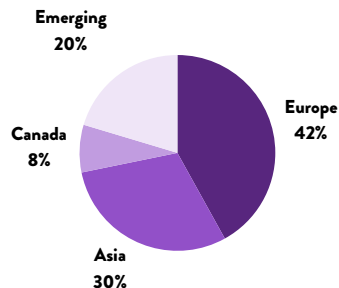
4Q2022 International Market Data

Index Performance Data (net)

Index (US\$)	QTR	YTD	1 yr.	3 yrs.	5 yrs.	10 yrs.
MSCI ACWI ex-US	14.28%	-16.00%	-16.00%	0.07%	0.88%	3.80%
MSCI EAFE	17.34%	-14.45%	-14.45%	0.87%	1.54%	4.67%
Europe	19.35%	-15.06%	-15.06%	1.35%	1.87%	4.58%
United Kingdom	16.98%	-4.84%	-4.84%	0.32%	0.96%	3.07%
Germany	24.57%	-22.34%	-22.34%	-3.01%	-3.02%	2.66%
France	22.19%	-13.33%	-13.33%	2.53%	3.41%	6.14%
Pacific	14.13%	-13.04%	-13.04%	-0.03%	0.95%	4.89%
Japan	13.23%	-16.65%	-16.65%	-0.99%	0.23%	5.55%
Hong Kong	18.21%	-4.71%	-4.71%	-1.05%	-0.29%	4.77%
Australia	15.68%	-5.25%	-5.25%	4.07%	4.05%	3.97%
Canada	7.42%	-12.87%	-12.87%	4.95%	4.06%	3.68%
MSCI EM	9.70%	-20.09%	-20.09%	-2.69%	-1.40%	1.44%
MSCI EM Latin America	5.73%	8.92%	8.92%	-4.79%	-1.08%	-2.15%
MSCI EM Asia	10.83%	-21.11%	-21.11%	-1.31%	-0.62%	3.55%
MSCI EM Eur/Mid East	1.25%	-35.34%	-35.34%	-9.53%	-4.07%	-4.02%
MSCI ACWI Value ex-US	15.70%	-8.59%	-8.59%	0.06%	-0.05%	2.72%
MSCI ACWI Growth ex-US	12.89%	-23.05%	-23.05%	-0.40%	1.49%	4.68%
MSCI ACWI Sm Cap ex-US	13.31%	-19.97%	-19.97%	1.07%	0.67%	5.24%

Regional Exposure

MSCI ACWI ex-USA

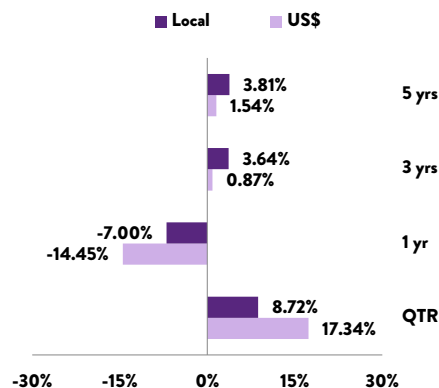


Top 10 Countries (MSCI AC World ex-USA)

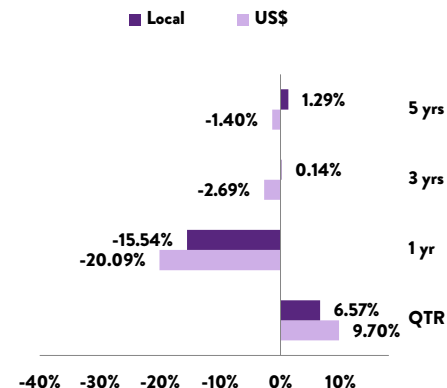
Japan	14%
UK	10%
China	9%
Canada	8%
France	8%
Switzerland	7%
Germany	5%
Australia	5%
India	4%
Taiwan	4%

Source: Morningstar

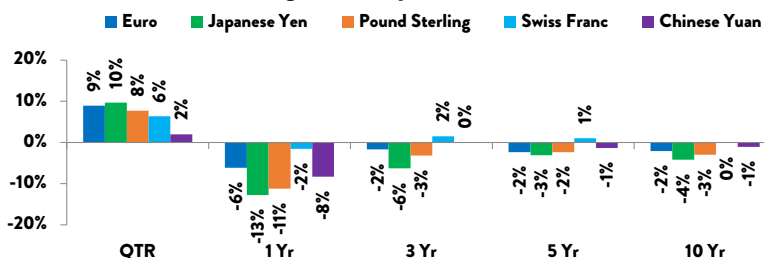
MSCI EAFE Index Return



MSCI Emerging Index Return



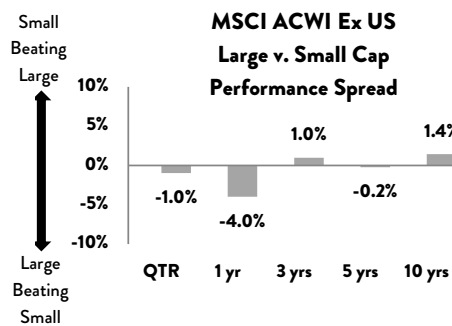
Foreign Currency v. US\$ Returns



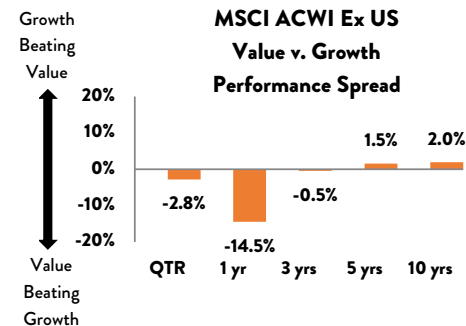
Exchange Rates	QTR	3Q22	2Q22	1Q22	4Q21	3Q21
Japanese Yen	131.81	144.71	135.69	121.44	115.17	111.50
Euro	0.93	1.02	0.96	0.90	0.88	0.86
British Pound	0.83	0.90	0.82	0.76	0.74	0.74
Swiss Franc	0.92	0.98	0.96	0.92	0.91	0.93
Chinese Yuan	6.90	7.11	6.70	6.34	6.37	6.44

Source: Federal Reserve Bank of St. Louis

MSCI ACWI Ex US Large v. Small Cap Performance Spread



MSCI ACWI Ex US Value v. Growth Performance Spread



Performance Source: Morningstar

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PLAN ASSET ALLOCATION

Fourth Quarter 2022

Fixed Income	Ticker	Assets	%
Nationwide Fixed Fund	-	\$62,329,404	30.1%
Fidelity US Bond Index	FXNAX	\$2,471,481	1.2%
Sterling Capital Total Return Bond R6	STRDX	\$3,643,656	1.8%
Hotchkis & Wiley High Yield Z	HWHZX	\$1,415,585	0.7%
Total		\$69,860,126	33.7%

Large Cap	Ticker	Assets	%
DFA US Large Cap Value I	DFLVX	\$8,080,316	3.9%
Fidelity 500 Index	FXAIX	\$34,402,962	16.6%
T. Rowe Price Large Cap Growth I	TRLGX	\$15,439,327	7.4%
Total		\$57,922,605	27.9%

Mid Cap	Ticker	Assets	%
MFS Mid Cap Value R6	MVCKX	\$2,041,837	1.0%
Fidelity Mid Cap Index	FSMDX	\$3,273,435	1.6%
JPMorgan Mid Cap Growth R6	JMGMX	\$6,656,385	3.2%
Total		\$11,971,657	5.8%

Small Cap	Ticker	Assets	%
DFA US Targeted Value I	DFVFX	\$4,003,056	1.9%
Fidelity Small Cap Index	FSSNX	\$1,889,802	0.9%
Vanguard Small Growth Index Adm	VSGAX	\$2,911,282	1.4%
Total		\$8,804,140	4.2%

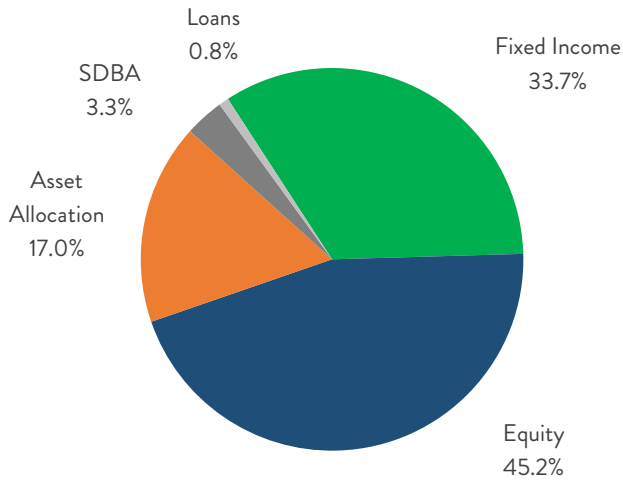
International	Ticker	Assets	%
Vanguard International Value Inv	VTRIX	\$3,477,463	1.7%
Fidelity Total International Index	FTIHX	\$5,156,053	2.5%
Vanguard International Growth Adm	VWILX	\$6,273,203	3.0%
Total		\$14,906,719	7.2%

Asset Allocation	Ticker	Assets	%
Vanguard Target Retirement Income	VTINX	\$1,544,413	0.7%
Vanguard Target Retirement 2025	VTTVX	\$12,772,831	6.2%
Vanguard Target Retirement 2030	VTHRX	\$1,090,113	0.5%
Vanguard Target Retirement 2035	VTTHX	\$7,007,213	3.4%
Vanguard Target Retirement 2040	VFORX	\$1,027,053	0.5%
Vanguard Target Retirement 2045	VTIVX	\$8,356,134	4.0%
Vanguard Target Retirement 2050	VFIFX	\$1,020,792	0.5%
Vanguard Target Retirement 2055	VFFVX	\$1,882,228	0.9%
Vanguard Target Retirement 2060	VTTSX	\$481,701	0.2%
Vanguard Target Retirement 2065	VLXVX	\$2,745	0.0%
Vanguard Target Retirement 2070	VSVNX	\$0	0.0%
Total		\$35,185,222	17.0%

Miscellaneous	Ticker	Assets	%
Self Directed Option	-	\$6,861,670	3.3%
Loans	-	\$1,734,203	0.8%
Total		\$8,595,873	4.1%

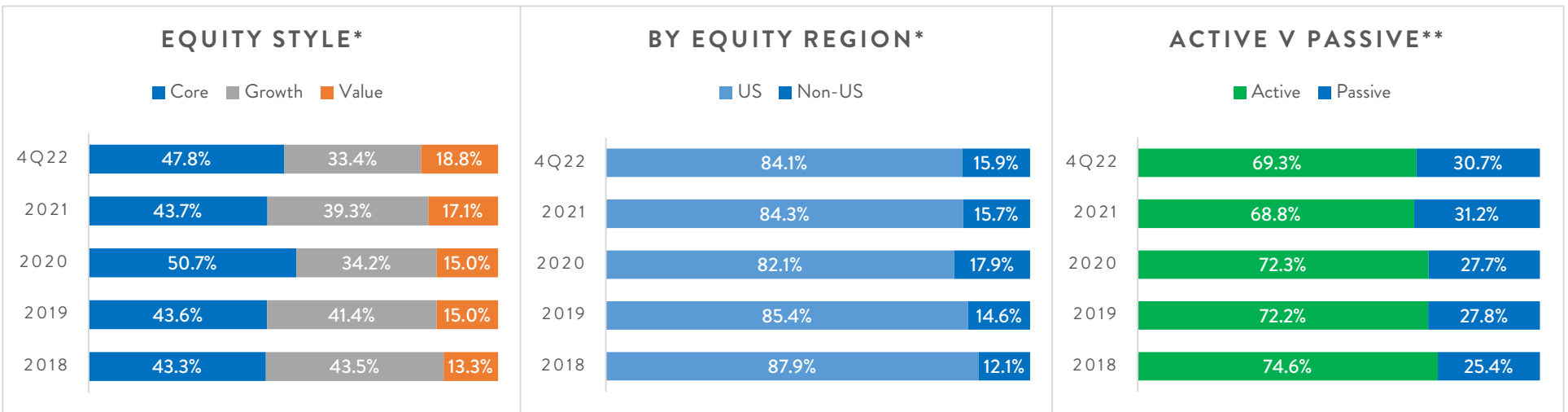
TOTAL PLAN ASSETS

\$207,246,343



HISTORICAL PLAN ALLOCATION

Asset Class	4Q22	2021	2020	2019	2018	2017	2016	2015
Fixed Income	33.7%	28.5%	33.4%	35.5%	38.7%	N/A	N/A	N/A
Large Cap	27.9%	30.6%	27.0%	26.3%	26.1%	N/A	N/A	N/A
Mid Cap	5.8%	6.5%	6.4%	7.7%	6.7%	N/A	N/A	N/A
Small Cap	4.2%	4.5%	3.9%	3.9%	4.1%	N/A	N/A	N/A
International	7.2%	7.8%	8.1%	6.5%	5.1%	N/A	N/A	N/A
Asset Allocation	17.0%	16.9%	16.3%	16.6%	16.3%	N/A	N/A	N/A
SDDBA	3.3%	4.4%	3.9%	2.8%	2.6%	N/A	N/A	N/A
Loans	0.8%	0.8%	1.0%	0.7%	0.5%	N/A	N/A	N/A



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

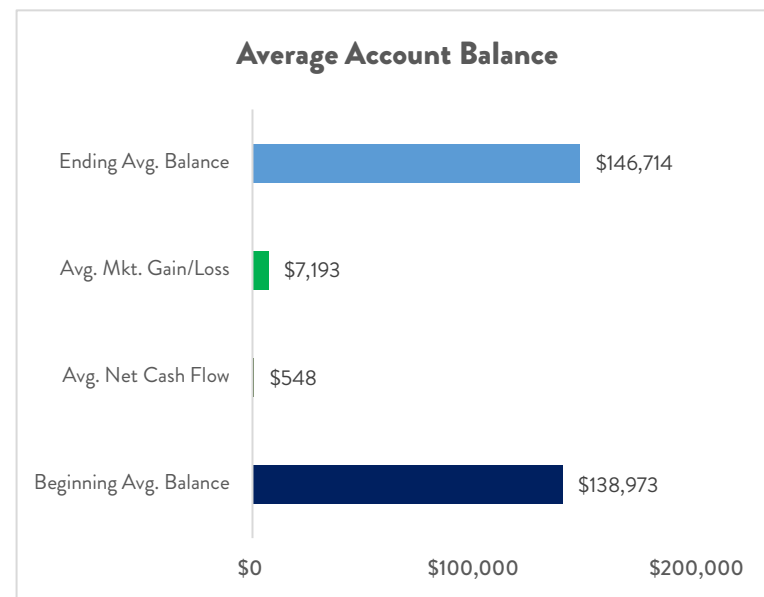
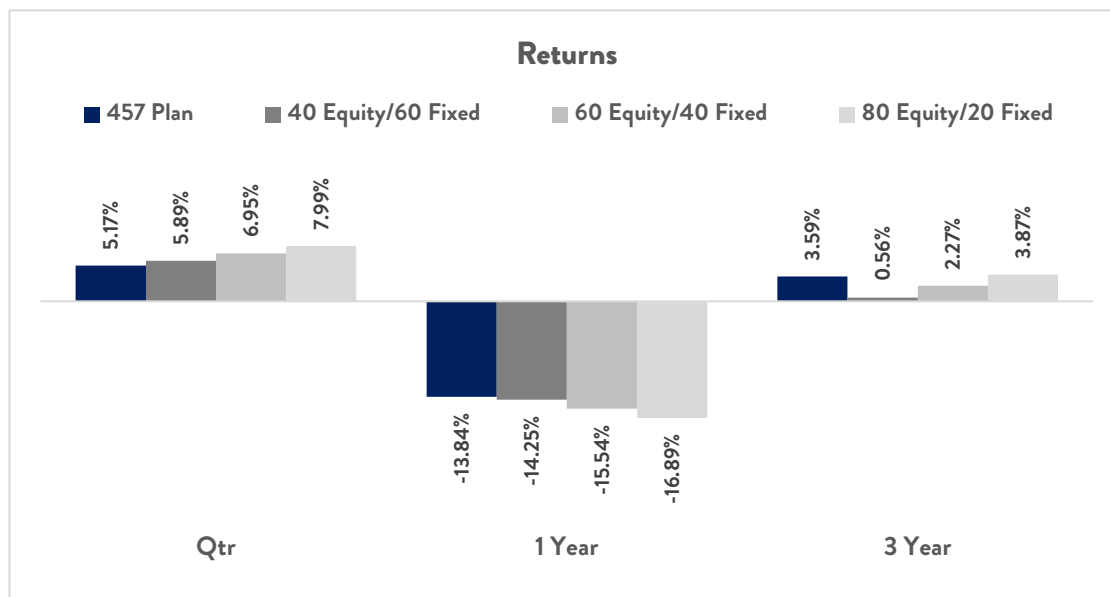
**Excludes Asset Allocation, Brokerage, and Loan assets

PLAN LEVEL CASH FLOWS

	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$69,207,209	\$598,192	(\$1,002,102)	\$437,137	\$619,691	\$69,860,126
Large Cap	\$53,655,612	\$794,958	(\$566,243)	\$710,717	\$3,327,559	\$57,922,605
Mid Cap	\$11,143,093	\$183,222	(\$98,583)	(\$138,902)	\$882,828	\$11,971,657
Small Cap	\$8,276,979	\$128,754	(\$51,287)	(\$213,531)	\$663,227	\$8,804,140
International	\$13,151,973	\$250,220	(\$216,172)	(\$132,507)	\$1,853,205	\$14,906,719
Asset Allocation	\$32,734,545	\$975,861	(\$255,074)	(\$662,914)	\$2,392,804	\$35,185,222
Total	\$188,169,411	\$2,931,206	(\$2,189,460)	\$0	\$9,739,313	\$198,650,470

HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
4Q22	\$188,169,411	\$741,746	\$9,739,313	\$198,650,470
YTD	\$228,093,930	\$2,016,434	(\$31,459,895)	\$198,650,470
2021	\$203,711,702	(\$1,066,724)	\$25,448,953	\$228,093,930
2020	\$174,412,951	\$3,320,382	\$25,978,370	\$203,711,702
2019	\$150,093,203	(\$2,185,094)	\$26,504,842	\$174,412,951
2018	N/A	N/A	N/A	\$150,093,203



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

Key: Ⓟ Pass / ● Fail

Investment Policy Status

	Performance Factors	Qualitative Factors	On-Watch Date Initiated	Notes
Nationwide Fixed Fund	Ⓟ	Ⓟ	-	
Fidelity US Bond Index	Ⓟ	Ⓟ	-	
Sterling Capital Total Return Bond R6	Ⓟ	Ⓟ	-	
Hotchkis & Wiley High Yield Z	●	Ⓟ	4Q2019	Trailing Benchmark and Peer Group for 5 year period. Sharpe Ratio trailing median for five-year period.
DFA US Large Cap Value I	●	Ⓟ	4Q2019	Trailing Benchmark and Peer Group for 5 year period. Sharpe Ratio trailing median for five-year period.
Fidelity 500 Index	Ⓟ	Ⓟ	-	
T. Rowe Price Large Cap Growth I	Ⓟ	Ⓟ	-	
MFS Mid Cap Value R6	Ⓟ	Ⓟ	-	
Fidelity Mid Cap Index	Ⓟ	Ⓟ	-	
JPMorgan Mid Cap Growth R6	Ⓟ	Ⓟ	-	
DFA US Targeted Value I	Ⓟ	Ⓟ	-	
Fidelity Small Cap Index	Ⓟ	Ⓟ	-	
Vanguard Small Growth Index Adm	Ⓟ	Ⓟ	-	
Vanguard International Value Inv	Ⓟ	Ⓟ	-	
Fidelity Total International Index	Ⓟ	Ⓟ	-	
Vanguard International Growth Adm	Ⓟ	Ⓟ	-	
Vanguard Target Retirement Income	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2025	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2030	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2035	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2040	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2045	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2050	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2055	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2060	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2065	Ⓟ	Ⓟ	-	
Vanguard Target Retirement 2070	Ⓟ	Ⓟ	-	

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Nationwide Fixed Fund	0.74	3.00	3.00	3.21	-	-	3.13	3.50	3.50	-	-	-
5 Yr Constant Maturity US Treasury Yield	0.99	3.00	3.00	1.46	1.81	1.68	0.85	0.54	1.96	2.75	1.91	1.44
+/- Index	(0.25)	0.00	0.00	1.75	-	-	2.28	2.96	1.54	-	-	-
Fidelity US Bond Index	1.68	-13.03	-13.03	-2.72	-0.02	1.01	-1.79	7.80	8.48	0.01	3.50	2.52
Bloomberg US Aggregate Bond Index	1.87	-13.01	-13.01	-2.71	0.02	1.06	-1.54	7.51	8.72	0.01	3.54	2.65
+/- Index	(0.19)	(0.02)	(0.02)	(0.01)	(0.04)	(0.05)	(0.25)	0.29	(0.23)	0.00	(0.04)	(0.13)
US Fund Intermediate Core Bond	43	29	29	46	38	42	65	50	48	26	43	55
Sterling Capital Total Return Bond R6	1.57	-13.15	-13.15	-2.08	0.48	1.58	-1.12	9.35	9.37	-0.27	4.33	3.75
Bloomberg US Aggregate Bond Index	1.87	-13.01	-13.01	-2.71	0.02	1.06	-1.54	7.51	8.72	0.01	3.54	2.65
+/- Index	(0.30)	(0.14)	(0.14)	0.63	0.46	0.52	0.42	1.84	0.65	(0.28)	0.79	1.10
US Fund Intermediate Core Bond	57	34	34	15	11	6	28	15	18	42	10	12
Hotchkis & Wiley High Yield Z	4.66	-9.69	-9.69	0.06	1.23	3.45	6.83	3.83	9.77	-3.34	8.24	16.02
Bloomberg US Corp High Yield Index	4.17	-11.19	-11.19	0.05	2.31	4.03	5.28	7.11	14.32	-2.08	7.50	17.13
+/- Index	0.49	1.50	1.50	0.01	(1.08)	(0.58)	1.55	(3.29)	(4.54)	(1.26)	0.73	(1.11)
US Fund High Yield Bond	18	29	29	34	73	39	13	74	87	64	15	17
DFA US Large Cap Value I	14.05	-5.78	-5.78	6.25	5.86	10.86	28.07	-0.61	25.45	-11.65	18.97	18.89
Russell 1000 Value Index	12.42	-7.54	-7.54	5.96	6.67	10.29	25.16	2.80	26.54	-8.27	13.66	17.34
+/- Index	1.63	1.76	1.76	0.29	(0.81)	0.57	2.91	(3.40)	(1.09)	(3.38)	5.30	1.55
US Fund Large Value	23	53	53	64	78	27	27	79	49	82	20	13

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Fidelity 500 Index	7.56	-18.13	-18.13	7.65	9.41	12.55	28.69	18.40	31.47	-4.40	21.81	11.97
S&P 500 Index	7.56	-18.11	-18.11	7.66	9.42	12.56	28.71	18.40	31.49	-4.38	21.83	11.96
+/- Index	0.00	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	0.00	(0.01)	(0.02)	(0.02)	0.01
US Fund Large Blend	56	49	49	30	20	11	21	33	22	22	32	27
T. Rowe Price Large Cap Growth I	-0.18	-35.18	-35.18	3.67	8.35	13.85	23.18	39.56	28.49	4.32	37.82	2.85
Russell 1000 Growth Index	2.20	-29.14	-29.14	7.79	10.96	14.10	27.60	38.49	36.39	-1.51	30.21	7.08
+/- Index	(2.38)	(6.04)	(6.04)	(4.12)	(2.61)	(0.25)	(4.42)	1.07	(7.90)	5.83	7.61	(4.22)
US Fund Large Growth	81	77	77	65	50	10	39	31	82	7	4	52
MFS Mid Cap Value R6	12.06	-8.64	-8.64	7.71	7.75	10.94	31.00	4.40	31.08	-11.31	13.84	15.86
Russell Mid Cap Value Index	10.45	-12.03	-12.03	5.82	5.72	10.11	28.34	4.96	27.06	-12.29	13.34	20.00
+/- Index	1.61	3.39	3.39	1.89	2.03	0.83	2.66	(0.57)	4.02	0.98	0.50	(4.14)
US Fund Mid-Cap Value	45	55	55	32	14	10	27	34	10	23	45	66
Fidelity Mid Cap Index	9.21	-17.28	-17.28	5.89	7.10	10.95	22.56	17.11	30.51	-9.05	18.47	13.86
Russell Mid Cap Index	9.18	-17.32	-17.32	5.88	7.10	10.96	22.58	17.10	30.54	-9.06	18.52	13.80
+/- Index	0.03	0.04	0.04	0.01	0.00	(0.01)	(0.02)	0.01	(0.03)	0.01	(0.05)	0.07
US Fund Mid-Cap Blend	51	67	67	53	30	16	66	24	24	25	26	57
JPMorgan Mid Cap Growth R6	6.05	-26.96	-26.96	6.38	9.87	13.04	10.99	48.51	39.96	-4.97	29.72	0.37
Russell Mid Cap Growth Index	6.90	-26.72	-26.72	3.85	7.64	11.41	12.73	35.59	35.47	-4.75	25.27	7.33
+/- Index	(0.85)	(0.24)	(0.24)	2.53	2.23	1.63	(1.74)	12.92	4.49	(0.22)	4.46	(6.96)
US Fund Mid-Cap Growth	41	41	41	17	10	9	61	24	9	46	17	91

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
DFA US Targeted Value I	12.63	-4.62	-4.62	11.16	7.04	10.49	38.80	3.77	21.47	-15.78	9.59	26.86
Russell 2000 Value Index	8.42	-14.48	-14.48	4.70	4.13	8.48	28.27	4.63	22.39	-12.86	7.84	31.74
+/- Index	4.21	9.86	9.86	6.46	2.91	2.01	10.53	(0.87)	(0.92)	(2.92)	1.75	(4.88)
US Fund Small Value	25	11	11	9	15	11	8	46	54	54	47	35
Fidelity Small Cap Index	6.25	-20.27	-20.27	3.15	4.22	9.17	14.71	19.99	25.71	-10.88	14.85	21.63
Russell 2000 Index	6.23	-20.44	-20.44	3.10	4.13	9.01	14.82	19.96	25.52	-11.01	14.65	21.31
+/- Index	0.02	0.17	0.17	0.05	0.09	0.16	(0.11)	0.03	0.18	0.14	0.20	0.32
US Fund Small Blend	89	79	79	73	61	48	89	12	36	34	26	46
Vanguard Small Growth Index Adm	3.02	-28.39	-28.39	0.79	5.10	9.27	5.70	35.28	32.76	-5.68	21.92	10.73
Vanguard US Small Cap Growth Index	3.00	-28.44	-28.44	0.79	5.09	9.22	5.71	35.35	32.75	-5.68	21.90	10.62
+/- Index	0.02	0.05	0.05	0.00	0.01	0.05	(0.01)	(0.07)	0.01	0.00	0.02	0.11
US Fund Small Growth	71	51	51	78	67	70	65	57	36	59	56	46
Vanguard International Value Inv	15.76	-11.66	-11.66	1.30	1.36	4.31	7.97	8.99	20.39	-14.52	27.96	4.46
MSCI ACWI Ex-USA Value (Net) Index	15.70	-8.59	-8.59	0.06	-0.05	2.72	10.46	-0.77	15.71	-13.97	22.66	8.92
+/- Index	0.06	(3.07)	(3.07)	1.24	1.41	1.59	(2.49)	9.76	4.68	(0.55)	5.30	(4.46)
US Fund Foreign Large Value	86	69	69	43	22	26	88	5	23	20	10	31
Fidelity Total International Index	14.78	-16.28	-16.28	0.29	0.96	-	8.47	11.07	21.48	-14.38	27.63	-
MSCI ACWI Ex-USA IMI (Net) Index	14.15	-16.58	-16.58	0.20	0.85	3.98	8.53	11.12	21.63	-14.76	27.81	4.41
+/- Index	0.63	0.30	0.30	0.09	0.11	-	(0.06)	(0.04)	(0.16)	0.37	(0.18)	-
US Fund Foreign Large Blend	78	55	55	58	58	-	65	42	62	39	27	-

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Vanguard International Growth Adm	12.62	-30.79	-30.79	3.14	4.75	7.84	-0.74	59.74	31.48	-12.58	43.16	1.84
MSCI ACWI Ex-USA Growth (Net) Index	12.89	-23.05	-23.05	-0.40	1.49	4.68	5.09	22.20	27.34	-14.43	32.01	0.12
+/- Index	(0.27)	(7.74)	(7.74)	3.54	3.26	3.16	(5.83)	37.54	4.14	1.84	11.15	1.72
US Fund Foreign Large Growth	71	82	82	8	9	5	87	2	23	34	7	16
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement Income	3.74	-12.74	-12.74	0.34	2.30	3.62	5.25	10.02	13.16	-1.99	8.47	5.25
Vanguard Retirement Income Index	3.95	-12.44	-12.44	0.72	2.58	3.86	5.43	10.70	13.40	-1.98	8.67	5.35
+/- Index	(0.21)	(0.30)	(0.30)	(0.38)	(0.28)	(0.24)	(0.18)	(0.68)	(0.24)	(0.01)	(0.19)	(0.10)
US Fund Target-Date Retirement	62	49	49	32	32	30	64	30	48	18	50	30
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2025	6.03	-15.55	-15.55	1.66	3.58	6.43	9.80	13.30	19.63	-5.15	15.94	7.48
Vanguard Retirement 2025 Index	6.16	-15.02	-15.02	2.23	4.01	6.77	10.10	14.19	19.93	-5.01	16.08	7.66
+/- Index	(0.13)	(0.53)	(0.53)	(0.57)	(0.43)	(0.34)	(0.30)	(0.89)	(0.30)	(0.14)	(0.14)	(0.18)
US Fund Target-Date 2025	40	52	52	39	31	18	47	34	20	48	22	21
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2030	6.81	-16.27	-16.27	2.09	3.94	6.99	11.38	14.10	21.07	-5.86	17.52	7.85
Vanguard Retirement 2030 Index	6.92	-15.71	-15.71	2.66	4.35	7.33	11.65	14.96	21.33	-5.74	17.65	8.11
+/- Index	(0.11)	(0.56)	(0.56)	(0.57)	(0.41)	(0.34)	(0.27)	(0.86)	(0.26)	(0.12)	(0.13)	(0.26)
US Fund Target-Date 2030	39	47	47	46	39	26	54	35	37	39	37	27
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2035	7.45	-16.62	-16.62	2.64	4.34	7.57	12.96	14.79	22.44	-6.58	19.12	8.26
Vanguard Retirement 2035 Index	7.41	-16.22	-16.22	3.14	4.73	7.91	13.24	15.67	22.76	-6.48	19.24	8.55
+/- Index	0.04	(0.40)	(0.40)	(0.50)	(0.39)	(0.34)	(0.28)	(0.87)	(0.33)	(0.10)	(0.12)	(0.29)
US Fund Target-Date 2035	62	38	38	52	42	30	78	38	49	31	40	32

CITY OF SANTA CLARA

457 Deferred Compensation Plan

PERFORMANCE REVIEW

Fourth Quarter 2022

	QTR	YTD	1Yr	Annualized			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Vanguard Target Retirement 2040	8.20	-16.98	-16.98	3.17	4.74	8.06	14.56	15.47	23.86	-7.32	20.71	8.73
Vanguard Retirement 2040 Index	8.23	-16.51	-16.51	3.70	5.14	8.42	14.85	16.31	24.19	-7.22	20.87	8.98
+/- Index	(0.03)	(0.47)	(0.47)	(0.53)	(0.40)	(0.36)	(0.29)	(0.83)	(0.33)	(0.11)	(0.16)	(0.25)
US Fund Target-Date 2040	63	34	34	49	40	23	80	39	49	35	30	23
Vanguard Target Retirement 2045	8.89	-17.36	-17.36	3.74	5.14	8.34	16.16	16.30	24.94	-7.90	21.42	8.87
Vanguard Retirement 2045 Index	8.99	-16.84	-16.84	4.26	5.55	8.71	16.45	17.03	25.36	-7.77	21.54	9.13
+/- Index	(0.10)	(0.52)	(0.52)	(0.52)	(0.41)	(0.37)	(0.29)	(0.73)	(0.42)	(0.13)	(0.11)	(0.26)
US Fund Target-Date 2045	53	31	31	32	27	19	65	34	40	41	24	26
Vanguard Target Retirement 2050	9.23	-17.46	-17.46	3.80	5.18	8.36	16.41	16.39	24.98	-7.90	21.39	8.85
Vanguard Retirement 2050 Index	9.18	-17.07	-17.07	4.30	5.58	8.72	16.77	17.18	25.36	-7.77	21.54	9.13
+/- Index	0.05	(0.39)	(0.39)	(0.50)	(0.40)	(0.36)	(0.36)	(0.79)	(0.38)	(0.13)	(0.14)	(0.28)
US Fund Target-Date 2050	44	29	29	32	28	20	70	35	45	37	31	27
Vanguard Target Retirement 2055	9.23	-17.46	-17.46	3.79	5.18	8.34	16.44	16.32	24.98	-7.89	21.38	8.88
Vanguard Retirement 2055 Index	9.18	-17.07	-17.07	4.30	5.58	8.72	16.77	17.18	25.36	-7.77	21.54	9.13
+/- Index	0.05	(0.39)	(0.39)	(0.51)	(0.40)	(0.38)	(0.33)	(0.86)	(0.38)	(0.12)	(0.16)	(0.25)
US Fund Target-Date 2055	48	26	26	36	29	26	75	40	47	35	39	26
Vanguard Target Retirement 2060	9.23	-17.46	-17.46	3.79	5.18	8.34	16.44	16.32	24.96	-7.87	21.36	8.84
Vanguard Retirement 2060 Index	9.18	-17.07	-17.07	4.30	5.58	8.72	16.77	17.18	25.36	-7.77	21.54	9.13
+/- Index	0.05	(0.39)	(0.39)	(0.51)	(0.40)	(0.38)	(0.33)	(0.85)	(0.40)	(0.10)	(0.18)	(0.28)
US Fund Target-Date 2060	53	25	25	38	32	50	77	41	56	30	43	23

CITY OF SANTA CLARA

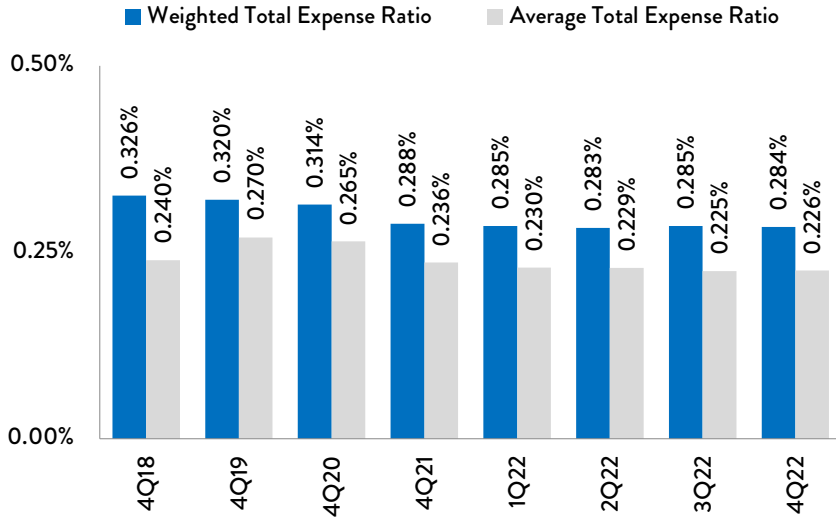
457 Deferred Compensation Plan

PERFORMANCE REVIEW

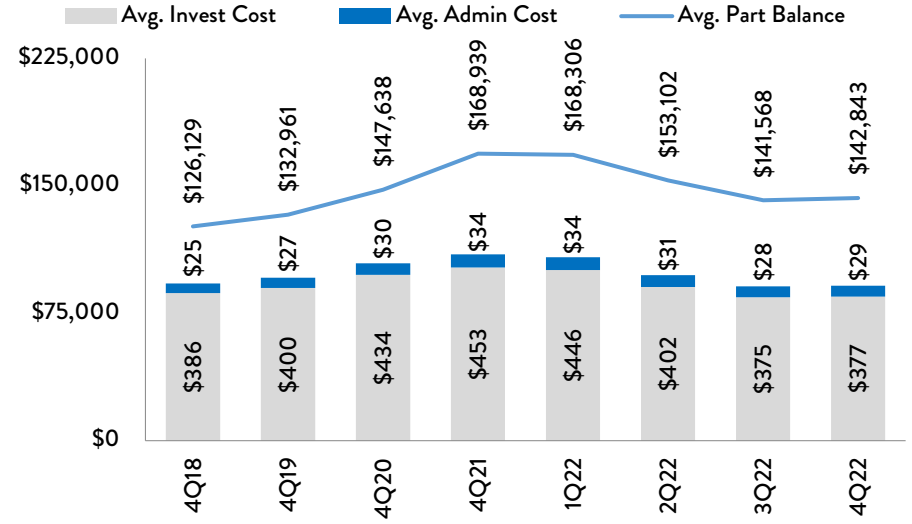
Fourth Quarter 2022

	QTR	YTD	1Yr	<i>Annualized</i>			2021	2020	2019	2018	2017	2016
				3Yr	5Yr	10Yr						
Vanguard Target Retirement 2065	9.24	-17.39	-17.39	3.78	5.15	-	16.46	16.17	24.96	-7.95	-	-
Vanguard Retirement 2065 Index	9.18	-17.07	-17.07	4.30	5.58	-	16.77	17.18	25.36	-7.77	-	-
+/- Index	0.06	(0.32)	(0.32)	(0.52)	(0.43)	-	(0.31)	(1.00)	(0.39)	(0.18)	-	-
US Fund Target-Date 2065+	51	18	18	31	31	-	67	56	59	12	-	-
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2070	9.21	-	-	-	-	-	-	-	-	-	-	-
Vanguard Retirement 2070 Index	9.18	-	-	-	-	-	-	-	-	-	-	-
+/- Index	0.03	-	-	-	-	-	-	-	-	-	-	-
US Fund Target-Date 2065+	54	-	-	-	-	-	-	-	-	-	-	-

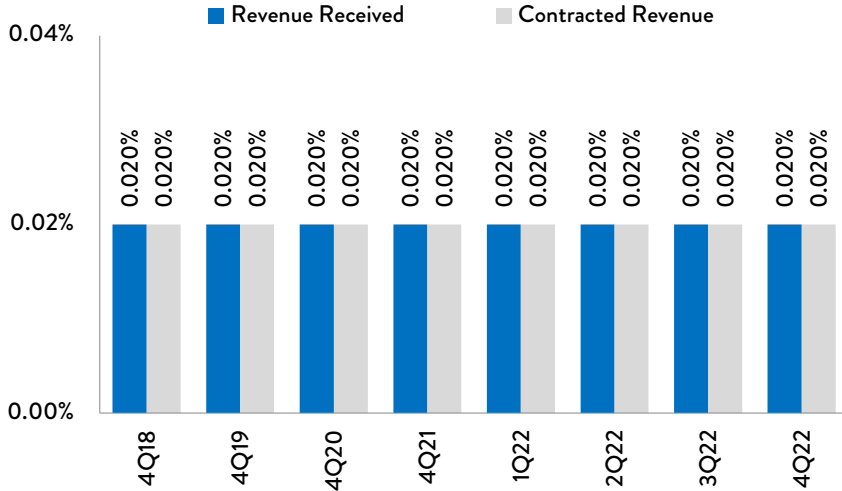
Annualized Plan Cost (%)



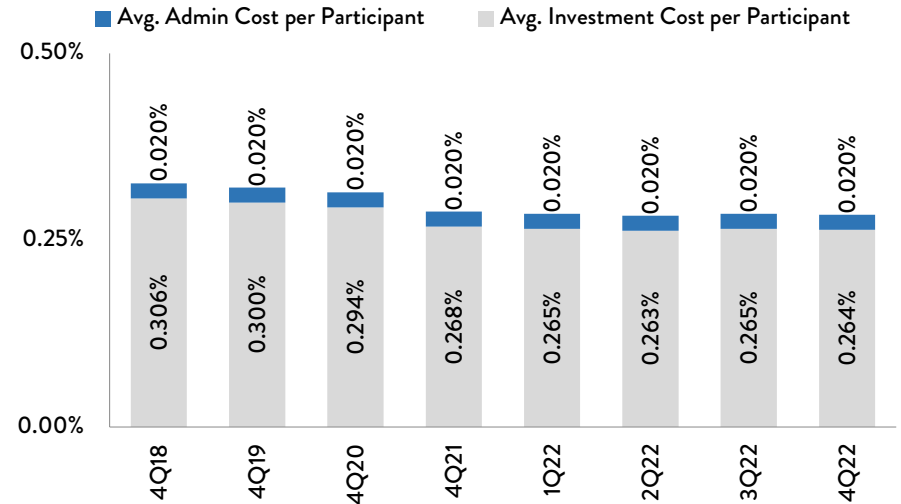
Average Participant Balance and Cost (\$)



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



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



CITY OF SANTA CLARA
457 Deferred Compensation Plan

PLAN FEE ANALYSIS
Fourth Quarter 2022

Annualized

Fund	Ticker	Quarter Average Assets	Net Expense Ratio	Admin Fee	Est. Total Invest. Cost	Est. Total Admin. Cost
Nationwide Fixed Fund*	-	\$62,152,294	0.40%	0.02%	\$248,609	\$12,430
Fidelity US Bond Index	FXNAX	\$2,419,015	0.03%	0.02%	\$605	\$484
Sterling Capital Total Return Bond R6	STRDX	\$3,587,724	0.35%	0.02%	\$12,557	\$718
Hotchkis & Wiley High Yield Z	HWHZX	\$1,374,635	0.60%	0.02%	\$8,248	\$275
DFA US Large Cap Value I	DFLVX	\$7,678,311	0.22%	0.02%	\$16,892	\$1,536
Fidelity 500 Index	FXAIX	\$32,701,076	0.02%	0.02%	\$4,905	\$6,540
T. Rowe Price Large Cap Growth I	TRLGX	\$15,409,722	0.55%	0.02%	\$84,753	\$3,082
MFS Mid Cap Value R6	MVCKX	\$1,936,266	0.64%	0.02%	\$12,392	\$387
Fidelity Mid Cap Index	FSMDX	\$3,169,050	0.03%	0.02%	\$792	\$634
JPMorgan Mid Cap Growth R6	JMGMX	\$6,452,059	0.70%	0.02%	\$45,164	\$1,290
DFA US Targeted Value I	DFFVX	\$3,832,289	0.29%	0.02%	\$11,114	\$766
Fidelity Small Cap Index	FSSNX	\$1,852,323	0.03%	0.02%	\$463	\$370
Vanguard Small Growth Index Adm	VSGAX	\$2,855,948	0.07%	0.02%	\$1,999	\$571
Vanguard International Value Inv	VTRIX	\$3,287,404	0.36%	0.02%	\$11,835	\$657
Fidelity Total International Index	FTIHX	\$4,753,665	0.06%	0.02%	\$2,852	\$951
Vanguard International Growth Adm	VWILX	\$5,988,276	0.34%	0.02%	\$20,360	\$1,198
Vanguard Target Retirement Income	VTINX	\$1,557,230	0.08%	0.02%	\$1,246	\$311
Vanguard Target Retirement 2025	VTTVX	\$12,407,822	0.08%	0.02%	\$9,926	\$2,482
Vanguard Target Retirement 2030	VTHRX	\$989,894	0.08%	0.02%	\$792	\$198
Vanguard Target Retirement 2035	VTTHX	\$6,952,736	0.08%	0.02%	\$5,562	\$1,391
Vanguard Target Retirement 2040	VFORX	\$955,243	0.08%	0.02%	\$764	\$191
Vanguard Target Retirement 2045	VTIVX	\$7,988,250	0.08%	0.02%	\$6,391	\$1,598
Vanguard Target Retirement 2050	VFIFX	\$946,439	0.08%	0.02%	\$757	\$189
Vanguard Target Retirement 2055	VFFVX	\$1,711,053	0.08%	0.02%	\$1,369	\$342
Vanguard Target Retirement 2060	VTTSX	\$448,832	0.08%	0.02%	\$359	\$90
Vanguard Target Retirement 2065	VLXVX	\$2,384	0.08%	0.02%	\$2	\$0
Vanguard Target Retirement 2070	VSVNX	\$0	0.08%	0.02%	\$0	\$0
TOTAL		\$193,409,940			\$510,709	\$38,682

Plan Administration Cost	Quarter	Annualized
Plan Generated Revenue (0.02% - est):	\$9,670	\$38,682

*No explicit expense ratio stated for the fund. For reporting purposes, an expense of 0.40% is assumed.



City of Santa Clara

1500 Warburton Avenue
Santa Clara, CA 95050
santaclaraca.gov
@SantaClaraCity

Agenda Report

23-239

Agenda Date: 2/16/2023

REPORT TO DEFERRED COMPENSATION COMMITTEE

SUBJECT

Informational Report on External Training Opportunities presented by the Hyas Group

DISCUSSION

This is an informational report to the City's 457 Deferred Compensation Plan Committee on potential external training opportunities presented by the Hyas Group.

As this is an informational report only, no action is taken by the Committee



City of Santa Clara

1500 Warburton Avenue
Santa Clara, CA 95050
santaclaraca.gov
@SantaClaraCity

Agenda Report

23-228

Agenda Date: 2/16/2023

REPORT TO DEFERRED COMPENSATION COMMITTEE

SUBJECT

Informational Report on Fourth Quarter 2022 Performance Presented by Nationwide

DISCUSSION

This is an informational report from the Plan recordkeeper, Nationwide, to the City's 457 Deferred Compensation Committee. This report will be presented by Nationwide and will cover the following topic: a) Quarterly Informational Report.

This is an informational report, no action is to be taken by the Committee.

1. Nationwide - City of Santa Clara Plan Health Report 12-31-2022

PLAN HEALTH REPORT

CITY OF SANTA CLARA

as of 12/31/2022



We value your partnership and the opportunity to offer a competitive, effective retirement plan to your participants. Through diligent work and thought leadership, we'll help you grow your plan and help your participants prepare for and live in retirement. This report includes balance information, participant demographics, contribution highlights and retirement readiness numbers. Together, we can use this information to help your participants achieve greater financial wellness.

Our goal is to help you objectively evaluate your Plan's performance and how it performs against other plans like yours. Since Nationwide Retirement Solutions is one of the largest retirement plan providers in the industry, we are uniquely positioned to compare your Plan to many others of similar asset size. By comparing the current year information to previous years, you can see how your Plan is performing, where your educational efforts are working and what areas offer opportunities for improvement. The "Peer Group" comparisons used in this report are based on cases with assets of: \$100 million - \$1 billion.

Thank you for your valued business. We look forward to helping improve retirement readiness for your participants.

TABLE OF CONTENTS

Welcome		2
Executive summary		3
Participant demographics		5
Contributions & investments		7
Retirement readiness		9
Assets & fund details		10
Balance details		13
Opportunities		17

Retirement Specialists are registered representatives of Nationwide Investment Services Corporation, member FINRA. The information they provide is for educational purposes only and is not legal, tax or investment advice.

Nationwide, the Nationwide N and Eagle, and Nationwide is on your side are service marks of Nationwide Mutual Insurance Company.

Nationwide Retirement Solutions, Inc. and Nationwide Life Insurance Company (collectively "Nationwide") have endorsement relationships with the National Association of Counties, the International Association of Fire Fighters-Financial Corporation and the National Association of Police Organizations. More information about the endorsement relationships may be found online at www.nrsforu.com.



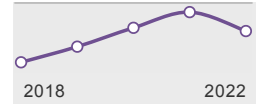
Quick plan facts

(as of 12/31/2022)

Metric	Current value	%Change from last quarter	%Change from last year
Participant Core Assets	\$198,650,470	6.00%	-13.00%
Total Participant Count	1,354	0.45%	2.34%
Total New Enrollments YTD Count	78	-13.04%	32.20%
Total Deferrals YTD	\$10,805,191	32.00%	-4.00%
Total Rollovers-In YTD	\$901,565	21.00%	-58.00%
ProAccount Participant Count	177	2.91%	4.73%
ProAccount Assets	\$18,666,322	9.00%	-13.00%

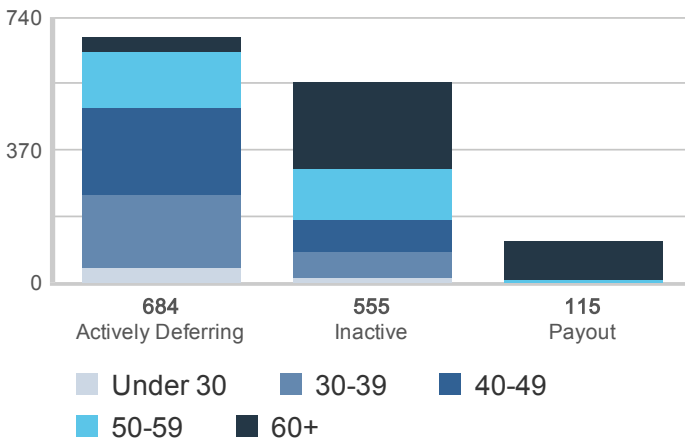
457 Plan Summary

\$ TOTAL PARTICIPANT ACCOUNT BALANCE
(as of 12/31/2022)
\$207,240,596



How many are participating?

ENROLLED PARTICIPANTS
(as of 12/31/2022)
1,354

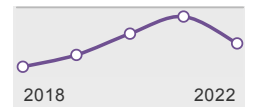


NEW ENROLLMENTS
(Calendar year to date)
78

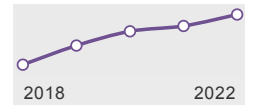
How are they saving & investing?

WHAT YOUR PARTICIPANTS ARE CONTRIBUTING
(as of 12/31/2022)

AVERAGE ACCOUNT BALANCE
\$148,083



AVERAGE CONTRIBUTION
\$470



How many participants are prepared for retirement

Online engagement
(as of 12/31/2022)

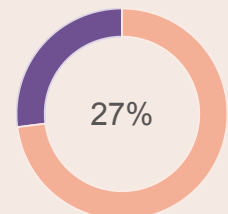
TOTAL ENROLLED PARTICIPANTS
1,354

ENROLLED PARTICIPANTS WITH AN ONLINE ACCOUNT
1,086

Retirement readiness
(as of 12/31/2022)

PARTICIPANTS WITH A RETIREMENT GOAL
653

PARTICIPANTS 'ON TRACK' FOR RETIREMENT



PARTICIPANT DEMOGRAPHICS

How participants are engaged in the plan



ENROLLED PARTICIPANTS ¹
(as of 12/31/2022)

1,354



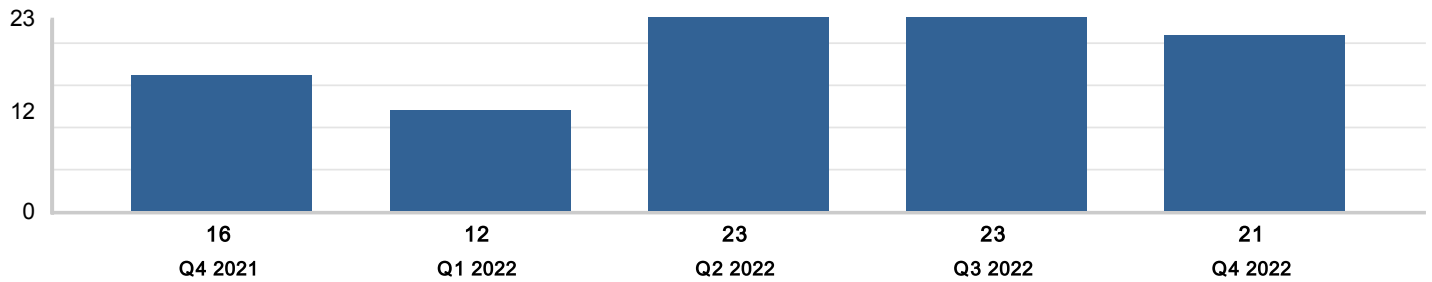
NEW ENROLLMENTS ²
(Calendar year to date)

78

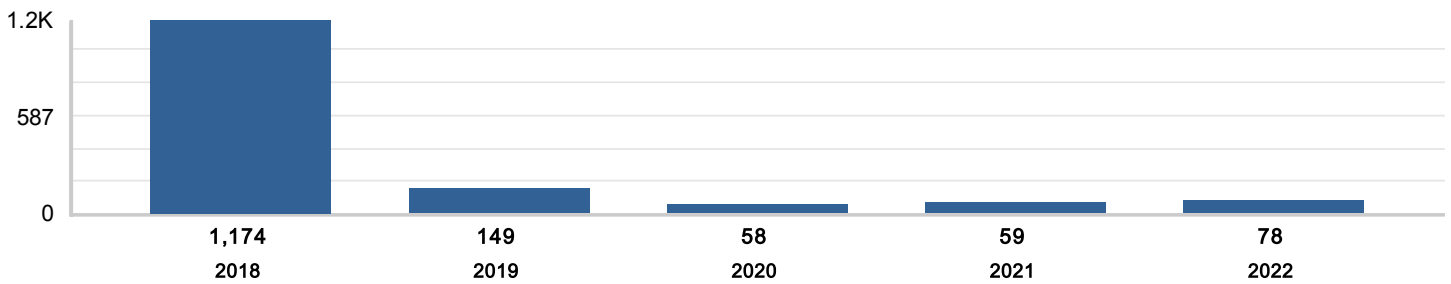
ONLINE ENROLLMENTS ³
(Calendar year to date)

26 out of 78

ENROLLMENT TRENDS (BY QUARTER) ⁴



ENROLLMENT TRENDS (BY YEAR) ⁴



¹ Total number of enrolled participants in this plan.

² Participants who open and close their account within the calendar year, will not be counted in year-to-date enrollment numbers.

³ The number of online enrollments out of new enrollments.

⁴ Total number of participants enrolled by quarter or by year.

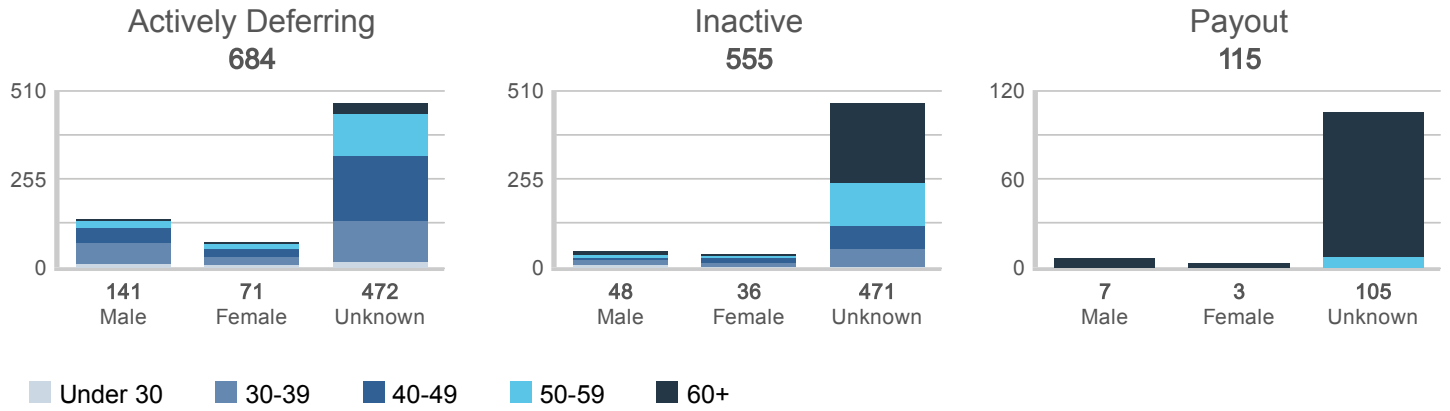
PARTICIPANT DEMOGRAPHICS

How participants are engaged in the plan



Enrolled participant data⁵

(as of 12/31/2022)



Actively Deferring
684

Inactive
555

Payout
115

	Actively Deferring 684			Inactive 555			Payout 115		
	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown
Under 30	14	9	18	7	3	3	0	0	0
30 - 39	60	26	115	14	12	49	0	0	0
40 - 49	40	17	190	9	11	66	0	0	0
50 - 59	18	16	120	8	6	127	0	0	8
60+	9	3	29	10	4	226	7	3	97

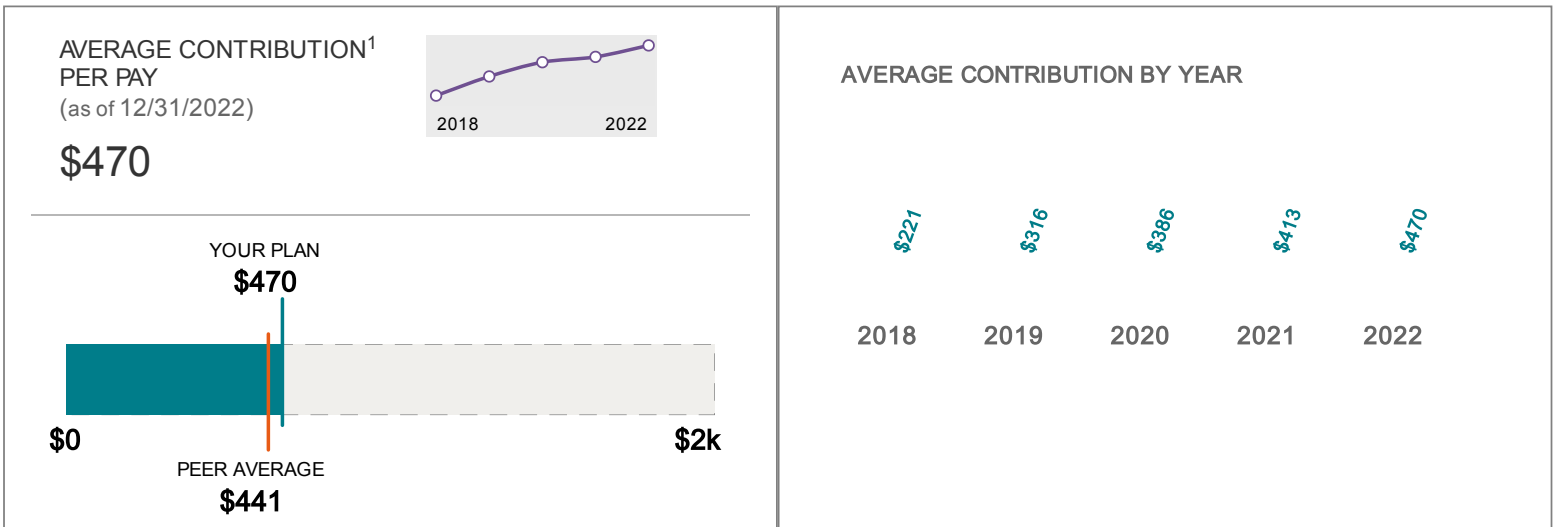
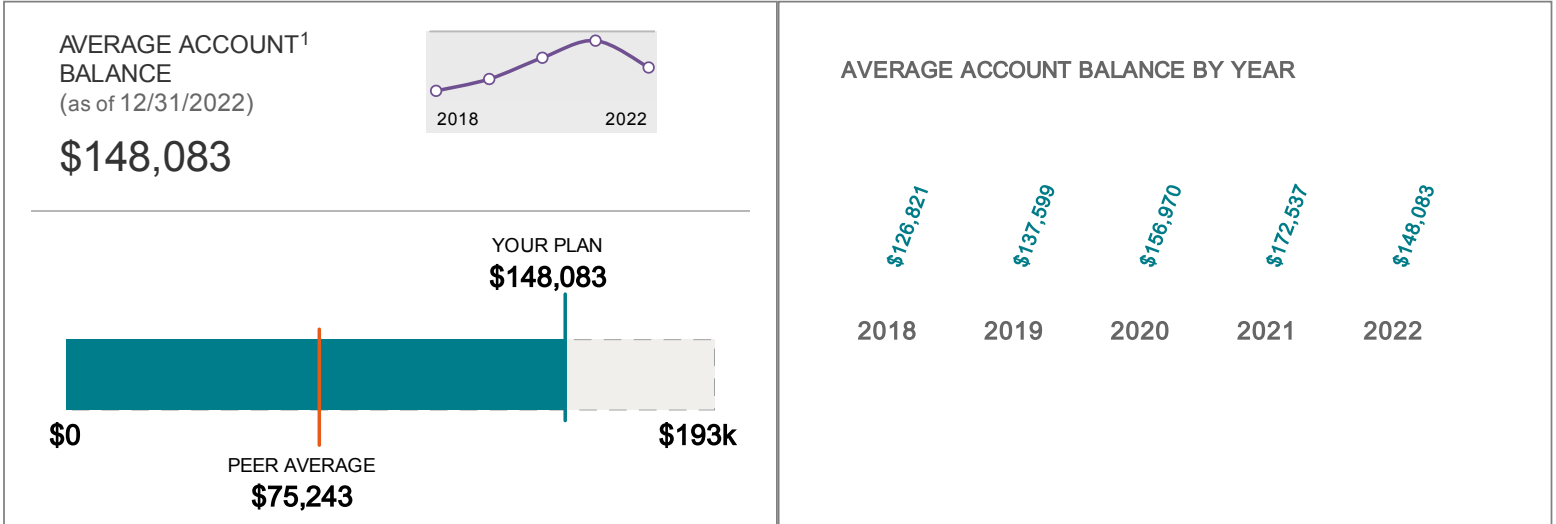
⁵ Actively deferring - Participants with a balance, a contribution in the past 30 days and a status of employed.

Inactive - Participants with a balance, no contribution in the past 30 days and no status of payout.

Payout - Participants with a balance and a status of payout.

CONTRIBUTIONS & INVESTMENTS

What your participants are contributing



Balances & contributions by age & gender

(as of 12/31/2022)

	Average account balance			Average annualized contributions		
	Male	Female	Unknown	Male	Female	Unknown
Under 30	\$16,731	\$20,427	\$24,074	\$7,086	\$6,587	\$10,379
30 - 39	\$37,108	\$25,478	\$95,898	\$11,096	\$12,665	\$13,955
40 - 49	\$39,709	\$54,256	\$136,489	\$13,076	\$10,117	\$11,713
50 - 59	\$165,714	\$94,360	\$219,747	\$25,417	\$15,920	\$16,246
60+	\$135,838	\$124,272	\$211,430	\$73,028	\$11,292	\$4,348

¹A peer group consists of NRS plans with similar assets. This peer group comparison includes cases with \$100 million - \$1 billion.

CONTRIBUTION & INVESTMENTS

What your participants are contributing

3% PARTICIPANTS WITH INCREASED CONTRIBUTIONS
(Calendar year to date)

6% PARTICIPANTS WITH AUTOMATIC CONTRIBUTION INCREASE
(Calendar year to date)

2022 IRS limits

Regular Limit \$20,500

50+ Catch Up \$6,500

3-Year Catch Up \$20,500

How your participants are invested

ASSET ALLOCATION ¹ (as of 12/31/2022)

NUMBER OF ASSET CLASSES

1	20.3%
2	5.8%
3	4.5%
4	6.4%
5+	62.8%



ASSET DIVERSIFICATION ² (as of 12/31/2022)

AVG. # ASSET CLASSES

4.6

PEER GROUP

4.6

RECOMMENDED

5



ProAccount

(as of 12/31/2022)

TOTAL PROACCOUNT BALANCE

\$18,666,322

PARTICIPANTS WITH PROACCOUNT

177

out of 1,354 total enrolled participants

AVG ACCOUNT BALANCE WITH PROACCOUNT

\$105,459



Schwab Personal Choice Retirement Account

(as of 12/31/2022)

Number of accounts

46

Balance

\$6,855,923

¹ Percentage of participants by number of investment classes.

² Average number of asset classes - Average number of asset classes in which participants are invested.

Peer group - Average number of asset classes in which this peer group (cases with \$100 million - \$1 billion) is invested.

Recommended number of asset classes - The number of asset classes in which a participant should be invested for ideal diversification.

How many participants are prepared for retirement

Online engagement

(as of 12/31/2022)

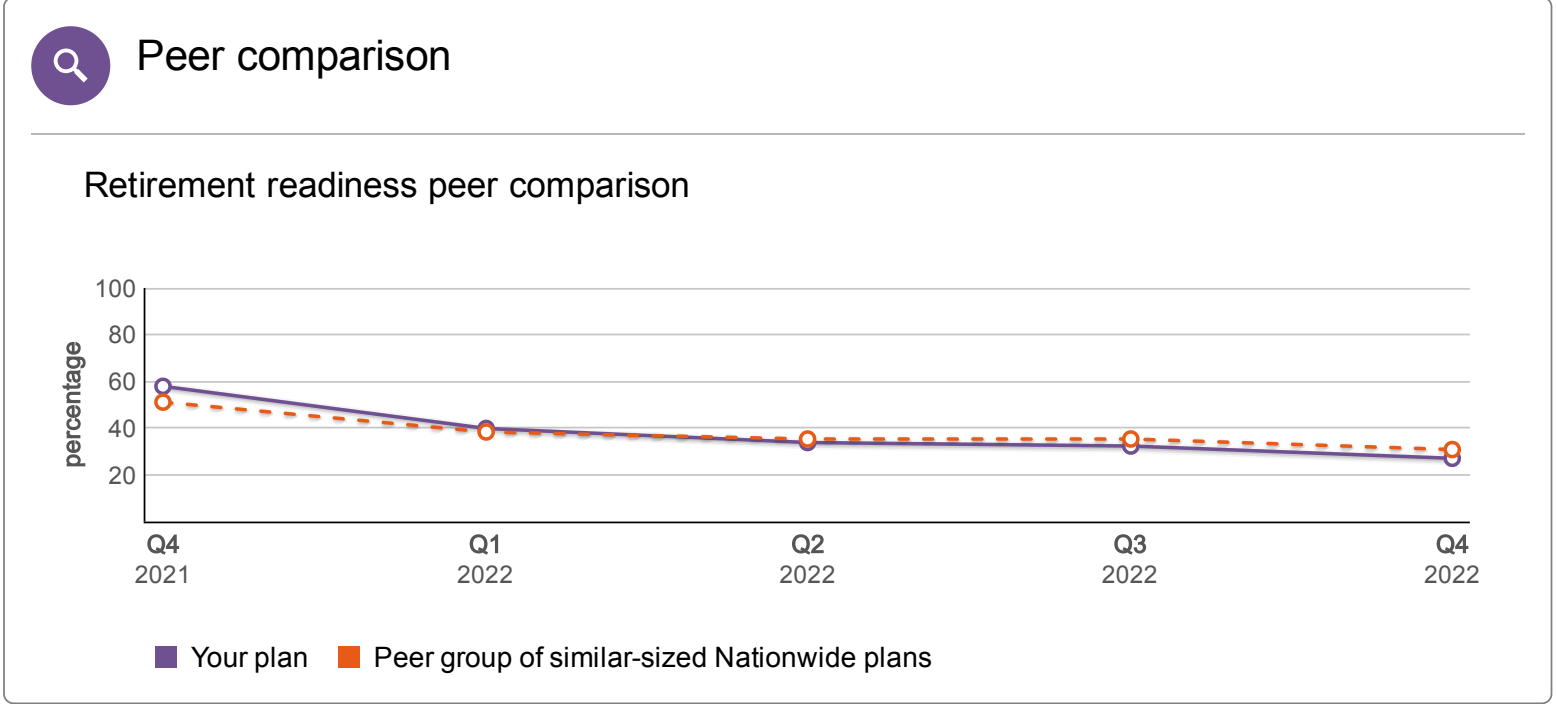
TOTAL ENROLLED PARTICIPANTS	ENROLLED PARTICIPANTS WITH AN ONLINE ACCOUNT
1,354	1,086

Retirement readiness

(as of 12/31/2022)

PARTICIPANTS WITH A RETIREMENT GOAL ¹	PARTICIPANTS 'ON TRACK' FOR RETIREMENT ²
653	<p style="font-size: 24px; font-weight: bold; margin-top: 5px;">27%</p>

Participants who actively review their online account and use their retirement outlook tools are 4 times more likely to take action and save more for retirement.



NRM-17390AO

¹ Participants with a retirement goal from My Interactive Retirement Planner®.
² Participants with a retirement goal from My Interactive Retirement Planner® and a retirement readiness score of "on track" (.915 or higher).

\$ Asset class totals

Asset class	2020	2021	2022 YTD	% of total
Mid cap	\$13,797,622.93	\$15,716,450.06	\$11,971,656.84	5.8%
Large cap	\$57,744,853.25	\$73,594,484.37	\$57,922,604.71	27.9%
Bonds	\$8,239,252.04	\$8,269,389.29	\$7,530,722.58	3.6%
SDO	\$8,348,193.81	\$10,661,919.46	\$6,855,923.10	3.3%
Loan	\$2,075,410.76	\$1,850,396.07	\$1,734,203.38	0.8%
Asset allocation	\$34,917,001.85	\$40,644,973.66	\$35,185,222.30	17.0%
International	\$17,376,816.67	\$18,734,125.72	\$14,906,719.11	7.2%
Small cap	\$8,317,744.11	\$10,939,582.49	\$8,804,140.26	4.2%
Fixed assets and cash	\$63,318,411.32	\$60,194,924.85	\$62,329,403.76	30.1%
Total	\$214,135,306.74	\$240,606,245.97	\$207,240,596.04	100%

 Total contributions by asset class

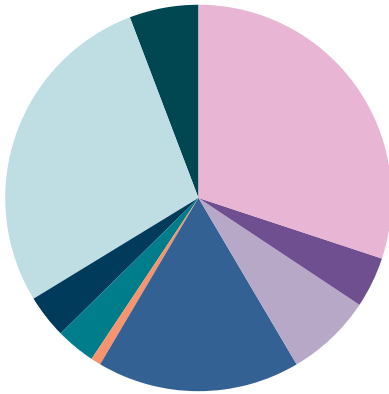
Asset class	2020	2021	2022 YTD	% of total
Mid cap	\$966,928.67	\$735,095.38	\$703,881.24	6.2%
Large cap	\$2,954,615.23	\$3,159,319.35	\$2,919,190.43	25.6%
Bonds	\$625,691.28	\$709,112.35	\$546,814.89	4.8%
Asset allocation	\$5,696,615.26	\$3,864,963.99	\$3,754,879.41	32.9%
International	\$1,040,851.35	\$1,154,209.97	\$1,027,162.43	9.0%
Small cap	\$549,936.19	\$564,450.33	\$564,958.09	5.0%
Fixed assets and cash	\$2,603,343.75	\$2,570,099.31	\$1,888,467.97	16.6%
Total	\$14,437,981.73	\$12,757,250.68	\$11,405,354.46	100%

2022



Asset allocation

(as of 12/31/2022)



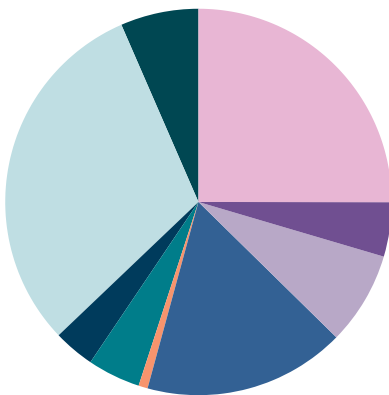
ASSET CLASS	YOUR PLAN	PEER GROUP	DIFFERENCE
Mid cap	5.8%	4.4%	1.3% ●
Large cap	27.9%	16.8%	11.1% ●
Balanced	0.0%	1.5%	0.0%
Bonds	3.6%	3.6%	0.1% ●
Short term	0.0%	2.2%	0.0%
SDO	3.3%	0.1%	3.2% ●
Specialty	0.0%	0.8%	0.0%
Loan	0.8%	0.0%	0.8% ●
Asset allocation	17.0%	11.9%	5.1% ●
International	7.2%	4.8%	2.4% ●
Small cap	4.2%	2.5%	1.7% ●
Fixed assets and cash	30.1%	51.3%	-21.3% ●
Fixed Indexed Annuity	0.0%	0.0%	0.0%

2021



Asset allocation

(as of 12/31/2021)



ASSET CLASS	YOUR PLAN	PEER GROUP	DIFFERENCE
Mid cap	6.5%	5.6%	1.0% ●
Large cap	30.6%	20.6%	10.0% ●
Balanced	0.0%	1.8%	0.0%
Bonds	3.4%	3.7%	-0.3% ●
Short term	0.0%	2.0%	0.0%
SDO	4.4%	0.1%	4.4% ●
Specialty	0.0%	0.7%	0.0%
Loan	0.8%	0.0%	0.7% ●
Asset allocation	16.9%	11.0%	5.9% ●
International	7.8%	5.3%	2.5% ●
Small cap	4.5%	3.1%	1.5% ●
Fixed assets and cash	25.0%	46.1%	-21.1% ●
Fixed Indexed Annuity	0.0%	0.0%	0.0%

BALANCE DETAILS



Total account balance

(as of 12/31/2022)

Money source	Current value
Participant assets	\$207,240,596.04
Rollover Repayment Event Related	\$27,099.91
Salary Reduction	\$180,124,752.14
Rollover (Pre-Tax)	\$9,205,314.40
Rollover (Pre-Tax) IRR 2021	\$1,884.57
Rollover 457	\$4,553,688.01
Roth Contribution	\$3,168,826.23
Roth Rollover	\$91,836.15
Roth Rollover 457	\$14,895.36
Salary Reduction IRR	\$360,949.39
Employer Discretionary Account	\$1,101,223.40
Loan balance	\$1,734,203.38
SDO balance	\$6,855,923.10
Total plan assets	\$207,240,596.04

BALANCE DETAILS



Loan Details

(as of 12/31/2022)

Loan type	Number of loans	Principal value
Active loans		
General purpose loan	82	\$1,281,690.13
Primary residence loan	10	\$309,840.21
Defaulted loans*		
General purpose loan	9	\$142,673.04
Total	101	\$1,734,203.38

* Default amounts are included in Beginning and Ending Balance



Contributions and transfers/rollovers-in

(as of 12/31/2022)

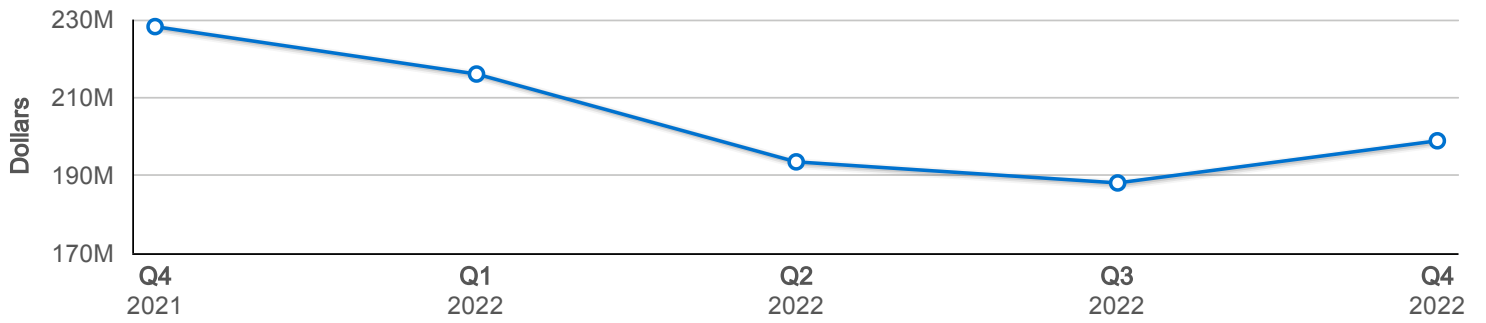
Type	Year to date
Contributions	\$10,805,191.28
Transfers/Rollovers-In	\$600,163.18
Total	\$11,405,354.46



Balance activity by quarter

Change in balance from last quarter

▲ 5.6%
FROM LAST QUARTER

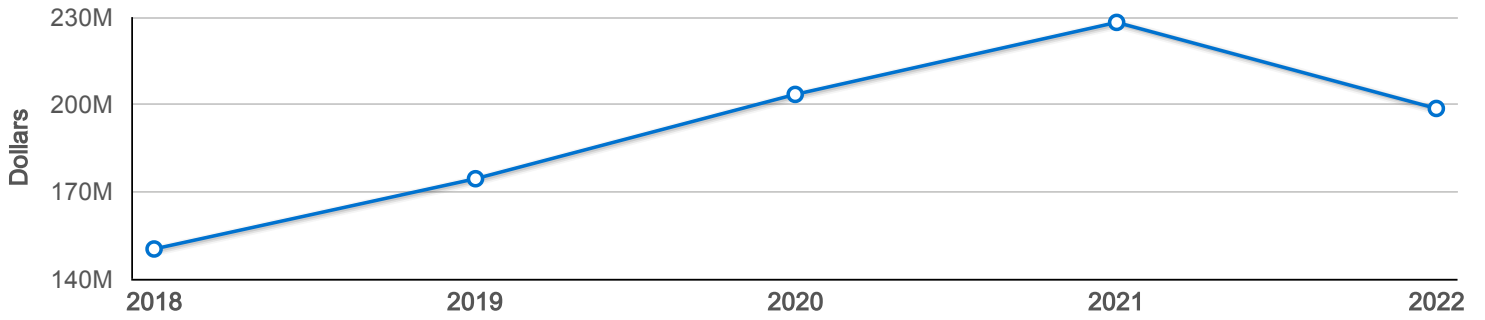




Balance activity by year

Change in balance from last year

▼ -12.9%
FROM LAST YEAR



	2018	2019	2020	2021	2022
Total balance	\$150,093,202.91	\$174,412,950.70	\$203,711,702.17	\$228,093,930.44	\$198,650,469.56

Top opportunities to improve plan health

- ✓ **Encourage enrollment**
Are you happy with your participation rate? Schedule an enrollment workshop today
- ✓ **Suggest online account usage**
Those who engage in their online account are 4x more likely to save more for retirement
- ✓ **Propose contribution increases**
Anything can help. Talk with your participants about the benefits of saving now for a better tomorrow
- ✓ **Discuss the benefits of Nationwide ProAccount**
How participants are invested can play a big role in their retirement health

Additional opportunities

How participants are engaged in the plan

- ✓ **Are your participants in the correct status based on their age?**
Check in with participants who may not be in the correct status.

What your participants are contributing

- ✓ **Starting to save early is one of the best ways to prepare for retirement.**
Contact your Nationwide representative to schedule a workshop with your participants under the age of 30 to help them understand the benefits of saving more now.
- ✓ **Are your female participants actively contributing?**
Host a workshop for women eligible and enrolled in your plan. Nationwide's Women & Investing tools can help.
- ✓ **Incremental increases can go a long way.**
Let your participants know how having an automatic annual contribution increase can help them reach their retirement goal.
- ✓ **Work with your Nationwide Retirement Specialist to help manage your loans.**
- ✓ **Are those closer to retirement aware of catch-up contributions?**
Let your participants know that catch-up contributions may help them reach their goal.

How your participants are invested

- ✓ **Are participants diversified enough?**
Call your Nationwide retirement specialist and discuss your participants' asset diversification.

How many participants are prepared for retirement

- ✓ **How many participants are getting close to retirement?**
Talk with your participants about which payout strategies may benefit them the most.



City of Santa Clara

1500 Warburton Avenue
Santa Clara, CA 95050
santaclaraca.gov
@SantaClaraCity

Agenda Report

23-230

Agenda Date: 2/16/2023

REPORT TO DEFERRED COMPENSATION COMMITTEE

SUBJECT

Informational Report Regarding the SECURE 2.0 Act of 2022 presented by Nationwide

DISCUSSION

This is an informational report to the Committee on the provisions of the Secure 2.0 Act of 2022 presented by Nationwide. As this is an informational report only, no action is to be taken by the Committee.

1. Nationwide - Summary of Secure 2.0 Act of 2022



Congress Passes Legislation to encourage a “Secure” Retirement for Governmental Workers

George W. Schein, JD®, ChFC
Technical Director, Advanced Consulting Group

As 2022 drew to a close, Congress passed the SECURE 2.0 Act of 2022 (“SECURE 2.0”) by attaching it as Division T to the much larger and broader Consolidated Appropriations Act, 2023. The provisions of SECURE 2.0 had strong bipartisan support and built upon the initial improvements of the “original” Setting Every Community Up for Retirement Enhancement Act (“SECURE Act”) passed at the end of 2019. The goals of SECURE 2.0 largely mirror those of the earlier SECURE Act, the main one being to encourage more employees to not only enroll in employer-provided DC retirement plans, but also increase the amounts they are able to contribute to those plans. As an added bonus, SECURE 2.0 also made some beneficial law changes applicable solely to governmental 457(b) plans that will please both governmental employers and their employees alike.

ENCOURAGE EMPLOYEES TO PARTICIPATE IN, AND CONTRIBUTE MORE TO, THEIR OWN RETIREMENT READINESS

SECURE 2.0 encourages more employees to enroll in employer-provided DC retirement plans, including governmental 457(b) plans, by offering a few different financial incentives, making it easier to access limited amounts of retirement savings while still working, and at the same time increasing both the amounts that participants may save and the time during which participants may hold on to their savings.

Creating a Saver’s Matching Credit

There is an existing **nonrefundable credit** for certain individuals who make contributions to individual retirement accounts (“IRAs”) and employer-provided DC retirement plans (including governmental 457(b) plans). Unfortunately, the credit is confusing because the amount is an adjustable percentage based on an individual’s income and filing status; more significantly, because of the nonrefundable nature of the credit, it cannot be larger than an individual’s overall tax liability. This means that the credit can be reduced, or even go away completely, if an individual’s tax bill is low.

SECURE 2.0 replaces the current nonrefundable credit paid directly as part of a tax refund into a federal matching contribution that **must** be deposited into an individual’s IRA or DC retirement plan, as elected by that taxpayer. The new Savers Match contribution is intended to help ensure that the tax credit will be directly used to help build up an individual’s retirement savings.

This new and improved “Savers Match” credit will be a simple 50% of IRA or retirement plan contributions up to \$2,000 per individual. The percentage will no longer change depending on income or filing status. The match will phase out between \$41,000 and \$71,000 in the case of taxpayers filing a joint return, \$20,500 to \$35,500 for single taxpayers and those married filing separately, and \$30,750 to \$53,250 for head of household filers. Those amounts will be adjusted each year to reflect increases in the cost of living.

Separately from the new Savers Match credit itself, SECURE 2.0 also contains a separate provision that directs the Treasury Department to increase public awareness of the new and improved credit by promoting its use by low and moderate income

taxpayers. The promotion will make clear that the Saver's Match cannot be withdrawn without incurring penalties, including repayment to the Treasury Department in some cases where the Saver's Match is withdrawn before retirement.

Unfortunately, this new and improved Savers Match credit has a delayed effective date. It will not be available until taxable years beginning after December 31, 2026.

Allowing more penalty-free in-service withdrawals

The Internal Revenue Code (the "Code") currently imposes a 10% penalty on withdrawals from DC retirement plans (including governmental 457(b) plans) before a participant's normal retirement age, including for an "unforeseeable emergency," unless an exception applies. This tax penalty has always had a negative impact on plan participation, as many individuals delay deferring into DC retirement plans until they have adequate cash reserves on hand to pay for emergency expenses. SECURE 2.0 amends the Code to provide for various potential exceptions to the 10% penalty for certain distributions. Among those new potential opportunities for penalty-free in-service withdrawals are plan distributions for the following reasons:

Emergency expenses – These are expenses that are unforeseeable or immediate financial needs relating to personal or family emergencies. Only one distribution of up to \$1,000 is permissible per year, and the participant has the option to repay the distribution within three years. No further emergency distributions will be permissible during the three-year repayment period unless repayment occurs.

These new emergency withdrawal provisions will be permitted to be added to governmental 457(b) plans after December 31, 2023.

Domestic abuse – A plan participant who self-certifies that they experienced domestic abuse may withdraw a small amount of money (the lesser of \$10,000, indexed for inflation, or 50% of the participant's account) from their DC retirement plan. Like the emergency withdrawals described immediately above, a participant will also be able to repay this withdrawn money back to the retirement plan over three years.

This new optional in-service withdrawal provision may be added to governmental 457(b) plans after December 31, 2023.

Purchasing long-term care contracts ("LTC") – A plan participant may take an in-service distribution of up to \$2,500 per year for the payment of premiums for certain specified LTC insurance contracts. It is important to note that to qualify for such an early distribution that is exempt from the additional tax, the individual must purchase certain policies that cover "qualified long-term care services" (as defined by the Code) or otherwise cover individuals who become "chronically ill" (as defined by the Code).

This new in-service withdrawal provision has a delayed effective date. Provisions allowing for in-service withdrawals for purposes of paying for such LTC premiums may be added to governmental 457(b) plans three years after the enactment of SECURE 2.0, December 29, 2025.

Qualified federally declared disasters – A plan participant who has been impacted by a federally declared disaster may take up to \$22,000 from their DC retirement plan. The amount of this type of distribution will be spread out as gross income over three years. Distributions can be repaid to any tax preferred retirement account within the same three-year period. In addition, amounts distributed prior to the federally declared disaster to purchase a home can be recontributed. Also of significance, an employer will also be permitted to provide individuals impacted by a federally declared disaster with a larger amount to be borrowed from the plan as a loan as well as additional time for repayment of plan loans.

Governmental employers are permitted to add these in-service withdrawals and more generous loan provisions to their plan in connection with any qualified federally declared disaster occurring on or after January 26, 2021.

Allowing separate emergency savings accounts linked to DC retirement plans

SECURE 2.0 added multiple new provisions to provide all employers, including governmental employers, the option to offer their non-highly compensated employees emergency savings accounts that are directly linked to their DC retirement plan. Employers may even automatically opt employees into these accounts at no more than 3% of their salary. The portion of the separate emergency savings account attributable to the employee's contribution is capped at \$2,500 (or lower as set by the employer).

Contributions to the emergency savings account will be made on an after-tax basis and contributions made directly to the employee's DC retirement plan after reaching the cap will be directed to the employee's Roth subaccount (if they have one), or stopped until the balance attributable to the employee's contributions falls below the cap. The contributions into the emergency savings account will also be treated as elective deferrals for purposes of retirement plan matching contributions - with an annual matching cap attributable to the emergency savings contributions set at the maximum account balance – i.e., \$2,500 or lower as set by the employer.

Plan participants may take up to four withdrawals from the emergency savings account each plan year without being subject to any fees or charges solely on the basis of such withdrawals. When plan participants separate from service, they may take their emergency savings accounts as cash or roll it into the Roth subaccount of another DC retirement plan or Roth IRA.

Governmental employers may link these new, separate emergency savings accounts to their 457(b) plans in any plan year beginning after December 31, 2023.

Treating student loan payments as elective deferrals for purposes of matching contributions

Although there are currently no provisions in the Code that allow an employer to make matching contributions based on a participant's repayment of student loan debt, at least one private sector employer has received a private letter ruling from the IRS that authorizes this practice.

SECURE 2.0 makes changes to the Code to expressly permit an employer to make matching contributions under a DC retirement plan with respect to “qualified student loan payments.” A qualified student loan payment is broadly defined as any indebtedness incurred by the employee solely to pay qualified higher education expenses of the employee.

Matching contributions attributable to qualified student loan payments may be made to governmental 457(b) plans that choose to adopt such matching provisions for plan years beginning after December 31, 2023.

Increasing age for Required Minimum Distributions (“RMDs”)

The original SECURE Act increased the age at which participants are generally required to begin taking distributions from their retirement plans from age 70½ to age 72.

SECURE 2.0 gradually increases the age at which RMDs must begin even further over the next decade. The applicable RMD age will be 73 for someone who attains age 72 after December 31, 2022, and age 73 before January 1, 2033. For someone who attains age 74 after December 31, 2032, the applicable RMD age is 75.

Increasing the catch-up limit at ages 60 - 63

The limit on catch-up contributions for 2023 will be \$7,500. SECURE 2.0 significantly increases this limit for those individuals who have reached age 60, 61, 62, and 63 by the end of the taxable year. The new maximum contribution limit for individuals in this 4-year age window will be 50% more than the regular catch-up contribution maximum effective in 2025 and will be indexed for inflation thereafter. For other changes related to catch-up contributions from SECURE 2.0, please read about the “Rothification of catch-up contributions” in the next section of this white paper.

The new increased catch-up contribution limits for those at ages 60-63 will be permitted in taxable years beginning after December 31, 2024.

Expanding and changing Roth-related provisions

SECURE 2.0 contains numerous different provisions that change how DC retirement plans (including governmental 457(b) plans) treat Roth contributions and Roth subaccounts within those plans. Roth contributions are deposited into DC retirement plans on an after-tax basis and the earnings on those Roth contributions will not be subject to tax upon distribution in retirement so long as certain requirements are met. Roth contributions are popular because they provide individuals an additional source of tax-free funds from which to draw at any time in retirement.

Rothification of catch-up contributions – SECURE 2.0 will for the first time require all catch-up contributions made by employees who are at least 50 or older be subject to Roth tax treatment. However, an exception for that required Roth treatment will be made for those employees with annual compensation in the previous plan year of \$145,000 or less (as indexed for inflation). The required Roth tax treatment will apply to catch-up contributions beginning in taxable years beginning after December 31, 2023.

Optional rothification of employer matching or nonelective contributions – SECURE 2.0 will for the first time permit DC retirement plans to provide participants the option of receiving employer matching or nonelective contributions on a Roth basis. This new Roth treatment will be permitted immediately in those plans that choose to implement these new provisions.

Removal of RMDs rules on Roth sub-accounts – Although RMDs are not required to begin before the death of a Roth IRA owner, pre-death RMDs are currently required for participants who hold amounts in a Roth subaccount within a DC retirement plan. This makes the RMD rules apply more favorable to Roth IRAs versus Roth amounts in retirement plans.

SECURE 2.0 makes changes to the Code so that Roth subaccounts in DC retirement plans will be treated just as a Roth IRA. In other words, it eliminates the pre-death distribution requirement for Roth subaccounts within retirement plans. This will effectively shield Roth amounts in DC retirement plans from application of the RMD rules, which will increase the amount of time those Roth amounts within the retirement plan may grow tax free.

This change to the RMD rules applicable to Roth subaccounts within DC retirement plans (including governmental 457(b) plans) will begin in taxable years beginning after December 31, 2023. However, note that this change does not apply to distributions that are required with respect to years beginning before January 1, 2024, but are permitted to be paid on or after such date.

CHANGES APPLICABLE SOLELY TO GOVERNMENTAL 457(B) PLANS

Removing the “first day of the month” rule

Currently, participants in governmental 457(b) plans must request changes to their deferral rate before the beginning of the month in which the deferral of their compensation will be made to the plan. This rule is unique to governmental 457(b) plans and does not apply to other employer-provided DC retirement plans in the private sector. SECURE 2.0 removes this rule so that participants in governmental 457(b) plans will be allowed to make changes to their retirement plan deferral elections just like participants in a 401(k) or 403(b) plan. This means that they will be able to elect to start, stop, or change their deferral rate at any time, and such election will be effective as soon as the next payroll date after the participant’s election is implemented by the plan’s administrator. The removal of this outdated rule and the coalesce of the procedure for all DC retirement plan participants to make changes to their deferral elections will be effective for taxable years beginning on or after January 1, 2023.

Extending penalty-free in-service withdrawal to state and local corrections officers

Unlike the four other opportunities to take penalty-free in-service withdrawals described earlier in this white paper, which will generally become available for all DC retirement plans, this particular change impacts solely governmental 457(b) plans.

Currently, governmental 457(b) plans may provide for “public safety employees” who are at least age 50 to take in-service withdrawals; however, the definition of “public safety employee” is limited to police officers, fire fighters, or other emergency medical personnel who work for state and local governments, as well as certain federal public safety employees.

As applied to those public safety employees who work for state and local governments, SECURE 2.0 extends the definition of “public safety employees” to include corrections officers and forensic security employees. This means that these two classifications of employees who work for state and local governments will now also be able to take a penalty-free in-service withdrawal upon reaching age 50, if the governmental 457(b) plan in which they participate allows such a withdrawal. This additional opportunity may be extended to such state and local corrections officers immediately.

IN SUMMARY

The legal changes and additions described above are the most significant ones for which all DC retirement plan participants, and governmental 457(b) retirement plans, should be aware. However, this white paper summarizes just a portion of the very large SECURE 2.0. For a more comprehensive summary of SECURE 2.0 and to find related educational materials specifically for governmental 457(b) plans, please access the [Nationwide Retirement Solutions SECURE 2.0 hub](#).



This material is not a recommendation to buy or sell a financial product or to adopt an investment strategy. Investors should discuss their specific situation with their financial professional.

Federal income tax laws are complex and subject to change. The information in this memorandum is based on current interpretations of the law and is not guaranteed. Neither Nationwide, nor its employees, its agents, brokers or registered representatives give legal or tax advice.

Nationwide, the Nationwide N and Eagle and Nationwide is on your side are service marks of Nationwide Mutual Insurance Company.
© 2021 Nationwide

NFM-22665AO (01/23)



City of Santa Clara

1500 Warburton Avenue
Santa Clara, CA 95050
santaclaraca.gov
@SantaClaraCity

Agenda Report

23-229

Agenda Date: 2/16/2023

REPORT TO DEFERRED COMPENSATION COMMITTEE

SUBJECT

Action to Review and Adopt the Investment Policy Statement (IPS) for the City's 457 Deferred Compensation Plan

DISCUSSION

This is an action report item for the Committee.

Each year, the City's 457 Deferred Compensation Committee reviews and adopts its Investment Policy Statement (IPS). Please see the attached IPS. The Committee will hear a presentation from, and review the draft changes provided by, the Hyas Group, and adopt or amend the proposed changes to the IPS.

RECOMMENDATION

Adopt the Investment Policy Statement for the City's 457 Deferred Compensation Plan

1. Hyas Group - Deferred Compensation Plan Investment Policy Statement - Draft

INVESTMENT POLICY STATEMENT

For

**City of Santa Clara
457 Deferred Compensation Plan**

|
Approved February 202~~3~~²

TABLE OF CONTENTS

BASIC INFORMATION	2
Purpose of this Policy	2
Policy Objectives	3
RESPONSIBILITIES	3
Delegation of Authority by the Committee	4
Responsibility of Participants	5
INVESTMENT POLICIES AND GUIDELINES	5
Core Investment Options	5
Selection of Options/Funds	10
Risk Tolerances	10
Performance Expectations	11
Watch List and Fund Termination	11
Qualitative Factors	11
Quantitative Factors	12
Performance Objectives and Review	12
Monitoring Conflicts of Interest and Costs	13
ADOPTION OF THE INVESTMENT POLICY	14

BASIC INFORMATION OF THE PLAN

This investment policy applies on February ~~1716~~, ~~2022-2023~~ to the City of Santa Clara Deferred Compensation Plan ("Plan") that was adopted on January 21, 1975 by the City of Santa Clara, acting by and through its Deferred Compensation Committee ("Committee"). The Plan is a voluntary, salary deferral retirement plan qualified under Internal Revenue Code Section 457 as amended available to eligible City of Santa Clara employees who are interested in saving for retirement on a tax-deferred basis. The Plan's main purpose is to provide a vehicle for and to encourage additional retirement savings to supplement the retirement benefits provided by the City to its employees.

General Compliance

The Plan is designed in accordance with the requirements of Section 457 of the Internal Revenue Code of 1986, as amended. Though the Employee Retirement Income Security Act (ERISA) does not apply directly to the Plan, the Committee nevertheless intends to structure the Plan to contain certain features of a "404(c) Plan" within the meaning of the Department of Labor regulations under Section 404(c) of ERISA. The Plan participants will be solely responsible for the investment decisions and investment transactions that they make under these Plan as well as for electing the timing and form of distributions according to the terms of the Plan.

In keeping with the statutory framework of the Department of Labor regulations under ERISA Section 404(c), the Committee aims, within its available resources, to provide Plan participants with the following opportunities to:

1. Choose from a minimum of three diverse investment categories, each with materially different risk and return characteristics. At least one of the categories will provide for a high degree of safety and capital preservation;
2. Make investment decisions at least quarterly; and
3. Receive or have access to the following information, as updated and as made available by the Recordkeeper:
 - A description of the investment options available under the Plan including a general description of the investment objectives, risk and return characteristics, and type and diversification of assets comprising each alternative;
 - Identification of the designated investment providers and investment options;
 - A description and detailed listing of any transaction fees or expenses charged to the participant's account and information on costs and fees for an investment option that reduce the rate of return to participants (expense ratios); and

- Prospectuses, annual reports, and semi-annual reports on each investment option, if available.

The purpose of this Investment Policy Statement (IPS) is to establish prudent guidelines for the Committee to select, monitor and evaluate the investment options in the Plan. The IPS defines responsibilities of various parties with respect to the investment program for the Plan and provides a sufficiently specific, reasonably flexible framework for the management of investment options for the Plan participants.

Policy Objectives

The overall objective of this policy is to establish an investment environment that meets a diverse set of financial needs of the Plan's participants.

Within this overall objective, the Committee has identified the following additional objectives:

1. To maintain efficient plan operation with competitive cost structures of investment options.
2. To provide an appropriate range of investment options recognizing the different financial objectives, risk and return tolerance and diverse demographics of participants. At least one of the options will provide for a high degree of safety and capital preservation.
3. To provide opportunities to supplement participants' future retirement needs.
4. To enable participants to exercise investment control.

Although the investment policies reflect current and foreseeable economic and market conditions, as well as any applicable accounting and statutory requirements, it is intended that the IPS be annually reviewed and updated as necessary and made available to participants upon request.

RESPONSIBILITIES

The Plan is administered by the Committee. Members of the Committee are appointed by the City Manager or by Memoranda of Understanding. The Committee has the authority to select and monitor the investment options of the Plan. The Committee is responsible for the prudent administration of this Investment Policy with specific responsibilities that include: design of the Plan's investment options; establishment of investment policy objectives and guidelines; selection of fund managers; and ongoing monitoring. The Committee may contract with a consultant to assist in these responsibilities.

The Committee or its assignee makes no representations, promises, or warranties about the performance of the Plan or the Plan's investments. Additionally, the Committee or its assignee makes no representations, promises or warranties regarding the suitability of Plan participation for any participant's individual investment or retirement needs.

Committee members will be required to complete Form 700 Conflict of Interest statement.

Delegation of Responsibility by the Committee

Each member of the Committee is a fiduciary. The Committee is responsible for providing the investment framework and monitoring the investment management of the Plan. As such, the Committee is authorized to delegate certain responsibilities to professional experts in various fields. These may include, but shall not be limited to:

1. Investment Management Consultant (Consultant). A Consultant may be retained to assist the Committee in: establishing investment policy, objectives, and guidelines; measuring and evaluating investment performance; and other tasks as deemed appropriate. Such Consultant must be registered with either state or federal securities regulators pursuant to the Investment Advisors Act of 1940 and have proven experience of managing deferred compensation plans of similar size. The Committee, with the assistance of the consultant, shall monitor and review the degree to which each investment option achieves the objectives for which it was selected. The Consultant is a co-fiduciary of the Plan. Services of the Consultant will be set forth in one or more separate agreements.
2. Plan Recordkeeper. The Recordkeeper will track individual participant balances and process participant contributions, disbursements, and transfers. The Recordkeeper will physically (or through agreement with a sub-custodian) maintain possession of securities owned by the Plan, collect dividends and interest payments, effect receipt and delivery following purchases and sales, and redeem maturing securities. The Recordkeeper will reconcile participant balances with trust account balances to maintain alignment. The Recordkeeper may perform testing and produce management reports that ensure Plan compliance with all laws and regulations. The Recordkeeper may also perform regular accounting of all assets owned, purchased, or sold, as well as movement of assets into and out of the Plan's accounts. The Recordkeeper will also furnish participants with necessary investment information such as fact sheets, prospectus and such.
3. Additional specialists such as attorneys, auditors, actuaries, and others may be contracted by the Committee to assist in meeting its responsibilities and obligations to administer plan assets prudently.

4. An Investment sub-committee or other sub-committees may be appointed within the Committee (in accordance with the Plan Document) to assist the Committee in meeting its responsibilities and obligations to administer Plan assets prudently.

If such experts are also deemed to be fiduciaries, they must acknowledge such in writing. All expenses for such experts must be reasonable, and may be borne by the Plan as deemed appropriate and necessary.

Responsibility of Participants

Participants in the Plan are solely responsible for their own investment decisions and bear the risks and assume responsibility for the results of the investment options that they select. Each participant is encouraged to acquire adequate knowledge in selecting an appropriate investment portfolio from the Plan's investment options that suits his or her unique financial parameters such as time horizon, risk tolerance, return expectation, and asset class preferences.

INVESTMENT POLICIES AND GUIDELINES

It is the policy of the Plan to foster an investment environment that encourages and facilitates participant efforts to supplement other sources of retirement income. The Plan will be structured to provide Plan participants with an array of investment options with an objective of selecting appropriate investment mix. The Committee will review the Policy at least annually to ensure compliance with prevailing federal and state laws and make changes as necessary.

Core Investment Categories

The Plan's objective is to provide alternatives within each of the core investment categories whenever possible to allow reasonable portfolio diversification and individual selection. Investment options offered by the Plan will be categorized by similarities in investment objectives, style and risk. All funds within the selected categories must have readily ascertainable market values and marketable. Funds with deferred sales charges and/or market value adjustments will not be permitted (general account investments however may entail market value adjustments). The Plan will assist participants in meeting their long-term investment objectives by providing investment options within the following permitted investment categories:

- Domestic Large Cap Value
- Domestic Large Cap Blend
- Domestic Large Cap Growth
- Domestic Mid Cap Value
- Domestic Mid Cap Blend
- Domestic Mid Cap Growth

- Domestic Small Cap Value
- Domestic Small Cap Blend
- Domestic Small Cap Growth
- Target Date Options
- International Value
- International Blend
- International Growth
- Capital Preservation
- Total Return Bond
- High Yield Bond
- Self-Directed Brokerage

Target Date Portfolio - Retirement Income	
Provide different levels of income and capital growth dependent upon an individual participant's specific risk tolerance and income needs. The portfolio will be well diversified including U.S. fixed income securities as well as U.S. and international equities. Stocks generally will comprise not more than 30% of the total portfolio. The percentage of international equities generally will not exceed 50% of the equity portion of the fund.	
Benchmark Index:	Custom Blended Index
Peer Group:	US Retirement Income

Target Date Portfolio –2020, 2025, 2030	
Provide different levels of income and capital growth dependent upon an individual participant's specific target retirement or withdrawal date. Portfolios provide different allocations to stocks and bonds dependent upon the target retirement or withdrawal date that is selected. The portfolio will be well diversified including U.S. fixed income securities, and U.S. and international equities. Stocks generally will comprise 45%-70% of the total portfolio. The percentage of international equities generally will not exceed 50% of the equity portion of the fund.	
Benchmark Index:	Custom Blended Index
Peer Groups:	US Target Date 2020 , US Target Date 2025, US Target Date 2030

Target Date Portfolio – 2035, 2040, 2045, 2050, 2055, 2060, 2065, 2070

Provide different levels of income and capital growth dependent upon an individual participant’s specific target retirement or withdrawal date. Portfolios provide different allocations to stocks and bonds dependent upon the target retirement or withdrawal date that is selected. The portfolio will be well diversified including U.S. fixed income securities, and U.S. and international equities. Stocks generally will comprise 70%-95% of the total portfolio. The percentage of international equities generally will not exceed 50% of the equity portion of the fund.

Benchmark Index:	Custom Blended Index
Peer Groups:	US Target Date 2035, US Target Date 2040, US Target Date 2045, US Target Date 2050, US Target Date 2055, US Target Date 2060, <u>US Target Date 2065+</u>

Capital Preservation/Stable Value

Provide high current income relative to cash investments and a high degree of investment safety without fluctuation of principal. Investment returns are derived primarily from interest income. A Fixed or General Account option, which is a fixed rate contract that is backed by an insurance company’s balance sheet, is to be of mid-investment-grade rating or higher, and backed by a diversified pool of underlying investments. A stable value option will be invested in guaranteed investment contracts (GICs), “synthetic” portfolios, money market instruments, and others, each mainly comprised of investments of short- to intermediate maturity, and which provide for an adequate degree of liquidity. The weighted-average maturity is expected to remain between two and five years at most times. The overall weighted credit-quality rating of the option shall be the equivalent of mid-investment-grade rating or higher. The rating must be obtained from at least one credit rating agency such as Moody, S&P or Duff & Phelps. If the option’s weighted rating declines below this level, the option will be evaluated for corrective action.

Benchmark Indexes:	5 Year Constant Maturity (CM) US Treasury, 90-Day US Treasury Bill
Peer Group:	Not Applicable

Total Return Bond	
<p>Provide capital appreciation and income through a diversified, actively managed fixed income portfolio. The portfolio's duration is expected to be comparable to that of its Benchmark Index, with some bandwidth allowed for the manager to exercise strategic deviation from the Benchmark. Average credit quality is expected to be investment grade. The fixed income portfolio will normally be primarily comprised of investments including money market instruments, U.S. Government and Agency bonds, mortgage-backed securities, corporate bonds, and others. The manager will be given discretion to hold securities that are not contained within the Benchmark Index, which may include Foreign Bonds, High Yield Bonds, Convertibles, Treasury Inflation Protected Securities, derivatives, and others. The portfolio's aggregated composition and risk and return characteristics however are expected to be reflective of its asset class.</p>	
Benchmark Index:	Bloomberg US Aggregate Bond Index
Peer Group:	US Intermediate-Term Core Bond

High Yield Bond	
<p>Provide high current income and capital appreciation through a diversified, actively-managed portfolio of non-investment grade high yield securities. The manager will be given discretion to hold securities that are not contained within the Benchmark Index, which may include Foreign Bonds, Investment Grade Bonds, Convertibles, derivatives, and others. The portfolio's aggregated composition and risk and return characteristics however are expected to be reflective of its asset class.</p>	
Benchmark Index:	Bloomberg US Corporate High Yield Index
Peer Group:	US High Yield

U.S. Large Company Equity	
<p>Provide long-term capital appreciation through a diversified common stock portfolio whose average market capitalization may be categorized as Large Cap by an industry standard data provider (primarily Morningstar). Stocks of foreign companies that are traded in the U.S. may also be included, but are expected to constitute a minority portion of the portfolio.</p>	
Benchmark Indexes:	S&P 500 Index, Russell 1000 Growth Index, Russell 1000 Value Index
Peer Groups:	US Large Blend, US Large Growth, US Large Value

U.S. Mid-Size Company Equity	
Provide long-term capital appreciation through a diversified common stock portfolio whose average market capitalization may be categorized as Mid Cap by an industry standard data provider (primarily Morningstar). Stocks of foreign companies may also be included, but are expected to constitute a minority portion of the portfolio.	
Benchmark Indexes:	Russell US MC Index, Russell MC Growth Index, Russell MC Value Index
Peer Groups:	US Mid Blend, US Mid Growth, US Mid Value

U.S. Small Company Equity	
Provide long-term capital appreciation through a diversified common stock portfolio whose average market capitalization may be categorized as Small Cap by an industry standard data provider (primarily Morningstar). Stocks of foreign companies may also be included, but are expected to constitute a minority portion of the portfolio.	
Benchmark Indexes:	Russell 2000 Index, Custom Blended Small Cap Growth Index, Russell 2000 Value Index
Peer Groups:	US Small Blend, US Small Growth, US Small Value

International Equity	
Provide long-term capital appreciation through a diversified, actively managed portfolio of international equities. Stocks of emerging countries may be used at the discretion of the manager, but are expected to constitute a minority portion of the portfolio at most times. However, the Plan Administrator may add an investment option dedicated to emerging markets if they feel doing so is in the best interest of participants.	
Benchmark Indexes:	MSCI ACWI ex-US IMI (net), MSCI AC World ex-USA Growth (net), MSCI AC World ex-USA Value (net)
Peer Groups:	US Foreign Blend, US Foreign Growth, US Foreign Value

Self-Directed Brokerage (SDB)

For Plan participants who consider themselves to be knowledgeable about investment principles, the Plan may offer a brokerage account option. Such option may be provided through one or more broker-dealers, as defined and regulated by the National Association of Securities Dealers, Securities Exchange Committee or State Securities Departments. Assets held in an SDB will be maintained in the name of the Plan Trustee or custodian for the benefit of the participant who established the account. Permissible investments for an SDB may include registered mutual funds and other securities permitted under State law. Futures and options are not permitted. It is the SDB account holder's responsibility to adhere to these and any other restrictions placed on him or her by the Committee, broker-dealer or regulatory body. It is also the account holder's responsibility not to engage in transactions prohibited by statute or any regulatory entity. Investment options available through the SDB may contain additional risks and are not monitored by the Committee. The Committee may further restrict permissible investments available in the SDB. Each SDB account holder will be responsible for his or her own commissions, fees or loads applicable to individual securities or mutual fund transactions for the account.

Benchmark Index:	Not Applicable
Peer Group:	Not Applicable

At least one investment option shall be available within each investment category. The Committee may add, delete or replace a particular style or options based on selection and performance criteria. The Committee will monitor each fund's performance, risk measures, management style, investment objectives and investment expenses at least annually. The following tables provide the description, peer group, and performance index for the Core Investment Categories.

Selection of Options/Funds

All prospective options and funds must meet the following criteria before being considered by the Committee:

- The fund should have a minimum history of 5 years, and
- The fund should perform, net of fees, within the upper half of its peer group in the preceding 5 years or outperform an applicable market index.

Risk Tolerances

To achieve long-term investment objectives, some risk must be assumed. Because the degree of risk tolerance varies among participants, the Committee has made a conscious decision to have a broad array of investment choices that provide different

levels of risk and return. Plan participants are free to choose from various options to reflect the degree of their risk tolerance. To safeguard and preserve the assets of participants, the Plan will try to avoid funds that are highly speculative and risky.

Performance Expectations

Investment options should generally be given a full market cycle (normally over 5-year time periods) to achieve stated objectives. Over time, active investment options are expected to perform, net of fees, above the median of the category of portfolios of similar style or a performance benchmark of the same investment style. Index funds are expected to track their stated benchmark with minor tracking error. The Committee will consider the effect of extenuating circumstances such as manager changes in performance evaluation.

Watch List and Fund Termination

Generally, all investment options are expected to remain true to their stated investment objectives and perform as well as or better than their prescribed performance benchmarks, net of fees.

A fund may be placed on watch when it fails to meet the criteria under “Performance Expectations” for two consecutive quarters.

The following are qualitative factors that may be considered in determining whether a manager should be placed on the “Watch List” or terminated.

Qualitative Factors

Factor	Evaluation Technique	Action Steps
Deviation from stated investment style and philosophy	Style analysis-returns based style analysis and portfolio analysis	Place on Watch List. Monitor for ongoing appropriateness with policy. Terminate if no longer consistent with plan objectives.
Changes in ownership	Evaluate any pending changes in ownership and impact on product	Place on Watch List. Determine if change may detrimentally affect asset performance. If so, terminate.
Turnover of key personnel	Evaluate personnel change	Place on Watch List. Consider termination for key personnel turnover on the account.
Litigation or Regulatory Investigation	Evaluate	Place on Watch List. Evaluate nature, seriousness and likely impact of charges on the investment process and

		performance. Take appropriate action.
--	--	---------------------------------------

Quantitative Factors

Performance Test	Benchmark	Fail Criteria	Action Steps*
Risk adjusted returns over 5 years	Sharpe Ratio relative to peer group	Below median	Place on Watch List or possibly terminate if under performance is not explained by strategy or sub-style. Review detailed quarterly quantitative analysis until termination or removal from Watch List.
Peer group comparison	Performance relative to peer group	Below median: Consecutive two quarters, or four quarters in a rolling three-year period	Place on Watch List or possibly terminate if under performance is not explained by strategy or sub-style. Review detailed quarterly quantitative analysis until termination or removal from Watch List.
Consistency of returns	Rolling 3 year returns relative to peer group Annual returns relative to peer group for past three full calendar years	More than 50% of periods below median	Place on Watch List or possibly terminate if under performance is not explained by strategy or sub-style. Review detailed quarterly quantitative analysis until termination or removal from Watch List.

**To be considered if a fund is already in violation of the criteria under "Performance Expectations".*

Performance Objectives and Review

Investment performance will be reviewed quarterly or, at a minimum, semi-annually, to determine the continued feasibility of achieving the investment objectives and the continued appropriateness of the IPS for achieving those objectives.

At the Committee's periodic meetings, the Committee will consider:

- Material changes in the manager's organization, investment philosophy and/or personnel;
- A fund manager's consistency with his/her investment style as expressed in the IPS;
- Comparisons of the manager's results to appropriate indices, as established in this document;
- The risk associated with each manager's portfolio, as measured by the variability of quarterly returns (standard deviation) and systematic risk (beta), compared with the benchmark index;
- The manager's performance relative to his/her peers; and the manager's risk-adjusted performance (as measured by the Sharpe ratio) or significant events listed below may warrant immediate review or at the next periodic meeting. These include, but are not necessarily limited to, the following events:
 - Change of fund ownership
 - Change of fund manager
 - Change of investment philosophy/style
 - Change in expense ratio and return
 - Probable and significant negative market value change

The performance of the Plan's investment options will be monitored on an ongoing basis. The Committee will exercise its prerogative to take corrective action by replacing a manager at the appropriate time.

Monitoring Conflicts of Interest and Costs

The Committee will review the service contracts and costs associated with the Plan on an annual basis. Areas to be reviewed include:

- Asset Management: The active management of the fund.
- Custody: The holding of the assets, collection of the income and disbursement of payments.
- Administrative Functions: Administration of the Plan, including recordkeeping, account settlement (participant balance with that of fund), and allocation of assets and earnings.

ADOPTION OF INVESTMENT POLICY FOR THE 457 DEFERRED COMPENSATION PLAN

This policy is hereby adopted by action of the Committee at its public meeting in February ~~2022~~2023.

City of Santa Clara
457 Deferred Compensation Plan

Attest:

Plan Administrator

Date

Deferred Compensation Committee Chair

Date