



# City of Memphis 401(a) Plan

## Analysis of Investment Performance

*Quarter Ending June 30, 2023*

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# **FINANCIAL MARKET CONDITIONS**

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# Quarter In Review: Global Equity Overview

Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
S&P 500	8.74	16.89	19.59	14.60	12.31	12.86
MSCI Europe, Australasia and Far East (EAFE)*	2.95	11.67	18.77	8.93	4.39	5.41
MSCI Emerging Markets (EM)*	0.90	4.89	1.75	2.32	0.93	2.95

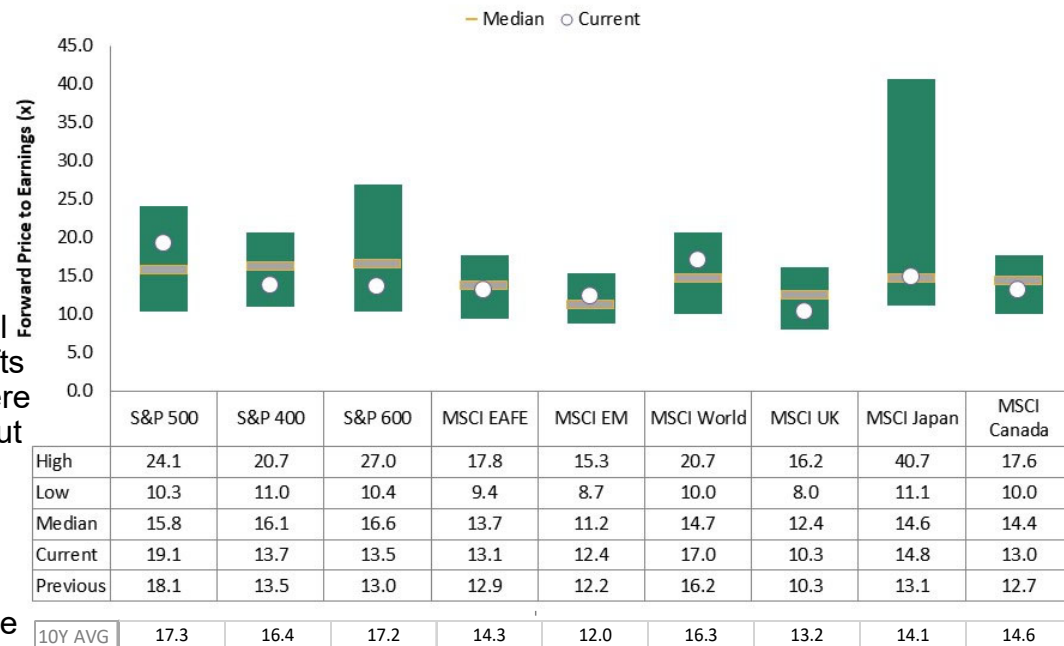
All data in the table are percentages.

\* Net dividends reinvested

## Global Equity Performance and Valuations

- U.S. (+8.7%), developed international (+3.0%), and emerging markets equities (+0.9%) all posted positive returns in the quarter ending June 30, as investor sentiment rose.
- Signs of lower growth in China, as well as continued tensions between the U.S. and China, hindered EM performance, which delivered lower returns than developed markets.
- Japan produced the highest returns for the developed international markets as expectations of governance reforms and structural shifts in the economy boosted investor sentiment. European markets were able to contribute positive returns despite late-quarter worries about the EU economy and the continuing pace of the European Central Bank's rate hikes.
- U.S. large cap and emerging market valuations remain well above their long-term median, while most other markets, including U.S. small cap and developed international, appear cheap relative to the last 20 years.

## Price to Earnings



Data range is from 3/31/00-6/30/23. P/E ratios are forward 12 months.

# Quarter In Review: U.S. Equity

U.S. Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
S&P 500	8.74	16.89	19.59	14.60	12.31	12.86
Russell 1000	8.58	16.68	19.36	14.09	11.92	12.64
Russell 1000 Growth	12.81	29.02	27.11	13.73	15.14	15.74
Russell 1000 Value	4.07	5.12	11.54	14.30	8.11	9.22
Russell 2000	5.21	8.09	12.31	10.82	4.21	8.26
Russell 2000 Growth	7.05	13.55	18.53	6.10	4.22	8.83
Russell 2000 Value	3.18	2.50	6.01	15.43	3.54	7.29
Russell Midcap	4.76	9.01	14.92	12.50	8.46	10.32
Russell 3000	8.39	16.17	18.95	13.89	11.39	12.34

All data in the tables are percentages.

## Performance

- U.S. equities were up +8.7% for the quarter ending June 30. The Fed raised interest rates by 25 basis points in May but did not further raise rates in June, choosing to pause while they assessed how previous interest rate increases were affecting the broader economy. Initial worries around the U.S. debt ceiling were allayed after Congress approved legislation suspending the debt ceiling in June.
- Growth continued to significantly outperform value, as positive IT gains were driven by continued enthusiasm for artificial intelligence (AI). Value underperformance reflected investor focus on sectors that benefited from stable economic growth.
- Large cap stocks outperformed small caps, as they did in the first quarter. As smaller companies are more dependent on financing, regional banks concerns and higher interest rates continued to hinder their performance.
- Information Technology (+17.2%) continued to lead the market as AI interest drove mega-cap tech stocks higher. Consumer Discretionary (+14.6%) and Telecom (+13.1%) also produced strong returns. Utilities (-2.5%) and Energy (-0.9%) were the only sectors to deliver negative returns for the quarter as oil prices weakened.

S&P 500 Sector Returns	QTD	1-Year
Cons. Disc.	14.58	24.73
Cons. Staples	0.45	6.60
Energy	-0.89	18.76
Financials	5.33	9.50
Healthcare	2.95	5.37
Industrials	6.49	25.16
IT	17.20	40.26
Materials	3.31	15.12
Telecom	13.06	17.28
Real Estate	1.81	-4.13
Utilities	-2.53	-3.68

# Quarter In Review: International Equity

MSCI International Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
World ex. U.S.	3.03	11.29	17.41	9.30	4.58	5.40
EAFE	2.95	11.67	18.77	8.93	4.39	5.41
EAFE Local Currency	4.28	12.10	17.50	11.73	6.42	7.67
Europe	2.74	13.59	21.81	10.68	5.19	5.70
Europe ex U.K.	2.90	15.17	24.57	10.07	6.00	6.40
U.K.	2.19	8.43	13.19	12.57	2.83	3.88
Japan	6.42	13.00	18.14	5.70	3.13	5.23
Pacific ex Japan	-1.80	0.32	5.85	6.54	2.66	4.34

All data in the tables are percentages and net dividends reinvested.

## Performance

- Developed international stocks were up +3.0% during the quarter. Inflation pressures, while still high, lessened in most countries, and balance sheets remained relatively strong.
- Europe posted positive returns of +2.7% during the quarter with the European Central Bank raising interest rates twice in the quarter and headline annual inflation declining from 6.1% in May to 5.5% in June. U.K. equity markets struggled following high inflation and low growth expectations.
- Japanese equities were up +6.4%, as foreign investment interest has grown over the quarter. The Nikkei 225 Index exceeded 33,700 yen in June, which was its highest level in 33 years.
- Most sectors in the developed international markets were positive in the quarter, with Industrials (+6.2%), Technology (+5.9%), and Consumer Discretionary (+5.0%) generating the highest returns. Telecommunications (-2.6%), Real Estate (-2.0%), and Materials (-1.7%) lagged. Over the 1-Year period, all sectors remain positive except for Real Estate (-7.4%).

MSCI EAFE Sector Returns	QTD	1-Year
Consumer Disc.	5.02	30.58
Cons. Staples	-0.64	9.87
Energy	0.09	14.34
Financials	4.60	20.16
Healthcare	1.99	9.75
Industrials	6.19	29.63
IT	5.85	32.66
Materials	-1.71	16.35
Telecom	-2.63	2.18
Utilities	4.04	16.49
Real Estate	-1.98	-7.37

# Quarter In Review: Emerging Market Equity

MSCI EM Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Emerging Markets	0.90	4.89	1.75	2.32	0.93	2.95
EM Local Currency	1.71	5.55	3.28	3.90	2.97	5.68
Asia	-0.77	4.00	-0.90	1.19	1.20	4.67
EMEA	2.74	1.64	1.79	0.61	-2.69	-1.48
Latin America	14.04	18.52	29.84	16.45	4.79	1.13

All data in the tables are percentages and net dividends reinvested.

## Performance

- Emerging markets were up marginally (+0.9%) over the quarter as China's underwhelming economic recovery and tensions with the U.S. contributed to the lag against developed markets.
- China suffered a poorer than expected recovery as the Shanghai Composite Index is marginally positive year-to-date. Korea and Taiwan outperformed overall as technology was strong for the quarter due to the positive sentiment behind AI.
- India rebounded and posted a strong quarter as its economic outlook has improved and is now projected to outpace China's economic growth this year. Brazil also performed well over the quarter following fiscal policy optimism—that country had its best GDP quarter-to-quarter reading (+1.9%) since the last quarter of 2020.
- Emerging market sectors were split for the quarter. Energy (+12.1%), Financials (+5.7%), and Technology (+5.1%) led sector returns. Telecom (-6.8%), Consumer Discretionary (-6.3%), and Real Estate (-4.9), on the other hand, lagged the most.

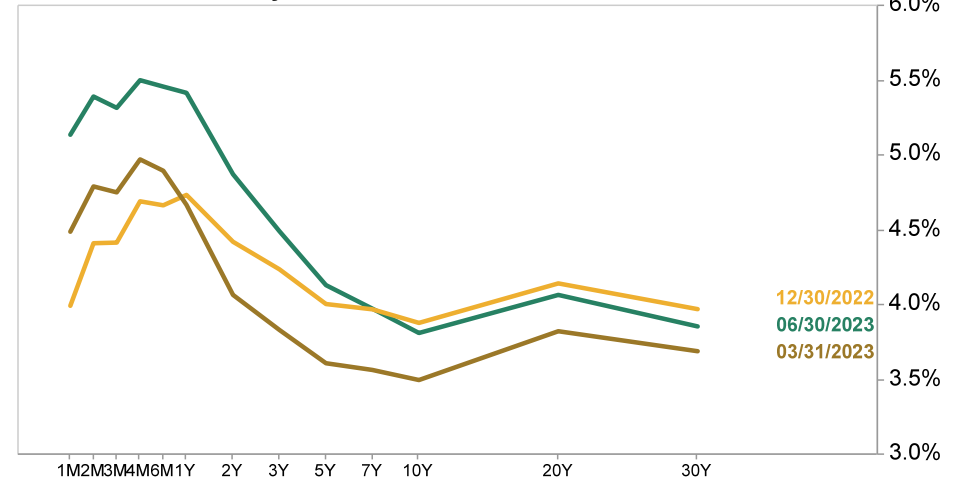
MSCI EM Sector Returns	QTD	1-Year
Cons. Disc.	-6.33	-15.27
Cons. Staples	0.28	4.44
Energy	12.14	13.47
Financials	5.68	6.36
Healthcare	-2.50	-9.55
Industrials	1.81	5.34
IT	5.05	14.10
Materials	-4.17	1.84
Telecom	-6.76	-3.59
Utilities	4.16	-6.70
Real Estate	-4.88	-17.67

# Quarter In Review: Fixed Income Overview

## Yield Curve

- The yield curve further inverted during the second quarter of 2023, with short-term rates rising faster than long-term rates. The Federal Reserve hiked rates by 25 basis points in May. In June, the Fed announced it would pause interest rate increases after 10 consecutive rate hikes. However, the Fed also indicated that there may be further rate increases later this year.
- Short-term yields increased the most over the quarter, with the 2-year Treasury note rising by 81 bps over the prior quarter.
- 10- and 30-year Treasury yields increased by 32 basis points and 16 basis points, ending the quarter at 3.81% and 3.85%, respectively.

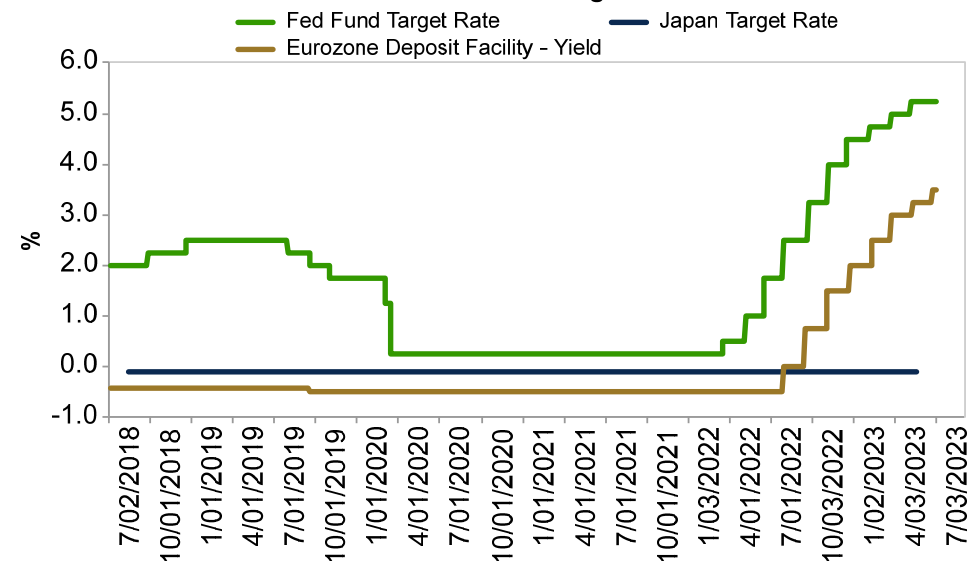
United States Treasury Yield Curve



## Monetary Policies/Global Interest Rates

- Central bank deposit rates remained negative in Japan, while rates in Europe ended the quarter at 4.00% and rates in the United Kingdom ended the quarter at 5.00%.
- Reflecting the earlier and faster pace of rate rises, the U.S. policy rate is above those of the Eurozone, the United Kingdom and Japan, at 5.25%.

Central Bank Target Rates



Interest Rates	Fed Funds Rate	EZ Deposit Facility Rate
Average	4.95	0.87
Max	20.00	3.75
Min	0.25	-0.50



# Quarter In Review: U.S. Fixed Income

U.S. Fixed Income Indices*	QTD	YTD	1-Year	3-Year	5-Year	10-Year
U.S. Aggregate	-0.84	2.09	-0.94	-3.96	0.77	1.52
Government/Credit	-0.93	2.21	-0.70	-4.11	1.03	1.66
Government	-1.35	1.59	-2.08	-4.71	0.46	0.97
Investment Grade Credit	-0.29	3.21	1.55	-3.44	1.76	2.63
Investment Grade CMBS	-0.63	1.07	-1.86	-2.73	1.22	1.86
U.S. Corporate High Yield	1.75	5.38	9.06	3.13	3.36	4.43
FTSE** 3-Month T-Bill	1.25	2.39	3.75	1.33	1.57	0.98
Hueler Stable Value	0.55	1.87	1.87	1.96	2.13	1.97

\* Bloomberg Indices, unless otherwise noted.

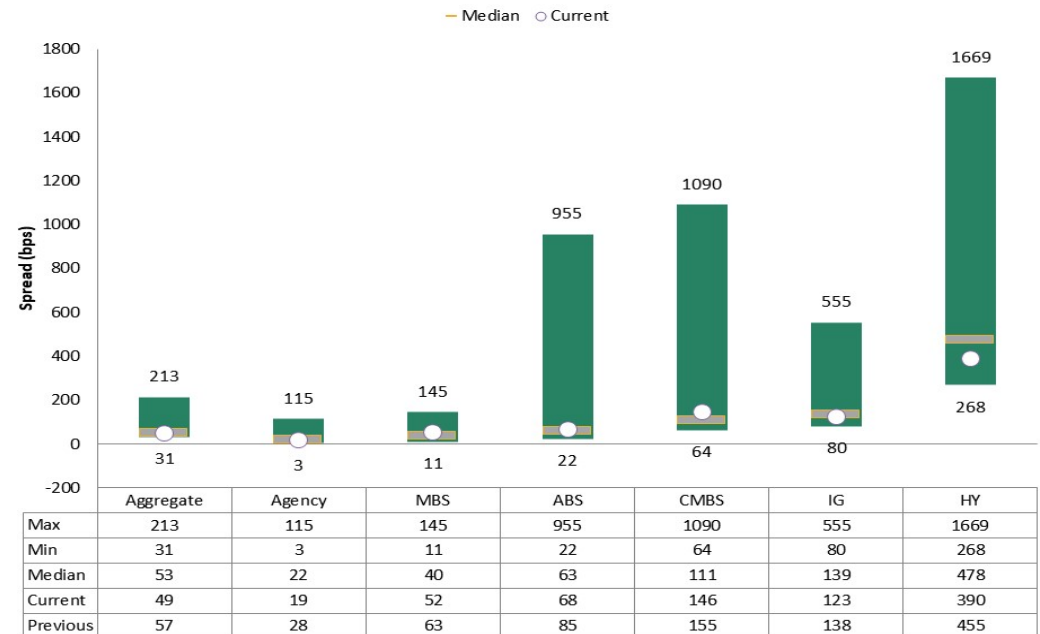
\*\* Formerly Citigroup. Citigroup's fixed income indices were purchased by London Stock Exchange Group (LSEG) and were rebranded to FTSE by July 31, 2018. FTSE Russell is a unit of LSEG's Information Services Division and a wholly owned subsidiary of LSEG.

All data in the table are percentages.

## Performance and Spreads

- The U.S. Aggregate Index was negative during the quarter. Sector returns were mostly negative with only the high yield sector and cash delivering positive quarterly returns.
- High Yield had the strongest performance at +1.75% for the quarter. Government bonds experienced the weakest performance in the quarter ended June 30 (-1.35%).
- For the quarter, all domestic fixed income spreads narrowed. The largest decreases were in High Yield and ABS with spreads narrowing by 65 basis points and 17 basis points, respectively.

Fixed Income Spreads



# Quarter In Review: International Fixed Income

Global Fixed Income Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Bloomberg Global Aggregate	-1.53	1.43	-1.32	-4.96	-1.09	0.20
Bloomberg Global Aggregate (Hgd)	0.06	2.96	0.52	-2.88	0.93	2.11
FTSE Non-U.S. WGBI*	-2.12	1.52	-2.63	-7.81	-3.75	-1.40
FTSE Non-U.S. WGBI (Hgd)	0.39	3.83	-0.55	-3.53	0.27	2.26
JPM EMBI Global Diversified**	2.19	4.09	7.39	-3.10	0.55	2.82
JPM GBI-EM Global Diversified***	2.51	7.79	11.38	-1.42	0.29	-0.56

All data in the table are percentages.

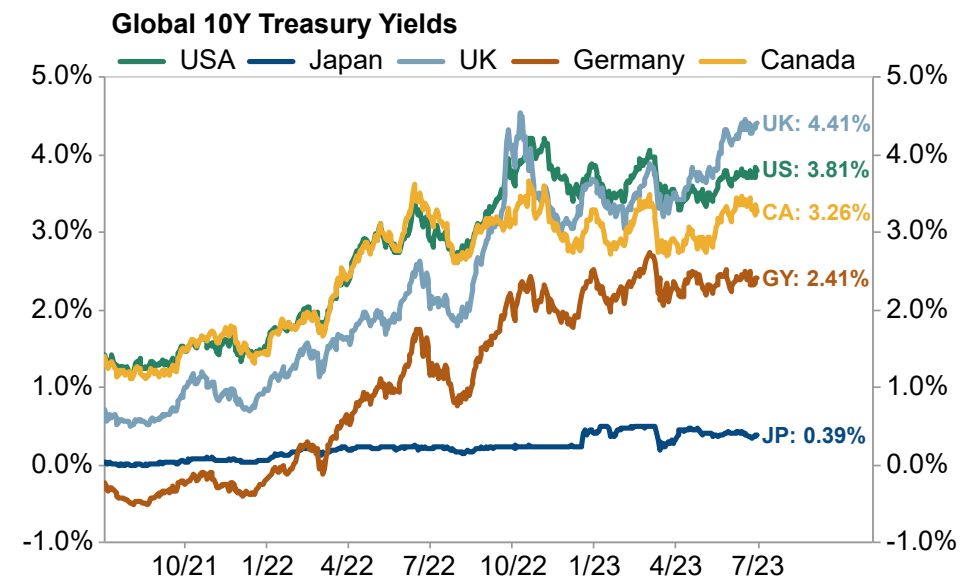
\* Formerly Citigroup. The FTSE Non-U.S. World Government Bond Index (WGBI) measures the performance of fixed-rate, local currency, investment grade sovereign bonds excluding the U.S.

\*\* The JP Morgan Emerging Market Bond Index (EMBI) Global Diversified index measures government bonds in hard currencies.

\*\*\* The JP Morgan Government Bond Index – Emerging Markets (GBI-EM) Global Diversified index measures government bonds in local currencies.

## Global Performance and Yields

- Yields rose in most developed markets during the quarter. Both the UK and Europe were more aggressive with interest rates increases compared to the U.S. The Bank of England increased rates twice by 25 and 50 basis points, respectively. The ECB also increased rates twice during the quarter by 25 basis points each time as inflation remains a major concern in both Europe and the United Kingdom.
- Inflation was the main driving force behind the speed of rate increases by the global central banks.
- The U.S. dollar depreciated relative to the yen, British pound and euro.
- Global returns were negative for the quarter ended June 30 while emerging markets debt returns were positive and delivered the strongest performance.



# Disclaimer

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## **401(a) TOTAL PLAN**

# City of Memphis 401(a) Retirement Plan

## Plan Asset Allocation as of June 30, 2023

<i>Fund Name</i>	<i>Number of Participants</i>	<i>Plan Assets</i>	<i>% of Total</i>
<b><i>Stable Value/Fixed Options</i></b>		<b>\$ 1,411,878</b>	<b>2.3%</b>
Fixed Option	290	\$ 1,411,878	2.3%
MassMutual US Gov't MM Fund	-	\$ -	0.0%
<b><i>Bond Funds</i></b>		<b>\$ 1,592,708</b>	<b>2.6%</b>
PIMCO Total Return R	383	\$ 758,636	1.3%
TCW Total Return Bond Instl	283	\$ 764,696	1.3%
Delaware Ivy High Income	38	\$ 69,376	0.1%
<b><i>US Equity Funds</i></b>		<b>\$ 5,420,877</b>	<b>9.0%</b>
Parnassus Cor Eq Instl	348	\$ 859,666	1.4%
Vanguard Institutional Index	383	\$ 1,197,340	2.0%
Edgar Lomax Value	296	\$ 515,150	0.9%
Fidelity Contrafund	333	\$ 882,108	1.5%
Vanguard Mid Cap Index Admiral	304	\$ 622,307	1.0%
JPMorgan MidCap Value R6	271	\$ 265,614	0.4%
Eaton Vance Atlanta Capital SMID	87	\$ 134,402	0.2%
Neuberger Genesis Trust R6	257	\$ 263,278	0.4%
Harbor Small Cap Value	262	\$ 373,662	0.6%
Brown Capital Small Co Instl	267	\$ 307,350	0.5%
<b><i>International/Global Funds</i></b>		<b>\$ 1,123,885</b>	<b>1.9%</b>
AmerFunds EuroPacific Growth R6	261	\$ 458,853	0.8%
MFS International Value R3	328	\$ 449,044	0.7%
Invesco Global A	-	\$ -	0.0%
AmerFunds Global Insight R6	257	\$ 215,988	0.4%
<b><i>Real Estate Fund</i></b>		<b>\$ 288,732</b>	<b>0.5%</b>
Vanguard REIT Index Admiral	268	\$ 288,732	0.5%
<b><i>Target Date Funds</i></b>		<b>\$ 50,629,498</b>	<b>83.7%</b>
Vanguard Target Retirement 2020 Inv	116	\$ 1,148,331	1.9%
Vanguard Target Retirement 2025 Inv	208	\$ 3,148,973	5.2%
Vanguard Target Retirement 2030 Inv	325	\$ 4,146,402	6.9%
Vanguard Target Retirement 2035 Inv	337	\$ 3,896,805	6.4%
Vanguard Target Retirement 2040 Inv	302	\$ 3,911,209	6.5%
Vanguard Target Retirement 2045 Inv	410	\$ 5,613,203	9.3%
Vanguard Target Retirement 2050 Inv	559	\$ 7,673,855	12.7%
Vanguard Target Retirement 2055 Inv	813	\$ 10,160,964	16.8%
Vanguard Target Retirement 2060 Inv	1,400	\$ 10,510,034	17.4%
Vanguard Target Retirement Inc	55	\$ 419,722	0.7%
<b>Totals</b>		<b>\$ 60,467,578</b>	<b>100.0%</b>

# City of Memphis 401(a) Retirement Plan

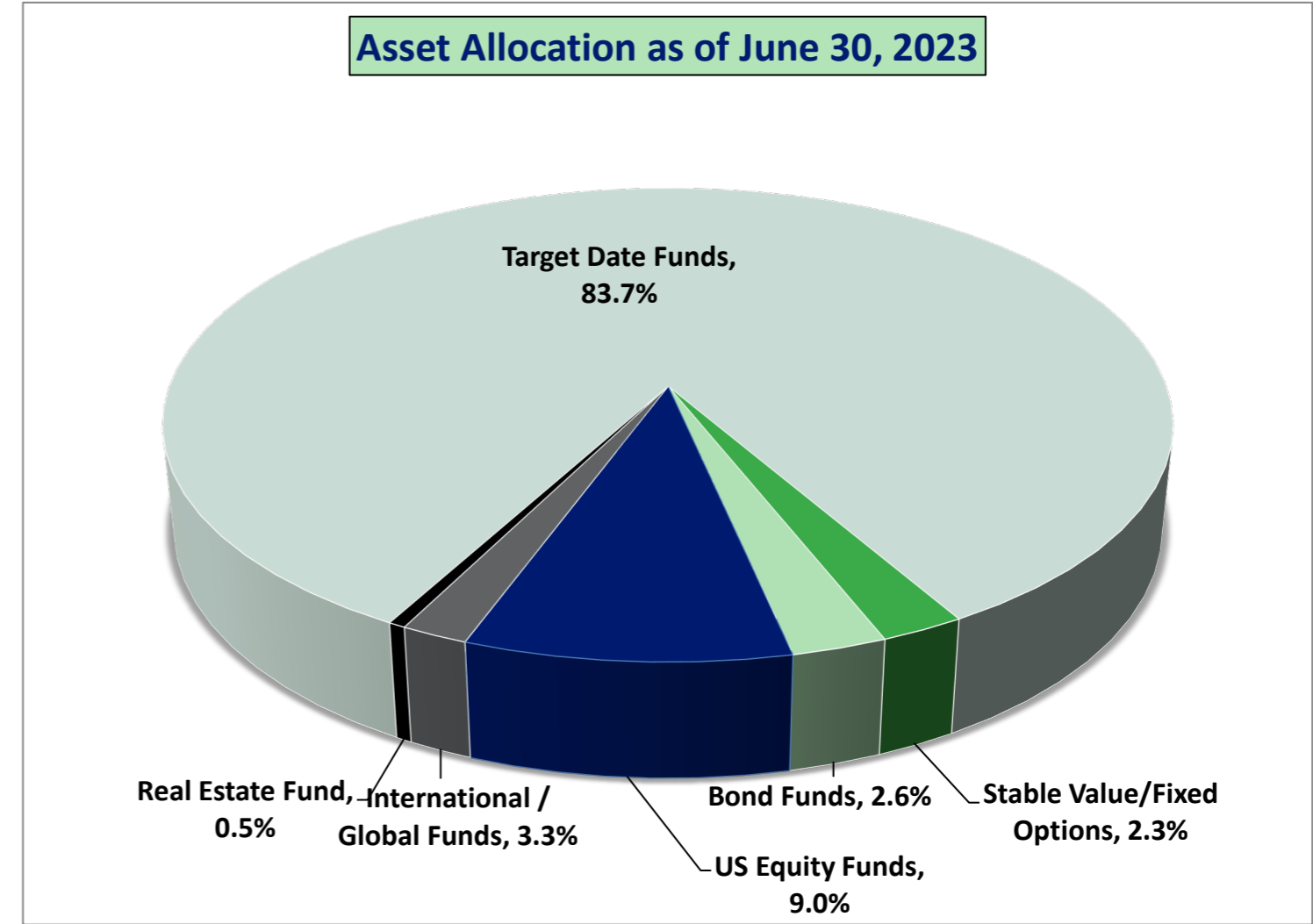
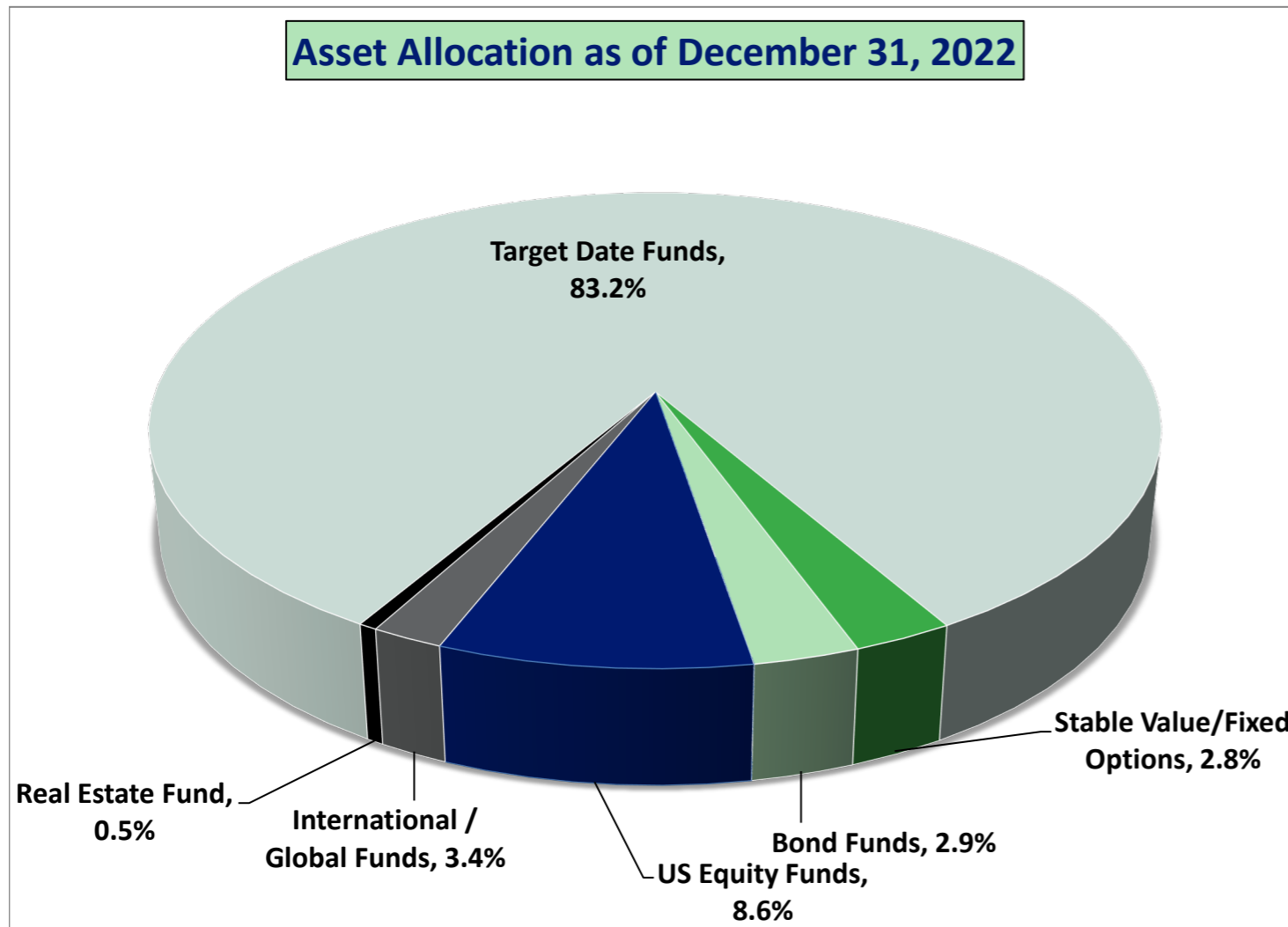
Plan Activity January 1, 2023 - June 30, 2023

Fund Name	Beg MV	Contributions	Exchanges	Distributions	Expenses	Other Activity	Gain/Loss	Ending MV
<b>Stable Value/Fixed Options</b>								
Fixed Option	\$ 1,269,181	\$ 279,989	\$ (18,200)	\$ (143,472)	\$ (347)	\$ -	\$ 24,728	\$ 1,411,878
MassMutual US Gov't MM Fund	\$ 726	\$ -	\$ -	\$ (736)	\$ (0)	\$ -	\$ 10	\$ (0)
<b>Bond Funds</b>								
PIMCO Total Return R	\$ 642,273	\$ 117,537	\$ 17,212	\$ (30,451)	\$ 431	\$ -	\$ 11,633	\$ 758,636
TCW Total Return Bond Instl	\$ 653,070	\$ 115,718	\$ 12,306	\$ (30,449)	\$ 421	\$ -	\$ 13,631	\$ 764,696
Delaware Ivy High Income	\$ 42,433	\$ 31,166	\$ (276)	\$ (6,835)	\$ (5)	\$ -	\$ 2,893	\$ 69,376
<b>US Equity Funds</b>								
Parnassus Cor Eq Instl	\$ 657,291	\$ 123,191	\$ (7,229)	\$ (25,922)	\$ 297	\$ -	\$ 112,038	\$ 859,666
Vanguard Institutional Index	\$ 822,211	\$ 182,256	\$ 58,541	\$ (27,342)	\$ 166	\$ -	\$ 161,509	\$ 1,197,340
Edgar Lomax Value	\$ 433,600	\$ 83,048	\$ 24,915	\$ (15,104)	\$ 174	\$ -	\$ (11,483)	\$ 515,150
Fidelity Contrafund	\$ 578,646	\$ 178,379	\$ (10,267)	\$ (29,233)	\$ 220	\$ -	\$ 164,362	\$ 882,108
Vanguard Mid Cap Index Admiral	\$ 457,397	\$ 113,798	\$ 17,046	\$ (12,404)	\$ 140	\$ -	\$ 46,330	\$ 622,307
JPMorgan MidCap Value R6	\$ 194,028	\$ 54,723	\$ 12,751	\$ (6,201)	\$ 12	\$ -	\$ 10,301	\$ 265,614
Eaton Vance Atlanta Capital SMID	\$ 79,256	\$ 29,054	\$ 20,794	\$ (1,033)	\$ 29	\$ -	\$ 6,302	\$ 134,402
Neuberger Genesis Trust R6	\$ 192,999	\$ 51,406	\$ 4,968	\$ (12,524)	\$ 65	\$ -	\$ 26,363	\$ 263,278
Harbor Small Cap Value	\$ 296,933	\$ 50,984	\$ 13,574	\$ (14,840)	\$ 129	\$ -	\$ 26,882	\$ 373,662
Brown Capital Small Co Instl	\$ 232,184	\$ 54,957	\$ (13,924)	\$ (7,698)	\$ 15	\$ -	\$ 41,817	\$ 307,350
<b>International/Global Equity Funds</b>								
AmerFunds EuroPacific Growth R6	\$ 388,287	\$ 69,357	\$ (35,270)	\$ (10,020)	\$ 126	\$ -	\$ 46,374	\$ 458,853
MFS International Value R3	\$ 365,259	\$ 64,902	\$ (13,802)	\$ (13,336)	\$ 196	\$ -	\$ 45,826	\$ 449,044
Invesco Global A	\$ 160,159	\$ 28,637	\$ (209,129)	\$ (3,254)	\$ 43	\$ -	\$ 23,545	\$ -
AmerFunds Global Insight R6	\$ -	\$ 6,099	\$ 206,570	\$ (1,650)	\$ 17	\$ -	\$ 4,951	\$ 215,988
<b>Real Estate Fund</b>								
Vanguard REIT Index Admiral	\$ 235,092	\$ 45,340	\$ 9,383	\$ (10,449)	\$ 21	\$ -	\$ 9,345	\$ 288,732
<b>Target Date Funds</b>								
Vanguard Target Retirement 2020 Inv	\$ 913,311	\$ 283,756	\$ (241)	\$ (115,904)	\$ (791)	\$ -	\$ 68,200	\$ 1,148,331
Vanguard Target Retirement 2025 Inv	\$ 2,513,467	\$ 505,139	\$ (265)	\$ (93,276)	\$ (1,756)	\$ -	\$ 225,664	\$ 3,148,973
Vanguard Target Retirement 2030 Inv	\$ 3,029,272	\$ 1,003,456	\$ (48,373)	\$ (150,659)	\$ (2,672)	\$ -	\$ 315,379	\$ 4,146,402
Vanguard Target Retirement 2035 Inv	\$ 2,943,482	\$ 769,761	\$ (6)	\$ (143,351)	\$ (3,127)	\$ -	\$ 330,046	\$ 3,896,805
Vanguard Target Retirement 2040 Inv	\$ 2,948,622	\$ 674,907	\$ (36)	\$ (62,308)	\$ (2,965)	\$ -	\$ 352,989	\$ 3,911,209
Vanguard Target Retirement 2045 Inv	\$ 4,149,821	\$ 1,052,722	\$ (1,991)	\$ (128,028)	\$ (4,155)	\$ -	\$ 544,833	\$ 5,613,203
Vanguard Target Retirement 2050 Inv	\$ 5,943,028	\$ 1,228,119	\$ (30,705)	\$ (246,955)	\$ (6,158)	\$ -	\$ 786,526	\$ 7,673,855
Vanguard Target Retirement 2055 Inv	\$ 7,849,740	\$ 1,924,035	\$ (43,645)	\$ (604,682)	\$ (9,620)	\$ -	\$ 1,045,135	\$ 10,160,964
Vanguard Target Retirement 2060 Inv	\$ 7,483,145	\$ 2,504,995	\$ 36,619	\$ (541,682)	\$ (16,402)	\$ -	\$ 1,043,359	\$ 10,510,034
Vanguard Target Retirement Inc	\$ 359,344	\$ 95,708	\$ (1,321)	\$ (54,222)	\$ (341)	\$ (341)	\$ 20,555	\$ 419,722
<b>Totals</b>	<b>\$ 45,834,257</b>	<b>\$ 11,723,139</b>	<b>\$ -</b>	<b>\$ (2,544,020)</b>	<b>\$ (45,839)</b>	<b>\$ (341)</b>	<b>\$ 5,500,041</b>	<b>\$ 60,467,578</b>



# City of Memphis 401(a) Retirement Plan

## Plan Asset Allocation as of June 30, 2023



Plan Assets as of December 31, 2022

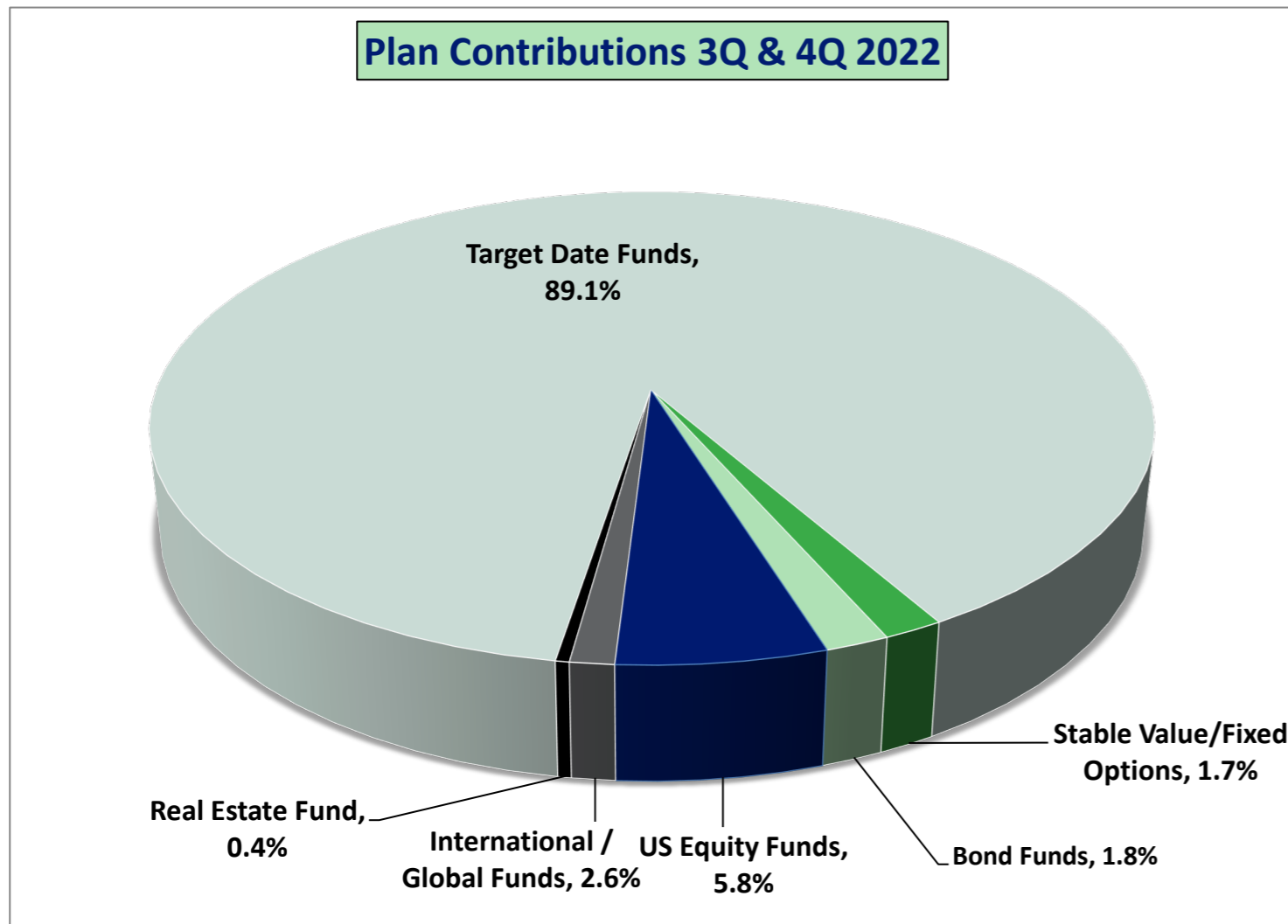
Fund Name	Plan Assets	% of Total
Stable Value/Fixed Options	\$ 1,269,907	2.8%
Bond Funds	\$ 1,337,777	2.9%
US Equity Funds	\$ 3,944,545	8.6%
International/Global Funds	\$ 913,704	2.0%
Real Estate Fund	\$ 235,092	0.5%
Target Date Funds	\$ 38,133,233	83.2%
<b>Totals</b>	<b>\$ 45,834,257</b>	<b>100.0%</b>

Plan Assets as of June 30, 2023

Fund Name	Plan Assets	% of Total
Stable Value/Fixed Options	\$ 1,411,878	2.3%
Bond Funds	\$ 1,592,708	2.6%
US Equity Funds	\$ 5,420,877	9.0%
International/Global Funds	\$ 1,123,885	1.9%
Real Estate Fund	\$ 288,732	0.5%
Target Date Funds	\$ 50,629,498	83.7%
<b>Totals</b>	<b>\$ 60,467,578</b>	<b>100.0%</b>

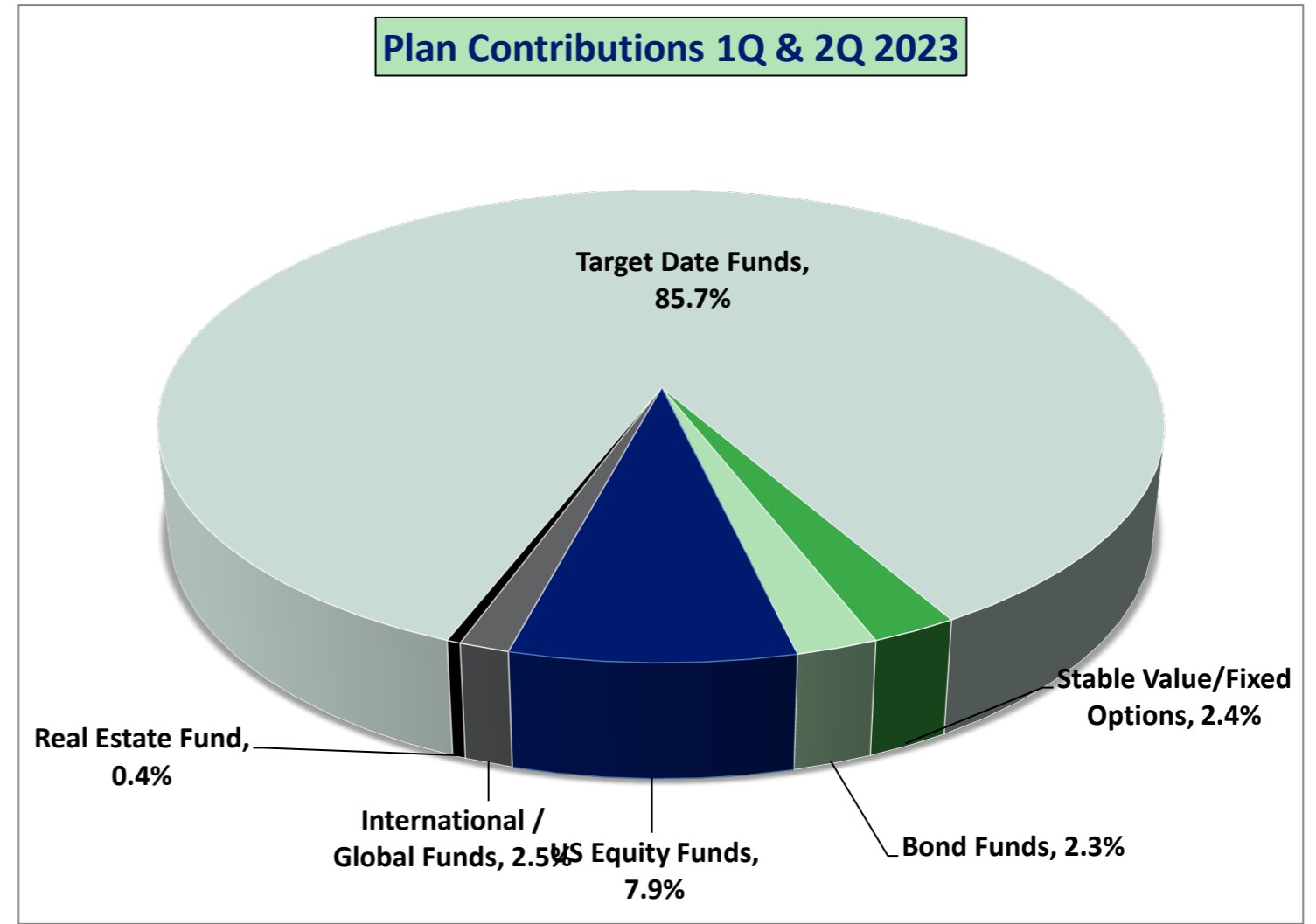
# City of Memphis 401(a) Retirement Plan

## Contributions as of June 30, 2023



Plan Contributions 3Q & 4Q 2022

Fund Name	Plan Contributions	% of Total
Stable Value/Fixed Options	\$ 49,861	1.7%
Bond Funds	\$ 53,119	1.8%
US Equity Funds	\$ 173,273	5.8%
International/Global Funds	\$ 36,573	1.2%
Real Estate Fund	\$ 11,369	0.4%
Target Date Funds	\$ 2,644,909	89.1%
<b>Totals</b>	<b>\$ 2,969,104</b>	<b>100.0%</b>



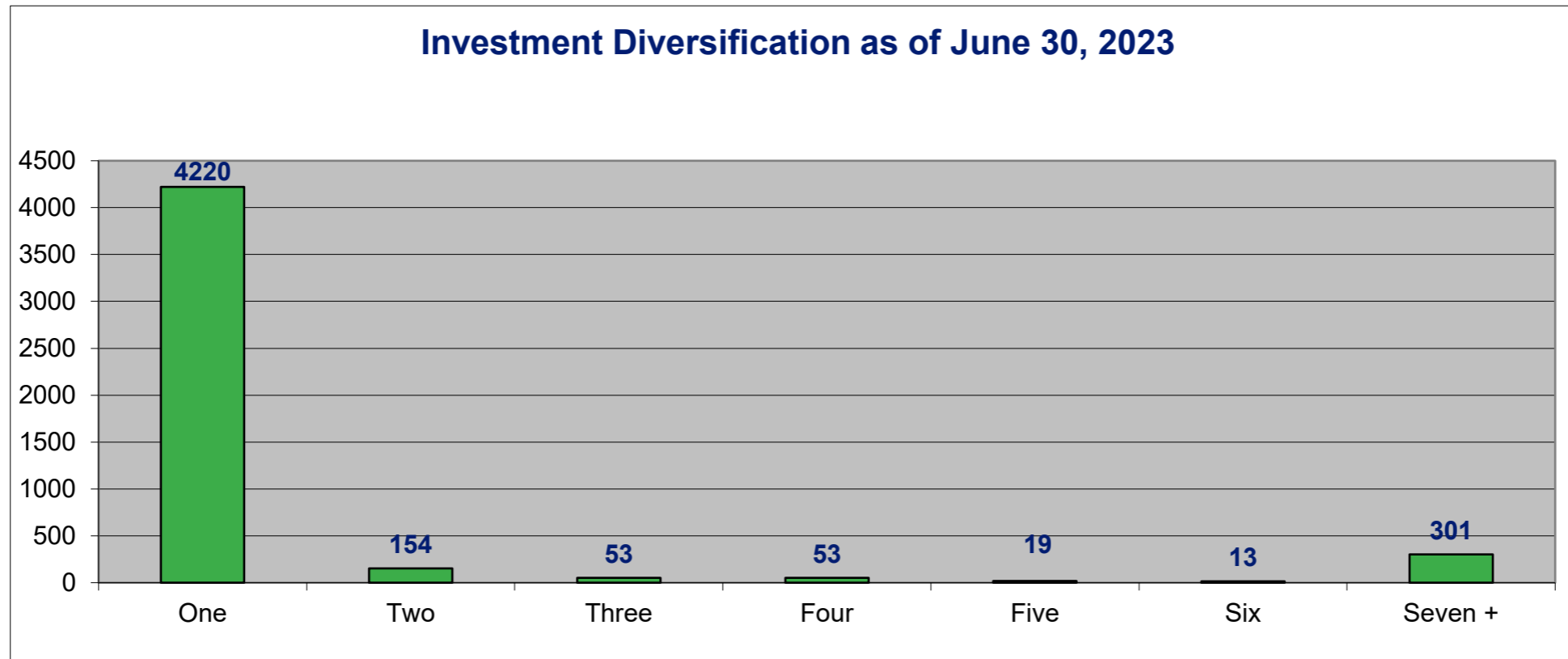
Plan Contributions 1Q & 2Q 2023

Fund Name	Plan Contributions	% of Total
Stable Value/Fixed Options	\$ 279,989	2.4%
Bond Funds	\$ 264,421	2.3%
US Equity Funds	\$ 921,797	7.9%
International/Global Funds	\$ 162,896	1.4%
Real Estate Fund	\$ 45,340	0.4%
Target Date Funds	\$ 10,042,597	85.7%
<b>Totals</b>	<b>\$ 11,717,040</b>	<b>100.0%</b>



# City of Memphis 401(a) Retirement Plan

## Investment Diversification as of June 30, 2023

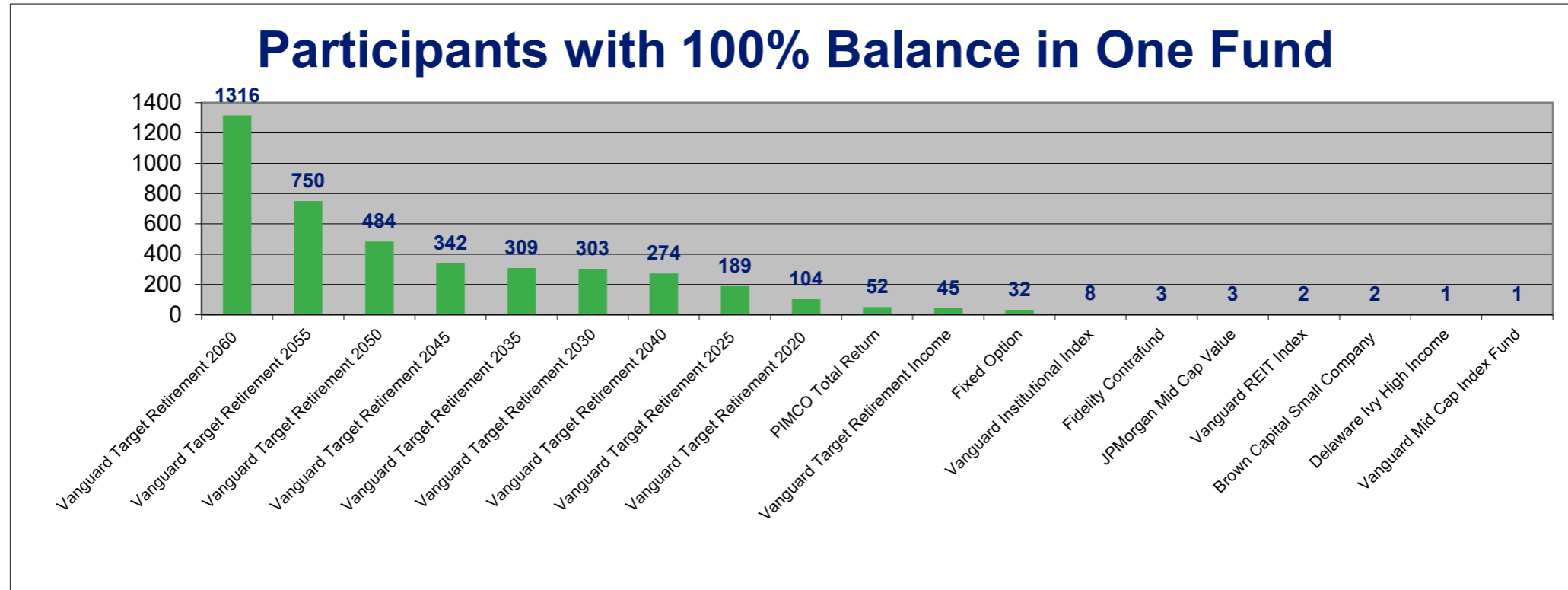


Number of Funds	No. of Participants	
One	4220	87.7%
Two	154	3.2%
Three	53	1.1%
Four	53	1.1%
Five	19	0.4%
Six	13	0.3%
Seven +	301	6.3%
<b>Total</b>	<b>4813</b>	<b>100%</b>

Note: Number of participants shown includes 401(a) MSCAA Plan Participants

# City of Memphis 401(a) Retirement Plan

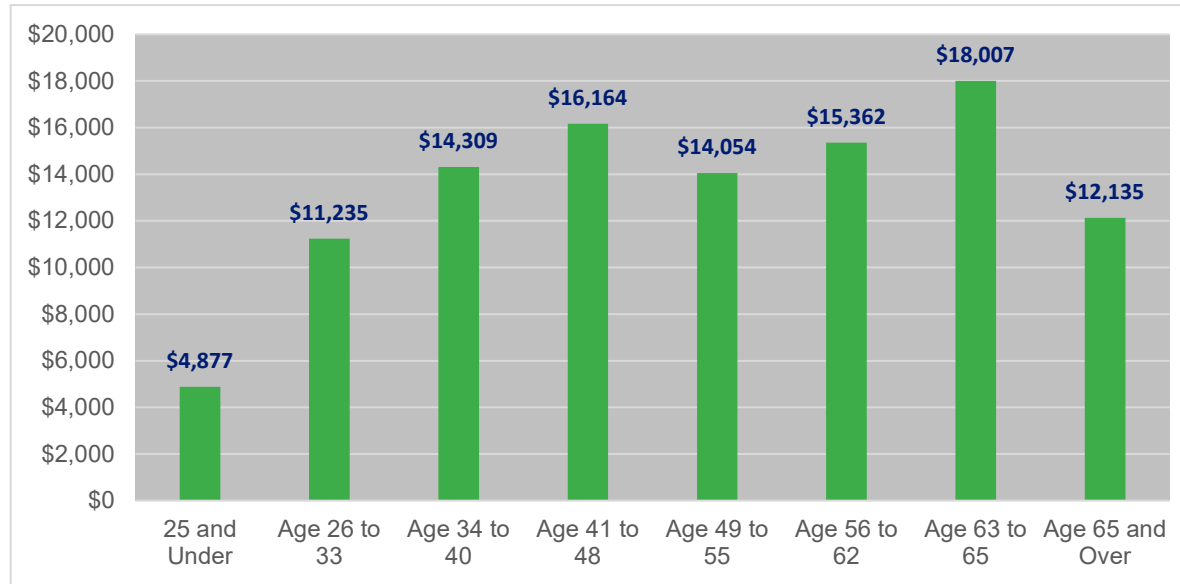
One Funders as of June 30, 2023



Number of Funds	No. of Participants	% of Participants
Vanguard Target Retirement 2060	1316	31.2%
Vanguard Target Retirement 2055	750	17.8%
Vanguard Target Retirement 2050	484	11.5%
Vanguard Target Retirement 2045	342	8.1%
Vanguard Target Retirement 2035	309	7.3%
Vanguard Target Retirement 2030	303	7.2%
Vanguard Target Retirement 2040	274	6.5%
Vanguard Target Retirement 2025	189	4.5%
Vanguard Target Retirement 2020	104	2.5%
PIMCO Total Return	52	1.2%
Vanguard Target Retirement Income	45	1.1%
Fixed Option	32	0.8%
Vanguard Institutional Index	8	0.2%
Fidelity Contrafund	3	0.1%
JPMorgan Mid Cap Value	3	0.1%
Vanguard REIT Index	2	0.0%
Brown Capital Small Company	2	0.0%
Delaware Ivy High Income	1	0.0%
Vanguard Mid Cap Index Fund	1	0.0%
<b>Total</b>	<b>4,220</b>	<b>100.0%</b>

# City of Memphis 401(a) Retirement Plan

*Average Account Balance as of June 30, 2023*



Age Range	No. of Participants	Average Account Balance
25 and Under	573	\$4,877
Age 26 to 33	1483	\$11,235
Age 34 to 40	928	\$14,309
Age 41 to 48	608	\$16,164
Age 49 to 55	508	\$14,054
Age 56 to 62	442	\$15,362
Age 63 to 65	113	\$18,007
Age 65 and Over	158	\$12,135
<b>Total</b>	<b>4813</b>	<b>\$12,563</b>

*Note: Number of participants shown does not include MSCAA Plan Participants.*

## **401(a) MSCAA Total Plan**

# City of Memphis 401(a) MSCAA Retirement Plan

## Plan Asset Allocation as of June 30, 2023

<i>Fund Name</i>	<i>Number of Participants</i>	<i>Plan Assets</i>	<i>% of Total</i>
<b><i>Stable Value/Fixed Options</i></b>		<b>\$ 105,562</b>	<b>2.0%</b>
Fixed Option	35	\$ 105,562	2.0%
<b><i>Bond Funds</i></b>		<b>\$ 252,669</b>	<b>4.8%</b>
PIMCO Total Return Instl	36	\$ 121,880	2.3%
TCW Total Return Bond Instl	37	\$ 125,822	2.4%
Delaware Ivy High Income	2	\$ 4,968	0.1%
<b><i>US Equity Funds</i></b>		<b>\$ 1,208,983</b>	<b>22.9%</b>
Parnassus Cor Eq Instl	45	\$ 246,240	4.7%
Vanguard Institutional Index	43	\$ 221,784	4.2%
Edgar Lomax Value	41	\$ 116,087	2.2%
Fidelity Contrafund	45	\$ 178,743	3.4%
Vanguard Mid Cap Index Admiral	41	\$ 136,627	2.6%
JPMorgan MidCap Value Instl	45	\$ 68,250	1.3%
Eaton Vance Atlanta Capital SMID	6	\$ 12,534	0.2%
Neuberger Genesis Trust Instl	44	\$ 79,431	1.5%
Harbor Small Cap Value	41	\$ 91,078	1.7%
Brown Capital Small Co Instl	46	\$ 58,209	1.1%
<b><i>International/Global Funds</i></b>		<b>\$ 272,765</b>	<b>5.2%</b>
AmerFunds EuroPacific Growth R6	39	\$ 94,285	1.8%
MFS International Value R5	42	\$ 126,605	2.4%
AmerFunds Global Insight R6	41	\$ 51,874	1.0%
<b><i>Real Estate Fund</i></b>		<b>\$ 57,960</b>	<b>1.1%</b>
Vanguard REIT Index Admiral	40	\$ 57,960	1.1%
<b><i>Target Date Funds</i></b>		<b>\$ 3,377,544</b>	<b>64.0%</b>
Vanguard Target Retirement 2020 Inv	4	\$ 83,514	1.6%
Vanguard Target Retirement 2025 Inv	6	\$ 143,890	2.7%
Vanguard Target Retirement 2030 Inv	28	\$ 194,273	3.7%
Vanguard Target Retirement 2035 Inv	36	\$ 455,780	8.6%
Vanguard Target Retirement 2040 Inv	28	\$ 613,110	11.6%
Vanguard Target Retirement 2045 Inv	32	\$ 560,421	10.6%
Vanguard Target Retirement 2050 Inv	22	\$ 663,315	12.6%
Vanguard Target Retirement 2055 Inv	24	\$ 286,181	5.4%
Vanguard Target Retirement 2060 Inv	26	\$ 355,669	6.7%
Vanguard Target Retirement Income Inv	1	\$ 21,388	0.4%
<b>Totals</b>		<b>\$ 5,275,483</b>	<b>100.0%</b>

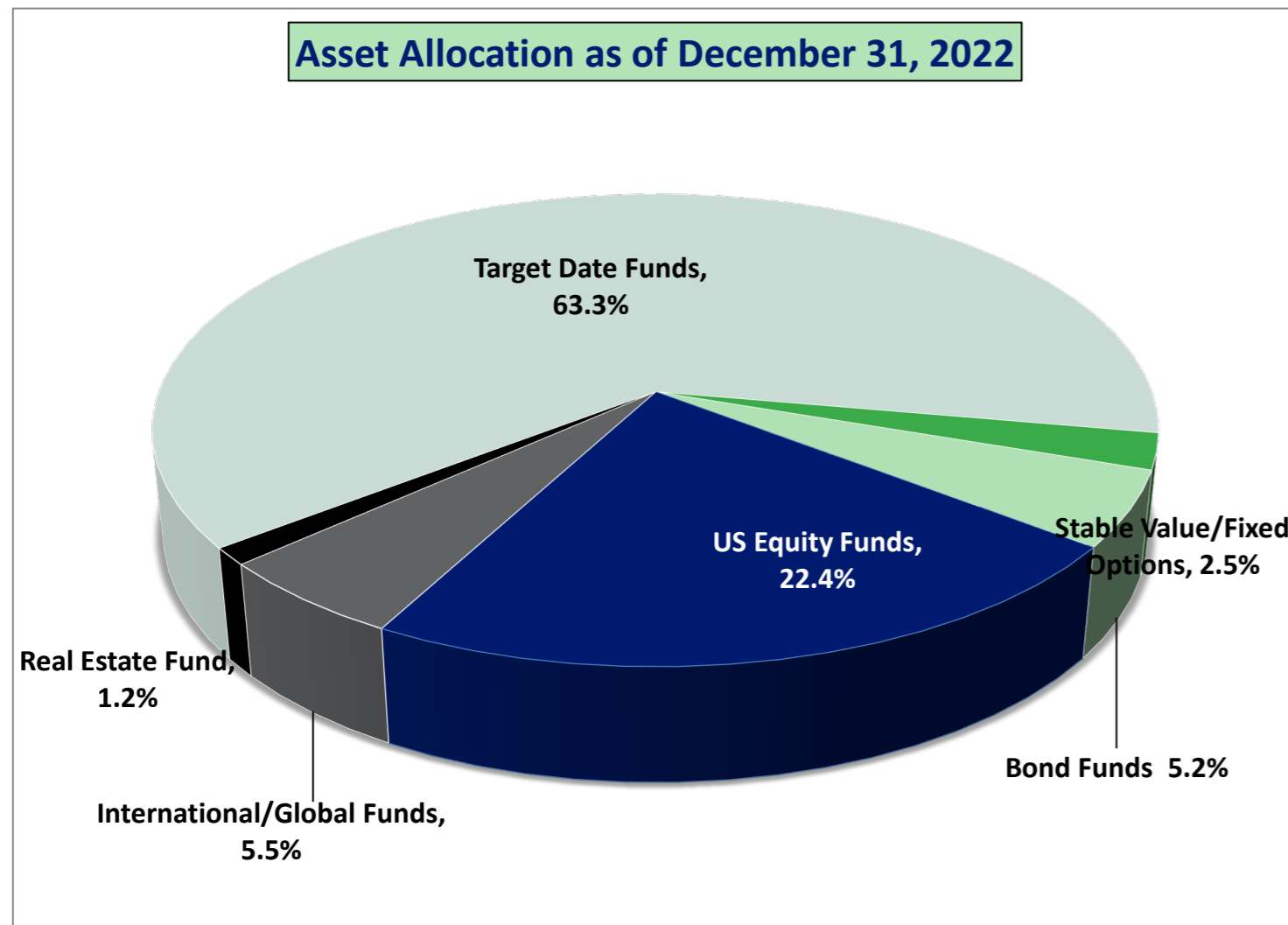
# City of Memphis 401(a) MSCAA Retirement Plan

Plan Activity January 1, 2023 - June 30, 2023

<i>Fund Name</i>	<i>Beg MV</i>	<i>Contributions</i>	<i>Exchanges</i>	<i>Distributions</i>	<i>Expenses</i>	<i>Other Activity</i>	<i>Gain/Loss</i>	<i>Ending MV</i>
<b><i>Stable Value/Fixed Options</i></b>								
Fixed Option	\$ 107,692	\$ 5,198	\$ (8,423)	\$ (905)	\$ (20)	\$ -	\$ 2,020	\$ 105,562
<b><i>Bond Funds</i></b>								
PIMCO Total Return R	\$ 109,789	\$ 8,460	\$ 4,487	\$ (3,100)	\$ 67	\$ -	\$ 2,177	\$ 121,880
TCW Total Return Bond Instl	\$ 113,243	\$ 8,621	\$ 4,426	\$ (3,095)	\$ 59	\$ -	\$ 2,567	\$ 125,822
Delaware Ivy High Income	\$ 4,294	\$ 348	\$ 80	\$ -	\$ 1	\$ -	\$ 244	\$ 4,968
<b><i>US Equity Funds</i></b>								
Parnassus Cor Eq Instl	\$ 197,094	\$ 15,647	\$ 7,304	\$ (6,154)	\$ 78	\$ -	\$ 32,272	\$ 246,240
Vanguard Institutional Index	\$ 173,908	\$ 13,382	\$ 9,699	\$ (6,180)	\$ 82	\$ -	\$ 30,892	\$ 221,784
Edgar Lomax Value	\$ 110,539	\$ 9,208	\$ 2,701	\$ (3,515)	\$ 51	\$ -	\$ (2,897)	\$ 116,087
Fidelity Contrafund	\$ 133,903	\$ 10,067	\$ 3,689	\$ (3,909)	\$ 50	\$ -	\$ 34,942	\$ 178,743
Vanguard Mid Cap Index Admiral	\$ 118,502	\$ 8,228	\$ 2,688	\$ (3,690)	\$ 54	\$ -	\$ 10,845	\$ 136,627
JPMorgan MidCap Value R6	\$ 54,276	\$ 13,286	\$ (846)	\$ (918)	\$ (4)	\$ -	\$ 2,455	\$ 68,250
Eaton Vance Atlanta Capital SMID	\$ 9,039	\$ 1,147	\$ 1,812	\$ -	\$ 4	\$ -	\$ 531	\$ 12,534
Neuberger Genesis Trust R6	\$ 60,621	\$ 4,526	\$ 8,139	\$ (1,845)	\$ 22	\$ -	\$ 7,969	\$ 79,431
Harbor Small Cap Value	\$ 76,671	\$ 6,732	\$ 3,319	\$ (2,265)	\$ 34	\$ -	\$ 6,587	\$ 91,078
Brown Capital Small Co Instl	\$ 46,044	\$ 5,102	\$ (192)	\$ (947)	\$ 10	\$ -	\$ 8,193	\$ 58,209
<b><i>International/Global Equity Funds</i></b>								
AmerFunds EuroPacific Growth R6	\$ 83,467	\$ 6,328	\$ (3,058)	\$ (2,682)	\$ 41	\$ -	\$ 10,190	\$ 94,285
MFS International Value R4	\$ 115,011	\$ 8,093	\$ (6,931)	\$ (3,602)	\$ 55	\$ -	\$ 13,979	\$ 126,605
Invesco Global A	\$ 42,579	\$ 2,249	\$ (51,015)	\$ -	\$ 12	\$ -	\$ 6,175	\$ -
AmerFunds Global Insight R6	\$ -	\$ 1,375	\$ 50,700	\$ (1,359)	\$ 6	\$ -	\$ 1,152	\$ 51,874
<b><i>Real Estate Fund</i></b>								
Vanguard REIT Index Admiral	\$ 51,382	\$ 4,005	\$ 2,513	\$ (1,787)	\$ 25	\$ -	\$ 1,823	\$ 57,960
<b><i>Target Date Funds</i></b>								
Vanguard Target Retirement 2020 Inv	\$ 98,902	\$ 6,834	\$ -	\$ (28,622)	\$ (71)	\$ -	\$ 6,471	\$ 83,514
Vanguard Target Retirement 2025 Inv	\$ 164,061	\$ 15,851	\$ 34	\$ -	\$ (75)	\$ -	\$ 14,401	\$ 194,273
Vanguard Target Retirement 2030 Inv	\$ 400,899	\$ 46,273	\$ (30,072)	\$ -	\$ (436)	\$ -	\$ 39,117	\$ 455,780
Vanguard Target Retirement 2035 Inv	\$ 511,502	\$ 59,409	\$ (1,054)	\$ (10,686)	\$ (511)	\$ -	\$ 54,451	\$ 613,110
Vanguard Target Retirement 2040 Inv	\$ 460,753	\$ 46,939	\$ -	\$ -	\$ (391)	\$ -	\$ 53,120	\$ 560,421
Vanguard Target Retirement 2045 Inv	\$ 523,233	\$ 74,303	\$ -	\$ -	\$ (427)	\$ -	\$ 66,206	\$ 663,315
Vanguard Target Retirement 2050 Inv	\$ 219,734	\$ 37,563	\$ -	\$ -	\$ (298)	\$ -	\$ 29,182	\$ 286,181
Vanguard Target Retirement 2055 Inv	\$ 272,174	\$ 49,120	\$ -	\$ (1,576)	\$ (337)	\$ -	\$ 36,287	\$ 355,669
Vanguard Target Retirement 2060 Inv	\$ 98,905	\$ 32,885	\$ -	\$ (1,489)	\$ (271)	\$ -	\$ 13,861	\$ 143,890
Vanguard Target Retirement Income Inv	\$ 20,262	\$ -	\$ -	\$ -	\$ (17)	\$ -	\$ 1,144	\$ 21,388
<b>Totals</b>	<b>\$ 4,378,478</b>	<b>\$ 501,178</b>	<b>\$ -</b>	<b>\$ (88,324)</b>	<b>\$ (2,206)</b>	<b>\$ -</b>	<b>\$ 486,357</b>	<b>\$ 5,275,483</b>

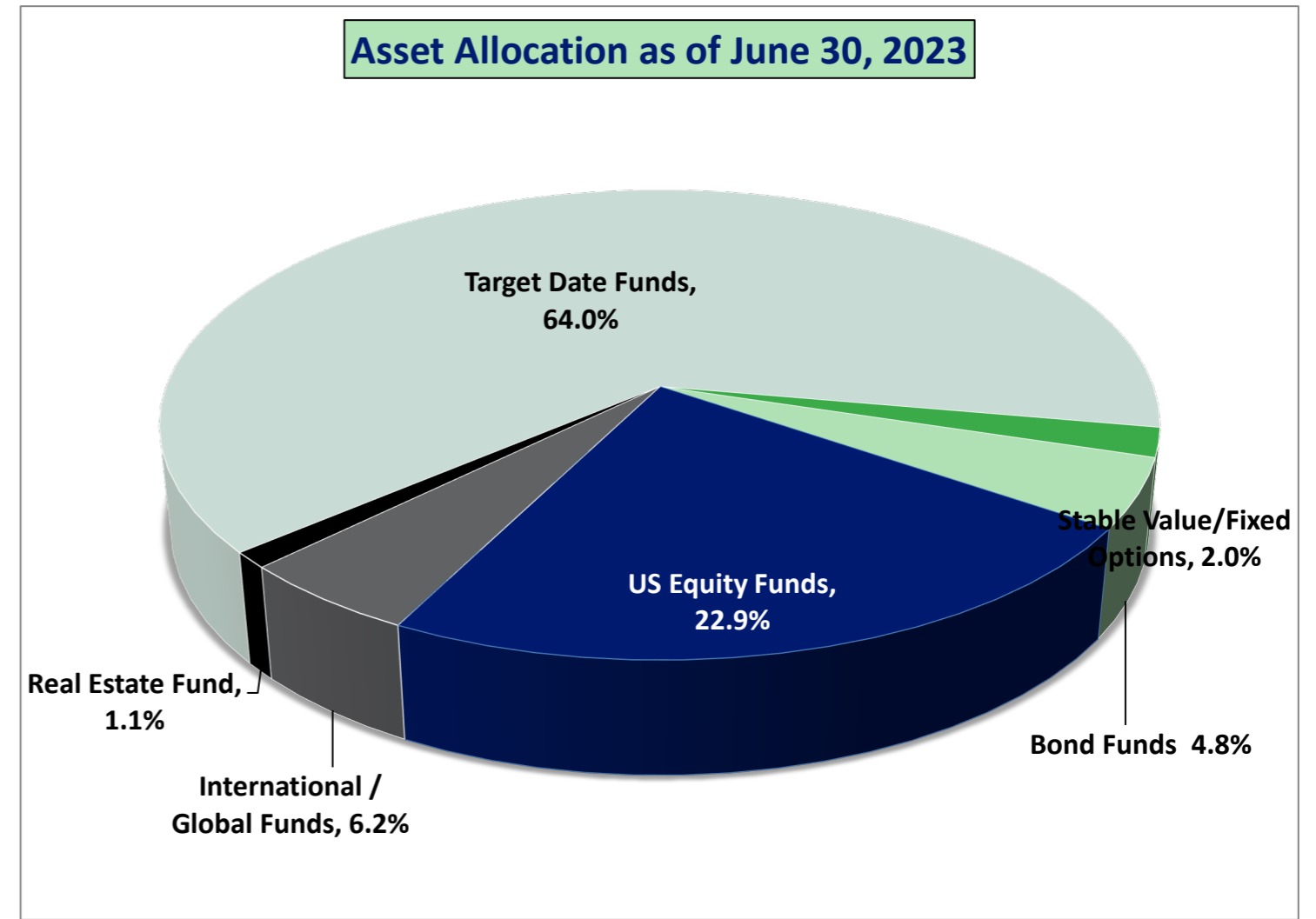
# City of Memphis 401(a) MSCAA Retirement Plan

## Plan Asset Allocation as of June 30, 2023



Plan Assets as of December 31, 2022

Fund Name	Plan Assets	% of Total
Stable Value/Fixed Options	\$ 107,692	2.5%
Bond Funds	\$ 227,326	5.2%
US Equity Funds	\$ 980,597	22.4%
International/Global Funds	\$ 241,057	5.5%
Real Estate Fund	\$ 51,382	1.2%
Target Date Funds	\$ 2,770,425	63.3%
<b>Totals</b>	<b>\$ 4,378,478</b>	<b>100.0%</b>



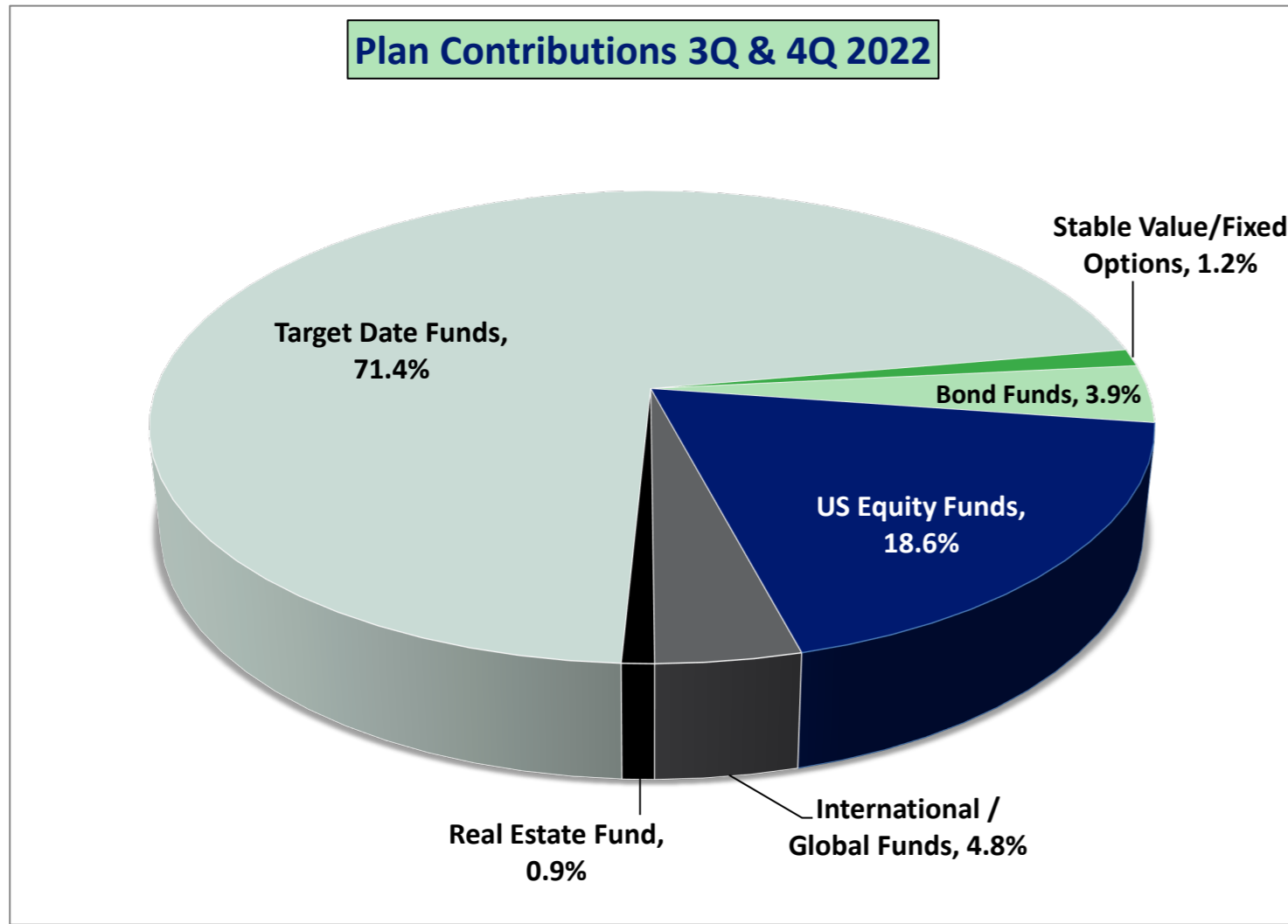
Plan Assets as of June 30, 2023

Fund Name	Plan Assets	% of Total
Stable Value/Fixed Options	\$ 105,562	2.0%
Bond Funds	\$ 252,669	4.8%
US Equity Funds	\$ 1,208,983	22.9%
International/Global Funds	\$ 272,765	5.2%
Real Estate Fund	\$ 57,960	1.1%
Target Date Funds	\$ 3,377,544	64.0%
<b>Totals</b>	<b>\$ 5,275,483</b>	<b>100.0%</b>



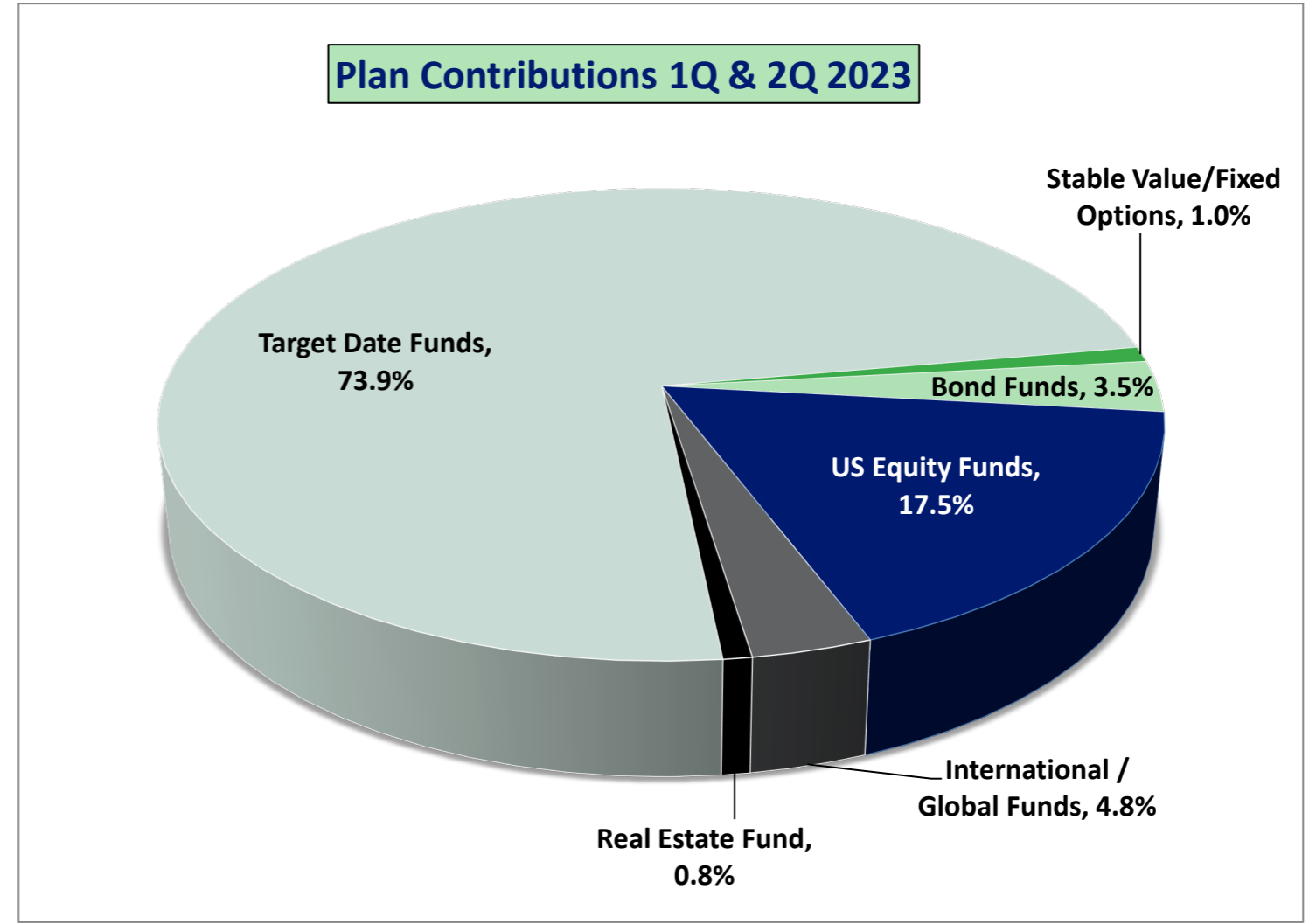
# City of Memphis 401(a) MSCAA Retirement Plan

## Contributions as of June 30, 2023



Plan Contributions 3Q & 4Q 2022

Fund Name	Plan Contributions	% of Total
Stable Value/Fixed Options	\$ 2,826	1.2%
Bond Funds	\$ 9,498	3.9%
US Equity Funds	\$ 44,941	18.6%
International/Global Funds	\$ 9,754	4.0%
Real Estate Fund	\$ 2,181	0.9%
Target Date Funds	\$ 172,989	71.4%
<b>Totals</b>	<b>\$ 242,189</b>	<b>100.0%</b>



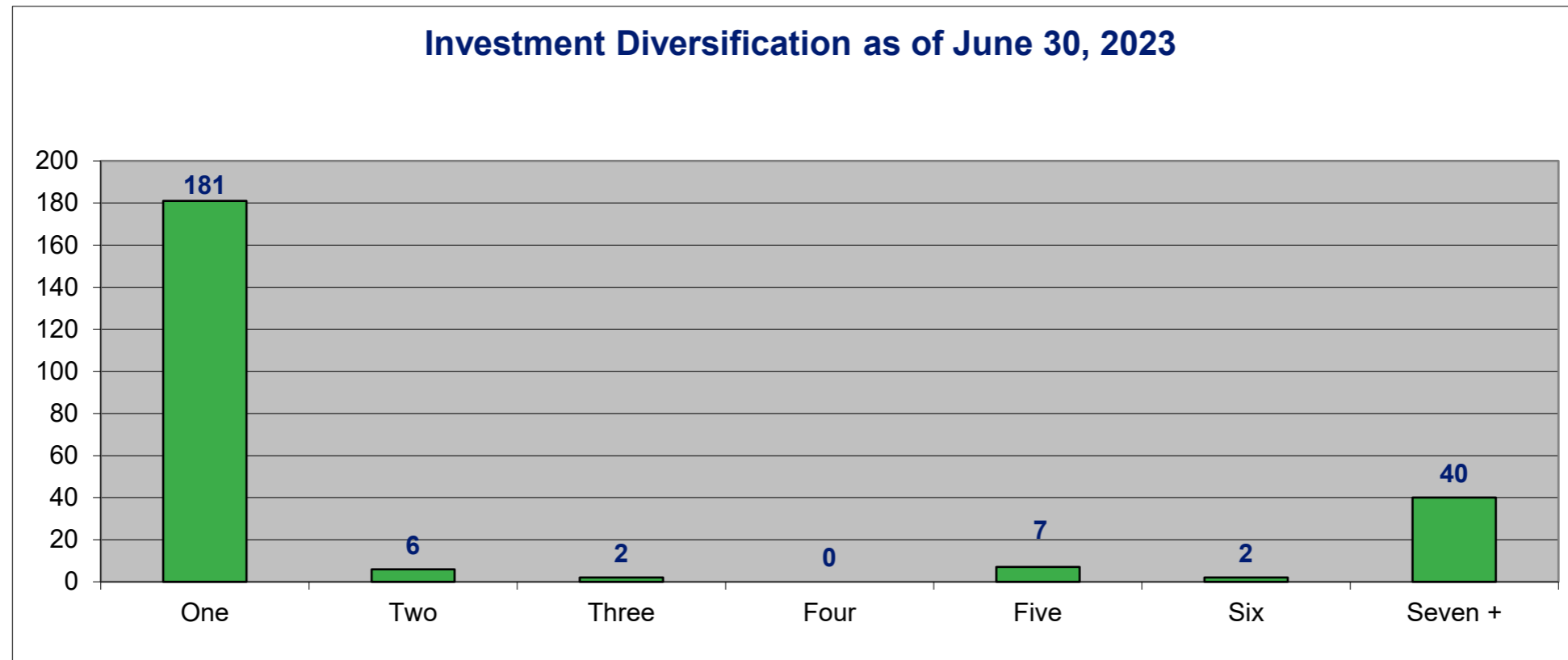
Plan Contributions 1Q & 2Q 2023

Fund Name	Plan Contributions	% of Total
Stable Value/Fixed Options	\$ 5,198	1.0%
Bond Funds	\$ 17,429	3.5%
US Equity Funds	\$ 87,324	17.5%
International/Global Funds	\$ 16,670	3.3%
Real Estate Fund	\$ 4,005	0.8%
Target Date Funds	\$ 369,176	73.9%
<b>Totals</b>	<b>\$ 499,802</b>	<b>100.0%</b>



# City of Memphis 401(a) MSCAA Retirement Plan

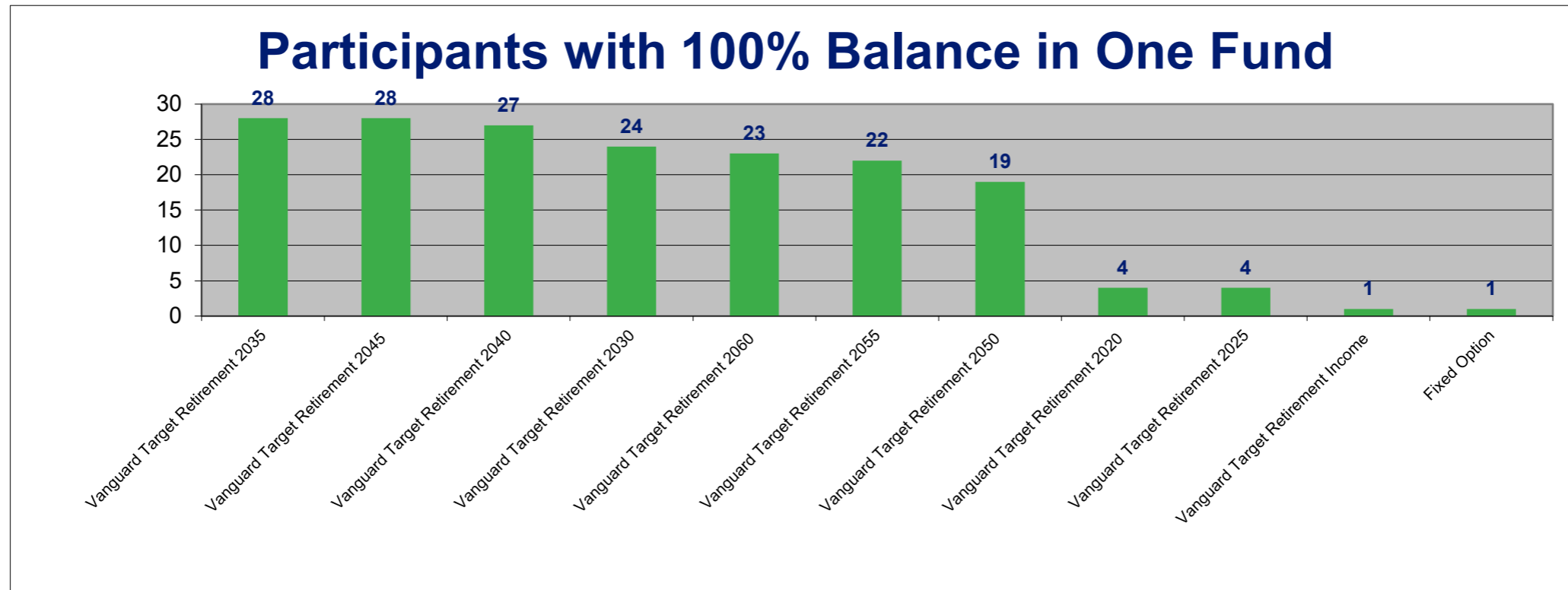
## Investment Diversification as of June 30, 2023



Number of Funds	No. of Participants	
One	181	76.1%
Two	6	2.5%
Three	2	0.8%
Four	0	0.0%
Five	7	2.9%
Six	2	0.8%
Seven +	40	16.8%
<b>Total</b>	<b>238</b>	<b>100%</b>

# City of Memphis 401(a) MSCAA Retirement Plan

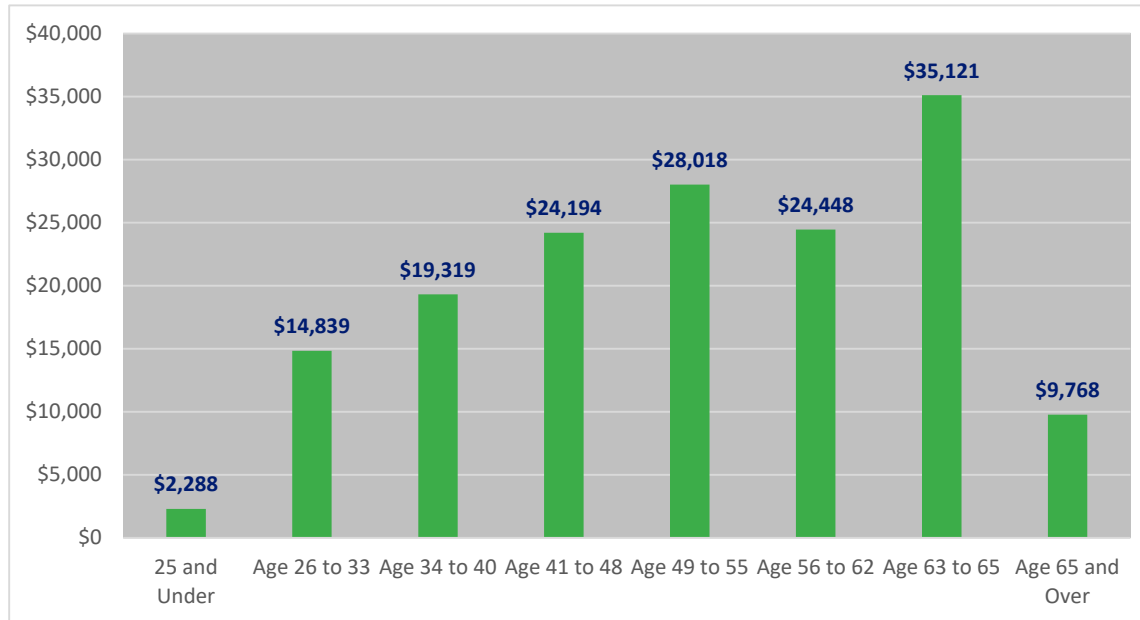
One Funders as of June 30, 2023



Number of Funds	No. of Participants	% of Participants
Vanguard Target Retirement 2035	28	15.5%
Vanguard Target Retirement 2045	28	15.5%
Vanguard Target Retirement 2040	27	14.9%
Vanguard Target Retirement 2030	24	13.3%
Vanguard Target Retirement 2060	23	12.7%
Vanguard Target Retirement 2055	22	12.2%
Vanguard Target Retirement 2050	19	10.5%
Vanguard Target Retirement 2020	4	2.2%
Vanguard Target Retirement 2025	4	2.2%
Vanguard Target Retirement Income	1	0.6%
Fixed Option	1	0.6%
<b>Total</b>	<b>181</b>	<b>100.0%</b>

# City of Memphis 401(a) MSCAA Retirement Plan

*Average Account Balance as of June 30, 2023*



Age Range	No. of Participants	Average Account Balance
25 and Under	10	\$2,288
Age 26 to 33	30	\$14,839
Age 34 to 40	43	\$19,319
Age 41 to 48	54	\$24,194
Age 49 to 55	57	\$28,018
Age 56 to 62	35	\$24,448
Age 63 to 65	6	\$35,121
Age 65 and Over	3	\$9,768
<b>Total</b>	<b>238</b>	<b>\$22,166</b>

	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Expense Ratio
Fixed Option	0.9	1.9	3.7	3.4	3.4	3.4		
PIMCO Total Return	-0.8	2.0	-1.5	-4.3	0.2	0.3	1.0	1.1
<i>Blmbg. U.S. Aggregate</i>	-0.8	2.1	-0.9	-4.0	0.8	0.4	1.5	
IM U.S. Broad Market Core+ Fixed Income (MF) Median	-0.7	2.5	-0.2	-3.3	1.0	0.9	1.7	0.6
PIMCO Total Return Rank	59	79	82	88	90	85	89	
TCW Total Return Bond	-1.2	2.3	-3.1	-5.2	0.0	0.0	1.3	0.5
<i>Blmbg. U.S. Aggregate</i>	-0.8	2.1	-0.9	-4.0	0.8	0.4	1.5	
IM U.S. Broad Market Core+ Fixed Income (MF) Median	-0.7	2.5	-0.2	-3.3	1.0	0.9	1.7	0.6
TCW Total Return Bond Rank	88	63	95	98	95	94	80	
Delaware Ivy High Income Bond Fund	2.4	5.5	11.1	5.1	2.6	4.6		0.7
<i>FTSE High Yield Market Index</i>	1.8	5.5	9.0	3.4	3.2	4.4	4.2	
IM U.S. High Yield Bonds (MF) Median	1.4	4.8	8.2	2.8	2.7	3.7	3.6	0.8
Delaware Ivy High Income Bond Fund Rank	8	15	3	9	57	14		
Parnassus Core Equity	7.5	15.7	18.1	14.3	13.4	13.3	12.8	0.6
<i>S&amp;P 500</i>	8.7	16.9	19.6	14.6	12.3	13.4	12.9	
IM U.S. Large Cap Core Equity (MF) Median	8.2	15.4	18.4	13.4	11.4	12.5	11.8	0.7
Parnassus Core Equity Rank	67	47	56	26	6	23	17	
Vanguard 500 Index Fund	8.7	16.9	19.5	14.6	12.3	13.4	12.8	0.0
<i>S&amp;P 500</i>	8.7	16.9	19.6	14.6	12.3	13.4	12.9	
IM U.S. Large Cap Core Equity (MF) Median	8.2	15.4	18.4	13.4	11.4	12.5	11.8	0.7
Vanguard 500 Index Fund Rank	34	31	34	21	22	22	16	
Edgar Lomax Value Fund	-0.2	-2.7	3.5	12.2	6.9	8.3	9.1	0.7
<i>Russell 1000 Value Index</i>	4.1	5.1	11.5	14.3	8.1	8.9	9.2	
IM U.S. Large Cap Value Equity (MF) Median	4.4	4.4	12.2	14.3	8.6	9.8	9.4	0.8
Edgar Lomax Value Fund Rank	98	100	99	80	87	87	64	

Returns for periods greater than one year are annualized.

Returns are expressed as percentages.

\*S&P MidCap 400 Index through May 16, 2003; MSCI US Mid Cap 450 Index through January 30, 2013; CRSP US Mid Cap Index thereafter.

\* Performance prior to February 2012 represents the Y Share Class; February 2012 forward represents the I Share Class.

	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Expense Ratio
Fidelity Contrafund	12.3	25.2	25.1	10.6	11.5	14.7	13.7	0.6
<i>Russell 1000 Growth Index</i>	12.8	29.0	27.1	13.7	15.1	16.9	15.7	
IM U.S. Large Cap Growth Equity (MF) Median	12.7	27.8	25.0	9.9	12.1	14.5	13.7	0.8
Fidelity Contrafund Rank	56	69	50	38	63	48	52	
Vanguard Mid Cap Index	4.8	8.8	13.7	12.0	8.6	10.3	10.4	0.1
<i>Mid Cap Index Blend*</i>	4.8	8.8	13.7	12.0	8.6	10.3	10.5	
IM U.S. Mid Cap Core Equity (MF) Median	4.6	7.2	12.8	13.6	7.4	9.0	8.7	0.9
Vanguard Mid Cap Index Rank	42	30	42	83	25	17	13	
JP Morgan Mid Cap Value	4.1	4.0	10.2	15.8	7.0			0.7
<i>Russell Midcap Value Index</i>	3.9	5.2	10.5	15.0	6.8	8.2	9.0	
IM U.S. Mid Cap Value Equity (MF) Median	4.3	4.8	11.9	17.2	7.1	8.6	8.6	0.9
JP Morgan Mid Cap Value Rank	55	57	61	67	54			
Eaton Vance Atlanta Capital SMID	4.0	4.9	13.7	13.3	9.3	11.3	11.8	1.1
<i>Russell 2500 Index</i>	5.2	8.8	13.6	12.3	6.5	9.7	9.4	
IM U.S. SMID Cap Core Equity (MF) Median	4.5	7.6	14.0	15.0	6.2	8.5	8.3	1.0
Eaton Vance Atlanta Capital SMID Rank	67	88	54	66	6	8	1	
Neuberger Berman Genesis Trust	4.8	12.2	16.8	10.9	9.3	11.3	10.6	0.7
<i>Russell 2000 Index</i>	5.2	8.1	12.3	10.8	4.2	8.8	8.3	
IM U.S. Small Cap Equity (MF) Median	4.3	8.2	12.9	13.4	5.4	9.0	8.5	1.1
Neuberger Berman Genesis Trust Rank	42	20	22	64	6	18	9	
Harbor Small Cap Value Fund	2.7	8.4	15.4	14.8	6.2	10.0	9.7	0.9
<i>Russell 2000 Value Index</i>	3.2	2.5	6.0	15.4	3.5	7.7	7.3	
IM U.S. Small Cap Value Equity (MF) Median	3.7	4.4	9.7	19.1	4.9	8.4	7.5	1.1
Harbor Small Cap Value Fund Rank	68	15	27	95	23	18	8	

Returns for periods greater than one year are annualized.

Returns are expressed as percentages.

\*S&P MidCap 400 Index through May 16, 2003; MSCI US Mid Cap 450 Index through January 30, 2013; CRSP US Mid Cap Index thereafter.

\* Performance prior to February 2012 represents the Y Share Class; February 2012 forward represents the I Share Class.

	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Expense Ratio
Brown Capital Management Small Company	7.2	16.8	10.3	-4.3	2.1	8.8	10.2	1.1
<i>Russell 2000 Growth Index</i>	7.1	13.6	18.5	6.1	4.2	9.3	8.8	
IM U.S. Small Cap Growth Equity (MF) Median	5.1	11.5	14.9	7.2	6.1	10.7	9.3	1.1
Brown Capital Management Small Company Rank	16	7	92	99	96	79	27	
American Funds Europacific Growth Fund	2.2	12.2	15.8	5.5	4.3	7.4	6.3	0.5
<i>MSCI EAFE (Net)</i>	3.0	11.7	18.8	8.9	4.4	6.9	5.4	
IM International Large Cap Core Equity (MF) Median	3.2	12.2	17.8	8.5	3.9	6.2	4.8	0.9
American Funds Europacific Growth Fund Rank	88	50	70	92	39	24	2	
MFS International Value	3.1	12.3	17.0	4.3	5.5	7.3	7.7	1.0
<i>MSCI EAFE Value Index (Net)</i>	3.2	9.3	17.4	11.3	2.9	6.0	4.1	
IM International Value Equity (MF) Median	2.9	10.5	17.5	11.2	3.2	5.9	4.5	1.0
MFS International Value Rank	42	27	54	100	6	15	1	
American Funds Global Insight R6	4.5	12.3	18.1	9.3				0.5
<i>MSCI World (Net)</i>	6.8	15.1	18.5	12.2	9.1	10.6	9.5	
IM Global Large Cap Core Equity (MF) Median	5.6	12.3	17.5	9.3	8.0	9.5	8.4	0.9
American Funds Global Insight R6 Rank	74	51	29	55				
Vanguard REIT Index Admiral	1.6	3.5	-3.9	5.9	4.4	3.2	6.1	0.1
<i>Vanguard REIT Spliced Index</i>	1.7	3.5	-3.8	6.0	4.5	3.3	6.2	
IM Global Real Estate (MF) Median	0.6	2.5	-3.8	3.7	1.4	1.9	3.5	1.1
Vanguard REIT Index Admiral Rank	8	14	55	5	6	24	1	
Vanguard Target Retirement Income	1.4	5.6	4.5	1.7	3.4	3.8	4.1	0.1
<i>Vanguard Target Income Composite Index</i>	1.4	5.6	4.8	1.9	3.7	4.0	4.4	
IM Mixed-Asset Target Today (MF) Median	1.5	5.5	5.0	2.1	3.3	3.9	3.8	0.6
Vanguard Target Retirement Income Rank	61	47	63	60	43	56	39	

Returns for periods greater than one year are annualized.

Returns are expressed as percentages.

\*S&P MidCap 400 Index through May 16, 2003; MSCI US Mid Cap 450 Index through January 30, 2013; CRSP US Mid Cap Index thereafter.

\* Performance prior to February 2012 represents the Y Share Class; February 2012 forward represents the I Share Class.

	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Expense Ratio
Vanguard Target Retirement 2020	2.1	7.0	6.6	3.8	4.6	5.7	6.0	0.1
<i>Vanguard Target 2020 Composite Index</i>	2.2	7.0	6.9	4.1	5.0	6.0	6.3	
IM Mixed-Asset Target 2020 (MF) Median	2.0	6.6	6.6	3.9	4.4	5.5	5.6	0.6
Vanguard Target Retirement 2020 Rank	37	30	51	57	36	33	20	
Vanguard Target Retirement 2025	3.0	8.5	8.6	5.0	5.3	6.5	6.7	0.1
<i>Vanguard Target 2025 Composite Index</i>	3.0	8.4	9.0	5.3	5.7	6.9	7.0	
IM Mixed-Asset Target 2025 (MF) Median	2.2	7.1	7.2	4.5	4.7	5.9	5.8	0.6
Vanguard Target Retirement 2025 Rank	9	8	13	32	22	23	15	
Vanguard Target Retirement 2030	3.6	9.4	9.9	6.0	5.8	7.2	7.2	0.1
<i>Vanguard Target 2030 Composite Index</i>	3.6	9.4	10.5	6.4	6.2	7.6	7.6	
IM Mixed-Asset Target 2030 (MF) Median	3.0	8.4	9.0	5.9	5.3	6.8	6.6	0.6
Vanguard Target Retirement 2030 Rank	11	7	15	40	26	30	18	
Vanguard Target Retirement 2035	4.1	10.3	11.3	7.2	6.4	8.0	7.8	0.1
<i>Vanguard Target 2035 Composite Index</i>	4.1	10.2	11.8	7.6	6.7	8.3	8.1	
IM Mixed-Asset Target 2035 (MF) Median	3.8	9.6	11.1	7.4	6.1	7.7	7.3	0.6
Vanguard Target Retirement 2035 Rank	31	23	43	61	32	39	26	
Vanguard Target Retirement 2040	4.6	11.1	12.6	8.4	6.9	8.7	8.3	0.1
<i>Vanguard Target 2040 Composite Index</i>	4.6	11.1	13.1	8.7	7.3	9.0	8.7	
IM Mixed-Asset Target 2040 (MF) Median	4.6	10.9	12.9	8.6	6.6	8.4	7.8	0.6
Vanguard Target Retirement 2040 Rank	54	43	59	62	32	34	23	
Vanguard Target Retirement 2045	5.1	11.9	13.9	9.5	7.5	9.2	8.7	0.1
<i>Vanguard Target 2045 Composite Index</i>	5.1	11.9	14.4	9.9	7.8	9.6	9.0	
IM Mixed-Asset Target 2045 (MF) Median	5.1	11.5	13.9	9.4	7.1	8.8	8.0	0.6
Vanguard Target Retirement 2045 Rank	51	38	51	46	25	25	18	

Returns for periods greater than one year are annualized.

Returns are expressed as percentages.

\*S&P MidCap 400 Index through May 16, 2003; MSCI US Mid Cap 450 Index through January 30, 2013; CRSP US Mid Cap Index thereafter.

\* Performance prior to February 2012 represents the Y Share Class; February 2012 forward represents the I Share Class.

	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Expense Ratio
Vanguard Target Retirement 2050	5.4	12.4	14.6	9.7	7.6	9.3	8.8	0.1
<i>Vanguard Target 2050 Composite Index</i>	5.4	12.3	15.0	10.1	8.0	9.7	9.1	
IM Mixed-Asset Target 2050 (MF) Median	5.3	12.0	14.5	9.6	7.1	8.9	8.2	0.6
Vanguard Target Retirement 2050 Rank	43	33	46	44	22	25	23	
Vanguard Target Retirement 2055	5.4	12.4	14.6	9.7	7.6	9.3	8.7	0.1
<i>Vanguard Target 2055 Composite Index</i>	5.4	12.3	15.0	10.1	8.0	9.7	9.1	
IM Mixed-Asset Target 2055 (MF) Median	5.3	12.2	14.7	9.7	7.2	9.0	8.3	0.6
Vanguard Target Retirement 2055 Rank	48	43	55	49	24	30	26	
Vanguard Target Retirement 2060	5.4	12.4	14.6	9.8	7.6	9.3	8.7	0.1
<i>Vanguard Target 2060 Composite Index</i>	5.4	12.3	15.0	10.1	8.0	9.7	9.1	
IM Mixed-Asset Target 2055 (MF) Median	5.3	12.2	14.7	9.7	7.2	9.0	8.3	0.6
Vanguard Target Retirement 2060 Rank	47	42	52	49	24	29	26	

Returns for periods greater than one year are annualized.

Returns are expressed as percentages.

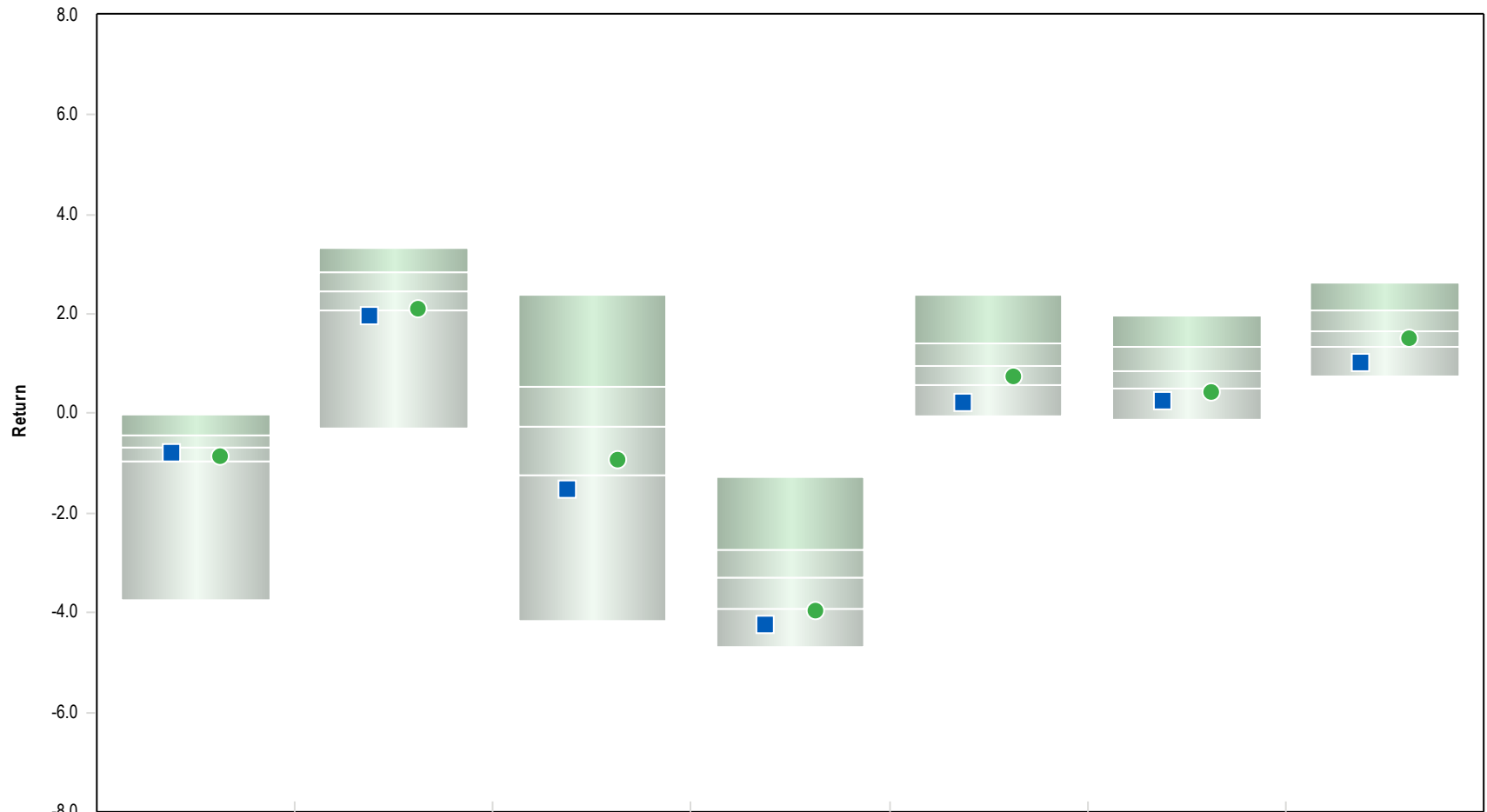
\*S&P MidCap 400 Index through May 16, 2003; MSCI US Mid Cap 450 Index through January 30, 2013; CRSP US Mid Cap Index thereafter.

\* Performance prior to February 2012 represents the Y Share Class; February 2012 forward represents the I Share Class.



## **INVESTMENT OPTIONS**

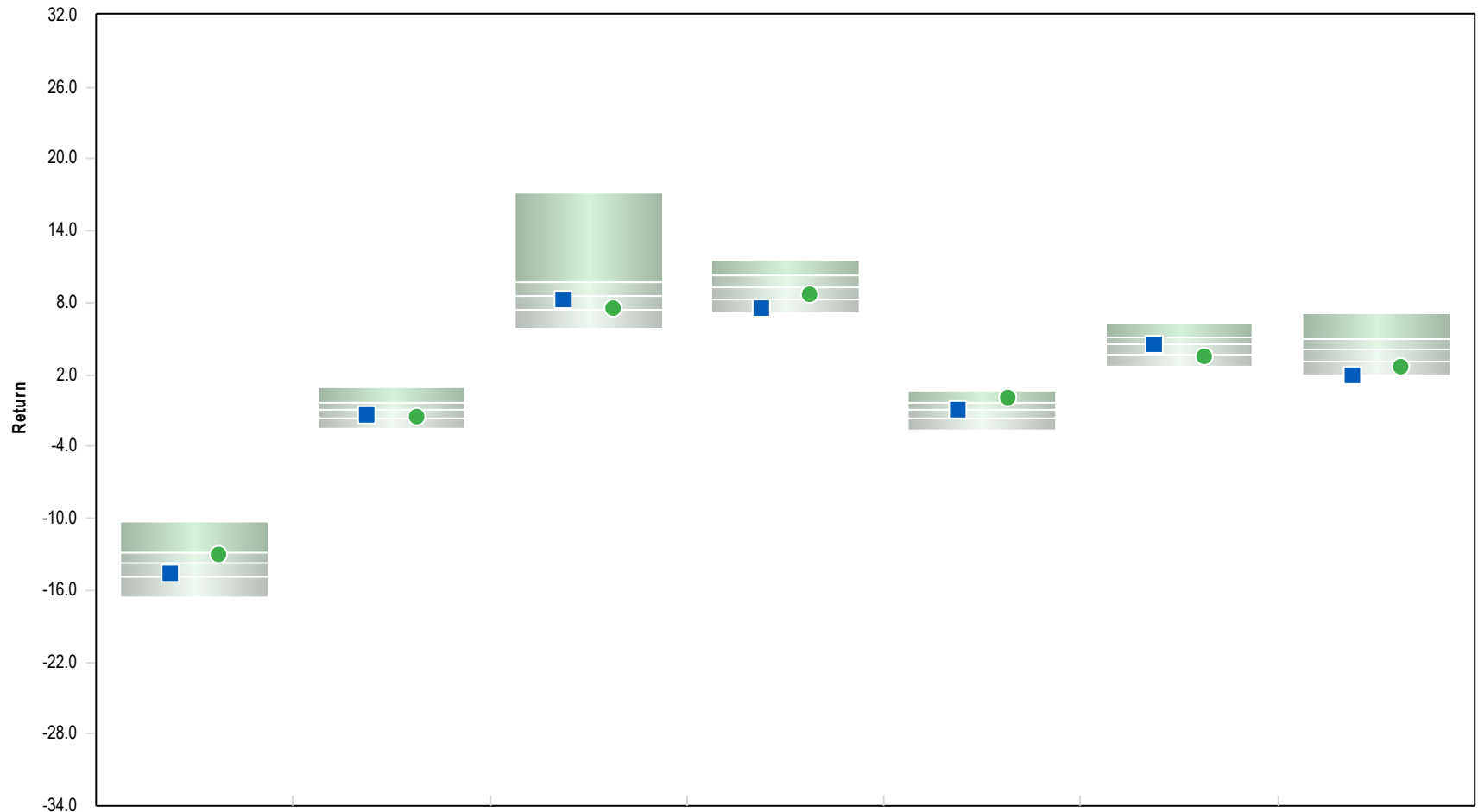
Peer Group Analysis - IM U.S. Broad Market Core+ Fixed Income (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ PIMCO Total Return	-0.8 (59)	2.0 (79)	-1.5 (82)	-4.3 (87)	0.2 (90)	0.3 (84)	1.0 (89)
● Blmbg. U.S. Aggregate	-0.8 (62)	2.1 (74)	-0.9 (70)	-4.0 (79)	0.8 (62)	0.4 (78)	1.5 (62)

5th Percentile	0.0	3.3	2.4	-1.3	2.4	2.0	2.6
1st Quartile	-0.4	2.8	0.5	-2.7	1.4	1.3	2.1
Median	-0.7	2.4	-0.2	-3.3	1.0	0.8	1.7
3rd Quartile	-1.0	2.1	-1.2	-3.9	0.6	0.5	1.4
95th Percentile	-3.7	-0.3	-4.2	-4.7	-0.1	-0.1	0.8

Peer Group Analysis - IM U.S. Broad Market Core+ Fixed Income (MF)



	2022	2021	2020	2019	2018	2017	2016
■ PIMCO Total Return	-14.6 (71)	-1.4 (70)	8.2 (58)	7.6 (88)	-0.9 (47)	4.5 (52)	1.9 (96)
● Blmbg. U.S. Aggregate	-13.0 (29)	-1.5 (74)	7.5 (73)	8.7 (65)	0.0 (17)	3.5 (78)	2.6 (84)

5th Percentile	-10.3	0.9	17.2	11.6	0.7	6.2	7.2
1st Quartile	-12.9	-0.4	9.7	10.3	-0.4	5.1	5.0
Median	-13.7	-0.9	8.6	9.3	-1.0	4.5	4.1
3rd Quartile	-14.8	-1.6	7.4	8.3	-1.7	3.6	3.1
95th Percentile	-16.6	-2.5	5.9	7.1	-2.7	2.7	2.0

**Fund Information**

Fund Name : PIMCO Funds: PIMCO Total Return Fund; Class R Shares  
 Fund Family : PIMCO  
 Ticker : PTRRX  
 Inception Date : 12/31/2002  
 Fund Assets : \$408 Million  
 Portfolio Turnover : 377%

Portfolio Assets : \$58,458 Million  
 Portfolio Manager : Team Managed  
 PM Tenure :  
 Fund Style : IM U.S. Broad Market Core+ Fixed Income (MF)  
 Style Benchmark : Blmbg. U.S. Aggregate

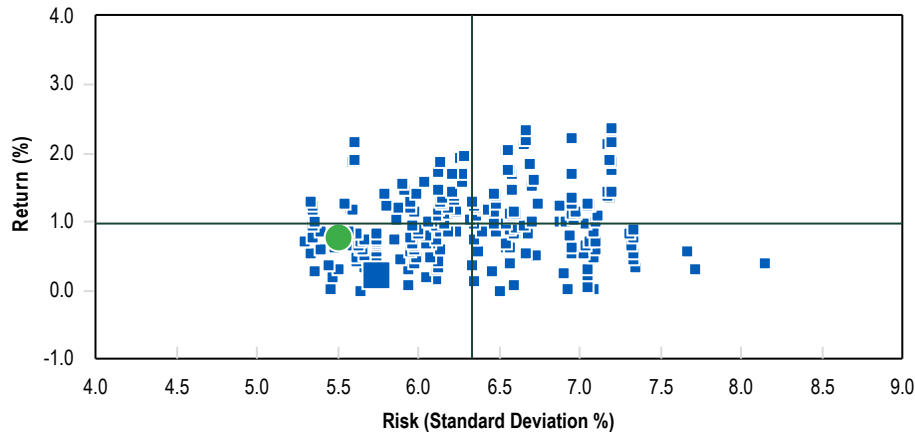
**Fund Investment Policy**

The Fund seeks maximum total return, consistent with preservation of capital and prudent investment management. The Fund seeks to achieve its investment objective by investing in a diversified portfolio of fixed income instruments. The average portfolio duration normally varies within a three-to-six year time frame.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
PIMCO Total Return	0.2	5.7	-0.2	-0.5	1.0	1.0	0.9	-0.6	5.6	04/01/2001
Blmbg. U.S. Aggregate	0.8	5.5	-0.1	0.0	1.0	1.0	0.0		5.3	04/01/2001
90 Day U.S. Treasury Bill	1.6	0.7		1.5	0.0	0.1	5.3	0.1	0.0	04/01/2001

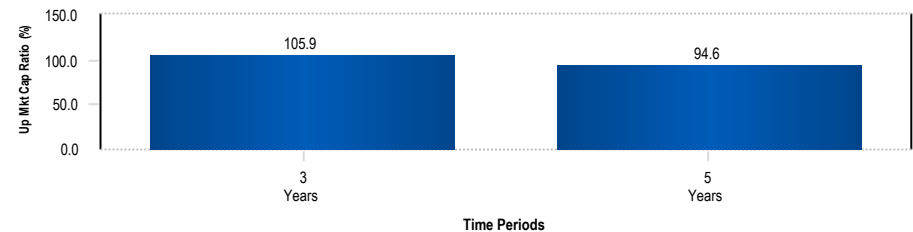
**Peer Group Scattergram (07/01/18 to 06/30/23)**



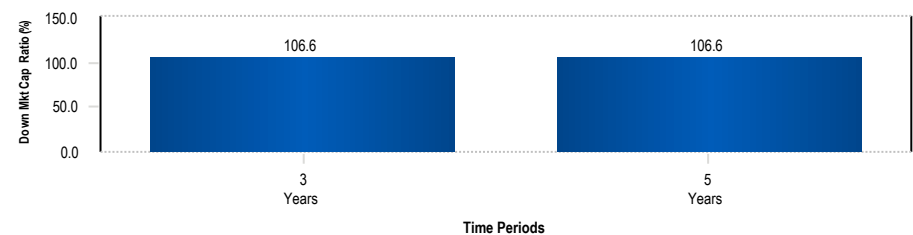
	Return	Standard Deviation
■ PIMCO Total Return	0.2	5.7
● Blmbg. U.S. Aggregate	0.8	5.5
— Median	1.0	6.3

**Up Down Market Capture**

**Up Market Capture**

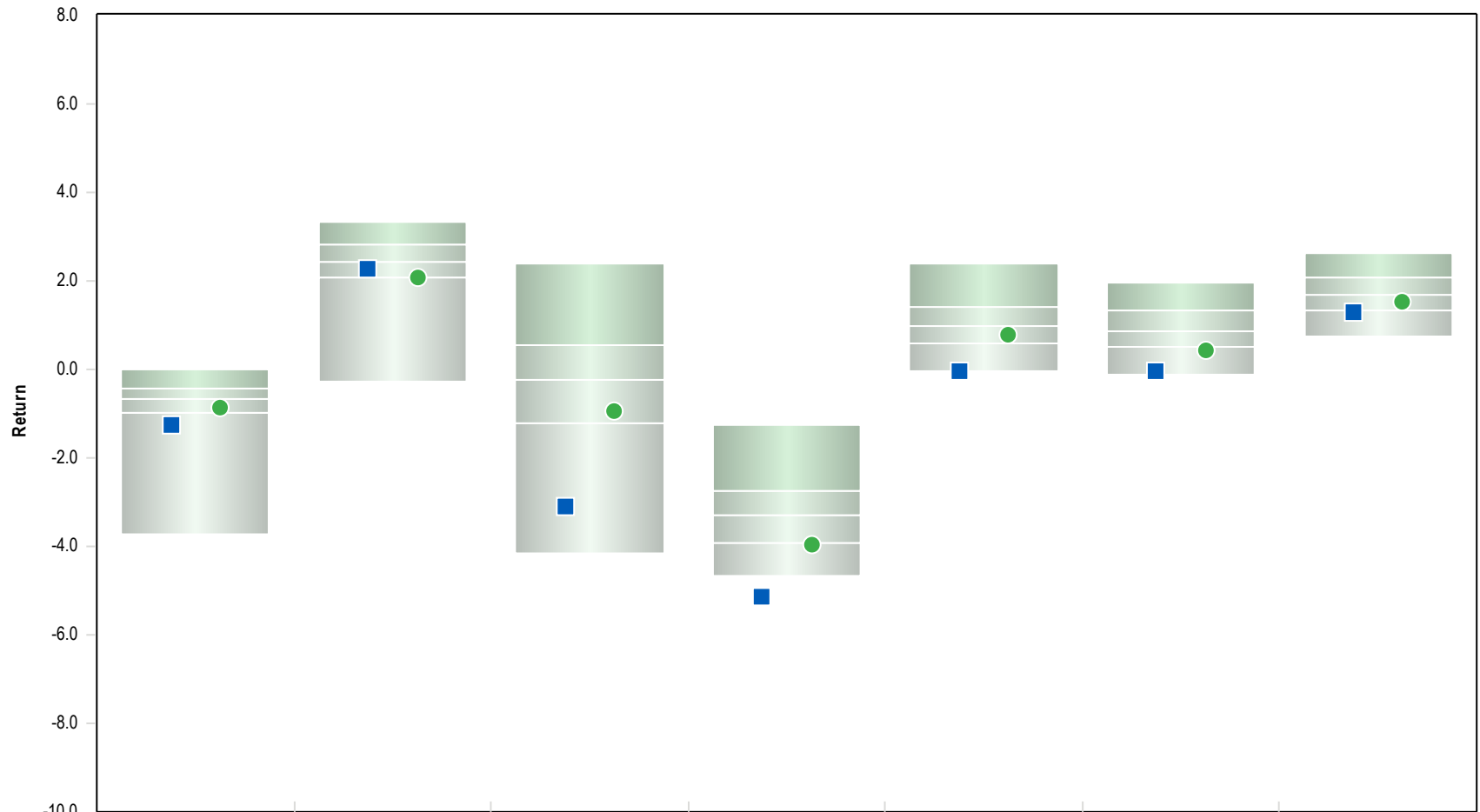


**Down Market Capture**



\* Quarterly periodicity used.

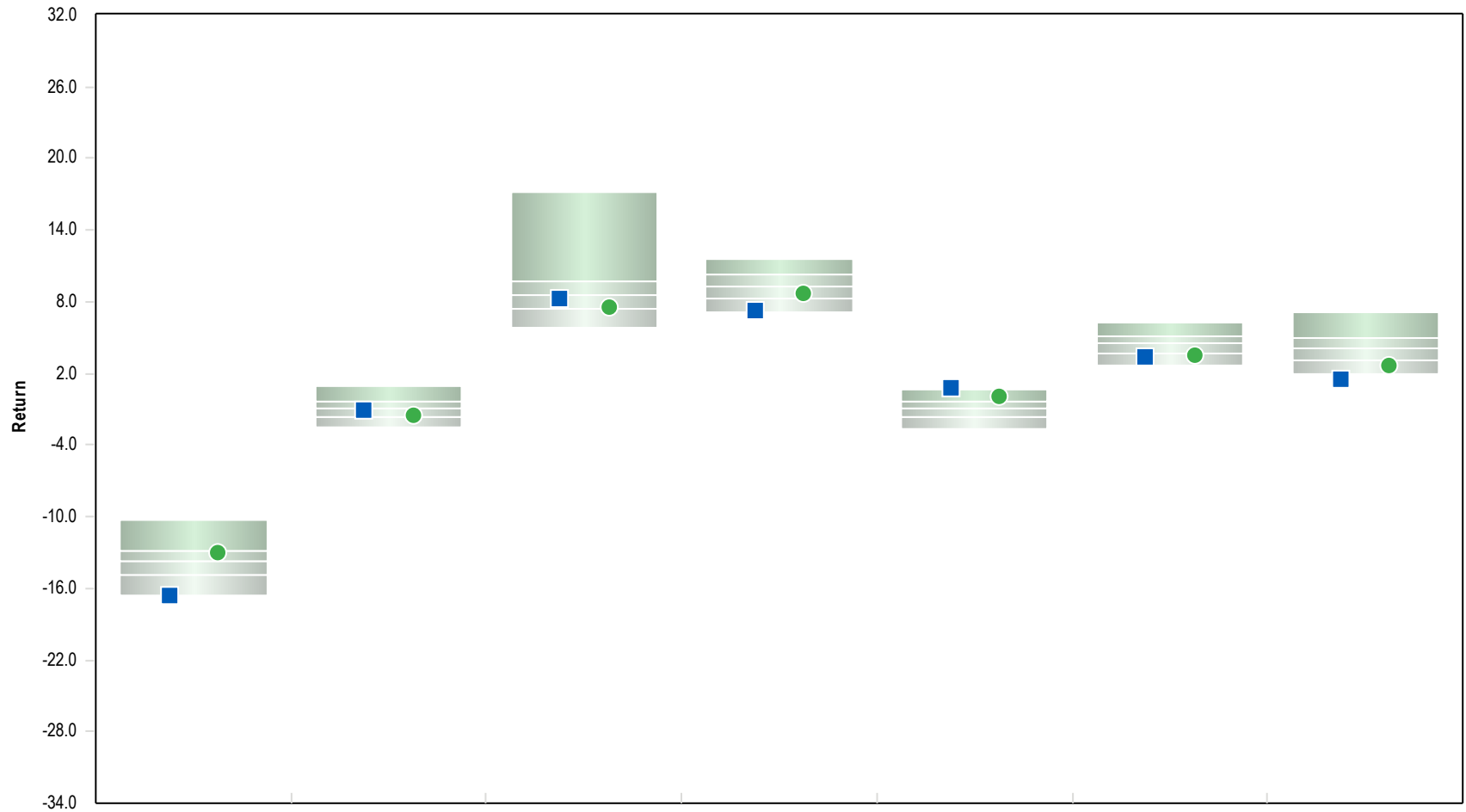
Peer Group Analysis - IM U.S. Broad Market Core+ Fixed Income (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ TCW Total Return Bond	-1.2 (88)	2.3 (63)	-3.1 (95)	-5.2 (98)	0.0 (95)	0.0 (94)	1.3 (80)
● Blmbg. U.S. Aggregate	-0.8 (62)	2.1 (74)	-0.9 (70)	-4.0 (79)	0.8 (62)	0.4 (78)	1.5 (62)

5th Percentile	0.0	3.3	2.4	-1.3	2.4	2.0	2.6
1st Quartile	-0.4	2.8	0.5	-2.7	1.4	1.3	2.1
Median	-0.7	2.4	-0.2	-3.3	1.0	0.8	1.7
3rd Quartile	-1.0	2.1	-1.2	-3.9	0.6	0.5	1.4
95th Percentile	-3.7	-0.3	-4.2	-4.7	-0.1	-0.1	0.8

Peer Group Analysis - IM U.S. Broad Market Core+ Fixed Income (MF)



	2022	2021	2020	2019	2018	2017	2016
■ TCW Total Return Bond	-16.6 (96)	-1.1 (55)	8.3 (57)	7.3 (92)	0.8 (4)	3.4 (81)	1.5 (99)
● Blmbg. U.S. Aggregate	-13.0 (29)	-1.5 (74)	7.5 (73)	8.7 (65)	0.0 (17)	3.5 (78)	2.6 (84)

5th Percentile	-10.3	0.9	17.2	11.6	0.7	6.2	7.2
1st Quartile	-12.9	-0.4	9.7	10.3	-0.4	5.1	5.0
Median	-13.7	-0.9	8.6	9.3	-1.0	4.5	4.1
3rd Quartile	-14.8	-1.6	7.4	8.3	-1.7	3.6	3.1
95th Percentile	-16.6	-2.5	5.9	7.1	-2.7	2.7	2.0

**Fund Information**

Fund Name : TCW Funds, Inc: TCW Total Return Bond Fund; Class I Shares  
 Fund Family : TCW Funds  
 Ticker : TGLMX  
 Inception Date : 06/17/1993  
 Fund Assets : \$2,349 Million  
 Portfolio Turnover : 387%

Portfolio Assets : \$2,797 Million  
 Portfolio Manager : Team Managed  
 PM Tenure :  
 Fund Style : IM U.S. Broad Market Core+ Fixed Income (MF)  
 Style Benchmark : Blmbg. U.S. Aggregate

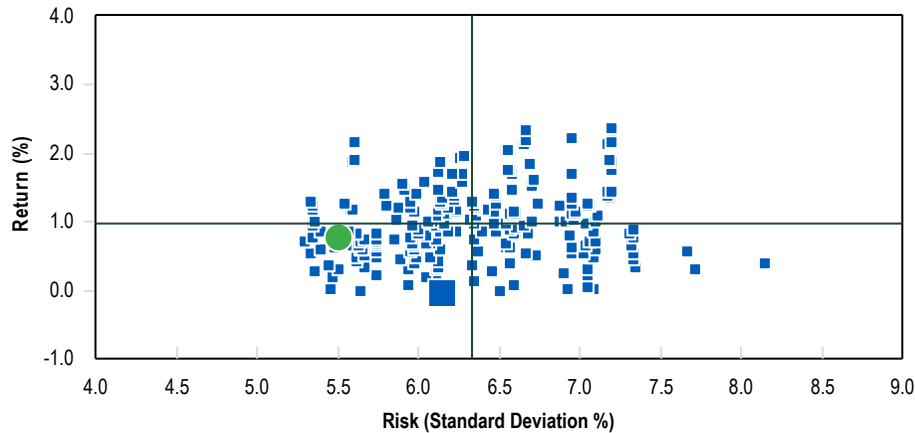
**Fund Investment Policy**

The Fund seeks to maximize current income and achieve above average total return consistent with prudent investment management over a full market cycle.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
TCW Total Return Bond	0.0	6.1	-0.2	-0.8	1.1	1.0	1.2	-0.7	6.0	07/01/1993
Blmbg. U.S. Aggregate	0.8	5.5	-0.1	0.0	1.0	1.0	0.0		5.3	07/01/1993
90 Day U.S. Treasury Bill	1.6	0.7		1.5	0.0	0.1	5.3	0.1	0.0	07/01/1993

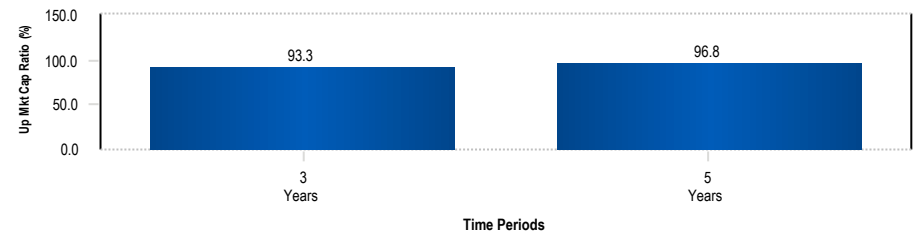
**Peer Group Scattergram (07/01/18 to 06/30/23)**



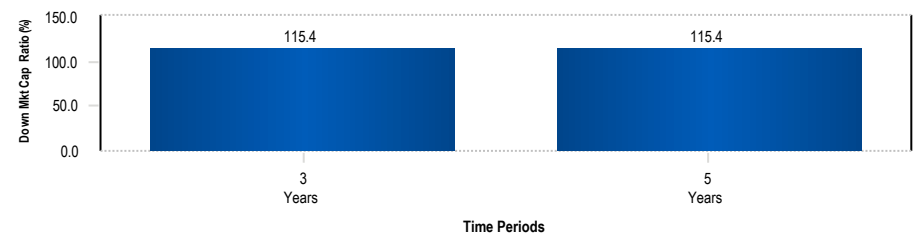
	Return	Standard Deviation
TCW Total Return Bond	0.0	6.1
Blmbg. U.S. Aggregate	0.8	5.5
Median	1.0	6.3

**Up Down Market Capture**

**Up Market Capture**

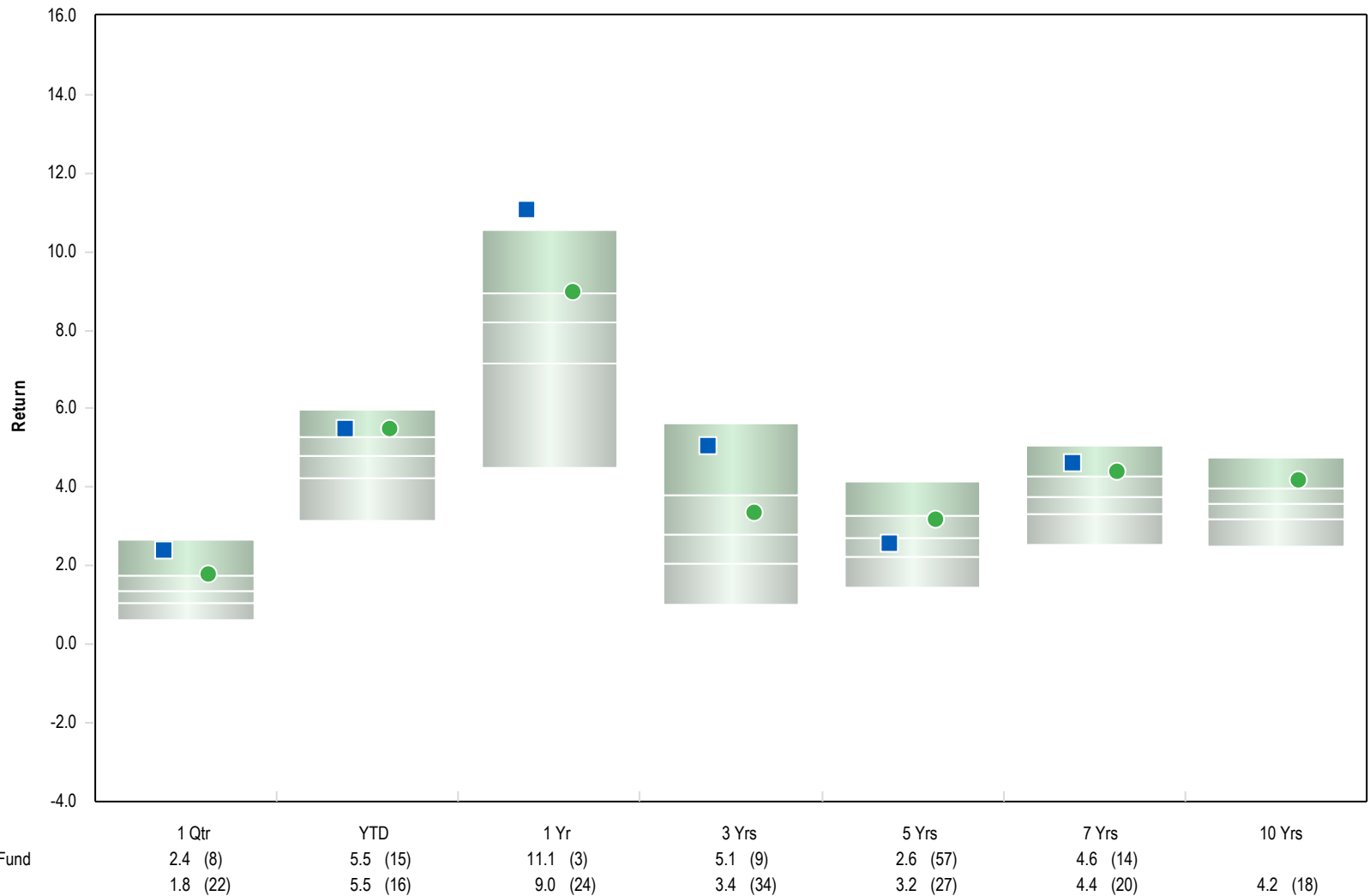


**Down Market Capture**



\* Quarterly periodicity used.

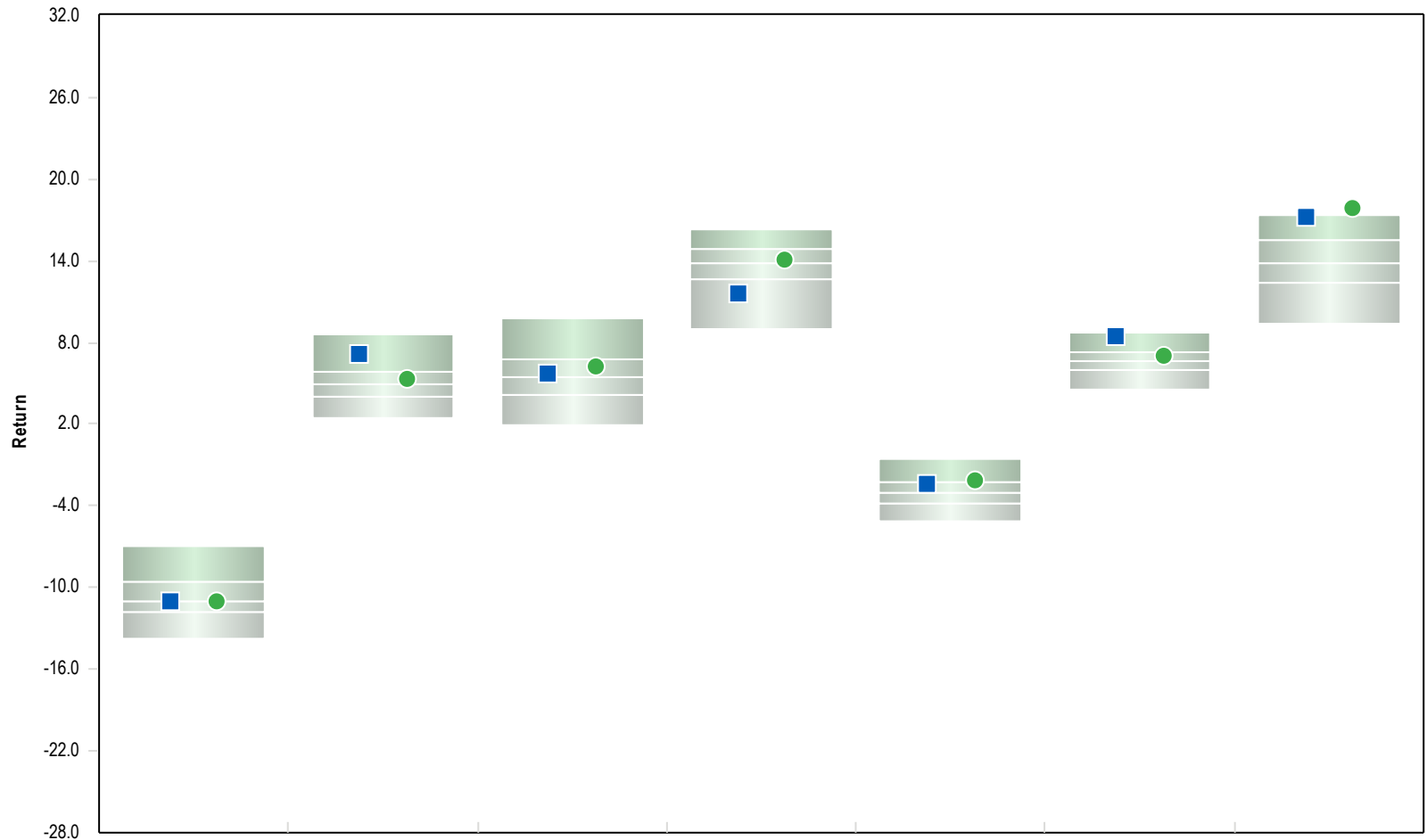
Peer Group Analysis - IM U.S. High Yield Bonds (MF)



5th Percentile	2.7	6.0	10.5	5.6	4.2	5.1	4.7
1st Quartile	1.7	5.3	9.0	3.8	3.3	4.3	4.0
Median	1.4	4.8	8.2	2.8	2.7	3.7	3.6
3rd Quartile	1.1	4.2	7.2	2.1	2.2	3.3	3.2
95th Percentile	0.6	3.1	4.5	1.0	1.5	2.5	2.5



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



■ Delaware Ivy High Income Bond Fund  
● FTSE High Yield Market Index

	2022	2021	2020	2019	2018	2017	2016
Delaware Ivy High Income Bond Fund	-11.1 (53)	7.1 (12)	5.7 (44)	11.7 (86)	-2.3 (28)	8.4 (8)	17.3 (6)
FTSE High Yield Market Index	-11.0 (52)	5.4 (40)	6.3 (32)	14.1 (44)	-2.1 (23)	7.0 (34)	17.8 (4)

5th Percentile	-7.0	8.6	9.7	16.3	-0.5	8.7	17.4
1st Quartile	-9.6	5.9	6.8	14.9	-2.2	7.3	15.5
Median	-11.0	4.9	5.4	13.8	-3.0	6.6	13.8
3rd Quartile	-11.8	4.0	4.2	12.6	-3.8	5.9	12.4
95th Percentile	-13.8	2.4	1.9	9.0	-5.2	4.6	9.4

**Fund Information**

Fund Name : Ivy Funds: Delaware Ivy High Income Fund; Class I Shares  
 Fund Family : Macquarie Asset Management  
 Ticker : IVHIX  
 Inception Date : 04/02/2007  
 Fund Assets : \$1,032 Million  
 Portfolio Turnover : 50%

Portfolio Assets : \$2,493 Million  
 Portfolio Manager : Brown/McCarthy  
 PM Tenure : 2021--2021  
 Fund Style : IM U.S. High Yield Bonds (MF)  
 Style Benchmark : FTSE High Yield Market Index

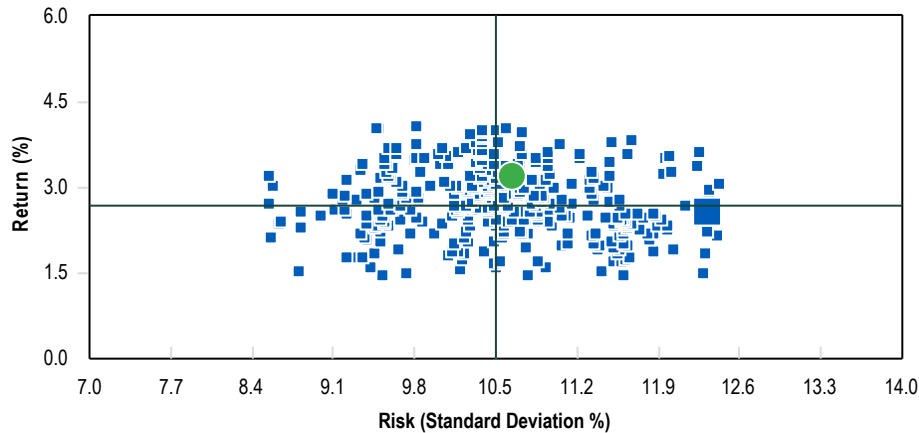
**Fund Investment Policy**

The Fund seeks a high level a current income as its primary goal and capital growth as a secondary goal when consistent with its primary goal. The Fund invests in high-yield, high-risk, fixed-income securities of U.S. issuers and may invest up to 20% of its total assets in common stock in order to seek capital growth.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Delaware Ivy High Income Bond Fund	2.6	12.3	0.1	-0.9	1.1	1.0	2.8	-0.1	12.4	02/01/1996
FTSE High Yield Market Index	3.2	10.6	0.2	0.0	1.0	1.0	0.0		10.7	02/01/1996
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	10.7	-0.2	0.0	02/01/1996

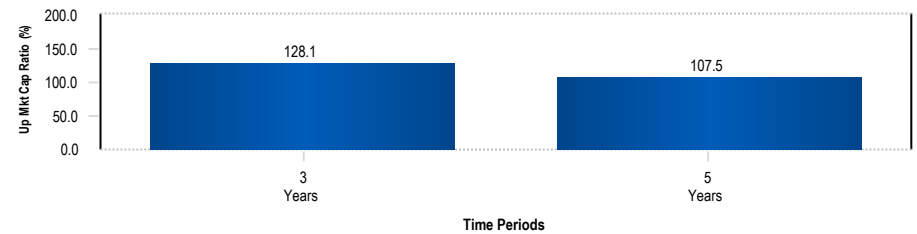
**Peer Group Scattergram (07/01/18 to 06/30/23)**



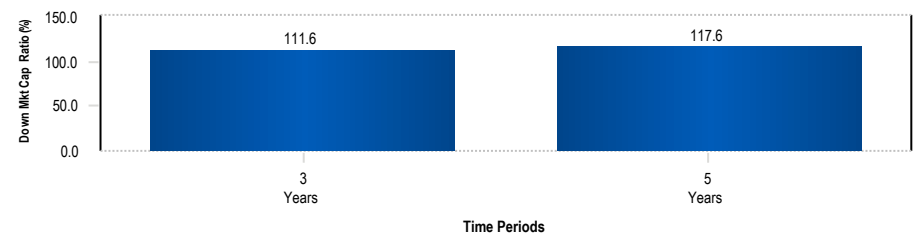
	Return	Standard Deviation
Delaware Ivy High Income Bond Fund	2.6	12.3
FTSE High Yield Market Index	3.2	10.6
Median	2.7	10.5

**Up Down Market Capture**

**Up Market Capture**

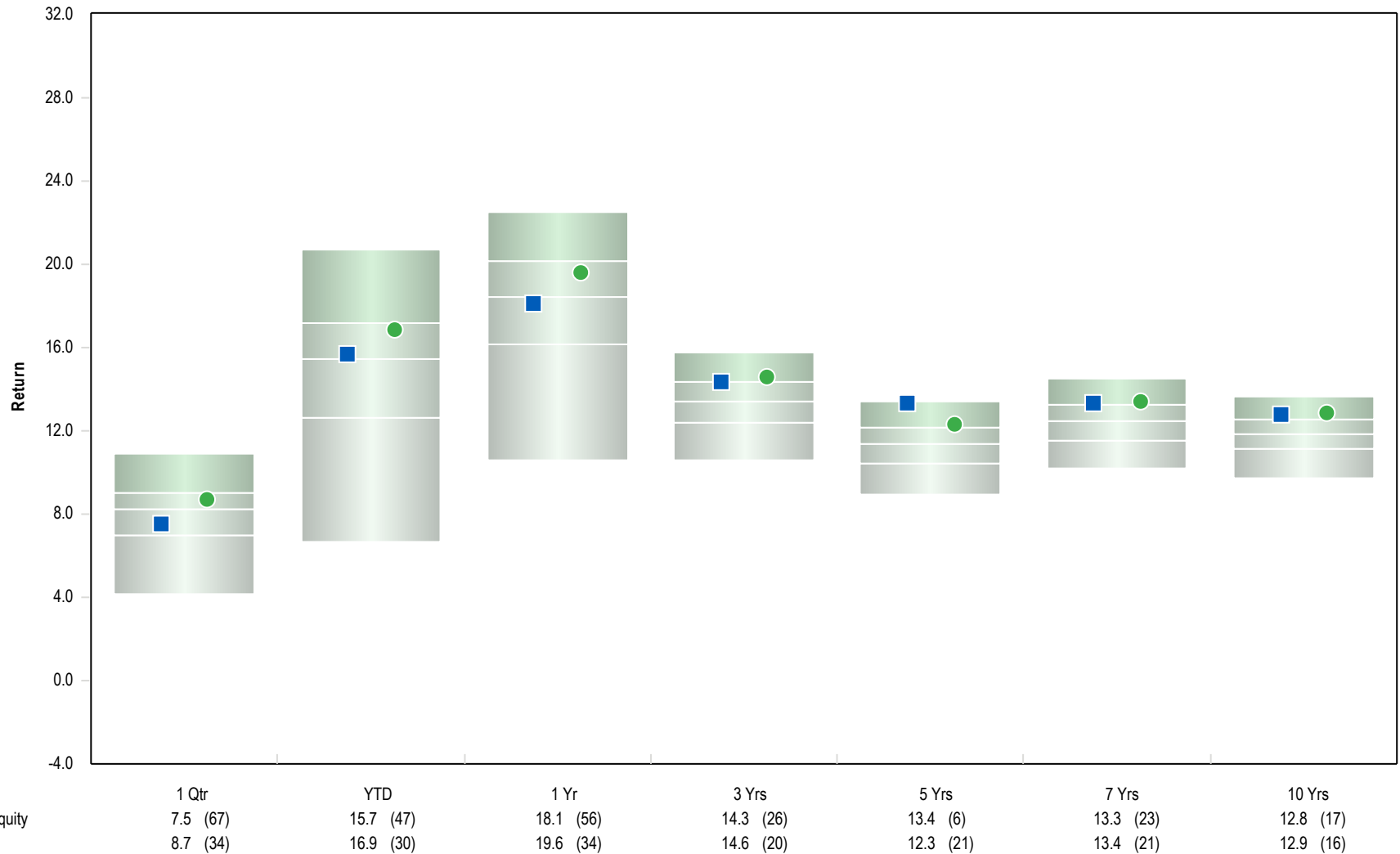


**Down Market Capture**



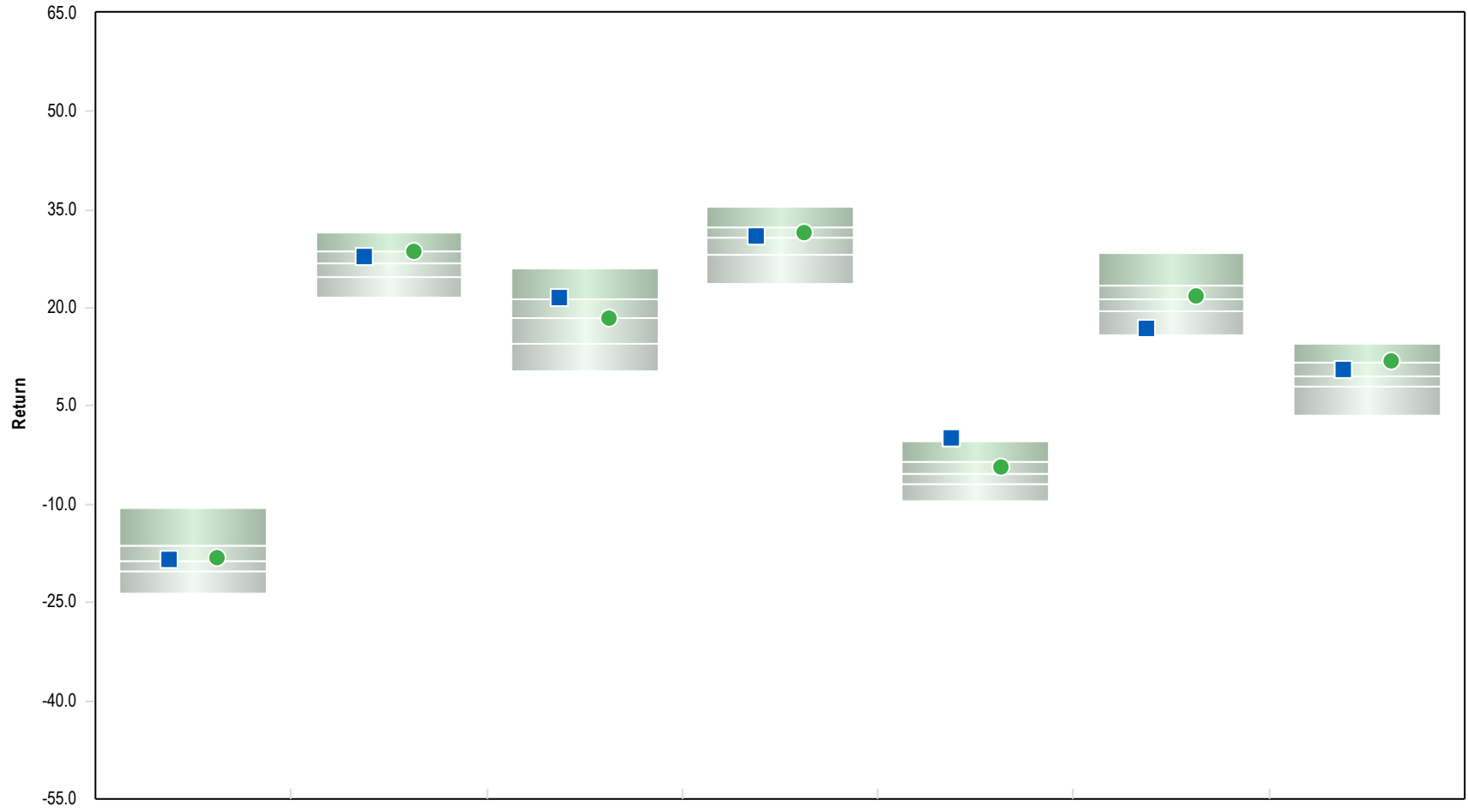
\* Quarterly periodicity used.

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



5th Percentile	10.9	20.7	22.5	15.8	13.4	14.5	13.6
1st Quartile	9.0	17.2	20.2	14.3	12.1	13.2	12.6
Median	8.2	15.4	18.4	13.4	11.4	12.5	11.8
3rd Quartile	7.0	12.7	16.2	12.4	10.4	11.5	11.1
95th Percentile	4.2	6.7	10.6	10.6	9.0	10.2	9.7

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



■ Parnassus Core Equity  
● S&P 500

	2022	2021	2020	2019	2018	2017	2016
Parnassus Core Equity	-18.4 (48)	27.8 (35)	21.5 (25)	31.0 (47)	0.1 (4)	16.8 (91)	10.6 (38)
S&P 500	-18.1 (45)	28.7 (25)	18.4 (50)	31.5 (36)	-4.4 (32)	21.8 (45)	12.0 (20)

5th Percentile	-10.6	31.5	26.0	35.6	-0.4	28.3	14.5
1st Quartile	-16.3	28.7	21.3	32.2	-3.5	23.5	11.6
Median	-18.7	26.9	18.4	30.6	-5.4	21.4	9.7
3rd Quartile	-20.2	24.7	14.6	28.2	-6.8	19.5	7.9
95th Percentile	-23.5	21.6	10.3	23.8	-9.6	15.8	3.5

**Fund Information**

Fund Name :	Parnassus Income Funds: Parnassus Core Equity Fund; Institutional Shares	Portfolio Assets :	\$26,973 Million
Fund Family :	Parnassus Investments	Portfolio Manager :	Ahlsten/Allen/Choi
Ticker :	PRILX	PM Tenure :	2006--2012--2022
Inception Date :	04/28/2006	Fund Style :	IM U.S. Large Cap Core Equity (MF)
Fund Assets :	\$14,475 Million	Style Benchmark :	S&P 500
Portfolio Turnover :	40%		

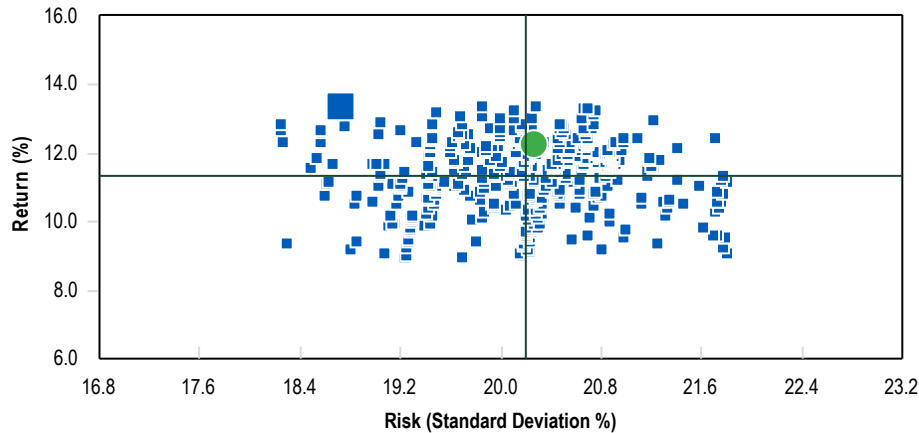
**Fund Investment Policy**

The Fund seeks both capital appreciation and current income. Under normal circumstances, the Fund will invest a minimum of 80% of its net assets plus any borrowings in equity securities. At least 75% of the Funds total assets will normally be invested in equity securities that pay interest or dividends.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Parnassus Core Equity	13.4	18.7	0.7	1.9	0.9	1.0	3.6	0.2	18.8	05/01/2006
S&P 500	12.3	20.3	0.6	0.0	1.0	1.0	0.0		20.3	05/01/2006
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	20.3	-0.6	0.0	05/01/2006

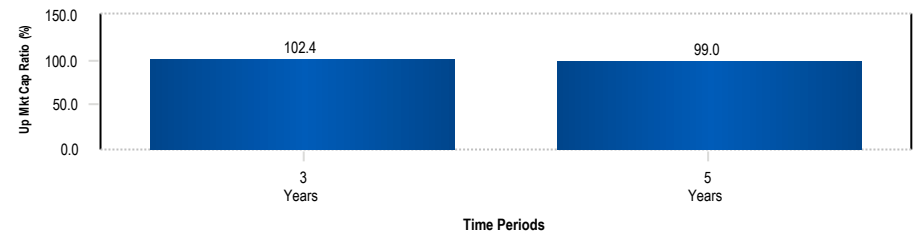
**Peer Group Scattergram (07/01/18 to 06/30/23)**



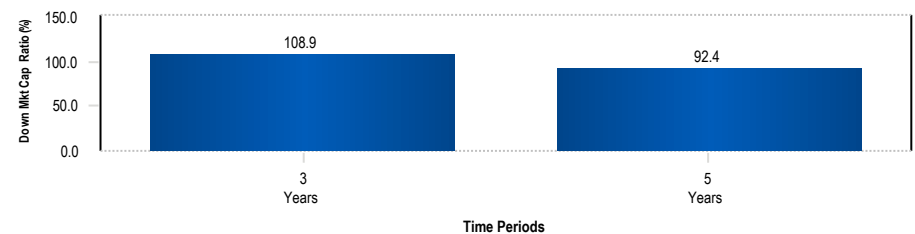
	Return	Standard Deviation
■ Parnassus Core Equity	13.4	18.7
● S&P 500	12.3	20.3
— Median	11.4	20.2

**Up Down Market Capture**

**Up Market Capture**

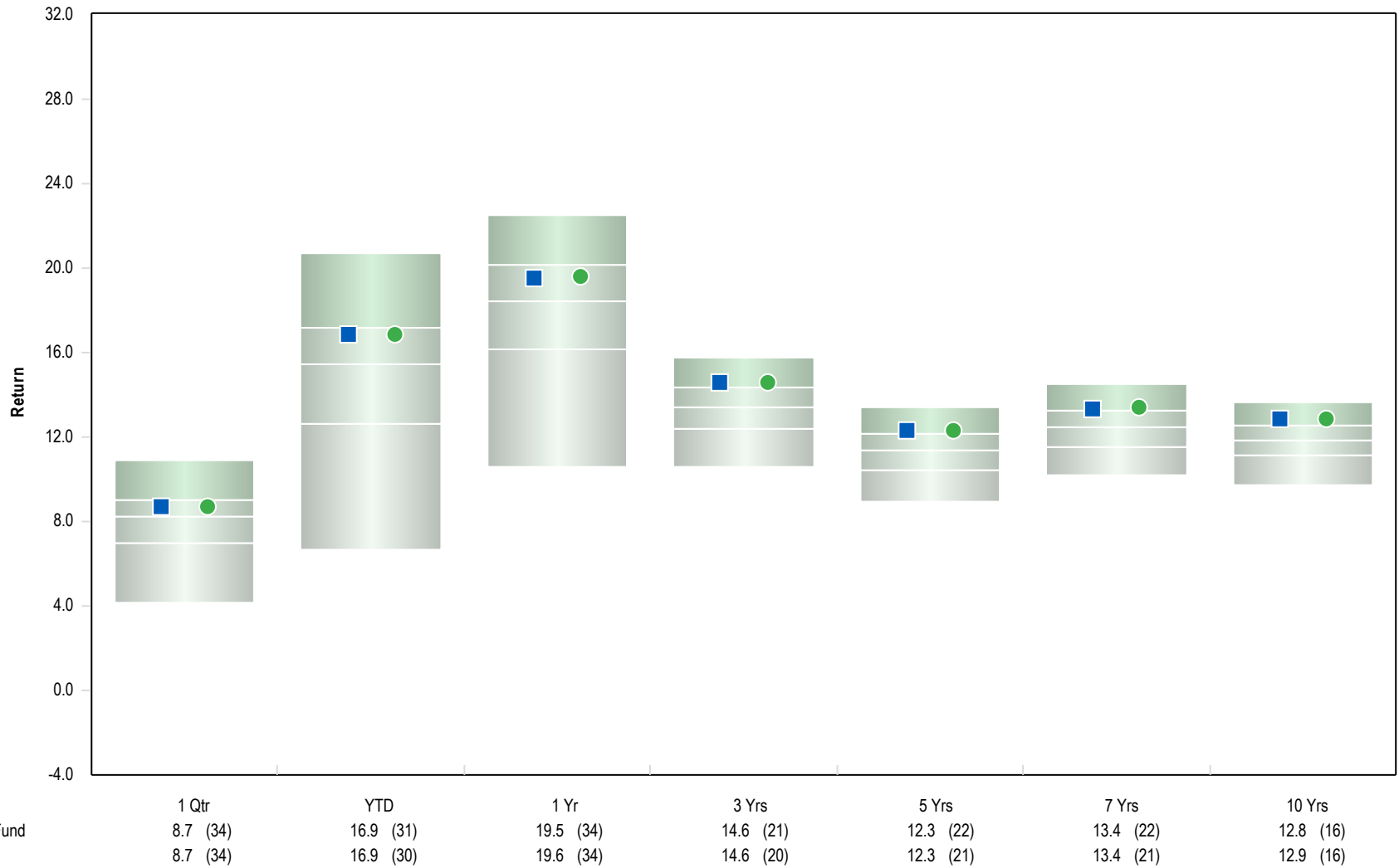


**Down Market Capture**



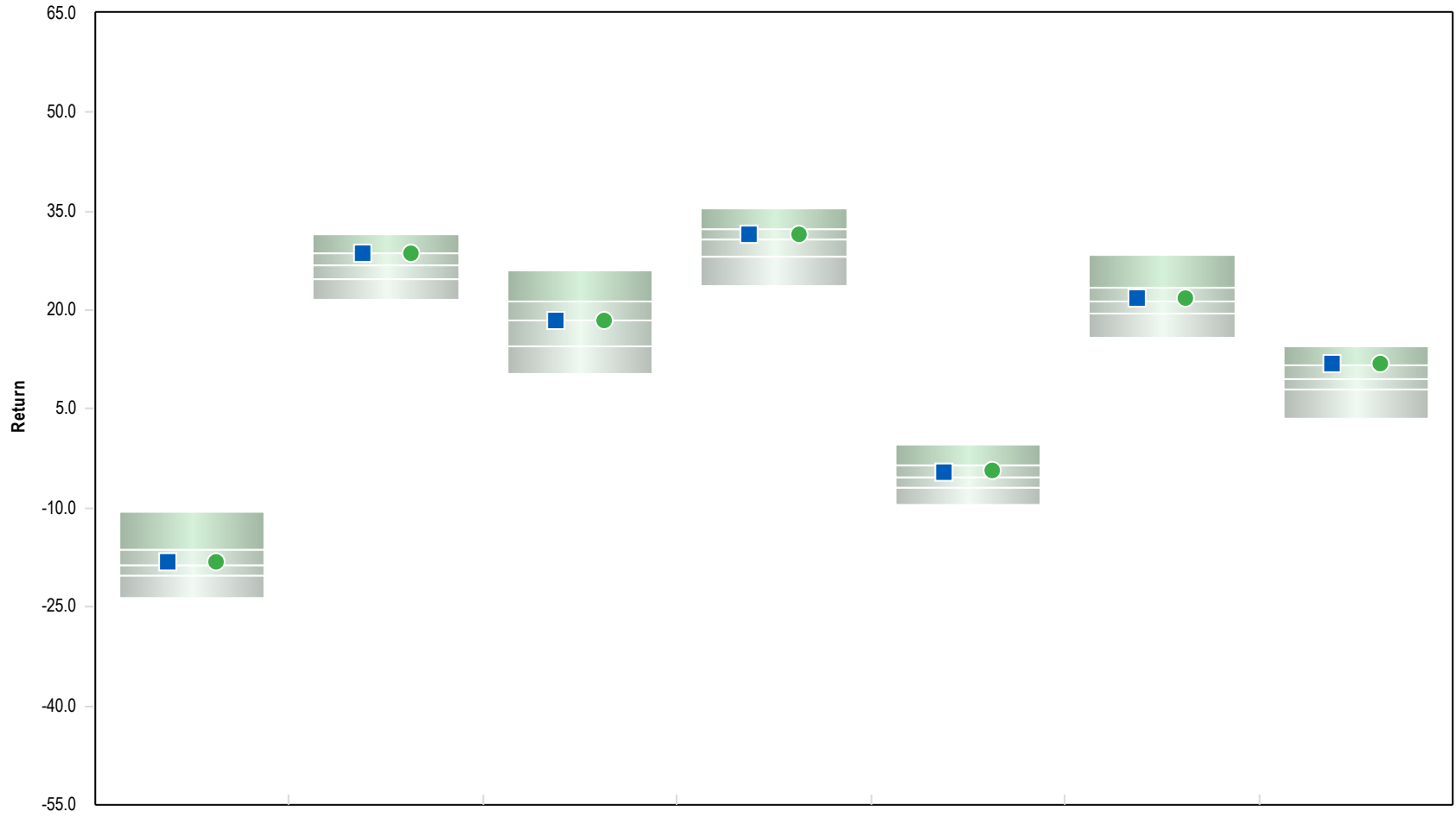
\* Quarterly periodicity used.

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



5th Percentile	10.9	20.7	22.5	15.8	13.4	14.5	13.6
1st Quartile	9.0	17.2	20.2	14.3	12.1	13.2	12.6
Median	8.2	15.4	18.4	13.4	11.4	12.5	11.8
3rd Quartile	7.0	12.7	16.2	12.4	10.4	11.5	11.1
95th Percentile	4.2	6.7	10.6	10.6	9.0	10.2	9.7

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



	2022	2021	2020	2019	2018	2017	2016
■ Vanguard 500 Index Fund	-18.1 (46)	28.7 (26)	18.4 (50)	31.5 (37)	-4.4 (32)	21.8 (45)	11.9 (20)
● S&P 500	-18.1 (45)	28.7 (25)	18.4 (50)	31.5 (36)	-4.4 (32)	21.8 (45)	12.0 (20)

5th Percentile	-10.6	31.5	26.0	35.6	-0.4	28.3	14.5
1st Quartile	-16.3	28.7	21.3	32.2	-3.5	23.5	11.6
Median	-18.7	26.9	18.4	30.6	-5.4	21.4	9.7
3rd Quartile	-20.2	24.7	14.6	28.2	-6.8	19.5	7.9
95th Percentile	-23.5	21.6	10.3	23.8	-9.6	15.8	3.5

**Fund Information**

Fund Name :	Vanguard Institutional Index Fund: Vanguard Institutional Index Fund; Institutional Shares	Portfolio Assets :	\$239,229 Million
Fund Family :	Vanguard	Portfolio Manager :	Butler/Louie
Ticker :	VINIX	PM Tenure :	2000--2017
Inception Date :	07/31/1990	Fund Style :	IM U.S. Large Cap Core Equity (MF)
Fund Assets :	\$100,805 Million	Style Benchmark :	S&P 500
Portfolio Turnover :	3%		

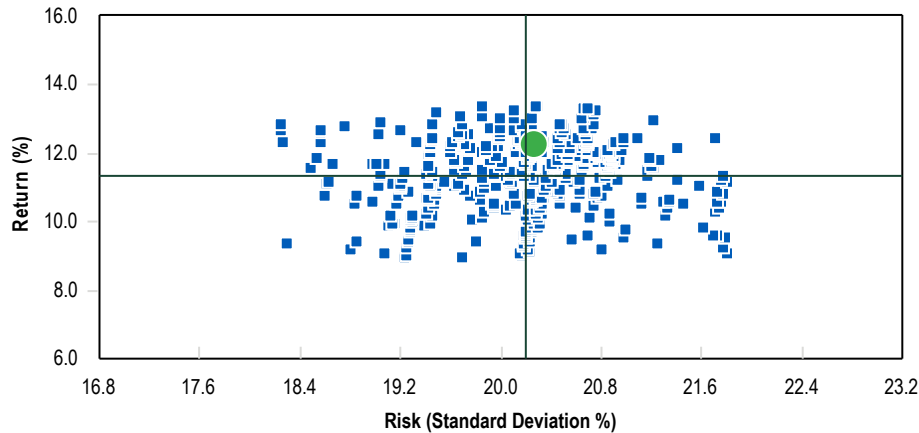
**Fund Investment Policy**

The Fund seeks to track the performance of the S&P 500 index, a benchmark that measures the investment return of large-capitalization stocks.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard 500 Index Fund	12.3	20.3	0.6	0.0	1.0	1.0	0.0	-2.5	20.3	09/01/1976
S&P 500	12.3	20.3	0.6	0.0	1.0	1.0	0.0		20.3	09/01/1976
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	20.3	-0.6	0.0	09/01/1976

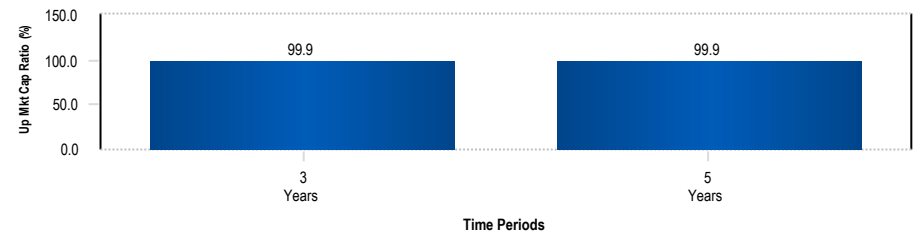
**Peer Group Scattergram (07/01/18 to 06/30/23)**



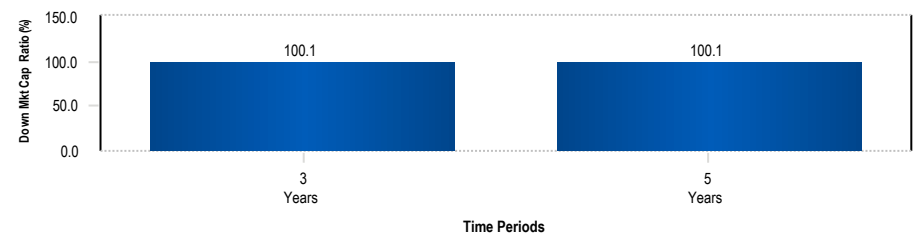
	Return	Standard Deviation
■ Vanguard 500 Index Fund	12.3	20.3
● S&P 500	12.3	20.3
— Median	11.4	20.2

**Up Down Market Capture**

**Up Market Capture**



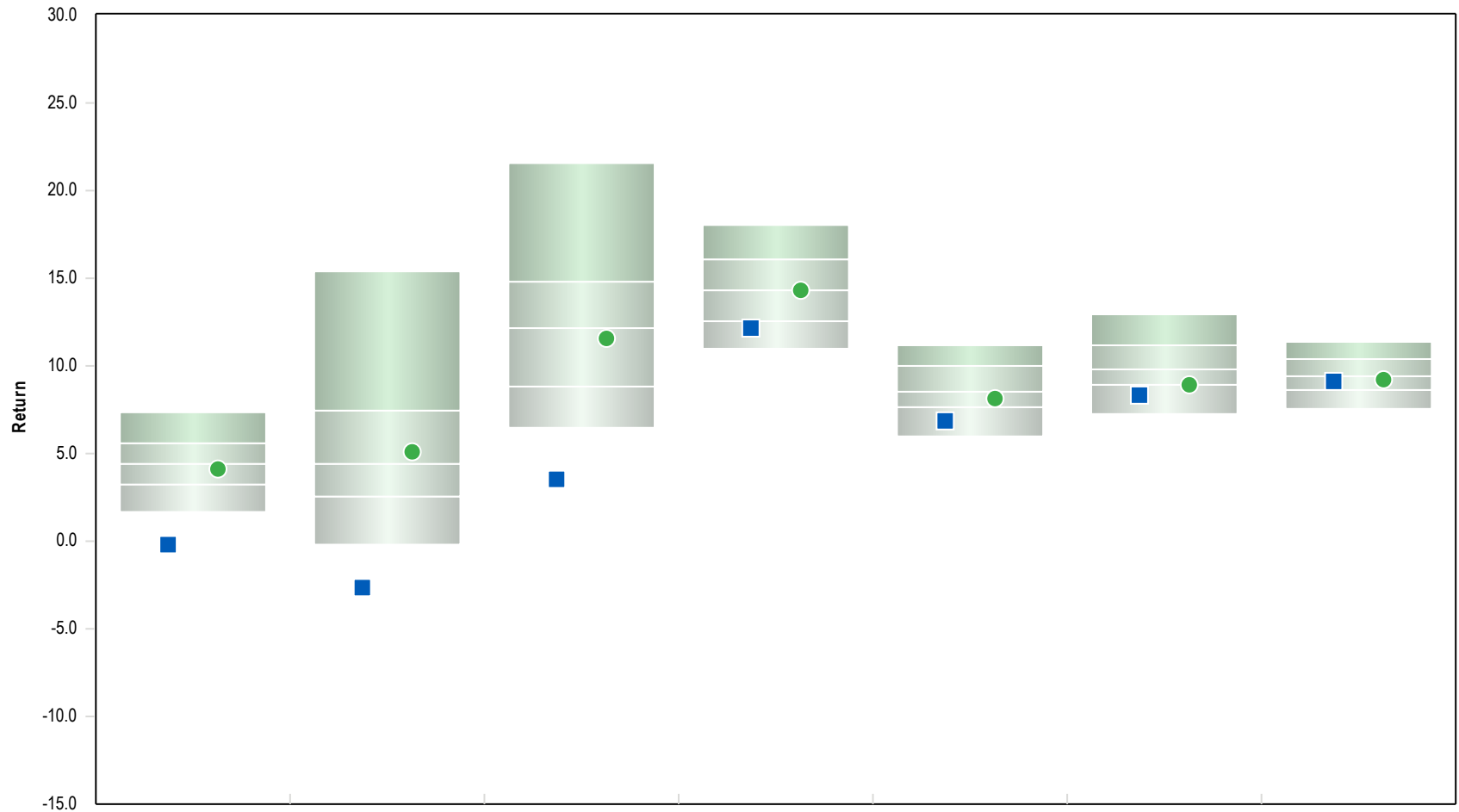
**Down Market Capture**



\* Quarterly periodicity used.



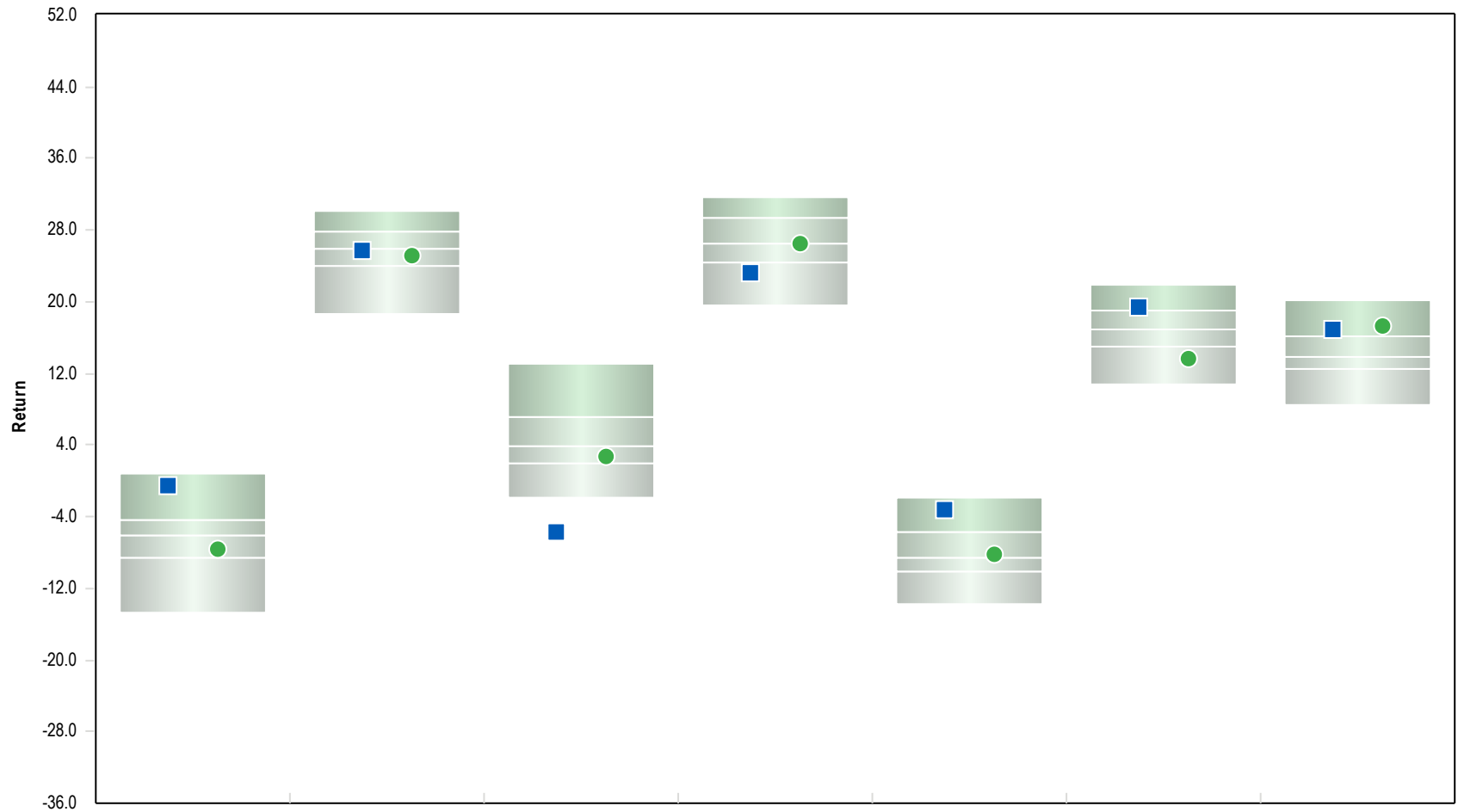
Peer Group Analysis - IM U.S. Large Cap Value Equity (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Edgar Lomax Value Fund	-0.2 (98)	-2.7 (100)	3.5 (99)	12.2 (80)	6.9 (87)	8.3 (87)	9.1 (64)
● Russell 1000 Value Index	4.1 (56)	5.1 (43)	11.5 (54)	14.3 (51)	8.1 (65)	8.9 (74)	9.2 (57)

5th Percentile	7.3	15.4	21.5	18.1	11.2	12.9	11.4
1st Quartile	5.6	7.4	14.8	16.1	10.0	11.2	10.4
Median	4.4	4.4	12.2	14.3	8.6	9.8	9.4
3rd Quartile	3.3	2.5	8.8	12.6	7.7	8.9	8.6
95th Percentile	1.7	-0.2	6.5	11.0	6.0	7.3	7.6

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



	2022	2021	2020	2019	2018	2017	2016
■ Edgar Lomax Value Fund	-0.6 (8)	25.7 (55)	-5.7 (99)	23.3 (83)	-3.3 (14)	19.5 (19)	17.0 (20)
● Russell 1000 Value Index	-7.5 (66)	25.2 (63)	2.8 (61)	26.5 (50)	-8.3 (45)	13.7 (82)	17.3 (17)

5th Percentile	0.8	30.2	13.0	31.7	-1.8	21.9	20.2
1st Quartile	-4.3	27.8	7.1	29.4	-5.8	18.9	16.1
Median	-6.1	26.0	3.8	26.5	-8.6	17.0	13.8
3rd Quartile	-8.6	24.0	1.9	24.4	-10.1	15.0	12.4
95th Percentile	-14.7	18.7	-1.8	19.6	-13.8	10.8	8.5

**Fund Information**

Fund Name : Advisors Series Trust: Edgar Lomax Value Fund  
 Fund Family : Edgar Lomax Company  
 Ticker : LOMAX  
 Inception Date : 12/12/1997  
 Fund Assets : \$91 Million  
 Portfolio Turnover : 40%

Portfolio Assets : \$91 Million  
 Portfolio Manager : Eley/Murray  
 PM Tenure : 1997-2019  
 Fund Style : IM U.S. Large Cap Value Equity (MF)  
 Style Benchmark : Russell 1000 Value Index

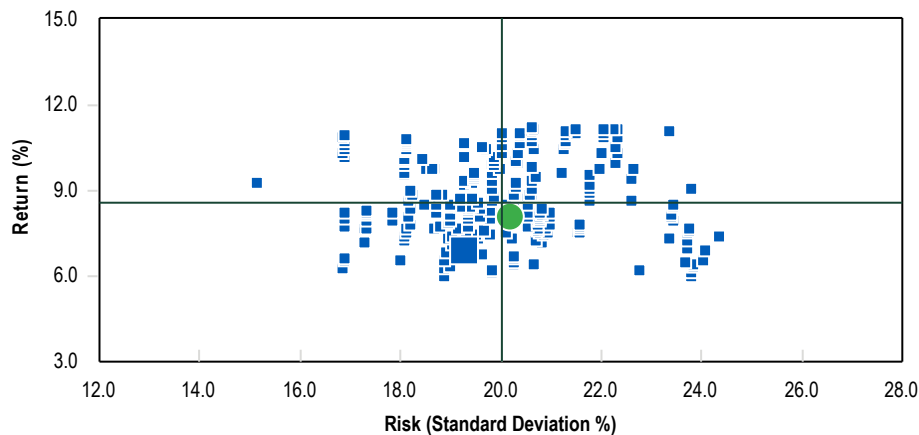
**Fund Investment Policy**

The Fund seeks long-term capital growth while providing some income. The Advisor uses a disciplined approach to select stocks for the Fund's portfolio that it believes are undervalued and have prospects for continued consistent growth. The Fund invests primarily in large, well-recognized companies.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Edgar Lomax Value Fund	6.9	19.3	0.4	-0.6	0.9	0.9	5.1	-0.3	19.4	02/01/2002
Russell 1000 Value Index	8.1	20.2	0.4	0.0	1.0	1.0	0.0		20.3	02/01/2002
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	20.3	-0.4	0.0	02/01/2002

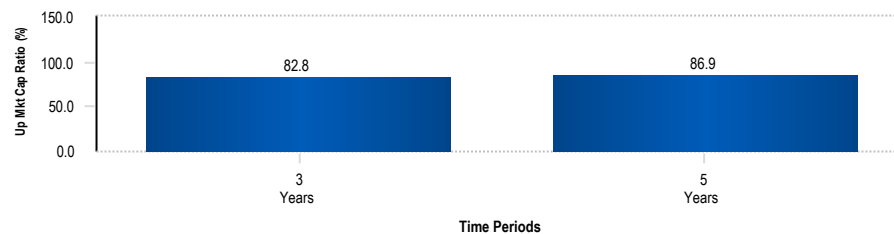
**Peer Group Scattergram (07/01/18 to 06/30/23)**



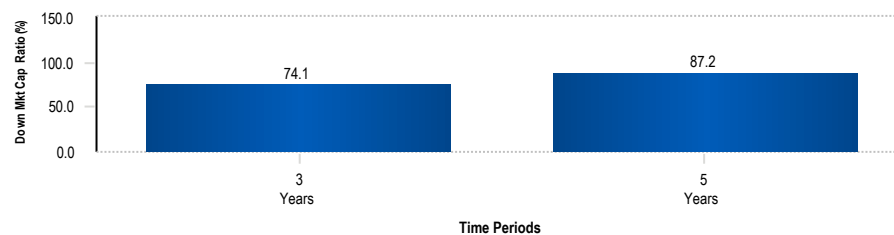
	Return	Standard Deviation
■ Edgar Lomax Value Fund	6.9	19.3
● Russell 1000 Value Index	8.1	20.2
— Median	8.6	20.0

**Up Down Market Capture**

**Up Market Capture**

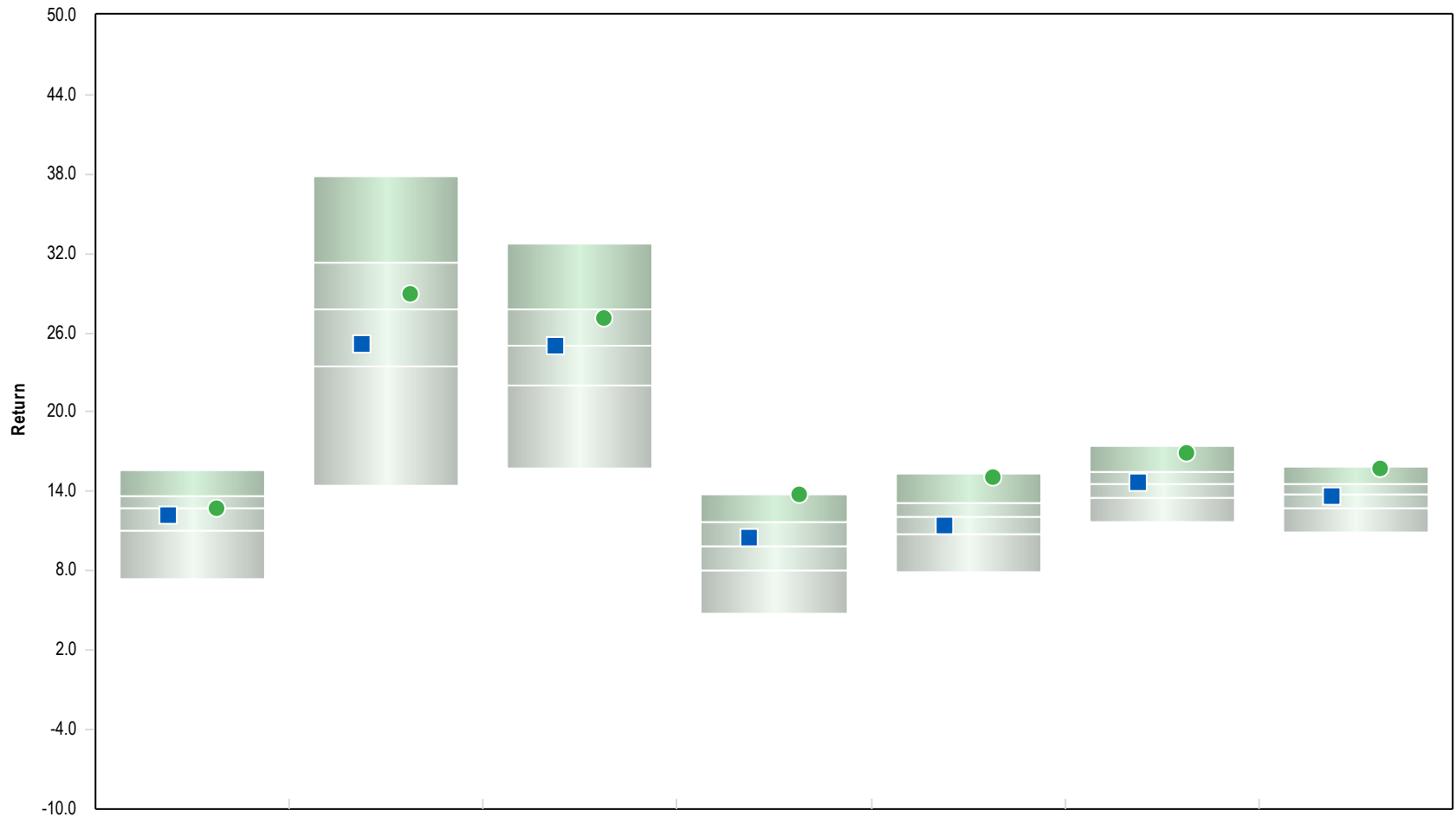


**Down Market Capture**



\* Quarterly periodicity used.

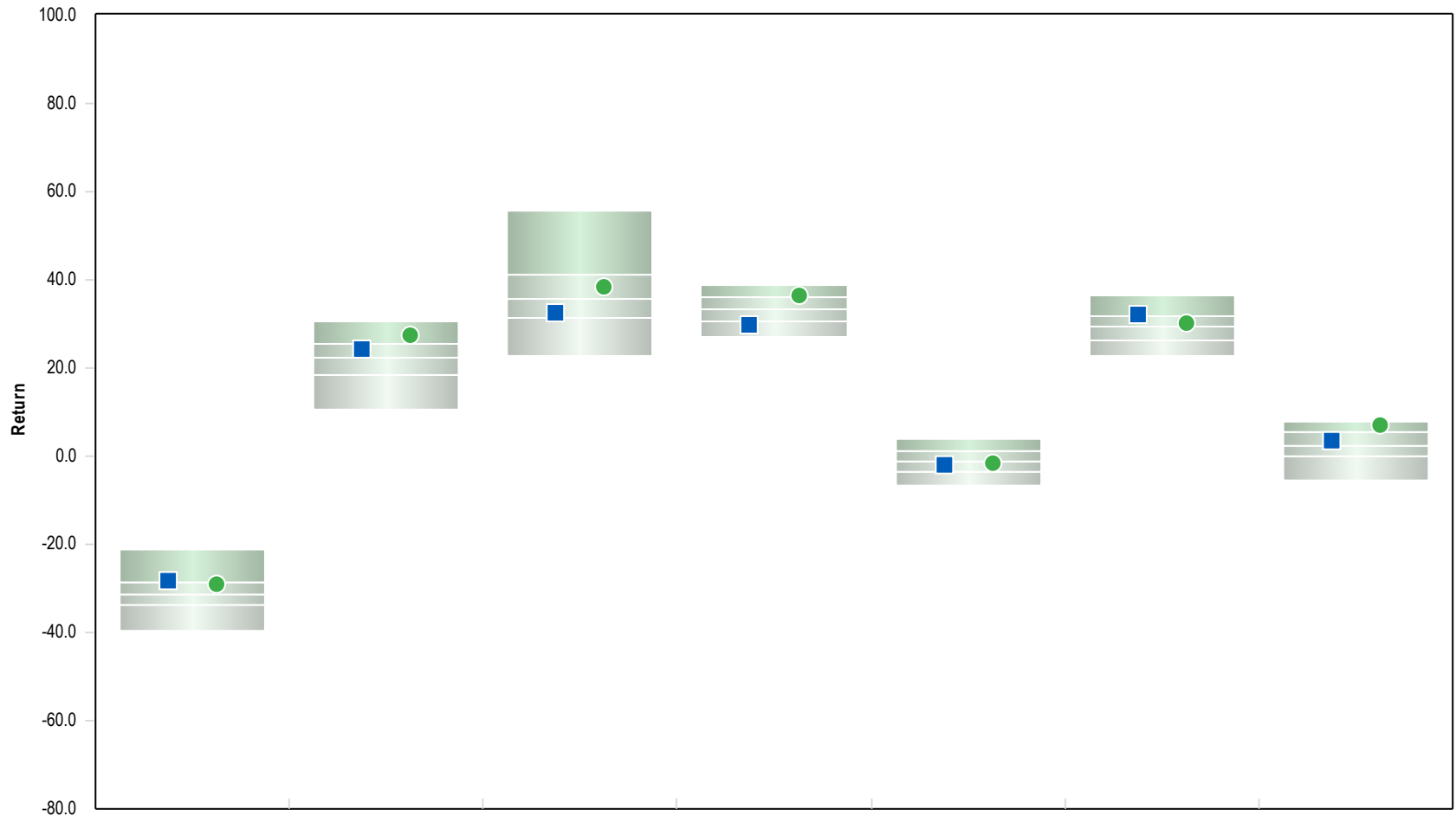
Peer Group Analysis - IM U.S. Large Cap Growth Equity (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Fidelity Contrafund	12.3 (56)	25.2 (69)	25.1 (50)	10.6 (38)	11.5 (63)	14.7 (48)	13.7 (52)
● Russell 1000 Growth Index	12.8 (45)	29.0 (40)	27.1 (30)	13.7 (6)	15.1 (7)	16.9 (9)	15.7 (7)

5th Percentile	15.6	37.8	32.7	13.7	15.4	17.5	15.9
1st Quartile	13.6	31.3	27.8	11.7	13.2	15.5	14.5
Median	12.7	27.8	25.0	9.9	12.1	14.5	13.7
3rd Quartile	11.1	23.5	22.0	8.0	10.8	13.6	12.7
95th Percentile	7.3	14.4	15.8	4.7	8.0	11.7	10.9

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



	2022	2021	2020	2019	2018	2017	2016
■ Fidelity Contrafund	-28.3 (23)	24.4 (32)	32.6 (69)	30.0 (81)	-2.1 (61)	32.2 (22)	3.4 (40)
● Russell 1000 Growth Index	-29.1 (27)	27.6 (17)	38.5 (34)	36.4 (19)	-1.5 (54)	30.2 (39)	7.1 (10)

5th Percentile	-21.3	30.5	55.6	38.7	4.0	36.3	7.9
1st Quartile	-28.8	25.6	41.2	35.9	1.2	31.7	5.3
Median	-31.3	22.4	35.6	33.3	-1.2	29.3	2.2
3rd Quartile	-33.9	18.4	31.2	30.7	-3.6	26.4	0.0
95th Percentile	-39.8	10.6	22.6	27.0	-6.6	22.7	-5.3

**Fund Information**

Fund Name :	Fidelity Contrafund	Portfolio Assets :	\$107,888 Million
Fund Family :	Fidelity Investments	Portfolio Manager :	William Danoff
Ticker :	FCNTX	PM Tenure :	1990
Inception Date :	05/17/1967	Fund Style :	IM U.S. Large Cap Growth Equity (MF)
Fund Assets :	\$98,831 Million	Style Benchmark :	Russell 1000 Growth Index
Portfolio Turnover :	25%		

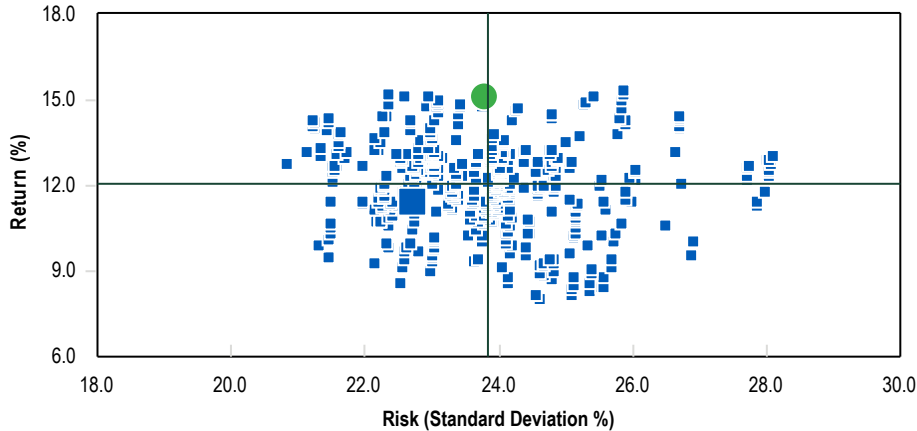
**Fund Investment Policy**

The Fund seeks capital appreciation. The Fund seeks to achieve its investment objective by investing in securities of companies whose value it believes is not fully recognized by the public. The Fund normally invests primarily in common stocks and may invest in both domestic and foreign issuers.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Fidelity Contrafund	11.5	22.7	0.5	-2.7	0.9	1.0	3.1	-1.2	22.7	01/01/1993
Russell 1000 Growth Index	15.1	23.8	0.7	0.0	1.0	1.0	0.0		23.8	01/01/1993
90 Day U.S. Treasury Bill	1.6	0.7		1.5	0.0	0.0	23.8	-0.7	0.0	01/01/1993

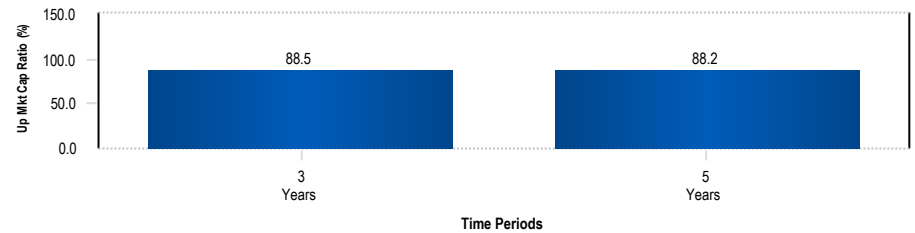
**Peer Group Scattergram (07/01/18 to 06/30/23)**



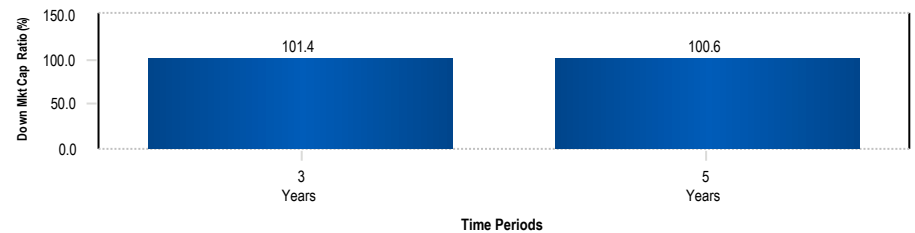
	Return	Standard Deviation
■ Fidelity Contrafund	11.5	22.7
● Russell 1000 Growth Index	15.1	23.8
— Median	12.1	23.8

**Up Down Market Capture**

**Up Market Capture**

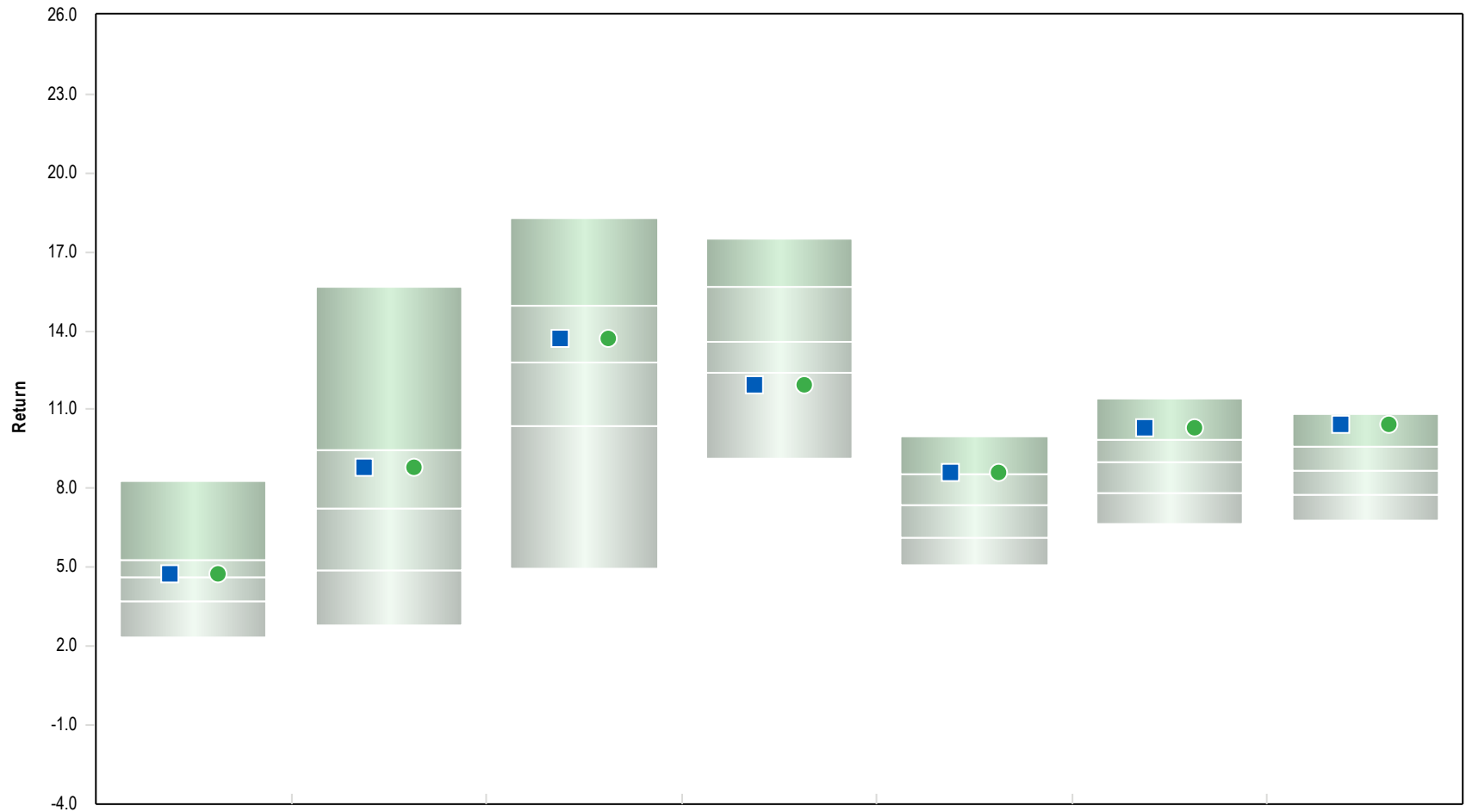


**Down Market Capture**



\* Quarterly periodicity used.

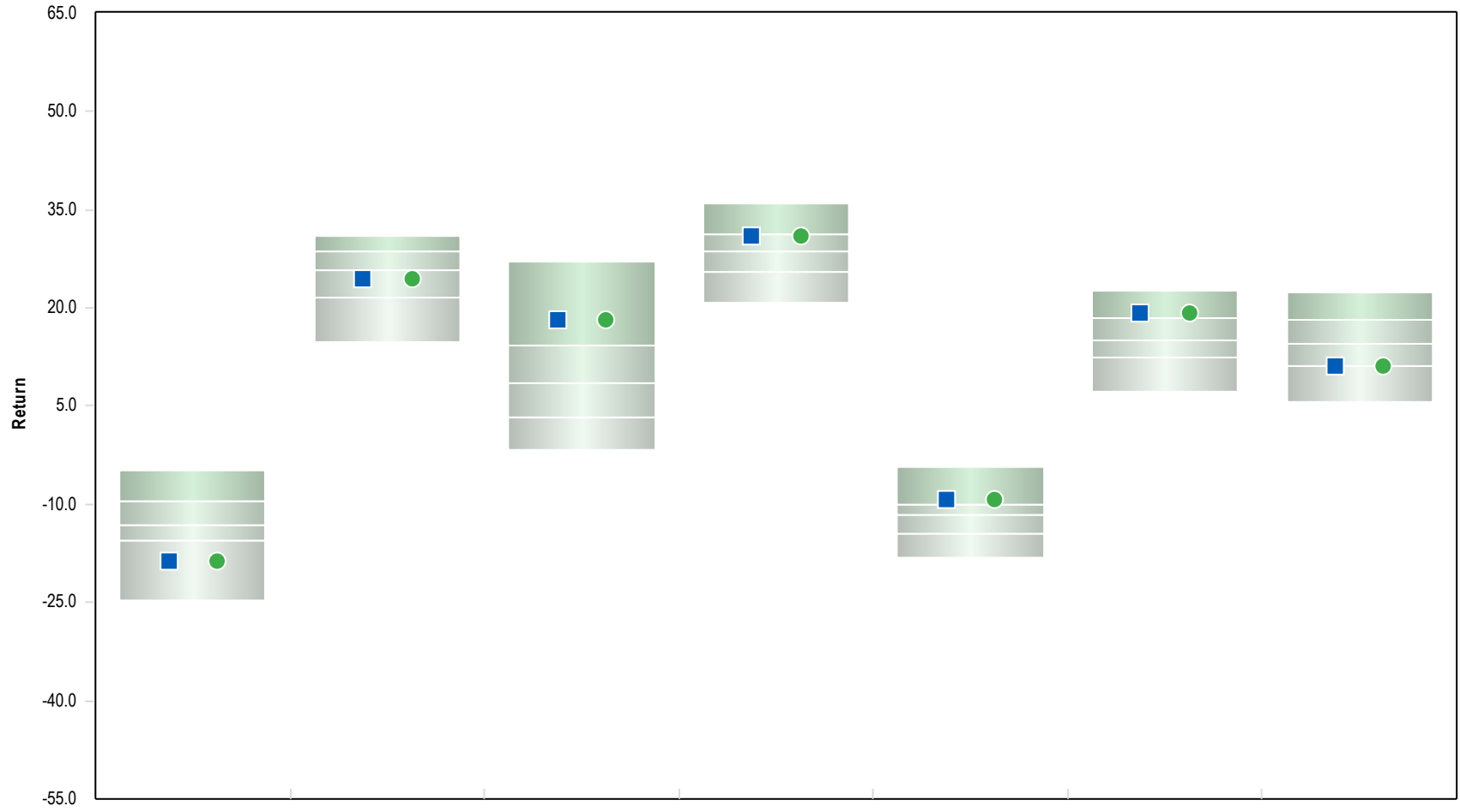
Peer Group Analysis - IM U.S. Mid Cap Core Equity (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard Md Cap Index	4.8 (42)	8.8 (30)	13.7 (42)	12.0 (83)	8.6 (25)	10.3 (17)	10.4 (13)
● Mid Cap Index Blend*	4.8 (42)	8.8 (30)	13.7 (42)	12.0 (82)	8.6 (25)	10.3 (17)	10.5 (12)

5th Percentile	8.3	15.7	18.3	17.5	10.0	11.4	10.8
1st Quartile	5.3	9.4	14.9	15.7	8.5	9.9	9.6
Median	4.6	7.2	12.8	13.6	7.4	9.0	8.7
3rd Quartile	3.7	4.9	10.4	12.4	6.1	7.8	7.8
95th Percentile	2.3	2.8	4.9	9.2	5.1	6.6	6.8

Peer Group Analysis - IM U.S. Mid Cap Core Equity (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Vanguard Md Cap Index	-18.7 (93)	24.5 (60)	18.2 (15)	31.0 (27)	-9.2 (22)	19.3 (19)	11.2 (76)
● Mid Cap Index Blend*	-18.7 (93)	24.5 (60)	18.2 (15)	31.1 (27)	-9.2 (22)	19.3 (19)	11.2 (76)

5th Percentile	-4.8	31.0	27.0	35.9	-4.3	22.8	22.5
1st Quartile	-9.5	28.7	14.2	31.3	-10.0	18.5	18.2
Median	-13.2	25.7	8.4	28.6	-11.6	14.9	14.5
3rd Quartile	-15.5	21.5	3.2	25.6	-14.5	12.4	11.3
95th Percentile	-24.8	14.8	-1.6	20.8	-18.2	7.3	5.8



**Fund Information**

Fund Name :	Vanguard Index Funds: Vanguard Mid-Cap Index Fund; Admiral Shares	Portfolio Assets :	\$144,368 Million
Fund Family :	Vanguard	Portfolio Manager :	Butler/Khan/Denis
Ticker :	VIMAX	PM Tenure :	2001--2021--2023
Inception Date :	11/12/2001	Fund Style :	IM U.S. Mid Cap Core Equity (MF)
Fund Assets :	\$50,964 Million	Style Benchmark :	Mid Cap Index Blend*
Portfolio Turnover :	12%		

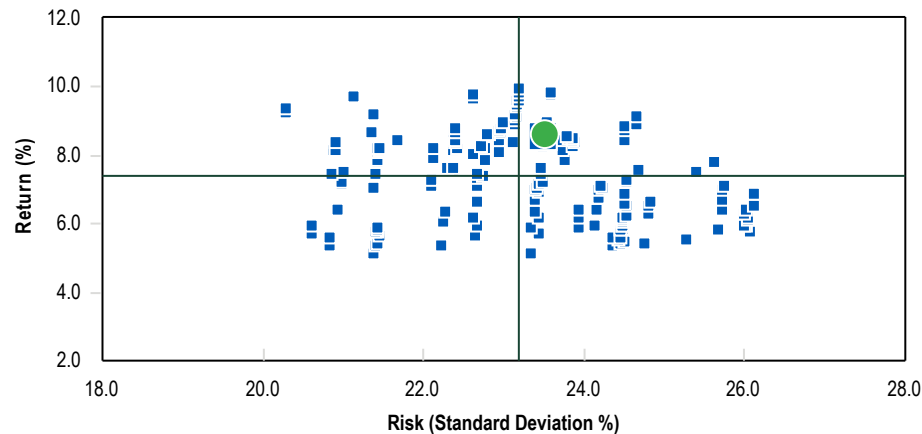
**Fund Investment Policy**

The Fund seeks to track the performance of a benchmark index that measures the investment return of mid-capitalization stocks.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Md Cap Index	8.6	23.5	0.4	0.0	1.0	1.0	0.0	-0.7	23.6	12/01/2001
Mid Cap Index Blend*	8.6	23.5	0.4	0.0	1.0	1.0	0.0		23.6	12/01/2001
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	23.6	-0.4	0.0	12/01/2001

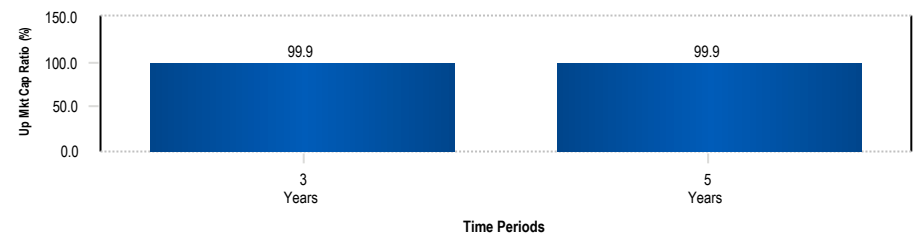
**Peer Group Scattergram (07/01/18 to 06/30/23)**



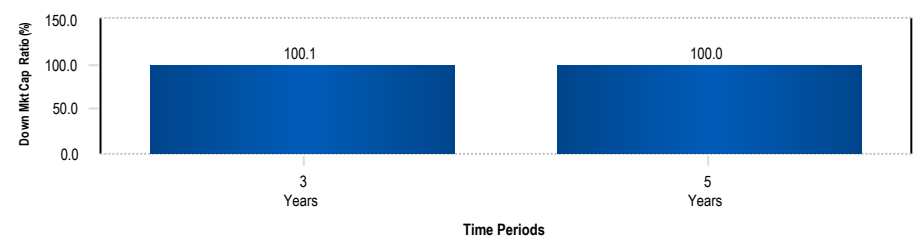
	Return	Standard Deviation
■ Vanguard Md Cap Index	8.6	23.5
● Mid Cap Index Blend*	8.6	23.5
— Median	7.4	23.2

**Up Down Market Capture**

**Up Market Capture**

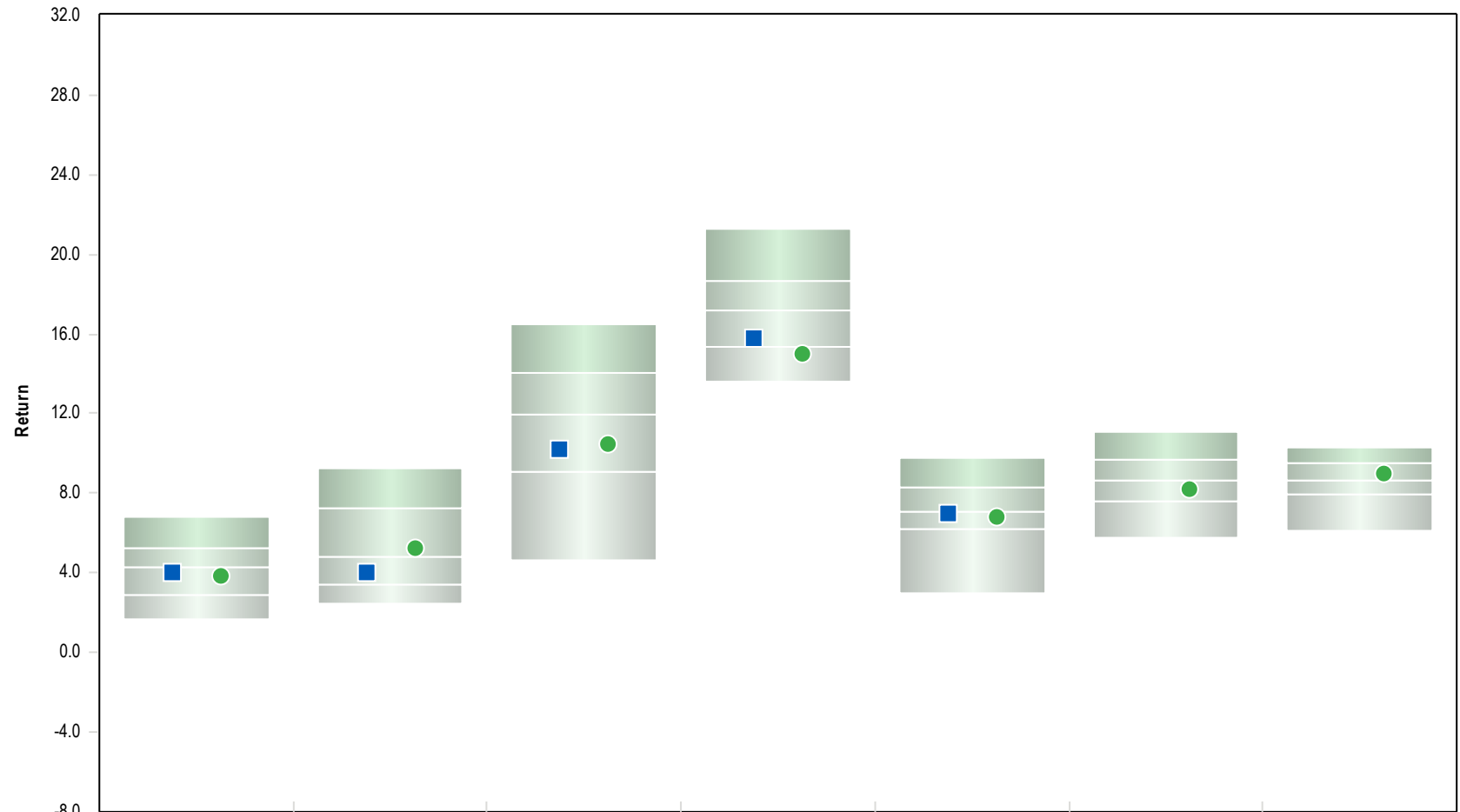


**Down Market Capture**



\* Quarterly periodicity used.

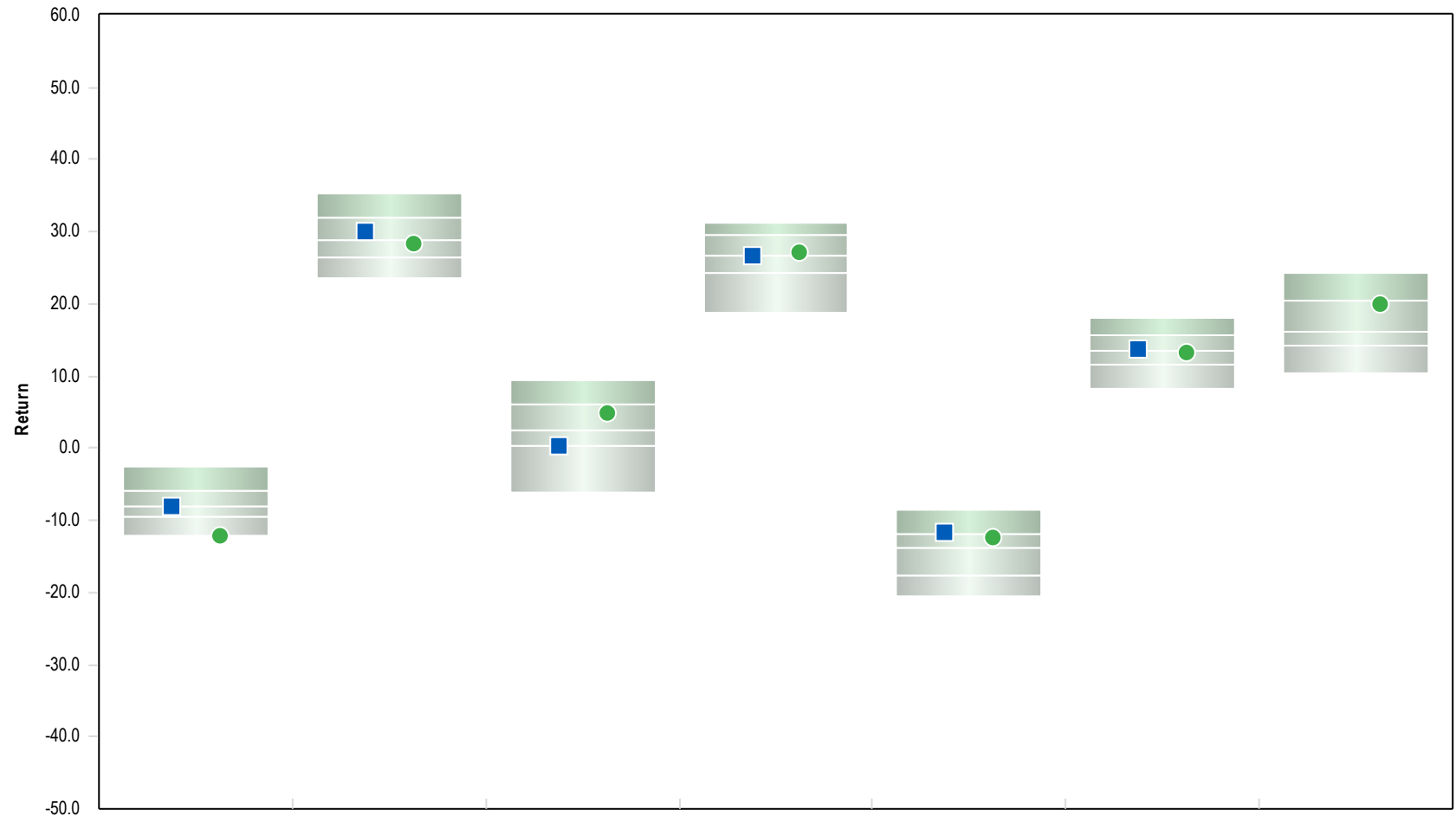
Peer Group Analysis - IM U.S. Mid Cap Value Equity (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ JP Morgan Mid Cap Value	4.1 (55)	4.0 (57)	10.2 (61)	15.8 (67)	7.0 (54)		
● Russell Midcap Value Index	3.9 (61)	5.2 (48)	10.5 (58)	15.0 (82)	6.8 (58)	8.2 (60)	9.0 (40)

5th Percentile	6.8	9.3	16.5	21.3	9.7	11.0	10.3
1st Quartile	5.2	7.2	14.1	18.7	8.3	9.7	9.5
Median	4.3	4.8	11.9	17.2	7.1	8.6	8.6
3rd Quartile	2.9	3.4	9.1	15.4	6.2	7.6	7.9
95th Percentile	1.7	2.5	4.6	13.6	3.0	5.8	6.2

Peer Group Analysis - IM U.S. Mid Cap Value Equity (MF)



	2022	2021	2020	2019	2018	2017	2016
■ JP Morgan Mid Cap Value	-8.0 (51)	30.1 (40)	0.4 (72)	26.7 (52)	-11.7 (23)	13.7 (48)	
● Russell Midcap Value Index	-12.0 (95)	28.3 (58)	5.0 (33)	27.1 (47)	-12.3 (27)	13.3 (55)	20.0 (29)

5th Percentile	-2.5	35.4	9.4	31.4	-8.6	18.1	24.3
1st Quartile	-5.8	32.0	6.2	29.5	-11.9	15.8	20.4
Median	-8.0	28.8	2.5	26.8	-13.8	13.6	16.2
3rd Quartile	-9.6	26.5	0.3	24.2	-17.5	11.5	14.1
95th Percentile	-12.1	23.5	-6.2	18.7	-20.6	8.3	10.3

**Fund Information**

Fund Name :	JP Morgan Fleming Mutual Fund Group, Inc: JPMorgan Mid Cap Value Fund; Class R6 Shares	Portfolio Assets :	\$13,478 Million
Fund Family :	JP Morgan Asset Management	Portfolio Manager :	Simon/Playford
Ticker :	JMVYX	PM Tenure :	2016--2016
Inception Date :	09/09/2016	Fund Style :	IM U.S. Mid Cap Value Equity (MF)
Fund Assets :	\$4,086 Million	Style Benchmark :	Russell Midcap Value Index

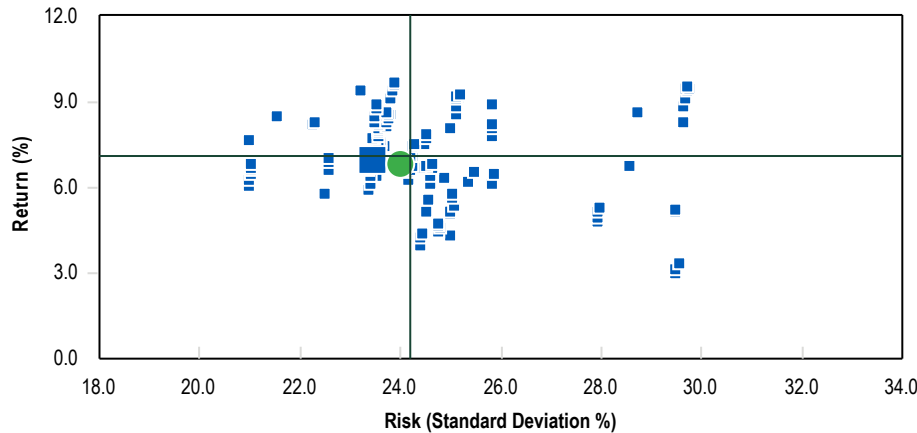
**Fund Investment Policy**

The Fund seeks growth through common stocks of issuers with above average growth potential. Under normal circumstances, the Fund invests at least 80% of its assets in equity securities of mid cap companies.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
JP Morgan Mid Cap Value	7.0	23.4	0.3	0.3	1.0	1.0	2.2	0.0	23.6	09/01/2007
Russell Midcap Value Index	6.8	24.0	0.3	0.0	1.0	1.0	0.0		24.2	09/01/2007
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	24.2	-0.3	0.0	09/01/2007

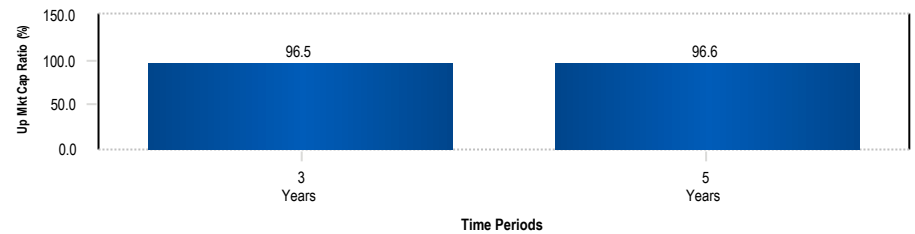
**Peer Group Scattergram (07/01/18 to 06/30/23)**



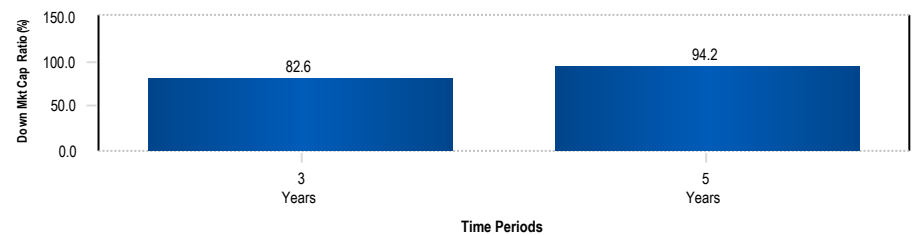
	Return	Standard Deviation
■ JP Morgan Mid Cap Value	7.0	23.4
● Russell Midcap Value Index	6.8	24.0
— Median	7.1	24.2

**Up Down Market Capture**

**Up Market Capture**

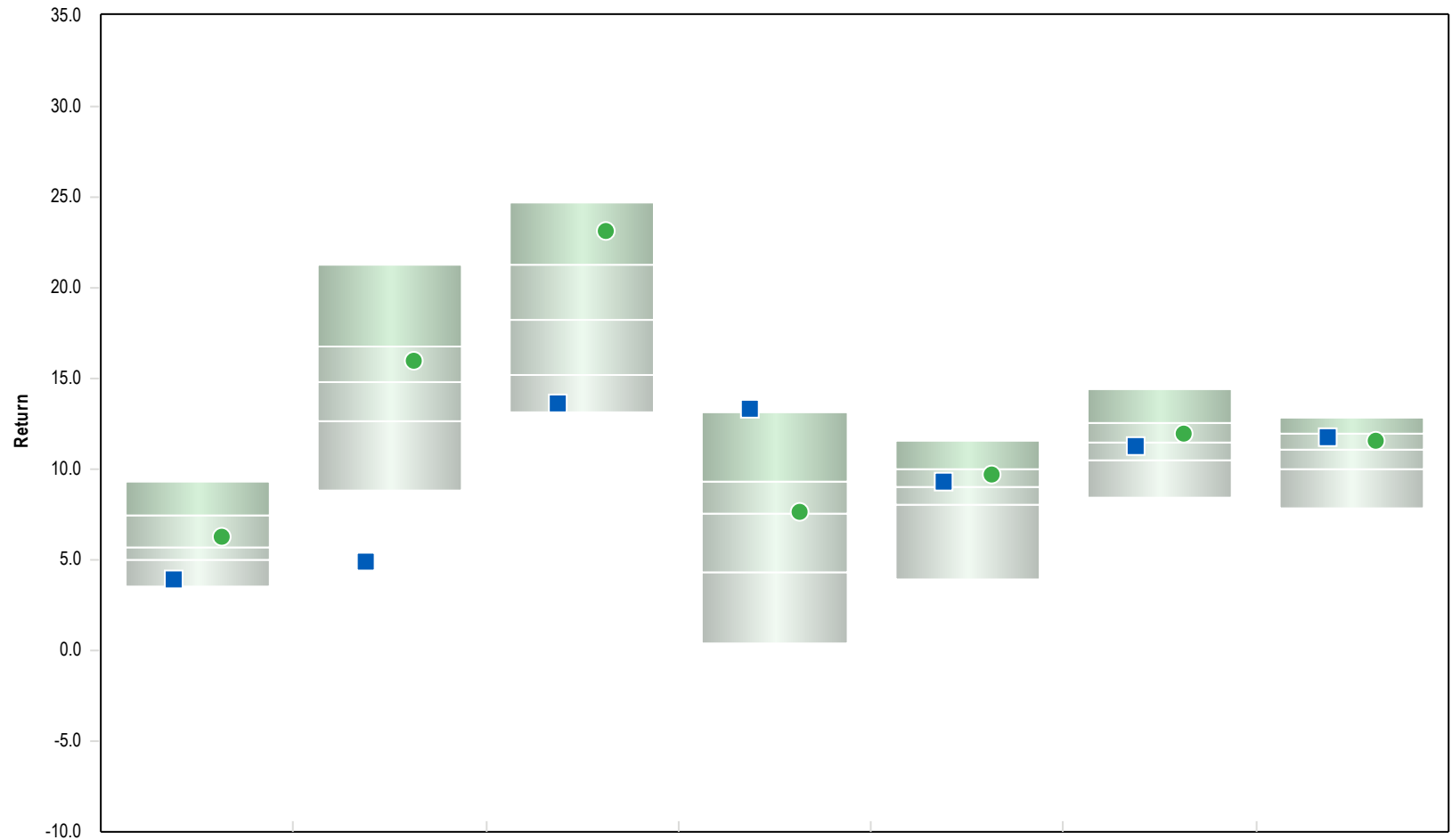


**Down Market Capture**



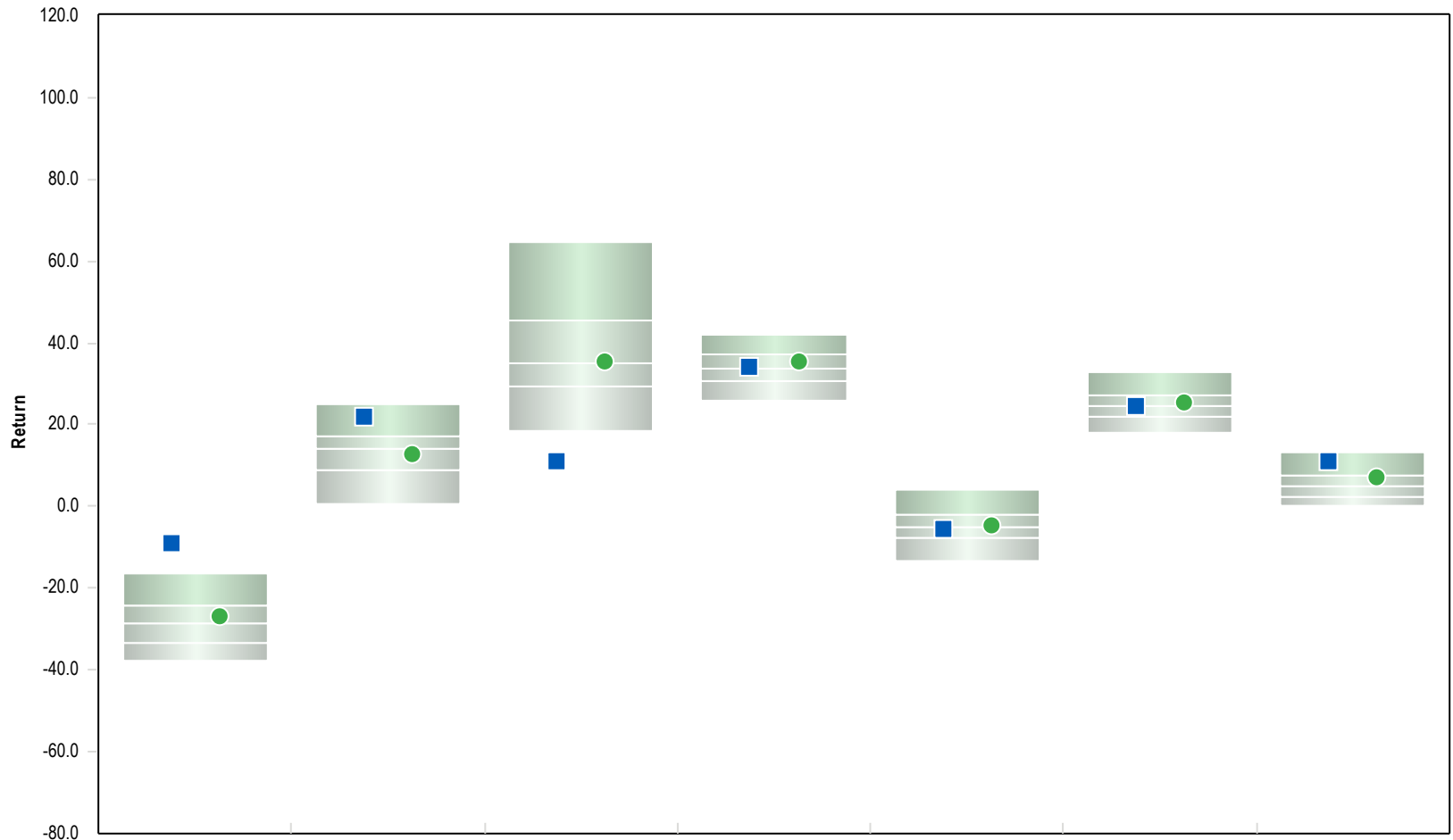
\* Quarterly periodicity used.

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



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Eaton Vance Atlanta Capital SMID	4.0 (93)	4.9 (100)	13.7 (93)	13.3 (5)	9.3 (43)	11.3 (58)	11.8 (32)
● Russell Midcap Growth Index	6.2 (42)	15.9 (32)	23.1 (9)	7.6 (50)	9.7 (30)	12.0 (38)	11.5 (39)
5th Percentile	9.3	21.3	24.7	13.1	11.5	14.4	12.8
1st Quartile	7.4	16.7	21.3	9.3	10.0	12.6	11.9
Median	5.7	14.8	18.2	7.6	9.0	11.4	11.1
3rd Quartile	5.0	12.7	15.2	4.4	8.1	10.5	10.0
95th Percentile	3.5	8.8	13.1	0.4	3.9	8.4	7.8

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



	2022	2021	2020	2019	2018	2017	2016
■ Eaton Vance Atlanta Capital SMID	-9.0 (1)	21.9 (14)	11.0 (99)	34.1 (48)	-5.6 (58)	24.4 (56)	11.0 (15)
● Russell Midcap Growth Index	-26.7 (38)	12.7 (60)	35.6 (46)	35.5 (34)	-4.8 (47)	25.3 (41)	7.3 (26)

5th Percentile	-16.3	24.9	64.6	42.0	4.2	32.8	13.1
1st Quartile	-24.3	17.3	45.6	37.3	-2.0	27.0	7.5
Median	-28.8	14.2	34.9	33.9	-5.0	24.7	4.8
3rd Quartile	-33.2	9.1	29.4	30.5	-7.9	22.2	2.2
95th Percentile	-37.6	0.8	18.3	25.8	-13.3	18.2	0.1

**Fund Information**

Fund Name :	Eaton Vance Growth Trust: Eaton Vance Atlanta Capital SMID-Cap Fund; Class A Shares	Portfolio Assets :	\$11,203 Million
Fund Family :	Eaton Vance	Portfolio Manager :	Bell IV/Reed/Hereford
Ticker :	EAASX	PM Tenure :	2004--2003--2004
Inception Date :	11/28/2003	Fund Style :	IM U.S. Mid Cap Growth Equity (MF)
Fund Assets :	\$998 Million	Style Benchmark :	Russell Midcap Growth Index
Portfolio Turnover :	7%		

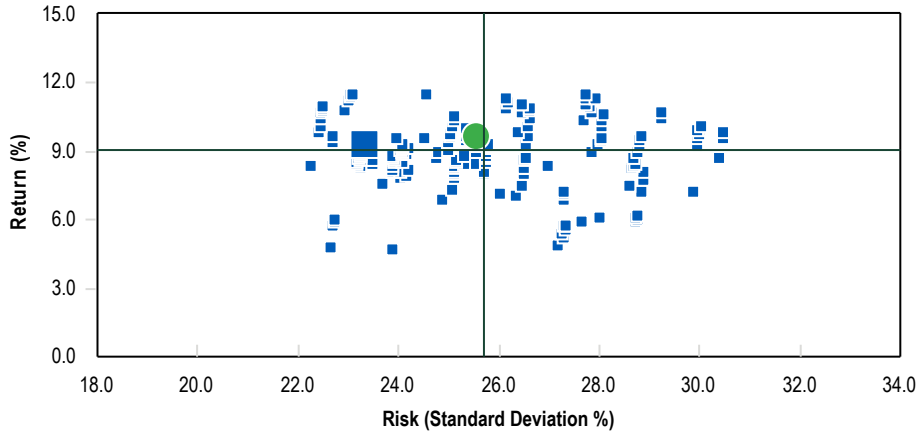
**Fund Investment Policy**

The Fund seeks long-term capital growth. Invests primarily in common stocks of companies with small market capitalizations. The Fund will normally invest in companies having market capitalizations within the range of companies comprising the Russell 2000 stock index.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Eaton Vance Atlanta Capital SMID	9.3	23.3	0.4	1.5	0.8	0.8	11.2	-0.1	23.4	08/01/2014
Russell Midcap Growth Index	9.7	25.6	0.4	0.0	1.0	1.0	0.0		25.6	08/01/2014
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	25.6	-0.4	0.0	08/01/2014

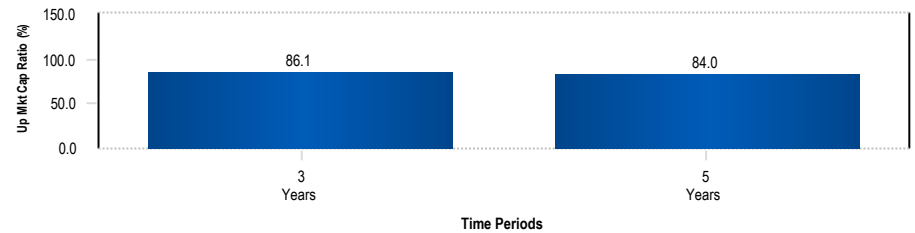
**Peer Group Scattergram (07/01/18 to 06/30/23)**



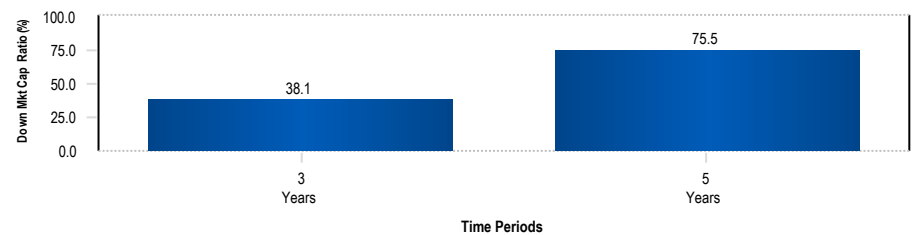
	Return	Standard Deviation
■ Eaton Vance Atlanta Capital SMID	9.3	23.3
● Russell Midcap Growth Index	9.7	25.6
— Median	9.0	25.7

**Up Down Market Capture**

**Up Market Capture**

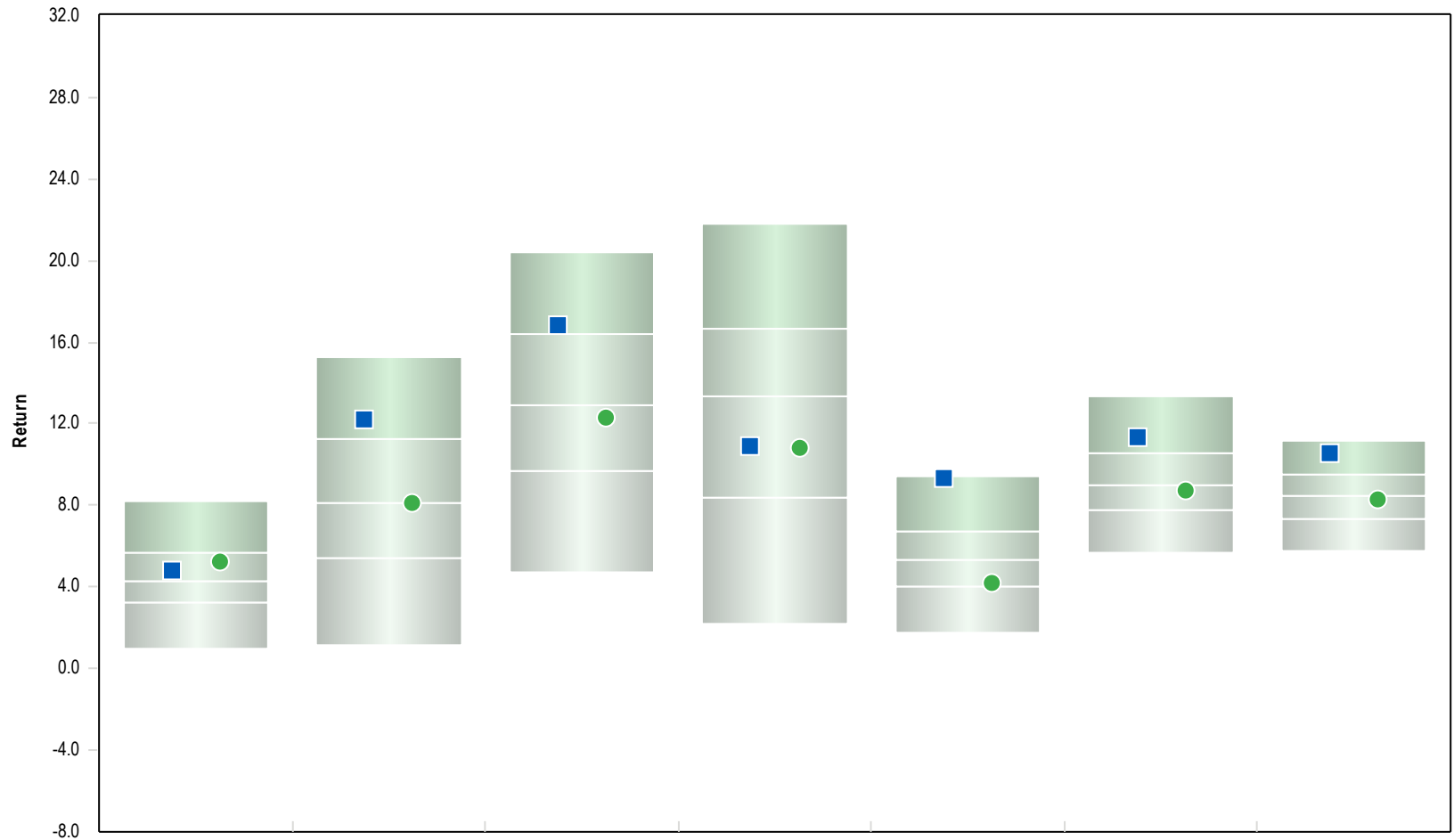


**Down Market Capture**



\* Quarterly periodicity used.

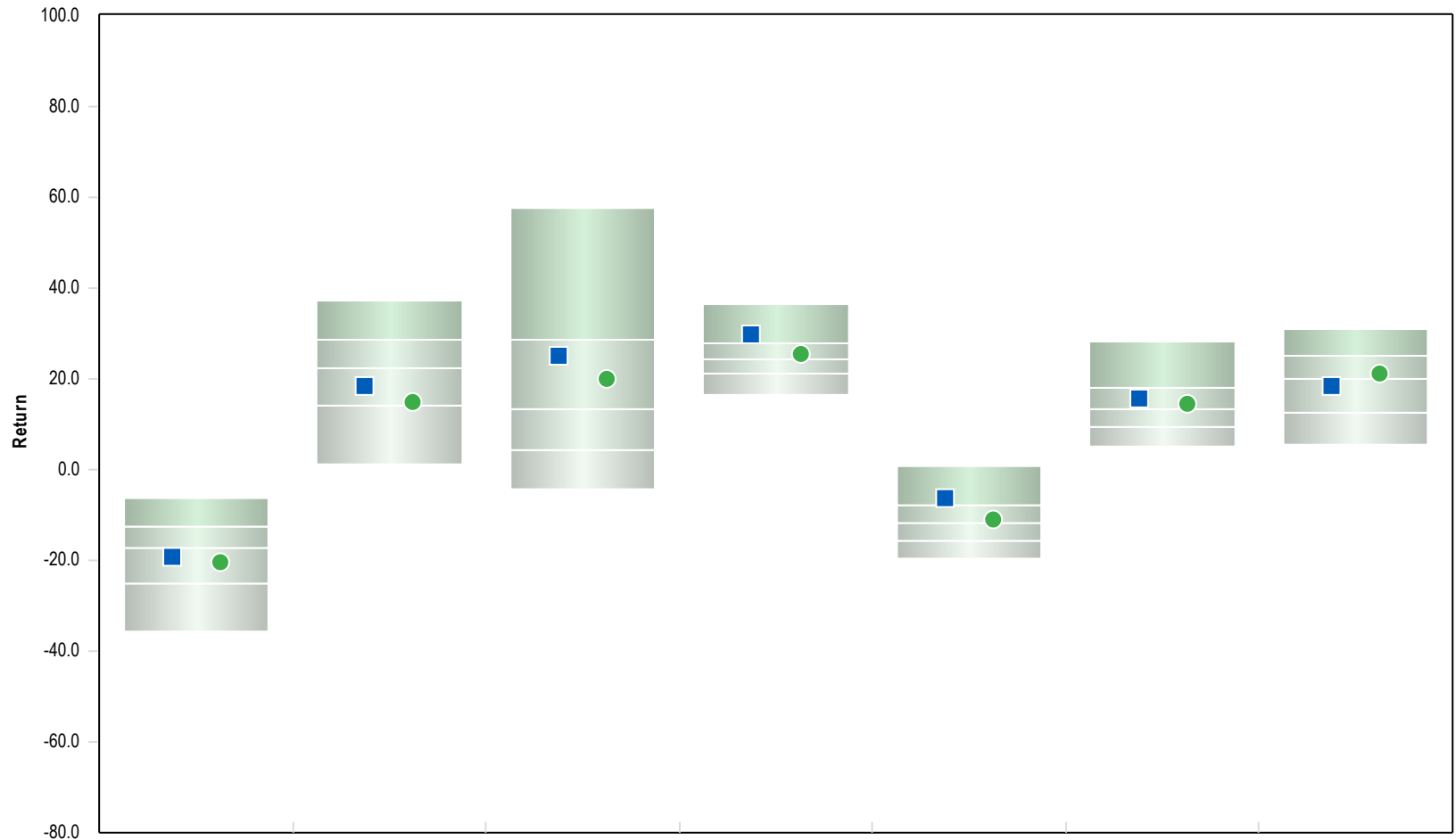
Peer Group Analysis - IM U.S. Small Cap Equity (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Neuberger Berman Genesis Trust	4.8 (42)	12.2 (20)	16.8 (22)	10.9 (64)	9.3 (6)	11.3 (18)	10.6 (9)
● Russell 2000 Index	5.2 (33)	8.1 (52)	12.3 (58)	10.8 (65)	4.2 (73)	8.8 (56)	8.3 (56)
5th Percentile	8.2	15.3	20.4	21.8	9.5	13.3	11.1
1st Quartile	5.7	11.2	16.4	16.7	6.7	10.5	9.5
Median	4.3	8.2	12.9	13.4	5.4	9.0	8.5
3rd Quartile	3.2	5.4	9.7	8.4	4.0	7.8	7.3
95th Percentile	1.0	1.2	4.7	2.2	1.7	5.7	5.8



Peer Group Analysis - IM U.S. Small Cap Equity (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Neuberger Berman Genesis Trust	-19.0 (58)	18.5 (63)	25.2 (31)	29.8 (19)	-6.4 (22)	15.9 (32)	18.4 (60)
● Russell 2000 Index	-20.4 (64)	14.8 (71)	20.0 (37)	25.5 (40)	-11.0 (44)	14.6 (39)	21.3 (43)

5th Percentile	-6.2	37.4	57.8	36.6	0.6	28.1	31.1
1st Quartile	-12.6	28.8	28.8	28.0	-7.8	18.2	25.0
Median	-17.2	22.4	13.3	24.4	-11.9	13.2	20.2
3rd Quartile	-24.9	14.0	4.5	21.2	-15.5	9.5	12.7
95th Percentile	-35.9	1.3	-4.3	16.5	-19.5	5.1	5.3

**Fund Information**

Fund Name :	Neuberger Berman Equity Funds: Neuberger Berman Genesis Fund; Class R6 Shares	Portfolio Assets :	\$10,223 Million
Fund Family :	Neuberger Berman	Portfolio Manager :	Team Managed
Ticker :	NRGSX	PM Tenure :	
Inception Date :	03/15/2013	Fund Style :	IM U.S. Small Cap Equity (MF)
Fund Assets :	\$4,660 Million	Style Benchmark :	Russell 2000 Index
Portfolio Turnover :	12%		

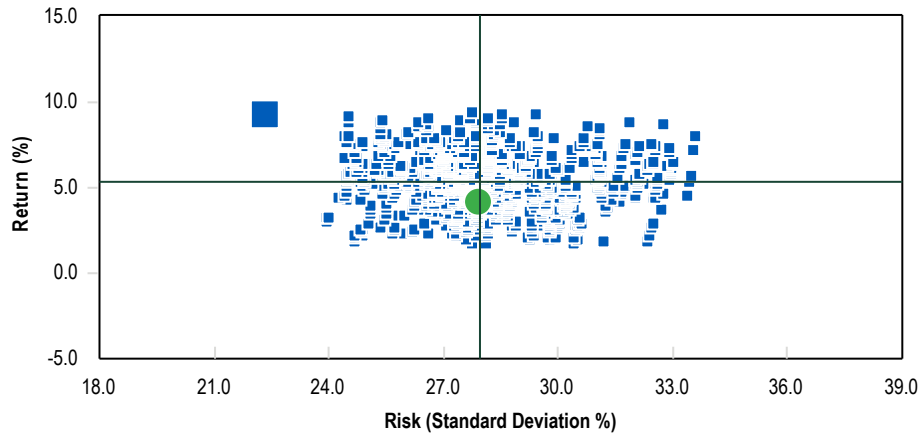
**Fund Investment Policy**

The Fund seeks capital appreciation through investment in common stock of companies with small market capitalization, which it defines as those with a total market value of no more than \$1.5 billion at the time the Fund first invests in them.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Neuberger Berman Genesis Trust	9.3	22.3	0.4	5.4	0.8	0.9	9.1	0.4	22.4	05/01/2001
Russell 2000 Index	4.2	27.9	0.2	0.0	1.0	1.0	0.0		28.0	05/01/2001
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	28.0	-0.2	0.0	05/01/2001

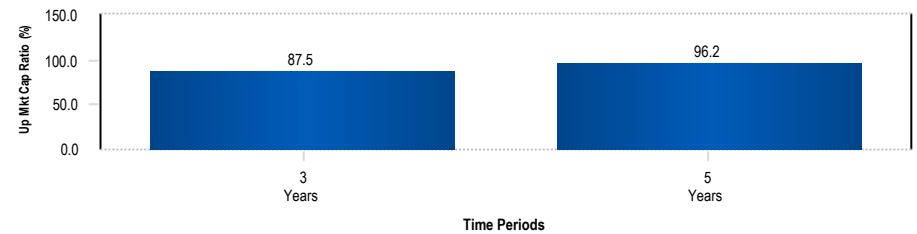
**Peer Group Scattergram (07/01/18 to 06/30/23)**



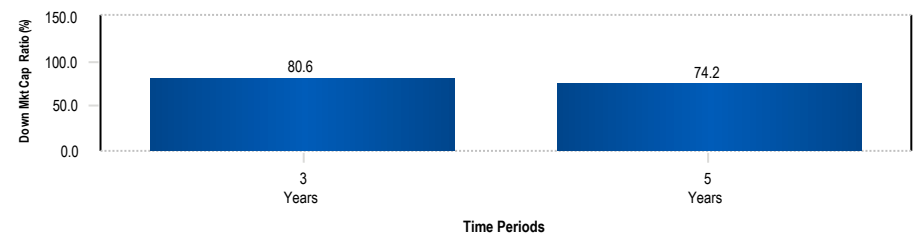
	Return	Standard Deviation
■ Neuberger Berman Genesis Trust	9.3	22.3
● Russell 2000 Index	4.2	27.9
— Median	5.4	27.9

**Up Down Market Capture**

**Up Market Capture**

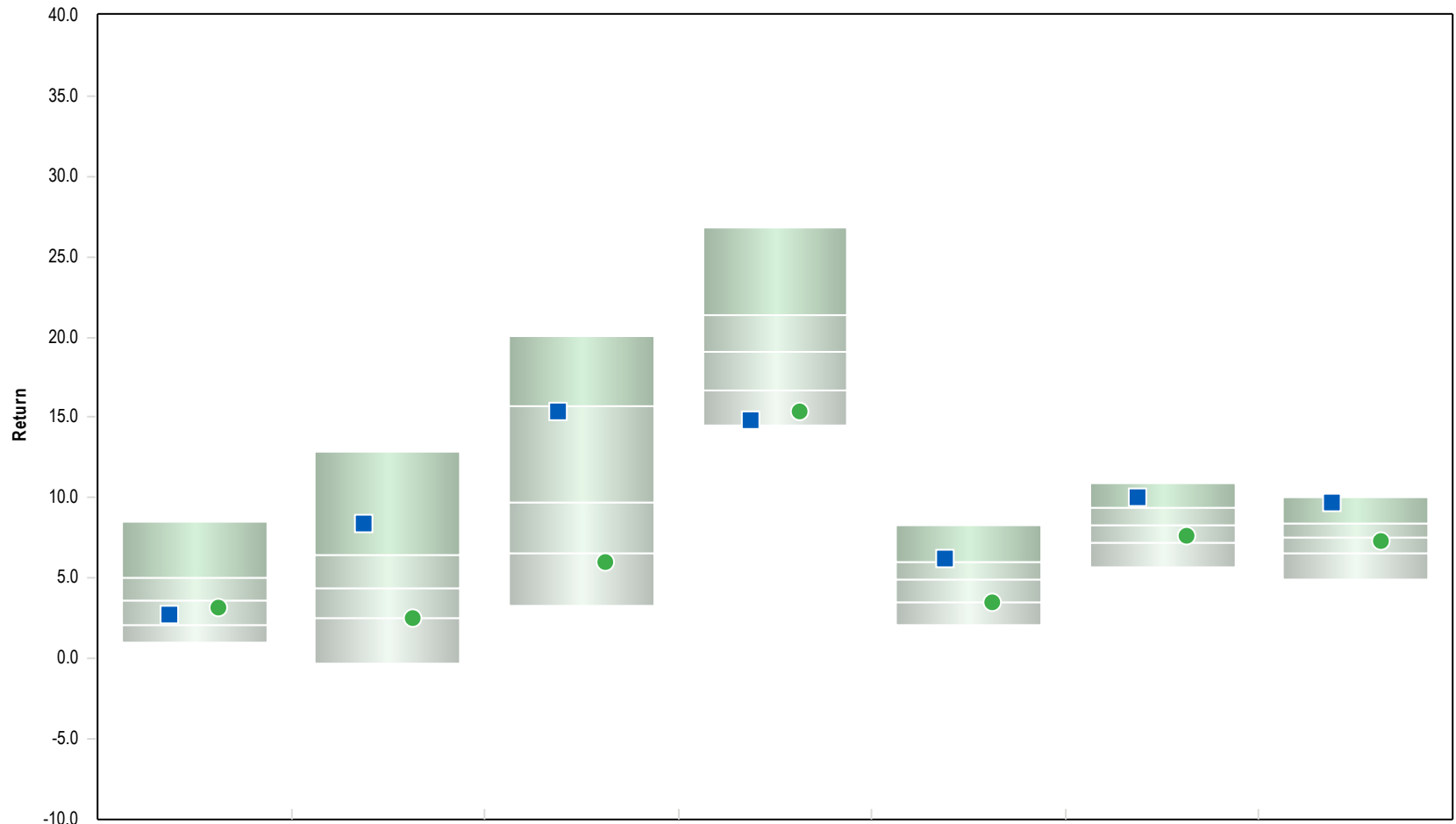


**Down Market Capture**



\* Quarterly periodicity used.

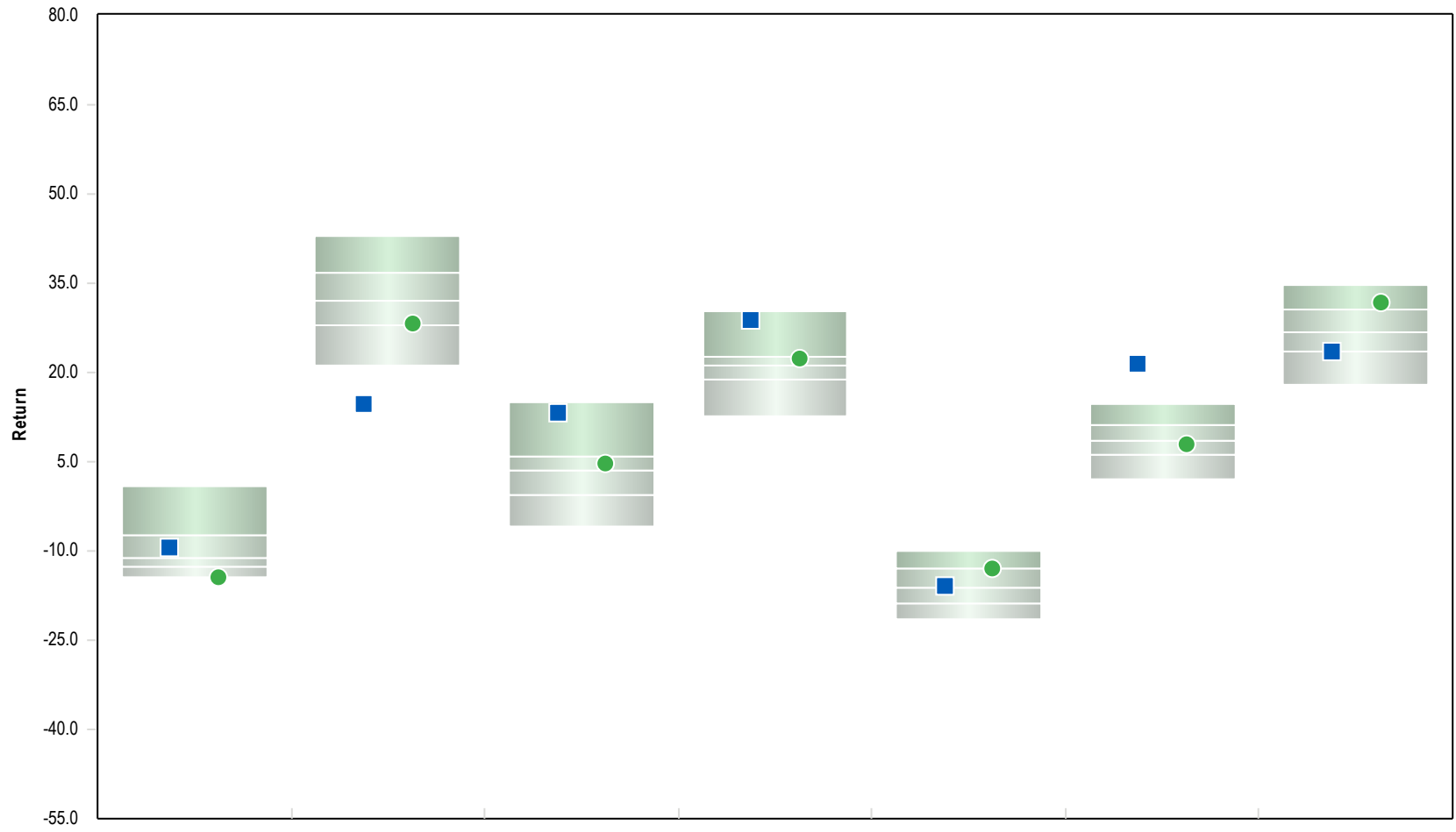
Peer Group Analysis - IM U.S. Small Cap Value Equity (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Harbor Small Cap Value Fund	2.7 (68)	8.4 (15)	15.4 (27)	14.8 (95)	6.2 (23)	10.0 (18)	9.7 (8)
● Russell 2000 Value Index	3.2 (64)	2.5 (76)	6.0 (83)	15.4 (89)	3.5 (76)	7.7 (69)	7.3 (56)

5th Percentile	8.6	12.9	20.1	26.8	8.3	10.9	10.1
1st Quartile	5.0	6.5	15.7	21.4	6.0	9.3	8.4
Median	3.7	4.4	9.7	19.1	4.9	8.4	7.5
3rd Quartile	2.1	2.5	6.6	16.7	3.5	7.3	6.6
95th Percentile	1.0	-0.3	3.2	14.5	2.1	5.6	4.9

Peer Group Analysis - IM U.S. Small Cap Value Equity (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Harbor Small Cap Value Fund	-9.5 (41)	14.7 (99)	13.1 (6)	29.0 (6)	-16.0 (49)	21.6 (1)	23.5 (76)
● Russell 2000 Value Index	-14.5 (96)	28.3 (73)	4.6 (35)	22.4 (28)	-12.9 (23)	7.8 (60)	31.7 (17)

5th Percentile	0.8	43.0	14.9	30.2	-10.1	14.8	34.6
1st Quartile	-7.4	36.9	5.8	22.6	-13.1	11.3	30.5
Median	-11.1	32.0	3.6	21.1	-16.1	8.5	26.7
3rd Quartile	-12.7	28.1	-0.5	18.8	-18.7	6.2	23.6
95th Percentile	-14.3	21.2	-6.0	12.6	-21.4	2.2	17.9

**Fund Information**

Fund Name : Harbor Funds: Harbor Small Cap Value Fund; Institutional Class Shares  
 Fund Family : Harbor Funds  
 Ticker : HASCX  
 Inception Date : 12/14/2001  
 Fund Assets : \$1,552 Million  
 Portfolio Turnover : 15%

Portfolio Assets : \$2,240 Million  
 Portfolio Manager : Paul E. Viera  
 PM Tenure : 2001  
 Fund Style : IM U.S. Small Cap Value Equity (MF)  
 Style Benchmark : Russell 2000 Value Index

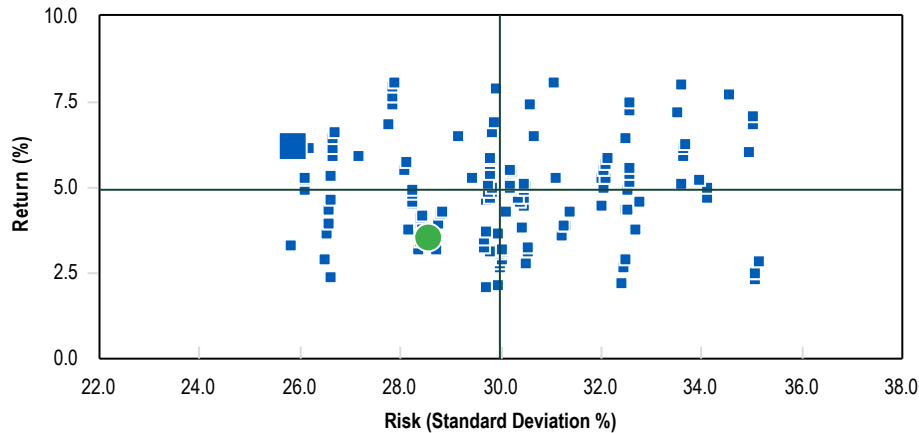
**Fund Investment Policy**

The Fund seeks long-term total return. The Fund invests primarily in equity securities, principally common and preferred stocks, of small cap companies. Small cap companies as those with market capitalizations that fall within the range of the Russell 2000 Index.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Harbor Small Cap Value Fund	6.2	25.9	0.3	2.7	0.9	1.0	6.5	0.3	26.0	01/01/2002
Russell 2000 Value Index	3.5	28.6	0.2	0.0	1.0	1.0	0.0		28.7	01/01/2002
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.1	28.7	-0.2	0.0	01/01/2002

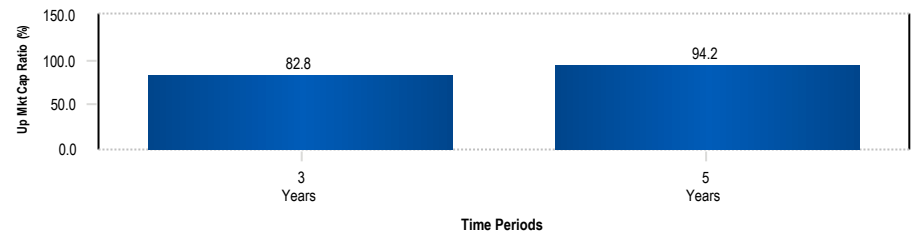
**Peer Group Scattergram (07/01/18 to 06/30/23)**



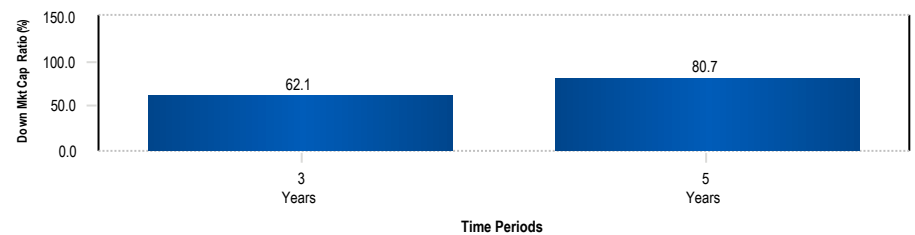
	Return	Standard Deviation
Harbor Small Cap Value Fund	6.2	25.9
Russell 2000 Value Index	3.5	28.6
Median	4.9	30.0

**Up Down Market Capture**

**Up Market Capture**

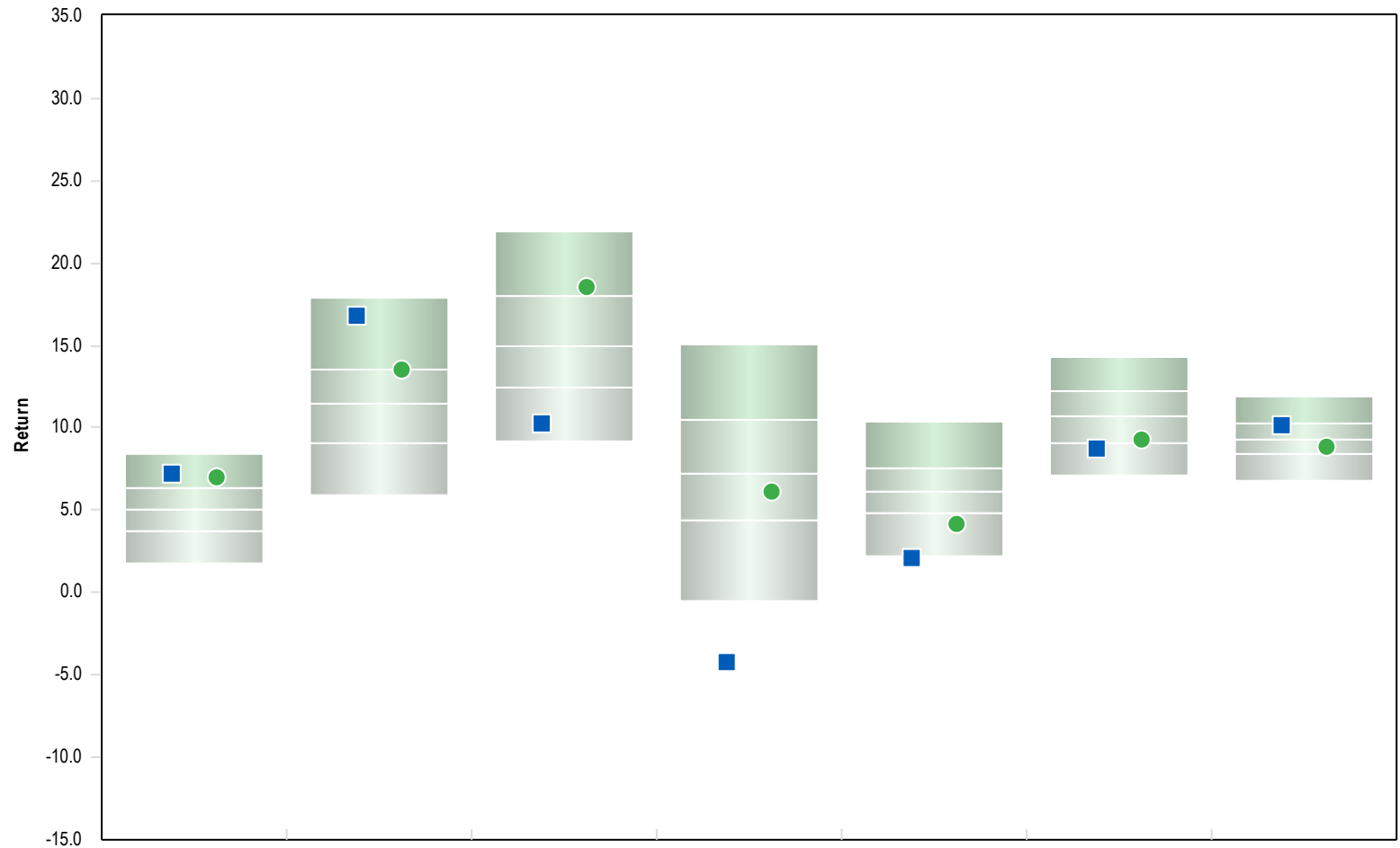


**Down Market Capture**



\* Quarterly periodicity used.

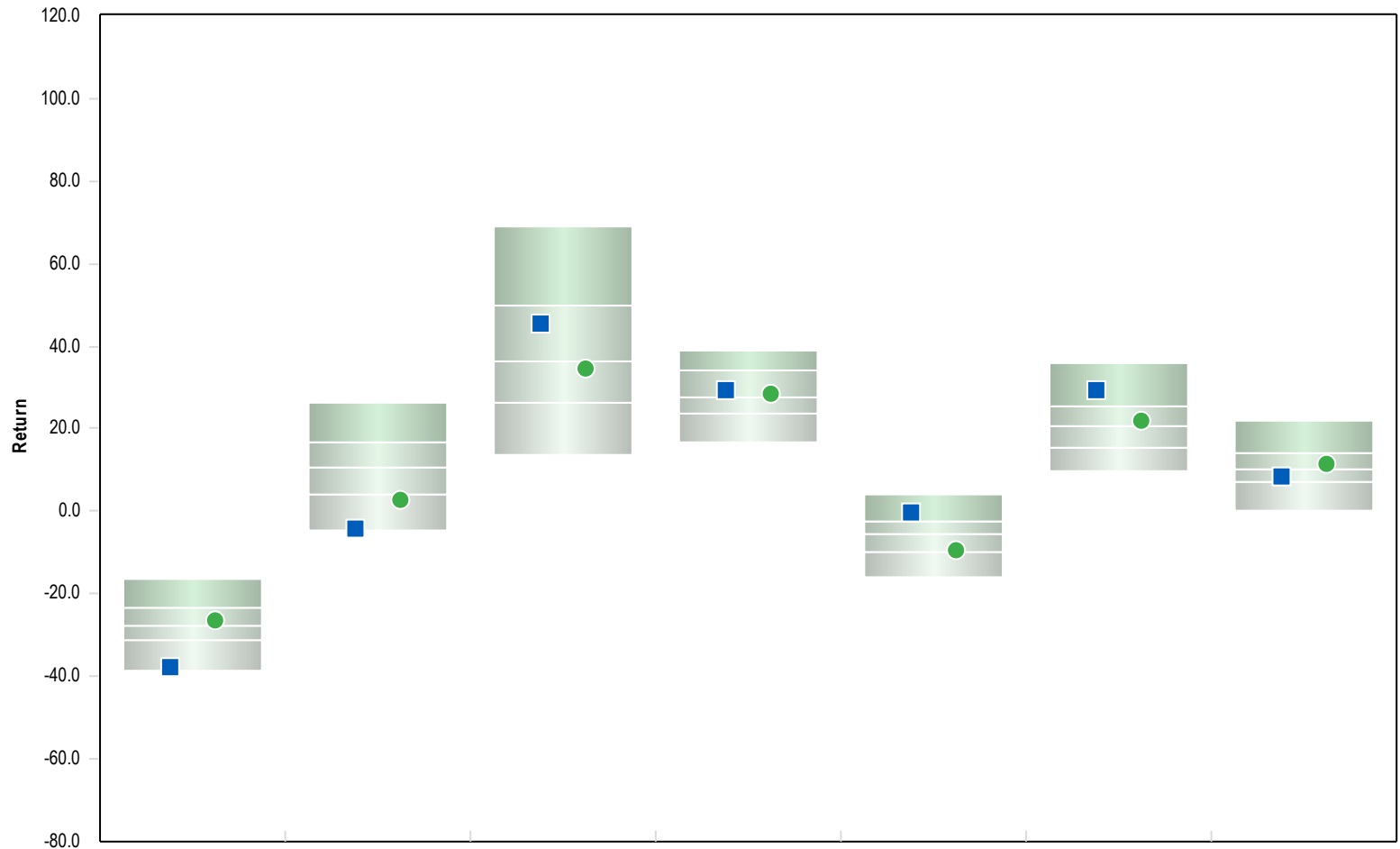
Peer Group Analysis - IM U.S. Small Cap Growth Equity (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Brown Capital Management Small Company	7.2 (16)	16.8 (7)	10.3 (92)	-4.3 (99)	2.1 (96)	8.8 (79)	10.2 (27)
● Russell 2000 Growth Index	7.1 (17)	13.6 (25)	18.5 (22)	6.1 (60)	4.2 (83)	9.3 (71)	8.8 (65)

5th Percentile	8.5	17.9	21.9	15.1	10.4	14.3	11.9
1st Quartile	6.3	13.5	18.1	10.5	7.5	12.3	10.3
Median	5.1	11.5	14.9	7.2	6.1	10.7	9.3
3rd Quartile	3.8	9.1	12.4	4.4	4.8	9.1	8.4
95th Percentile	1.7	5.9	9.2	-0.5	2.2	7.1	6.7

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



■ Brown Capital Management Small Company  
● Russell 2000 Growth Index

	2022	2021	2020	2019	2018	2017	2016
Brown Capital Management Small Company	-37.9 (95)	-4.0 (95)	45.5 (30)	29.5 (43)	-0.5 (17)	29.2 (12)	8.6 (62)
Russell 2000 Growth Index	-26.4 (44)	2.8 (82)	34.6 (56)	28.5 (47)	-9.3 (73)	22.2 (43)	11.3 (43)

5th Percentile	-16.5	26.2	68.9	38.8	4.2	36.1	22.1
1st Quartile	-23.3	16.9	49.9	34.1	-2.4	25.4	14.0
Median	-27.5	10.5	36.5	27.7	-5.6	20.7	10.1
3rd Quartile	-31.2	4.0	26.4	23.9	-9.9	15.6	7.3
95th Percentile	-38.5	-4.4	13.7	16.8	-16.1	9.7	0.3

**Fund Information**

Fund Name :	Brown Capital Management Mutual Funds: Brown Capital Management Small Company Fund; Institutional Share	Portfolio Assets :	\$3,674 Million
Fund Family :	Brown Capital	Portfolio Manager :	Team Managed
Ticker :	BCSSX	PM Tenure :	
Inception Date :	12/15/2011	Fund Style :	IM U.S. Small Cap Growth Equity (MF)
Fund Assets :	\$2,834 Million	Style Benchmark :	Russell 2000 Growth Index

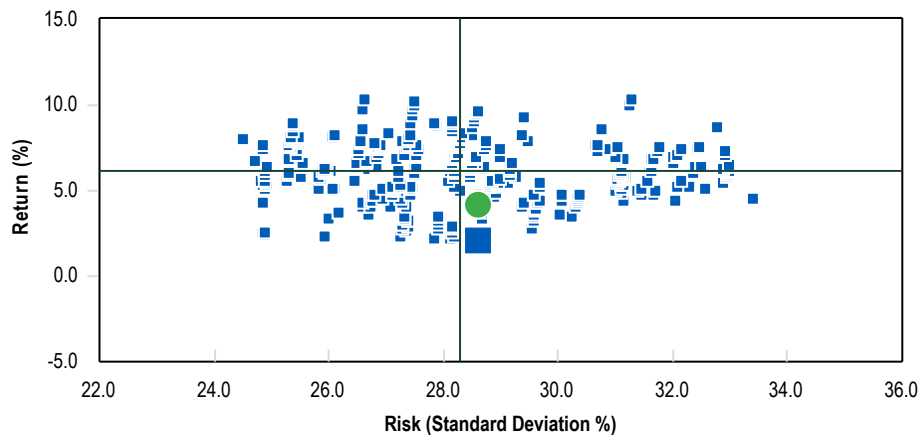
**Fund Investment Policy**

The Fund seeks long-term capital appreciation and current income is a secondary consideration in selecting portfolio investments. The Fund invests primarily in a portfolio of equity securities of companies that have a market capitalization of between \$1 billion and \$10 billion at the time of purchase.

**Historical Statistics (07/01/18 - 06/30/23) \***

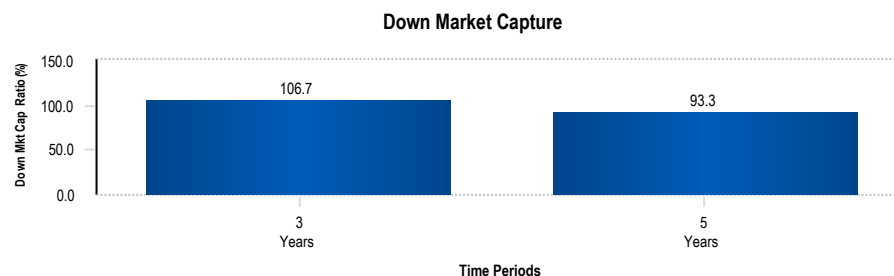
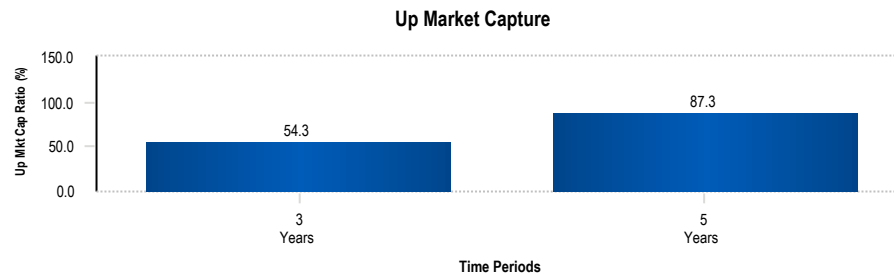
	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Brown Capital Management Small Company	2.1	28.6	0.2	-1.5	0.9	0.9	10.7	-0.2	28.6	09/01/1999
Russell 2000 Growth Index	4.2	28.6	0.2	0.0	1.0	1.0	0.0		28.7	09/01/1999
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	28.7	-0.2	0.0	09/01/1999

**Peer Group Scattergram (07/01/18 to 06/30/23)**



■ Brown Capital Management Small Company	Return	Standard Deviation
● Russell 2000 Growth Index	2.1	28.6
— Median	4.2	28.6
	6.1	28.3

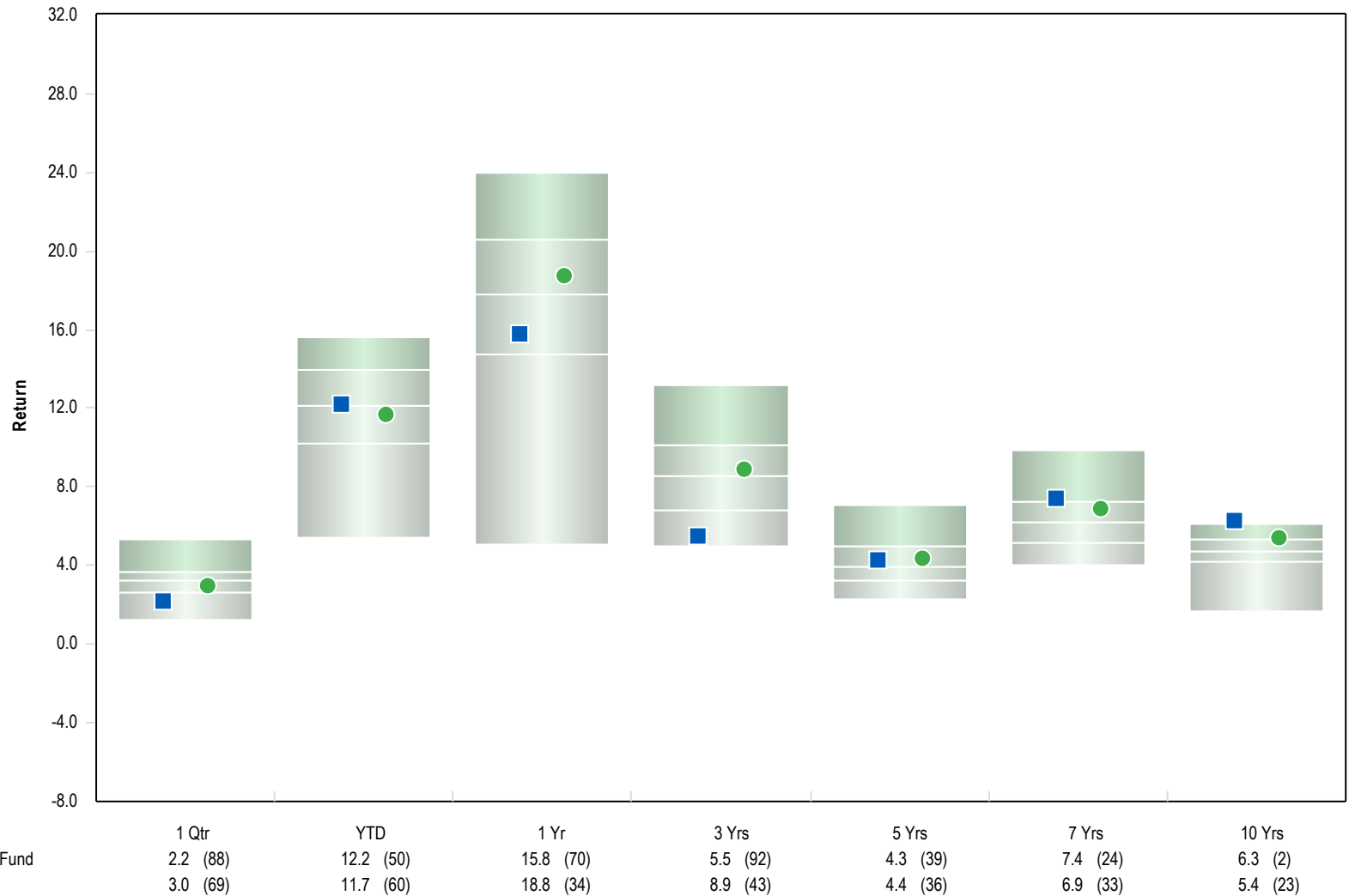
**Up Down Market Capture**



\* Quarterly periodicity used.

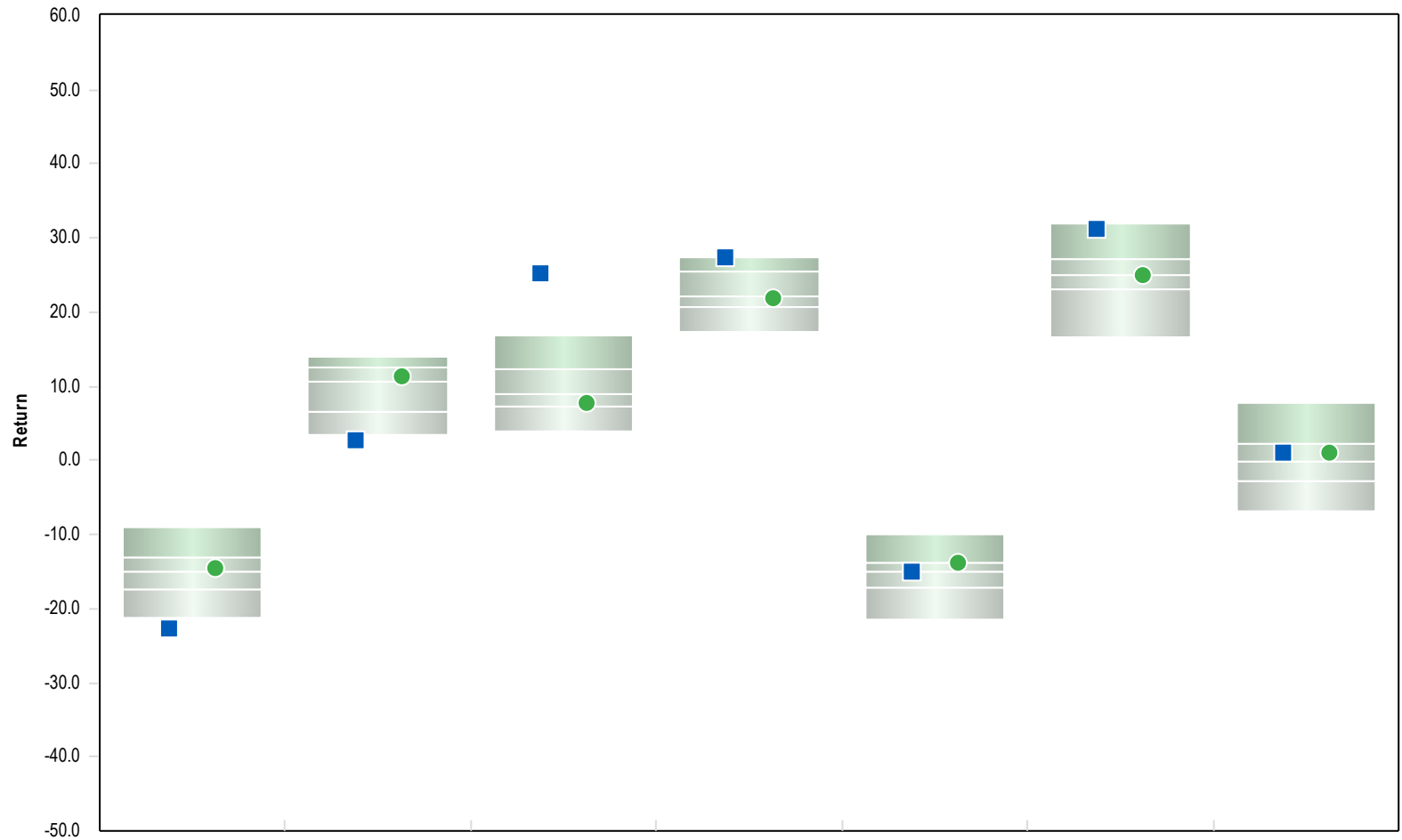


Peer Group Analysis - IM International Large Cap Core Equity (MF)



5th Percentile	5.4	15.6	24.0	13.2	7.0	9.8	6.1
1st Quartile	3.7	14.0	20.6	10.1	5.0	7.3	5.4
Median	3.2	12.2	17.8	8.5	3.9	6.2	4.8
3rd Quartile	2.6	10.2	14.8	6.8	3.2	5.2	4.2
95th Percentile	1.2	5.4	5.1	5.0	2.2	4.0	1.6

Peer Group Analysis - IM International Large Cap Core Equity (MF)



■ American Funds Europacific Growth Fund  
● MSCI EAFE (Net)

	2022	2021	2020	2019	2018	2017	2016
American Funds Europacific Growth Fund	-22.7 (100)	2.8 (96)	25.3 (1)	27.4 (4)	-14.9 (49)	31.2 (10)	1.0 (37)
MSCI EAFE (Net)	-14.5 (39)	11.3 (39)	7.8 (67)	22.0 (52)	-13.8 (25)	25.0 (50)	1.0 (37)

5th Percentile	-9.0	14.0	16.8	27.4	-9.9	32.0	7.7
1st Quartile	-13.0	12.4	12.4	25.6	-13.8	27.2	2.2
Median	-15.1	10.7	9.1	22.1	-15.0	25.0	0.0
3rd Quartile	-17.4	6.7	7.3	20.7	-17.2	23.2	-2.7
95th Percentile	-21.2	3.4	3.9	17.4	-21.4	16.6	-6.9

**Fund Information**

Fund Name : EuroPacific Growth Fund; Class R6 Shares  
 Fund Family : Capital Group/American Funds  
 Ticker : RERGX  
 Inception Date : 05/01/2009  
 Fund Assets : \$64,712 Million  
 Portfolio Turnover : 34%

Portfolio Assets : \$133,394 Million  
 Portfolio Manager : Team Managed  
 PM Tenure :  
 Fund Style : IM International Large Cap Core Equity (MF)  
 Style Benchmark : MSCI EAFE (Net)

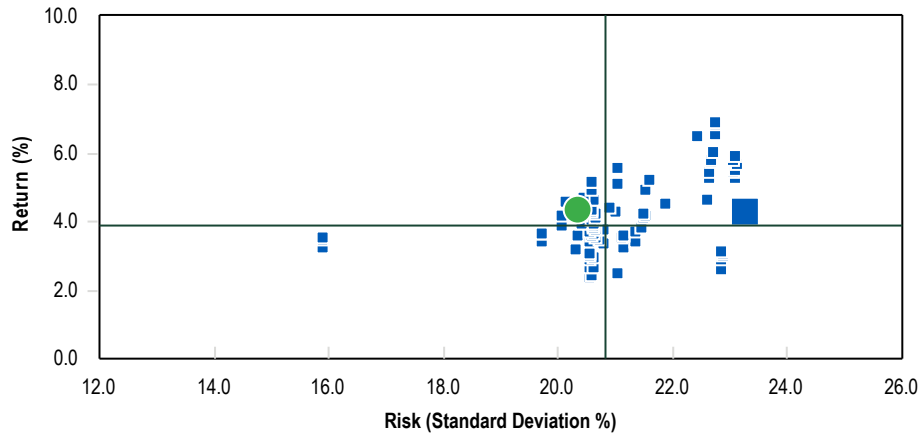
**Fund Investment Policy**

The Fund seeks to provide long-term growth of capital. The Fund will invest its net assets in securities of issuers in Europe and the Pacific Basin. It will be considered part of Europe if it is part of the MSCI European indexes, and part of the Pacific Basin if any of its borders touches the Pacific Ocean.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
American Funds Europacific Growth Fund	4.3	23.3	0.2	-0.2	1.1	0.9	6.5	0.1	23.3	07/01/2002
MSCI EAFE (Net)	4.4	20.4	0.2	0.0	1.0	1.0	0.0		20.3	07/01/2002
90 Day U.S. Treasury Bill	1.6	0.7		1.5	0.0	0.0	20.3	-0.2	0.0	07/01/2002

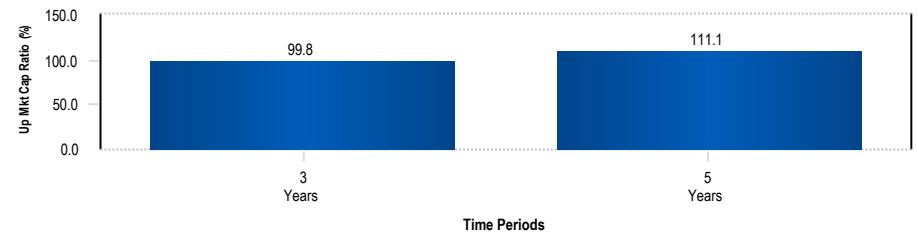
**Peer Group Scattergram (07/01/18 to 06/30/23)**



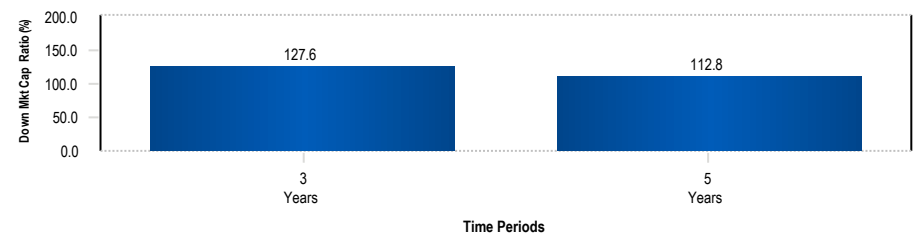
	Return	Standard Deviation
American Funds Europacific Growth Fund	4.3	23.3
MSCI EAFE (Net)	4.4	20.4
Median	3.9	20.8

**Up Down Market Capture**

**Up Market Capture**

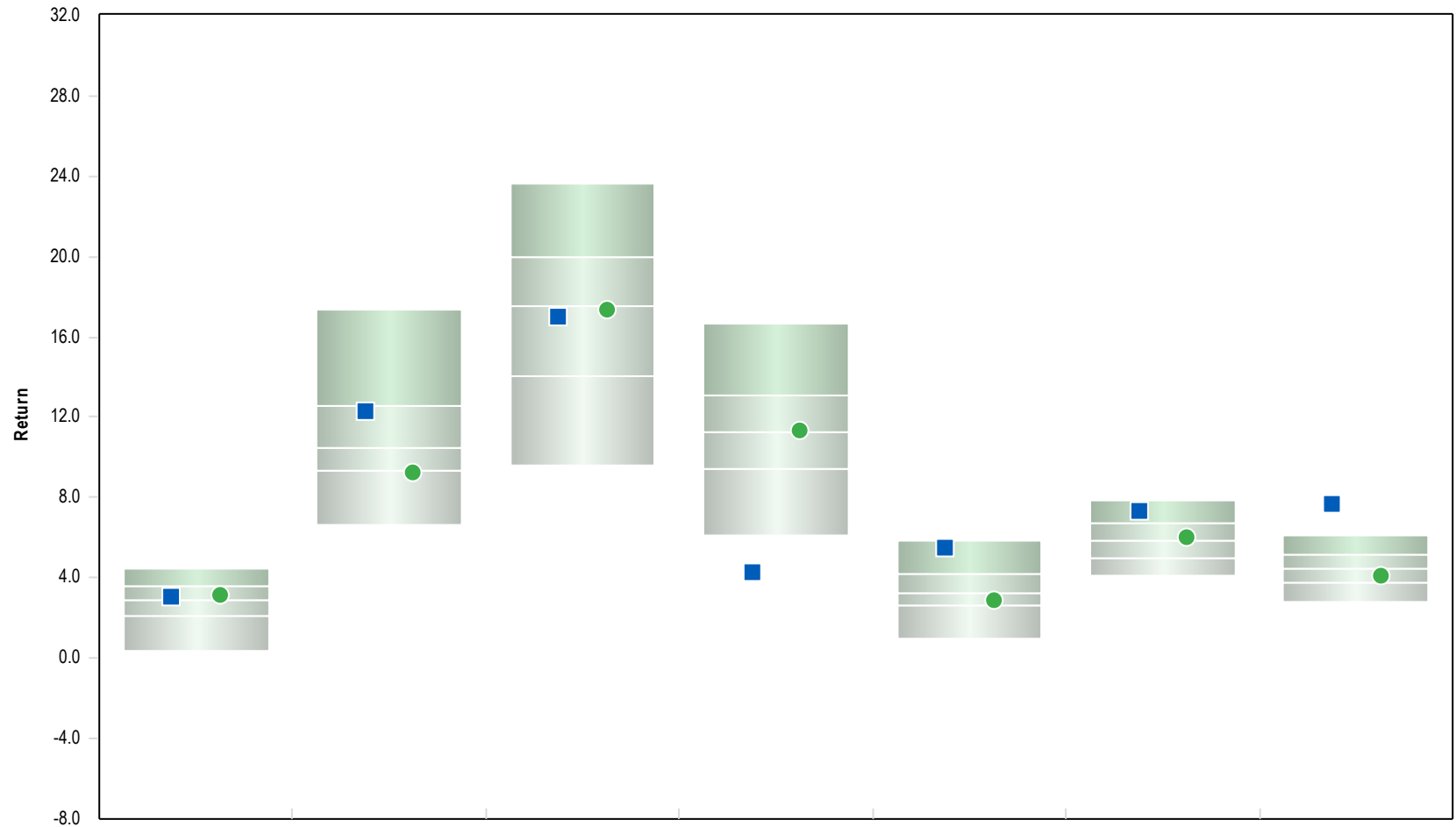


**Down Market Capture**



\* Quarterly periodicity used.

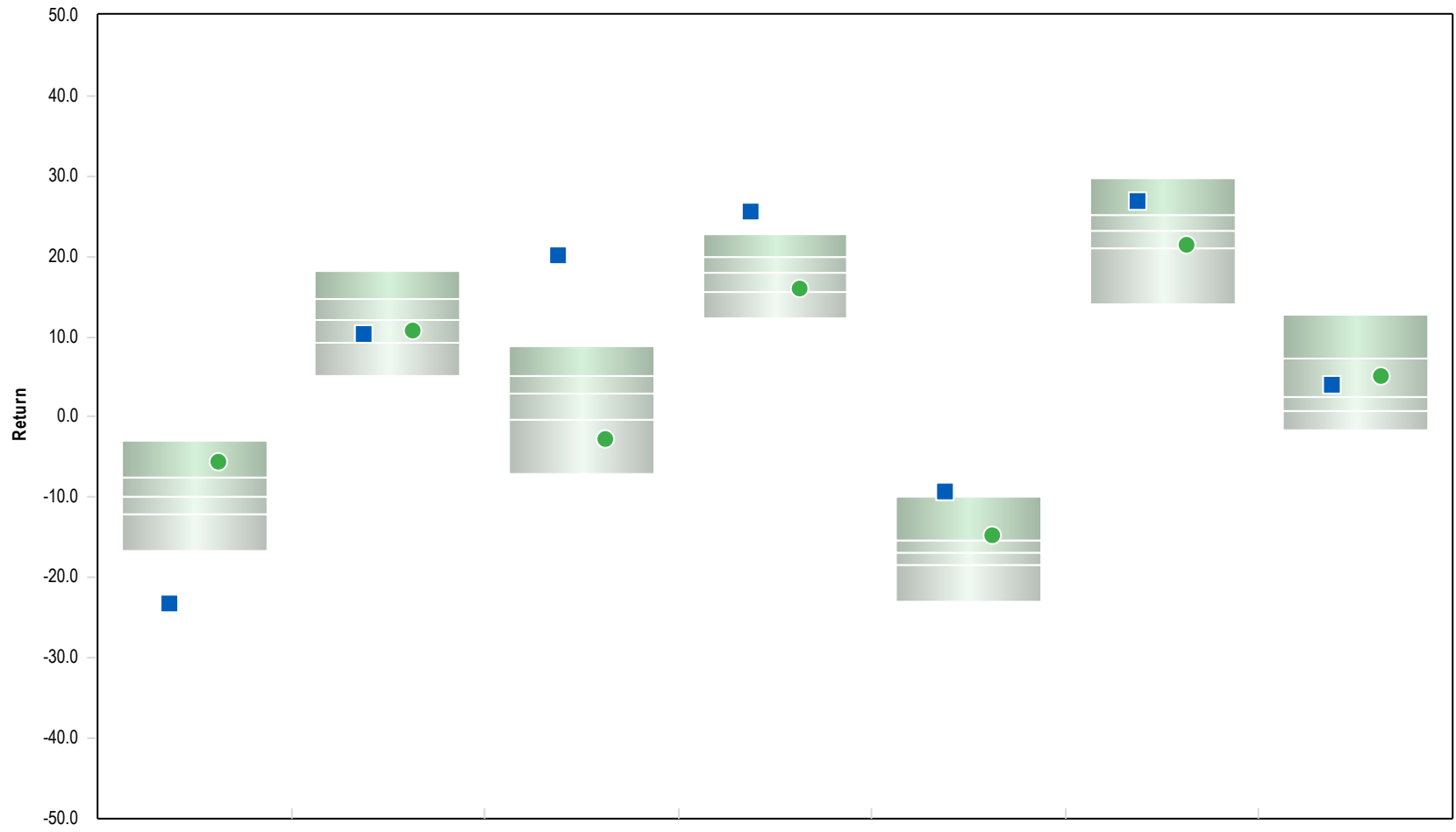
Peer Group Analysis - IM International Value Equity (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ MFS International Value	3.1 (42)	12.3 (27)	17.0 (54)	4.3 (100)	5.5 (7)	7.3 (15)	7.7 (1)
● MSCI EAFE Value Index (Net)	3.2 (38)	9.3 (76)	17.4 (51)	11.3 (50)	2.9 (65)	6.0 (45)	4.1 (61)

5th Percentile	4.4	17.3	23.6	16.6	5.8	7.9	6.1
1st Quartile	3.6	12.5	20.0	13.1	4.2	6.7	5.1
Median	2.9	10.5	17.6	11.2	3.2	5.9	4.5
3rd Quartile	2.1	9.3	14.0	9.4	2.6	5.0	3.7
95th Percentile	0.4	6.6	9.6	6.1	1.0	4.2	2.8

Peer Group Analysis - IM International Value Equity (MF)



	2022	2021	2020	2019	2018	2017	2016
■ MFS International Value	-23.3 (100)	10.3 (66)	20.2 (1)	25.6 (1)	-9.2 (3)	26.8 (15)	4.0 (36)
● MSCI EAFE Value Index (Net)	-5.6 (15)	10.9 (59)	-2.6 (85)	16.1 (71)	-14.8 (19)	21.4 (71)	5.0 (30)

5th Percentile	-2.9	18.1	8.7	22.8	-9.9	29.7	12.8
1st Quartile	-7.6	14.6	5.2	20.0	-15.3	25.2	7.3
Median	-10.0	12.1	2.9	17.9	-16.9	23.3	2.5
3rd Quartile	-12.1	9.3	-0.3	15.7	-18.3	21.0	0.8
95th Percentile	-16.7	5.1	-7.1	12.3	-23.0	14.0	-1.7

**Fund Information**

Fund Name : MFS Series Trust X: MFS International Intrinsic Value Fund; Class R3 Shares  
 Fund Family : MFS  
 Ticker : MINGX  
 Inception Date : 10/01/2008  
 Fund Assets : \$1,010 Million  
 Portfolio Turnover : 10%

Portfolio Assets : \$21,843 Million  
 Portfolio Manager : Stone/Evans  
 PM Tenure : 2008--2020  
 Fund Style : IM International Value Equity (MF)  
 Style Benchmark : MSCI EAFE Value Index (Net)

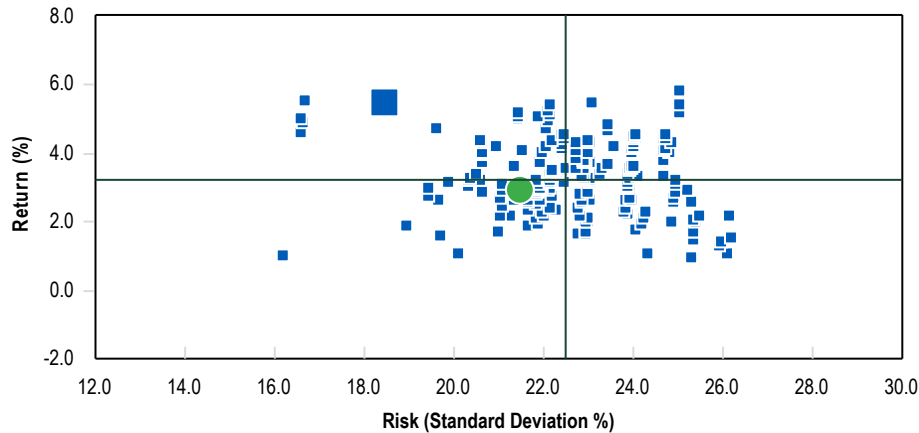
**Fund Investment Policy**

The Fund seeks capital appreciation and current income by investing, under normal conditions, at least 65 percent of its total assets in equity and fixed income securities of issuers whose principal activities are outside the U.S.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
MFS International Value	5.5	18.4	0.3	3.5	0.7	0.7	12.6	0.1	18.4	06/01/2006
MSCI EAFE Value Index (Net)	2.9	21.5	0.2	0.0	1.0	1.0	0.0		21.5	06/01/2006
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	21.5	-0.2	0.0	06/01/2006

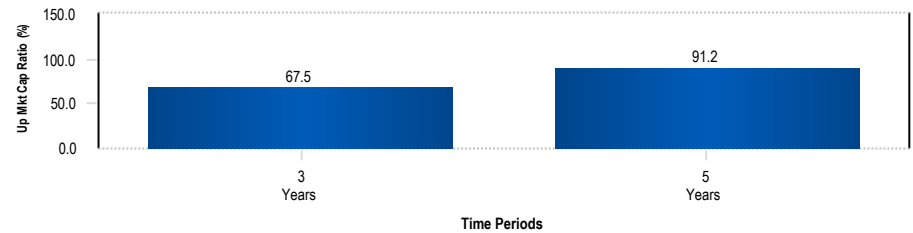
**Peer Group Scattergram (07/01/18 to 06/30/23)**



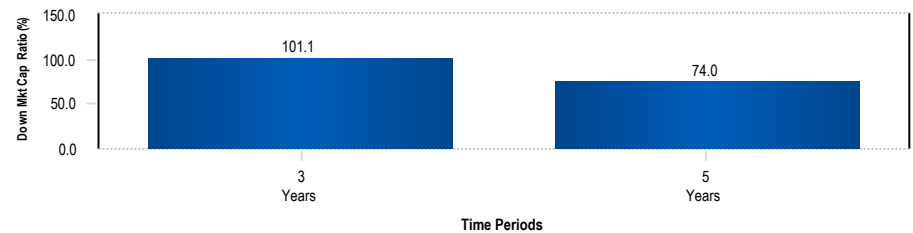
	Return	Standard Deviation
■ MFS International Value	5.5	18.4
● MSCI EAFE Value Index (Net)	2.9	21.5
— Median	3.2	22.5

**Up Down Market Capture**

**Up Market Capture**

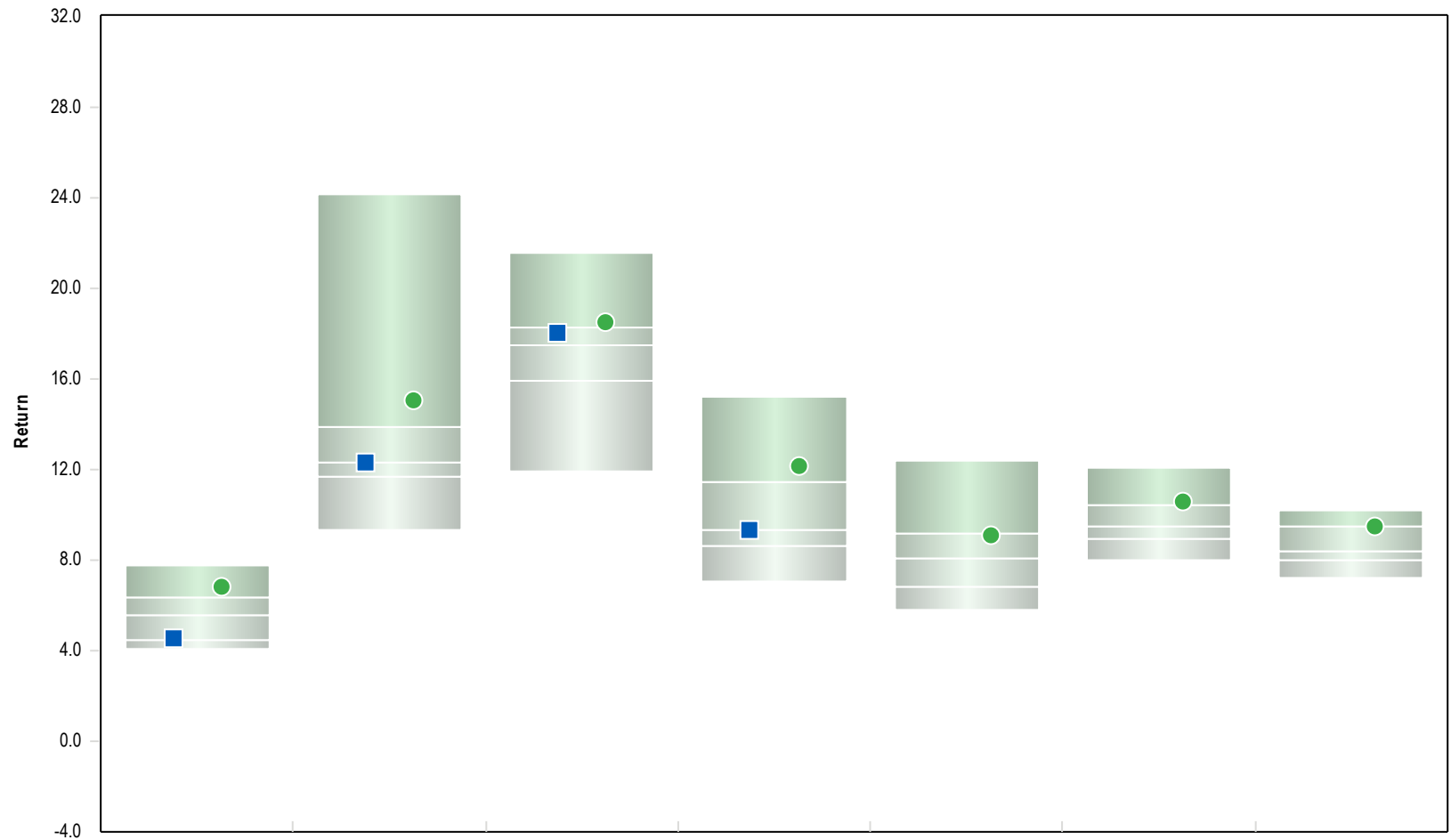


**Down Market Capture**



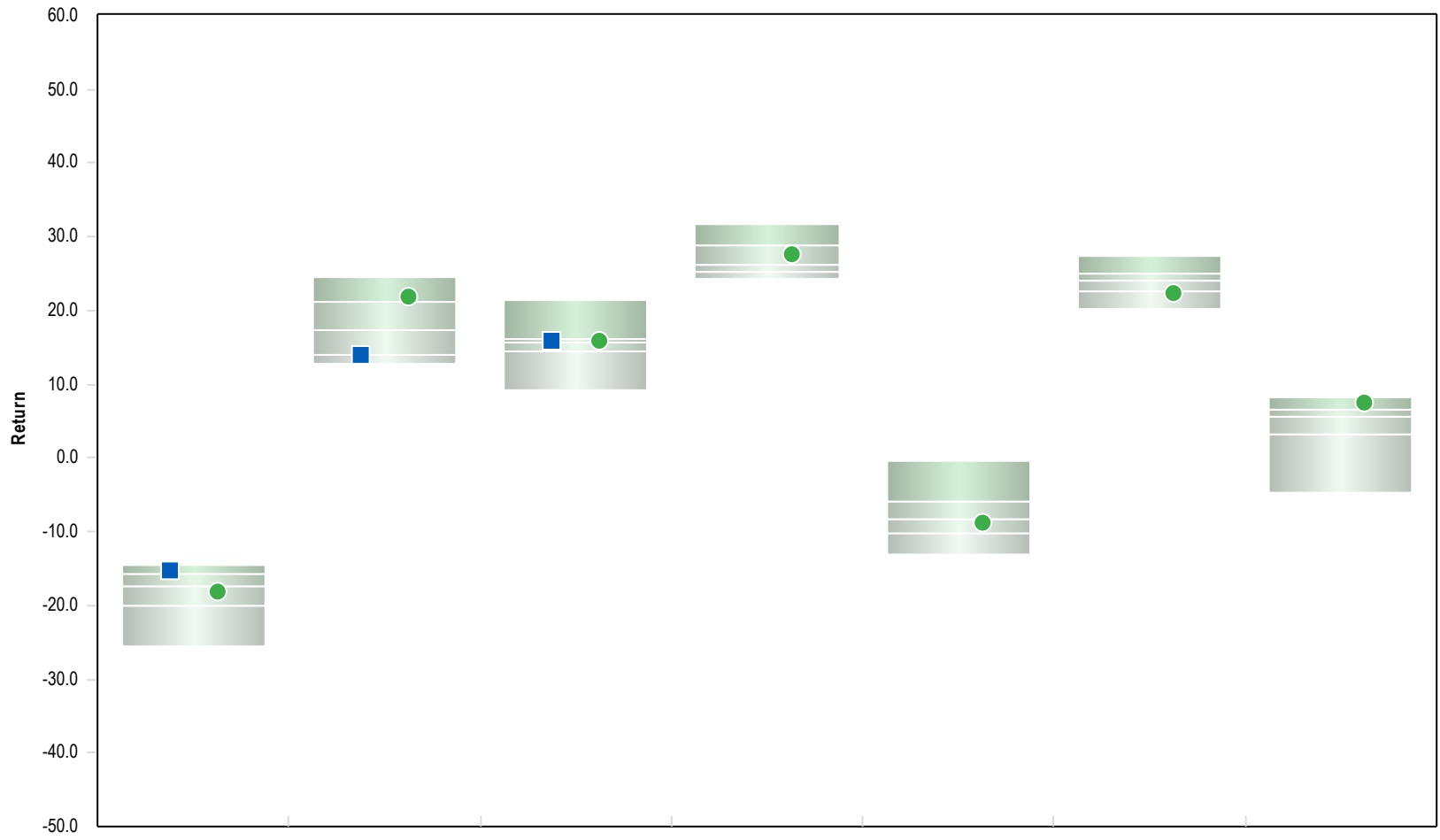
\* Quarterly periodicity used.

Peer Group Analysis - IM Global Large Cap Core Equity (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
American Funds Global Insight R6	4.5 (74)	12.3 (51)	18.1 (29)	9.3 (55)	9.1 (31)	10.6 (21)	9.5 (26)
MSCI World (Net)	6.8 (18)	15.1 (20)	18.5 (20)	12.2 (17)	9.1 (31)	10.6 (21)	9.5 (26)
5th Percentile	7.8	24.2	21.6	15.2	12.4	12.1	10.2
1st Quartile	6.4	13.9	18.3	11.5	9.2	10.4	9.5
Median	5.6	12.3	17.5	9.3	8.1	9.5	8.4
3rd Quartile	4.5	11.7	15.9	8.6	6.8	9.0	8.0
95th Percentile	4.1	9.3	11.9	7.0	5.8	8.0	7.2

Peer Group Analysis - IM Global Large Cap Core Equity (MF)



	2022	2021	2020	2019	2018	2017	2016
■ American Funds Global Insight R6	-15.2 (11)	13.9 (74)	16.0 (33)				
● MSCI World (Net)	-18.1 (68)	21.8 (23)	15.9 (36)	27.7 (39)	-8.7 (57)	22.4 (77)	7.5 (13)

5th Percentile	-14.5	24.5	21.5	31.7	-0.4	27.3	8.3
1st Quartile	-15.8	21.1	16.1	28.8	-6.0	24.9	6.5
Median	-17.4	17.3	15.6	26.2	-8.4	24.1	5.6
3rd Quartile	-20.1	13.9	14.5	25.3	-10.1	22.5	3.3
95th Percentile	-25.4	12.7	9.3	24.3	-13.2	20.2	-4.6



**Fund Information**

Fund Name : American Funds Global Insight Fund; Class R-6 Shares  
 Fund Family : Capital Group/American Funds  
 Ticker : RGLGX  
 Inception Date : 11/08/2019  
 Fund Assets : \$7,753 Million  
 Portfolio Turnover : 20%

Portfolio Assets : \$9,329 Million  
 Portfolio Manager : Team Managed  
 PM Tenure :  
 Fund Style : IM Global Large Cap Core Equity (MF)  
 Style Benchmark : MSCI World (Net)

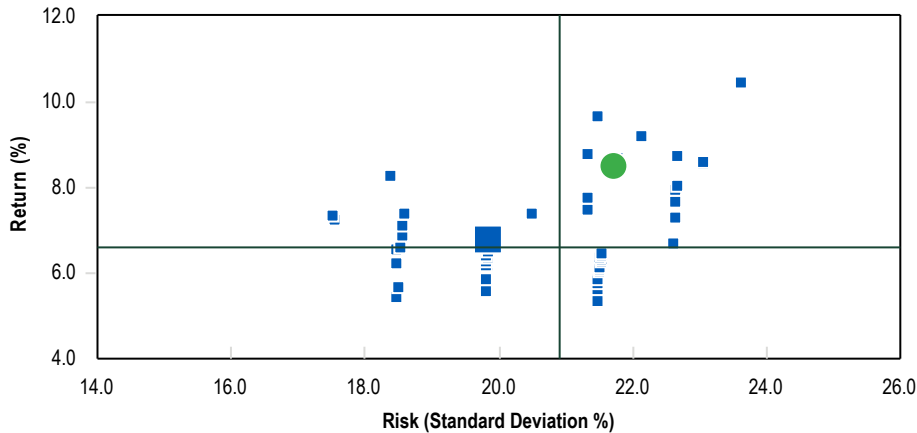
**Fund Investment Policy**

The Fund seeks to provide prudent growth of capital and conservation of principal. The Fund invests in common stocks of issuers around the world that the adviser believes have the potential for growth, many of which have the potential to pay dividends. It will invest at least 80% of net assets in equity-type securities.

**Historical Statistics (12/01/19 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
American Funds Global Insight R6										12/01/2019
MSCI World (Net)	10.3	21.2	0.5	0.0	1.0	1.0	0.0		21.2	12/01/2019
90 Day U.S. Treasury Bill	1.3	0.8		1.3	0.0	0.0	21.2	-0.5	0.0	12/01/2019

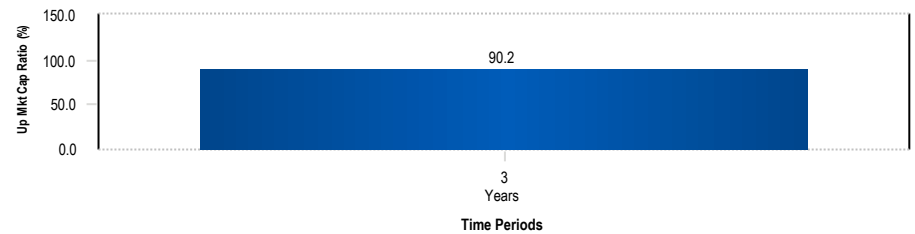
**Peer Group Scattergram (01/01/20 to 06/30/23)**



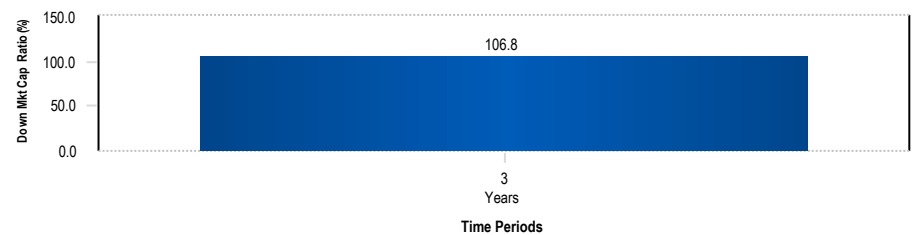
	Return	Standard Deviation
American Funds Global Insight R6	6.8	19.8
MSCI World (Net)	8.5	21.7
Median	6.6	20.9

**Up Down Market Capture**

**Up Market Capture**

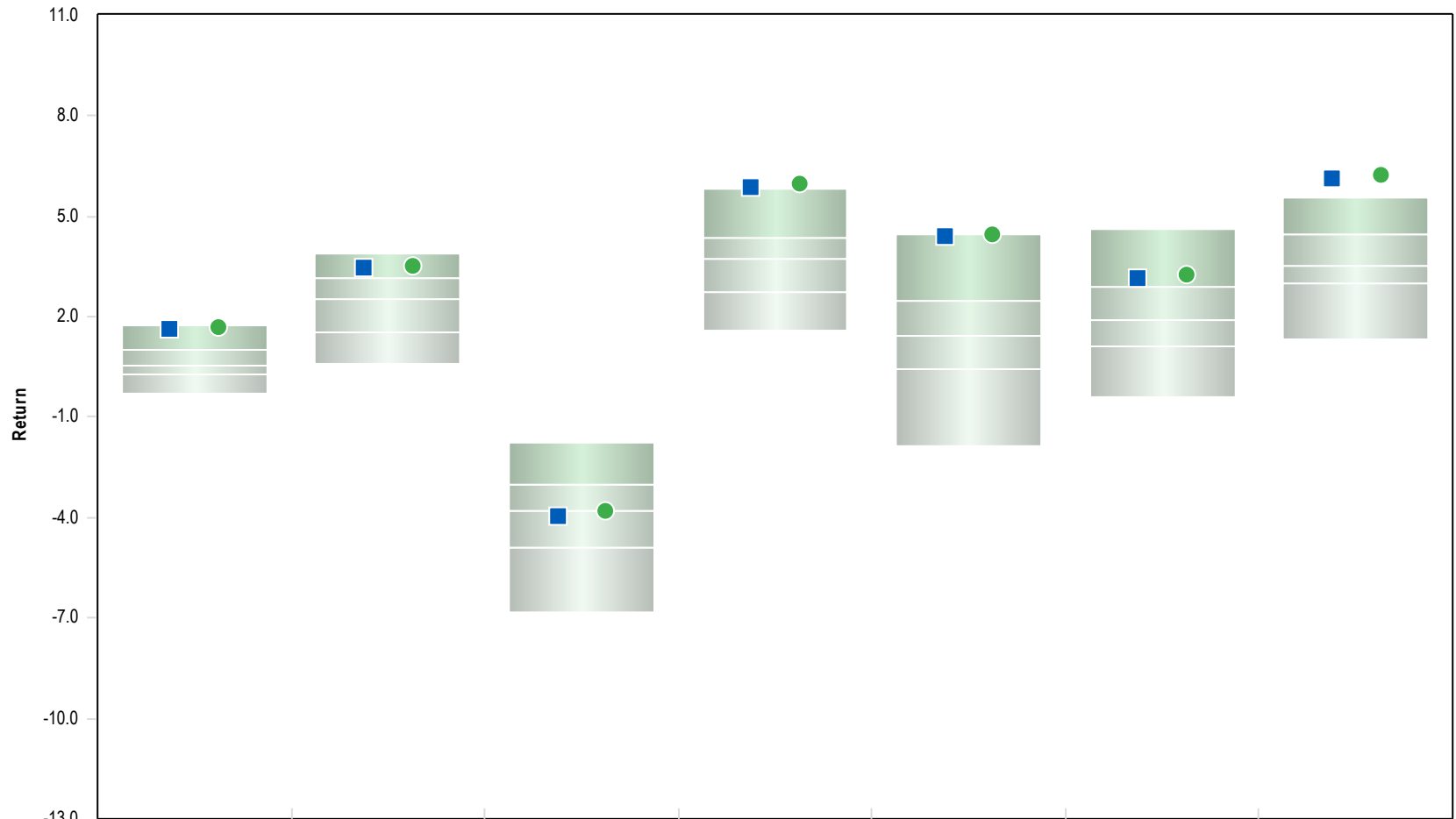


**Down Market Capture**



\* Quarterly periodicity used.

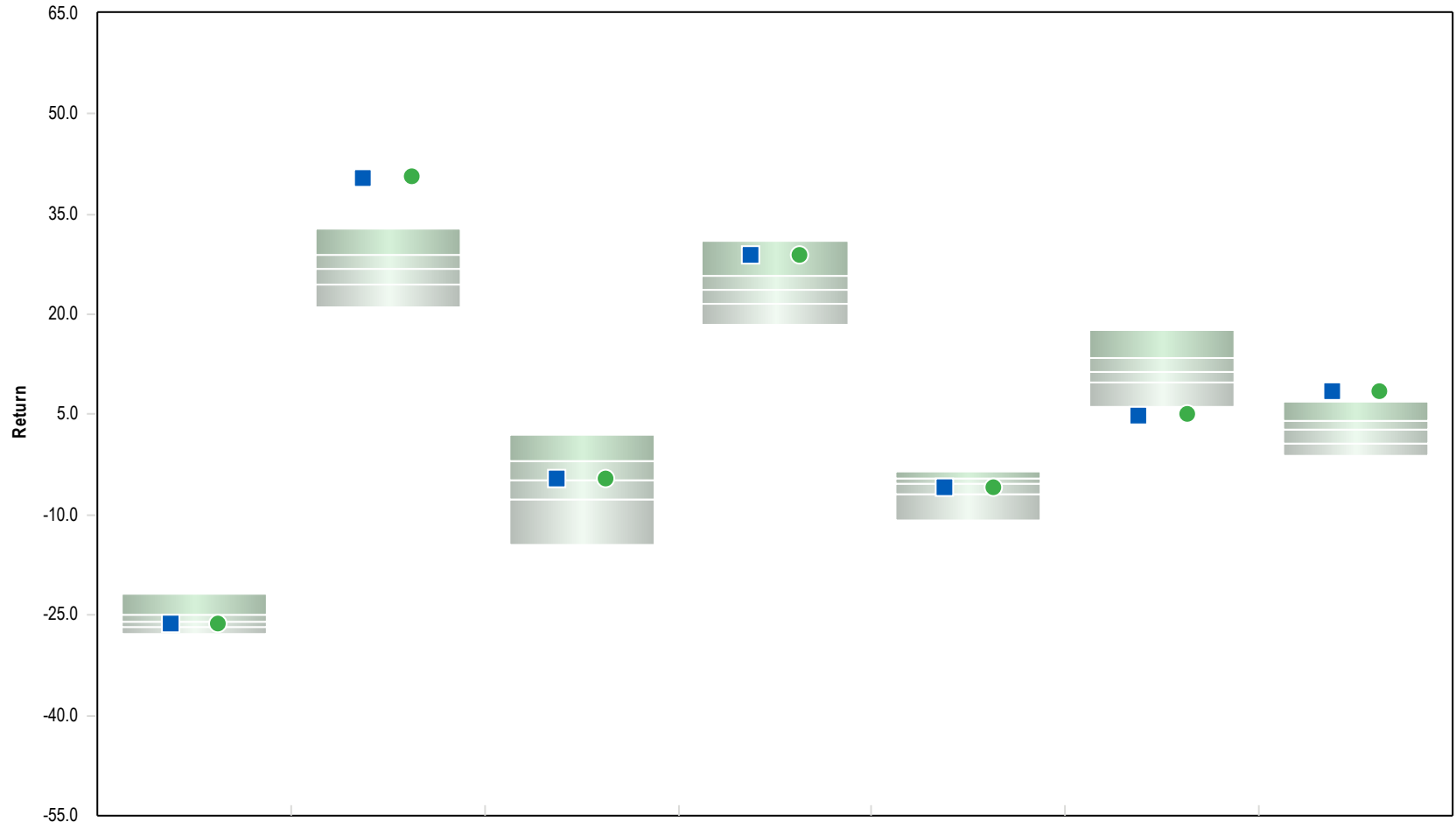
Peer Group Analysis - IM Global Real Estate (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard REIT Index	1.6 (8)	3.5 (14)	-3.9 (55)	5.9 (5)	4.4 (6)	3.2 (24)	6.1 (1)
● Vanguard REIT Spliced Index	1.7 (7)	3.5 (12)	-3.8 (50)	6.0 (5)	4.5 (6)	3.3 (23)	6.2 (1)

5th Percentile	1.8	3.9	-1.8	5.8	4.5	4.6	5.5
1st Quartile	1.0	3.2	-3.0	4.4	2.5	2.9	4.5
Median	0.6	2.5	-3.8	3.7	1.4	1.9	3.5
3rd Quartile	0.3	1.6	-4.9	2.8	0.4	1.1	3.0
95th Percentile	-0.3	0.6	-6.8	1.6	-1.9	-0.4	1.3

Peer Group Analysis - IM Global Real Estate (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Vanguard REIT Index	-26.2 (59)	40.4 (1)	-4.7 (49)	28.9 (16)	-5.9 (61)	4.9 (98)	8.5 (1)
● Vanguard REIT Spliced Index	-26.1 (57)	40.6 (1)	-4.6 (48)	29.0 (16)	-5.9 (59)	5.1 (98)	8.6 (1)

5th Percentile	-21.9	32.8	2.1	30.9	-3.6	17.6	6.9
1st Quartile	-24.9	29.0	-1.9	25.8	-4.6	13.4	4.2
Median	-25.9	26.9	-4.8	23.6	-5.5	11.5	2.8
3rd Quartile	-26.9	24.5	-7.6	21.6	-7.0	9.8	0.8
95th Percentile	-27.8	21.1	-14.4	18.4	-10.8	6.3	-1.2

**Fund Information**

Fund Name :	Vanguard Specialized Funds: Vanguard Real Estate Index Fund; Admiral Shares	Portfolio Assets :	\$62,436 Million
Fund Family :	Vanguard	Portfolio Manager :	O'Reilly/Nejman
Ticker :	VGSLX	PM Tenure :	2001--2016
Inception Date :	11/12/2001	Fund Style :	IM Global Real Estate (MF)
Fund Assets :	\$19,258 Million	Style Benchmark :	Vanguard REIT Spliced Index
Portfolio Turnover :	7%		

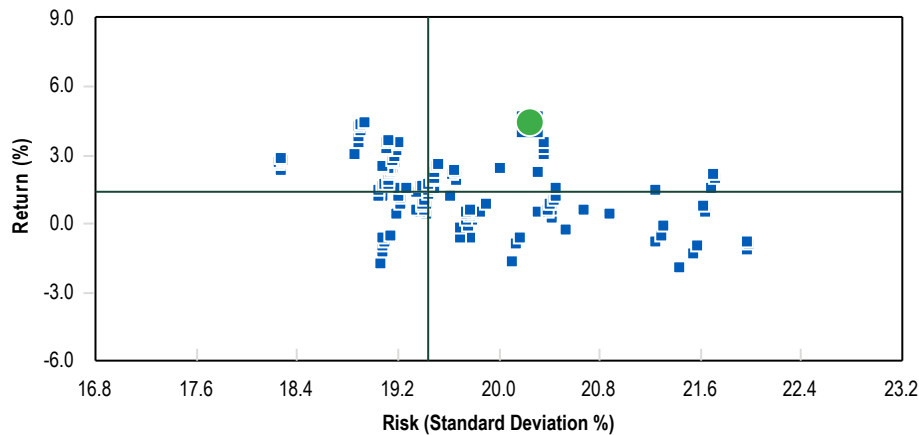
**Fund Investment Policy**

The Fund seeks to provide a high level of income and moderate long-term capital appreciation by tracking the performance of a benchmark index that measures the performance of publicly traded equity REITs and other real estate-related investments. The Fund employs indexing to track the performance of the Index.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard REIT Index	4.4	20.2	0.2	-0.1	1.0	1.0	0.0	-2.6	20.4	12/01/2001
Vanguard REIT Spliced Index	4.5	20.3	0.2	0.0	1.0	1.0	0.0		20.4	12/01/2001
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	20.4	-0.2	0.0	12/01/2001

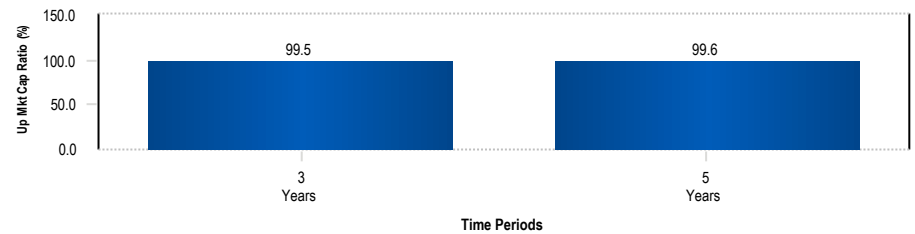
**Peer Group Scattergram (07/01/18 to 06/30/23)**



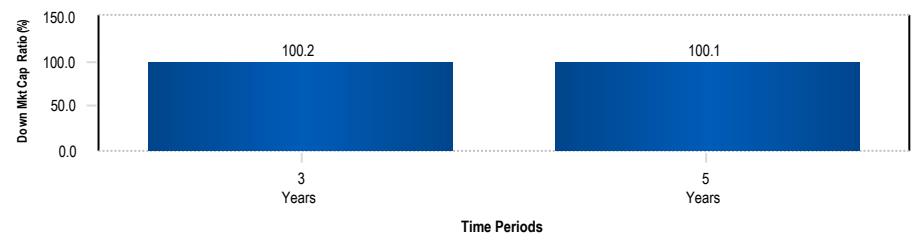
	Return	Standard Deviation
■ Vanguard REIT Index	4.4	20.2
● Vanguard REIT Spliced Index	4.5	20.3
— Median	1.4	19.4

**Up Down Market Capture**

**Up Market Capture**

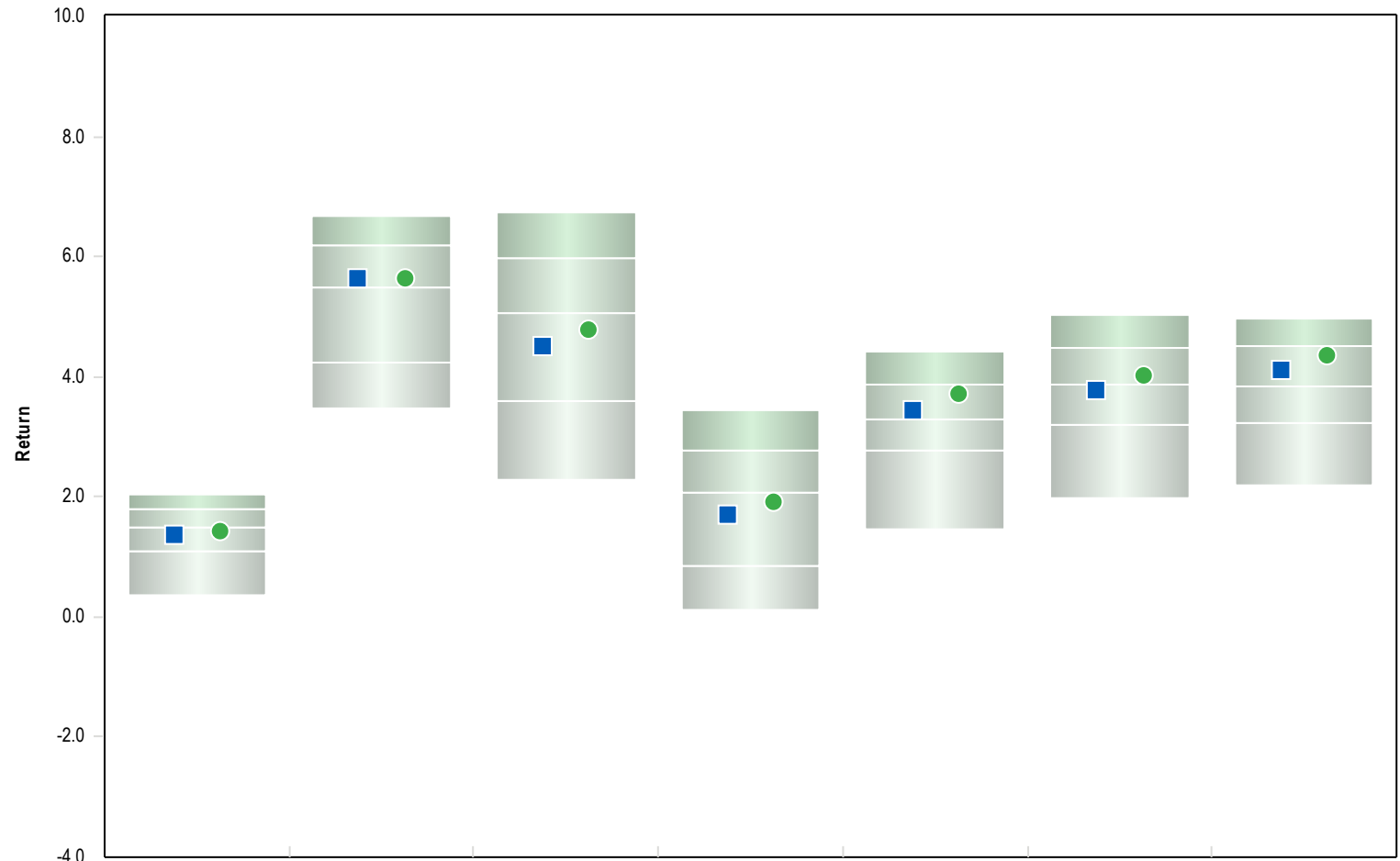


**Down Market Capture**



\* Quarterly periodicity used.

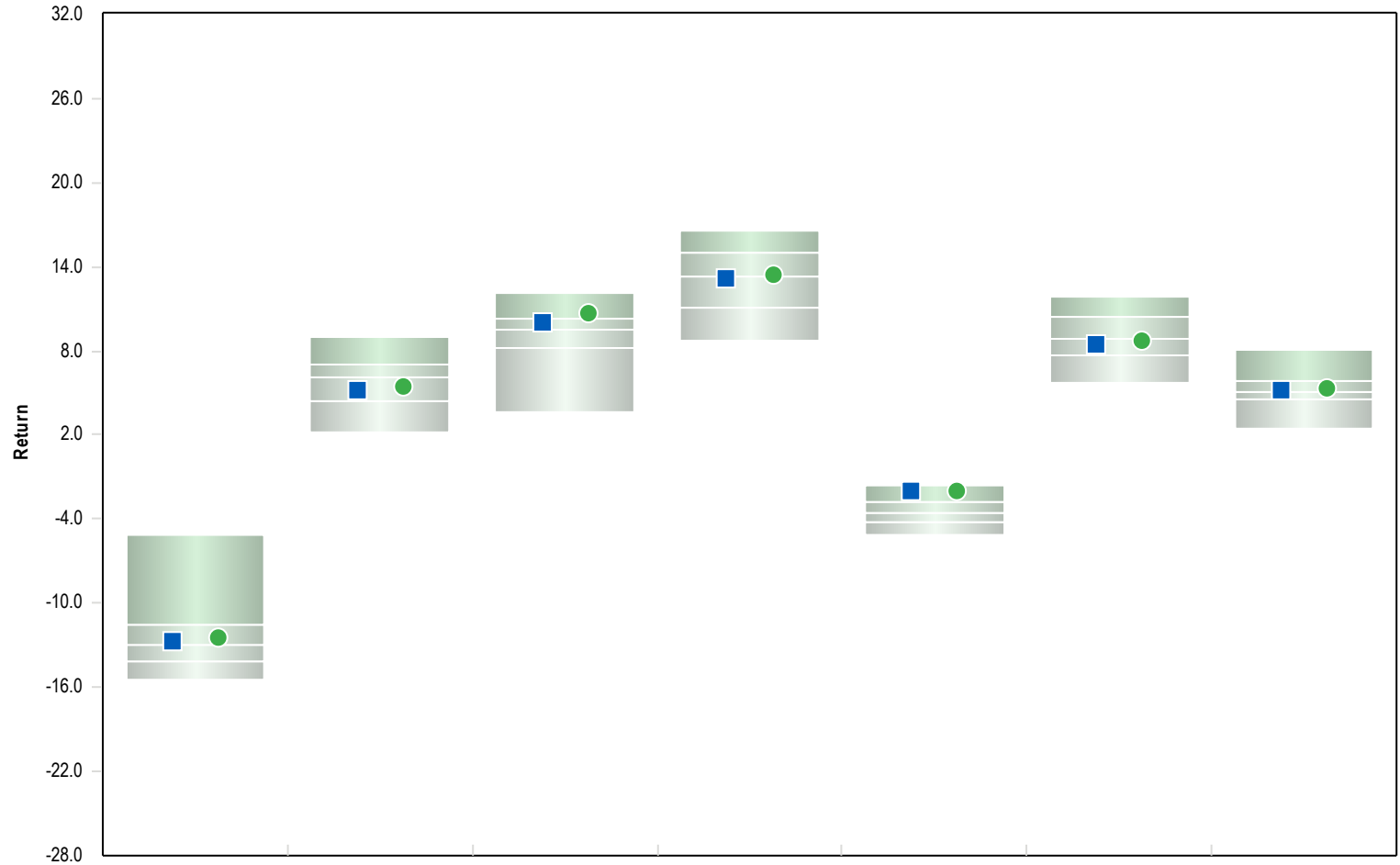
Peer Group Analysis - IM Mixed-Asset Target Today (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard Target Retirement Income Investment	1.4 (61)	5.6 (47)	4.5 (63)	1.7 (60)	3.4 (43)	3.8 (56)	4.1 (39)
● Vanguard Target Income Composite Index	1.4 (54)	5.6 (48)	4.8 (54)	1.9 (55)	3.7 (30)	4.0 (41)	4.4 (30)

5th Percentile	2.0	6.7	6.7	3.5	4.4	5.0	5.0
1st Quartile	1.8	6.2	6.0	2.8	3.9	4.5	4.5
Median	1.5	5.5	5.0	2.1	3.3	3.9	3.8
3rd Quartile	1.1	4.2	3.6	0.9	2.8	3.2	3.2
95th Percentile	0.4	3.5	2.3	0.1	1.5	2.0	2.2

Peer Group Analysis - IM Mixed-Asset Target Today (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Vanguard Target Retirement Income Investment	-12.7 (49)	5.2 (69)	10.0 (34)	13.2 (56)	-2.0 (11)	8.5 (61)	5.3 (46)
● Vanguard Target Income Composite Index	-12.4 (41)	5.4 (66)	10.7 (20)	13.4 (50)	-2.0 (9)	8.7 (55)	5.4 (39)

5th Percentile	-5.2	9.0	12.2	16.6	-1.6	11.9	8.1
1st Quartile	-11.6	7.1	10.2	15.0	-2.8	10.4	5.9
Median	-12.9	6.2	9.5	13.3	-3.6	8.9	5.1
3rd Quartile	-14.2	4.4	8.2	11.1	-4.3	7.7	4.5
95th Percentile	-15.5	2.2	3.7	8.8	-5.1	5.7	2.5

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement Income Fund; Investor Class Shares	Portfolio Assets :	\$36,709 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VTINX	PM Tenure :	
Inception Date :	10/27/2003	Fund Style :	IM Mixed-Asset Target Today (MF)
Fund Assets :	\$36,709 Million	Style Benchmark :	Vanguard Target Income Composite Index

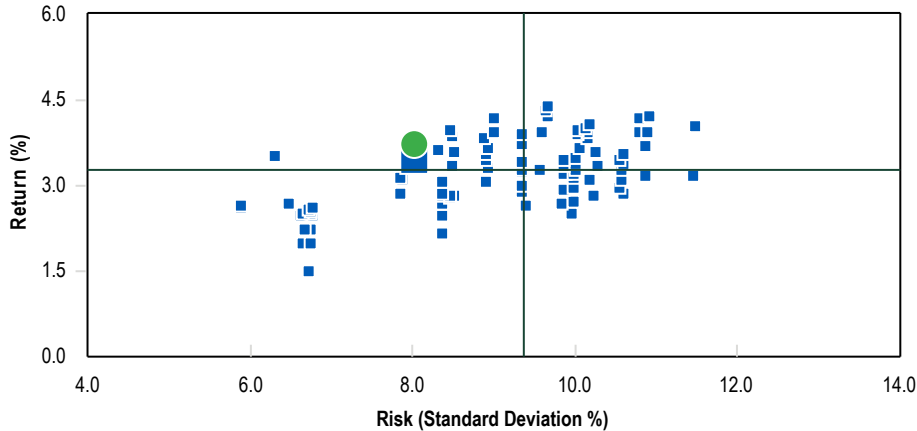
**Fund Investment Policy**

The Fund seeks to provide current income and some capital appreciation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors currently in retirement.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement Income Investment	3.4	8.0	0.3	-0.3	1.0	1.0	0.2	-1.2	8.0	11/01/2003
Vanguard Target Income Composite Index	3.7	8.0	0.3	0.0	1.0	1.0	0.0		8.0	11/01/2003
90 Day U.S. Treasury Bill	1.6	0.7		1.5	0.0	0.0	8.0	-0.3	0.0	11/01/2003

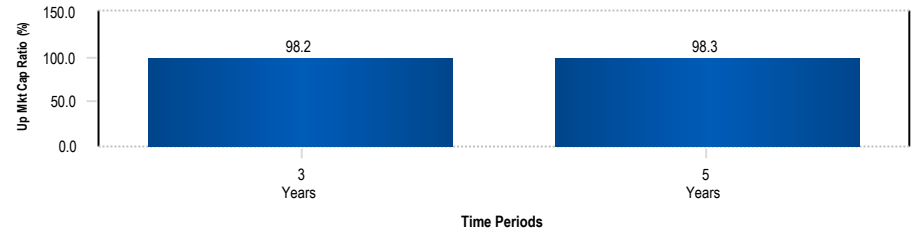
**Peer Group Scattergram (07/01/18 to 06/30/23)**



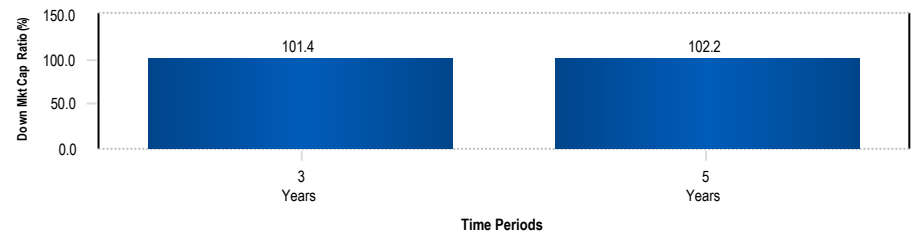
■ Vanguard Target Retirement Income Investment	Return	Standard Deviation
● Vanguard Target Income Composite Index	3.4	8.0
— Median	3.7	8.0
	3.3	9.4

**Up Down Market Capture**

**Up Market Capture**

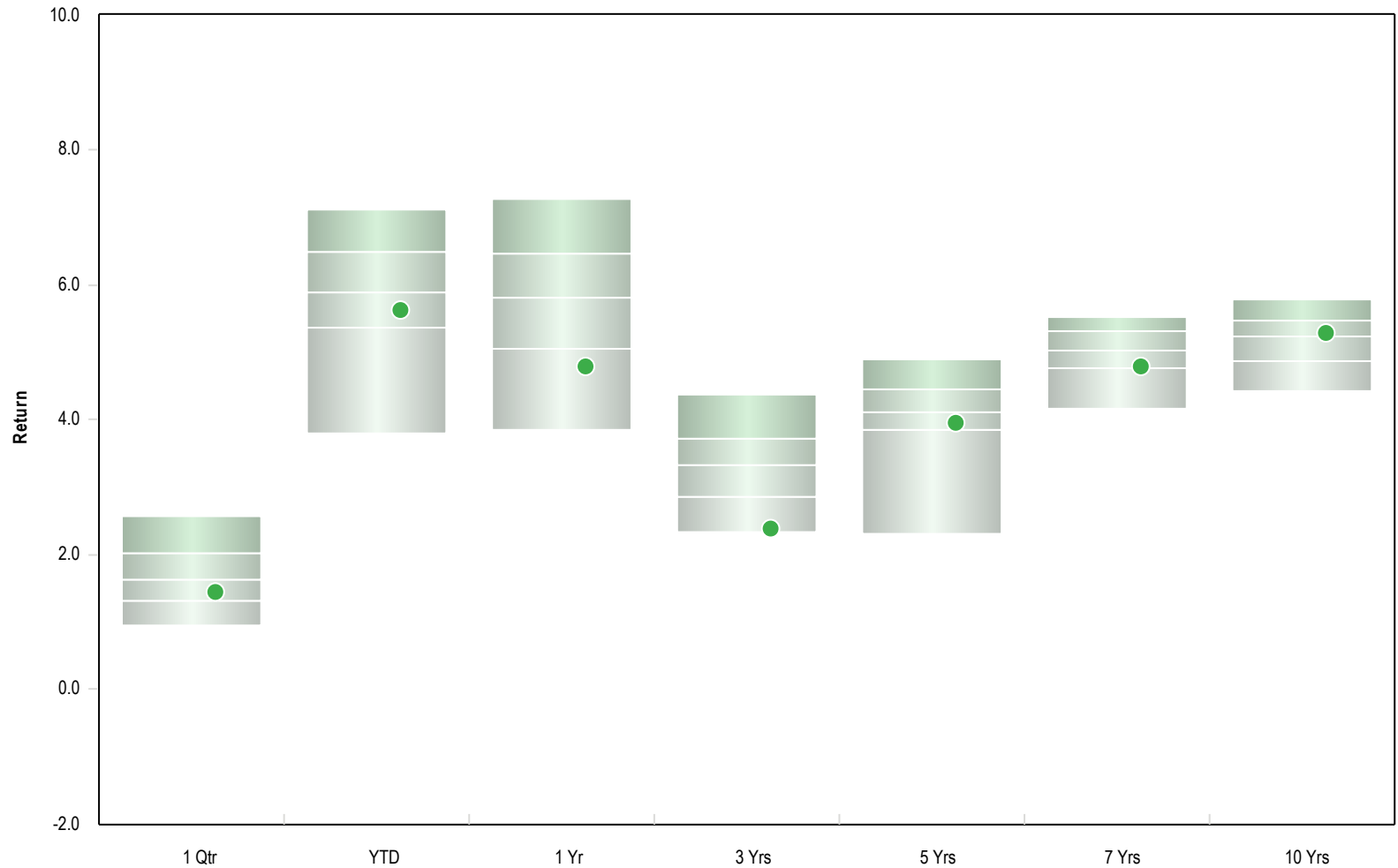


**Down Market Capture**



\* Quarterly periodicity used.

Peer Group Analysis - IM Mixed-Asset Target 2015 (MF)



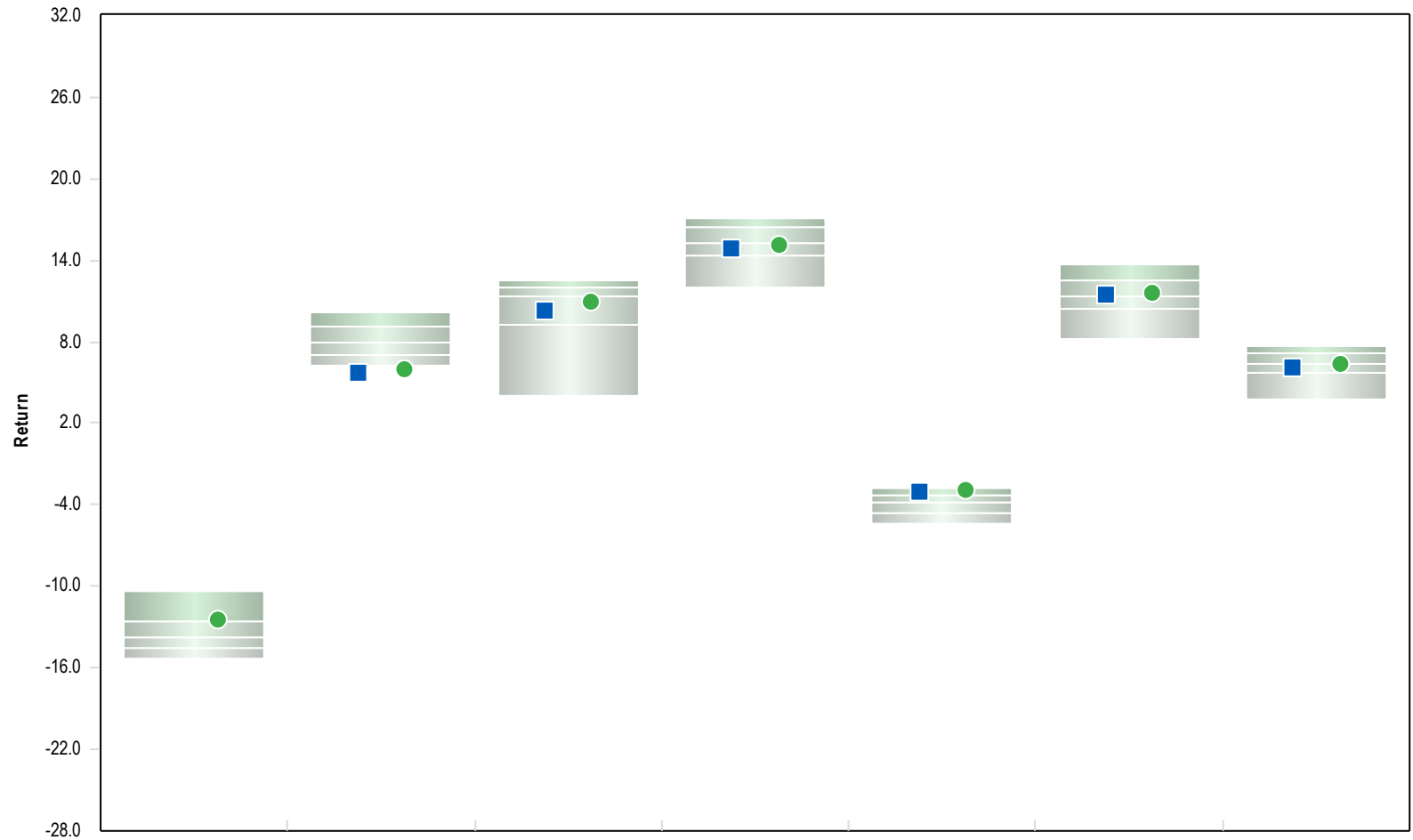
■ Vanguard Target Retirement 2015  
 ● Vanguard Target 2015 Composite Index

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
	1.4 (66)	5.6 (68)	4.8 (85)	2.4 (95)	4.0 (70)	4.8 (74)	5.3 (48)

5th Percentile	2.6	7.1	7.3	4.4	4.9	5.5	5.8
1st Quartile	2.0	6.5	6.5	3.7	4.5	5.3	5.5
Median	1.6	5.9	5.8	3.3	4.1	5.0	5.2
3rd Quartile	1.3	5.4	5.0	2.9	3.8	4.8	4.9
95th Percentile	1.0	3.8	3.8	2.3	2.3	4.2	4.4



Peer Group Analysis - IM Mixed-Asset Target 2015 (MF)



■ Vanguard Target Retirement 2015  
 ● Vanguard Target 2015 Composite Index

	2022	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2015		5.8 (100)	10.3 (61)	14.8 (63)	-3.0 (14)	11.5 (43)	6.2 (63)
Vanguard Target 2015 Composite Index	-12.5 (25)	6.0 (98)	11.0 (56)	15.1 (54)	-2.9 (9)	11.6 (41)	6.4 (50)

5th Percentile	-10.3	10.1	12.6	17.0	-2.7	13.7	7.6
1st Quartile	-12.5	9.1	11.9	16.5	-3.3	12.5	7.1
Median	-13.7	8.0	11.4	15.2	-3.9	11.3	6.4
3rd Quartile	-14.6	7.0	9.3	14.3	-4.6	10.4	5.8
95th Percentile	-15.4	6.2	4.0	12.0	-5.4	8.3	3.8

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2015 Fund; Investor Class Shares	Portfolio Assets :	\$19,153 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VTXVX	PM Tenure :	
Inception Date :	10/27/2003	Fund Style :	IM Mixed-Asset Target 2015 (MF)
Fund Assets :	\$19,153 Million	Style Benchmark :	Vanguard Target 2015 Composite Index
Portfolio Turnover :	4%		

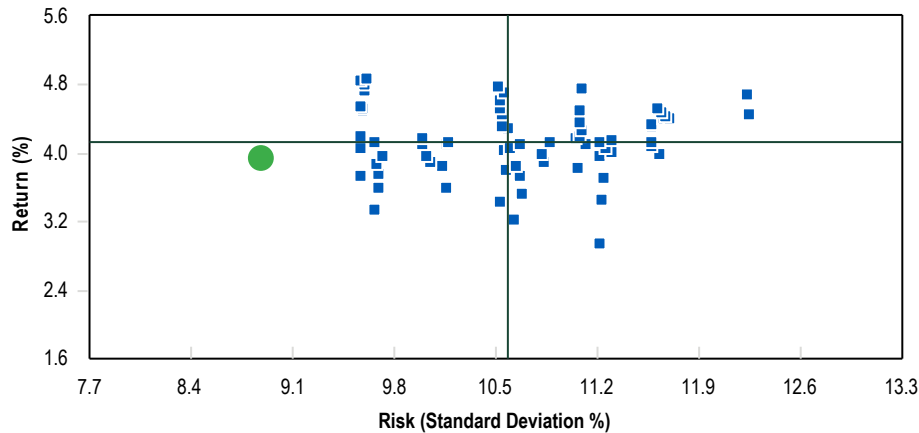
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2015.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2015										11/01/2003
Vanguard Target 2015 Composite Index	4.0	8.9	0.3	0.0	1.0	1.0	0.0		8.9	11/01/2003
90 Day U.S. Treasury Bill	1.6	0.7		1.5	0.0	0.0	8.9	-0.3	0.0	11/01/2003

**Peer Group Scattergram (07/01/18 to 06/30/23)**



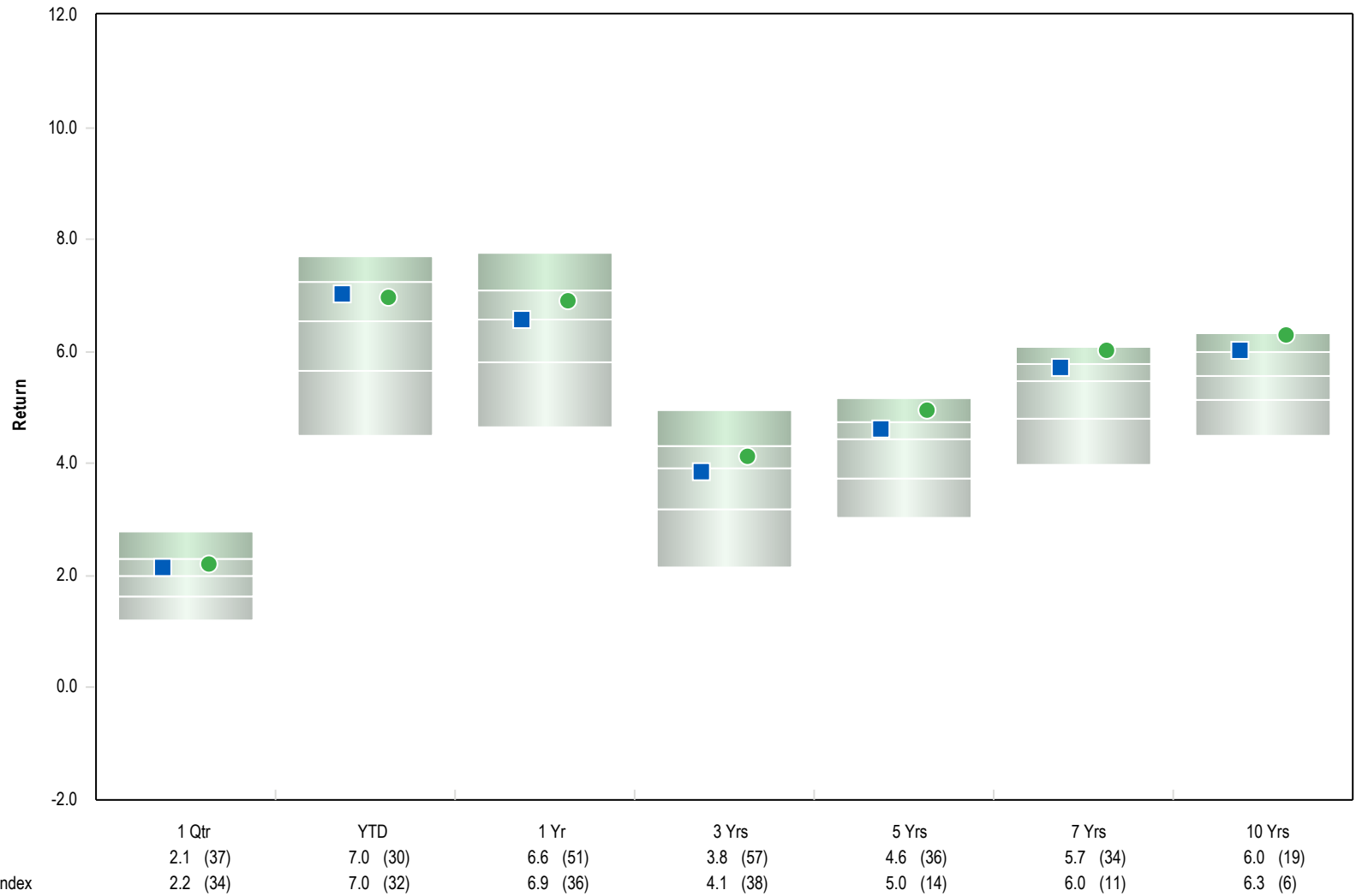
■ Vanguard Target Retirement 2015	Return	Standard Deviation
● Vanguard Target 2015 Composite Index	4.0	8.9
— Median	4.1	10.6

**Up Down Market Capture**

No data found.

\* Quarterly periodicity used.

Peer Group Analysis - IM Mixed-Asset Target 2020 (MF)



5th Percentile	2.8	7.7	7.8	5.0	5.2	6.1	6.3
1st Quartile	2.3	7.2	7.1	4.3	4.7	5.8	6.0
Median	2.0	6.6	6.6	3.9	4.4	5.5	5.6
3rd Quartile	1.6	5.7	5.8	3.2	3.7	4.8	5.1
95th Percentile	1.2	4.5	4.6	2.2	3.0	4.0	4.5

Peer Group Analysis - IM Mixed-Asset Target 2020 (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Vanguard Target Retirement 2020	-14.2 (42)	8.2 (67)	12.0 (37)	17.6 (24)	-4.2 (44)	14.1 (15)	6.9 (31)
● Vanguard Target 2020 Composite Index	-13.8 (34)	8.4 (60)	12.8 (21)	17.9 (20)	-4.1 (40)	14.2 (11)	7.2 (25)

5th Percentile	-11.3	10.7	13.6	18.7	-2.7	15.1	8.6
1st Quartile	-13.3	9.6	12.7	17.6	-3.8	13.7	7.1
Median	-14.4	8.7	10.9	16.0	-4.5	12.7	6.4
3rd Quartile	-15.1	7.4	9.4	14.7	-5.4	10.8	5.5
95th Percentile	-16.6	5.6	6.0	10.0	-6.5	7.5	3.3

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2020 Fund; Investor Class Shares	Portfolio Assets :	\$39,666 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VTWNX	PM Tenure :	
Inception Date :	06/07/2006	Fund Style :	IM Mixed-Asset Target 2020 (MF)
Fund Assets :	\$39,666 Million	Style Benchmark :	Vanguard Target 2020 Composite Index
Portfolio Turnover :	14%		

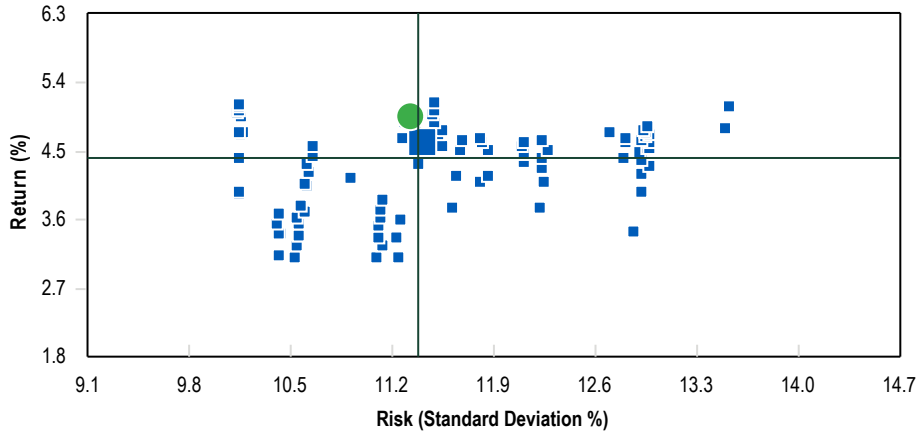
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2020.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2020	4.6	11.4	0.3	-0.4	1.0	1.0	0.2	-1.3	11.4	07/01/2006
Vanguard Target 2020 Composite Index	5.0	11.3	0.3	0.0	1.0	1.0	0.0		11.3	07/01/2006
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	11.3	-0.3	0.0	07/01/2006

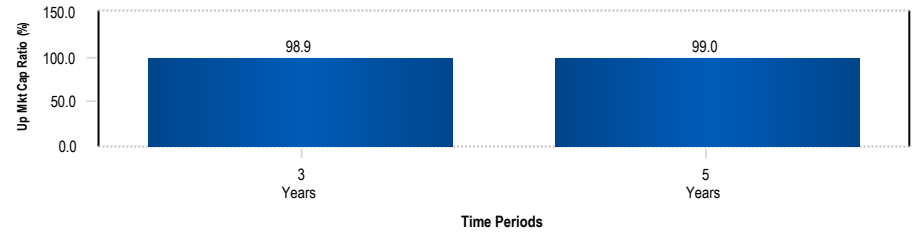
**Peer Group Scattergram (07/01/18 to 06/30/23)**



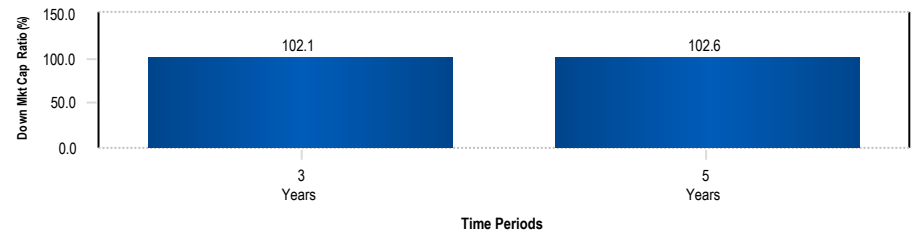
	Return	Standard Deviation
■ Vanguard Target Retirement 2020	4.6	11.4
● Vanguard Target 2020 Composite Index	5.0	11.3
— Median	4.4	11.4

**Up Down Market Capture**

**Up Market Capture**

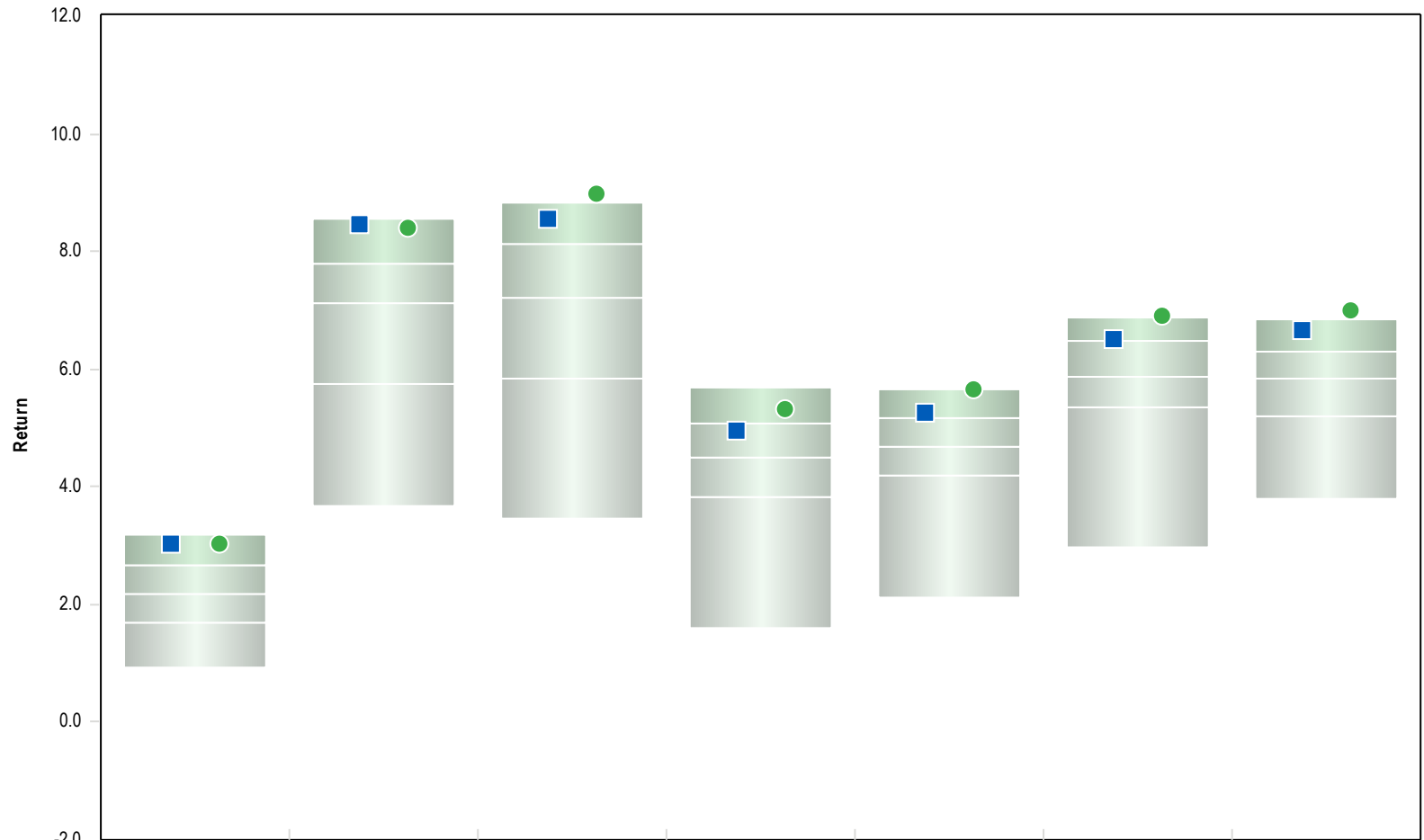


**Down Market Capture**



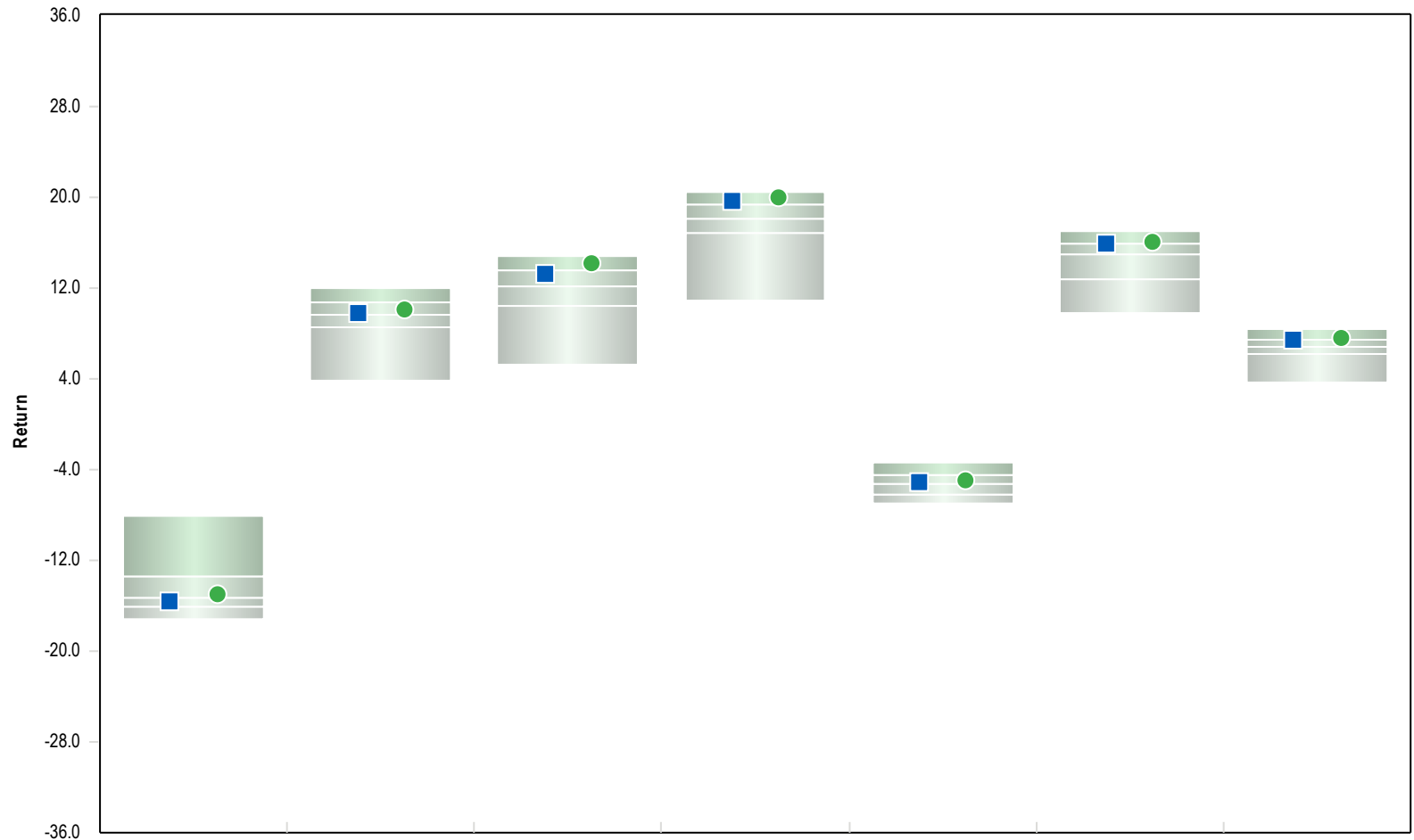
\* Quarterly periodicity used.

Peer Group Analysis - IM Mixed-Asset Target 2025 (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard Target Retirement 2025	3.0 (9)	8.5 (8)	8.6 (12)	5.0 (31)	5.3 (22)	6.5 (23)	6.7 (14)
● Vanguard Target 2025 Composite Index	3.0 (9)	8.4 (11)	9.0 (3)	5.3 (13)	5.7 (6)	6.9 (5)	7.0 (4)
5th Percentile	3.2	8.6	8.8	5.7	5.7	6.9	6.9
1st Quartile	2.7	7.8	8.1	5.1	5.2	6.5	6.3
Median	2.2	7.1	7.2	4.5	4.7	5.9	5.8
3rd Quartile	1.7	5.8	5.8	3.8	4.2	5.3	5.2
95th Percentile	0.9	3.7	3.5	1.6	2.1	3.0	3.8

Peer Group Analysis - IM Mixed-Asset Target 2025 (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Vanguard Target Retirement 2025	-15.5 (58)	9.8 (46)	13.3 (33)	19.6 (18)	-5.2 (47)	15.9 (22)	7.5 (27)
● Vanguard Target 2025 Composite Index	-15.0 (43)	10.1 (37)	14.2 (15)	19.9 (12)	-5.0 (43)	16.1 (19)	7.7 (20)

5th Percentile	-8.1	12.0	14.8	20.4	-3.4	16.9	8.4
1st Quartile	-13.4	10.7	13.6	19.3	-4.4	15.8	7.5
Median	-15.3	9.7	12.1	18.2	-5.2	15.0	6.9
3rd Quartile	-16.0	8.6	10.5	16.9	-6.2	12.7	6.1
95th Percentile	-17.2	3.9	5.3	10.9	-7.1	9.8	3.6

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2025 Fund; Investor Class Shares	Portfolio Assets :	\$73,722 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VTTVX	PM Tenure :	
Inception Date :	10/27/2003	Fund Style :	IM Mixed-Asset Target 2025 (MF)
Fund Assets :	\$73,722 Million	Style Benchmark :	Vanguard Target 2025 Composite Index
Portfolio Turnover :	14%		

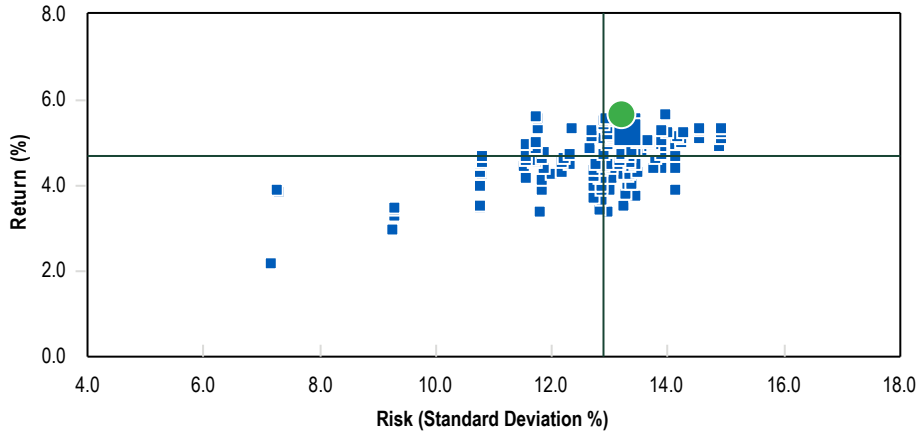
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2025.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2025	5.3	13.3	0.3	-0.4	1.0	1.0	0.3	-1.4	13.3	11/01/2003
Vanguard Target 2025 Composite Index	5.7	13.2	0.4	0.0	1.0	1.0	0.0		13.2	11/01/2003
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	13.2	-0.4	0.0	11/01/2003

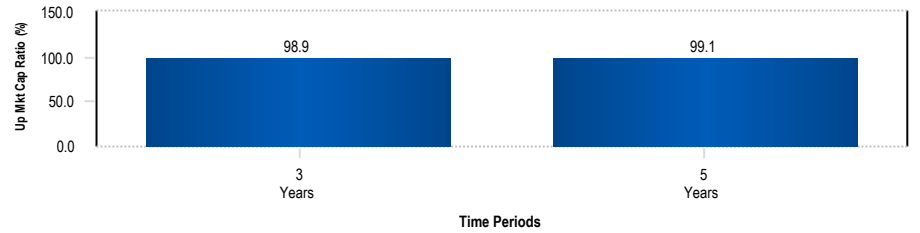
**Peer Group Scattergram (07/01/18 to 06/30/23)**



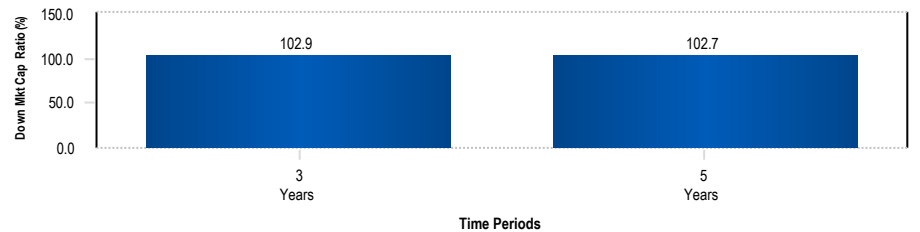
	Return	Standard Deviation
■ Vanguard Target Retirement 2025	5.3	13.3
● Vanguard Target 2025 Composite Index	5.7	13.2
— Median	4.7	12.9

**Up Down Market Capture**

**Up Market Capture**



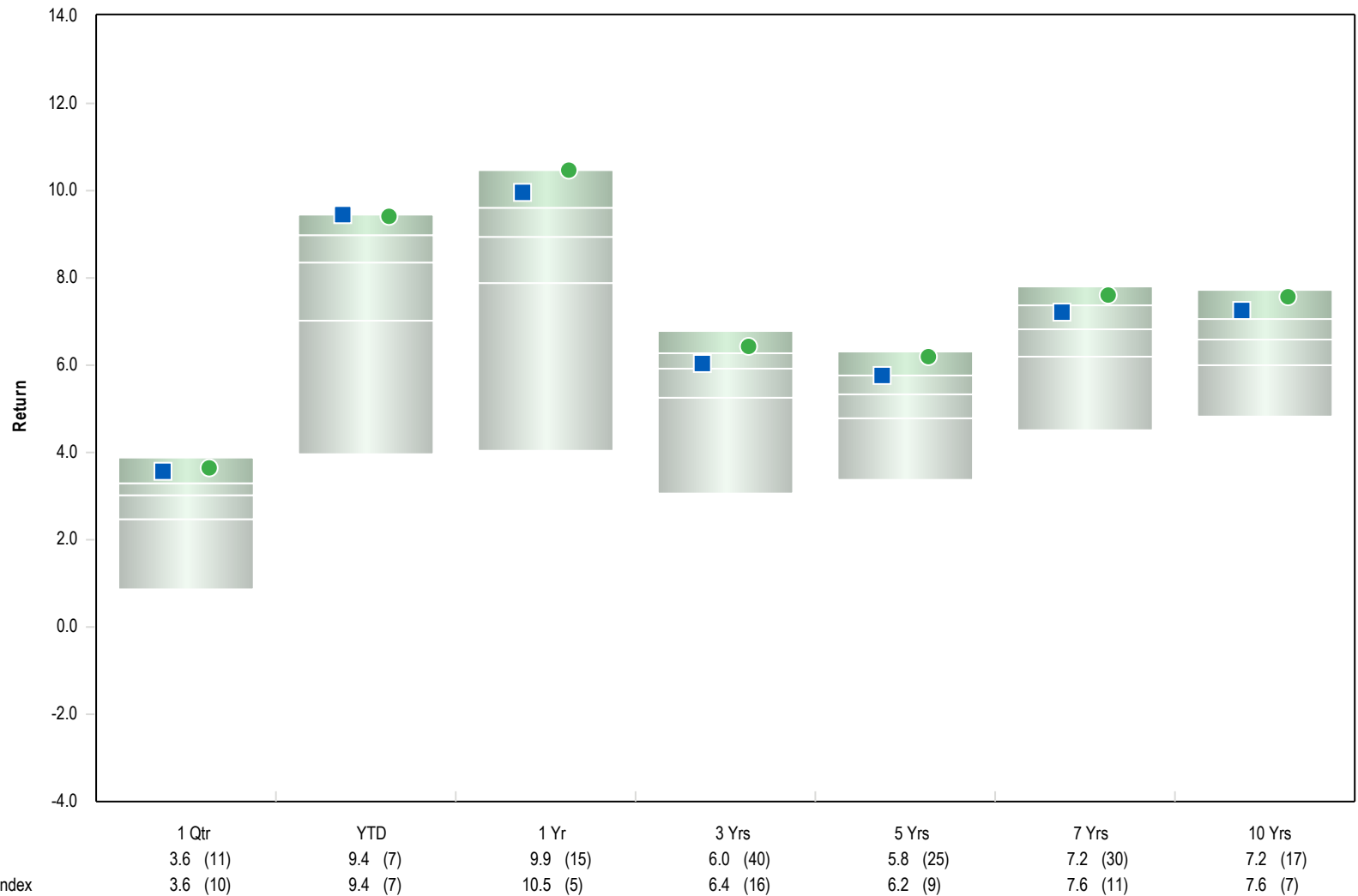
**Down Market Capture**



\* Quarterly periodicity used.

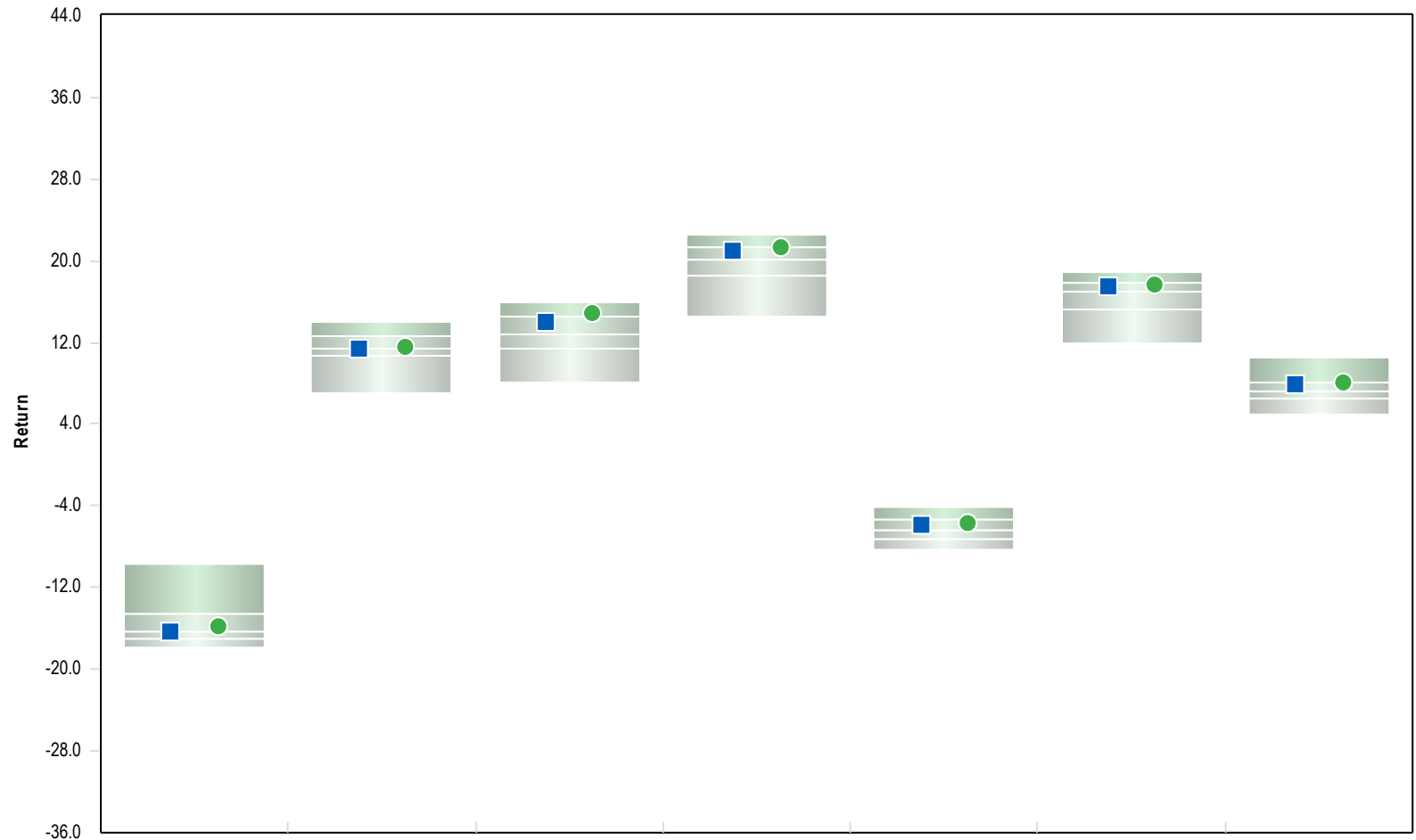


Peer Group Analysis - IM Mixed-Asset Target 2030 (MF)



5th Percentile	3.9	9.4	10.5	6.8	6.3	7.8	7.7
1st Quartile	3.3	9.0	9.6	6.3	5.8	7.4	7.1
Median	3.0	8.4	8.9	5.9	5.3	6.8	6.6
3rd Quartile	2.5	7.0	7.9	5.3	4.8	6.2	6.0
95th Percentile	0.9	4.0	4.1	3.1	3.4	4.5	4.8

Peer Group Analysis - IM Mixed-Asset Target 2030 (MF)



■ Vanguard Target Retirement 2030  
 ● Vanguard Target 2030 Composite Index

	2022	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2030	-16.3 (51)	11.4 (52)	14.1 (36)	21.1 (32)	-5.9 (39)	17.5 (34)	7.9 (32)
Vanguard Target 2030 Composite Index	-15.7 (40)	11.7 (44)	15.0 (18)	21.3 (26)	-5.7 (35)	17.7 (30)	8.1 (25)

5th Percentile	-9.6	14.0	15.9	22.5	-4.2	18.8	10.5
1st Quartile	-14.6	12.6	14.5	21.3	-5.3	17.8	8.1
Median	-16.2	11.4	12.9	20.1	-6.3	16.9	7.3
3rd Quartile	-17.0	10.7	11.3	18.6	-7.2	15.2	6.5
95th Percentile	-17.8	7.0	8.0	14.6	-8.2	11.9	4.9

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2030 Fund; Investor Class Shares	Portfolio Assets :	\$81,075 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VTHRX	PM Tenure :	
Inception Date :	06/07/2006	Fund Style :	IM Mixed-Asset Target 2030 (MF)
Fund Assets :	\$81,075 Million	Style Benchmark :	Vanguard Target 2030 Composite Index
Portfolio Turnover :	11%		

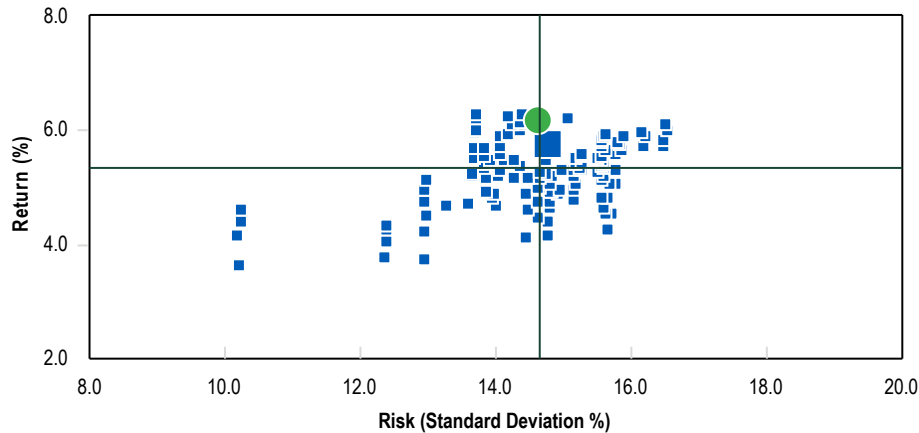
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2030.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2030	5.8	14.8	0.4	-0.4	1.0	1.0	0.3	-1.2	14.8	07/01/2006
Vanguard Target 2030 Composite Index	6.2	14.6	0.4	0.0	1.0	1.0	0.0		14.7	07/01/2006
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	14.7	-0.4	0.0	07/01/2006

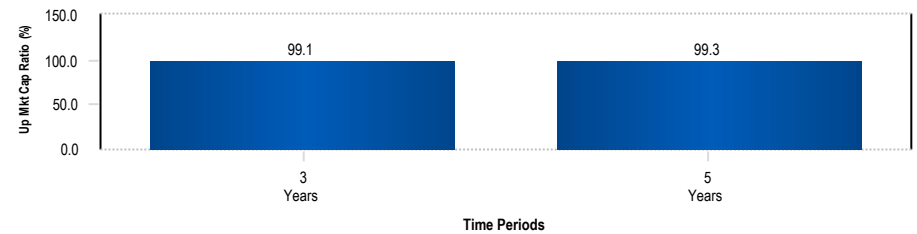
**Peer Group Scattergram (07/01/18 to 06/30/23)**



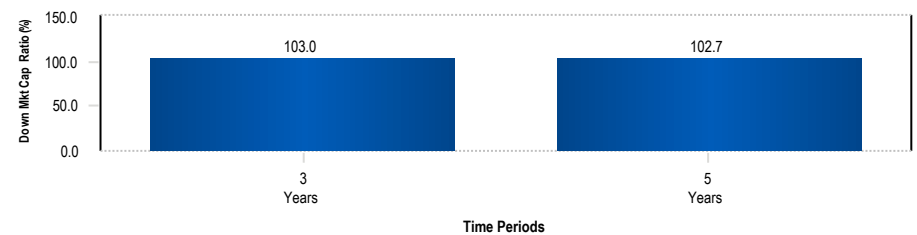
	Return	Standard Deviation
■ Vanguard Target Retirement 2030	5.8	14.8
● Vanguard Target 2030 Composite Index	6.2	14.6
— Median	5.3	14.6

**Up Down Market Capture**

**Up Market Capture**



**Down Market Capture**



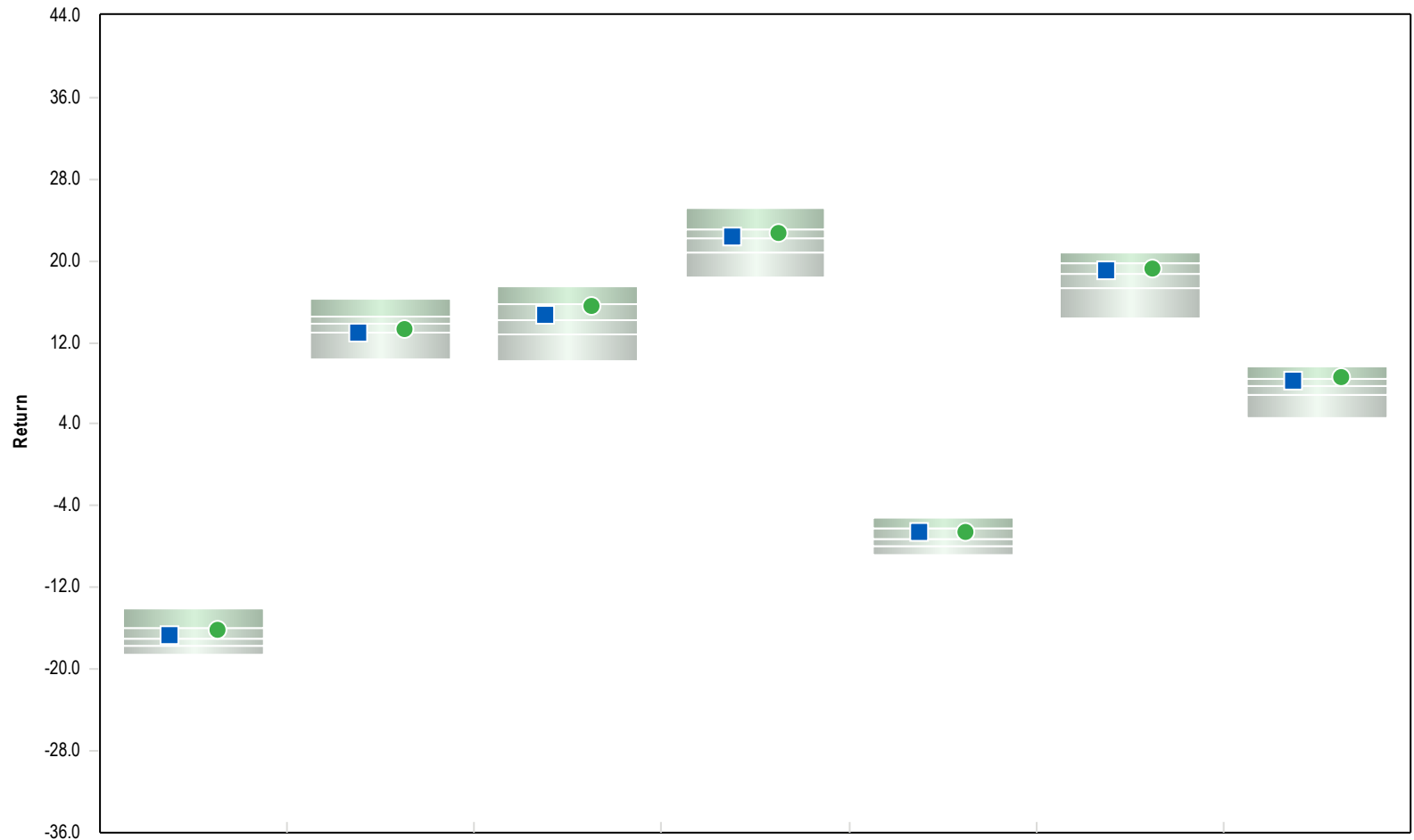
\* Quarterly periodicity used.

Peer Group Analysis - IM Mixed-Asset Target 2035 (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard Target Retirement 2035	4.1 (31)	10.3 (23)	11.3 (43)	7.2 (60)	6.4 (32)	8.0 (38)	7.8 (25)
● Vanguard Target 2035 Composite Index	4.1 (27)	10.2 (25)	11.8 (23)	7.6 (41)	6.7 (16)	8.3 (17)	8.1 (11)
5th Percentile	4.6	11.0	12.4	8.5	7.0	8.8	8.4
1st Quartile	4.1	10.2	11.7	7.8	6.5	8.2	7.8
Median	3.8	9.6	11.0	7.4	6.1	7.7	7.3
3rd Quartile	3.5	8.4	10.0	6.9	5.6	7.3	6.7
95th Percentile	2.4	7.1	7.6	4.8	4.6	6.1	5.9

Peer Group Analysis - IM Mixed-Asset Target 2035 (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Vanguard Target Retirement 2035	-16.6 (42)	13.0 (76)	14.8 (43)	22.4 (45)	-6.6 (33)	19.1 (41)	8.3 (34)
● Vanguard Target 2035 Composite Index	-16.1 (28)	13.2 (68)	15.7 (27)	22.8 (36)	-6.5 (30)	19.2 (38)	8.6 (24)

5th Percentile	-14.0	16.3	17.6	25.2	-5.2	20.9	9.7
1st Quartile	-15.9	14.6	15.8	23.1	-6.2	19.7	8.5
Median	-17.1	13.8	14.1	22.3	-7.3	18.7	7.7
3rd Quartile	-17.8	13.0	12.7	20.8	-7.9	17.4	6.9
95th Percentile	-18.6	10.3	10.2	18.3	-8.9	14.4	4.5

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2035 Fund; Investor Class Shares	Portfolio Assets :	\$80,998 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VTTHX	PM Tenure :	
Inception Date :	10/27/2003	Fund Style :	IM Mixed-Asset Target 2035 (MF)
Fund Assets :	\$80,998 Million	Style Benchmark :	Vanguard Target 2035 Composite Index
Portfolio Turnover :	9%		

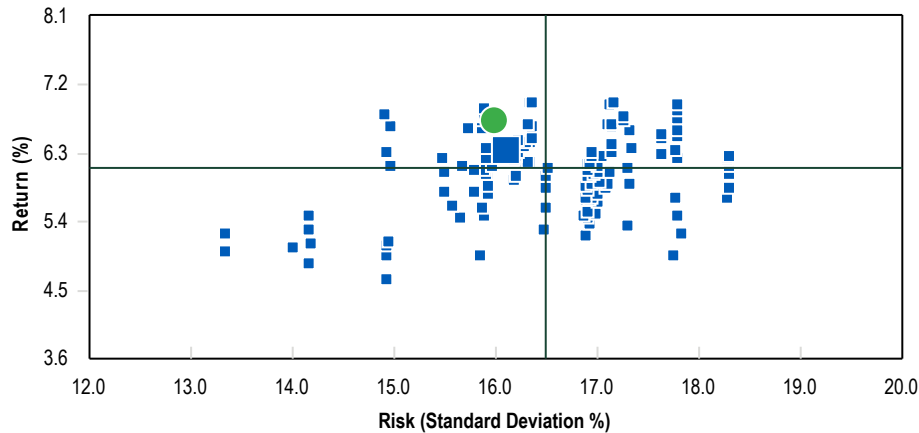
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2035.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2035	6.4	16.1	0.4	-0.4	1.0	1.0	0.3	-1.1	16.1	11/01/2003
Vanguard Target 2035 Composite Index	6.7	16.0	0.4	0.0	1.0	1.0	0.0		16.0	11/01/2003
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	16.0	-0.4	0.0	11/01/2003

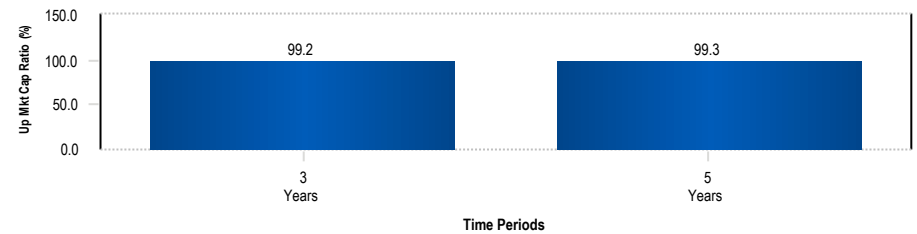
**Peer Group Scattergram (07/01/18 to 06/30/23)**



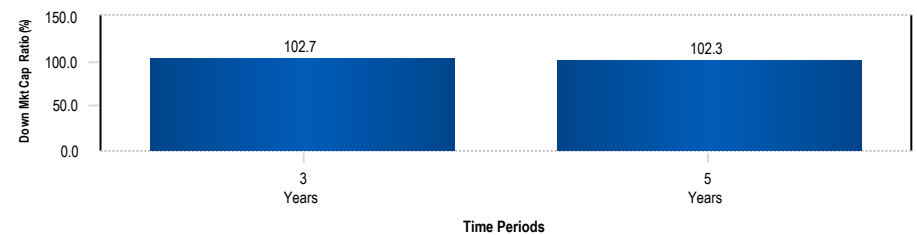
	Return	Standard Deviation
■ Vanguard Target Retirement 2035	6.4	16.1
● Vanguard Target 2035 Composite Index	6.7	16.0
— Median	6.1	16.5

**Up Down Market Capture**

**Up Market Capture**

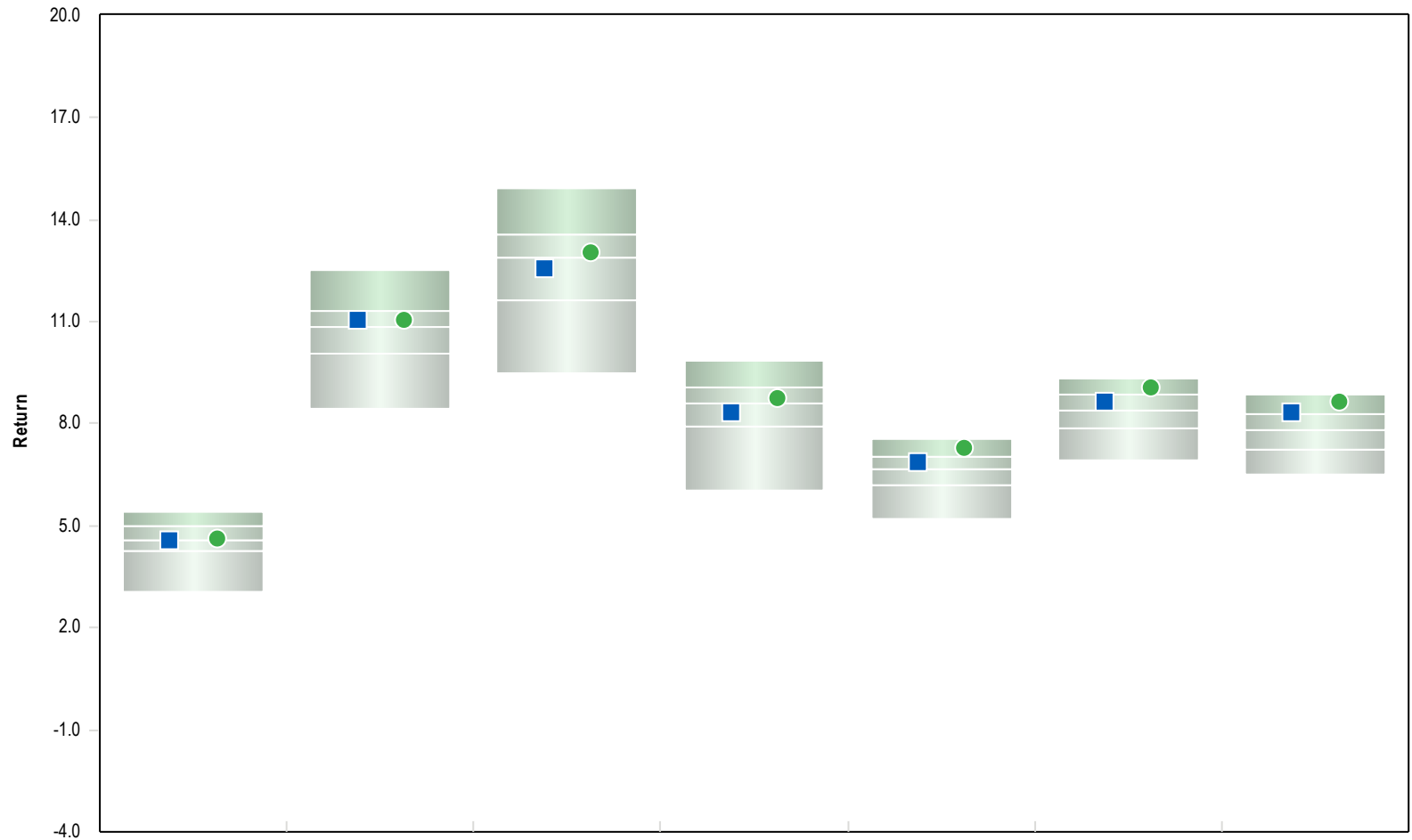


**Down Market Capture**



\* Quarterly periodicity used.

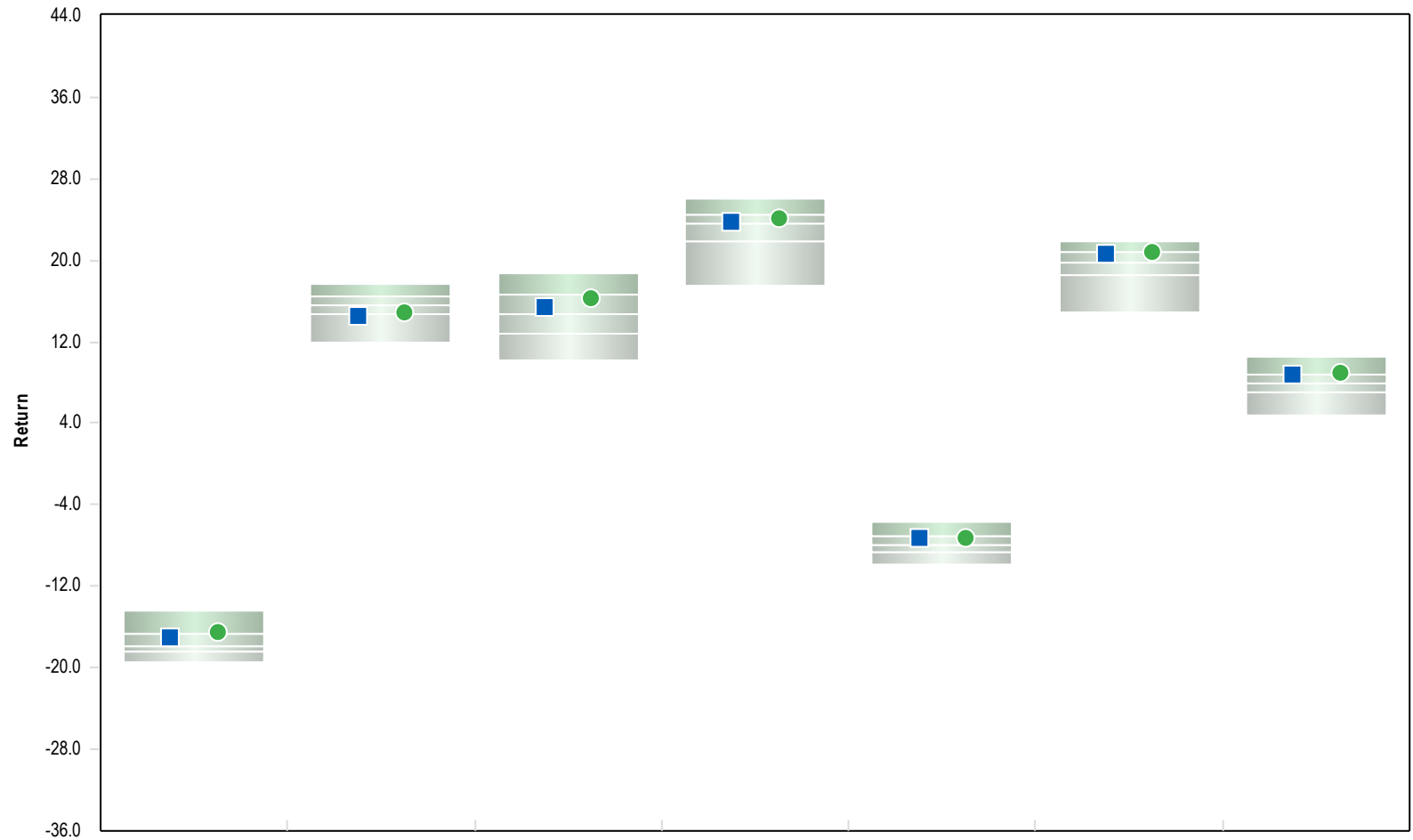
Peer Group Analysis - IM Mixed-Asset Target 2040 (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard Target Retirement 2040	4.6 (54)	11.1 (42)	12.6 (59)	8.4 (61)	6.9 (31)	8.7 (34)	8.3 (22)
● Vanguard Target 2040 Composite Index	4.6 (49)	11.1 (42)	13.1 (43)	8.7 (44)	7.3 (18)	9.0 (15)	8.7 (9)

5th Percentile	5.4	12.5	14.9	9.9	7.6	9.3	8.9
1st Quartile	5.0	11.3	13.6	9.1	7.0	8.9	8.3
Median	4.6	10.9	12.9	8.6	6.6	8.4	7.8
3rd Quartile	4.2	10.0	11.6	7.9	6.2	7.9	7.3
95th Percentile	3.1	8.4	9.5	6.0	5.2	6.9	6.5

Peer Group Analysis - IM Mixed-Asset Target 2040 (MF)



■ Vanguard Target Retirement 2040  
 ● Vanguard Target 2040 Composite Index

	2022	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2040	-17.0 (33)	14.6 (79)	15.5 (39)	23.9 (44)	-7.3 (33)	20.7 (28)	8.7 (26)
Vanguard Target 2040 Composite Index	-16.5 (22)	14.8 (72)	16.3 (30)	24.2 (36)	-7.2 (30)	20.9 (23)	9.0 (20)

5th Percentile	-14.4	17.7	18.7	26.1	-5.6	21.8	10.6
1st Quartile	-16.7	16.4	16.7	24.5	-7.1	20.8	8.7
Median	-17.9	15.7	14.7	23.6	-8.0	19.7	7.9
3rd Quartile	-18.5	14.7	12.8	21.9	-8.7	18.5	7.0
95th Percentile	-19.4	11.9	10.1	17.5	-9.8	14.9	4.8



**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2040 Fund; Investor Class Shares	Portfolio Assets :	\$70,674 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VFORX	PM Tenure :	
Inception Date :	06/07/2006	Fund Style :	IM Mixed-Asset Target 2040 (MF)
Fund Assets :	\$70,674 Million	Style Benchmark :	Vanguard Target 2040 Composite Index
Portfolio Turnover :	7%		

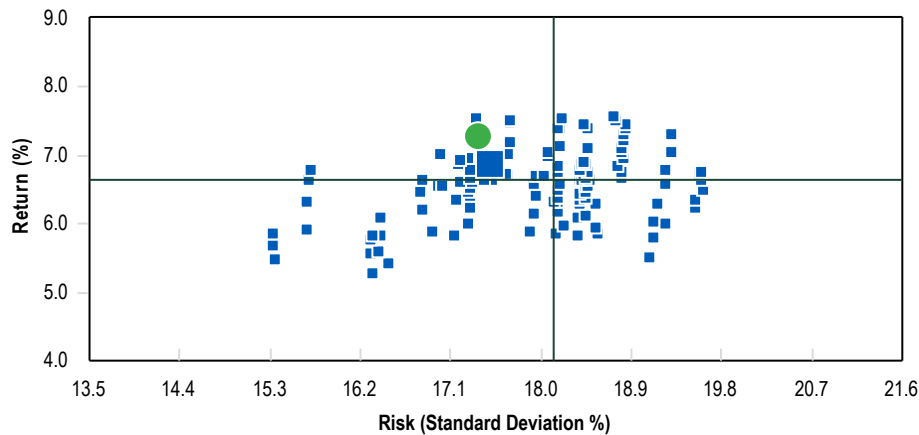
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2040.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2040	6.9	17.5	0.4	-0.4	1.0	1.0	0.3	-1.0	17.5	07/01/2006
Vanguard Target 2040 Composite Index	7.3	17.4	0.4	0.0	1.0	1.0	0.0		17.4	07/01/2006
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	17.4	-0.4	0.0	07/01/2006

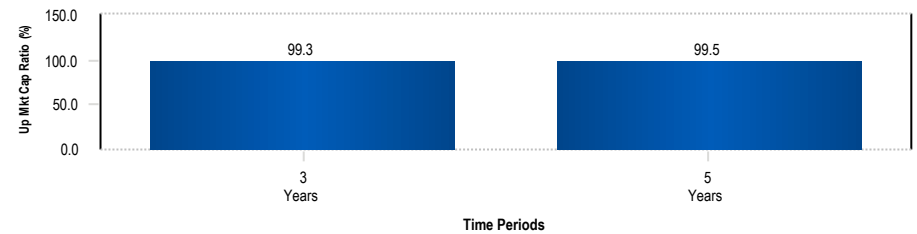
**Peer Group Scattergram (07/01/18 to 06/30/23)**



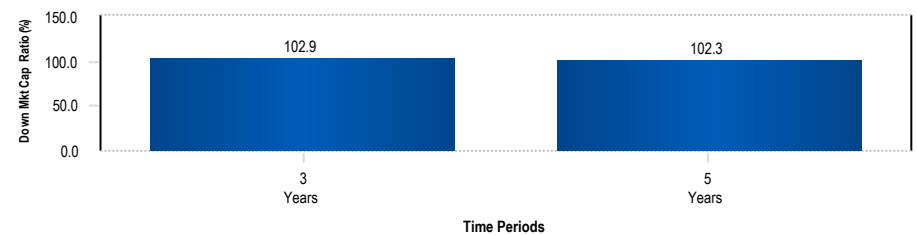
	Return	Standard Deviation
■ Vanguard Target Retirement 2040	6.9	17.5
● Vanguard Target 2040 Composite Index	7.3	17.4
— Median	6.6	18.1

**Up Down Market Capture**

**Up Market Capture**

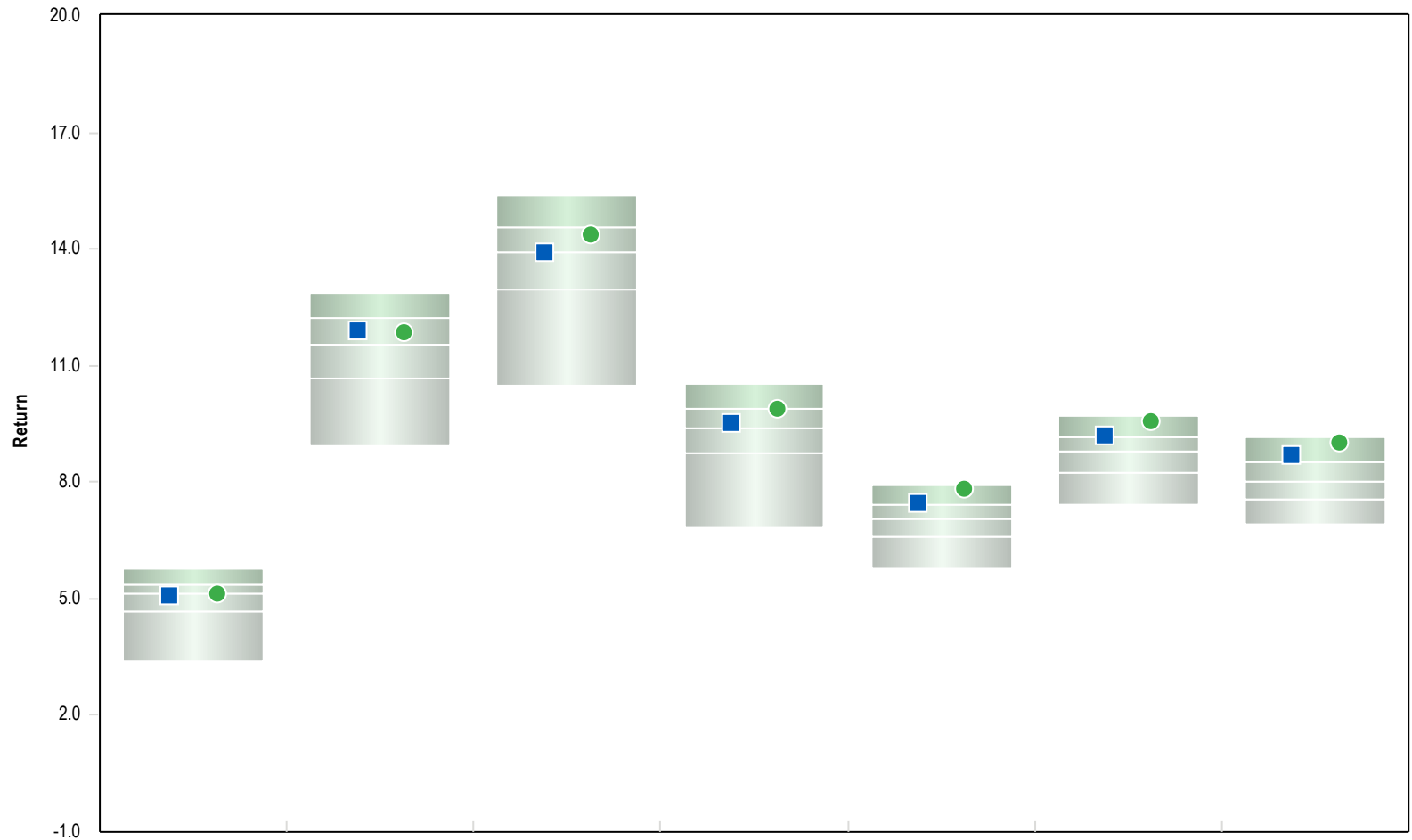


**Down Market Capture**



\* Quarterly periodicity used.

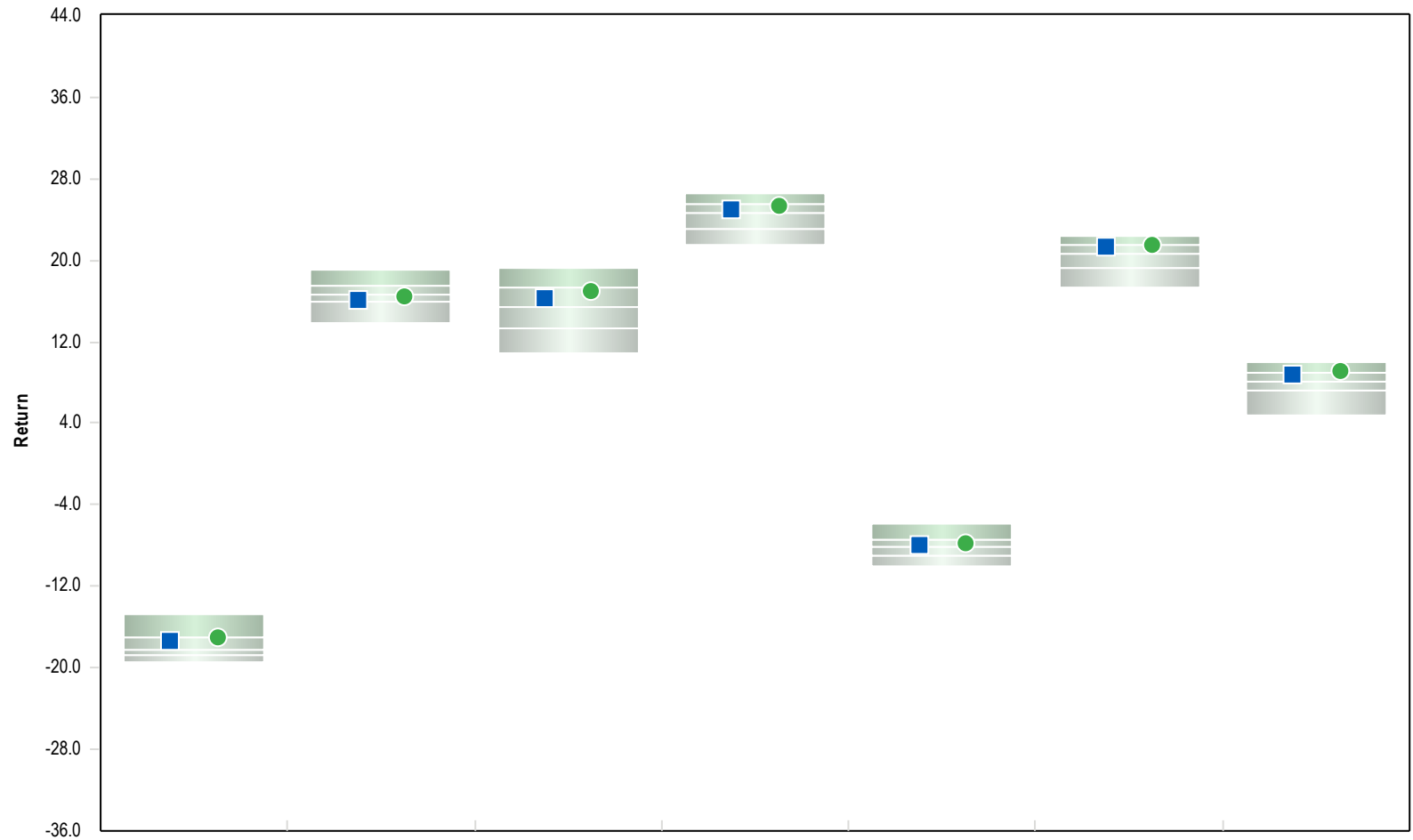
Peer Group Analysis - IM Mixed-Asset Target 2045 (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard Target Retirement 2045	5.1 (51)	11.9 (38)	13.9 (50)	9.5 (46)	7.5 (24)	9.2 (24)	8.7 (17)
● Vanguard Target 2045 Composite Index	5.1 (51)	11.9 (39)	14.4 (34)	9.9 (26)	7.8 (9)	9.6 (10)	9.0 (7)

5th Percentile	5.8	12.9	15.4	10.5	7.9	9.7	9.1
1st Quartile	5.4	12.2	14.5	9.9	7.4	9.2	8.5
Median	5.1	11.5	13.9	9.4	7.0	8.8	8.0
3rd Quartile	4.7	10.6	13.0	8.7	6.6	8.2	7.6
95th Percentile	3.4	8.9	10.5	6.8	5.8	7.4	6.9

Peer Group Analysis - IM Mixed-Asset Target 2045 (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Vanguard Target Retirement 2045	-17.4 (32)	16.2 (65)	16.3 (37)	24.9 (39)	-7.9 (41)	21.4 (26)	8.9 (29)
● Vanguard Target 2045 Composite Index	-16.9 (24)	16.4 (56)	17.0 (30)	25.4 (28)	-7.8 (37)	21.5 (21)	9.1 (22)

5th Percentile	-14.7	19.0	19.2	26.7	-5.9	22.5	10.1
1st Quartile	-17.0	17.5	17.3	25.5	-7.4	21.4	9.1
Median	-18.2	16.7	15.4	24.6	-8.2	20.6	8.1
3rd Quartile	-18.8	15.9	13.3	23.1	-9.0	19.3	7.1
95th Percentile	-19.5	13.9	10.9	21.5	-10.0	17.3	4.7

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2045 Fund; Investor Class Shares	Portfolio Assets :	\$66,705 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VTIVX	PM Tenure :	
Inception Date :	10/27/2003	Fund Style :	IM Mixed-Asset Target 2045 (MF)
Fund Assets :	\$66,705 Million	Style Benchmark :	Vanguard Target 2045 Composite Index
Portfolio Turnover :	5%		

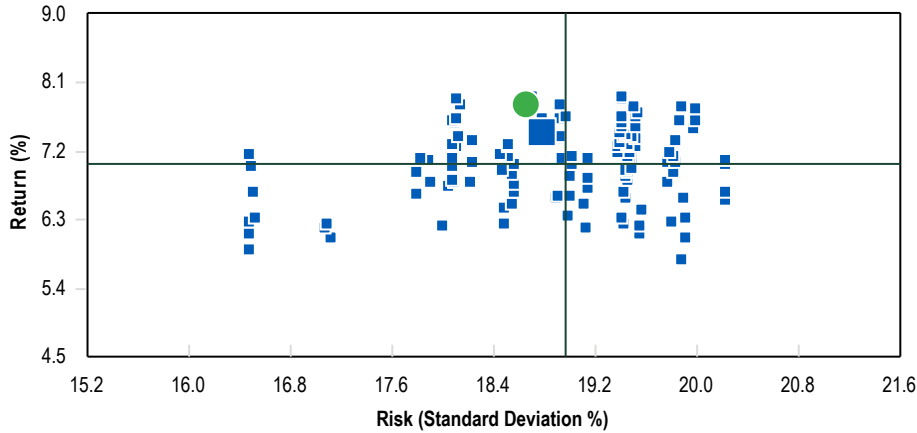
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2045.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2045	7.5	18.8	0.4	-0.4	1.0	1.0	0.4	-0.9	18.8	11/01/2003
Vanguard Target 2045 Composite Index	7.8	18.7	0.4	0.0	1.0	1.0	0.0		18.7	11/01/2003
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	18.7	-0.4	0.0	11/01/2003

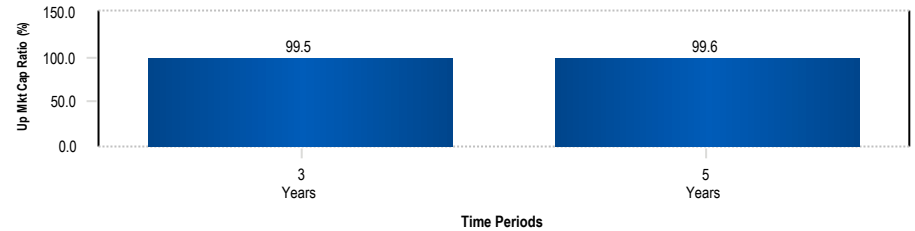
**Peer Group Scattergram (07/01/18 to 06/30/23)**



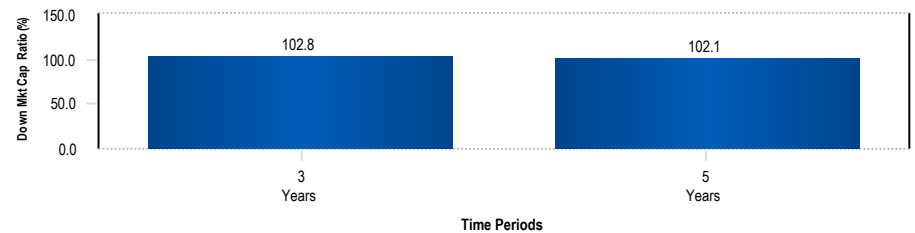
	Return	Standard Deviation
■ Vanguard Target Retirement 2045	7.5	18.8
● Vanguard Target 2045 Composite Index	7.8	18.7
— Median	7.0	19.0

**Up Down Market Capture**

**Up Market Capture**

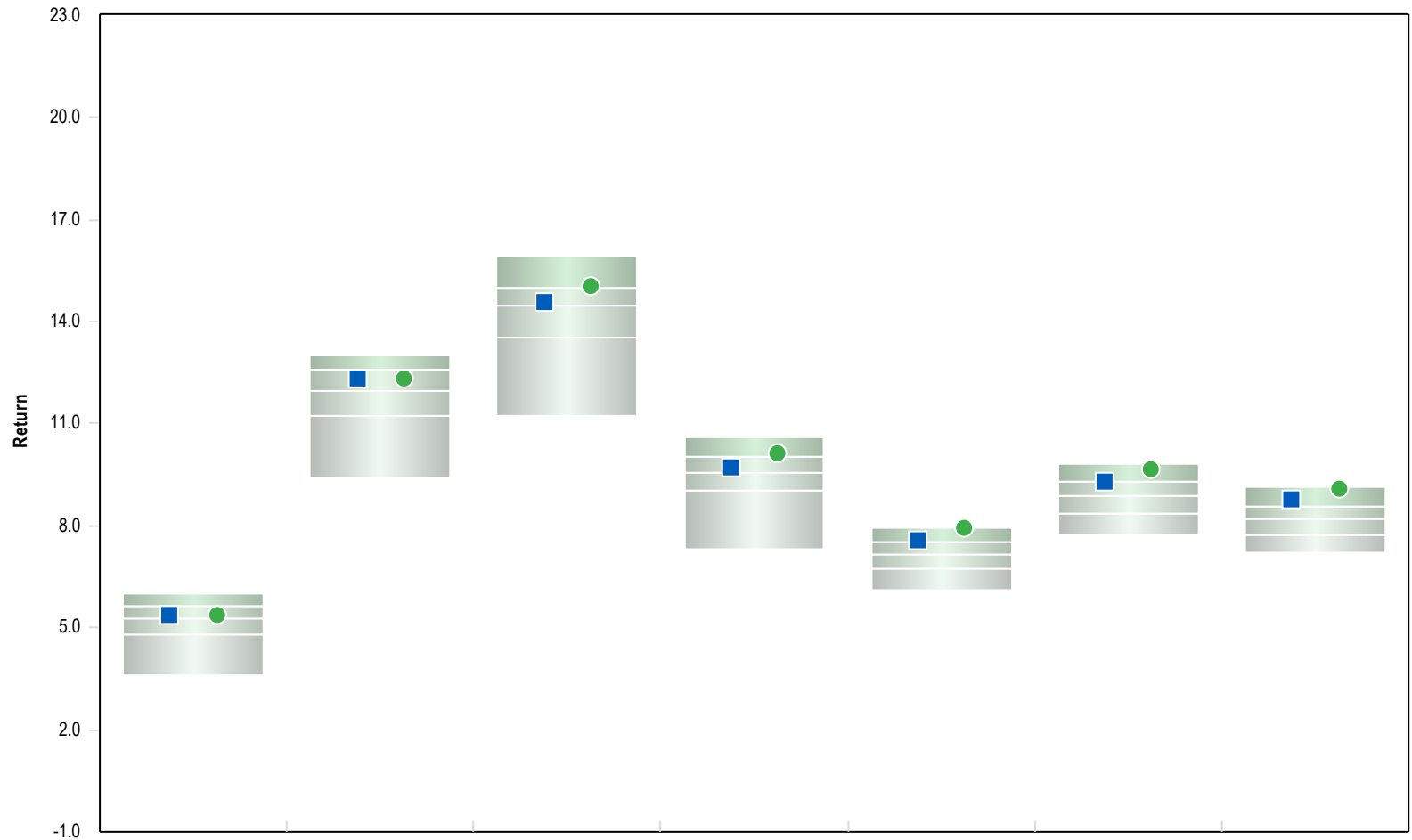


**Down Market Capture**



\* Quarterly periodicity used.

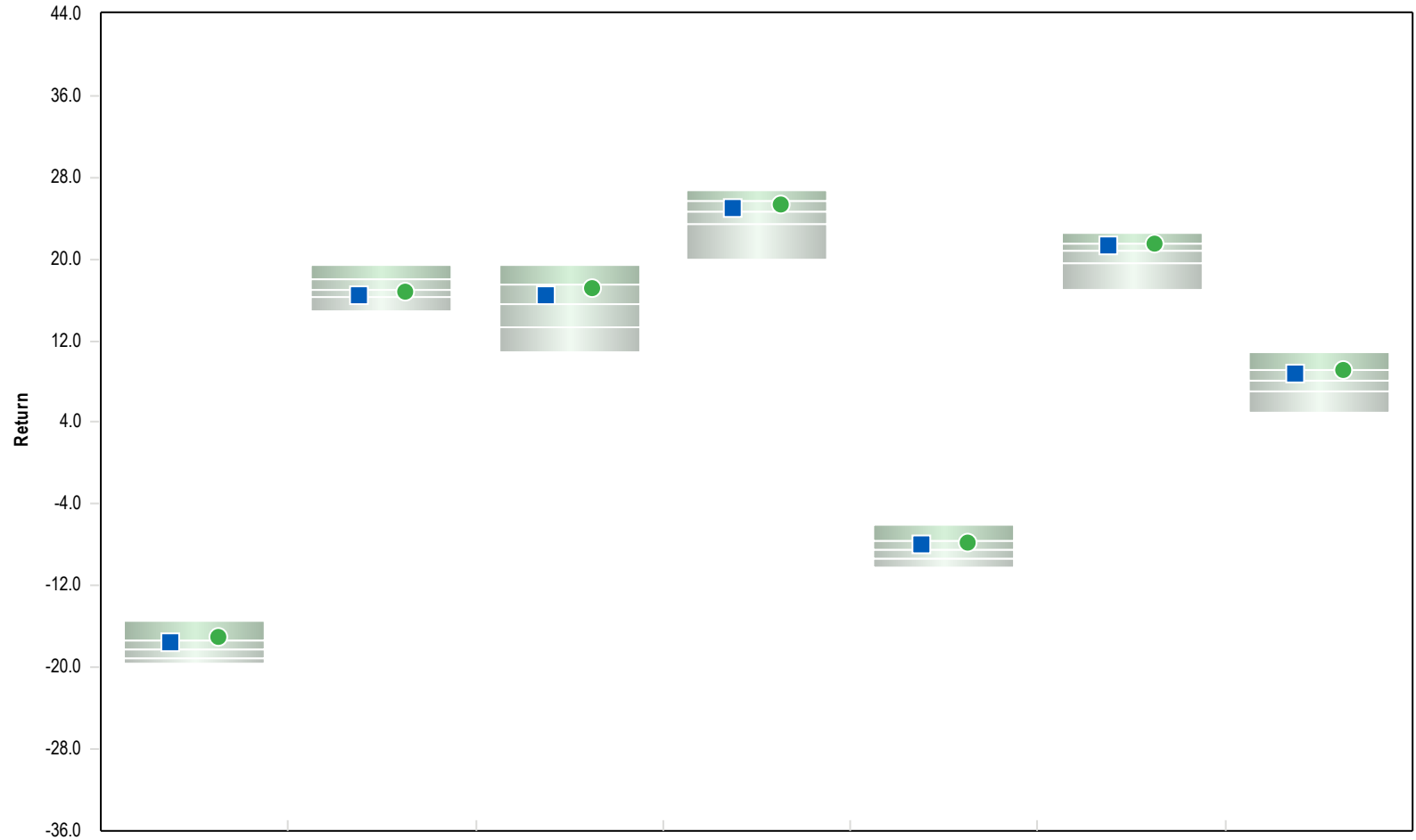
Peer Group Analysis - IM Mixed-Asset Target 2050 (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard Target Retirement 2050	5.4 (43)	12.4 (33)	14.6 (46)	9.7 (44)	7.6 (21)	9.3 (25)	8.8 (22)
● Vanguard Target 2050 Composite Index	5.4 (38)	12.3 (34)	15.0 (24)	10.1 (22)	8.0 (5)	9.7 (10)	9.1 (8)

5th Percentile	6.0	13.0	15.9	10.6	7.9	9.8	9.2
1st Quartile	5.6	12.6	15.0	10.0	7.5	9.3	8.6
Median	5.3	12.0	14.5	9.6	7.1	8.9	8.2
3rd Quartile	4.8	11.2	13.5	9.0	6.7	8.4	7.7
95th Percentile	3.6	9.4	11.2	7.3	6.1	7.7	7.2

Peer Group Analysis - IM Mixed-Asset Target 2050 (MF)



■ Vanguard Target Retirement 2050  
 ● Vanguard Target 2050 Composite Index

	2022	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2050	-17.5 (30)	16.4 (70)	16.4 (37)	25.0 (41)	-7.9 (34)	21.4 (33)	8.9 (31)
Vanguard Target 2050 Composite Index	-17.1 (20)	16.8 (58)	17.2 (30)	25.4 (30)	-7.8 (27)	21.5 (26)	9.1 (26)

5th Percentile	-15.4	19.4	19.5	26.7	-5.9	22.6	10.9
1st Quartile	-17.3	18.0	17.4	25.6	-7.6	21.6	9.1
Median	-18.3	17.0	15.5	24.7	-8.5	20.8	8.1
3rd Quartile	-19.1	16.2	13.3	23.4	-9.3	19.6	7.1
95th Percentile	-19.6	14.9	10.9	19.9	-10.2	16.9	4.9

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2050 Fund; Investor Class Shares	Portfolio Assets :	\$54,429 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VFIFX	PM Tenure :	
Inception Date :	06/07/2006	Fund Style :	IM Mixed-Asset Target 2050 (MF)
Fund Assets :	\$54,429 Million	Style Benchmark :	Vanguard Target 2050 Composite Index
Portfolio Turnover :	4%		

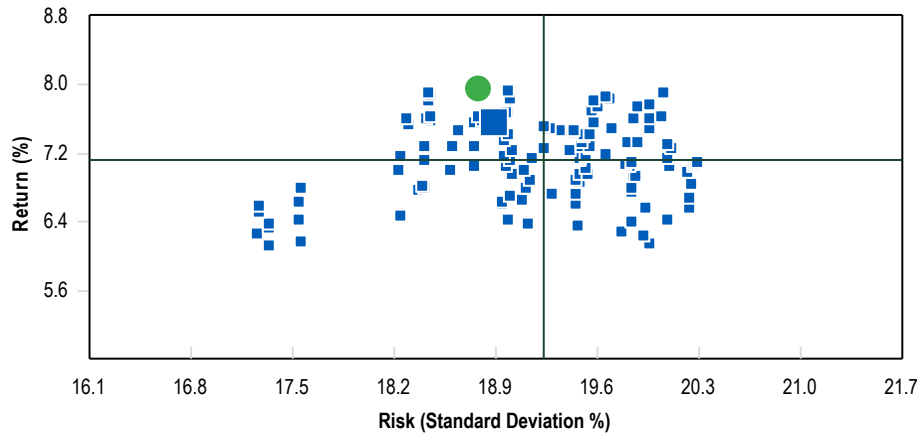
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2050.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2050	7.6	18.9	0.4	-0.4	1.0	1.0	0.4	-0.9	18.9	07/01/2006
Vanguard Target 2050 Composite Index	8.0	18.8	0.4	0.0	1.0	1.0	0.0		18.8	07/01/2006
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	18.8	-0.4	0.0	07/01/2006

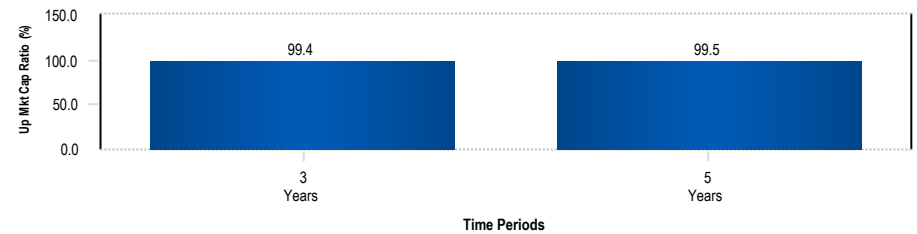
**Peer Group Scattergram (07/01/18 to 06/30/23)**



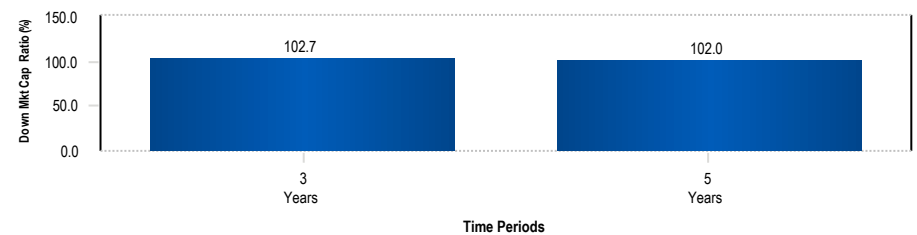
	Return	Standard Deviation
■ Vanguard Target Retirement 2050	7.6	18.9
● Vanguard Target 2050 Composite Index	8.0	18.8
— Median	7.1	19.2

**Up Down Market Capture**

**Up Market Capture**



**Down Market Capture**



\* Quarterly periodicity used.

Peer Group Analysis - IM Mixed-Asset Target 2055+ (MF)

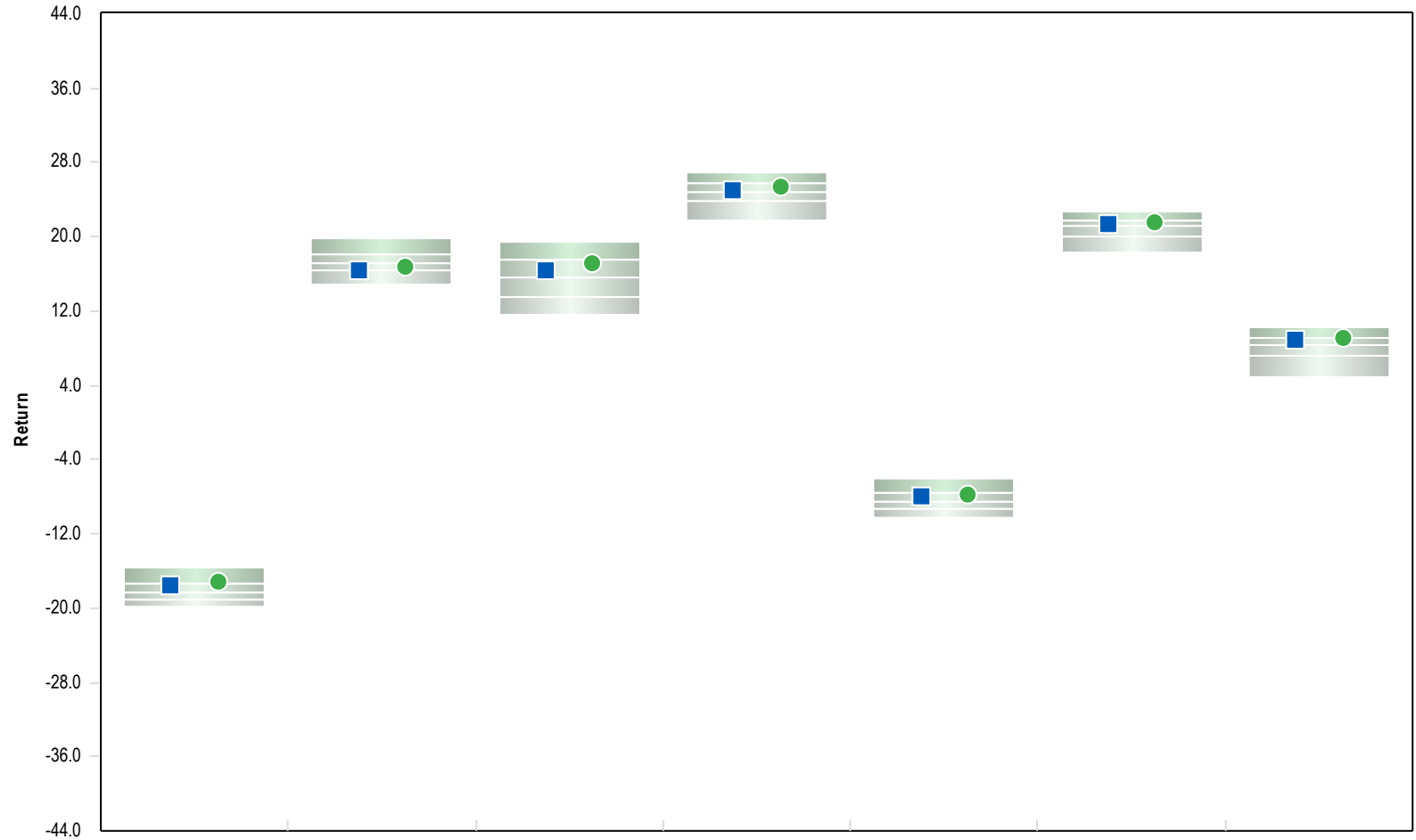


	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard Target Retirement 2055	5.4 (48)	12.4 (43)	14.6 (55)	9.7 (48)	7.6 (23)	9.3 (30)	8.7 (26)
● Vanguard Target 2055 Composite Index	5.4 (45)	12.3 (43)	15.0 (34)	10.1 (30)	8.0 (5)	9.7 (11)	9.1 (10)

5th Percentile	6.1	13.2	16.3	10.7	7.9	9.8	9.2
1st Quartile	5.8	12.7	15.3	10.2	7.5	9.3	8.7
Median	5.3	12.2	14.7	9.7	7.2	9.0	8.3
3rd Quartile	4.8	11.2	13.7	9.1	6.8	8.5	7.8
95th Percentile	3.9	9.5	11.3	7.7	6.2	7.9	7.4



Peer Group Analysis - IM Mixed-Asset Target 2055+ (MF)



	2022	2021	2020	2019	2018	2017	2016
■ Vanguard Target Retirement 2055	-17.5 (26)	16.4 (74)	16.3 (40)	25.0 (45)	-7.9 (35)	21.4 (41)	8.9 (29)
● Vanguard Target 2055 Composite Index	-17.1 (19)	16.8 (62)	17.2 (31)	25.4 (33)	-7.8 (30)	21.5 (34)	9.1 (25)

5th Percentile	-15.6	19.8	19.5	26.9	-6.0	22.6	10.2
1st Quartile	-17.4	18.1	17.6	25.9	-7.6	21.8	9.1
Median	-18.3	17.2	15.6	24.8	-8.5	21.1	8.2
3rd Quartile	-19.1	16.4	13.4	23.8	-9.3	20.0	7.2
95th Percentile	-19.8	14.9	11.6	21.7	-10.3	18.3	4.9

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2055 Fund; Investor Class Shares	Portfolio Assets :	\$34,849 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VFFVX	PM Tenure :	
Inception Date :	08/18/2010	Fund Style :	IM Mixed-Asset Target 2055+ (MF)
Fund Assets :	\$34,849 Million	Style Benchmark :	Vanguard Target 2055 Composite Index
Portfolio Turnover :	4%		

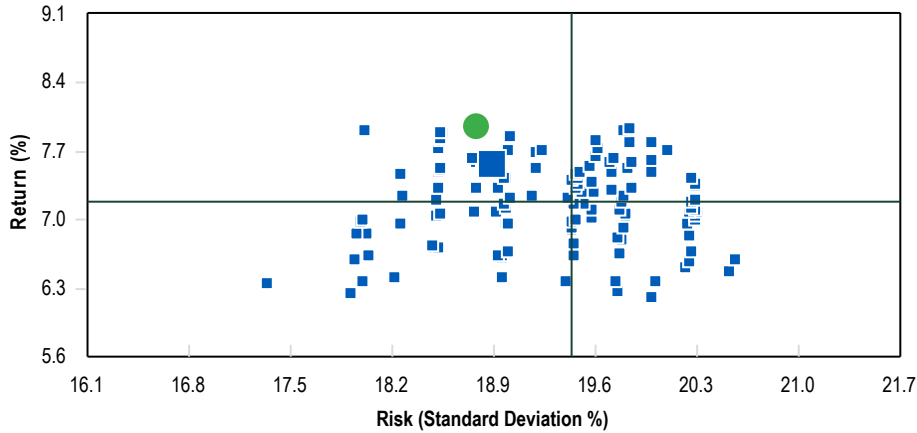
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2055.

**Historical Statistics (07/01/18 - 06/30/23) \***

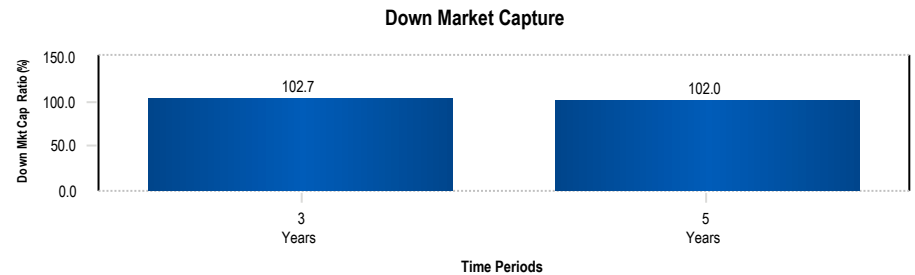
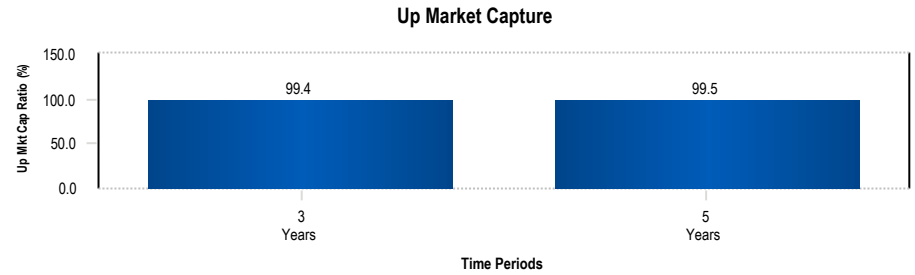
	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2055	7.6	18.9	0.4	-0.4	1.0	1.0	0.4	-0.9	18.9	09/01/2010
Vanguard Target 2055 Composite Index	8.0	18.8	0.4	0.0	1.0	1.0	0.0		18.8	09/01/2010
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	18.8	-0.4	0.0	09/01/2010

**Peer Group Scattergram (07/01/18 to 06/30/23)**



	Return	Standard Deviation
■ Vanguard Target Retirement 2055	7.6	18.9
● Vanguard Target 2055 Composite Index	8.0	18.8
— Median	7.2	19.4

**Up Down Market Capture**



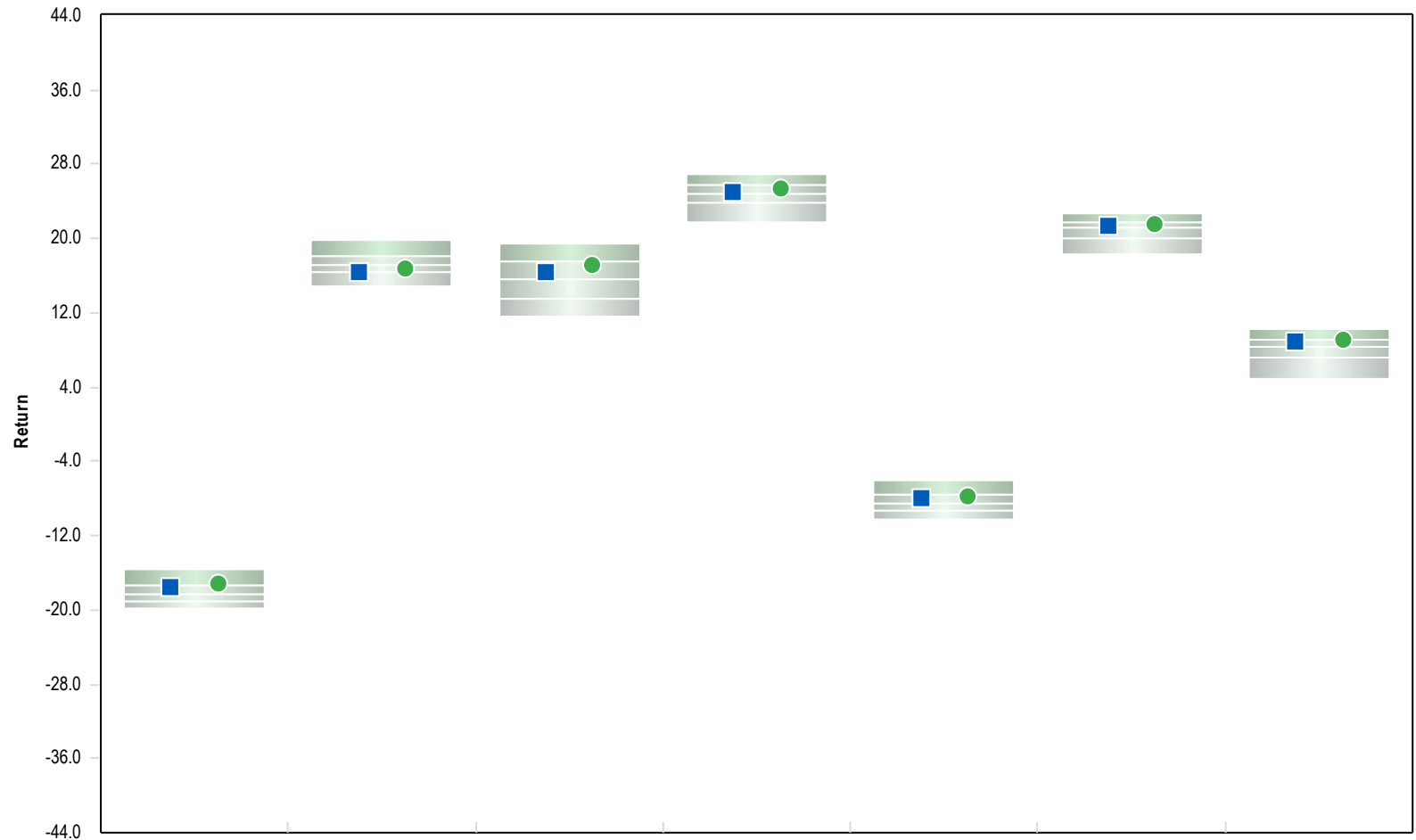
\* Quarterly periodicity used.

Peer Group Analysis - IM Mixed-Asset Target 2055 (MF)



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Vanguard Target Retirement 2060	5.4 (47)	12.4 (42)	14.6 (52)	9.8 (48)	7.6 (23)	9.3 (29)	8.7 (26)
● Vanguard Target 2060 Composite Index	5.4 (45)	12.3 (43)	15.0 (34)	10.1 (30)	8.0 (5)	9.7 (11)	9.1 (10)
5th Percentile	6.1	13.2	16.3	10.7	7.9	9.8	9.2
1st Quartile	5.8	12.7	15.3	10.2	7.5	9.3	8.7
Median	5.3	12.2	14.7	9.7	7.2	9.0	8.3
3rd Quartile	4.8	11.2	13.7	9.1	6.8	8.5	7.8
95th Percentile	3.9	9.5	11.3	7.7	6.2	7.9	7.4

Peer Group Analysis - IM Mixed-Asset Target 2055 (MF)



■ Vanguard Target Retirement 2060  
 ● Vanguard Target 2060 Composite Index

	2022	2021	2020	2019	2018	2017	2016
Vanguard Target Retirement 2060	-17.5 (26)	16.4 (74)	16.3 (40)	25.0 (46)	-7.9 (35)	21.4 (41)	8.8 (30)
Vanguard Target 2060 Composite Index	-17.1 (19)	16.8 (62)	17.2 (31)	25.4 (33)	-7.8 (30)	21.5 (34)	9.1 (25)

5th Percentile	-15.6	19.8	19.5	26.9	-6.0	22.6	10.2
1st Quartile	-17.4	18.1	17.6	25.9	-7.6	21.8	9.1
Median	-18.3	17.2	15.6	24.8	-8.5	21.1	8.2
3rd Quartile	-19.1	16.4	13.4	23.8	-9.3	20.0	7.2
95th Percentile	-19.8	14.9	11.6	21.7	-10.3	18.3	4.9

**Fund Information**

Fund Name :	Vanguard Chester Funds: Vanguard Target Retirement 2060 Fund; Investor Class Shares	Portfolio Assets :	\$18,227 Million
Fund Family :	Vanguard	Portfolio Manager :	Team Managed
Ticker :	VTTSX	PM Tenure :	
Inception Date :	01/19/2012	Fund Style :	IM Mixed-Asset Target 2055 (MF)
Fund Assets :	\$18,227 Million	Style Benchmark :	Vanguard Target 2060 Composite Index
Portfolio Turnover :	3%		

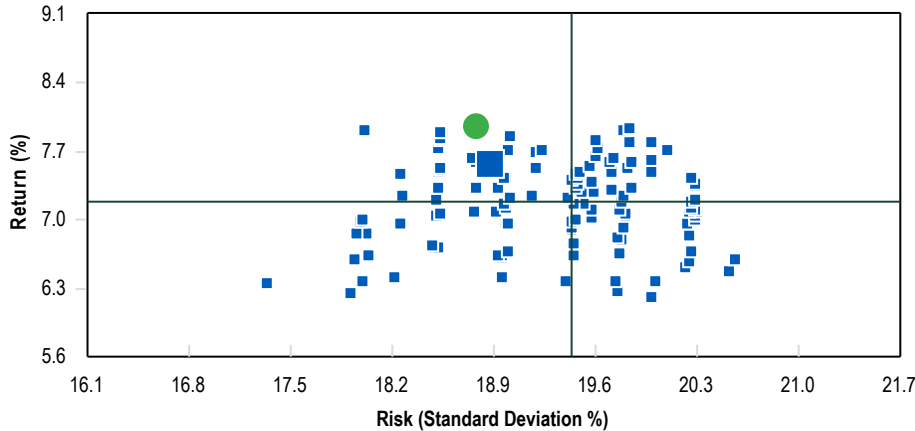
**Fund Investment Policy**

The Fund seeks to provide capital appreciation and current income consistent with its current asset allocation. The Fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2060.

**Historical Statistics (07/01/18 - 06/30/23) \***

	Return	Standard Deviation	Sharpe Ratio	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Excess Risk	Inception Date
Vanguard Target Retirement 2060	7.6	18.9	0.4	-0.4	1.0	1.0	0.4	-0.9	18.9	02/01/2012
Vanguard Target 2060 Composite Index	8.0	18.8	0.4	0.0	1.0	1.0	0.0		18.8	02/01/2012
90 Day U.S. Treasury Bill	1.6	0.7		1.6	0.0	0.0	18.8	-0.4	0.0	02/01/2012

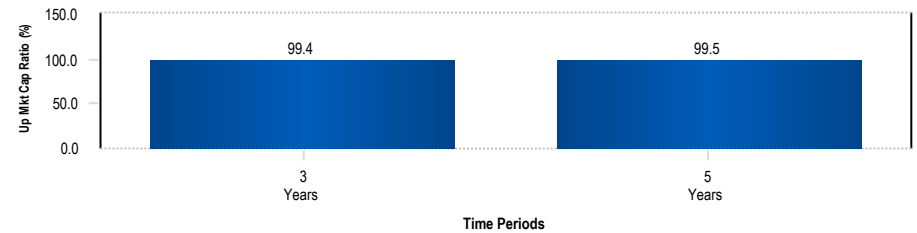
**Peer Group Scattergram (07/01/18 to 06/30/23)**



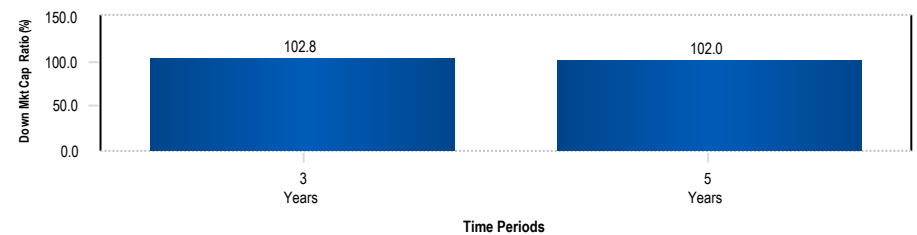
	Return	Standard Deviation
■ Vanguard Target Retirement 2060	7.6	18.9
● Vanguard Target 2060 Composite Index	8.0	18.8
— Median	7.2	19.4

**Up Down Market Capture**

**Up Market Capture**



**Down Market Capture**



\* Quarterly periodicity used.

# **S3 RATING REPORT**

# City of Memphis 457 Retirement Plan

S3 Reports as of June 30, 2023

Scoring System Summary						
Ticker	Fund Name	Fund Category	Sep-2022	Dec-2022	Mar-2023	Jun-2023
PTTRX	PIMCO Total Return R	Intermediate-Term Bond	C	C	C	C
TGLMX	TCW Total Return Bond I	Intermediate-Term Bond	B	B	B	C
IVHIX	Delaware Ivy High Income	High Yield Bond	C	B	C	B
PRILX	Parnassus Core Equity Institutional	Large Blend	A	A	A	A
VINIX	Vanguard 500 Index	Large Blend	A	A	A	A
LOMAX	Edgar Lomax Value	Large Value	A	A	A	A
FCNTX	Fidelity Contrafund	Large Growth	B	B	A	A
VIMAX	Vanguard Mid Cap Index Adm	Mid-Cap Blend	A	A	A	A
FLMVX	JPMorgan Mid Cap Value R6	Mid-Cap Value	A	A	A	A
ERASX	Eaton Vance Atlanta Capital SMID	SMID-Cap	A	B	B	B
NBGIX	Neuberger Berman Genesis R6	Small Growth	A	A	A	A
HASCX	Harbor Small Cap Value	Small Value	A	A	A	A
BCSIX	Brown Capital Mgmt Small Co Inv	Small Growth	A	A	A	A
RERGX	American Funds Europacific Growth R6	Foreign Large Growth	A	A	A	A
MINJX	MFS International Value R3	Foreign Large Blend	A	A	A	A
OGLIX	American Funds Global Insight R6	World Stock	A	A	A	A
VGSLX	Vanguard REIT Index Adm	Real Estate	B	A	B	B
VTW NX	Vanguard Target Retirement 2020	Target Date 2020	A	A	A	A
VTTVX	Vanguard Target Retirement 2025	Target Date 2025	A	A	A	A
VTHR X	Vanguard Target Retirement 2030	Target Date 2030	A	A	A	A
VTTH X	Vanguard Target Retirement 2035	Target Date 2035	A	A	A	A
VFOR X	Vanguard Target Retirement 2040	Target Date 2040	A	A	A	A
VTIV X	Vanguard Target Retirement 2045	Target Date 2045	A	A	A	A
VFIF X	Vanguard Target Retirement 2050	Target Date 2050	A	A	A	A
VFFV X	Vanguard Target Retirement 2055	Target Date 2055	A	A	A	A
VTT S X	Vanguard Target Retirement 2060	Target Date 2060+	A	A	A	A
VTIN X	Vanguard Target Retirement Income	Target Date Retirement	A	A	A	A

# PIMCO Total Return R

Segal Score

C

**Ticker:** PTRRX

**Category:** Intermediate Core-Plus Bond

**Subcategory:** Intermediate Investment Grade (4-6)

**Expense Ratio:** 1.05

**Benchmark:** Bloomberg US Agg Bond

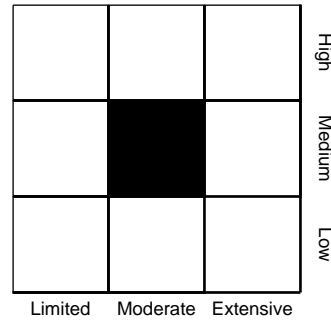
**Inception Date:** 5/11/1987

**S<sup>3</sup> Scores**    Organization: B    Fees: C    Style/Portfolio Characteristics: A    Performance: C    Risk: C

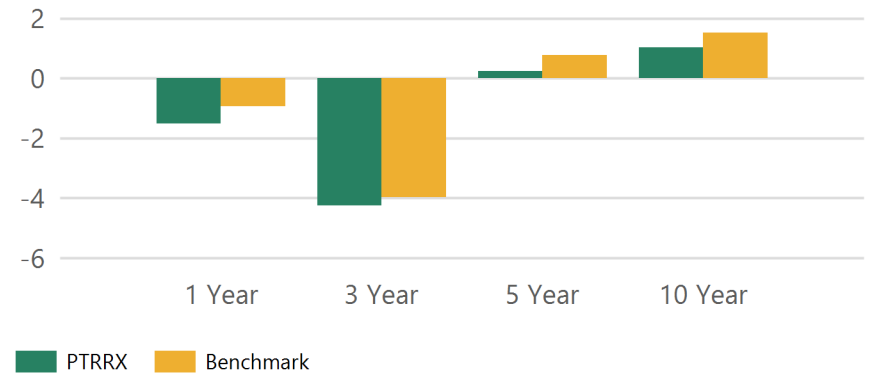
## Portfolio Characteristics

**Fund AUM (\$mil):** 54,605  
**No. of Bonds:** 7,203  
**% Assets in Top 10:** 21.47  
**Avg Eff Duration:** 5.61  
**Avg Eff Maturity:** 8.07  
**Yield to Maturity:**  
**Turnover Ratio %:** 377.00  
**Portfolio Date:** 3/31/2023

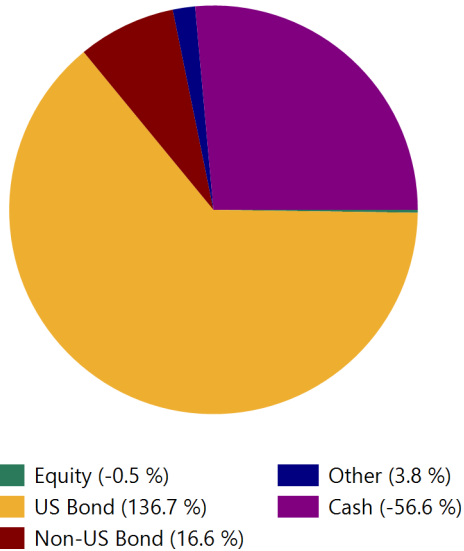
## Style



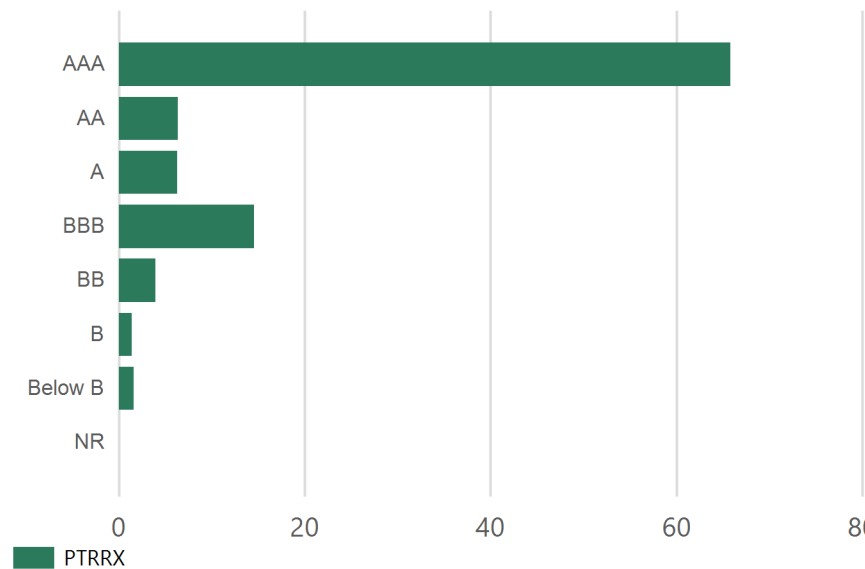
## Returns



## Asset Allocation



## Quality Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	6.29	6.40
5 Year:	5.59	6.05
10 Year:	4.50	4.70
<b>Information Ratio</b>		
3 Year:	-0.38	0.41
5 Year:	-0.58	0.03
10 Year:	-0.43	0.08
<b>Downside Capture</b>		
3 Year:	101.29	97.49
5 Year:	104.69	106.19
10 Year:	107.60	101.24



# TCW Total Return Bond I

Segal Score

C

**Ticker:** TGLMX

**Category:** Intermediate Core-Plus Bond

**Subcategory:** Mortgage-Backed

**Expense Ratio:** 0.49

**Benchmark:** Bloomberg US Agg Bond

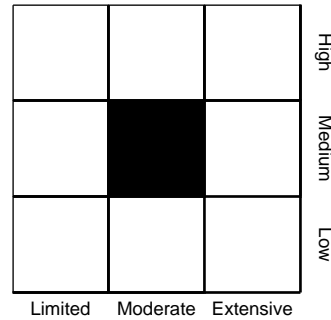
**Inception Date:** 6/17/1993

**S<sup>3</sup> Scores**    Organization: A    Fees: A    Style/Portfolio Characteristics: C    Performance: C    Risk: C

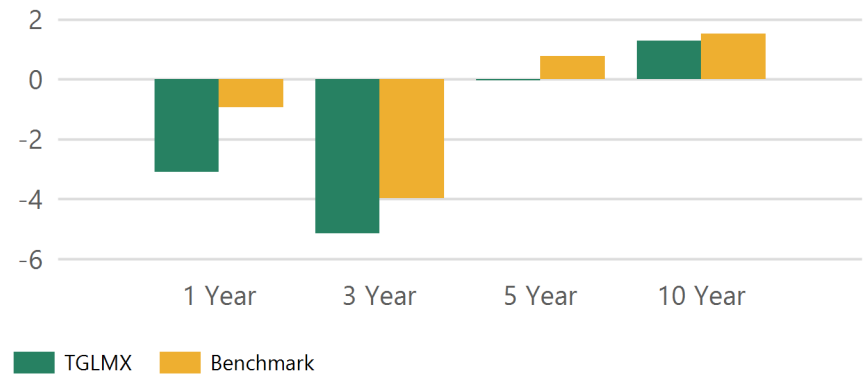
## Portfolio Characteristics

**Fund AUM (\$mil):** 2,797  
**No. of Bonds:** 527  
**% Assets in Top 10:** 22.27  
**Avg Eff Duration:** 7.13  
**Avg Eff Maturity:** 8.45  
**Yield to Maturity:** 6.01  
**Turnover Ratio %:** 386.85  
**Portfolio Date:** 5/31/2023

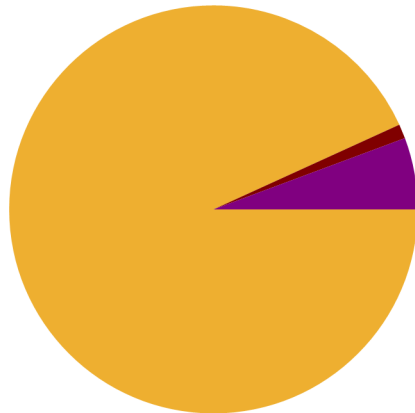
## Style



## Returns

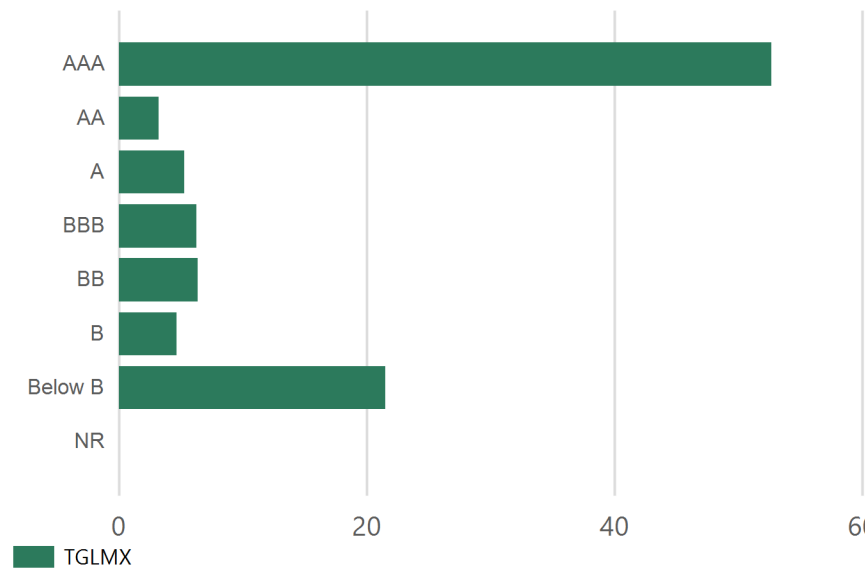


## Asset Allocation



Equity (0.0 %)    Other (0.0 %)  
 US Bond (93.2 %)    Cash (5.7 %)  
 Non-US Bond (1.1 %)

## Quality Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	6.97	6.40
5 Year:	6.15	6.05
10 Year:	4.69	4.70
<b>Information Ratio</b>		
3 Year:	-0.95	0.41
5 Year:	-0.67	0.03
10 Year:	-0.21	0.08
<b>Downside Capture</b>		
3 Year:	110.76	97.49
5 Year:	110.91	106.19
10 Year:	99.88	101.24

# Delaware Ivy High Income Fund Class I

Segal Score

**B**

**Ticker:** IVHIX

**Category:** High Yield Bond

**Subcategory:** High Yield Bond

**Expense Ratio:** 0.74

**Benchmark:** ICE BofA US High Yield

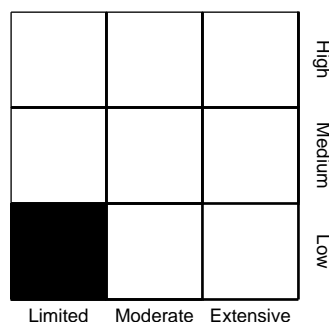
**Inception Date:** 7/31/1997

**S<sup>3</sup> Scores**    Organization: C    Fees: B    Style/Portfolio Characteristics: B    Performance: A    Risk: B

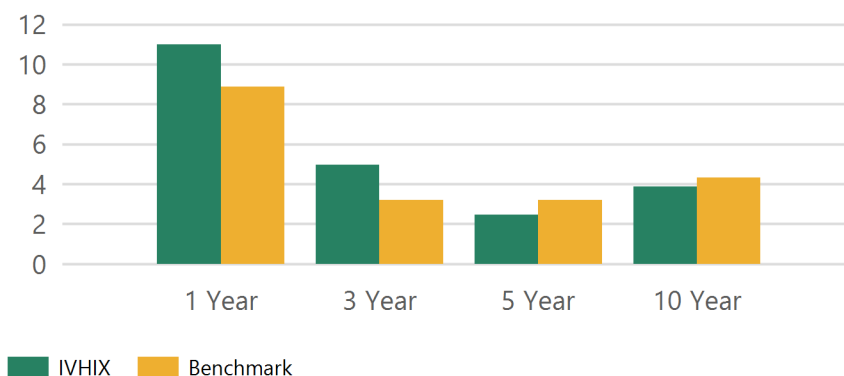
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	2,484
<b>No. of Bonds:</b>	187
<b>% Assets in Top 10:</b>	13.66
<b>Avg Eff Duration:</b>	3.46
<b>Avg Eff Maturity:</b>	6.84
<b>Yield to Maturity:</b>	9.68
<b>Turnover Ratio %:</b>	50.00
<b>Portfolio Date:</b>	5/31/2023

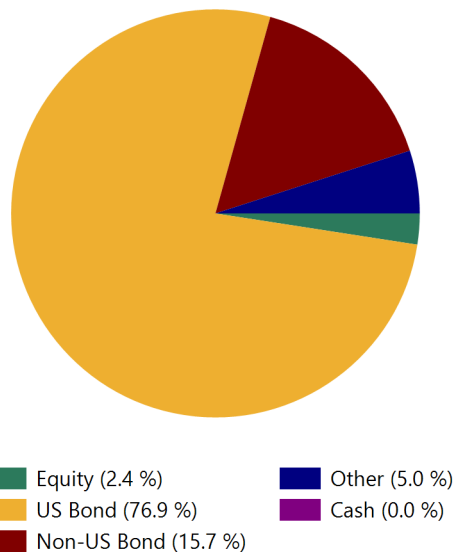
## Style



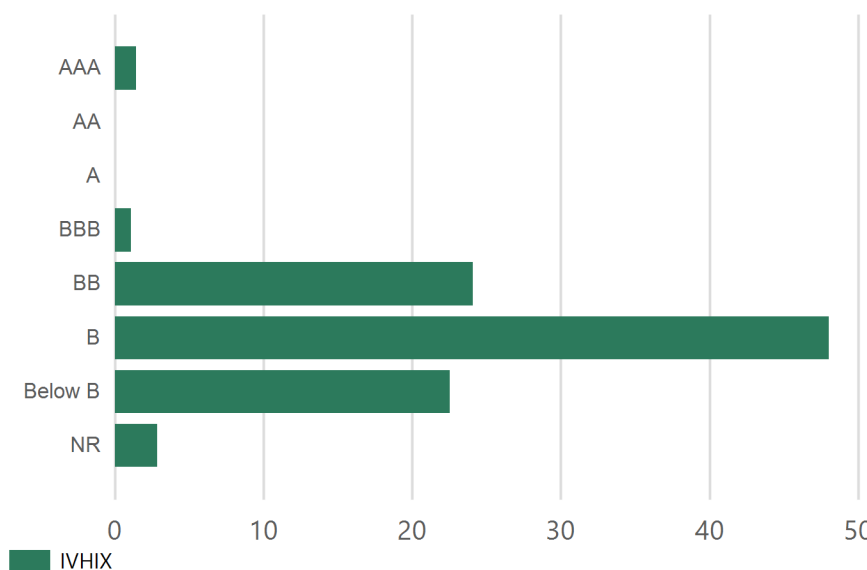
## Returns



## Asset Allocation



## Quality Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	9.35	8.22
5 Year:	10.70	9.23
10 Year:	8.38	7.36
<b>Information Ratio</b>		
3 Year:	0.56	-0.21
5 Year:	-0.24	-0.26
10 Year:	-0.17	-0.39
<b>Downside Capture</b>		
3 Year:	83.64	96.36
5 Year:	102.30	97.52
10 Year:	98.93	97.64

# Parnassus Core Equity Institutional

Segal Score

A

Ticker: PRILX

Category: Large Blend

Subcategory: Large Core

Expense Ratio: 0.61

Benchmark: S&P 500

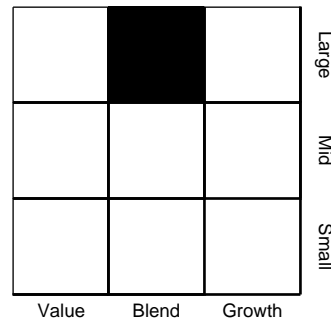
Inception Date: 8/31/1992

S<sup>3</sup> Scores    Organization: A    Fees: A    Style/Portfolio Characteristics: B    Performance: A    Risk: A

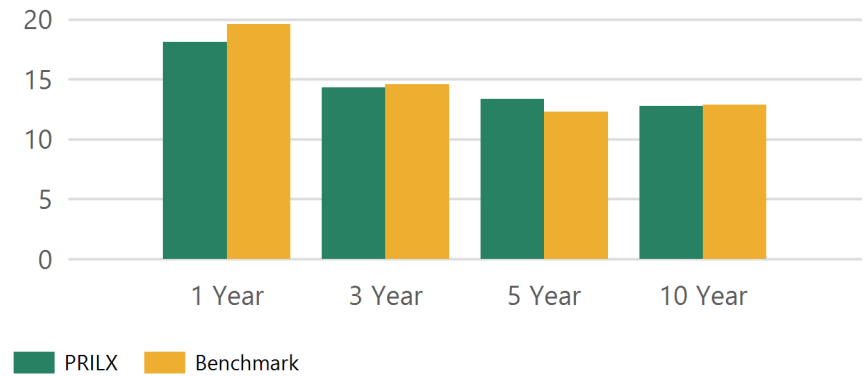
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	26,973
<b>No. of Stocks:</b>	39
<b>% Assets in Top 10:</b>	40.30
<b>Avg Market Cap (\$mil):</b>	198,100.27
<b>P/E Ratio (TTM)(Long):</b>	25.11
<b>P/B Ratio (TTM)(Long):</b>	4.49
<b>Turnover Ratio %:</b>	39.63
<b>Portfolio Date:</b>	6/30/2023

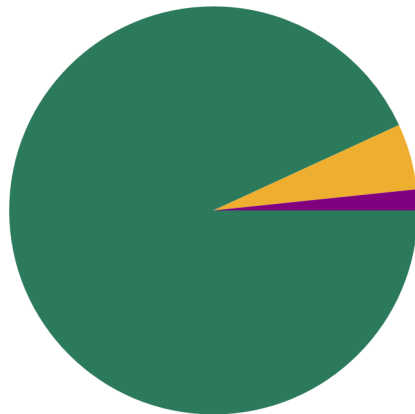
## Style



## Returns

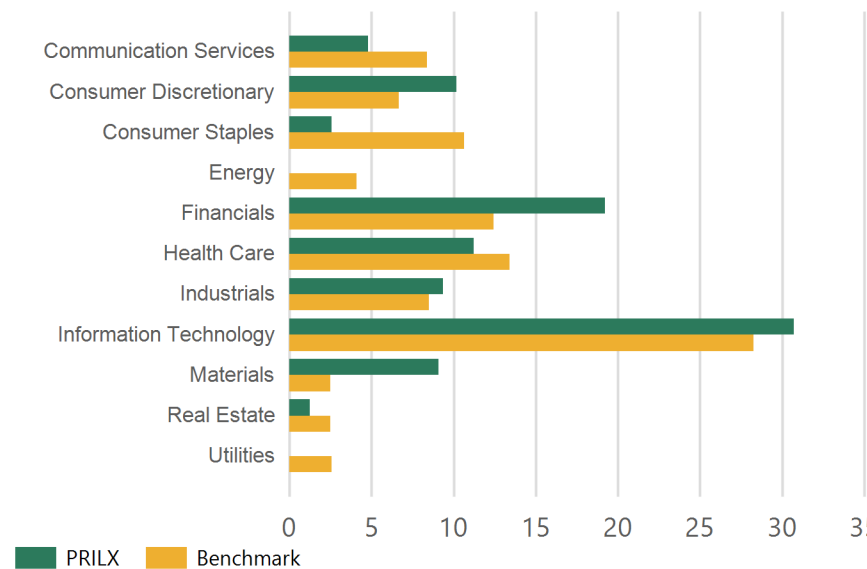


## Asset Allocation



US Equity (93.1 %)	Other (0.0 %)
Non-US Equity (5.2 %)	Cash (1.7 %)
Bond (0.0 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	17.72	18.13
5 Year:	17.42	18.80
10 Year:	13.84	14.96
<b>Information Ratio</b>		
3 Year:	-0.09	-0.34
5 Year:	0.26	-0.42
10 Year:	-0.02	-0.43
<b>Downside Capture</b>		
3 Year:	96.33	97.86
5 Year:	89.45	100.28
10 Year:	89.49	101.06

# Vanguard Institutional Index I

Segal Score

A

Ticker: VINIX

Category: Large Blend

Subcategory: S&P 500 Tracking

Expense Ratio: 0.04

Benchmark: S&P 500

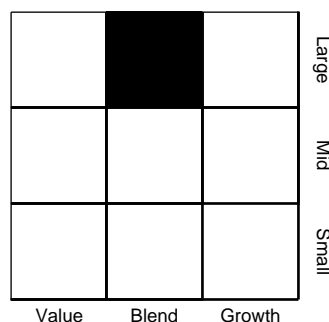
Inception Date: 7/31/1990

S<sup>3</sup> Scores    Organization: A    Fees: A    Style/Portfolio Characteristics: A    Performance: A    Risk: C

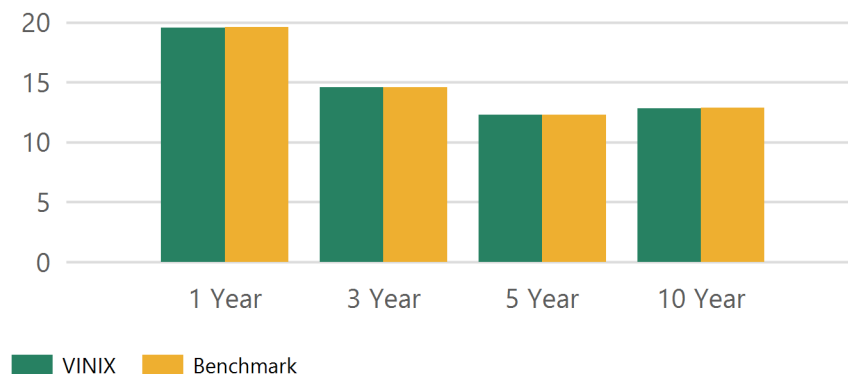
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	254,070
<b>No. of Stocks:</b>	503
<b>% Assets in Top 10:</b>	30.45
<b>Avg Market Cap (\$mil):</b>	223,341.68
<b>P/E Ratio (TTM)(Long):</b>	22.84
<b>P/B Ratio (TTM)(Long):</b>	4.02
<b>Turnover Ratio %:</b>	3.00
<b>Portfolio Date:</b>	6/30/2023

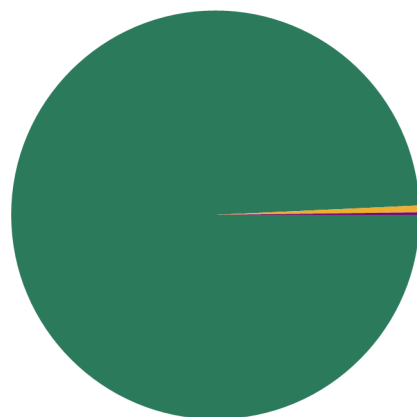
## Style



## Returns

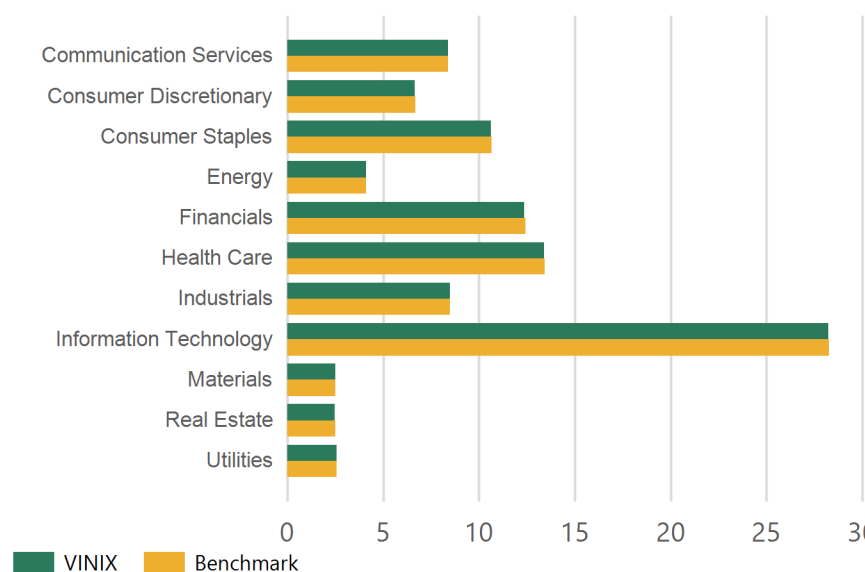


## Asset Allocation



US Equity (99.3 %)	Other (0.0 %)
Non-US Equity (0.5 %)	Cash (0.2 %)
Bond (0.0 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	18.19	18.13
5 Year:	18.80	18.80
10 Year:	14.93	14.96
<b>Information Ratio</b>		
3 Year:	-3.78	-0.34
5 Year:	-2.37	-0.42
10 Year:	-2.77	-0.43
<b>Downside Capture</b>		
3 Year:	100.07	97.86
5 Year:	100.05	100.28
10 Year:	100.06	101.06

# Edgar Lomax Value

Segal Score

A

Ticker: LOMAX

Category: Large Value

Subcategory: Giant Value

Expense Ratio: 0.70

Benchmark: Russell 1000 Value

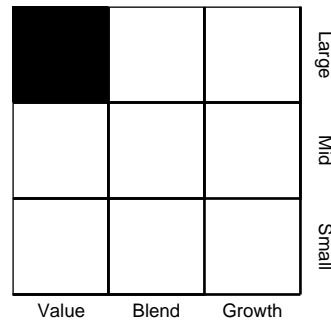
Inception Date: 12/12/1997

S<sup>3</sup> Scores    Organization: A    Fees: A    Style/Portfolio Characteristics: A    Performance: B    Risk: A

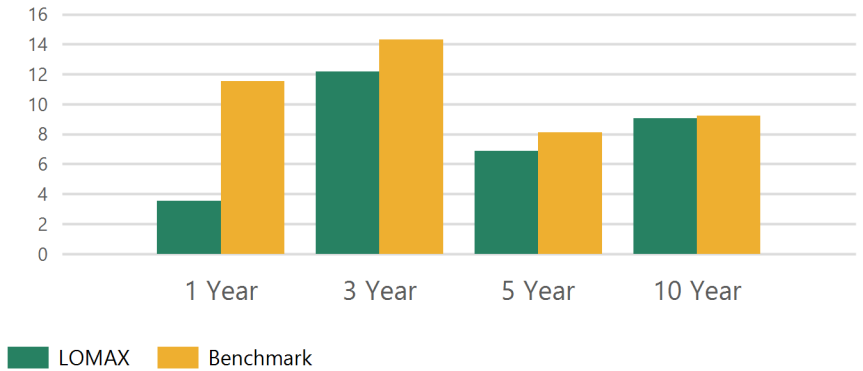
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	91
<b>No. of Stocks:</b>	49
<b>% Assets in Top 10:</b>	42.00
<b>Avg Market Cap (\$mil):</b>	109,988.57
<b>P/E Ratio (TTM)(Long):</b>	13.67
<b>P/B Ratio (TTM)(Long):</b>	2.15
<b>Turnover Ratio %:</b>	39.80
<b>Portfolio Date:</b>	6/30/2023

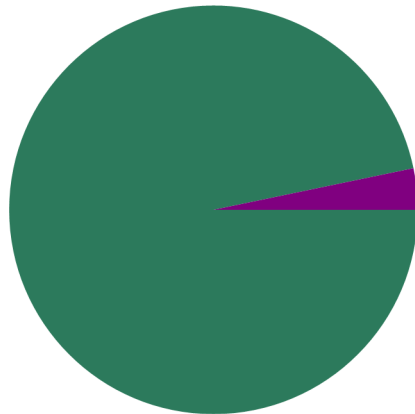
## Style



## Returns

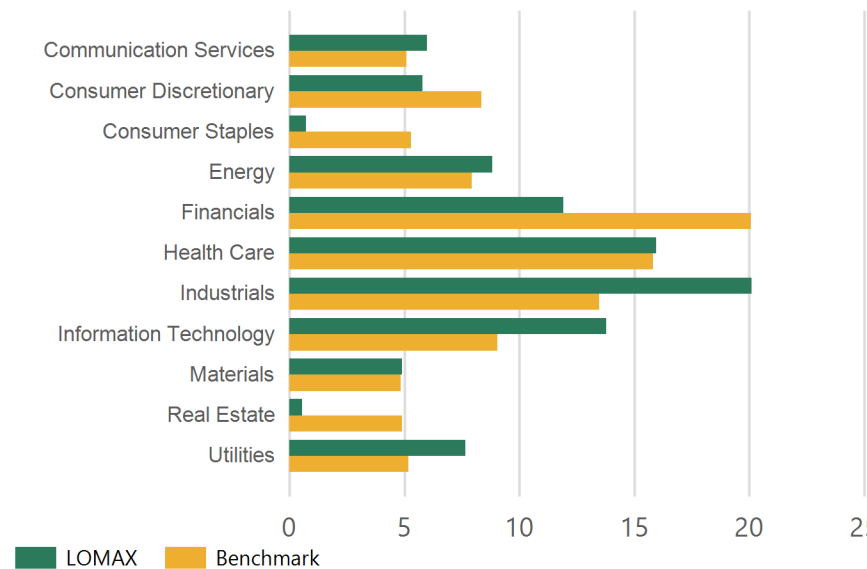


## Asset Allocation



US Equity (96.7 %)	Other (0.0 %)
Non-US Equity (0.0 %)	Cash (3.3 %)
Bond (0.0 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	16.65	17.42
5 Year:	17.83	19.02
10 Year:	14.26	15.19
<b>Information Ratio</b>		
3 Year:	-0.33	0.07
5 Year:	-0.21	0.00
10 Year:	-0.03	-0.04
<b>Downside Capture</b>		
3 Year:	84.97	96.01
5 Year:	88.04	98.40
10 Year:	86.49	98.25

**Ticker:** FCNTX

**Category:** Large Growth

**Subcategory:** Large Core Growth

**Expense Ratio:** 0.55

**Benchmark:** Russell 1000 Growth

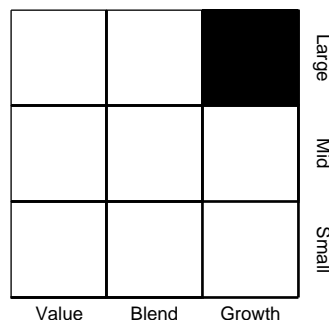
**Inception Date:** 5/17/1967

**S<sup>3</sup> Scores**    Organization: A    Fees: A    Style/Portfolio Characteristics: C    Performance: B    Risk: B

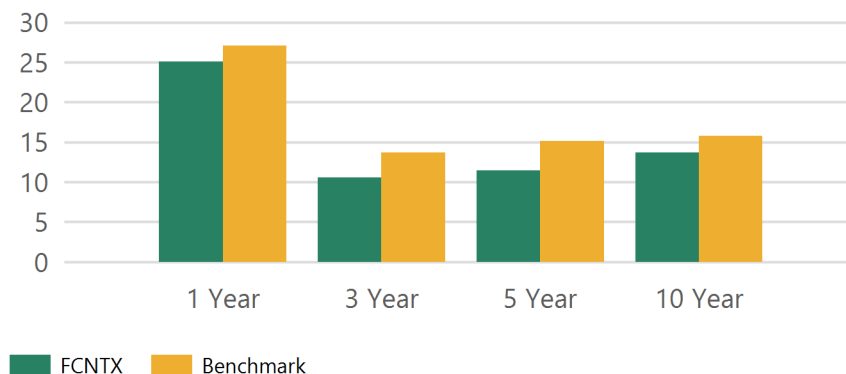
### Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	107,888
<b>No. of Stocks:</b>	291
<b>% Assets in Top 10:</b>	52.22
<b>Avg Market Cap (\$mil):</b>	335,781.83
<b>P/E Ratio (TTM)(Long):</b>	23.71
<b>P/B Ratio (TTM)(Long):</b>	3.93
<b>Turnover Ratio %:</b>	25.00
<b>Portfolio Date:</b>	5/31/2023

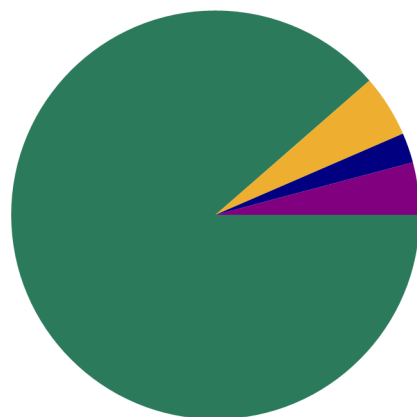
### Style



### Returns

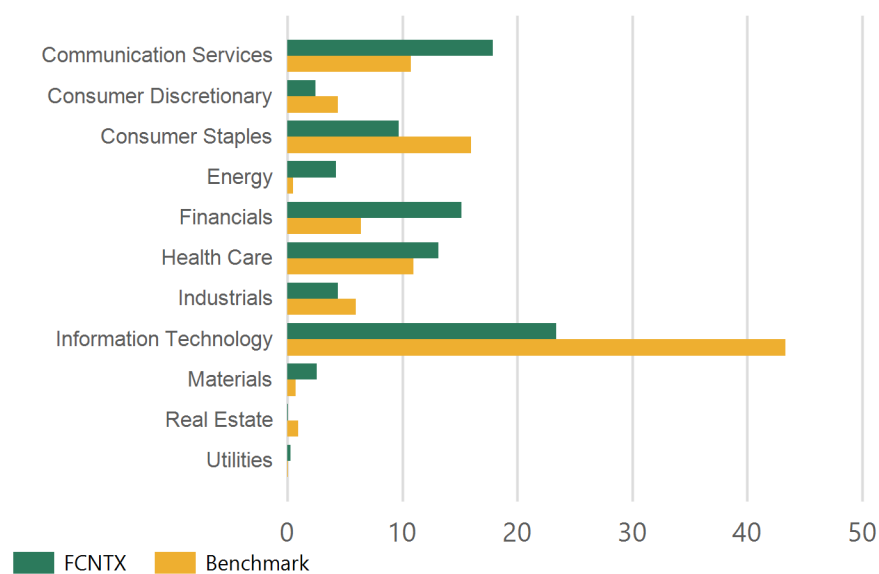


### Asset Allocation



US Equity (88.6 %)	Other (2.4 %)
Non-US Equity (4.9 %)	Cash (4.1 %)
Bond (0.0 %)	

### Sector Allocation



### Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	19.54	21.32
5 Year:	19.73	21.10
10 Year:	15.77	16.77
<b>Information Ratio</b>		
3 Year:	-0.83	-0.68
5 Year:	-1.00	-0.60
10 Year:	-0.62	-0.46
<b>Downside Capture</b>		
3 Year:	91.50	100.03
5 Year:	94.43	99.99
10 Year:	94.12	101.90

# Vanguard Mid Cap Index Admiral

Segal Score

A

Ticker: VIMAX

Category: Mid-Cap Blend

Subcategory: Mid Core

Expense Ratio: 0.05

Benchmark: Russell Mid Cap

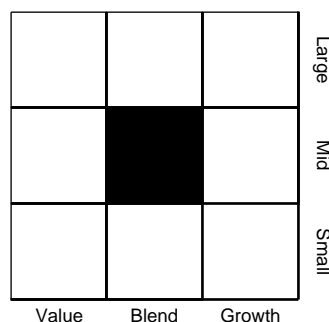
Inception Date: 5/21/1998

S<sup>3</sup> Scores    Organization: A    Fees: A    Style/Portfolio Characteristics: A    Performance: A    Risk: A

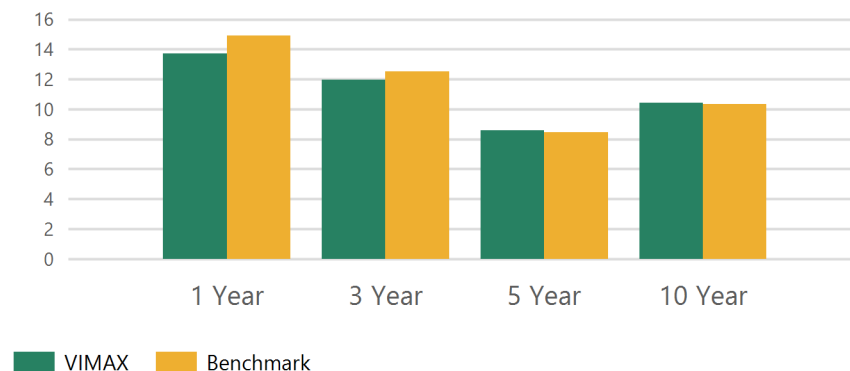
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	147,295
<b>No. of Stocks:</b>	342
<b>% Assets in Top 10:</b>	7.26
<b>Avg Market Cap (\$mil):</b>	24,880.42
<b>P/E Ratio (TTM)(Long):</b>	19.26
<b>P/B Ratio (TTM)(Long):</b>	2.90
<b>Turnover Ratio %:</b>	12.00
<b>Portfolio Date:</b>	6/30/2023

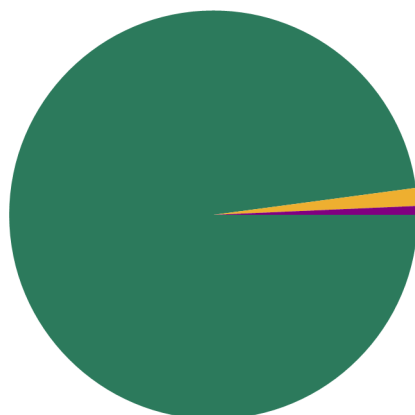
## Style



## Returns

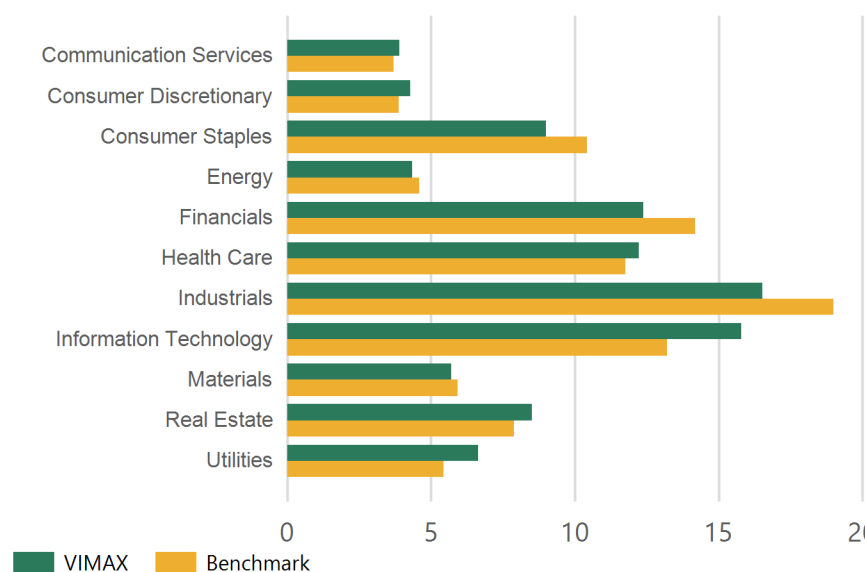


## Asset Allocation



US Equity (97.9 %)	Other (0.0 %)
Non-US Equity (1.4 %)	Cash (0.7 %)
Bond (0.0 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	19.20	19.26
5 Year:	21.15	21.30
10 Year:	16.58	16.83
<b>Information Ratio</b>		
3 Year:	-0.27	0.14
5 Year:	0.08	-0.21
10 Year:	0.07	-0.18
<b>Downside Capture</b>		
3 Year:	99.96	96.20
5 Year:	98.26	99.30
10 Year:	98.35	100.85

# JPMorgan Mid Cap Value R6

Segal Score

A

Ticker: JMVYX

Category: Mid-Cap Value

Subcategory: Mid Core Value

Expense Ratio: 0.65

Benchmark: Russell Mid Cap Value

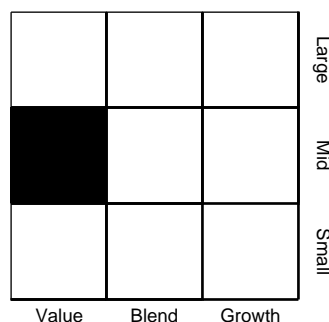
Inception Date: 11/13/1997

S<sup>3</sup> Scores Organization: A Fees: A Style/Portfolio Characteristics: A Performance: B Risk: A

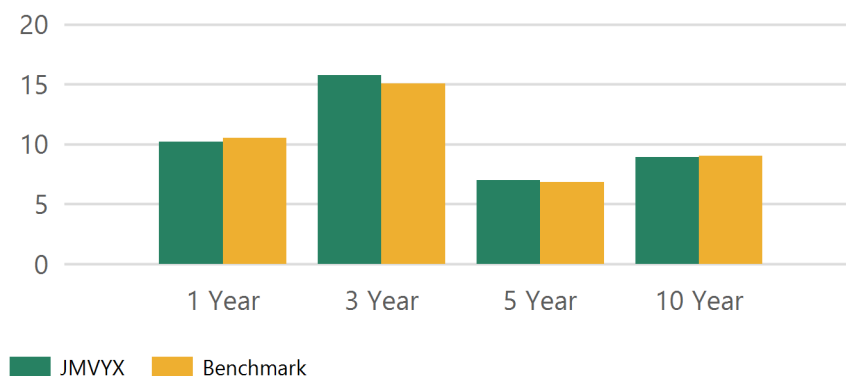
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	13,471
<b>No. of Stocks:</b>	104
<b>% Assets in Top 10:</b>	16.99
<b>Avg Market Cap (\$mil):</b>	14,986.72
<b>P/E Ratio (TTM)(Long):</b>	13.51
<b>P/B Ratio (TTM)(Long):</b>	2.02
<b>Turnover Ratio %:</b>	16.00
<b>Portfolio Date:</b>	5/31/2023

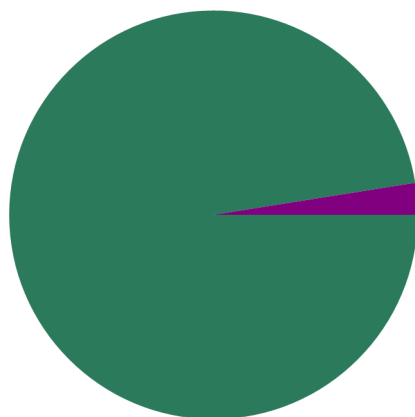
## Style



## Returns

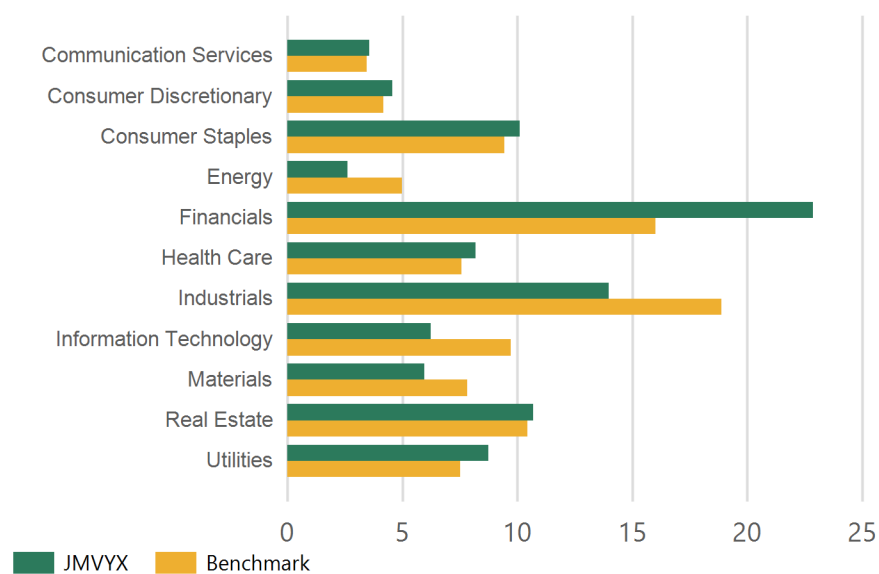


## Asset Allocation



US Equity (97.5 %)	Other (0.0 %)
Non-US Equity (0.0 %)	Cash (2.5 %)
Bond (0.0 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	18.39	19.51
5 Year:	21.36	22.22
10 Year:	16.54	17.55
<b>Information Ratio</b>		
3 Year:	0.23	0.28
5 Year:	0.06	0.00
10 Year:	-0.05	-0.11
<b>Downside Capture</b>		
3 Year:	88.85	92.42
5 Year:	94.69	98.30
10 Year:	92.96	101.15



# Eaton Vance Atlanta Capital SMID-Cap A

Segal Score

**B**

**Ticker:** EAASX

**Category:** Mid-Cap Blend

**Subcategory:** Mid Core

**Expense Ratio:** 1.14

**Benchmark:** Russell Mid Cap

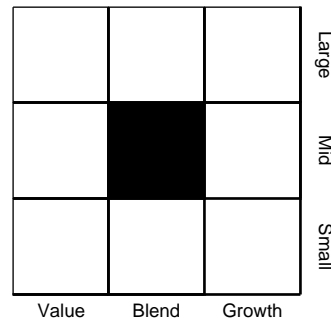
**Inception Date:** 4/30/2002

**S<sup>3</sup> Scores**    Organization: A    Fees: C    Style/Portfolio Characteristics: C    Performance: B    Risk: A

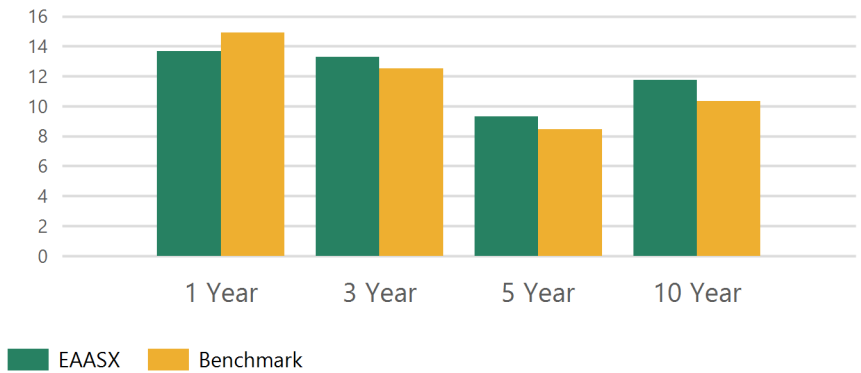
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	11,203
<b>No. of Stocks:</b>	53
<b>% Assets in Top 10:</b>	30.81
<b>Avg Market Cap (\$mil):</b>	9,606.79
<b>P/E Ratio (TTM)(Long):</b>	22.08
<b>P/B Ratio (TTM)(Long):</b>	3.06
<b>Turnover Ratio %:</b>	7.00
<b>Portfolio Date:</b>	5/31/2023

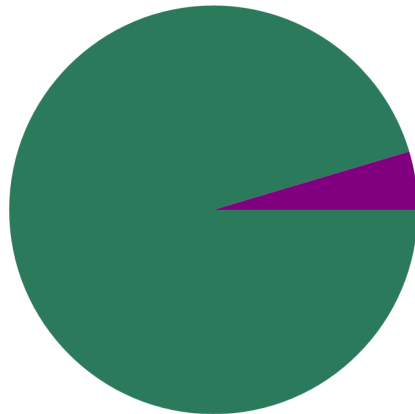
## Style



## Returns

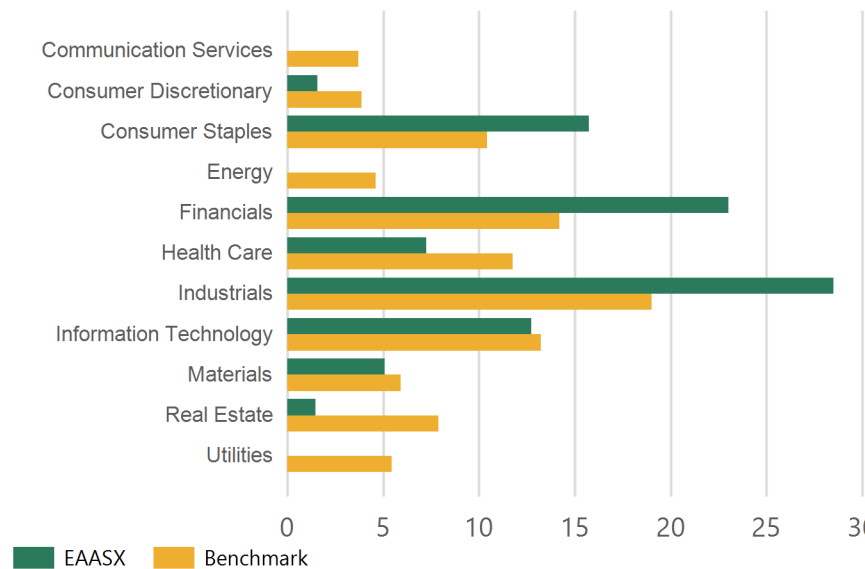


## Asset Allocation



US Equity (95.4 %)	Other (0.0 %)
Non-US Equity (0.0 %)	Cash (4.6 %)
Bond (0.0 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	18.52	19.26
5 Year:	20.73	21.30
10 Year:	16.44	16.83
<b>Information Ratio</b>		
3 Year:	0.13	0.14
5 Year:	0.15	-0.21
10 Year:	0.26	-0.18
<b>Downside Capture</b>		
3 Year:	95.88	96.20
5 Year:	94.94	99.30
10 Year:	95.18	100.85

# Neuberger Berman Genesis R6

Segal Score

A

Ticker: NRGSX

Category: Small Growth

Subcategory: Small Core Growth

Expense Ratio: 0.74

Benchmark: Russell 2000 Growth

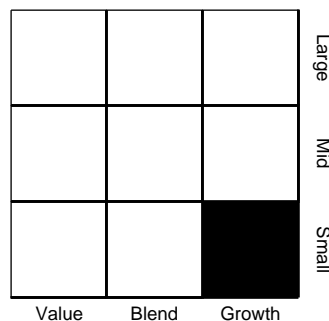
Inception Date: 9/27/1988

S<sup>3</sup> Scores    Organization: A    Fees: A    Style/Portfolio Characteristics: B    Performance: B    Risk: A

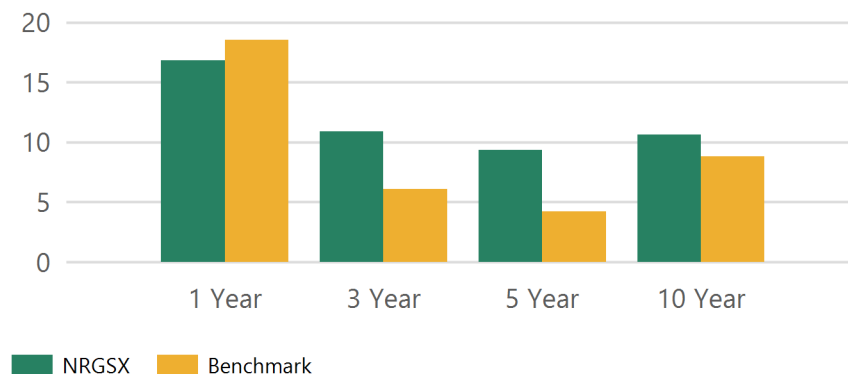
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	10,223
<b>No. of Stocks:</b>	110
<b>% Assets in Top 10:</b>	20.76
<b>Avg Market Cap (\$mil):</b>	5,591.22
<b>P/E Ratio (TTM)(Long):</b>	20.55
<b>P/B Ratio (TTM)(Long):</b>	3.46
<b>Turnover Ratio %:</b>	12.00
<b>Portfolio Date:</b>	6/30/2023

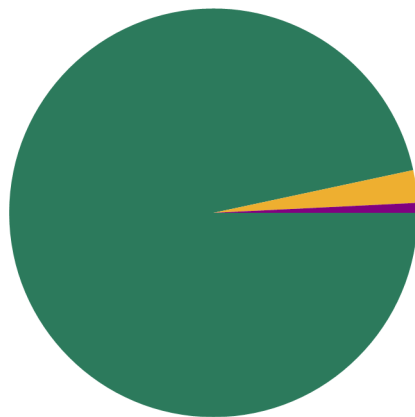
## Style



## Returns

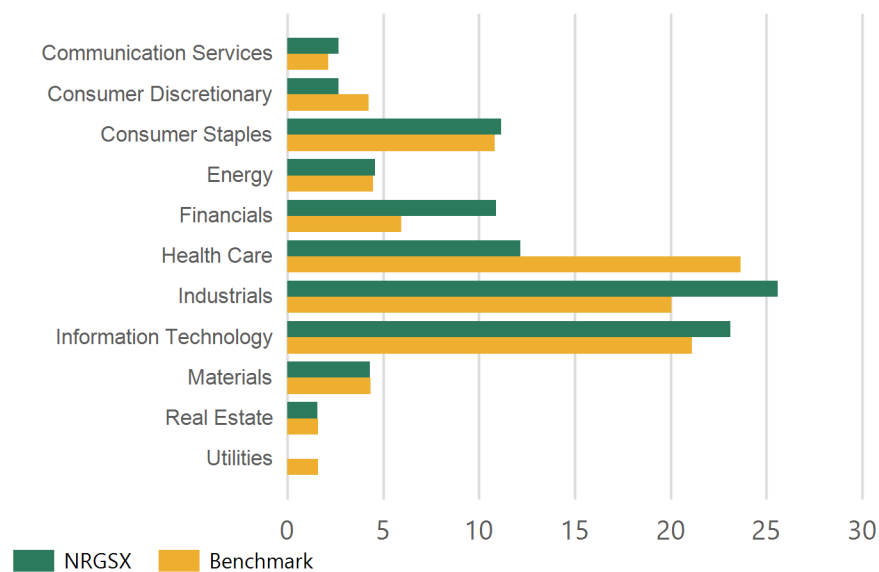


## Asset Allocation



US Equity (96.6 %)	Other (0.0 %)
Non-US Equity (2.6 %)	Cash (0.8 %)
Bond (0.0 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	18.91	21.55
5 Year:	20.55	23.92
10 Year:	16.56	19.51
<b>Information Ratio</b>		
3 Year:	0.47	0.13
5 Year:	0.53	0.25
10 Year:	0.21	0.11
<b>Downside Capture</b>		
3 Year:	71.48	93.99
5 Year:	74.34	94.08
10 Year:	73.36	93.25

# Harbor Small Cap Value Instl

Segal Score

A

Ticker: HASCX

Category: Small Blend

Subcategory: Small Core

Expense Ratio: 0.88

Benchmark: Russell 2000

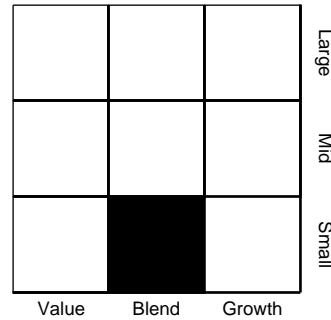
Inception Date: 12/14/2001

S<sup>3</sup> Scores Organization: A Fees: A Style/Portfolio Characteristics: A Performance: A Risk: A

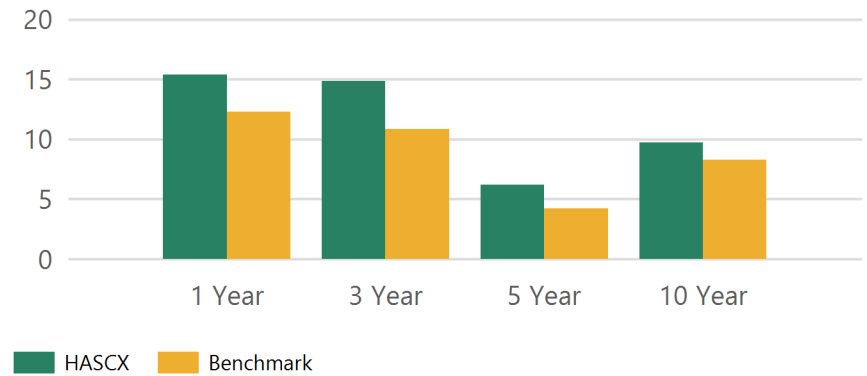
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	2,240
<b>No. of Stocks:</b>	58
<b>% Assets in Top 10:</b>	25.83
<b>Avg Market Cap (\$mil):</b>	3,385.13
<b>P/E Ratio (TTM)(Long):</b>	17.63
<b>P/B Ratio (TTM)(Long):</b>	2.10
<b>Turnover Ratio %:</b>	15.00
<b>Portfolio Date:</b>	3/31/2023

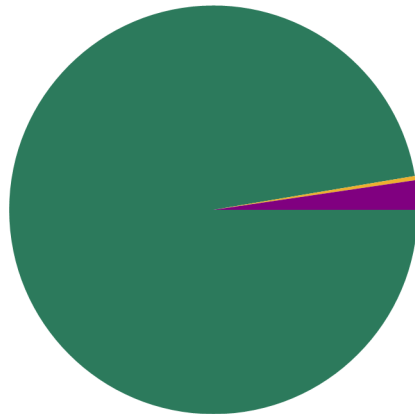
## Style



## Returns

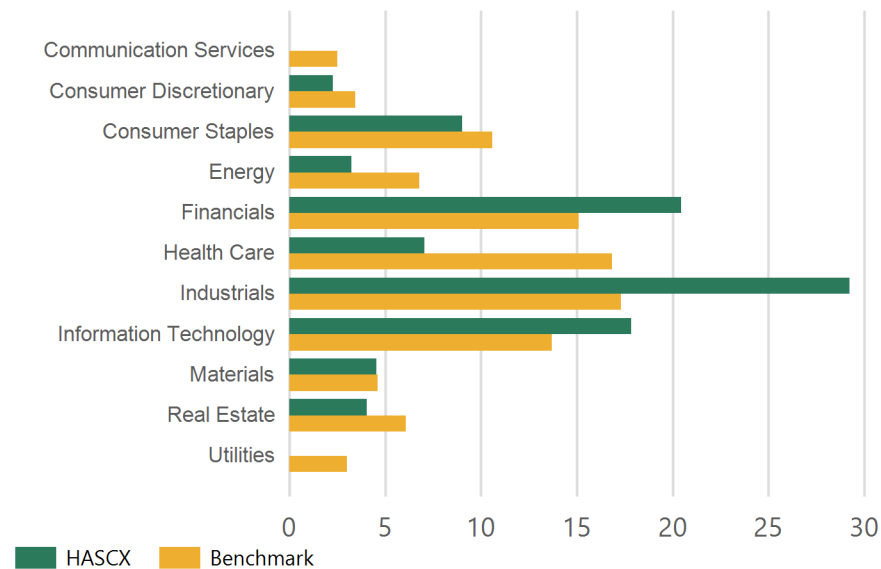


## Asset Allocation



US Equity (97.3 %)	Other (0.0 %)
Non-US Equity (0.3 %)	Cash (2.3 %)
Bond (0.0 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	21.30	20.83
5 Year:	24.11	23.63
10 Year:	19.29	19.20
<b>Information Ratio</b>		
3 Year:	0.52	0.46
5 Year:	0.30	0.20
10 Year:	0.26	0.04
<b>Downside Capture</b>		
3 Year:	87.81	91.26
5 Year:	96.41	96.64
10 Year:	91.79	95.09

# Brown Capital Mgmt Small Co Instl

Segal Score

A

Ticker: BCSSX

Category: Small Growth

Subcategory: Small High Growth

Expense Ratio: 1.05

Benchmark: Russell 2000 Growth

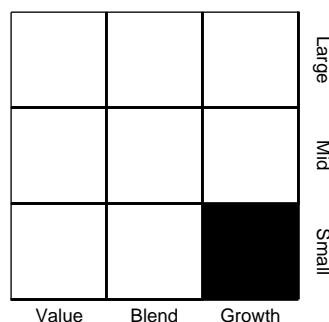
Inception Date: 7/23/1992

S<sup>3</sup> Scores Organization: A Fees: B Style/Portfolio Characteristics: A Performance: A Risk: C

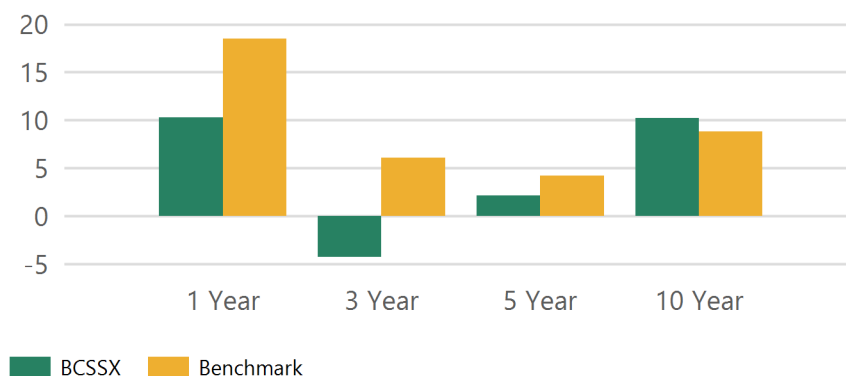
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	3,674
<b>No. of Stocks:</b>	40
<b>% Assets in Top 10:</b>	47.12
<b>Avg Market Cap (\$mil):</b>	5,436.29
<b>P/E Ratio (TTM)(Long):</b>	44.76
<b>P/B Ratio (TTM)(Long):</b>	4.96
<b>Turnover Ratio %:</b>	22.00
<b>Portfolio Date:</b>	3/31/2023

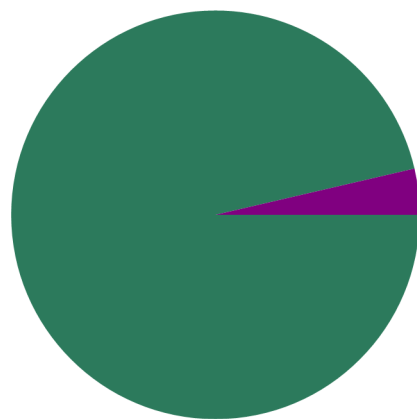
## Style



## Returns

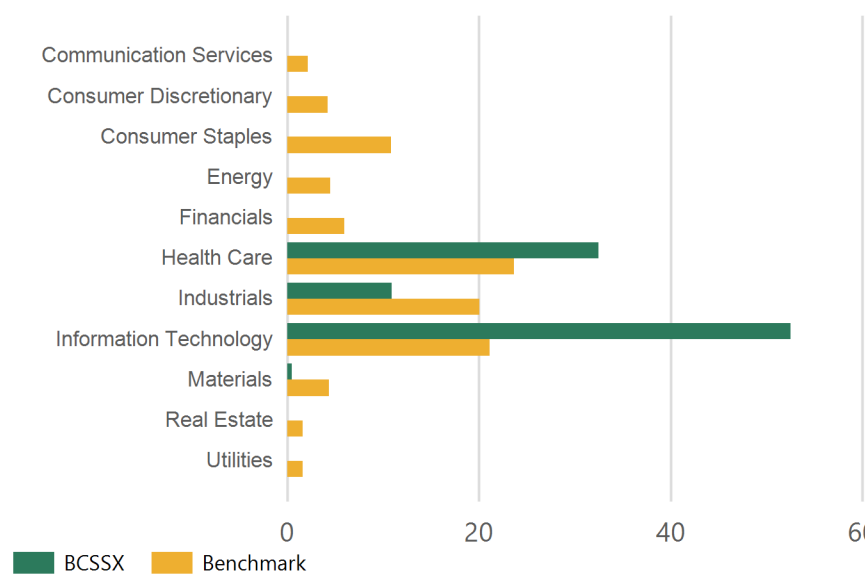


## Asset Allocation



US Equity (96.4 %)	Other (0.0 %)
Non-US Equity (0.0 %)	Cash (3.6 %)
Bond (0.0 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	21.67	21.55
5 Year:	24.78	23.92
10 Year:	20.16	19.51
<b>Information Ratio</b>		
3 Year:	-1.05	0.13
5 Year:	-0.18	0.25
10 Year:	0.14	0.11
<b>Downside Capture</b>		
3 Year:	111.84	93.99
5 Year:	98.77	94.08
10 Year:	88.27	93.25

# American Funds Europacific Growth R6

Segal Score

A

**Ticker:** RERGX

**Category:** Foreign Large Growth

**Subcategory:** Foreign Large Growth

**Expense Ratio:** 0.47

**Benchmark:** MSCI EAFE Growth

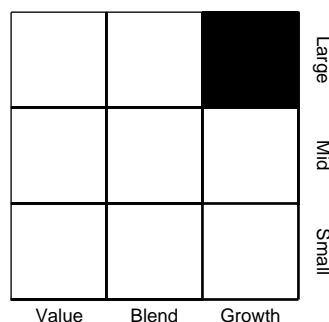
**Inception Date:** 4/16/1984

**S<sup>3</sup> Scores**    Organization: A    Fees: A    Style/Portfolio Characteristics: A    Performance: B    Risk: A

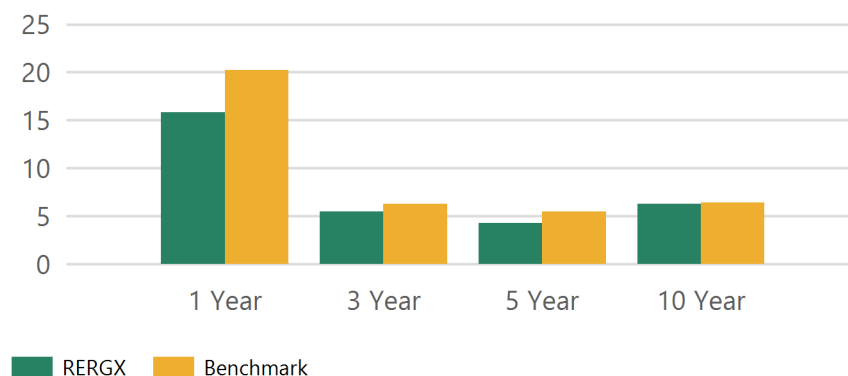
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	138,674
<b>No. of Stocks:</b>	356
<b>% Assets in Top 10:</b>	25.07
<b>Avg Market Cap (\$mil):</b>	59,237.72
<b>P/E Ratio (TTM)(Long):</b>	17.10
<b>P/B Ratio (TTM)(Long):</b>	3.01
<b>Turnover Ratio %:</b>	34.00
<b>Portfolio Date:</b>	3/31/2023

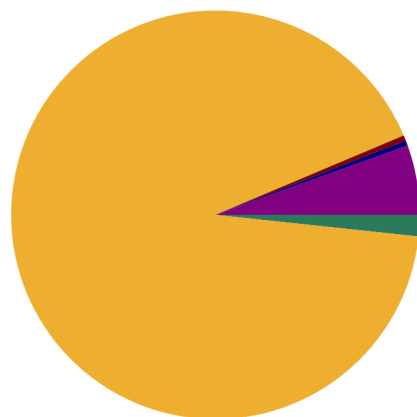
## Style



## Returns

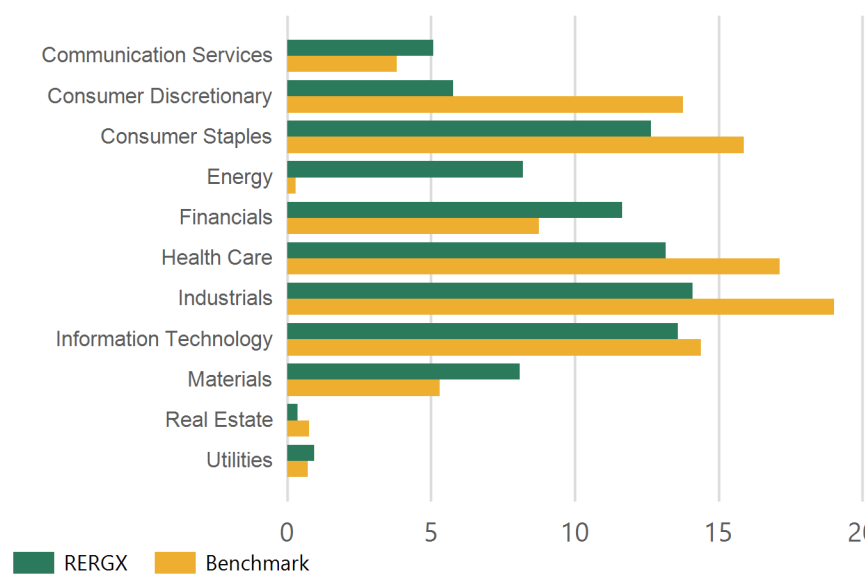


## Asset Allocation



US Equity (1.7 %)	Other (0.4 %)
Non-US Equity (92.0 %)	Cash (5.5 %)
Bond (0.4 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
<b>3 Year:</b>	19.05	19.45
<b>5 Year:</b>	19.16	19.16
<b>10 Year:</b>	15.49	15.58
<b>Information Ratio</b>		
<b>3 Year:</b>	-0.13	-0.28
<b>5 Year:</b>	-0.18	-0.20
<b>10 Year:</b>	-0.03	-0.10
<b>Downside Capture</b>		
<b>3 Year:</b>	93.42	101.77
<b>5 Year:</b>	106.86	106.15
<b>10 Year:</b>	98.79	100.76

# MFS International Intrinsic Value R3

Segal Score

A

**Ticker:** MINGX

**Category:** Foreign Large Growth

**Subcategory:** Foreign Large Growth

**Expense Ratio:** 0.97

**Benchmark:** MSCI EAFE Growth

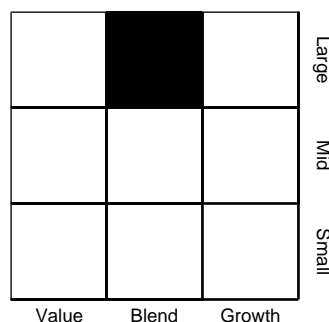
**Inception Date:** 10/24/1995

**S<sup>3</sup> Scores**    Organization: A    Fees: B    Style/Portfolio Characteristics: C    Performance: A    Risk: A

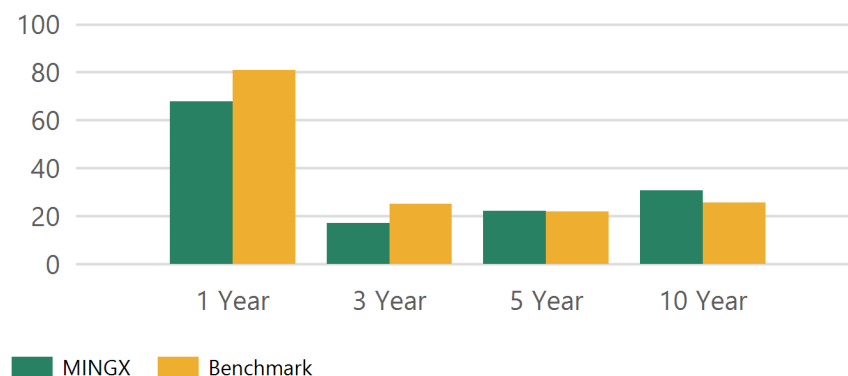
## Portfolio Characteristics

## Style

<b>Fund AUM (\$mil):</b>	21,843
<b>No. of Stocks:</b>	91
<b>% Assets in Top 10:</b>	27.29
<b>Avg Market Cap (\$mil):</b>	34,033.54
<b>P/E Ratio (TTM)(Long):</b>	16.89
<b>P/B Ratio (TTM)(Long):</b>	2.13
<b>Turnover Ratio %:</b>	10.00
<b>Portfolio Date:</b>	5/31/2023



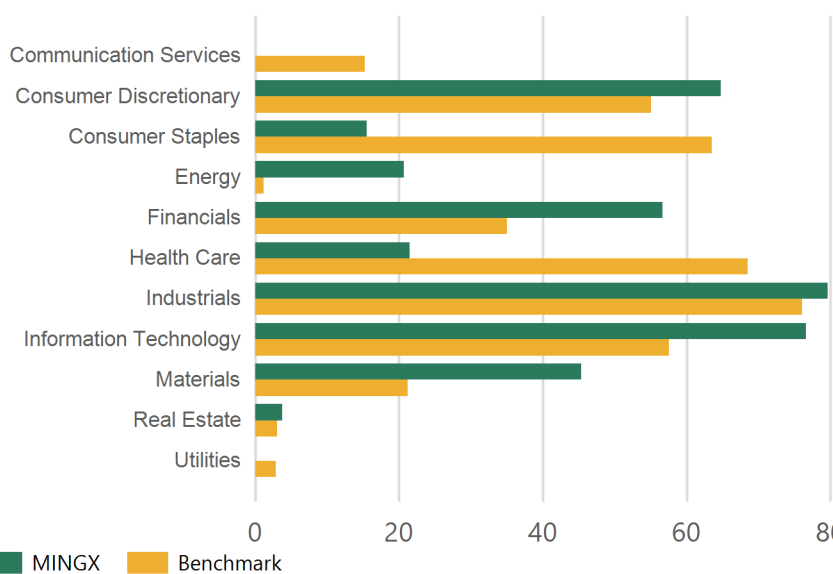
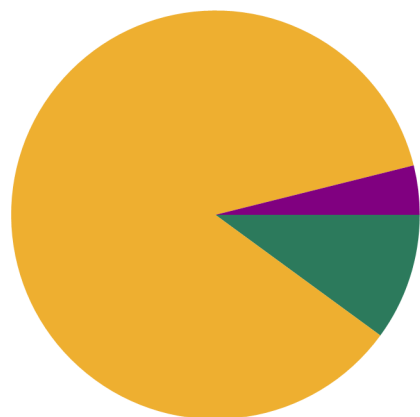
## Returns



## Asset Allocation

## Sector Allocation

## Risk Metrics



	Actual	Median
<b>Standard Deviation</b>		
3 Year:	17.93	19.45
5 Year:	16.40	19.16
10 Year:	13.40	15.58
<b>Information Ratio</b>		
3 Year:	-0.52	-0.28
5 Year:	0.02	-0.20
10 Year:	0.32	-0.10
<b>Downside Capture</b>		
3 Year:	98.31	101.77
5 Year:	92.42	106.15
10 Year:	82.82	100.76

█ US Equity (10.1 %)    █ Other (0.0 %)  
█ Non-US Equity (86.1 %)    █ Cash (3.9 %)  
█ Bond (0.0 %)

# American Funds Global Insight R-6

Segal Score

A

**Ticker:** RGLGX

**Category:** Global Large-Stock Blend

**Subcategory:** World Large Core

**Expense Ratio:** 0.46

**Benchmark:** MSCI ACWI All Cap

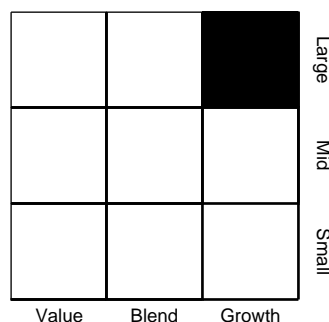
**Inception Date:** 4/1/2011

**S<sup>3</sup> Scores**    Organization: A    Fees: A    Style/Portfolio Characteristics: A    Performance: A    Risk: A

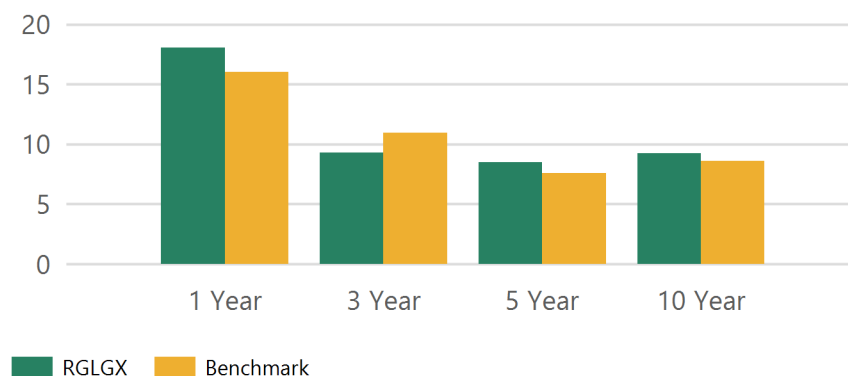
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	9,817
<b>No. of Stocks:</b>	186
<b>% Assets in Top 10:</b>	19.10
<b>Avg Market Cap (\$mil):</b>	94,743.88
<b>P/E Ratio (TTM)(Long):</b>	19.72
<b>P/B Ratio (TTM)(Long):</b>	3.56
<b>Turnover Ratio %:</b>	20.00
<b>Portfolio Date:</b>	3/31/2023

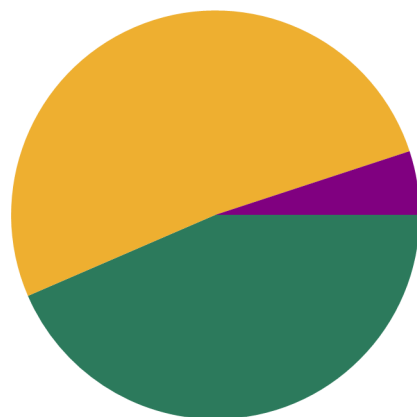
## Style



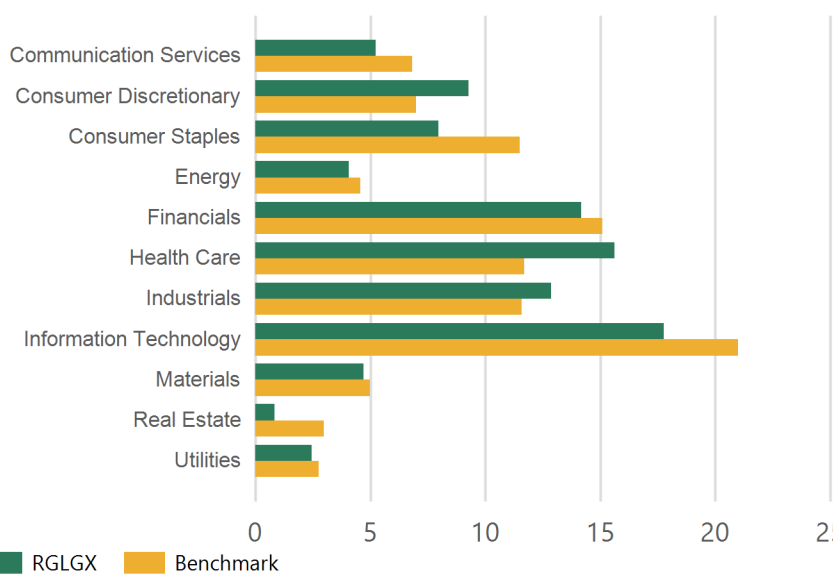
## Returns



## Asset Allocation



## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
<b>3 Year:</b>	16.76	17.43
<b>5 Year:</b>	16.69	18.10
<b>10 Year:</b>	13.57	14.55
<b>Information Ratio</b>		
<b>3 Year:</b>	-0.40	-0.17
<b>5 Year:</b>	0.21	-0.11
<b>10 Year:</b>	0.18	-0.12
<b>Downside Capture</b>		
<b>3 Year:</b>	100.72	101.87
<b>5 Year:</b>	91.34	99.17
<b>10 Year:</b>	90.99	98.25

# Vanguard Real Estate Index Admiral

Segal Score

**B**

**Ticker:** VGSLX

**Category:** Real Estate

**Subcategory:** Domestic Real Estate

**Expense Ratio:** 0.12

**Benchmark:** MSCI US REIT

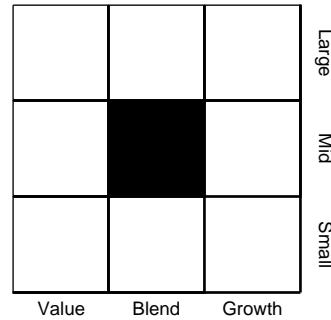
**Inception Date:** 5/13/1996

**S<sup>3</sup> Scores**    Organization: A    Fees: A    Style/Portfolio Characteristics: B    Performance: B    Risk: C

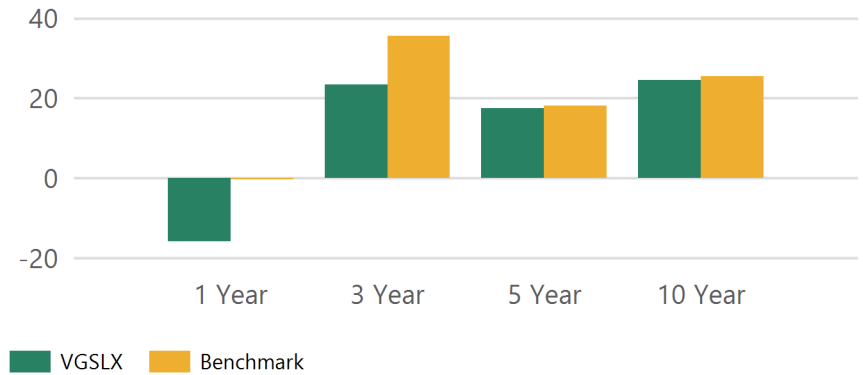
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	62,304
<b>No. of Stocks:</b>	165
<b>% Assets in Top 10:</b>	46.90
<b>Avg Market Cap (\$mil):</b>	21,514.51
<b>P/E Ratio (TTM)(Long):</b>	28.85
<b>P/B Ratio (TTM)(Long):</b>	2.25
<b>Turnover Ratio %:</b>	7.00
<b>Portfolio Date:</b>	6/30/2023

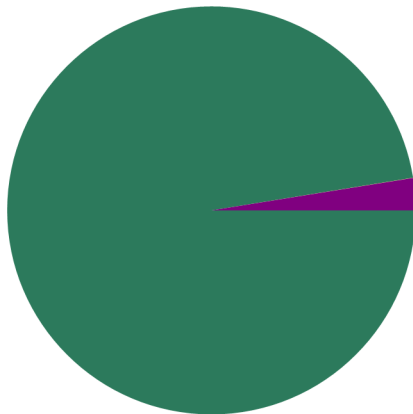
## Style



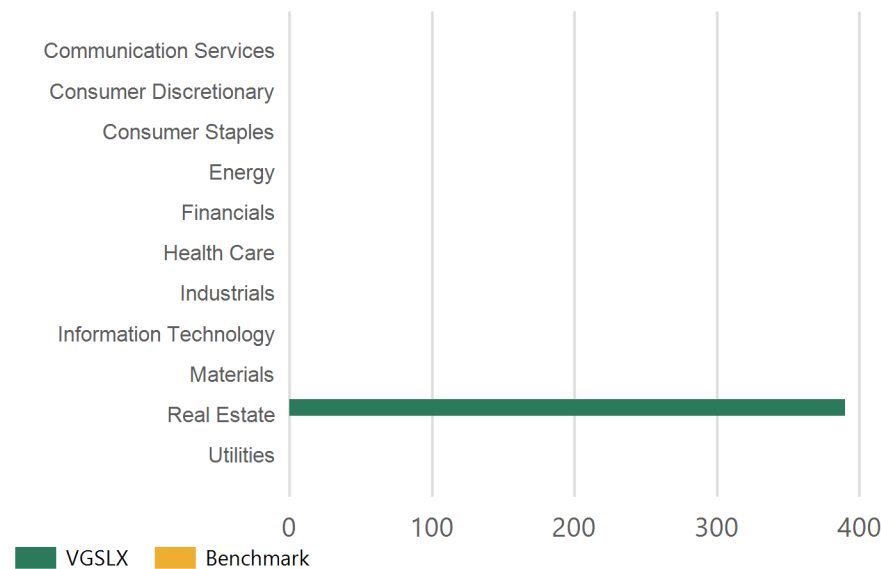
## Returns



## Asset Allocation



## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
<b>3 Year:</b>	20.22	20.13
<b>5 Year:</b>	20.12	19.74
<b>10 Year:</b>	17.21	16.82
<b>Information Ratio</b>		
<b>3 Year:</b>	-1.43	-0.57
<b>5 Year:</b>	-0.06	-0.02
<b>10 Year:</b>	-0.13	-0.08
<b>Downside Capture</b>		
<b>3 Year:</b>	105.33	102.35
<b>5 Year:</b>	98.56	96.72
<b>10 Year:</b>	99.18	96.55



# Vanguard Target Retirement 2020 Fund

Segal Score

A

**Ticker:** VTWNX

**Category:** Target-Date 2020

**Subcategory:** Target Date 2016-2020 Moderate

**Expense Ratio:** 0.08

**Benchmark:** S&P Target Date 2020

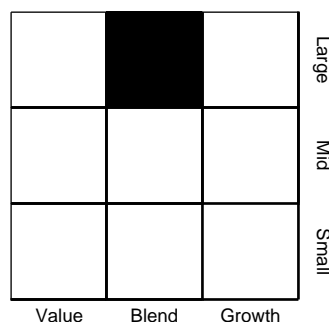
**Inception Date:** 6/7/2006

**S<sup>3</sup> Scores**    Organization: B    Fees: A    Style/Portfolio Characteristics: A    Performance: A    Risk: A

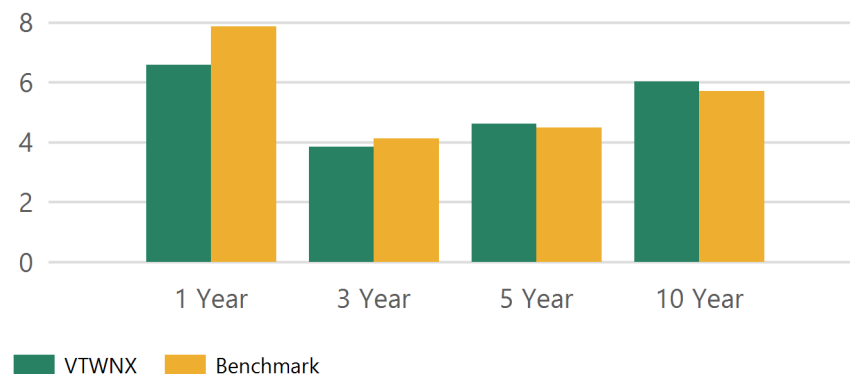
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	40,067
<b>No. of Stocks:</b>	0
<b>% Assets in Top 10:</b>	99.11
<b>Avg Market Cap (\$mil):</b>	72,001.95
<b>P/E Ratio (TTM)(Long):</b>	17.11
<b>P/B Ratio (TTM)(Long):</b>	2.40
<b>Turnover Ratio %:</b>	14.00
<b>Portfolio Date:</b>	6/30/2023

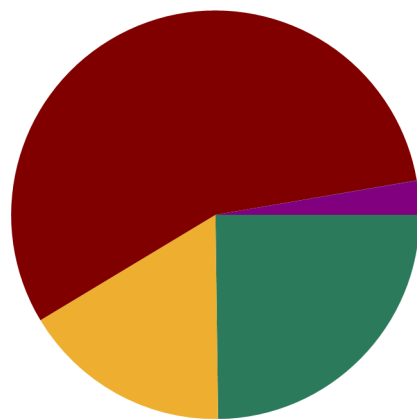
## Style



## Returns

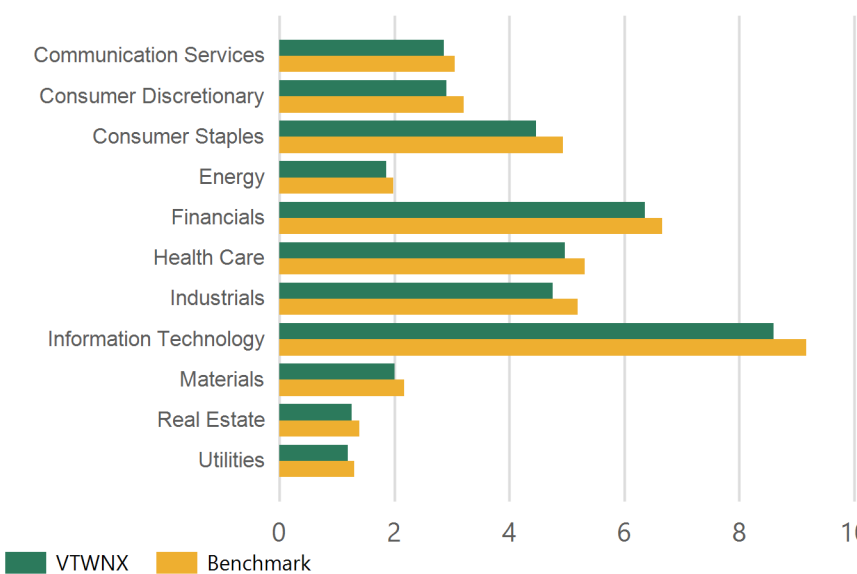


## Asset Allocation



US Equity (24.8 %)	Other (0.0 %)
Non-US Equity (16.6 %)	Cash (2.7 %)
Bond (55.9 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	10.07	10.26
5 Year:	10.17	10.17
10 Year:	8.29	8.32
<b>Information Ratio</b>		
3 Year:	-0.29	-0.16
5 Year:	0.15	-0.08
10 Year:	0.40	-0.08
<b>Downside Capture</b>		
3 Year:	104.66	106.74
5 Year:	103.10	105.72
10 Year:	102.26	104.23

# Vanguard Target Retirement 2025 Fund

Segal Score

A

Ticker: VTTVX

Category: Target-Date 2025

Subcategory: Target Date 2021-2025 Moderate

Expense Ratio: 0.08

Benchmark: S&P Target Date 2025

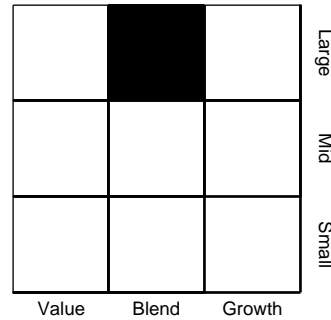
Inception Date: 10/27/2003

S<sup>3</sup> Scores Organization: B Fees: A Style/Portfolio Characteristics: A Performance: A Risk: B

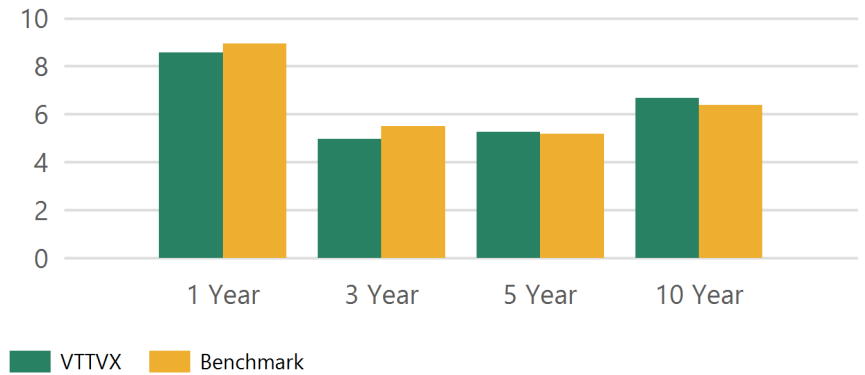
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	75,531
<b>No. of Stocks:</b>	0
<b>% Assets in Top 10:</b>	98.81
<b>Avg Market Cap (\$mil):</b>	72,822.67
<b>P/E Ratio (TTM)(Long):</b>	17.17
<b>P/B Ratio (TTM)(Long):</b>	2.41
<b>Turnover Ratio %:</b>	14.00
<b>Portfolio Date:</b>	6/30/2023

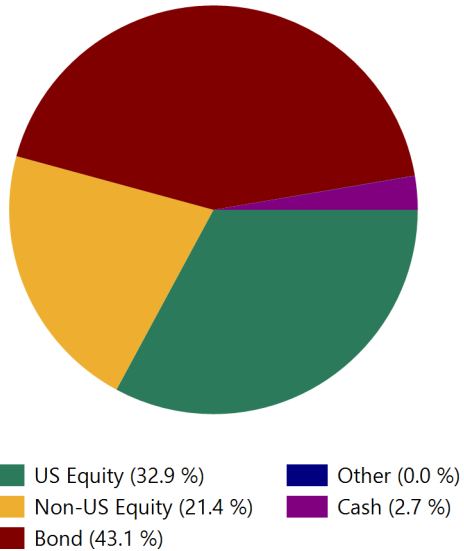
## Style



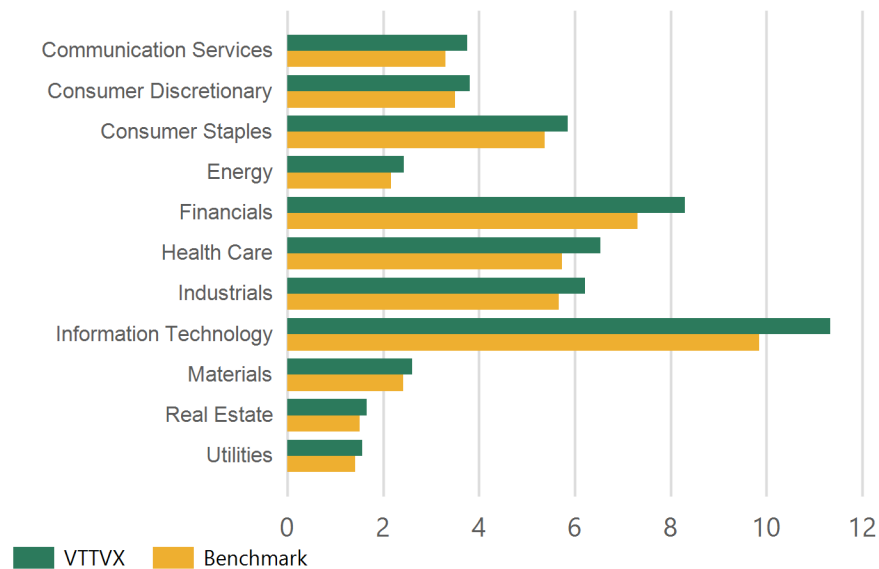
## Returns



## Asset Allocation



## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	11.69	11.21
5 Year:	11.86	11.60
10 Year:	9.58	9.42
<b>Information Ratio</b>		
3 Year:	-0.45	-0.58
5 Year:	0.08	-0.29
10 Year:	0.31	-0.31
<b>Downside Capture</b>		
3 Year:	111.68	107.88
5 Year:	106.42	103.93
10 Year:	104.79	103.73

# Vanguard Target Retirement 2030 Fund

Segal Score

A

**Ticker:** VTHR

**Category:** Target-Date 2030

**Subcategory:** Target Date 2026-2030 Moderate

**Expense Ratio:** 0.08

**Benchmark:** S&P Target Date 2030

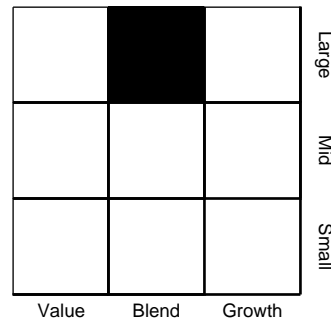
**Inception Date:** 6/7/2006

**S<sup>3</sup> Scores**    Organization: B    Fees: A    Style/Portfolio Characteristics: A    Performance: A    Risk: A

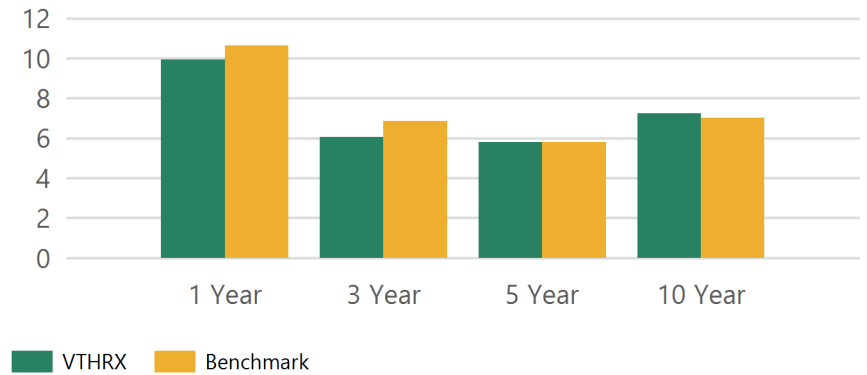
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	84,089
<b>No. of Stocks:</b>	0
<b>% Assets in Top 10:</b>	98.67
<b>Avg Market Cap (\$mil):</b>	73,148.27
<b>P/E Ratio (TTM)(Long):</b>	17.19
<b>P/B Ratio (TTM)(Long):</b>	2.42
<b>Turnover Ratio %:</b>	11.00
<b>Portfolio Date:</b>	6/30/2023

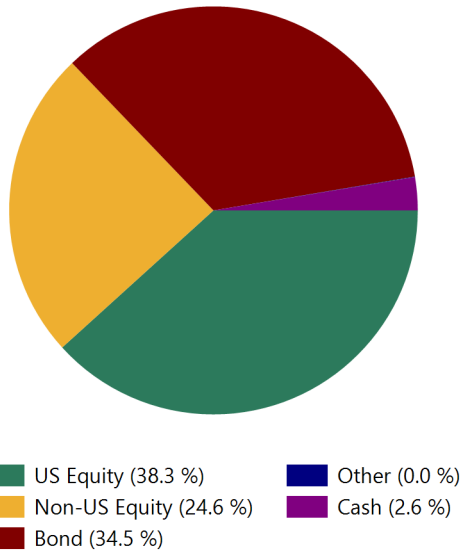
## Style



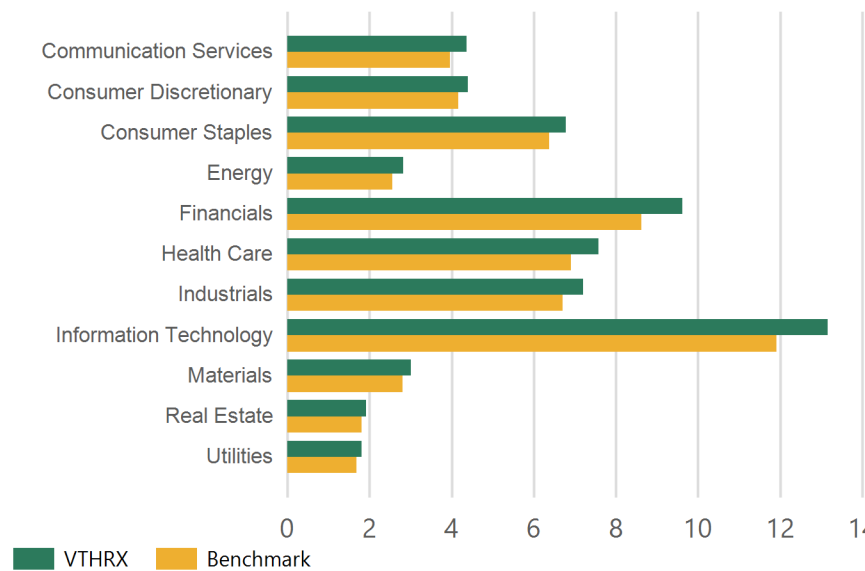
## Returns



## Asset Allocation



## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	12.80	12.80
5 Year:	13.10	13.08
10 Year:	10.58	10.72
<b>Information Ratio</b>		
3 Year:	-0.72	-0.61
5 Year:	-0.02	-0.25
10 Year:	0.22	-0.26
<b>Downside Capture</b>		
3 Year:	108.10	107.77
5 Year:	102.23	102.79
10 Year:	101.99	104.62

# Vanguard Target Retirement 2035 Fund

Segal Score

A

Ticker: VTTHX

Category: Target-Date 2035

Subcategory: Target Date 2031-2035 Moderate

Expense Ratio: 0.08

Benchmark: S&P Target Date 2035

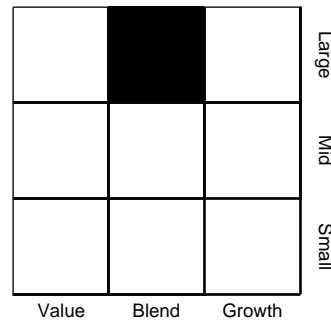
Inception Date: 10/27/2003

S<sup>3</sup> Scores Organization: B Fees: A Style/Portfolio Characteristics: A Performance: A Risk: A

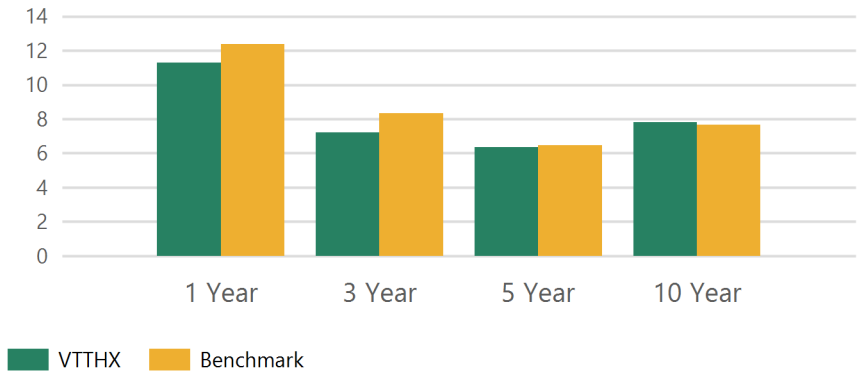
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	84,529
<b>No. of Stocks:</b>	0
<b>% Assets in Top 10:</b>	98.73
<b>Avg Market Cap (\$mil):</b>	73,097.85
<b>P/E Ratio (TTM)(Long):</b>	17.19
<b>P/B Ratio (TTM)(Long):</b>	2.41
<b>Turnover Ratio %:</b>	9.00
<b>Portfolio Date:</b>	6/30/2023

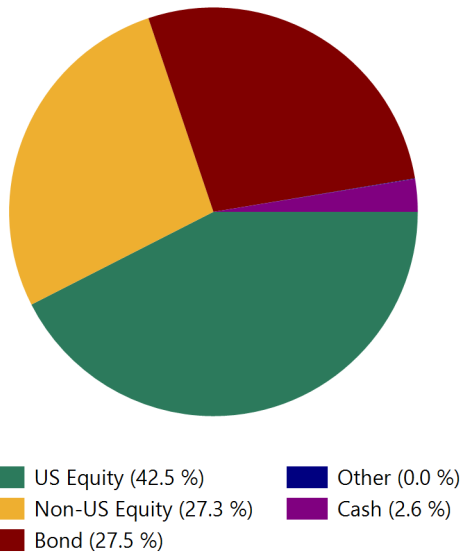
## Style



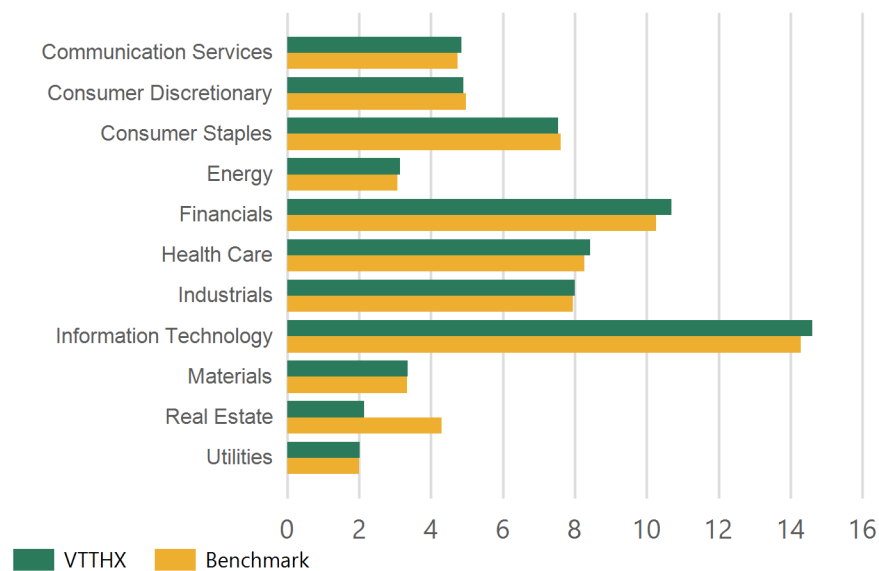
## Returns



## Asset Allocation



## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	13.78	14.17
5 Year:	14.26	14.63
10 Year:	11.56	12.03
<b>Information Ratio</b>		
3 Year:	-0.99	-0.54
5 Year:	-0.11	-0.23
10 Year:	0.13	-0.27
<b>Downside Capture</b>		
3 Year:	102.35	105.64
5 Year:	97.93	101.30
10 Year:	99.60	103.83

# Vanguard Target Retirement 2040 Fund

Segal Score

A

Ticker: VFORX

Category: Target-Date 2040

Subcategory: Target Date 2036-2040 Moderate

Expense Ratio: 0.08

Benchmark: S&P Target Date 2040

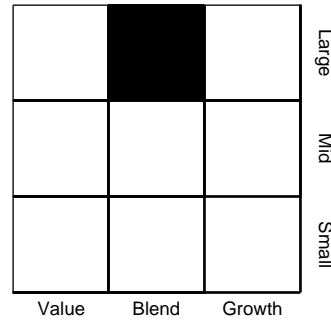
Inception Date: 6/7/2006

S<sup>3</sup> Scores Organization: B Fees: A Style/Portfolio Characteristics: A Performance: A Risk: A

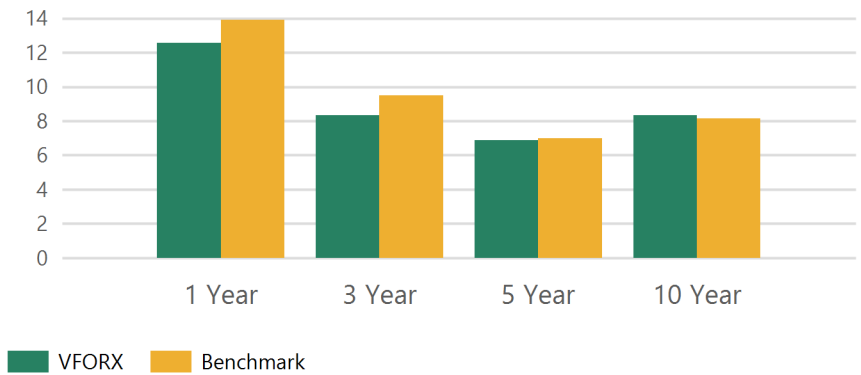
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	74,198
<b>No. of Stocks:</b>	0
<b>% Assets in Top 10:</b>	98.69
<b>Avg Market Cap (\$mil):</b>	73,679.28
<b>P/E Ratio (TTM)(Long):</b>	17.23
<b>P/B Ratio (TTM)(Long):</b>	2.43
<b>Turnover Ratio %:</b>	7.00
<b>Portfolio Date:</b>	6/30/2023

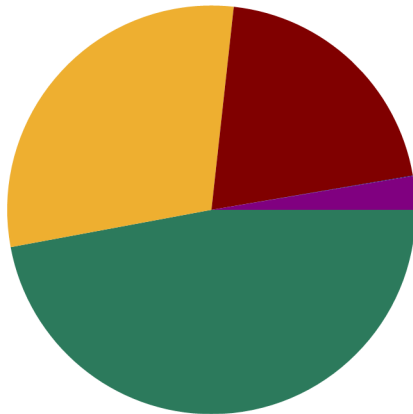
## Style



## Returns

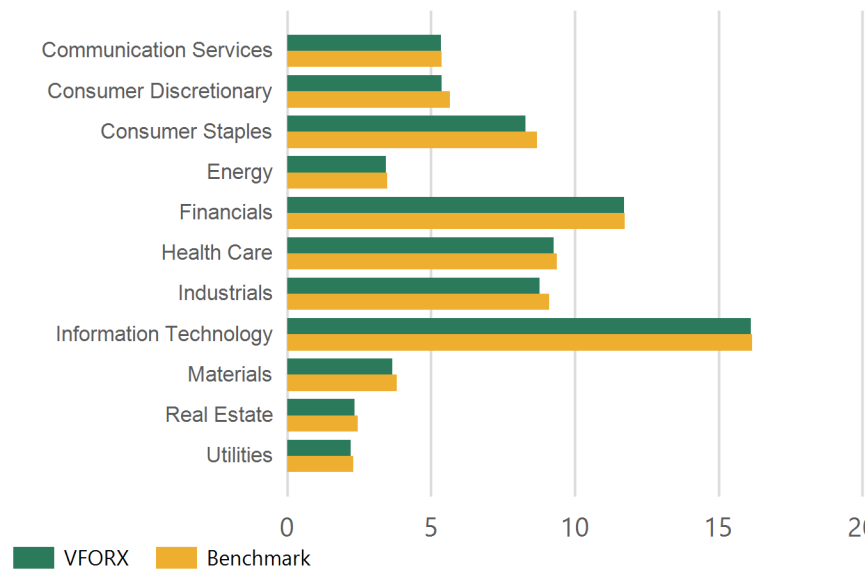


## Asset Allocation



US Equity (47.1 %)	Other (0.0 %)
Non-US Equity (29.7 %)	Cash (2.6 %)
Bond (20.6 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	14.76	15.35
5 Year:	15.43	16.04
10 Year:	12.51	12.89
<b>Information Ratio</b>		
3 Year:	-0.91	-0.48
5 Year:	-0.10	-0.18
10 Year:	0.15	-0.16
<b>Downside Capture</b>		
3 Year:	100.96	105.80
5 Year:	98.36	102.47
10 Year:	100.80	104.27

# Vanguard Target Retirement 2045 Fund

Segal Score

A

**Ticker:** VTIVX

**Category:** Target-Date 2045

**Subcategory:** Target Date 2041-2045 Moderate

**Expense Ratio:** 0.08

**Benchmark:** S&P Target Date 2045

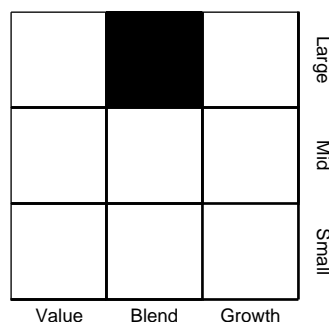
**Inception Date:** 10/27/2003

**S<sup>3</sup> Scores**    Organization: B    Fees: A    Style/Portfolio Characteristics: A    Performance: A    Risk: A

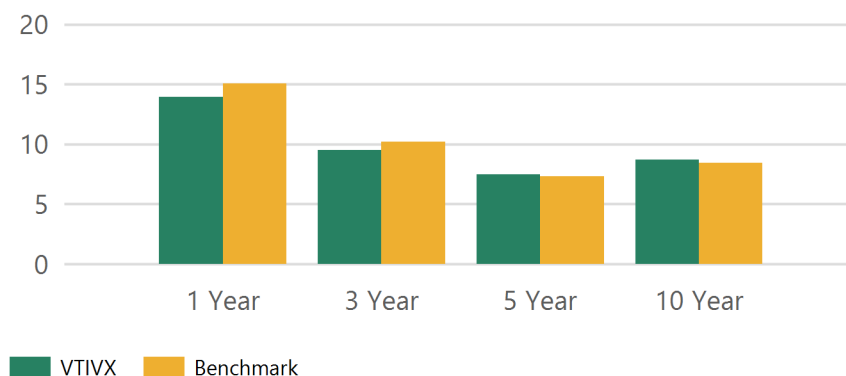
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	70,405
<b>No. of Stocks:</b>	0
<b>% Assets in Top 10:</b>	98.71
<b>Avg Market Cap (\$mil):</b>	73,705.99
<b>P/E Ratio (TTM)(Long):</b>	17.23
<b>P/B Ratio (TTM)(Long):</b>	2.43
<b>Turnover Ratio %:</b>	5.00
<b>Portfolio Date:</b>	6/30/2023

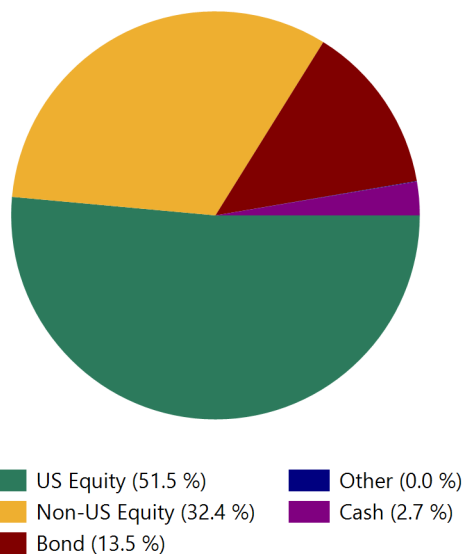
## Style



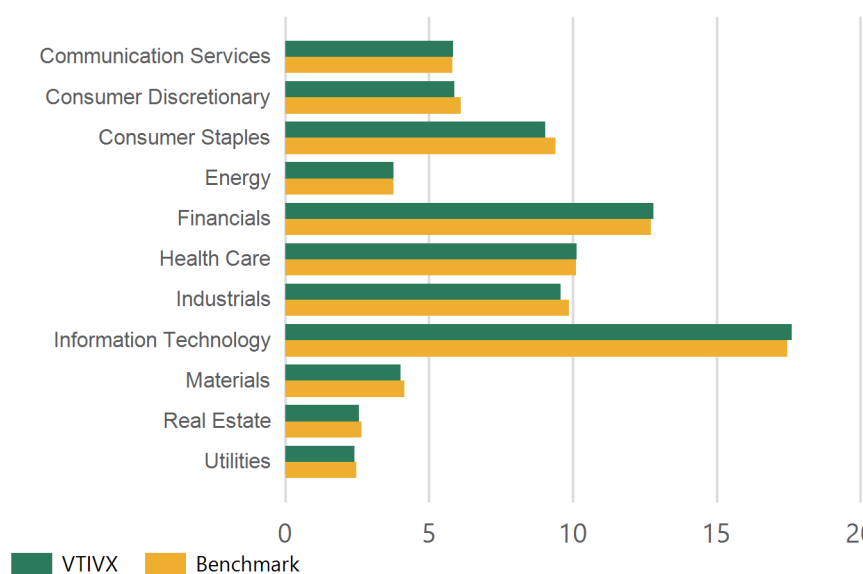
## Returns



## Asset Allocation



## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	15.79	16.16
5 Year:	16.55	16.86
10 Year:	13.24	13.55
<b>Information Ratio</b>		
3 Year:	-0.53	-0.41
5 Year:	0.10	-0.15
10 Year:	0.20	-0.18
<b>Downside Capture</b>		
3 Year:	102.65	105.60
5 Year:	101.05	103.11
10 Year:	101.74	103.97

# Vanguard Target Retirement 2050 Fund

Segal Score

A

**Ticker:** VFIFX

**Category:** Target-Date 2050

**Subcategory:** Target Date 2050+ Moderate

**Expense Ratio:** 0.08

**Benchmark:** S&P Target Date 2050

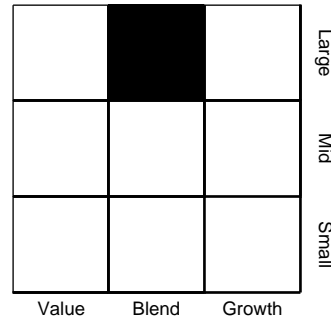
**Inception Date:** 6/7/2006

**S<sup>3</sup> Scores**    Organization: B    Fees: A    Style/Portfolio Characteristics: A    Performance: A    Risk: A

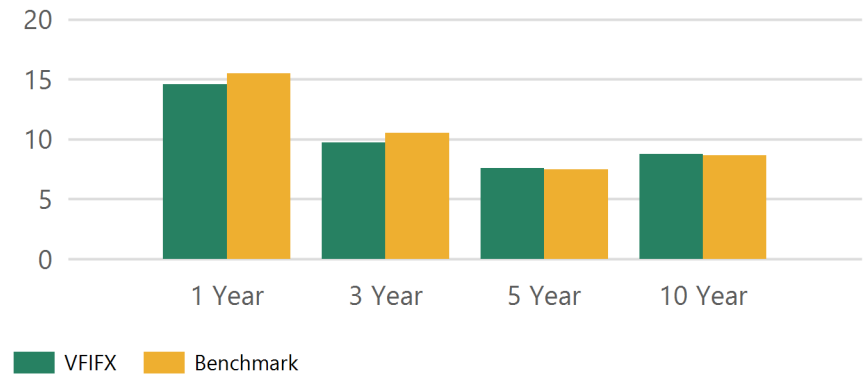
## Portfolio Characteristics

## Style

**Fund AUM (\$mil):** 57,753  
**No. of Stocks:** 0  
**% Assets in Top 10:** 98.87  
**Avg Market Cap (\$mil):** 73,285.43  
**P/E Ratio (TTM)(Long):** 17.20  
**P/B Ratio (TTM)(Long):** 2.42  
**Turnover Ratio %:** 4.00  
**Portfolio Date:** 6/30/2023



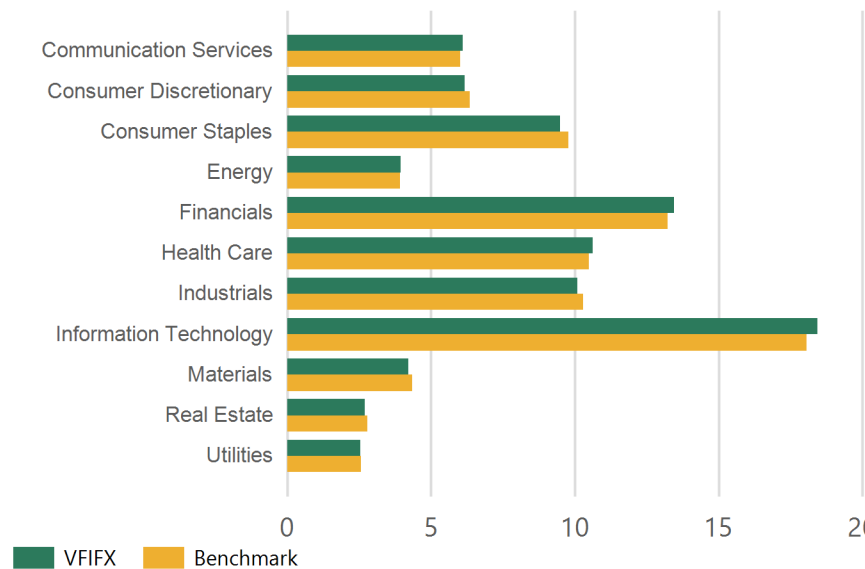
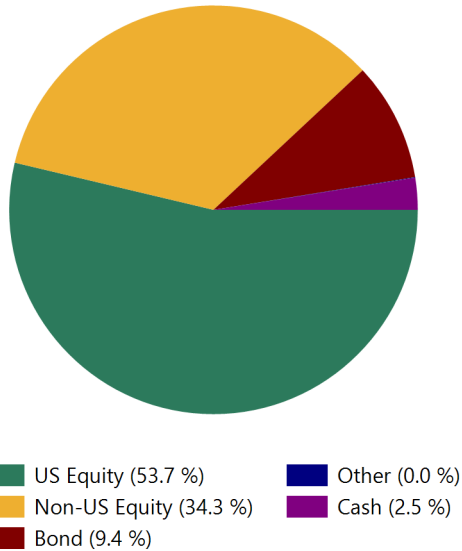
## Returns



## Asset Allocation

## Sector Allocation

## Risk Metrics



	Actual	Median
<b>Standard Deviation</b>		
3 Year:	16.06	16.41
5 Year:	16.72	17.11
10 Year:	13.33	13.65
<b>Information Ratio</b>		
3 Year:	-0.63	-0.48
5 Year:	0.09	-0.19
10 Year:	0.08	-0.25
<b>Downside Capture</b>		
3 Year:	102.56	105.13
5 Year:	99.90	101.96
10 Year:	99.78	101.83

# Vanguard Target Retirement 2055 Fund

Segal Score

A

Ticker: VFFVX

Category: Target-Date 2055

Subcategory: Target Date 2050+ Moderate

Expense Ratio: 0.08

Benchmark: S&P Target Date 2055

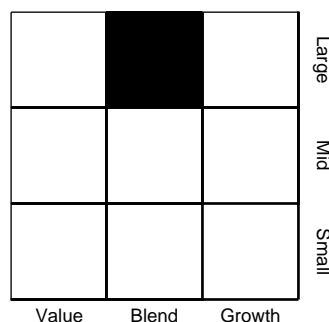
Inception Date: 8/18/2010

S<sup>3</sup> Scores Organization: B Fees: A Style/Portfolio Characteristics: A Performance: A Risk: A

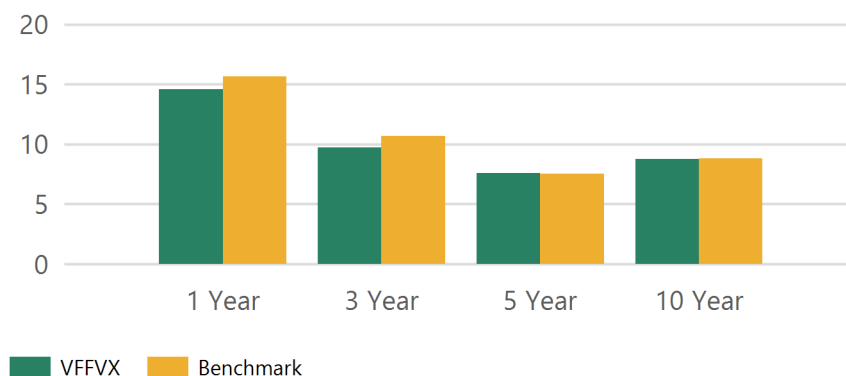
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	37,112
<b>No. of Stocks:</b>	0
<b>% Assets in Top 10:</b>	98.91
<b>Avg Market Cap (\$mil):</b>	72,904.54
<b>P/E Ratio (TTM)(Long):</b>	17.17
<b>P/B Ratio (TTM)(Long):</b>	2.41
<b>Turnover Ratio %:</b>	4.00
<b>Portfolio Date:</b>	6/30/2023

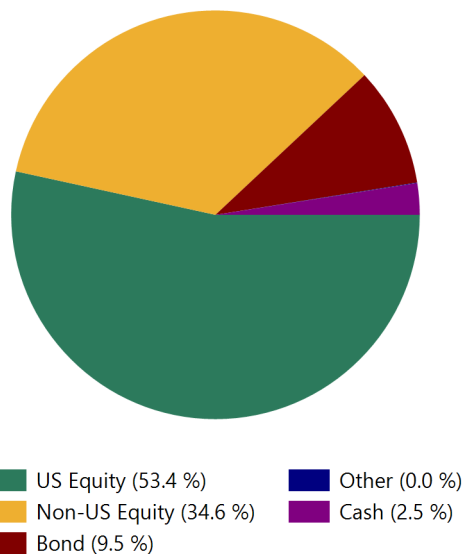
## Style



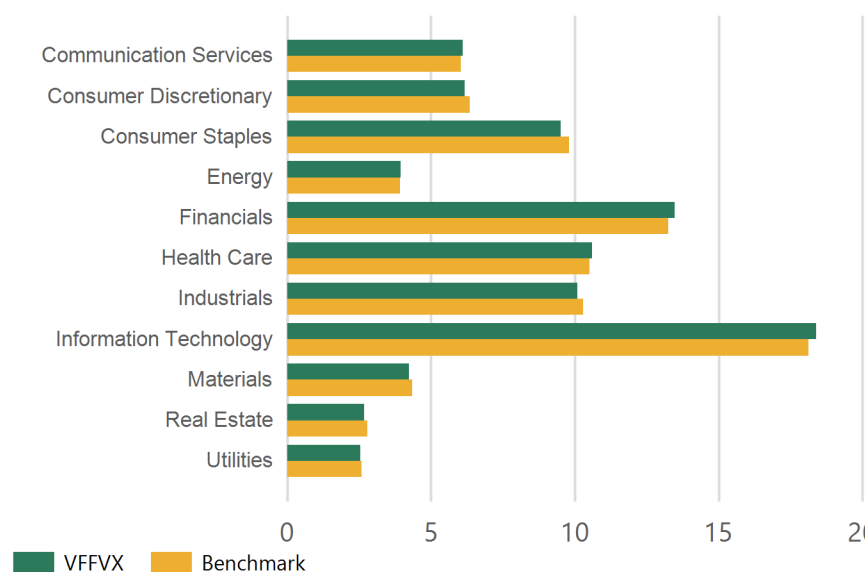
## Returns



## Asset Allocation



## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	16.07	16.46
5 Year:	16.71	17.13
10 Year:	13.33	13.65
<b>Information Ratio</b>		
3 Year:	-0.72	-0.51
5 Year:	0.04	-0.19
10 Year:	-0.04	-0.22
<b>Downside Capture</b>		
3 Year:	102.07	104.72
5 Year:	99.12	101.51
10 Year:	98.52	100.36



# Vanguard Target Retirement 2060 Fund

Segal Score

A

**Ticker:** VTTSX

**Category:** Target-Date 2060

**Subcategory:** Target Date 2050+ Moderate

**Expense Ratio:** 0.08

**Benchmark:** S&P Target Date 2060

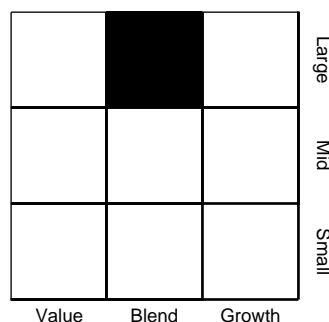
**Inception Date:** 1/19/2012

**S<sup>3</sup> Scores**    Organization: A    Fees: A    Style/Portfolio Characteristics: A    Performance: A    Risk: A

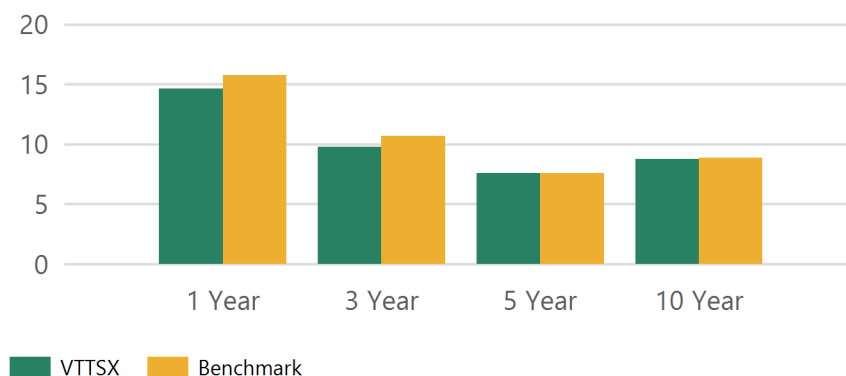
## Portfolio Characteristics

<b>Fund AUM (\$mil):</b>	19,523
<b>No. of Stocks:</b>	0
<b>% Assets in Top 10:</b>	98.93
<b>Avg Market Cap (\$mil):</b>	72,317.20
<b>P/E Ratio (TTM)(Long):</b>	17.13
<b>P/B Ratio (TTM)(Long):</b>	2.40
<b>Turnover Ratio %:</b>	3.00
<b>Portfolio Date:</b>	6/30/2023

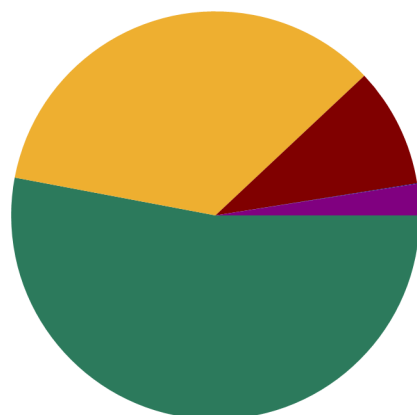
## Style



## Returns

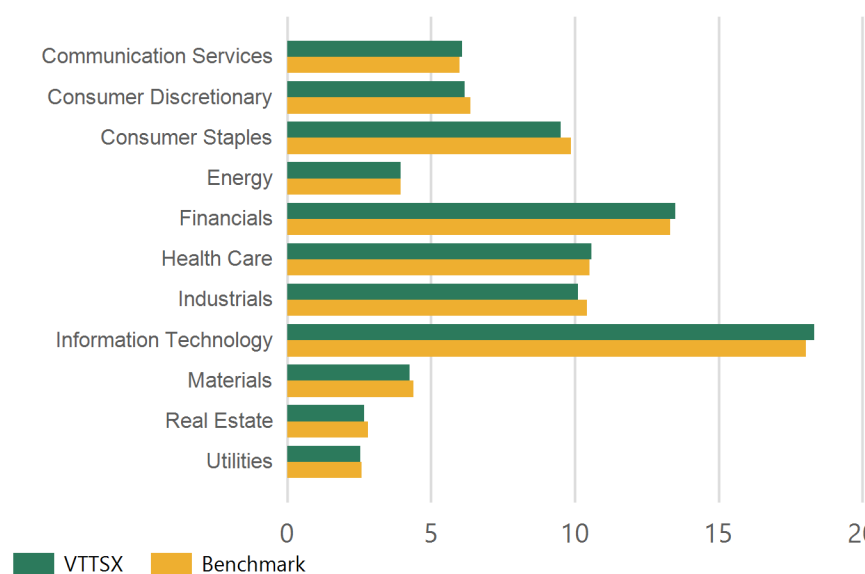


## Asset Allocation



US Equity (53.0 %)	Other (0.0 %)
Non-US Equity (35.0 %)	Cash (2.5 %)
Bond (9.5 %)	

## Sector Allocation



## Risk Metrics

	Actual	Median
<b>Standard Deviation</b>		
3 Year:	16.05	16.58
5 Year:	16.70	17.15
10 Year:	13.32	14.32
<b>Information Ratio</b>		
3 Year:	-0.70	-0.45
5 Year:	0.01	-0.18
10 Year:	-0.08	-0.29
<b>Downside Capture</b>		
3 Year:	101.79	104.79
5 Year:	98.77	101.31
10 Year:	98.00	106.20



**For Active Funds:**

Grade		Action
A	Above Average	No Action
B	Above Average	No Action
C	Average	Closely Monitor
D	Watch List	Fund Alert
F	Immediate Action	Terminate
NA	< that 3 years of history	Check share class and inception date

**For Index Funds:**

Grade		Action
A	Satisfactory	No Action
B	Satisfactory	No Action
C	Satisfactory	No Action
D	Immediate Action	Terminate
F	Immediate Action	Terminate
NA	< that 3 years of history	Check share class and inception date

## **FUND EXPENSE RATIOS**

# City of Memphis 401(a) Retirement Plan

Plan Fees as of June 30, 2023

Investment Option	Account Value as of 6/30/23	Revenue Share Payment (%)	Revenue Share Payment (\$)	Mutual Fund Expense Ratio (%)	Mutual Fund Total Expense (\$)	Net Participant Expense (%)
AmerFunds EuroPacific Growth Fund(R) - Class R6	\$ 458,853	0.00%	\$ -	0.47%	\$ 2,157	0.47%
AmerFunds Global Insight R6	\$ 215,988	0.00%	\$ -	0.46%	\$ 994	0.46%
Brown Capital Management Small Company Fund (The) - Inst	\$ 307,350	0.00%	\$ -	1.05%	\$ 3,227	1.05%
Eaton Vance Atlanta Capital SMID Class A	\$ 134,402	0.50%	\$ 672	1.14%	\$ 1,532	0.64%
Edgar Lomax Value Fund	\$ 515,150	0.40%	\$ 2,061	0.70%	\$ 3,606	0.30%
Fidelity Contrafund	\$ 882,108	0.25%	\$ 2,205	0.55%	\$ 4,852	0.30%
Harbor Small Cap Value	\$ 373,662	0.10%	\$ 374	0.88%	\$ 3,288	0.78%
JPMorgan Mid Cap Value Fund - R6	\$ 265,614	0.00%	\$ -	0.65%	\$ 1,726	0.65%
MassMutual US Gov't MM Fund	\$ -	0.00%	\$ -	0.54%	\$ -	0.00%
MFS International Value Fund - Class R3	\$ 449,044	0.50%	\$ 2,245	0.97%	\$ 4,356	0.47%
Neuberger Berman Genesis Fund - R6	\$ 263,278	0.00%	\$ -	0.74%	\$ 1,948	0.74%
Parnassus Core Equity Fund - Institutional Shares	\$ 859,666	0.10%	\$ 860	0.61%	\$ 5,244	0.51%
PIMCO Total Return Fund - R Shares	\$ 758,636	0.70%	\$ 5,310	1.05%	\$ 7,966	0.35%
TCW Total Return Bond Institutional Shares	\$ 764,696	0.10%	\$ 765	0.49%	\$ 3,747	0.39%
Vanguard Institutional Index	\$ 1,197,340	0.00%	\$ -	0.035%	\$ 419	0.04%
Vanguard Mid-Cap Index Fund - Admiral Shares	\$ 622,307	0.00%	\$ -	0.05%	\$ 311	0.05%
Vanguard REIT Index Fund Admiral Shares	\$ 288,732	0.00%	\$ -	0.12%	\$ 346	0.12%
Vanguard Target Retirement 2020 Fund - Investor Shares	\$ 1,148,331	0.00%	\$ -	0.08%	\$ 919	0.08%
Vanguard Target Retirement 2025 Fund - Investor Shares	\$ 3,148,973	0.00%	\$ -	0.08%	\$ 2,519	0.08%
Vanguard Target Retirement 2030 Fund - Investor Shares	\$ 4,146,402	0.00%	\$ -	0.08%	\$ 3,317	0.08%
Vanguard Target Retirement 2035 Fund - Investor Shares	\$ 3,896,805	0.00%	\$ -	0.08%	\$ 3,117	0.08%
Vanguard Target Retirement 2040 Fund - Investor Shares	\$ 3,911,209	0.00%	\$ -	0.08%	\$ 3,129	0.08%
Vanguard Target Retirement 2045 Fund - Investor Shares	\$ 5,613,203	0.00%	\$ -	0.08%	\$ 4,491	0.08%
Vanguard Target Retirement 2050 Fund - Investor Shares	\$ 7,673,855	0.00%	\$ -	0.08%	\$ 6,139	0.08%
Vanguard Target Retirement 2055 Fund - Investor Shares	\$ 10,160,964	0.00%	\$ -	0.08%	\$ 8,129	0.08%
Vanguard Target Retirement 2060 Fund - Investor Shares	\$ 10,510,034	0.00%	\$ -	0.08%	\$ 8,408	0.08%
Vanguard Target Retirement Income Inv	\$ 419,722	0.00%	\$ -	0.08%	\$ 336	0.08%
Delaware Ivy High Income	\$ 69,376	0.00%	\$ -	0.60%	\$ 416	0.60%
<b>Subtotal of Non-Fixed Investment Options</b>	<b>\$ 59,055,700</b>	<b>0.02%</b>	<b>\$ 14,492</b>	<b>0.15%</b>	<b>\$ 86,639</b>	

<b>Fixed Option (SAGIC)</b>	<b>\$ 1,411,878</b>	<b>0.00%</b>	<b>\$ -</b>	<b>0.42%</b>	<b>\$ 5,930</b>	
<b>TOTAL OF ALL INVESTMENT OPTIONS</b>	<b>\$ 60,467,578</b>	<b>0.02%</b>	<b>\$ 14,492</b>	<b>0.15%</b>	<b>\$ 92,569</b>	
<b>TOTAL ANNUAL PLAN COST</b>		<b>0.02%</b>		<b>0.15%</b>		

All Funds	
Average Expense Ratio	0.43%
Weighted Average Expense Ratio	0.15%
Weighted Revenue Sharing	0.02%
Plan Revenue Requirement*	0.04%

\* Plan Revenue Requirement is currently 4 bps. Any amount collected over 4 bps is reimbursed to the Plan.

The Plan moved to fee leveling in June 2022. The Plan Revenue Requirement will remain at 4 bps, however, revenue sharing from individual fund options will no longer be used to pay for Plan expenses.

Plan expenses will be paid using a flat basis point fee.

Note: The data used in this report for expense ratios and revenue sharing amount was provided by MassMutual as of 6/30/23