

Investment Performance Review  
Period Ending December 31, 2022

# **Sunrise Police Retirement Plan**

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# Table Of Contents

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1	Compliance Report	Page 1
2	Asset Allocation Compliance Account Based	Page 4
3	Asset Allocation Compliance Segment Based	Page 6
4	Asset Allocation Pie Chart	Page 7
5	Comparative Performance Trailing Returns	Page 9
6	Comparative Performance Calendar Year	Page 13
7	Financial Reconciliation Quarter to Date	Page 18
8	Schedule of Investable Assets With Full Table	Page 19
9	Total Fund Composite Returns Based Analysis	Page 23
10	Historical Risk Statistics Total Fund	Page 25
11	Historical Risk Statistics Total Equity	Page 28
12	Historical Risk Statistics Total Fixed Income	Page 29
13	Ceredex Returns Based Analysis	Page 31
14	Rhumblin R1000G Returns Based Analysis	Page 35
15	Polen Returns Based Analysis	Page 39
16	ARKK Returns Based Analysis	Page 41
17	Vanguard R2000 (VRTIX) Returns Based Analysis	Page 49
18	Vanguard International Returns Based Analysis	Page 50
19	JPM International Returns Based Analysis	Page 56
20	GHA A+ Returns Based Analysis	Page 58
21	GHA EXCL A+ Fixed Inc Returns Based Analysis	Page 62
22	Barings Returns Based Analysis	Page 66
23	ASB Returns Based Analysis	Page 68
24	Benchmark History	Page 70
25	Fee Schedule	Page 72
26	Disclosures	Page 84
27	Definitions & Disclosure Pages	Page 85



<b>Total Fund Compliance:</b>	<b>Yes</b>	<b>No</b>
The total plan return equaled or exceeded the total plan benchmark over the trailing three and five year periods.		●
The three and five year total plan returns rank in the top 40% of the Fund's peers.		●
The total plan return equaled or exceeded the 7.35% target rate of return over the trailing three year period.		●
The total plan return equaled or exceeded the 7.35% target rate of return over the trailing five year period.		●
<b>Equity Compliance:</b>		
<b>Ceredex Large Cap Value</b>	<b>Yes</b>	<b>No</b>
The return equaled or exceeded its benchmark over the trailing three and five year periods.		●
The three and five year return ranks in the top 40% of its peers.		●
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.	●	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	●	
<b>Rhumblin R1000G</b>	<b>Yes</b>	<b>No</b>
The return equaled or exceeded its benchmark over the trailing three and five year periods.*		●
The three and five year return ranks in the top 40% of its peers. *	●	
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.	●	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	●	
<b>Polen Capital</b>	<b>Yes</b>	<b>No</b>
The return equaled or exceeded its benchmark over the trailing three and five year periods. *		●
The three and five year return ranks in the top 40% of its peers. *		●
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.		●
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	●	

<b>Mutual of America</b>	<b>Yes</b>	<b>No</b>
The return equaled or exceeded its benchmark over the trailing three and five year periods.		●
The three and five year return ranks in the top 40% of its peers.		●
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.	●	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	●	
<b>Vanguard R2000 Equity</b>	<b>Yes</b>	<b>No</b>
The return equaled or exceeded its benchmark over the trailing three and five year periods. *	●	
The three and five year return ranks in the top 40% of its peers. *		●
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.	●	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	●	
<b>Vanguard International Equity</b>	<b>Yes</b>	<b>No</b>
The return equaled or exceeded its benchmark over the trailing three and five year periods.		●
The three and five year return ranks in the top 40% of its peers.	●	
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.	●	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	●	
<b>Vanguard Emerging Equity</b>	<b>Yes</b>	<b>No</b>
The return equaled or exceeded its benchmark over the trailing three and five year periods.**	●	
The three and five year return ranks in the top 40% of its peers.**		●
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.	●	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	●	
<b>JPM International Equity</b>	<b>Yes</b>	<b>No</b>
The return equaled or exceeded its benchmark over the trailing three and five year periods.		●
The three and five year return ranks in the top 40% of its peers.		●
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.	●	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	●	

**Fixed Income Compliance:**

**GHA Fixed Income BCAB A+**

	Yes	No
The return equaled or exceeded its benchmark over the trailing three and five year periods.	●	
The three and five year return ranks in the top 40% of its peers.		●
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.	●	
Are all the fixed income securities ranked in the top "3" categories by Standard & Poor's or Moody's.	●	

**GHA Fixed Income BCIGC**

	Yes	No
The return equaled or exceeded its benchmark over the trailing three and five year periods.	●	
The three and five year return ranks in the top 40% of its peers.		●
The amount invested in any one issuing company is less than or equal to 5% of the Manager's total fund.	●	
Are all the fixed income securities ranked in the top "3" categories by Standard & Poor's or Moody's.	●	

**Real Estate Compliance:**

**Barings Real Estate**

	Yes	No
The return equaled or exceeded its benchmark over the trailing three and five year periods.*		●
The three and five year return ranks in the top 40% of its peers.*		●

**ASB Real Estate**

	Yes	No
The return equaled or exceeded its benchmark over the trailing three and five year periods.*		●
The three and five year return ranks in the top 40% of its peers.*		●

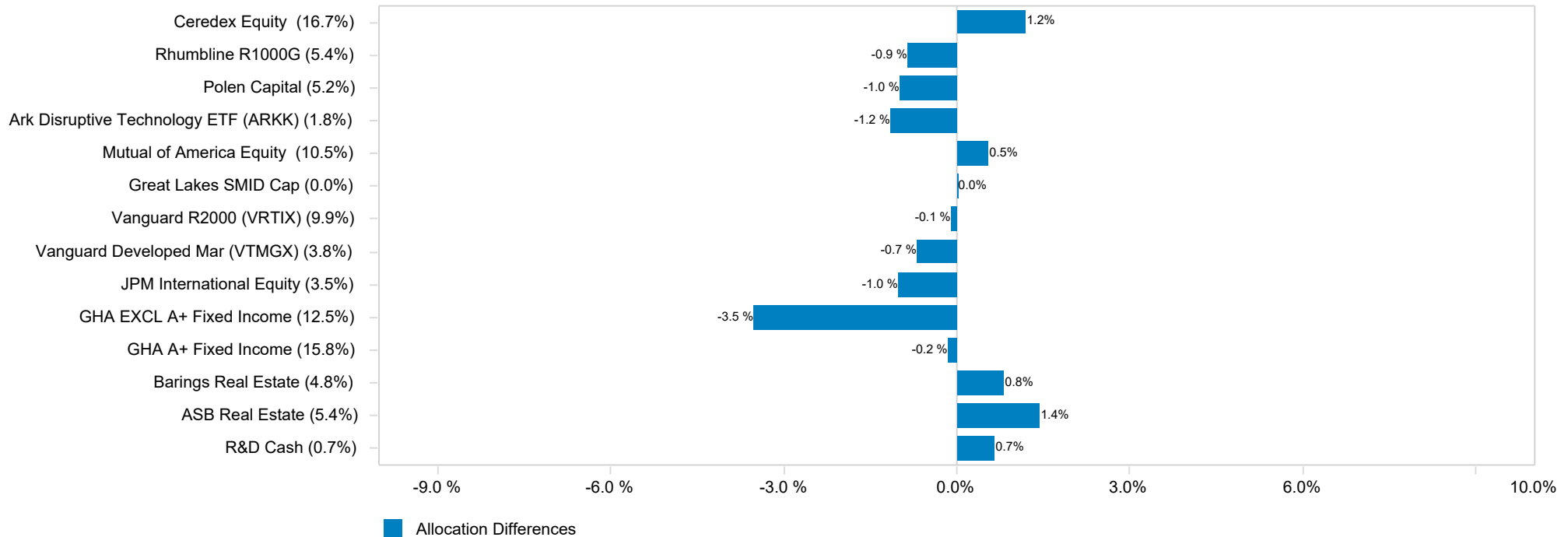
\* Only 3 years available

\*\* Since Inception

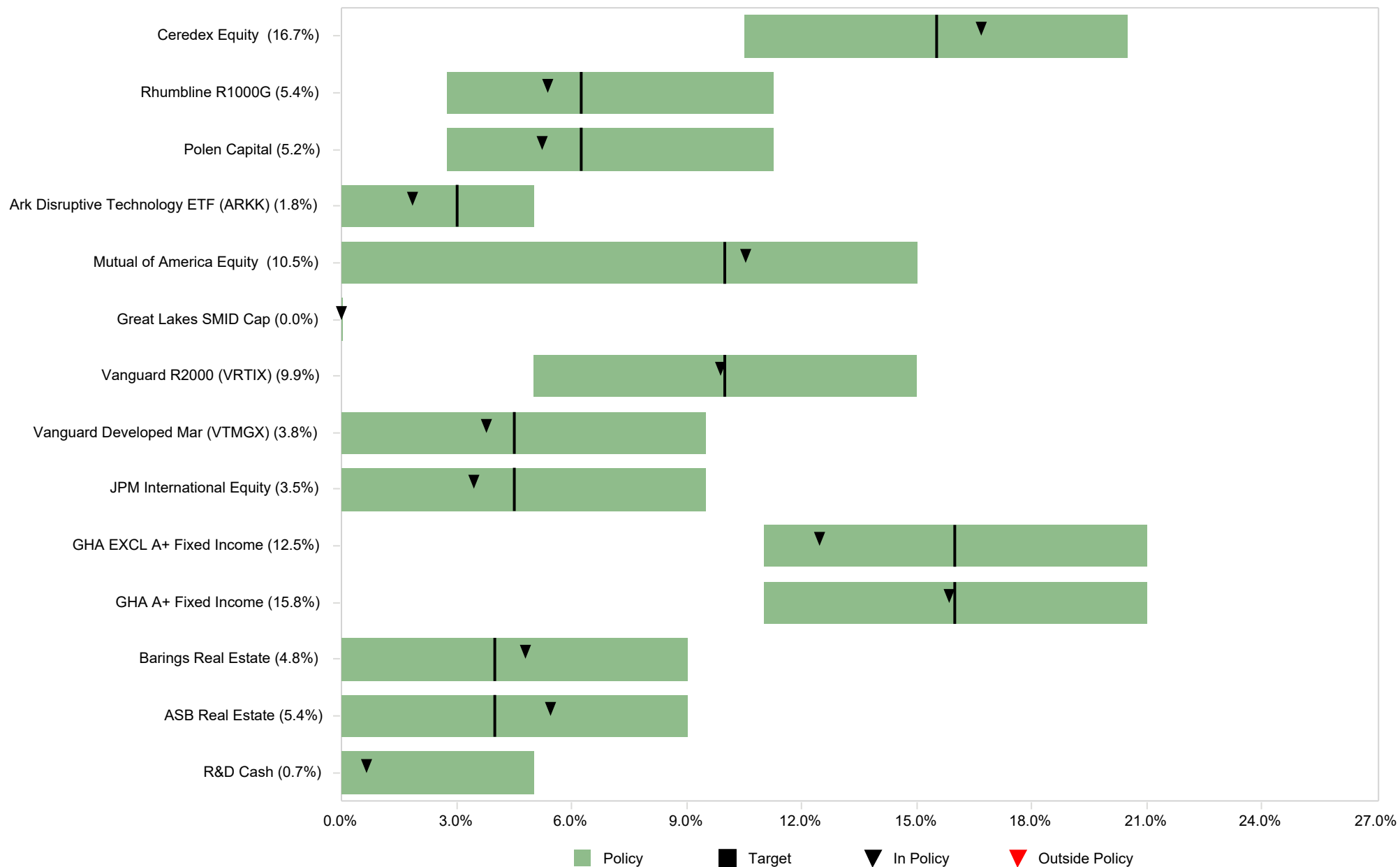
Net performance used when available

Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. (\$000)
<b>Total Fund Composite</b>	<b>199,409,729</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>	<b>-</b>
Ceredex Equity	33,290,890	16.7	15.5	1.2	-2,382,382
Rhumblin R1000G	10,749,735	5.4	6.3	-0.9	1,713,373
Polen Capital	10,458,780	5.2	6.3	-1.0	2,004,328
Ark Disruptive Technology ETF (ARKK)	3,676,448	1.8	3.0	-1.2	2,305,844
Mutual of America Equity	21,005,299	10.5	10.0	0.5	-1,064,327
Great Lakes SMID Cap	-	0.0	0.0	0.0	-
Vanguard R2000 (VRTIX)	19,734,384	9.9	10.0	-0.1	206,589
Vanguard Developed Mar (VTMGX)	7,561,573	3.8	4.5	-0.7	1,411,865
JPM International Equity	6,920,234	3.5	4.5	-1.0	2,053,204
GHA EXCL A+ Fixed Income	24,873,607	12.5	16.0	-3.5	7,031,949
GHA A+ Fixed Income	31,559,136	15.8	16.0	-0.2	346,421
Barings Real Estate	9,580,034	4.8	4.0	0.8	-1,603,645
ASB Real Estate	10,833,652	5.4	4.0	1.4	-2,857,263
R&D Cash	1,308,706	0.7	0.0	0.7	-1,308,706

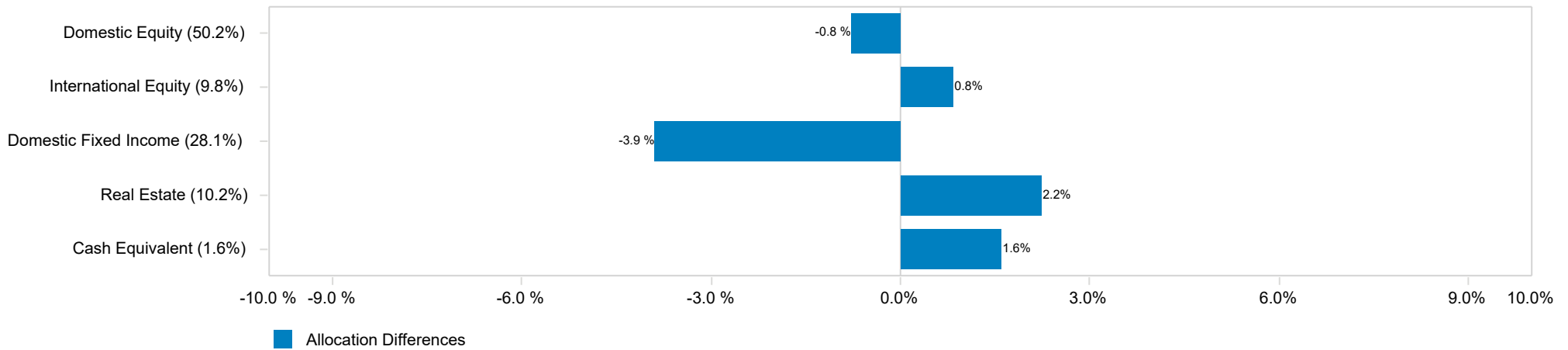


Executive Summary

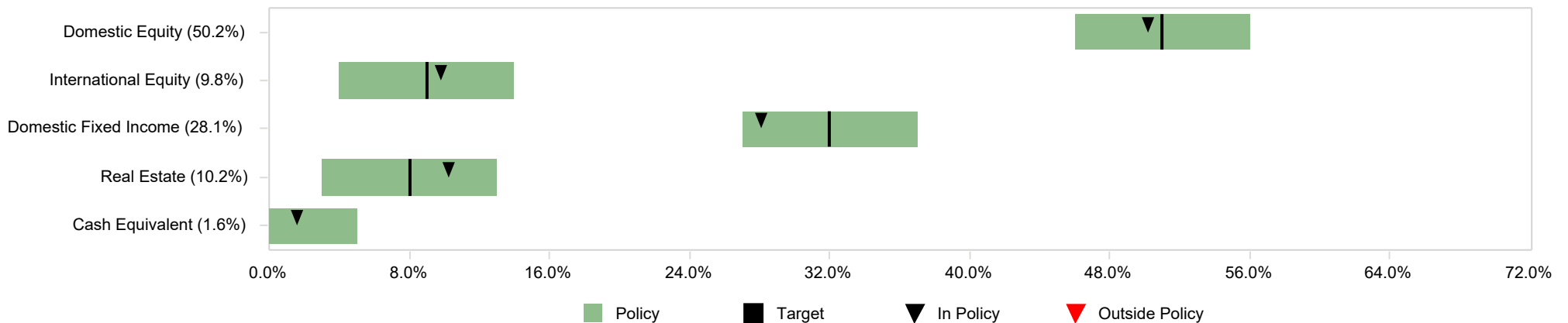


Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. (\$000)
Domestic Equity	100,149,975	50.2	51.0	-0.8	1,548,987
International Equity	19,608,363	9.8	9.0	0.8	-1,661,487
Domestic Fixed Income	56,033,005	28.1	32.0	-3.9	7,778,108
Real Estate	20,413,687	10.2	8.0	2.2	-4,460,908
Cash Equivalent	3,204,699	1.6	0.0	1.6	-3,204,699
<b>Total Fund</b>	<b>199,409,729</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>	<b>-</b>

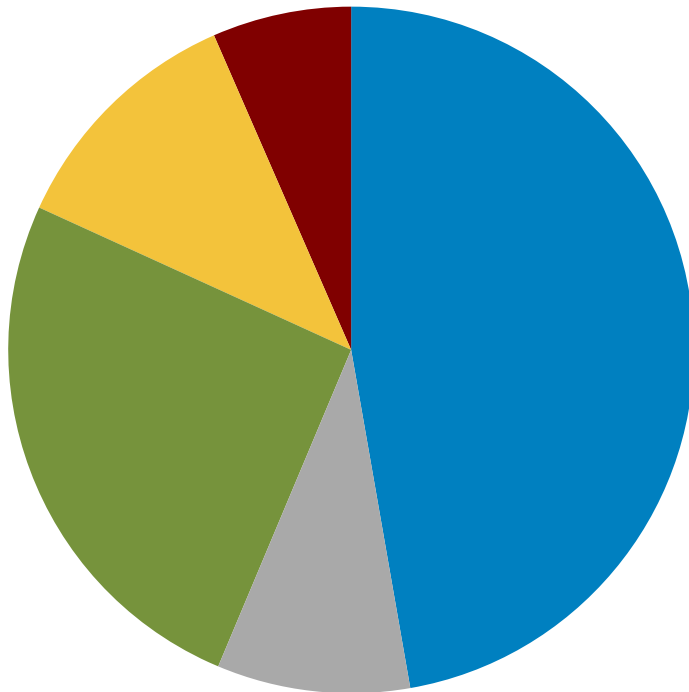


Executive Summary

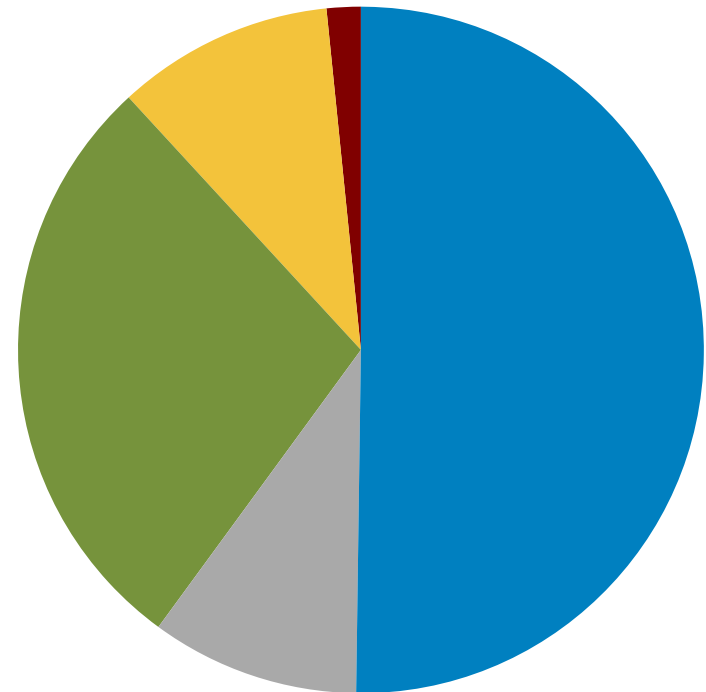




**Asset Allocation By Segment as of  
September 30, 2022 : \$182,314,335**

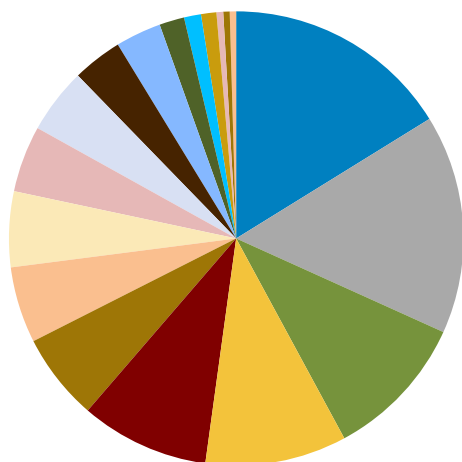


**Asset Allocation By Segment as of  
December 31, 2022 : \$199,409,729**

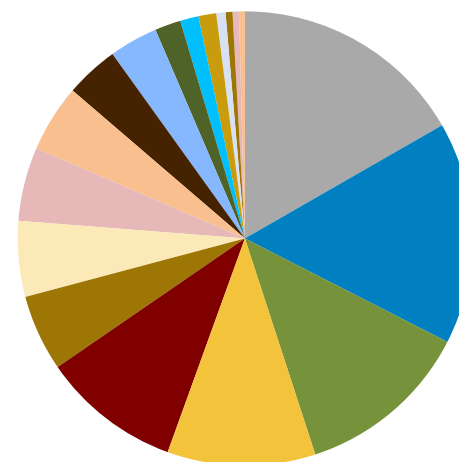


Allocation			Allocation		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	86,129,935	47.2	Domestic Equity	100,149,975	50.2
International Equity	16,591,256	9.1	International Equity	19,608,363	9.8
Domestic Fixed Income	46,422,393	25.5	Domestic Fixed Income	56,033,005	28.1
Real Estate	21,223,978	11.6	Real Estate	20,413,687	10.2
Cash Equivalent	11,946,774	6.6	Cash Equivalent	3,204,699	1.6

**Asset Allocation By Manager as of  
September 30, 2022 : \$182,314,335**



**Asset Allocation By Manager as of  
December 31, 2022 : \$199,409,729**



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
GHA A+ Fixed Income	29,490,205	16.2	Ceredex Equity	33,290,890	16.7
Ceredex Equity	28,407,764	15.6	GHA A+ Fixed Income	31,559,136	15.8
GHA EXCL A+ Fixed Income	18,873,726	10.4	GHA EXCL A+ Fixed Income	24,873,607	12.5
Mutual of America Equity	18,353,023	10.1	Mutual of America Equity	21,005,299	10.5
Vanguard R2000 (VRTIX)	16,684,765	9.2	Vanguard R2000 (VRTIX)	19,734,384	9.9
ASB Real Estate	11,314,981	6.2	ASB Real Estate	10,833,652	5.4
Barings Real Estate	9,908,997	5.4	Rhumblin R1000G	10,749,735	5.4
Rhumblin R1000G	9,807,519	5.4	Polen Capital	10,458,780	5.2
Polen Capital	8,620,730	4.7	Barings Real Estate	9,580,034	4.8
R&D Cash	8,498,210	4.7	Vanguard Developed Mar (VTMGX)	7,561,573	3.8
Vanguard Developed Mar (VTMGX)	6,457,086	3.5	JPM International Equity	6,920,234	3.5
JPM International Equity	5,928,550	3.3	Ark Disruptive Technology ETF (ARKK)	3,676,448	1.8
Ark Disruptive Technology ETF (ARKK)	3,230,933	1.8	Vanguard Emerging Mar Adm (VEMAX)	2,598,161	1.3
Vanguard Emerging Mar Adm (VEMAX)	2,204,296	1.2	iShares MSCI EM ex China ETF (EMXC)	2,528,395	1.3
iShares MSCI EM ex China ETF (EMXC)	2,001,323	1.1	R&D Cash	1,308,706	0.7
First Trust Cloud Computing ETF (SKYY)	861,567	0.5	Defiance 5G Next Gen Connectivity ETF (FIVG)	981,080	0.5
Defiance 5G Next Gen Connectivity ETF (FIVG)	842,721	0.5	First Trust Cloud Computing ETF (SKYY)	909,892	0.5
Ark Autonomous Technology & Robotics ETF (ARKQ)	827,936	0.5	Ark Autonomous Technology & Robotics ETF (ARKQ)	839,721	0.4

## Comparative Performance Trailing Returns

	QTR	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
<b>Total Fund Composite (Gross)</b>	<b>4.56 (84)</b>	<b>-15.64 (78)</b>	<b>4.56 (84)</b>	<b>-15.64 (78)</b>	<b>2.66 (76)</b>	<b>4.52 (67)</b>	<b>6.02 (52)</b>	<b>01/01/1998</b>
Total Fund Policy Index	5.77 (49)	-12.68 (34)	5.77 (49)	-12.68 (34)	4.34 (25)	5.55 (24)	6.30 (39)	
Difference	-1.21	-2.96	-1.21	-2.96	-1.68	-1.03	-0.28	
All Public Plans-Total Fund Median	5.72	-13.88	5.72	-13.88	3.54	4.91	6.06	
<b>Total Fund Composite (Net)</b>	<b>4.49</b>	<b>-15.89</b>	<b>4.49</b>	<b>-15.89</b>	<b>2.35</b>	<b>4.19</b>	<b>5.68</b>	<b>01/01/1998</b>
Total Fund Policy Index	5.77	-12.68	5.77	-12.68	4.34	5.55	6.30	
Difference	-1.28	-3.21	-1.28	-3.21	-1.99	-1.36	-0.62	
<b>Total Equity Composite (Gross)</b>	<b>7.63</b>	<b>-22.58</b>	<b>7.63</b>	<b>-22.58</b>	<b>3.17</b>	<b>5.53</b>	<b>6.12</b>	<b>01/01/1998</b>
Total Equity Policy Index	9.38	-17.03	9.38	-17.03	6.04	7.13	7.10	
Difference	-1.75	-5.55	-1.75	-5.55	-2.87	-1.60	-0.98	
<b>Total Domestic Equity</b>								
Ceredex Equity (Gross)	13.20 (44)	-13.25 (84)	13.20 (44)	-13.25 (84)	4.54 (95)	6.39 (83)	11.08 (75)	01/01/2012
Russell 1000 Value Index	12.42 (56)	-7.54 (70)	12.42 (56)	-7.54 (70)	5.96 (86)	6.67 (81)	10.93 (79)	
Difference	0.78	-5.71	0.78	-5.71	-1.42	-0.28	0.15	
IM U.S. Large Cap Value Equity (SA+CF) Median	12.75	-5.44	12.75	-5.44	8.06	8.11	11.82	
Ceredex Equity (Net)	13.06	-13.69	13.06	-13.69	4.00	5.84	10.48	01/01/2012
Russell 1000 Value Index	12.42	-7.54	12.42	-7.54	5.96	6.67	10.93	
Difference	0.64	-6.15	0.64	-6.15	-1.96	-0.83	-0.45	
Rhumblin R1000G (Gross)	2.20 (73)	-29.11 (49)	2.20 (73)	-29.11 (49)	7.83 (29)	11.00 (28)	11.00 (28)	01/01/2018
Russell 1000 Growth Index	2.20 (73)	-29.14 (49)	2.20 (73)	-29.14 (49)	7.79 (30)	10.96 (30)	10.96 (30)	
Difference	0.00	0.03	0.00	0.03	0.04	0.04	0.04	
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.91	-29.57	3.91	-29.57	6.30	9.98	9.98	
Rhumblin R1000G (Net)	2.19	-29.14	2.19	-29.14	7.78	10.95	10.95	01/01/2018
Russell 1000 Growth Index	2.20	-29.14	2.20	-29.14	7.79	10.96	10.96	
Difference	-0.01	0.00	-0.01	0.00	-0.01	-0.01	-0.01	
Polen Capital (Gross)	-0.21 (90)	-37.59 (91)	-0.21 (90)	-37.59 (91)	1.84 (92)	9.77 (55)	9.77 (55)	01/01/2018
Russell 1000 Growth Index	2.20 (73)	-29.14 (49)	2.20 (73)	-29.14 (49)	7.79 (30)	10.96 (30)	10.96 (30)	
Difference	-2.41	-8.45	-2.41	-8.45	-5.95	-1.19	-1.19	
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.91	-29.57	3.91	-29.57	6.30	9.98	9.98	
Polen Capital (Net)	-0.33	-38.02	-0.33	-38.02	1.21	9.13	9.13	01/01/2018
Russell 1000 Growth Index	2.20	-29.14	2.20	-29.14	7.79	10.96	10.96	
Difference	-2.53	-8.88	-2.53	-8.88	-6.58	-1.83	-1.83	

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



# Comparative Performance

## Total Fund

As of December 31, 2022

	QTR	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
Ark Disruptive Technology ETF (ARKK) (Net)	-17.22 (100)	-66.99 (100)	-17.22 (100)	-66.99 (100)	N/A	N/A	-37.33 (100)	09/01/2020
Russell 3000 Growth Index	2.31 (67)	-28.97 (46)	2.31 (67)	-28.97 (46)	7.32 (15)	10.45 (12)	-1.78 (43)	
Difference	-19.53	-38.02	-19.53	-38.02	N/A	N/A	-35.55	
IM U.S. Growth Equity (MF) Median	3.96	-29.69	3.96	-29.69	4.15	7.48	-2.75	
Ark Autonomous Technology & Robotics ETF (ARKQ) (Net)	-9.01 (100)	-46.75 (98)	-9.01 (100)	-46.75 (98)	N/A	N/A	-41.37 (98)	09/01/2021
Russell 1000 Growth Index	2.20 (68)	-29.14 (43)	2.20 (68)	-29.14 (43)	7.79 (20)	10.96 (17)	-19.67 (36)	
Difference	-11.21	-17.61	-11.21	-17.61	N/A	N/A	-21.70	
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.58	-30.69	3.58	-30.69	5.35	9.04	-22.47	
Defiance 5G Next Gen Connectivity ETF (FIVG) (Net)	5.17 (22)	-27.27 (18)	5.17 (22)	-27.27 (18)	N/A	N/A	-16.10 (8)	09/01/2021
Russell 1000 Growth Index	2.20 (57)	-29.14 (27)	2.20 (57)	-29.14 (27)	7.79 (10)	10.96 (11)	-19.67 (21)	
Difference	2.97	1.87	2.97	1.87	N/A	N/A	3.57	
IM U.S. Large Cap Growth Equity (MF) Median	2.48	-31.30	2.48	-31.30	4.76	8.53	-23.37	
First Trust Cloud Computing ETF (SKYY) (net)	-4.64 (99)	-44.68 (98)	-4.64 (99)	-44.68 (98)	N/A	N/A	-37.85 (97)	09/01/2021
S&P MidCap 400 Growth	8.75 (17)	-18.96 (10)	8.75 (17)	-18.96 (10)	5.76 (30)	6.02 (79)	-12.42 (9)	
Difference	-13.39	-25.72	-13.39	-25.72	N/A	N/A	-25.43	
IM U.S. Mid Cap Growth Equity (MF) Median	5.69	-28.79	5.69	-28.79	4.14	7.54	-22.57	
Mutual of America Equity (Gross)	10.63 (34)	-13.29 (43)	10.63 (34)	-13.29 (43)	7.06 (27)	6.65 (50)	9.61 (15)	04/01/2008
S&P MidCap 400 Index	10.78 (33)	-13.06 (43)	10.78 (33)	-13.06 (43)	7.23 (26)	6.71 (48)	9.71 (14)	
Difference	-0.15	-0.23	-0.15	-0.23	-0.17	-0.06	-0.10	
IM U.S. Mid Cap Equity (MF) Median	9.14	-14.74	9.14	-14.74	5.77	6.62	8.34	
Mutual of America Equity (Net)	10.63	-13.34	10.63	-13.34	6.99	6.57	9.53	04/01/2008
S&P MidCap 400 Index	10.78	-13.06	10.78	-13.06	7.23	6.71	9.71	
Difference	-0.15	-0.28	-0.15	-0.28	-0.24	-0.14	-0.18	
Vanguard R2000 (VRTIX) (Net)	6.25 (91)	-20.39 (86)	6.25 (91)	-20.39 (86)	3.17 (74)	N/A	1.68 (75)	09/01/2018
Russell 2000 Index	6.23 (92)	-20.44 (87)	6.23 (92)	-20.44 (87)	3.10 (75)	4.13 (64)	1.60 (77)	
Difference	0.02	0.05	0.02	0.05	0.07	N/A	0.08	
IM U.S. Small Cap Core Equity (MF) Median	9.65	-15.78	9.65	-15.78	5.20	4.78	2.91	
<b>Total International Equity</b>								
Vanguard Intl Eq (VTMGX) (Net)	17.11 (26)	-15.32 (31)	17.11 (26)	-15.32 (31)	1.33 (27)	1.67 (27)	4.81 (26)	07/01/2013
MSCI EAFE Index	17.40 (23)	-14.01 (23)	17.40 (23)	-14.01 (23)	1.34 (27)	2.03 (21)	4.96 (23)	
Difference	-0.29	-1.31	-0.29	-1.31	-0.01	-0.36	-0.15	
IM International Equity (MF) Median	14.28	-18.96	14.28	-18.96	-0.14	0.43	3.96	

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



# Comparative Performance

## Total Fund

As of December 31, 2022

	QTR	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
iShares MSCI EM ex China ETF (EMXC) (Net)	9.07 (65)	N/A	9.07 (65)	N/A	N/A	N/A	N/A	02/01/2022
MSCI Emerging Markets Index	9.79 (53)	-19.74 (29)	9.79 (53)	-19.74 (29)	-2.34 (40)	-1.03 (34)	-18.19 (29)	
Difference	-0.72	N/A	-0.72	N/A	N/A	N/A	N/A	
IM Emerging Markets Equity (MF) Median	9.95	-22.44	9.95	-22.44	-3.16	-1.74	-20.94	
Vanguard Emerging Mar Adm (VEMAX) (Net)	8.20 (74)	N/A	8.20 (74)	N/A	N/A	N/A	-2.78 (67)	09/01/2022
MSCI Emerging Markets Index	9.79 (53)	-19.74 (29)	9.79 (53)	-19.74 (29)	-2.34 (40)	-1.03 (34)	-3.02 (72)	
Difference	-1.59	N/A	-1.59	N/A	N/A	N/A	0.24	
IM Emerging Markets Equity (MF) Median	9.95	-22.44	9.95	-22.44	-3.16	-1.74	-1.80	
JPM International Equity (Net)	16.73 (36)	-18.36 (61)	16.73 (36)	-18.36 (61)	0.27 (70)	1.85 (53)	5.70 (57)	10/01/2015
MSCI EAFE Index	17.40 (28)	-14.01 (36)	17.40 (28)	-14.01 (36)	1.34 (52)	2.03 (49)	5.53 (61)	
Difference	-0.67	-4.35	-0.67	-4.35	-1.07	-0.18	0.17	
IM International Equity (SA+CF) Median	15.51	-16.40	15.51	-16.40	1.42	1.95	6.03	

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



# Comparative Performance

## Total Fund

As of December 31, 2022

	QTR	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
<b>Total Fixed Income Composite</b>	<b>1.84</b>	<b>-9.01</b>	<b>1.84</b>	<b>-9.01</b>	<b>-1.58</b>	<b>0.56</b>	<b>4.66</b>	<b>01/01/1998</b>
Total Fixed Income Policy Index	1.55	-10.40	1.55	-10.40	-1.99	0.31	3.59	
Difference	0.29	1.39	0.29	1.39	0.41	0.25	1.07	
GHA A+ Fixed Income (Gross)	1.57 (78)	-10.64 (5)	1.57 (78)	-10.64 (5)	-1.91 (28)	0.42 (55)	4.09 (6)	01/01/2007
Blmbg. U.S. Aggregate: A+	1.55 (80)	-12.53 (29)	1.55 (80)	-12.53 (29)	-2.72 (90)	-0.11 (98)	2.71 (99)	
Difference	0.02	1.89	0.02	1.89	0.81	0.53	1.38	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.82	-12.95	1.82	-12.95	-2.20	0.45	3.40	
GHA A+ Fixed Income (Net)	1.50	-10.87	1.50	-10.87	-2.15	0.17	3.84	01/01/2007
Blmbg. U.S. Aggregate: A+	1.55	-12.53	1.55	-12.53	-2.72	-0.11	2.71	
Difference	-0.05	1.66	-0.05	1.66	0.57	0.28	1.13	
GHA EXCL A+ Fixed Income (Gross)	2.43 (3)	-6.22 (15)	2.43 (3)	-6.22 (15)	-0.91 (55)	0.90 (68)	4.53 (10)	01/01/1998
Bloomberg Intermediate US Govt/Credit Idx	1.54 (54)	-8.24 (62)	1.54 (54)	-8.24 (62)	-1.26 (83)	0.73 (84)	3.76 (93)	
Difference	0.89	2.02	0.89	2.02	0.35	0.17	0.77	
IM U.S. Intermediate Duration (SA+CF) Median	1.56	-8.11	1.56	-8.11	-0.86	1.01	4.16	
GHA EXCL A+ Fixed Income (Net)	2.15	-6.65	2.15	-6.65	-1.22	0.61	4.47	01/01/1998
Bloomberg Intermediate US Govt/Credit Idx	1.54	-8.24	1.54	-8.24	-1.26	0.73	3.76	
Difference	0.61	1.59	0.61	1.59	0.04	-0.12	0.71	
<b>Total Real Estate (Gross)</b>	<b>-3.58 (33)</b>	<b>7.00 (49)</b>	<b>-3.58 (33)</b>	<b>7.00 (49)</b>	<b>8.42 (62)</b>	<b>7.69 (68)</b>	<b>7.54 (N/A)</b>	<b>06/01/2017</b>
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89 (40)	8.42 (30)	-4.89 (40)	8.42 (30)	10.64 (37)	9.23 (40)	9.34 (N/A)	
Difference	1.31	-1.42	1.31	-1.42	-2.22	-1.54	-1.80	
IM U.S. Open End Private Real Estate (SA+CF) Median	-5.18	6.78	-5.18	6.78	9.72	9.01	N/A	
Barings Real Estate (Gross)	-3.08 (24)	3.13 (83)	-3.08 (24)	3.13 (83)	7.56 (70)	7.43 (70)	7.53 (70)	07/01/2017
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89 (40)	8.42 (30)	-4.89 (40)	8.42 (30)	10.64 (37)	9.23 (40)	9.15 (39)	
Difference	1.81	-5.29	1.81	-5.29	-3.08	-1.80	-1.62	
IM U.S. Open End Private Real Estate (SA+CF) Median	-5.18	6.78	-5.18	6.78	9.72	9.01	8.99	
Barings Real Estate (Net)	-3.32	2.13	-3.32	2.13	6.58	6.41	6.50	07/01/2017
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89	8.42	-4.89	8.42	10.64	9.23	9.15	
Difference	1.57	-6.29	1.57	-6.29	-4.06	-2.82	-2.65	
ASB Real Estate (Gross)	-4.01 (35)	10.68 (13)	-4.01 (35)	10.68 (13)	9.24 (55)	7.88 (66)	7.69 (69)	07/01/2017
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89 (40)	8.42 (30)	-4.89 (40)	8.42 (30)	10.64 (37)	9.23 (40)	9.15 (39)	
Difference	0.88	2.26	0.88	2.26	-1.40	-1.35	-1.46	
IM U.S. Open End Private Real Estate (SA+CF) Median	-5.18	6.78	-5.18	6.78	9.72	9.01	8.99	
ASB Real Estate (Net)	-4.25	9.58	-4.25	9.58	8.01	6.63	6.43	07/01/2017
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89	8.42	-4.89	8.42	10.64	9.23	9.15	
Difference	0.64	1.16	0.64	1.16	-2.63	-2.60	-2.72	

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



# Comparative Performance

## Total Fund

As of December 31, 2022

### Comparative Performance Fiscal Year to Date

	FYTD	Oct-2021 To Sep-2022	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015
<b>Total Fund Composite (Gross)</b>	<b>4.56 (84)</b>	<b>-16.06 (66)</b>	<b>20.33 (44)</b>	<b>8.17 (54)</b>	<b>3.94 (53)</b>	<b>8.38 (39)</b>	<b>11.66 (51)</b>	<b>9.56 (44)</b>	<b>0.60 (19)</b>
Total Fund Policy Index	5.77 (49)	-13.33 (34)	21.11 (34)	7.67 (59)	4.31 (39)	9.00 (29)	10.90 (71)	10.01 (29)	0.59 (19)
Difference	-1.21	-2.73	-0.78	0.50	-0.37	-0.62	0.76	-0.45	0.01
All Public Plans-Total Fund Median	5.72	-14.76	19.88	8.51	4.00	7.86	11.70	9.33	-0.72
<b>Total Fund Composite (Net)</b>	<b>4.49</b>	<b>-16.31</b>	<b>19.98</b>	<b>7.83</b>	<b>3.60</b>	<b>8.01</b>	<b>11.28</b>	<b>9.25</b>	<b>0.22</b>
Total Fund Policy Index	5.77	-13.33	21.11	7.67	4.31	9.00	10.90	10.01	0.59
Difference	-1.28	-2.98	-1.13	0.16	-0.71	-0.99	0.38	-0.76	-0.37
<b>Total Equity Composite (Gross)</b>	<b>7.63</b>	<b>-23.82</b>	<b>33.24</b>	<b>9.67</b>	<b>1.68</b>	<b>13.02</b>	<b>19.33</b>	<b>13.45</b>	<b>-1.15</b>
Total Equity Policy Index	9.38	-18.54	34.91	7.61	0.83	14.65	18.53	13.79	-1.26
Difference	-1.75	-5.28	-1.67	2.06	0.85	-1.63	0.80	-0.34	0.11
<b>Total Domestic Equity</b>									
Ceredex Equity (Gross)	13.20 (44)	-15.64 (87)	32.34 (73)	-1.49 (41)	4.95 (29)	10.74 (62)	17.71 (51)	16.57 (23)	-5.35 (71)
Russell 1000 Value Index	12.42 (56)	-11.36 (67)	35.01 (58)	-5.03 (66)	4.00 (39)	9.45 (75)	15.12 (76)	16.19 (25)	-4.42 (63)
Difference	0.78	-4.28	-2.67	3.54	0.95	1.29	2.59	0.38	-0.93
IM U.S. Large Cap Value Equity (SA+CF) Median	12.75	-9.53	36.98	-3.28	2.49	11.73	17.78	13.33	-3.39
Ceredex Equity (Net)	13.06 (47)	-16.07 (89)	31.69 (73)	-2.03 (44)	4.39 (35)	10.15 (68)	17.06 (58)	15.91 (27)	-5.89 (78)
Russell 1000 Value Index	12.42 (56)	-11.36 (67)	35.01 (58)	-5.03 (66)	4.00 (39)	9.45 (75)	15.12 (76)	16.19 (25)	-4.42 (63)
Difference	0.64	-4.71	-3.32	3.00	0.39	0.70	1.94	-0.28	-1.47
IM U.S. Large Cap Value Equity (SA+CF) Median	12.75	-9.53	36.98	-3.28	2.49	11.73	17.78	13.33	-3.39
Rhumblin R1000G (Gross)	2.20 (73)	-22.51 (39)	27.29 (50)	37.64 (31)	3.71 (52)	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	2.20 (73)	-22.59 (40)	27.32 (49)	37.53 (31)	3.71 (52)	26.30 (39)	21.94 (39)	13.76 (21)	3.17 (58)
Difference	0.00	0.08	-0.03	0.11	0.00	N/A	N/A	N/A	N/A
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.91	-25.12	27.23	33.78	3.81	24.81	21.10	11.84	3.87
Rhumblin R1000G (Net)	2.19 (73)	-22.55 (39)	27.25 (50)	37.57 (31)	3.66 (53)	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	2.20 (73)	-22.59 (40)	27.32 (49)	37.53 (31)	3.71 (52)	26.30 (39)	21.94 (39)	13.76 (21)	3.17 (58)
Difference	-0.01	0.04	-0.07	0.04	-0.05	N/A	N/A	N/A	N/A
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.91	-25.12	27.23	33.78	3.81	24.81	21.10	11.84	3.87
Polen Capital (Gross)	-0.21 (90)	-34.01 (90)	30.69 (19)	35.75 (39)	9.69 (11)	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	2.20 (73)	-22.59 (40)	27.32 (49)	37.53 (31)	3.71 (52)	26.30 (39)	21.94 (39)	13.76 (21)	3.17 (58)
Difference	-2.41	-11.42	3.37	-1.78	5.98	N/A	N/A	N/A	N/A
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.91	-25.12	27.23	33.78	3.81	24.81	21.10	11.84	3.87

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



**Comparative Performance**  
**Total Fund**

As of December 31, 2022

	FYTD	Oct-2021 To Sep-2022	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015
Polen Capital (Net)	-0.33 (90)	-34.48 (91)	29.90 (24)	34.98 (44)	9.03 (15)	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	2.20 (73)	-22.59 (40)	27.32 (49)	37.53 (31)	3.71 (52)	26.30 (39)	21.94 (39)	13.76 (21)	3.17 (58)
Difference	-2.53	-11.89	2.58	-2.55	5.32	N/A	N/A	N/A	N/A
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.91	-25.12	27.23	33.78	3.81	24.81	21.10	11.84	3.87
Ark Disruptive Technology ETF (ARKK) (Net)	-17.22 (100)	-65.59 (100)	22.25 (89)	N/A	N/A	N/A	N/A	N/A	N/A
Russell 3000 Growth Index	2.31 (67)	-23.01 (20)	27.57 (61)	36.12 (28)	2.70 (32)	25.89 (38)	21.87 (27)	13.64 (18)	3.21 (41)
Difference	-19.53	-42.58	-5.32	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Growth Equity (MF) Median	3.96	-28.76	29.03	29.14	0.23	23.96	19.65	10.35	2.36
Ark Autonomous Technology & Robotics ETF (ARKQ) (Net)	-9.01 (100)	-41.80 (97)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	2.20 (68)	-22.59 (35)	27.32 (39)	37.53 (25)	3.71 (40)	26.30 (34)	21.94 (29)	13.76 (19)	3.17 (50)
Difference	-11.21	-19.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.58	-26.27	26.33	33.29	2.53	24.22	20.28	10.95	3.17
Defiance 5G Next Gen Connectivity ETF (FIVG) (Net)	5.17 (22)	-20.16 (8)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	2.20 (57)	-22.59 (20)	27.32 (30)	37.53 (31)	3.71 (30)	26.30 (36)	21.94 (28)	13.76 (15)	3.17 (43)
Difference	2.97	2.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Large Cap Growth Equity (MF) Median	2.48	-27.73	25.85	34.07	2.15	24.80	20.19	10.85	2.64
First Trust Cloud Computing ETF (SKYY) (net)	-4.64 (99)	-42.20 (97)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S&P MidCap 400 Growth	8.75 (17)	-19.52 (10)	33.26 (33)	8.25 (91)	-2.53 (84)	16.55 (84)	17.29 (59)	12.78 (13)	4.92 (25)
Difference	-13.39	-22.68	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Mid Cap Growth Equity (MF) Median	5.69	-29.66	30.55	23.53	3.44	21.73	17.94	8.76	2.09
Mutual of America Equity (Gross)	10.63 (34)	-15.35 (49)	43.37 (25)	-2.00 (56)	-2.50 (74)	14.25 (39)	17.31 (36)	15.25 (17)	1.41 (34)
S&P MidCap 400 Index	10.78 (33)	-15.25 (48)	43.68 (24)	-2.16 (56)	-2.49 (74)	14.21 (40)	17.52 (33)	15.33 (17)	1.40 (34)
Difference	-0.15	-0.10	-0.31	0.16	-0.01	0.04	-0.21	-0.08	0.01
IM U.S. Mid Cap Equity (MF) Median	9.14	-15.67	37.14	0.13	1.97	11.71	16.08	10.98	-0.36
Mutual of America Equity (Net)	10.63 (36)	-15.42 (52)	43.26 (33)	-2.07 (58)	-2.53 (80)	14.15 (43)	17.23 (51)	15.17 (23)	1.35 (43)
S&P MidCap 400 Index	10.78 (34)	-15.25 (52)	43.68 (30)	-2.16 (58)	-2.49 (79)	14.21 (43)	17.52 (48)	15.33 (22)	1.40 (43)
Difference	-0.15	-0.17	-0.42	0.09	-0.04	-0.06	-0.29	-0.16	-0.05
IM U.S. Mid Cap Equity (MF) Median	9.31	-14.70	38.48	1.40	2.89	13.02	17.35	12.20	0.76
Vanguard R2000 (VRTIX) (Net)	6.25 (91)	-23.48 (88)	47.79 (69)	0.51 (14)	-8.83 (59)	N/A	N/A	N/A	N/A
Russell 2000 Index	6.23 (92)	-23.50 (89)	47.68 (69)	0.39 (15)	-8.89 (61)	15.24 (24)	20.74 (28)	15.47 (39)	1.25 (45)
Difference	0.02	0.02	0.11	0.12	0.06	N/A	N/A	N/A	N/A
IM U.S. Small Cap Core Equity (MF) Median	9.65	-18.44	51.01	-8.26	-8.11	11.70	18.98	14.43	0.91

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





# Comparative Performance

## Total Fund

As of December 31, 2022

	FYTD	Oct-2021 To Sep-2022	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015
<b>Total International Equity</b>									
Vanguard Intl Eq (VTMGX) (Net)	17.11 (26)	-25.53 (32)	26.51 (34)	2.18 (65)	-2.08 (52)	2.78 (24)	19.25 (52)	8.03 (59)	-7.90 (45)
MSCI EAFE Index	17.40 (23)	-24.75 (26)	26.29 (34)	0.93 (69)	-0.82 (41)	3.25 (21)	19.65 (48)	7.06 (65)	-8.27 (47)
Difference	-0.29	-0.78	0.22	1.25	-1.26	-0.47	-0.40	0.97	0.37
IM International Equity (MF) Median	14.28	-28.15	23.07	6.53	-1.89	0.18	19.37	9.31	-8.71
iShares MSCI EM ex China ETF (EMXC) (Net)	9.07 (65)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI Emerging Markets Index	9.79 (53)	-27.80 (30)	18.58 (56)	10.91 (47)	-1.63 (66)	-0.44 (21)	22.91 (35)	17.21 (38)	-18.98 (58)
Difference	-0.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM Emerging Markets Equity (MF) Median	9.95	-29.88	19.25	10.39	0.25	-3.86	21.20	15.77	-18.47
Vanguard Emerging Mar Adm (VEMAX)	8.20 (74)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI Emerging Markets Index	9.79 (53)	-27.80 (30)	18.58 (56)	10.91 (47)	-1.63 (66)	-0.44 (21)	22.91 (35)	17.21 (38)	-18.98 (58)
Difference	-1.59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM Emerging Markets Equity (MF) Median	9.95	-29.88	19.25	10.39	0.25	-3.86	21.20	15.77	-18.47
JPM International Equity (Net)	16.73 (36)	-27.05 (60)	17.09 (91)	11.25 (34)	6.53 (6)	-3.43 (96)	18.60 (69)	10.45 (43)	N/A
MSCI EAFE Index	17.40 (28)	-24.75 (39)	26.29 (55)	0.93 (68)	-0.82 (38)	3.25 (46)	19.65 (59)	7.06 (71)	-8.27 (67)
Difference	-0.67	-2.30	-9.20	10.32	7.35	-6.68	-1.05	3.39	N/A
IM International Equity (SA+CF) Median	15.51	-25.98	27.20	5.86	-2.02	2.80	20.68	9.54	-5.60

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



# Comparative Performance

## Total Fund

As of December 31, 2022

	FYTD	Oct-2021 To Sep-2022	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015
<b>Total Fixed Income Composite</b>	<b>1.84</b>	<b>-10.79</b>	<b>-1.38</b>	<b>6.42</b>	<b>7.74</b>	<b>0.58</b>	<b>0.36</b>	<b>4.79</b>	<b>3.51</b>
Total Fixed Income Policy Index	1.55	-12.03	-1.00	6.63	8.97	-1.12	-0.09	4.01	3.06
Difference	0.29	1.24	-0.38	-0.21	-1.23	1.70	0.45	0.78	0.45
GHA A+ Fixed Income (Gross)	1.57 (78)	-12.07 (5)	-1.69 (98)	7.35 (56)	8.45 (97)	0.74 (5)	0.23 (70)	5.53 (60)	3.53 (11)
Blmbg. U.S. Aggregate: A+	1.55 (80)	-13.89 (23)	-1.60 (97)	6.92 (79)	9.78 (88)	-1.28 (95)	-0.42 (99)	4.50 (96)	3.44 (16)
Difference	0.02	1.82	-0.09	0.43	-1.33	2.02	0.65	1.03	0.09
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.82	-14.50	-0.03	7.53	10.42	-0.74	0.63	5.66	3.02
GHA A+ Fixed Income (Net)	1.50 (82)	-12.30 (6)	-1.94 (99)	7.08 (71)	8.18 (97)	0.48 (8)	-0.02 (91)	5.27 (70)	3.27 (27)
Blmbg. U.S. Aggregate: A+	1.55 (80)	-13.89 (23)	-1.60 (97)	6.92 (79)	9.78 (88)	-1.28 (95)	-0.42 (99)	4.50 (96)	3.44 (16)
Difference	-0.05	1.59	-0.34	0.16	-1.60	1.76	0.40	0.77	-0.17
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.82	-14.50	-0.03	7.53	10.42	-0.74	0.63	5.66	3.02
GHA EXCL A+ Fixed Income (Gross)	2.43 (3)	-8.70 (18)	-0.94 (98)	5.24 (87)	6.99 (82)	0.42 (14)	0.52 (66)	4.03 (41)	3.45 (7)
Bloomberg Intermediate US Govt/Credit Idx	1.54 (54)	-10.14 (63)	-0.40 (88)	6.32 (58)	8.17 (39)	-0.96 (95)	0.23 (87)	3.52 (75)	2.68 (51)
Difference	0.89	1.44	-0.54	-1.08	-1.18	1.38	0.29	0.51	0.77
IM U.S. Intermediate Duration (SA+CF) Median	1.56	-10.00	0.27	6.43	8.01	-0.36	0.70	3.89	2.69
GHA EXCL A+ Fixed Income (Net)	2.15 (6)	-8.93 (20)	-1.18 (100)	4.99 (88)	6.74 (84)	0.22 (20)	0.52 (66)	4.03 (41)	3.45 (7)
Bloomberg Intermediate US Govt/Credit Idx	1.54 (54)	-10.14 (63)	-0.40 (88)	6.32 (58)	8.17 (39)	-0.96 (95)	0.23 (87)	3.52 (75)	2.68 (51)
Difference	0.61	1.21	-0.78	-1.33	-1.43	1.18	0.29	0.51	0.77
IM U.S. Intermediate Duration (SA+CF) Median	1.56	-10.00	0.27	6.43	8.01	-0.36	0.70	3.89	2.69
<b>Total Real Estate (Gross)</b>	<b>-3.58 (33)</b>	<b>17.34 (69)</b>	<b>11.89 (82)</b>	<b>2.12 (40)</b>	<b>5.81 (71)</b>	<b>7.85 (74)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89 (40)	22.76 (43)	15.75 (52)	1.74 (44)	6.17 (69)	8.82 (58)	7.81 (51)	10.62 (68)	14.71 (56)
Difference	1.31	-5.42	-3.86	0.38	-0.36	-0.97	N/A	N/A	N/A
IM U.S. Open End Private Real Estate (SA+CF) Median	-5.18	21.16	15.91	1.62	6.80	8.98	7.83	11.18	15.20
Barings Real Estate (Gross)	-3.08 (24)	14.48 (80)	12.00 (82)	1.73 (45)	7.06 (39)	7.51 (84)	N/A	N/A	N/A
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89 (40)	22.76 (43)	15.75 (52)	1.74 (44)	6.17 (69)	8.82 (58)	7.81 (51)	10.62 (68)	14.71 (56)
Difference	1.81	-8.28	-3.75	-0.01	0.89	-1.31	N/A	N/A	N/A
IM U.S. Open End Private Real Estate (SA+CF) Median	-5.18	21.16	15.91	1.62	6.80	8.98	7.83	11.18	15.20
Barings Real Estate (Net)	-3.32	13.41	11.05	0.77	6.04	6.36	N/A	N/A	N/A
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89	22.76	15.75	1.74	6.17	8.82	7.81	10.62	14.71
Difference	1.57	-9.35	-4.70	-0.97	-0.13	-2.46	N/A	N/A	N/A
ASB Real Estate (Gross)	-4.01 (35)	19.96 (60)	11.76 (83)	2.59 (26)	4.35 (82)	8.26 (66)	N/A	N/A	N/A
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89 (40)	22.76 (43)	15.75 (52)	1.74 (44)	6.17 (69)	8.82 (58)	7.81 (51)	10.62 (68)	14.71 (56)
Difference	0.88	-2.80	-3.99	0.85	-1.82	-0.56	N/A	N/A	N/A
IM U.S. Open End Private Real Estate (SA+CF) Median	-5.18	21.16	15.91	1.62	6.80	8.98	7.83	11.18	15.20

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



**Comparative Performance**

**Total Fund**

**As of December 31, 2022**

	<b>FYTD</b>	<b>Oct-2021 To Sep-2022</b>	<b>Oct-2020 To Sep-2021</b>	<b>Oct-2019 To Sep-2020</b>	<b>Oct-2018 To Sep-2019</b>	<b>Oct-2017 To Sep-2018</b>	<b>Oct-2016 To Sep-2017</b>	<b>Oct-2015 To Sep-2016</b>	<b>Oct-2014 To Sep-2015</b>
ASB Real Estate (Net)	-4.25	18.73	10.42	1.35	3.08	6.92	N/A	N/A	N/A
NCREIF Fund Index-Open End Diversified Core (EW)	-4.89	22.76	15.75	1.74	6.17	8.82	7.81	10.62	14.71
Difference	0.64	-4.03	-5.33	-0.39	-3.09	-1.90	N/A	N/A	N/A

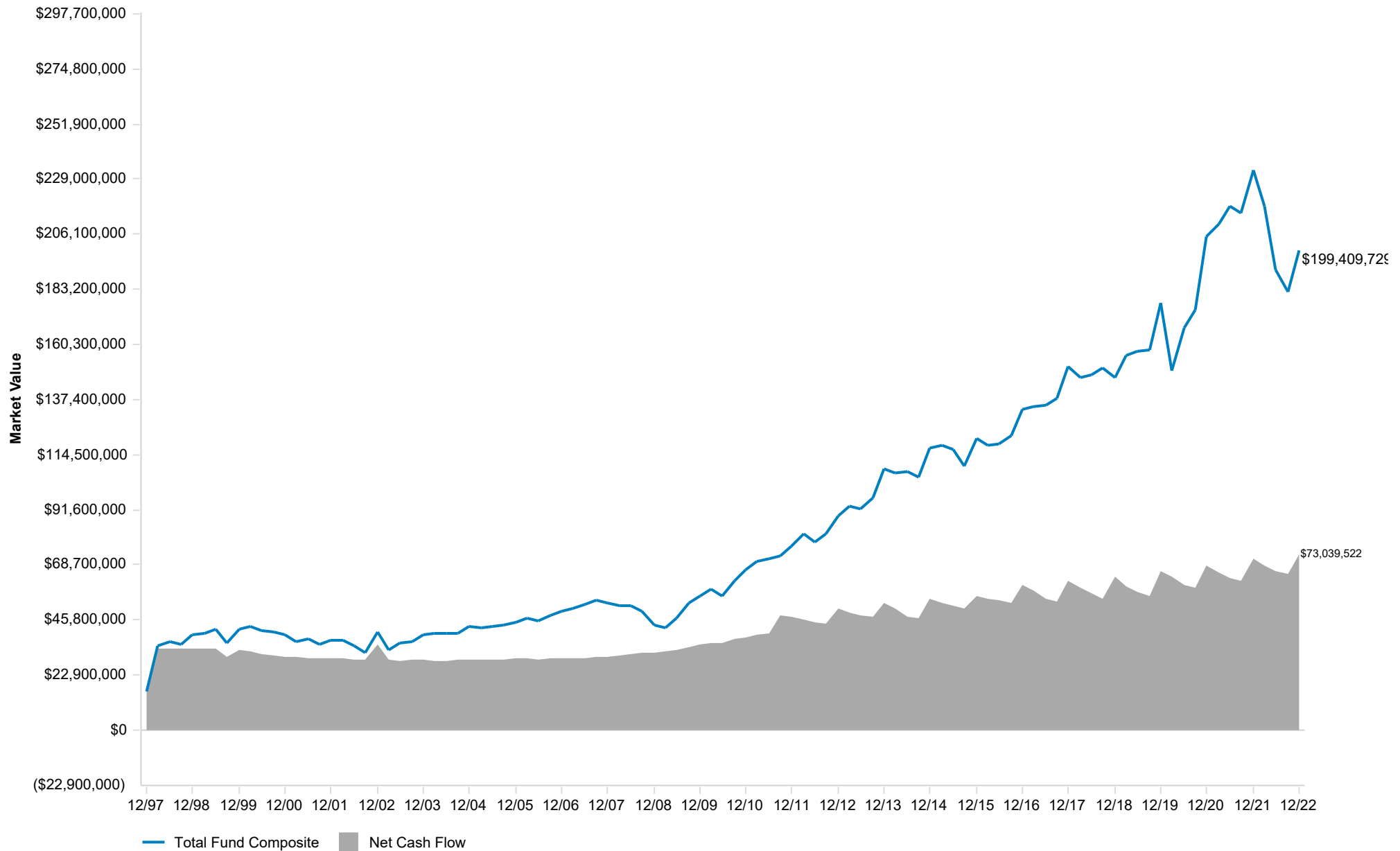
Returns for periods greater than one year are annualized. Returns are expressed as percentages.



## Financial Reconciliation Quarter to Date

	Market Value 10/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Return On Investment	Market Value 12/31/2022	Income	Apprec./ Deprec.
Ceredex Equity	28,407,764	1,100,000	-	-	-39,999	-4,155	3,827,280	33,290,890	202,605	3,624,675
Rhumblin R1000G	9,807,519	751,336	-	-	-1,336	-	192,217	10,749,735	-	192,217
Defiance 5G Next Gen Connectivity ETF (FIVG)	842,721	96,173	-	-	-	-	42,187	981,080	4,263	37,924
Polen Capital	8,620,730	2,000,000	-	-	-13,036	-1,261	-147,653	10,458,780	13,730	-161,383
Ark Disruptive Technology ETF (ARKK)	3,230,933	1,272,168	-	-	-	-	-826,653	3,676,448	-	-826,653
Ark Autonomous Technology & Robotics ETF (ARKQ)	827,936	98,547	-	-	-	-	-86,762	839,721	-	-86,762
First Trust Cloud Computing ETF (SKYY)	861,567	99,444	-	-	-	-	-51,119	909,892	-	-51,119
Mutual of America Equity	18,353,023	650,000	-	-	-	-5,975	2,008,251	21,005,299	207,910	1,800,341
Vanguard R2000 (VRTIX)	16,684,765	2,000,000	-	-	-	-	1,049,619	19,734,384	116,568	933,051
Vanguard Developed Mar (VTMGX)	6,457,086	-	-	-	-	-	1,104,487	7,561,573	86,629	1,017,858
iShares MSCI EM ex China ETF (EMXC)	2,001,323	330,435	-	-	-	-	196,637	2,528,395	45,050	151,587
Vanguard Emerging Mar Adm (VEMAX)	2,204,296	200,000	-	-	-	-	193,865	2,598,161	-	193,865
JPM International Equity	5,928,550	-	-	-	-	-	991,684	6,920,234	258,668	733,016
GHA A+ Fixed Income	29,490,205	1,600,000	-	-	-18,337	-4,661	491,929	31,559,136	250,847	241,082
GHA EXCL A+ Fixed Income	18,873,726	5,453,351	-	-	-11,791	-3,773	562,093	24,873,607	206,692	355,401
Barings Real Estate	9,908,997	-	-	-	-24,153	-	-304,810	9,580,034	79,801	-384,611
ASB Real Estate	11,314,981	-	-	-	-27,152	-	-454,177	10,833,652	-	-454,177
R&D Cash	8,498,210	-15,651,455	11,180,079	-2,681,414	-	-43,769	7,054	1,308,706	7,054	-
<b>Total Fund Composite</b>	<b>182,314,335</b>	<b>-</b>	<b>11,180,079</b>	<b>-2,681,414</b>	<b>-135,804</b>	<b>-63,595</b>	<b>8,796,126</b>	<b>199,409,729</b>	<b>1,479,816</b>	<b>7,316,311</b>

**Schedule of Investable Assets**



**Schedule of Investable Assets**  
**Total Fund**  
Since Inception Ending December 31, 2022

Schedule of Investable Assets							
Periods Ending	Beginning Market Value \$	Contributions \$	Withdrawals \$	Net Cash Flow \$	Gain/Loss \$	Ending Market Value \$	%Return
Dec-1997	-	-	-	-	-	15,998,300	N/A
Mar-1998	15,998,300	17,675,917	-	17,675,917	1,591,809	35,266,026	9.95
Jun-1998	35,266,026	237,384	-	237,384	1,275,793	36,779,203	3.61
Sep-1998	36,779,203	-	34,946	-34,946	-1,362,667	35,381,590	-3.71
Dec-1998	35,381,590	-	84,404	-84,404	4,428,727	39,725,913	12.53
Mar-1999	39,725,913	45,809	-	45,809	571,996	40,343,718	1.44
Jun-1999	40,343,718	-	83,881	-83,881	1,732,162	41,991,999	4.30
Sep-1999	41,991,999	-	3,513,461	-3,513,461	-1,997,343	36,481,195	-4.88
Dec-1999	36,481,195	3,141,344	-	3,141,344	2,286,800	41,909,339	6.31
Mar-2000	41,909,339	-	531,269	-531,269	1,445,328	42,823,398	3.47
Jun-2000	42,823,398	-	986,106	-986,106	-362,829	41,474,463	-0.86
Sep-2000	41,474,463	-	690,560	-690,560	215,472	40,999,375	0.52
Dec-2000	40,999,375	-	577,326	-577,326	-951,616	39,470,433	-2.34
Mar-2001	39,470,433	-	393,550	-393,550	-2,158,027	36,918,856	-5.50
Jun-2001	36,918,856	-	225,319	-225,319	1,167,090	37,860,627	3.17
Sep-2001	37,860,627	40,297	-	40,297	-2,075,500	35,825,424	-5.47
Dec-2001	35,825,424	-	184,219	-184,219	1,729,006	37,370,211	4.84
Mar-2002	37,370,211	-	223,926	-223,926	278,998	37,425,283	0.75
Jun-2002	37,425,283	-	348,391	-348,391	-1,937,612	35,139,280	-5.21
Sep-2002	35,139,280	-	221,225	-221,225	-2,602,605	32,315,450	-7.44
Dec-2002	32,315,450	6,836,371	-	6,836,371	1,438,642	40,590,463	4.41
Mar-2003	40,590,463	-	6,795,099	-6,795,099	-410,557	33,384,807	-1.17
Jun-2003	33,384,807	-	197,693	-197,693	2,866,553	36,053,667	8.62
Sep-2003	36,053,667	252,293	-	252,293	741,955	37,047,915	2.05
Dec-2003	37,047,915	-	21,113	-21,113	2,460,444	39,487,246	6.67
Mar-2004	39,487,246	-	134,073	-134,073	822,971	40,176,144	2.09
Jun-2004	40,176,144	1,194	-	1,194	3,493	40,180,831	-0.01
Sep-2004	40,180,831	397,660	-	397,660	-339,911	40,238,580	-0.85
Dec-2004	40,238,580	54,577	-	54,577	2,802,548	43,095,705	6.96
Mar-2005	43,095,705	-	186,709	-186,709	-417,831	42,491,165	-0.98
Jun-2005	42,491,165	-	34,346	-34,346	731,050	43,187,869	1.72
Sep-2005	43,187,869	-	43,678	-43,678	503,689	43,647,880	1.17
Dec-2005	43,647,880	423,649	-	423,649	950,170	45,021,699	2.19
Mar-2006	45,021,699	51,421	-	51,421	1,403,105	46,476,225	3.11
Jun-2006	46,476,225	-	83,590	-83,590	-718,538	45,674,097	-1.55
Sep-2006	45,674,097	586,713	-	586,713	1,503,788	47,764,598	3.27
Dec-2006	47,764,598	-	322,499	-322,499	1,978,220	49,420,319	4.19
Mar-2007	49,420,319	45,644	-	45,644	895,483	50,361,446	1.82
Jun-2007	50,361,446	243,909	-	243,909	1,901,240	52,506,595	3.78
Sep-2007	52,506,595	400,316	-	400,316	1,166,875	54,073,786	2.20



**Schedule of Investable Assets**  
**Total Fund**  
Since Inception Ending December 31, 2022

Periods Ending	Beginning Market Value \$	Contributions \$	Withdrawals \$	Net Cash Flow \$	Gain/Loss \$	Ending Market Value \$	%Return
Dec-2007	54,073,786	190,416	-	190,416	-1,264,986	52,999,216	-2.33
Mar-2008	52,999,216	475,161	-	475,161	-1,773,644	51,700,733	-3.33
Jun-2008	51,700,733	157,090	-	157,090	19,456	51,877,279	0.06
Sep-2008	51,877,279	729,736	-	729,736	-3,090,400	49,516,615	-5.88
Dec-2008	49,516,615	272,688	-	272,688	-5,953,060	43,836,243	-12.10
Mar-2009	43,836,243	645,560	-	645,560	-2,154,563	42,327,240	-4.63
Jun-2009	42,327,240	466,248	-	466,248	4,028,207	46,821,695	9.51
Sep-2009	46,821,695	1,231,187	-	1,231,187	4,915,363	52,968,245	10.42
Dec-2009	52,968,245	728,073	-	728,073	2,085,980	55,782,298	3.90
Mar-2010	55,782,298	530,170	-	530,170	2,014,347	58,326,815	3.60
Jun-2010	58,326,815	495,784	-	495,784	-3,139,138	55,683,461	-5.38
Sep-2010	55,683,461	1,660,776	-	1,660,776	4,453,702	61,797,939	7.87
Dec-2010	61,797,939	651,202	-	651,202	4,073,218	66,522,359	6.59
Mar-2011	66,522,359	634,816	-	634,816	2,936,677	70,093,852	4.43
Jun-2011	70,093,852	665,257	-	665,257	532,225	71,291,334	0.76
Sep-2011	71,291,334	7,862,053	-	7,862,053	-6,957,257	72,196,130	-9.67
Dec-2011	72,196,130	-	654,876	-654,876	4,773,351	76,314,605	6.63
Mar-2012	76,314,605	-	1,466,628	-1,466,628	6,525,345	81,373,322	8.63
Jun-2012	81,373,322	-	1,210,329	-1,210,329	-1,962,942	78,200,051	-2.42
Sep-2012	78,200,051	-	328,909	-328,909	3,699,212	81,570,354	4.75
Dec-2012	81,570,354	6,149,365	-	6,149,365	1,463,069	89,182,788	1.61
Mar-2013	89,182,788	-	1,674,077	-1,674,077	5,563,247	93,071,958	6.29
Jun-2013	93,071,958	-	1,198,519	-1,198,519	117,987	91,991,426	0.15
Sep-2013	91,991,426	-	302,113	-302,113	4,852,470	96,541,783	5.28
Dec-2013	96,541,783	5,486,468	-	5,486,468	6,283,251	108,311,502	6.10
Mar-2014	108,311,502	-	2,359,425	-2,359,425	918,503	106,870,580	0.88
Jun-2014	106,870,580	-	3,191,614	-3,191,614	3,629,450	107,308,416	3.49
Sep-2014	107,308,416	-	452,620	-452,620	-1,543,346	105,312,450	-1.43
Dec-2014	105,312,450	7,621,833	-	7,621,833	4,031,767	116,966,050	3.57
Mar-2015	116,966,050	-	1,512,343	-1,512,343	2,856,300	118,310,007	2.46
Jun-2015	118,310,007	-	1,332,712	-1,332,712	-581,700	116,395,595	-0.50
Sep-2015	116,395,595	-	1,099,361	-1,099,361	-5,449,028	109,847,206	-4.72
Dec-2015	109,847,206	8,251,060	2,762,661	5,488,399	5,689,897	121,025,502	2.58
Mar-2016	121,025,502	7,589,316	8,599,372	-1,010,056	-1,803,617	118,211,829	1.44
Jun-2016	118,211,829	1,424,212	2,565,534	-1,141,322	2,049,990	119,120,498	1.74
Sep-2016	119,120,498	3,743,647	4,750,720	-1,007,073	4,157,724	122,271,148	3.49
Dec-2016	122,271,148	20,010,869	12,411,919	7,598,951	3,172,123	133,042,222	2.44
Mar-2017	133,042,222	3,994,591	6,390,328	-2,395,737	4,004,829	134,651,313	3.04
Jun-2017	134,651,313	12,268,921	15,569,852	-3,300,931	3,602,838	134,953,220	2.71
Sep-2017	134,953,220	15,754,188	16,964,685	-1,210,497	4,039,130	137,781,854	3.00
Dec-2017	137,781,854	34,723,496	26,093,106	8,630,390	4,656,414	151,068,658	3.17



**Schedule of Investable Assets**  
**Total Fund**  
Since Inception Ending December 31, 2022

Periods Ending	Beginning Market Value \$	Contributions \$	Withdrawals \$	Net Cash Flow \$	Gain/Loss \$	Ending Market Value \$	%Return
Mar-2018	151,068,658	36,560,097	39,599,539	-3,039,442	-1,310,015	146,719,201	-0.90
Jun-2018	146,719,201	2,531,546	4,858,682	-2,327,136	3,494,498	147,886,563	2.40
Sep-2018	147,886,563	21,023,715	23,353,030	-2,329,315	5,161,780	150,719,028	3.51
Dec-2018	150,719,028	21,868,800	12,579,706	9,289,095	-13,690,229	146,317,894	-8.54
Mar-2019	146,317,894	3,053,173	6,698,694	-3,645,521	12,799,990	155,472,363	8.81
Jun-2019	155,472,363	8,994,188	11,622,765	-2,628,576	4,830,123	157,673,909	3.15
Sep-2019	157,673,909	2,824,811	4,364,556	-1,539,745	1,977,441	158,111,606	1.26
Dec-2019	158,111,606	23,694,123	13,560,039	10,134,085	9,408,326	177,654,016	5.59
Mar-2020	177,654,016	1,829,074	4,196,065	-2,366,991	-25,735,318	149,551,707	-14.62
Jun-2020	149,551,707	3,874,820	7,270,528	-3,395,708	20,766,832	166,922,831	13.95
Sep-2020	166,922,831	13,422,990	14,502,057	-1,079,067	8,806,775	174,650,539	5.29
Dec-2020	174,650,539	22,323,848	13,115,255	9,208,593	21,482,659	205,341,792	11.66
Mar-2021	205,341,792	24,471,180	27,363,519	-2,892,338	8,123,252	210,572,706	3.99
Jun-2021	210,572,706	2,690,535	4,917,426	-2,226,891	9,431,986	217,777,801	4.49
Sep-2021	217,777,801	31,272,674	32,544,064	-1,271,390	-1,788,837	214,717,574	-0.82
Dec-2021	214,717,574	24,798,644	15,700,684	9,097,960	9,077,169	232,892,703	4.05
Mar-2022	232,892,703	9,412,362	12,201,299	-2,788,938	-12,602,016	217,501,749	-5.43
Jun-2022	217,501,749	3,349,301	5,476,901	-2,127,600	-23,869,823	191,504,327	-11.01
Sep-2022	191,504,327	3,688,340	5,057,057	-1,368,717	-7,821,274	182,314,335	-4.15
Dec-2022	182,314,335	33,223,456	24,924,189	8,299,267	8,796,126	199,409,729	4.56
	15,998,300	469,756,361	412,715,139	57,041,222	126,370,207	199,409,729	6.02





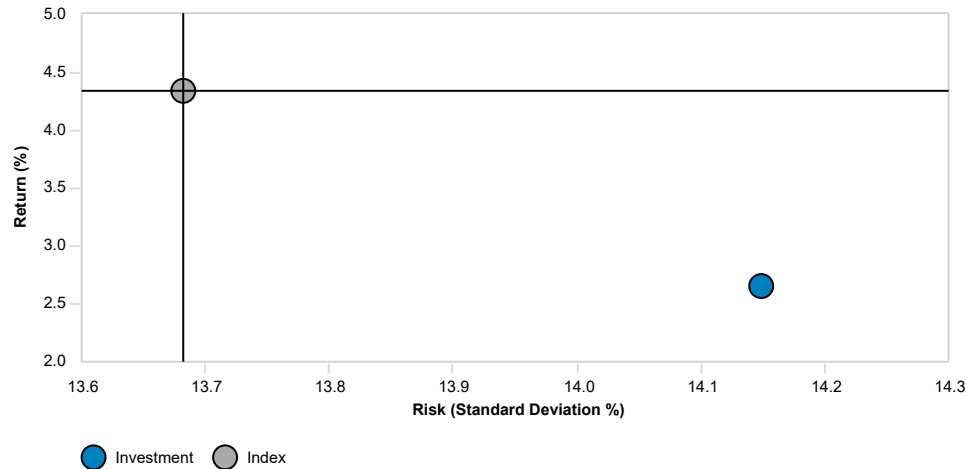
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.66	14.15	0.20	98.52	7	107.45	5
Index	4.34	13.68	0.32	100.00	8	100.00	4

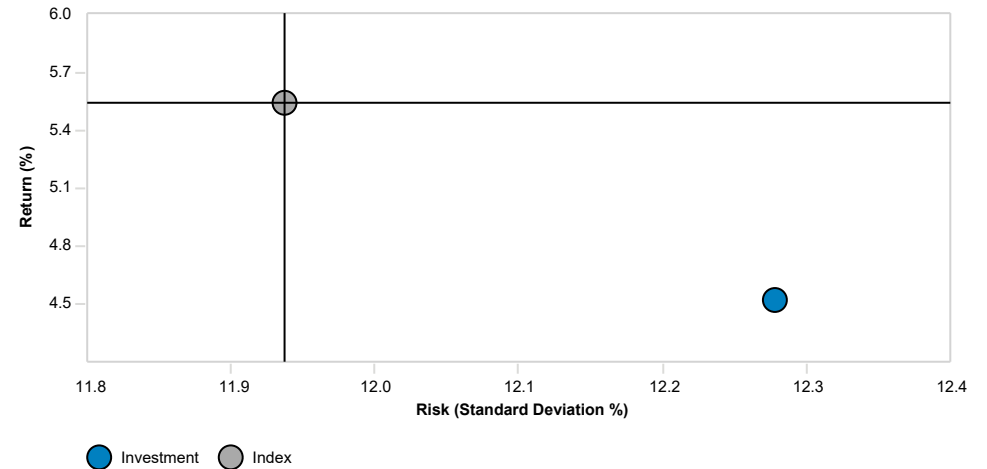
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.52	12.28	0.32	99.35	13	106.03	7
Index	5.55	11.94	0.41	100.00	14	100.00	6

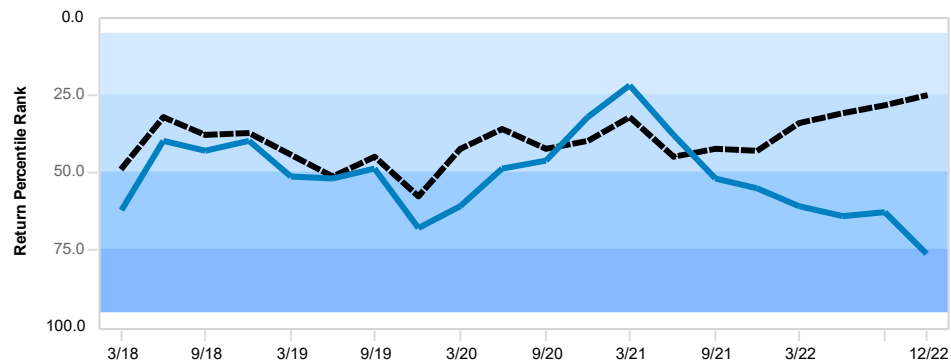
### Risk and Return 3 Years



### Risk and Return 5 Years

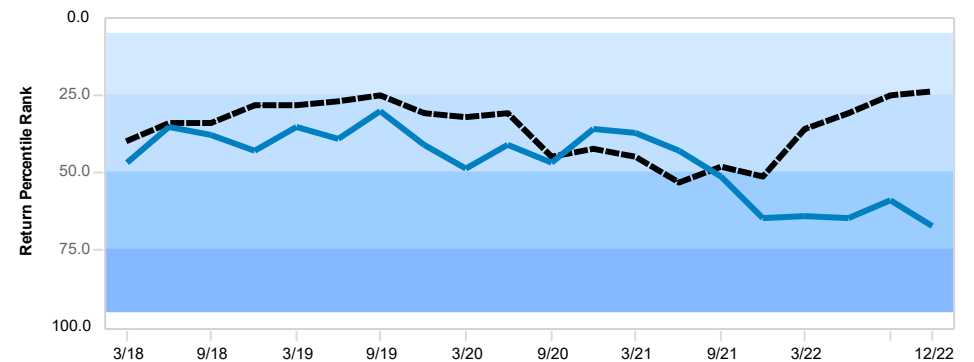


### 3 Year Rolling Percentile Rank All Public Plans-Total Fund



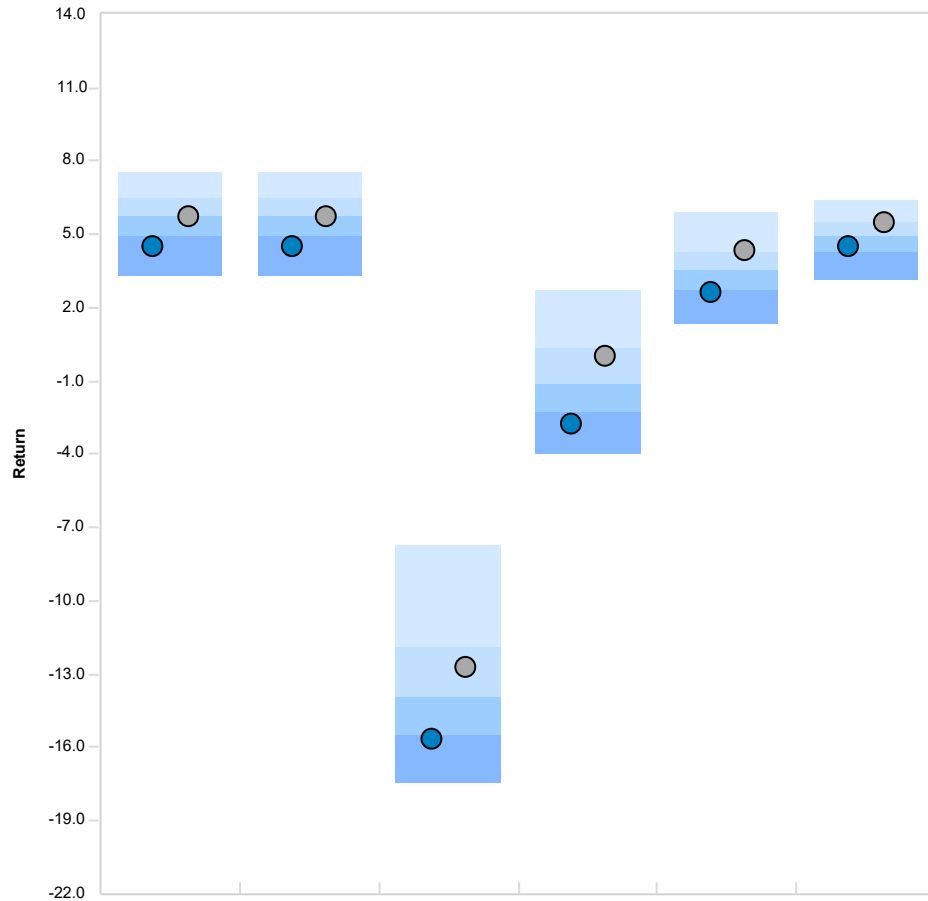
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	1 (5%)	8 (40%)	10 (50%)	1 (5%)
Index	20	1 (5%)	17 (85%)	2 (10%)	0 (0%)

### 5 Year Rolling Percentile Rank All Public Plans-Total Fund

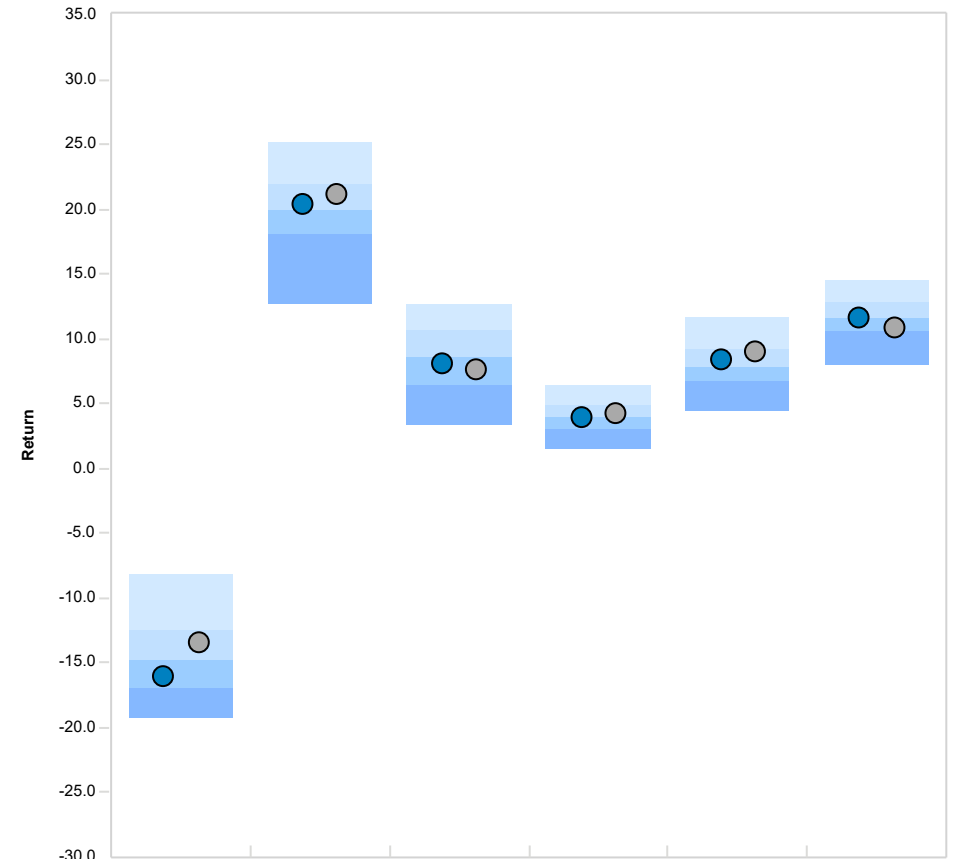


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	14 (70%)	6 (30%)	0 (0%)
Index	20	3 (15%)	15 (75%)	2 (10%)	0 (0%)

**Plan Sponsor Peer Group Analysis vs. All Public Plans-Total Fund**



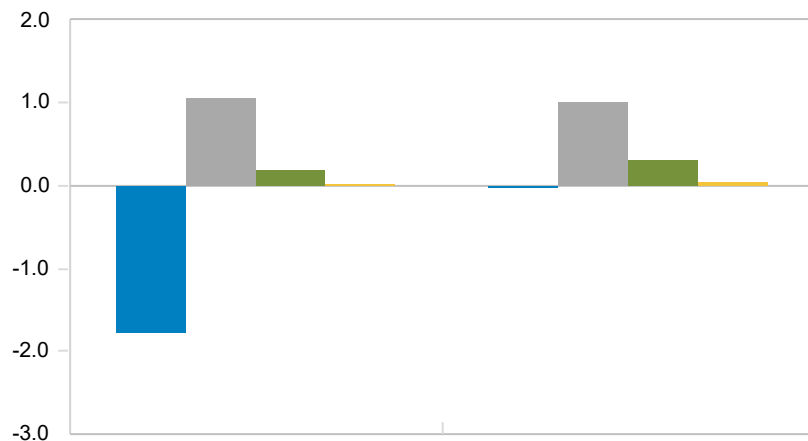
**Plan Sponsor Peer Group Analysis vs. All Public Plans-Total Fund**



**Comparative Performance**

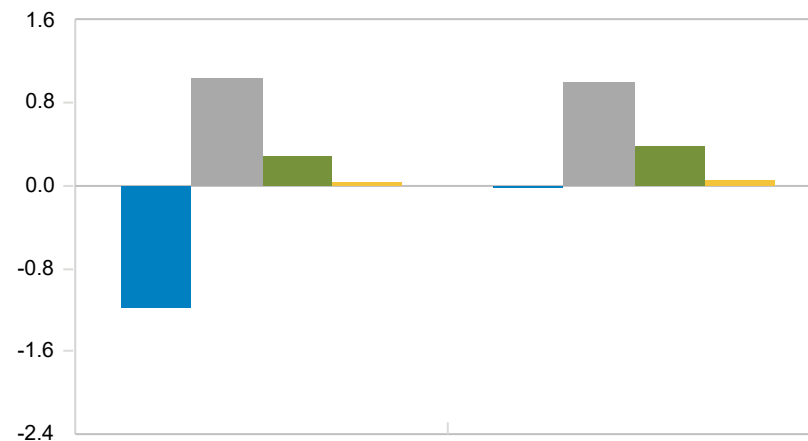
	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-4.15 (41)	-11.01 (60)	-5.43 (63)	4.05 (70)	-0.82 (95)	4.49 (89)
Index	-3.84 (29)	-10.50 (46)	-4.07 (27)	4.98 (29)	0.19 (27)	4.81 (81)
Median	-4.30	-10.64	-4.94	4.50	-0.13	5.46

Risk / Reward Historical Statistics 3 Years Ending December 31, 2022



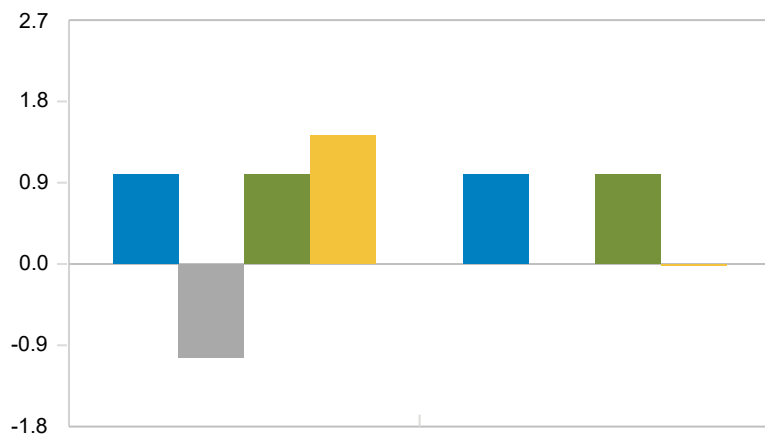
	Total Fund Composite	Total Fund Policy Index
Alpha	-1.78	0.00
Beta	1.05	1.00
Sharpe Ratio	0.20	0.30
Treynor Ratio	0.03	0.05

Risk / Reward Historical Statistics 5 Years Ending December 31, 2022



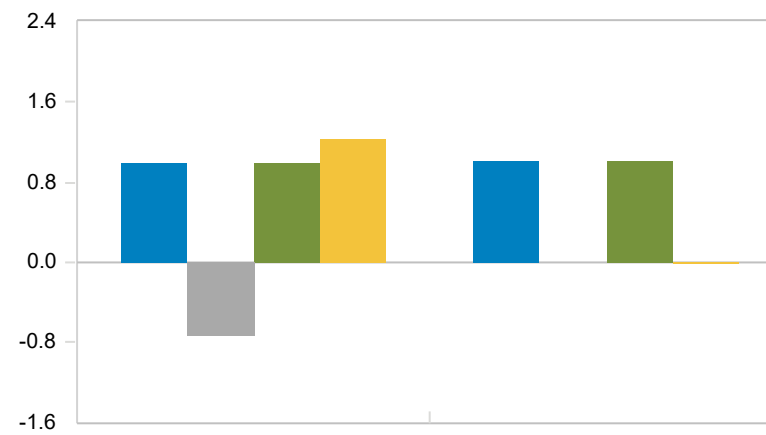
	Total Fund Composite	Total Fund Policy Index
Alpha	-1.17	0.00
Beta	1.04	1.00
Sharpe Ratio	0.30	0.38
Treynor Ratio	0.04	0.05

Index Relative Historical Statistics 3 Years Ending December 31, 2022



	Total Fund Composite	Total Fund Policy Index
Actual Correlation	1.00	1.00
Information Ratio	-1.05	N/A
R-Squared	0.99	1.00
Tracking Error	1.44	0.00

Index Relative Historical Statistics 5 Years Ending December 31, 2022

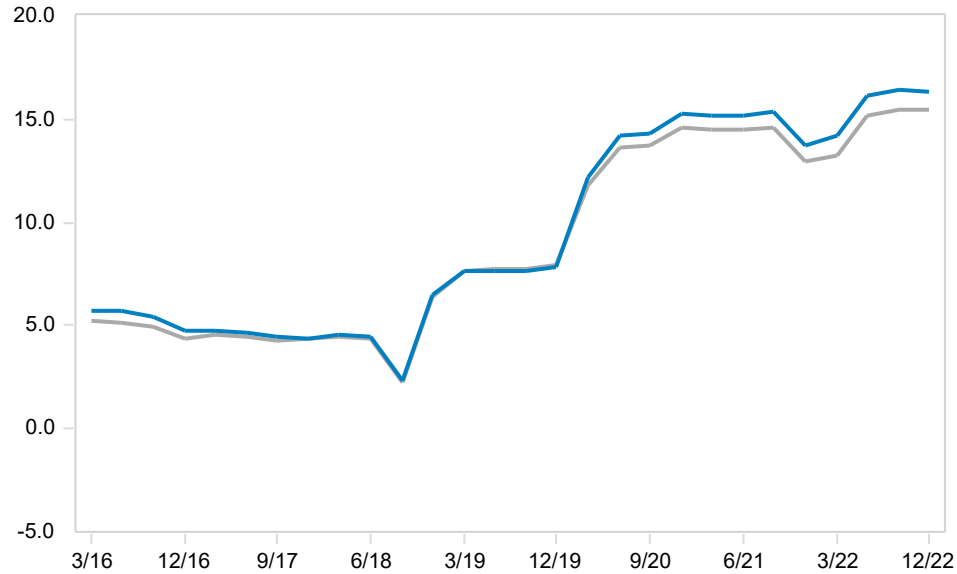


	Total Fund Composite	Total Fund Policy Index
Actual Correlation	1.00	1.00
Information Ratio	-0.74	N/A
R-Squared	0.99	1.00
Tracking Error	1.22	0.00

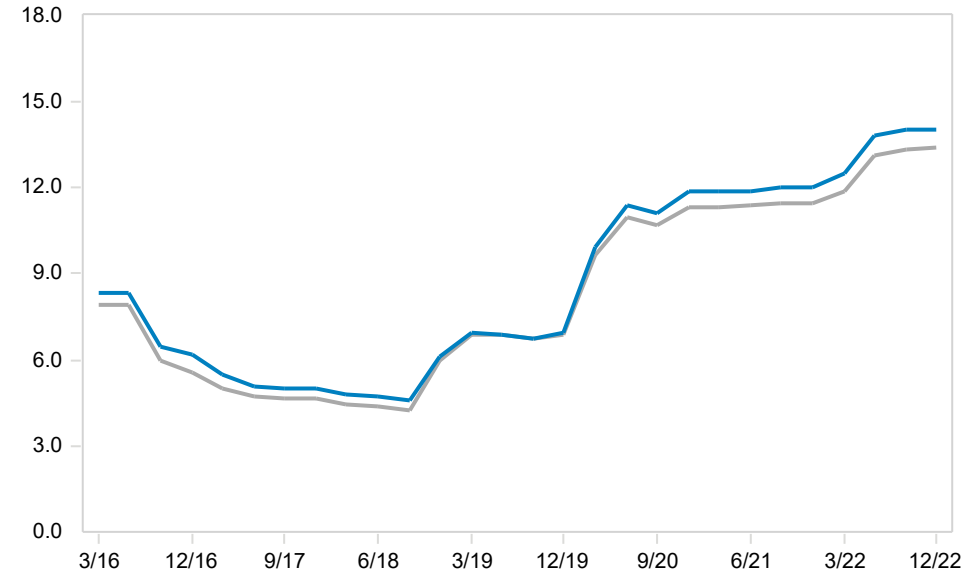
Benchmark: Total Fund Policy Index



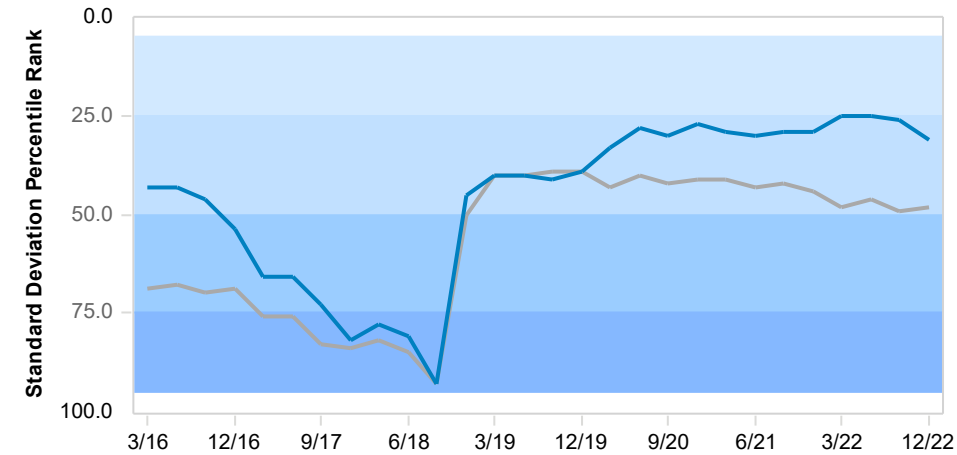
Standard Deviation 12 Quarters Rolling Periods As of December 31, 2022



Standard Deviation 20 Quarters Rolling Periods As of December 31, 2022

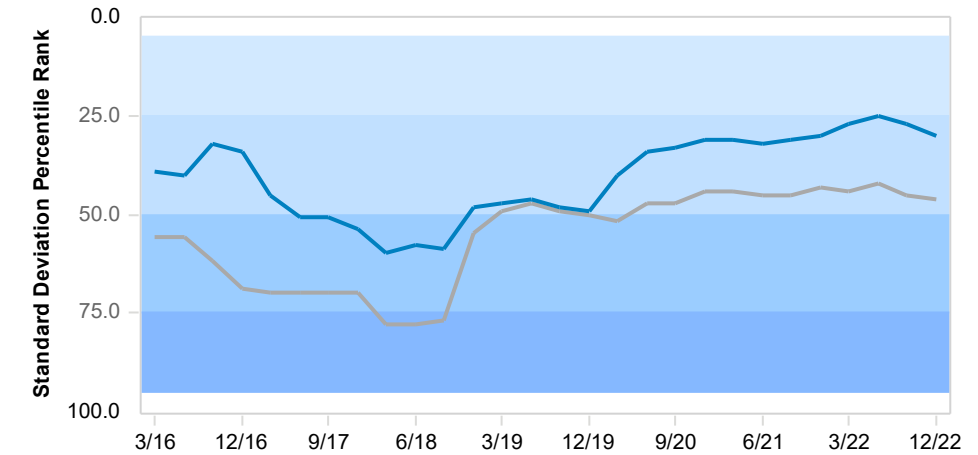


Rolling Percentile Ranking 12 Quarters Rolling Periods As of December 31, 2022



	Total Period	5-25 Count	25-50 Count	50-75 Count	75-95 Count
— Total Fund Composite	28	2 (7%)	18 (64%)	4 (14%)	4 (14%)
— Total Fund Policy Index	28	0 (0%)	17 (61%)	4 (14%)	7 (25%)

Rolling Percentile Ranking 20 Quarters Rolling Periods As of December 31, 2022



	Total Period	5-25 Count	25-50 Count	50-75 Count	75-95 Count
— Total Fund Composite	28	1 (4%)	21 (75%)	6 (21%)	0 (0%)
— Total Fund Policy Index	28	0 (0%)	15 (54%)	10 (36%)	3 (11%)

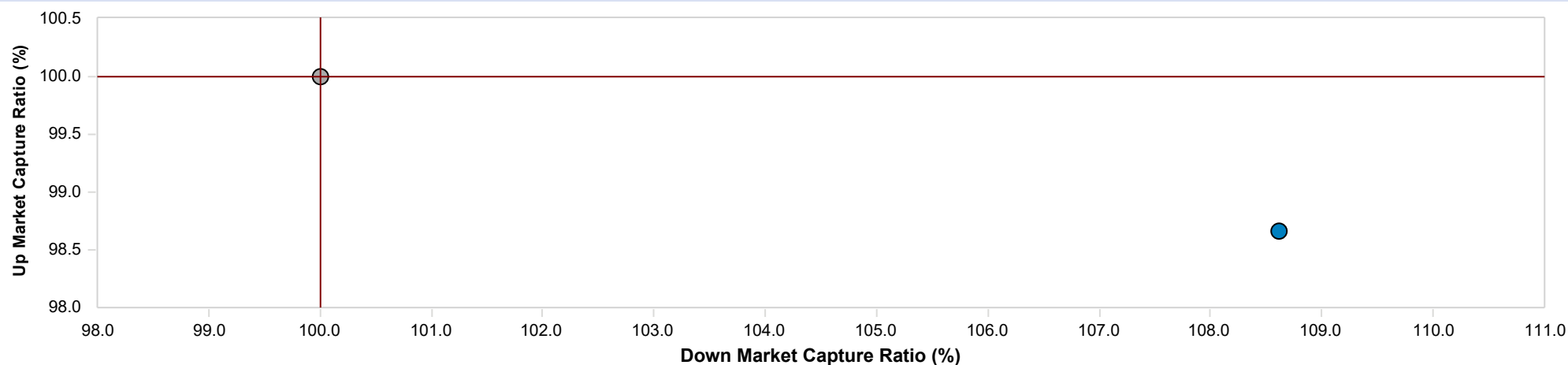
Peer: All Public Plans-Total Fund



Up/Down Markets

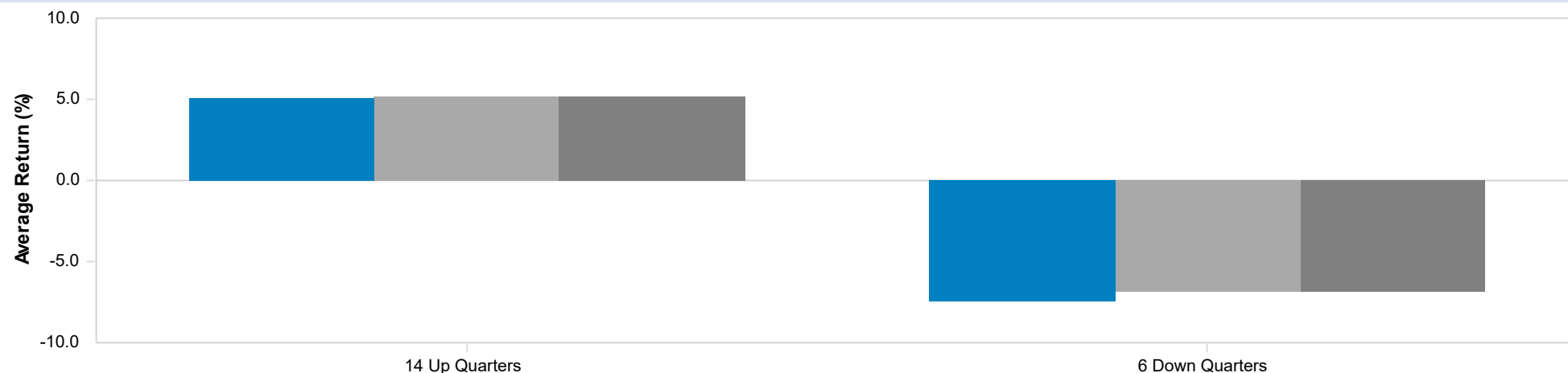
	Full Period Return		Quarters Benchmark Up(14)				Quarters Benchmark Down(6)			
	Portfolio	Benchmark	Portfolio Ahead		Portfolio Behind		Portfolio Ahead		Portfolio Behind	
			No. Quarters	Avg Ahead	No. Quarters	Avg Behind	No. Quarters	Avg Ahead	No. Quarters	Avg Behind
Total Fund Composite	4.52	5.55	8	0.38	6	-0.67	0	0.00	6	-0.59
Total Fund Policy Index	5.55	5.55	14	0.00	0	0.00	6	0.00	0	0.00

Up/Down Markets



● Total Fund Composite ● Total Fund Policy Index

Up Down Market Bar Chart

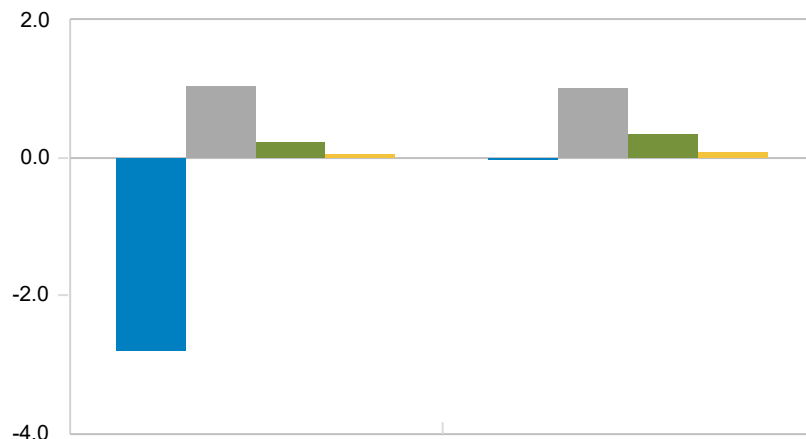


■ Total Fund Composite ■ Total Fund Policy Index ■ Total Fund Policy Index

Calculation based on quarterly periodicity.

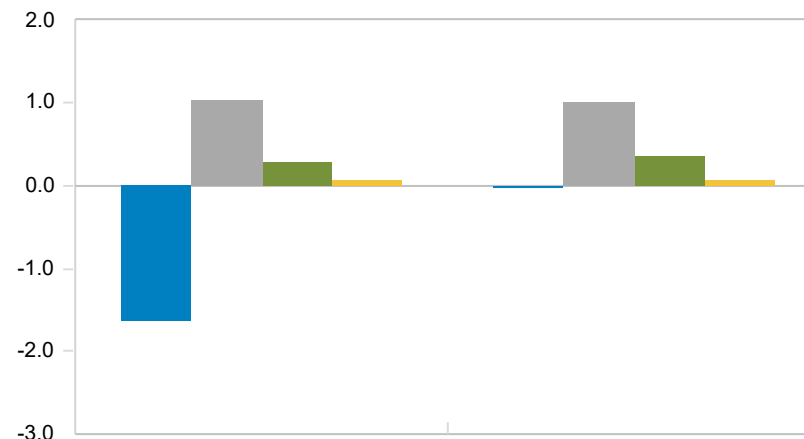


Risk / Reward Historical Statistics 3 Years Ending December 31, 2022



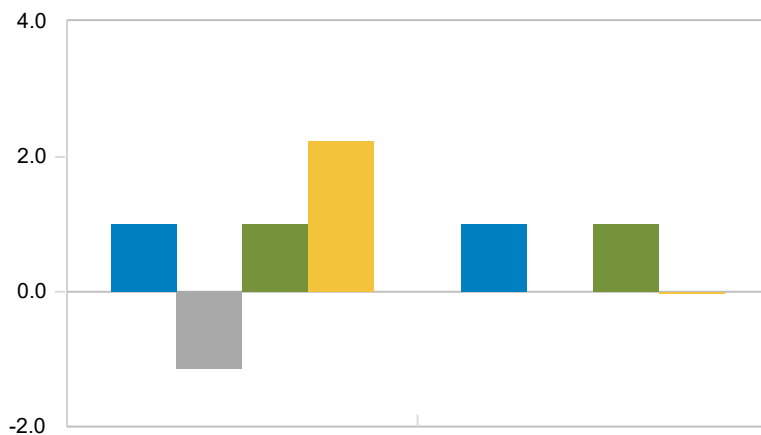
	Total Equity Composite	Total Equity Policy Index
Alpha	-2.81	0.00
Beta	1.03	1.00
Sharpe Ratio	0.23	0.33
Treynor Ratio	0.06	0.09

Risk / Reward Historical Statistics 5 Years Ending December 31, 2022



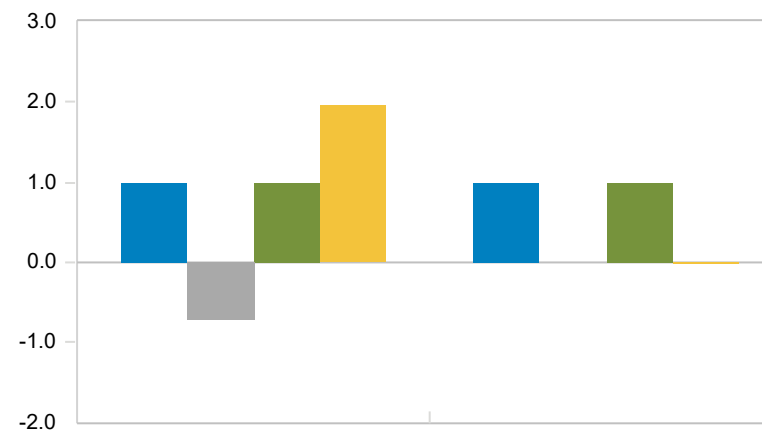
	Total Equity Composite	Total Equity Policy Index
Alpha	-1.62	0.00
Beta	1.03	1.00
Sharpe Ratio	0.30	0.37
Treynor Ratio	0.07	0.08

Index Relative Historical Statistics 3 Years Ending December 31, 2022



	Total Equity Composite	Total Equity Policy Index
Actual Correlation	1.00	1.00
Information Ratio	-1.14	N/A
R-Squared	0.99	1.00
Tracking Error	2.24	0.00

Index Relative Historical Statistics 5 Years Ending December 31, 2022

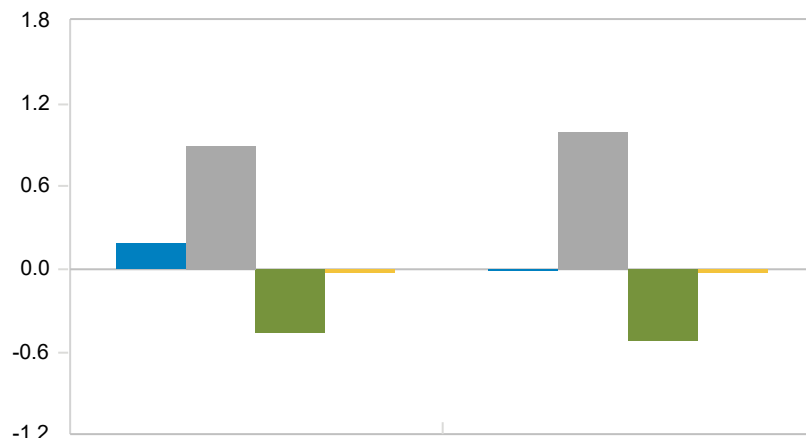


	Total Equity Composite	Total Equity Policy Index
Actual Correlation	1.00	1.00
Information Ratio	-0.71	N/A
R-Squared	0.99	1.00
Tracking Error	1.94	0.00

Benchmark: Total Equity Policy Index

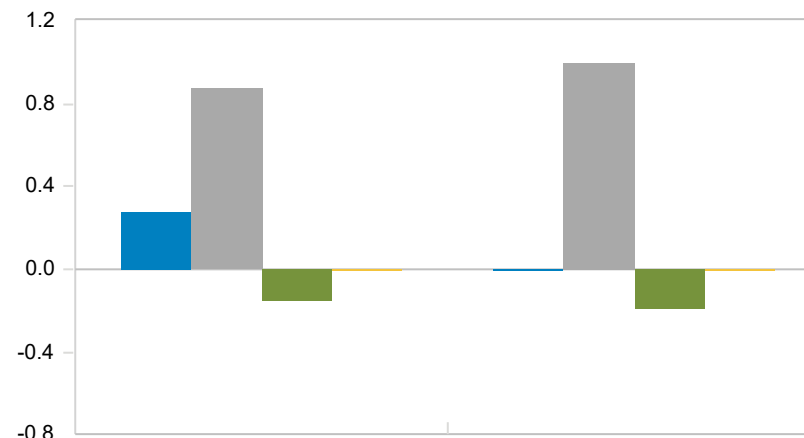


Risk / Reward Historical Statistics 3 Years Ending December 31, 2022



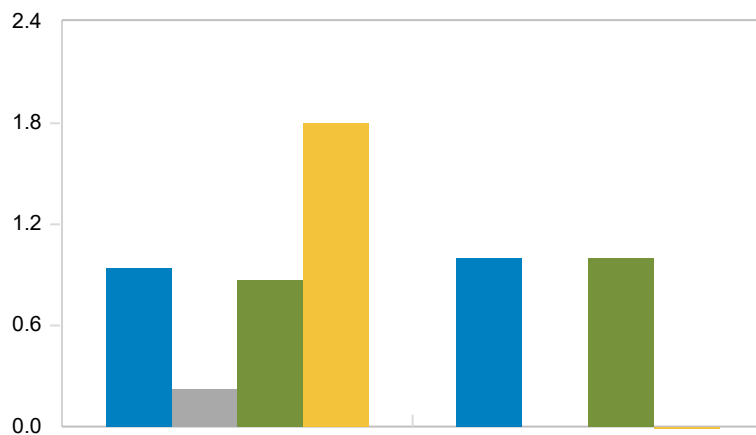
	Total Fixed Income Composite	Total Fixed Income Policy Index
Alpha	0.19	0.00
Beta	0.89	1.00
Sharpe Ratio	-0.46	-0.52
Treynor Ratio	-0.02	-0.03

Risk / Reward Historical Statistics 5 Years Ending December 31, 2022



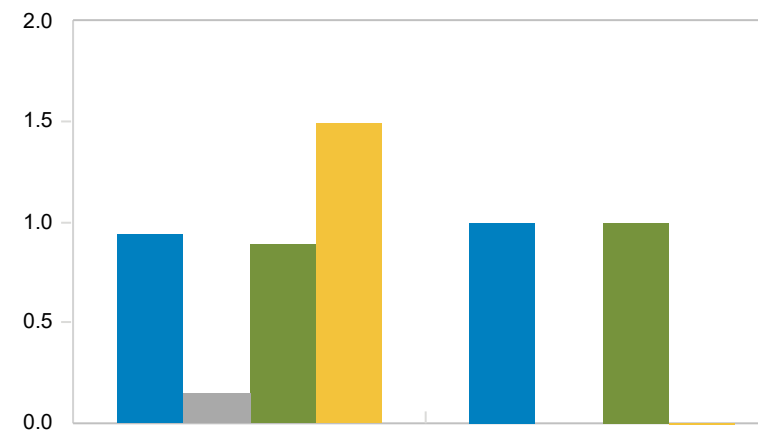
	Total Fixed Income Composite	Total Fixed Income Policy Index
Alpha	0.28	0.00
Beta	0.87	1.00
Sharpe Ratio	-0.15	-0.20
Treynor Ratio	-0.01	-0.01

Index Relative Historical Statistics 3 Years Ending December 31, 2022



	Total Fixed Income Composite	Total Fixed Income Policy Index
Actual Correlation	0.94	1.00
Information Ratio	0.22	N/A
R-Squared	0.88	1.00
Tracking Error	1.79	0.00

Index Relative Historical Statistics 5 Years Ending December 31, 2022



	Total Fixed Income Composite	Total Fixed Income Policy Index
Actual Correlation	0.94	1.00
Information Ratio	0.15	N/A
R-Squared	0.89	1.00
Tracking Error	1.50	0.00

Benchmark: Total Fixed Income Policy Index



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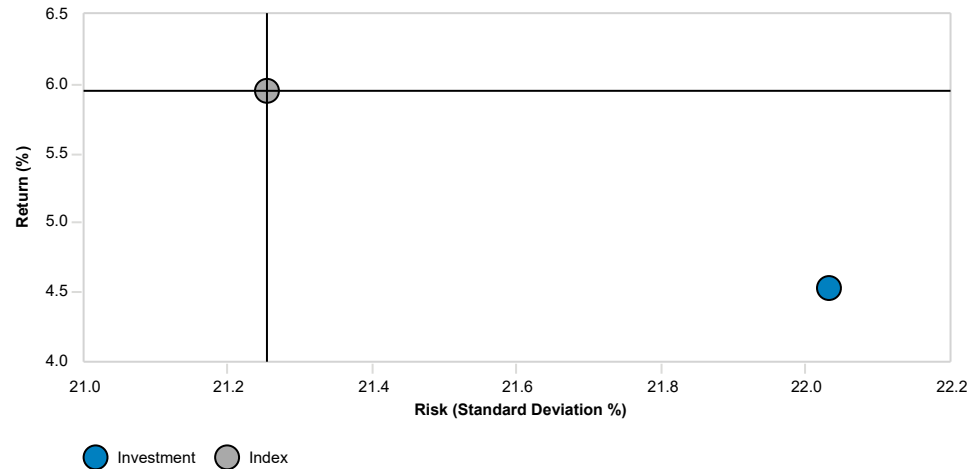
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.54	22.03	0.28	98.40	7	102.40	5
Index	5.96	21.25	0.35	100.00	7	100.00	5

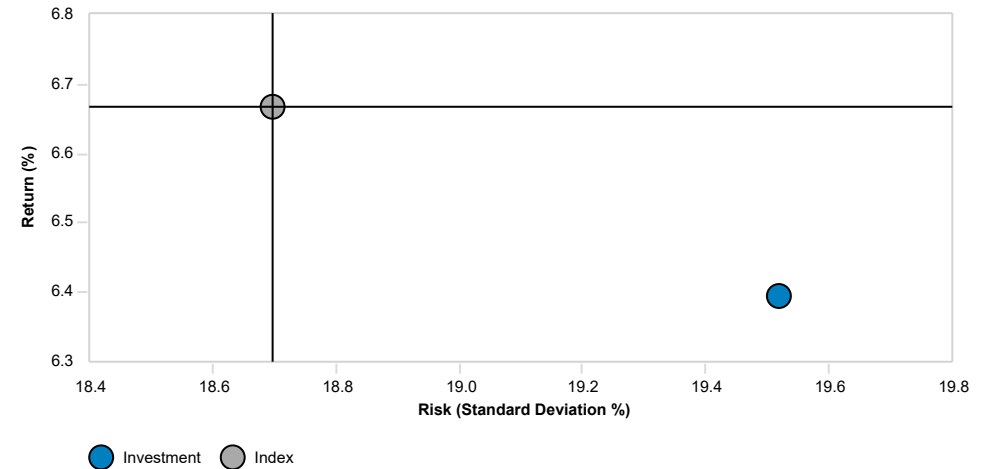
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.39	19.52	0.35	102.21	13	103.40	7
Index	6.67	18.70	0.37	100.00	13	100.00	7

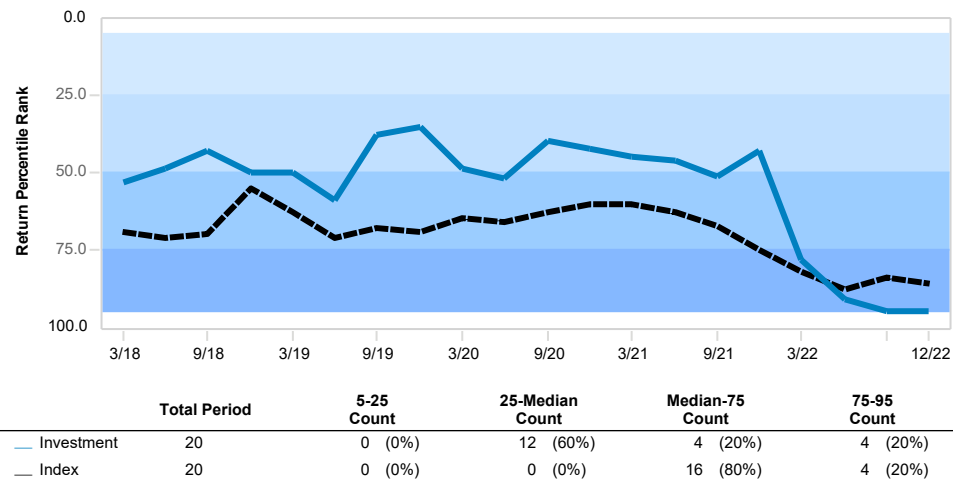
### Risk and Return 3 Years



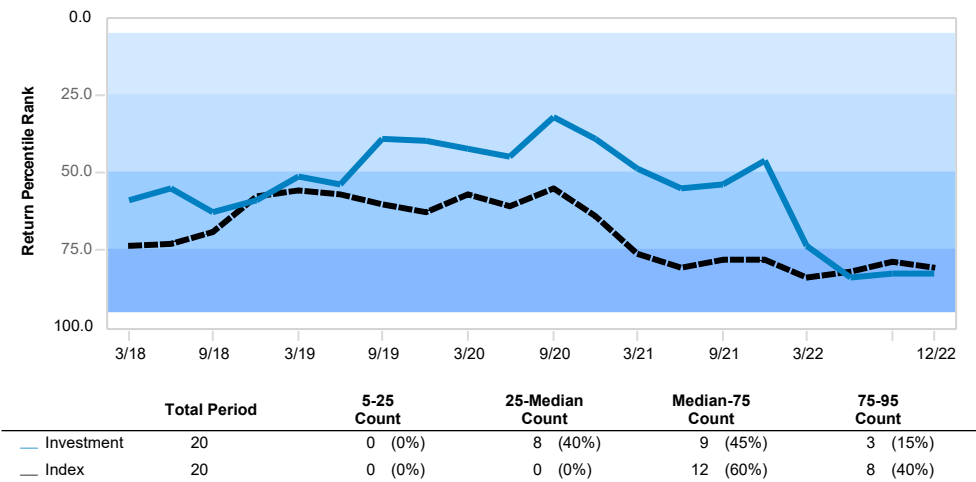
### Risk and Return 5 Years



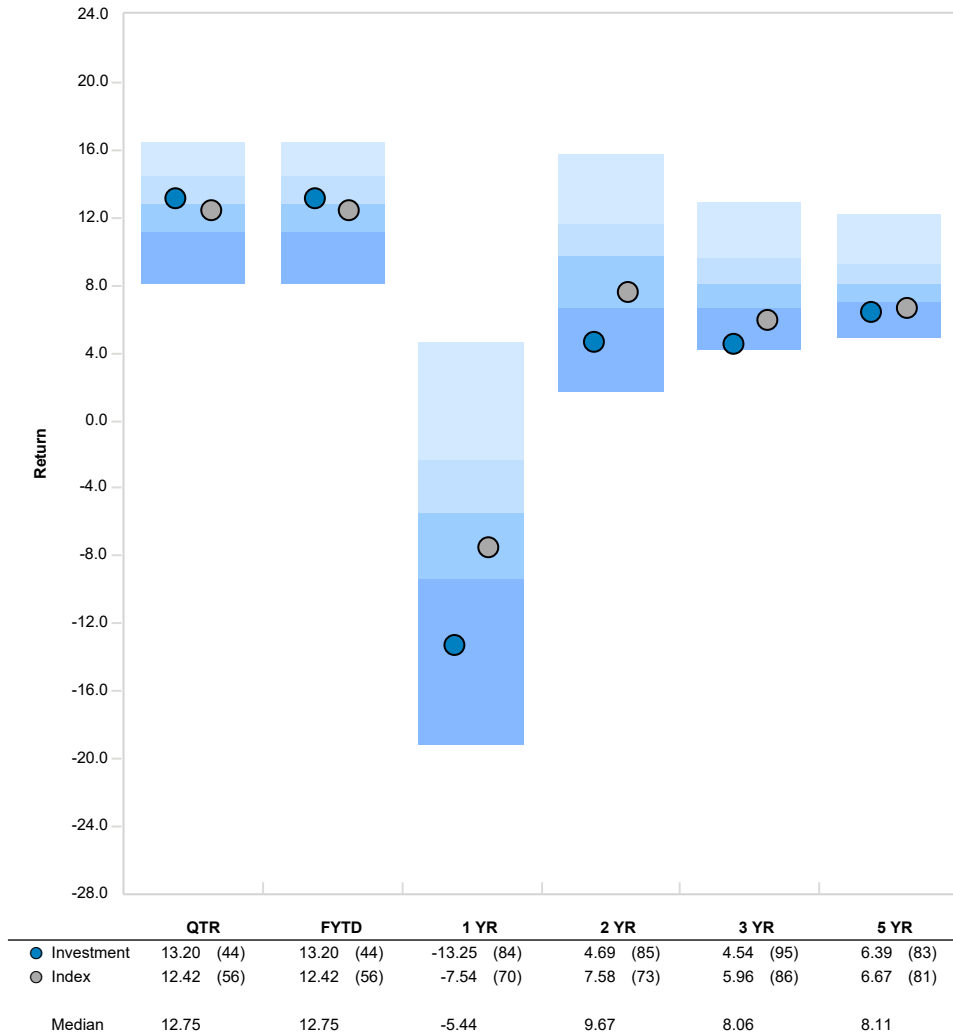
### 3 Year Rolling Percentile Rank IM U.S. Large Cap Value Equity (SA+CF)



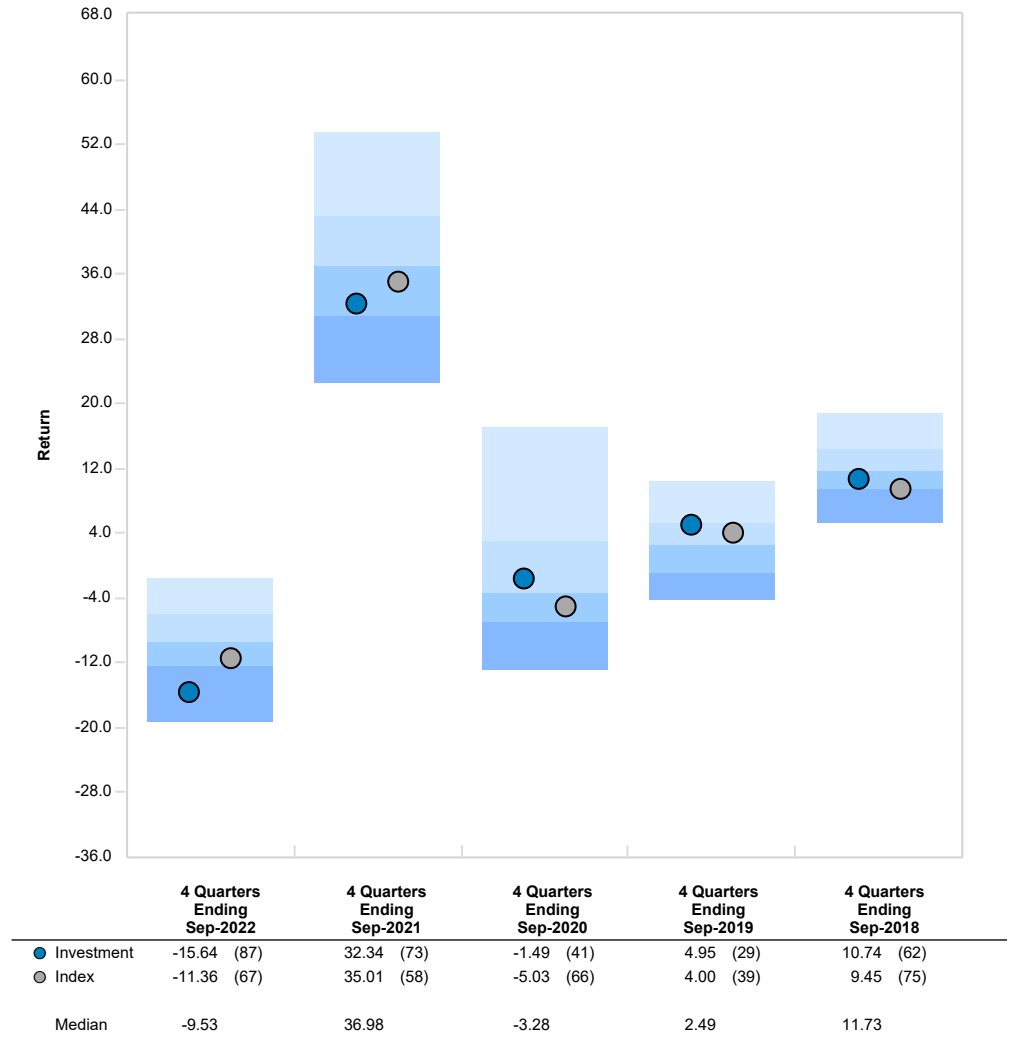
### 5 Year Rolling Percentile Rank IM U.S. Large Cap Value Equity (SA+CF)



Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Value Equity (SA+CF)



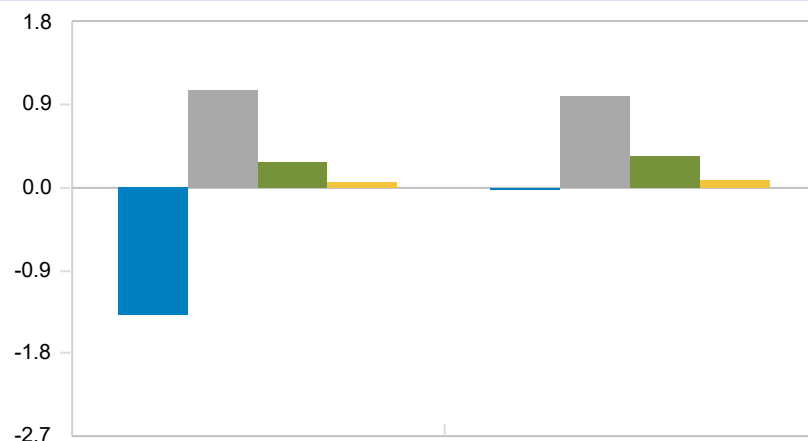
Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Value Equity (SA+CF)



Comparative Performance

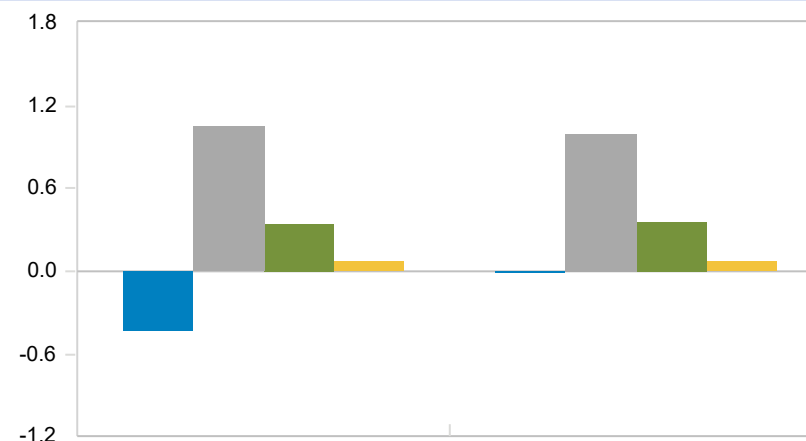
	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-5.65 (51)	-13.46 (76)	-6.14 (94)	10.08 (21)	-1.09 (71)	6.08 (41)
Index	-5.62 (50)	-12.21 (61)	-0.74 (60)	7.77 (61)	-0.78 (61)	5.21 (66)
Median	-5.64	-11.67	-0.22	8.27	-0.51	5.81

## Risk / Reward Historical Statistics 3 Years Ending December 31, 2022



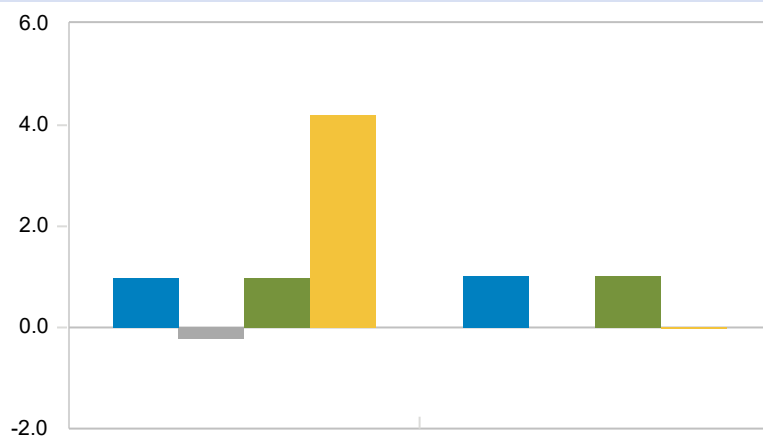
	Ceredex Equity	Russell 1000 Value Index
Alpha	-1.39	0.00
Beta	1.05	1.00
Sharpe Ratio	0.28	0.34
Treynor Ratio	0.07	0.08

## Risk / Reward Historical Statistics 5 Years Ending December 31, 2022



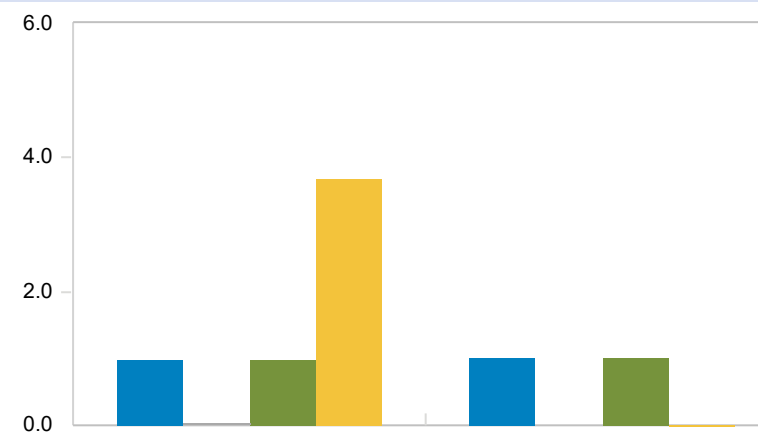
	Ceredex Equity	Russell 1000 Value Index
Alpha	-0.43	0.00
Beta	1.06	1.00
Sharpe Ratio	0.34	0.37
Treynor Ratio	0.07	0.07

## Index Relative Historical Statistics 3 Years Ending December 31, 2022



	Ceredex Equity	Russell 1000 Value Index
Actual Correlation	0.99	1.00
Information Ratio	-0.23	N/A
R-Squared	0.97	1.00
Tracking Error	4.20	0.00

## Index Relative Historical Statistics 5 Years Ending December 31, 2022



	Ceredex Equity	Russell 1000 Value Index
Actual Correlation	0.99	1.00
Information Ratio	0.02	N/A
R-Squared	0.97	1.00
Tracking Error	3.69	0.00

Benchmark: Russell 1000 Value Index



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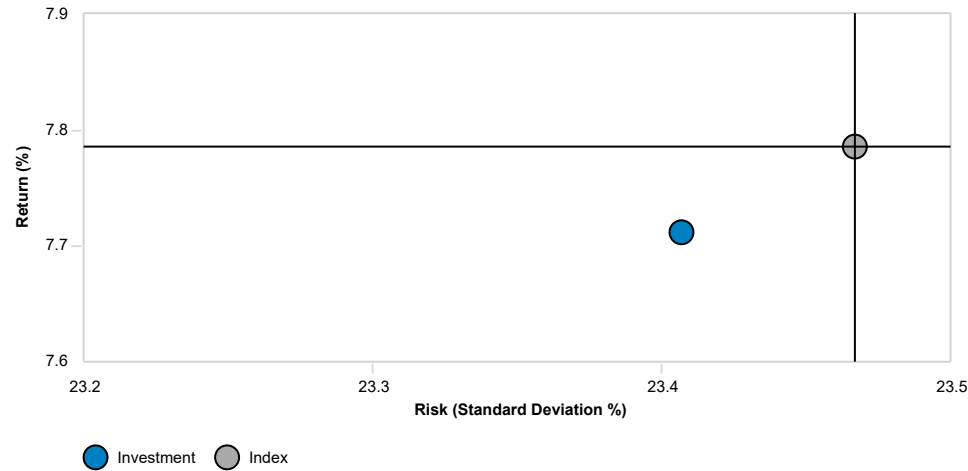
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.71	23.41	0.40	99.67	8	99.83	4
Index	7.79	23.47	0.40	100.00	8	100.00	4

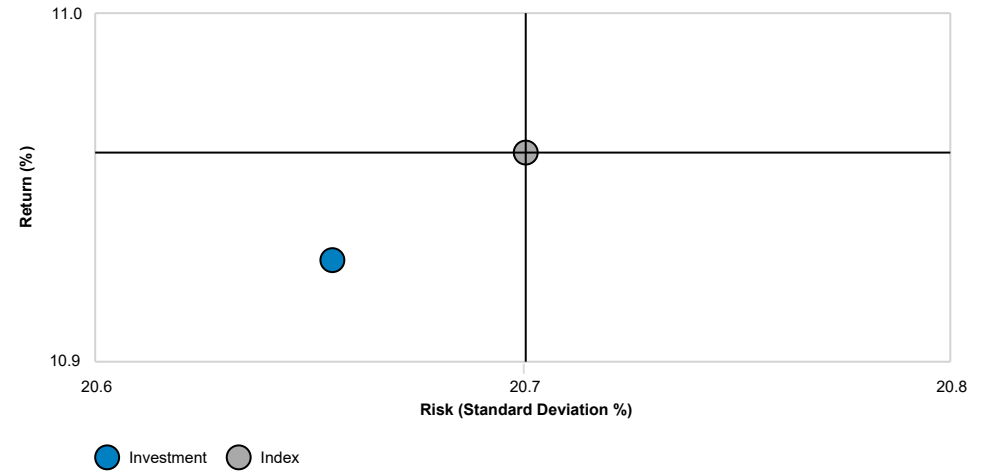
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.93	20.66	0.54	99.79	15	99.84	5
Index	10.96	20.70	0.55	100.00	15	100.00	5

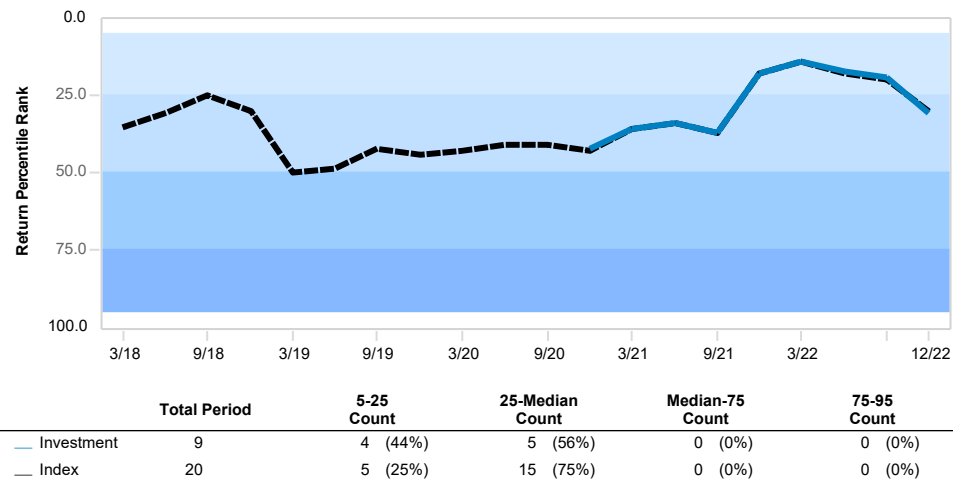
### Risk and Return 3 Years



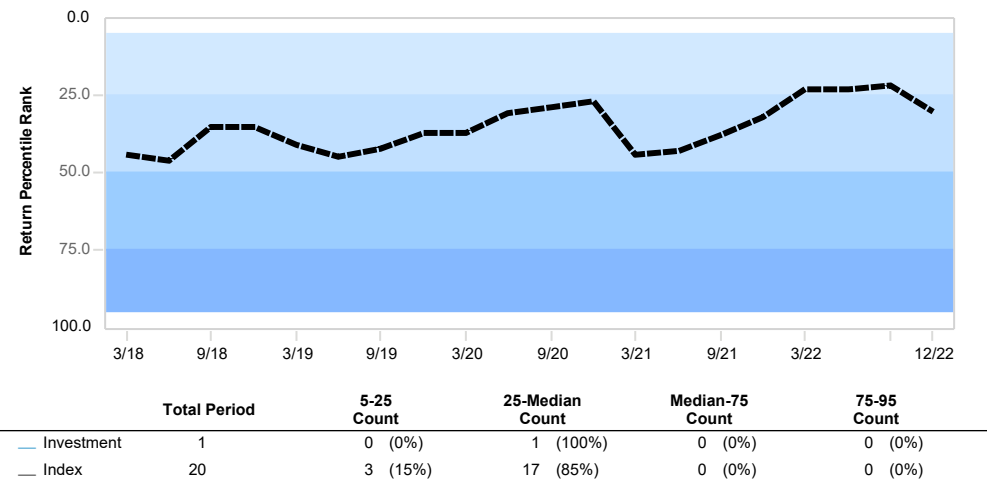
### Risk and Return 5 Years



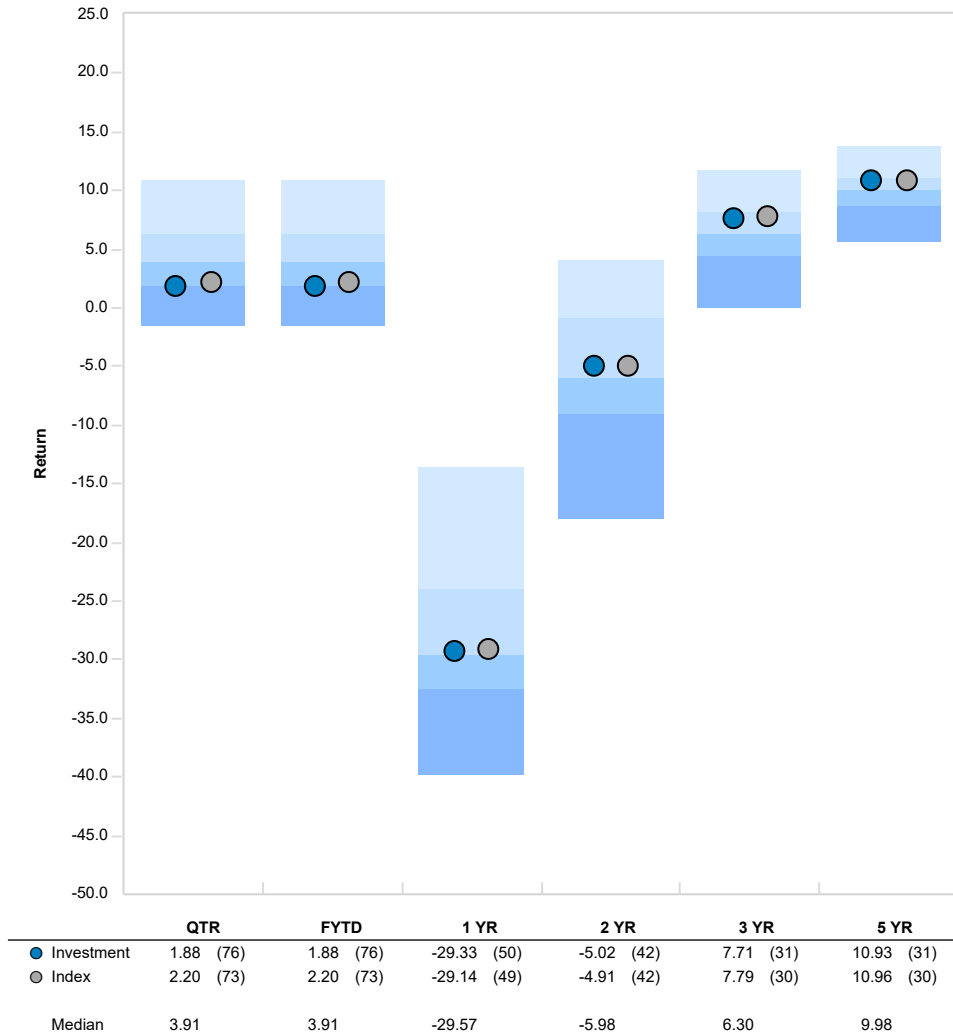
### 3 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (SA+CF)



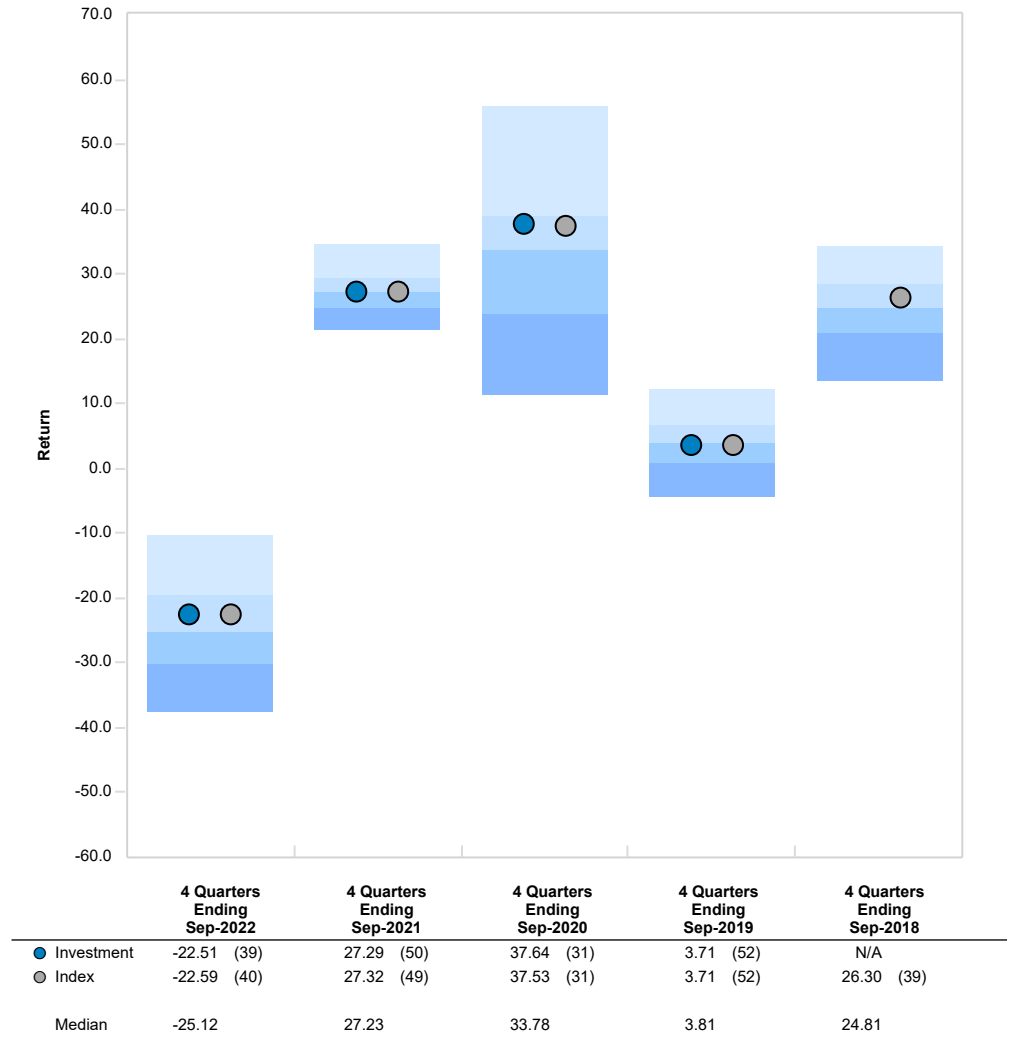
### 5 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (SA+CF)



**Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Growth Equity (SA+CF)**



**Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Growth Equity (SA+CF)**



**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-3.60 (38)	-20.91 (56)	-9.03 (36)	11.72 (22)	1.15 (38)	11.92 (33)
Index	-3.60 (38)	-20.92 (56)	-9.04 (36)	11.64 (23)	1.16 (38)	11.93 (33)
Median	-4.12	-20.30	-10.23	9.29	0.73	11.21

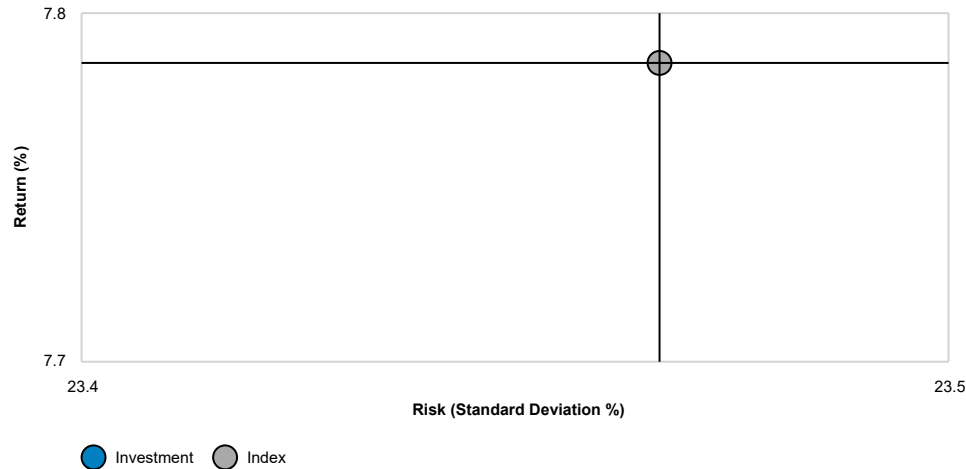
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	7.79	23.47	0.40	100.00	8	100.00	4

### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	10.96	20.70	0.55	100.00	15	100.00	5

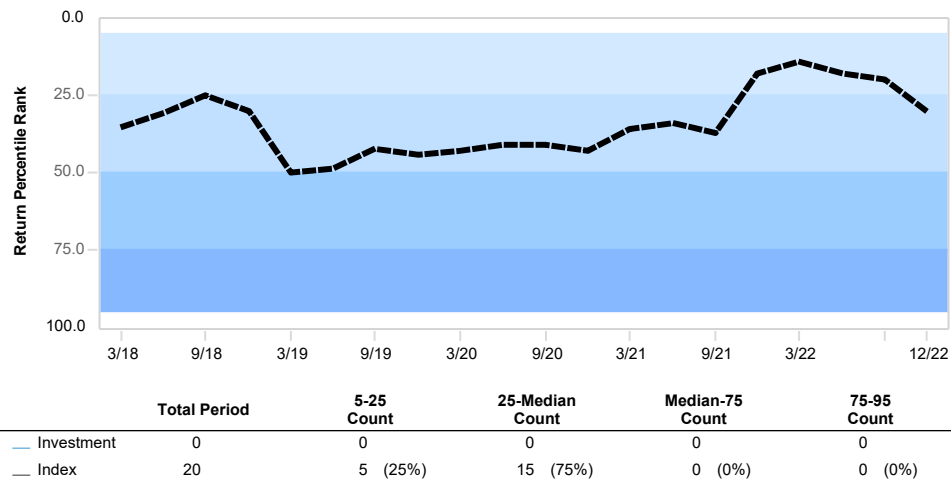
### Risk and Return 3 Years



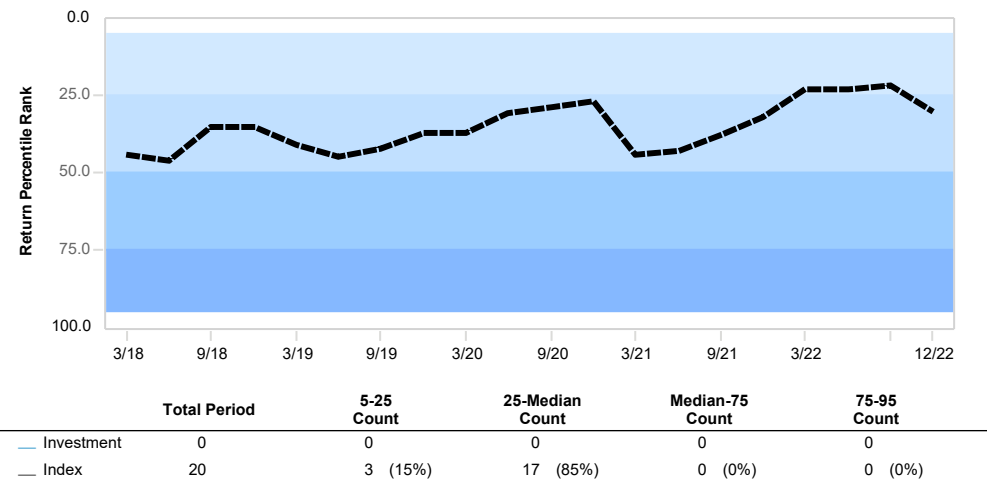
### Risk and Return 5 Years



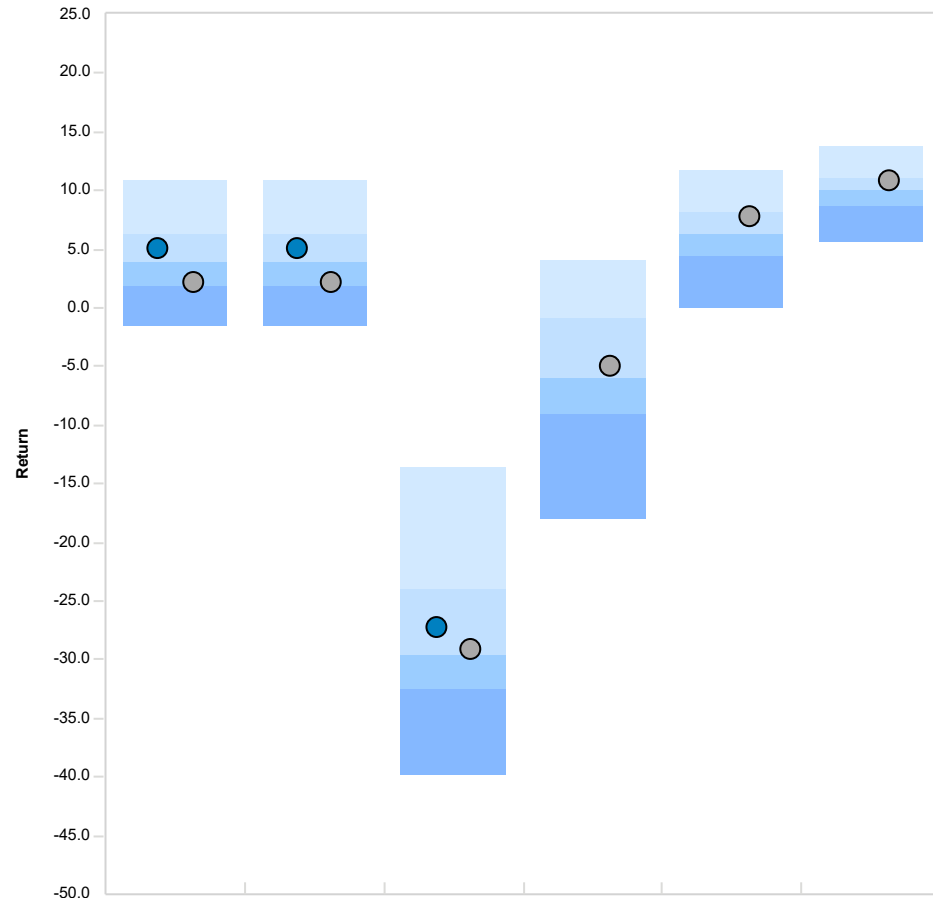
### 3 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (SA+CF)



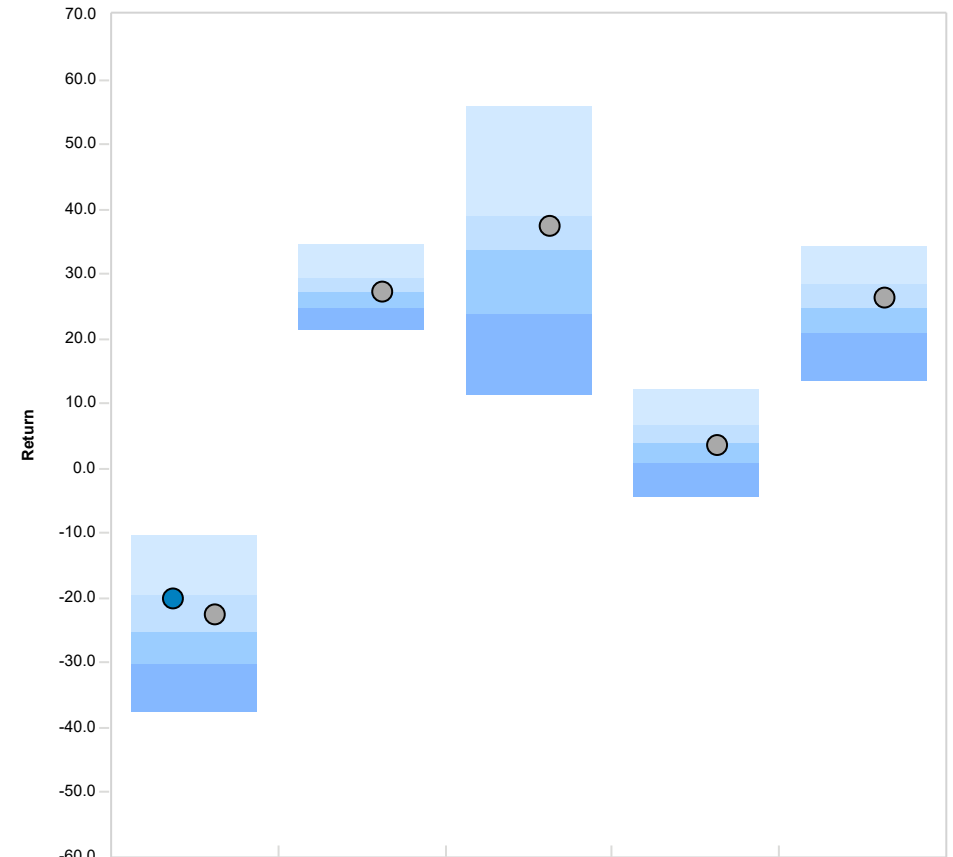
### 5 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (SA+CF)



**Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Growth Equity (SA+CF)**



**Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Growth Equity (SA+CF)**



**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-9.16 (100)	-15.63 (14)	-9.76 (42)	15.44 (2)	N/A	N/A
Index	-3.60 (38)	-20.92 (56)	-9.04 (36)	11.64 (23)	1.16 (38)	11.93 (33)
Median	-4.12	-20.30	-10.23	9.29	0.73	11.21



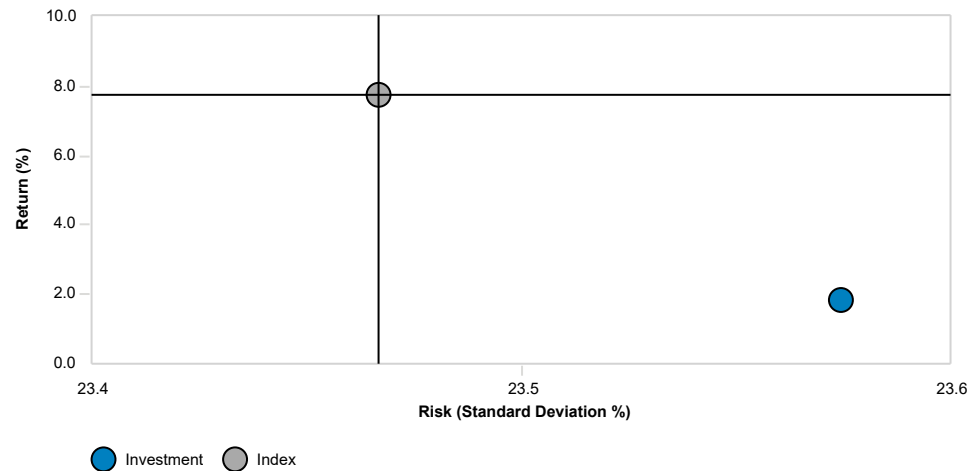
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.84	23.57	0.16	87.78	7	102.49	5
Index	7.79	23.47	0.40	100.00	8	100.00	4

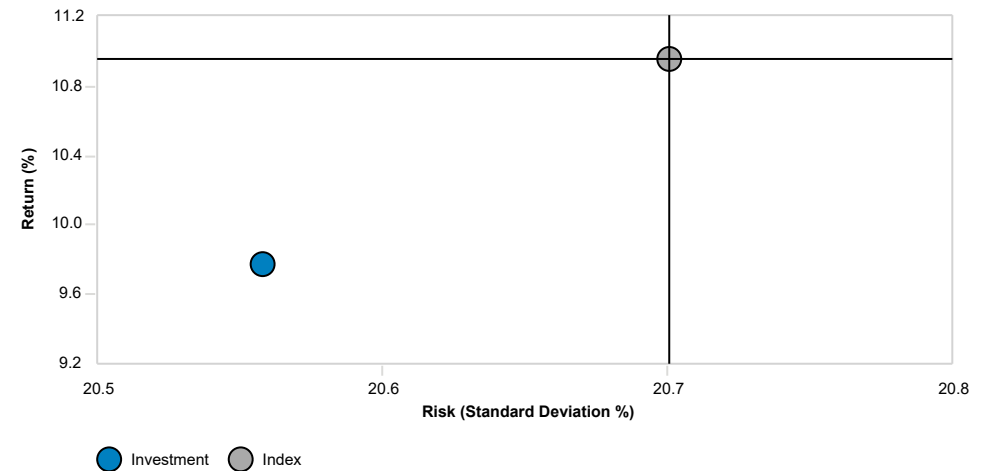
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.77	20.56	0.50	94.89	14	96.81	6
Index	10.96	20.70	0.55	100.00	15	100.00	5

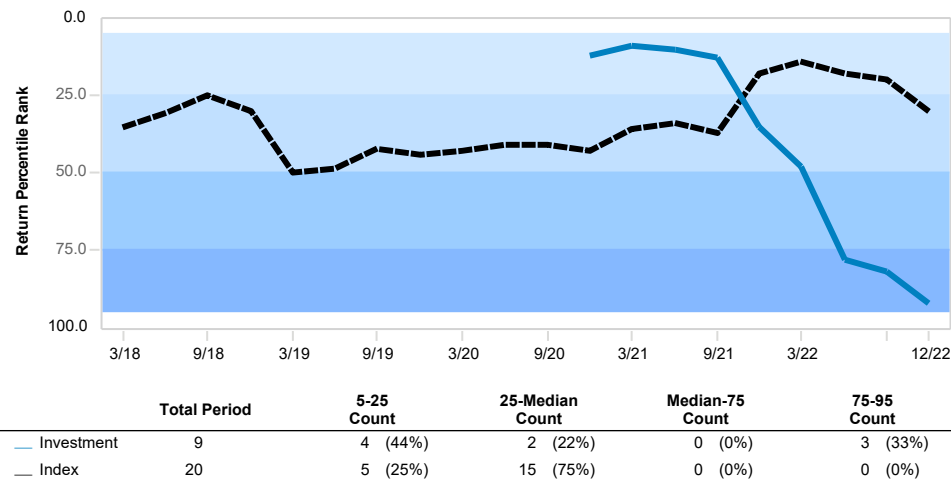
### Risk and Return 3 Years



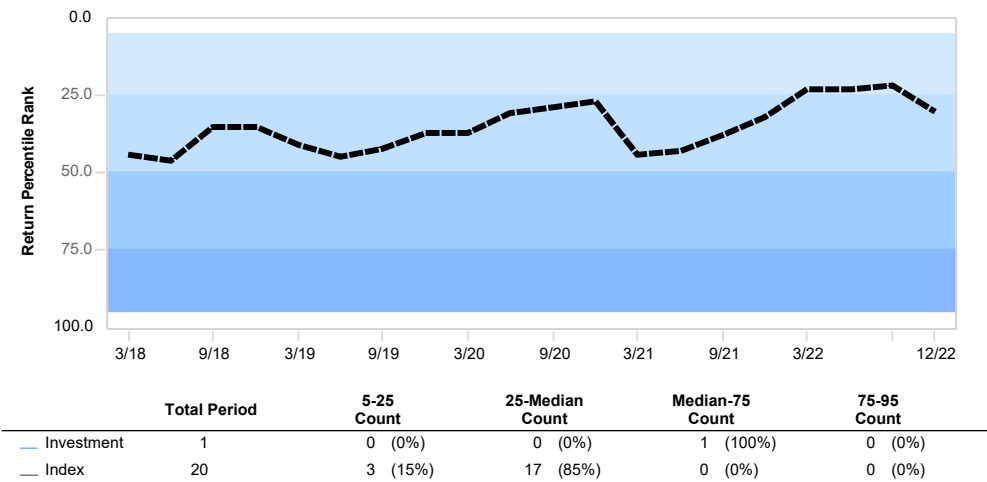
### Risk and Return 5 Years



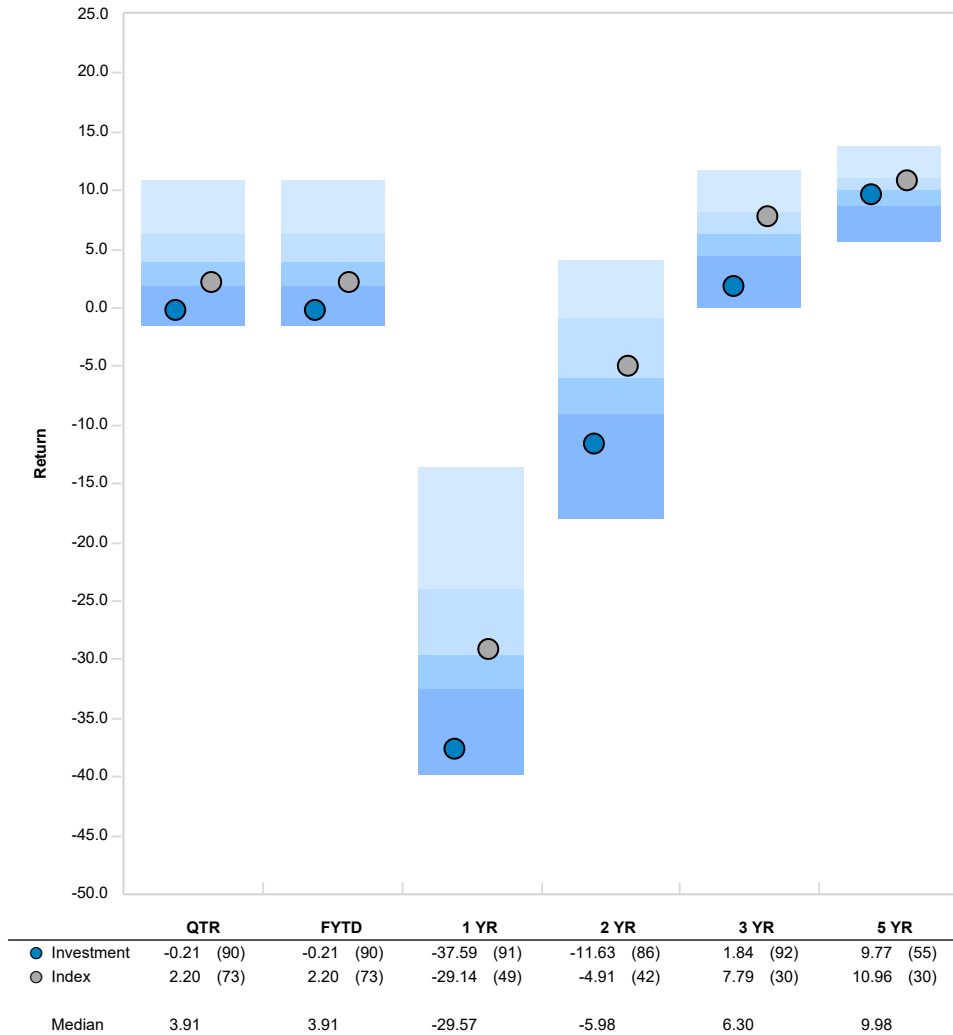
### 3 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (SA+CF)



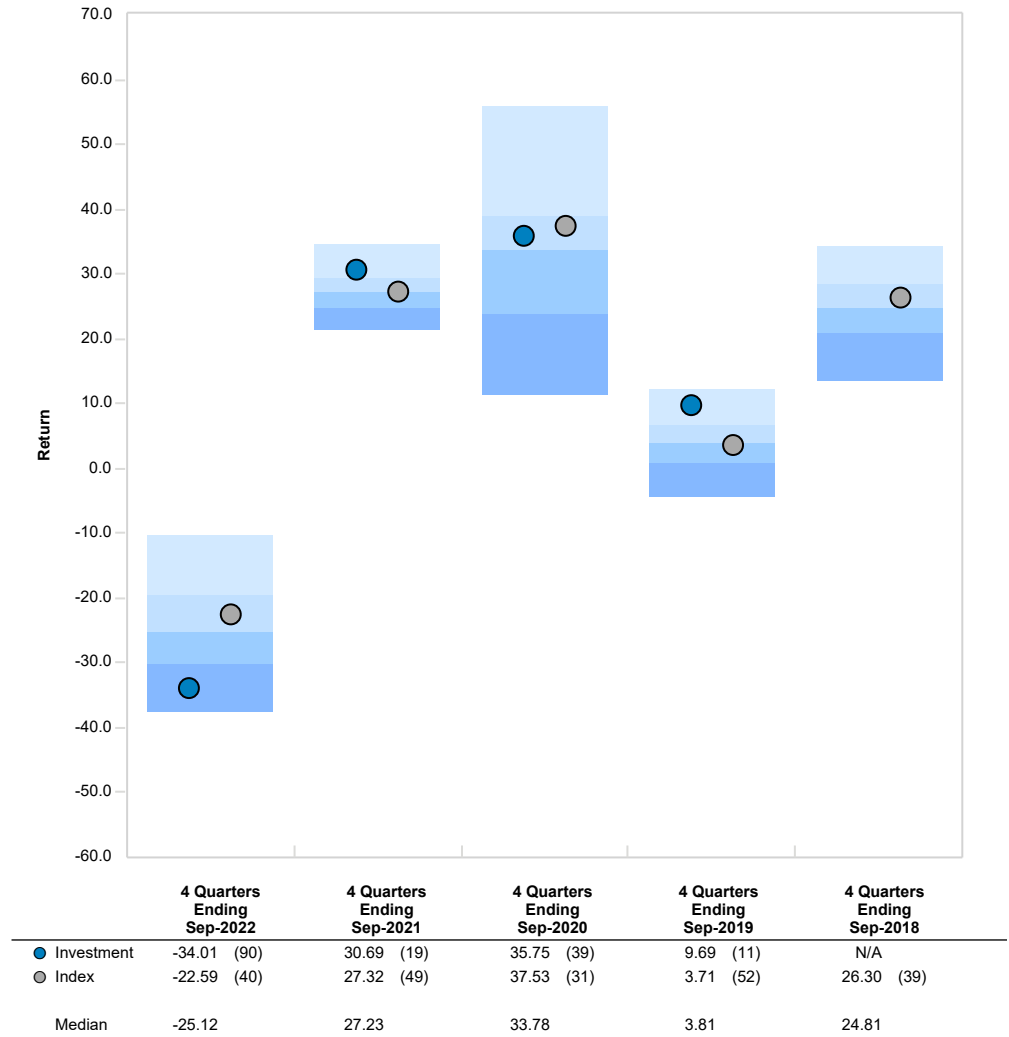
### 5 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (SA+CF)



Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Growth Equity (SA+CF)



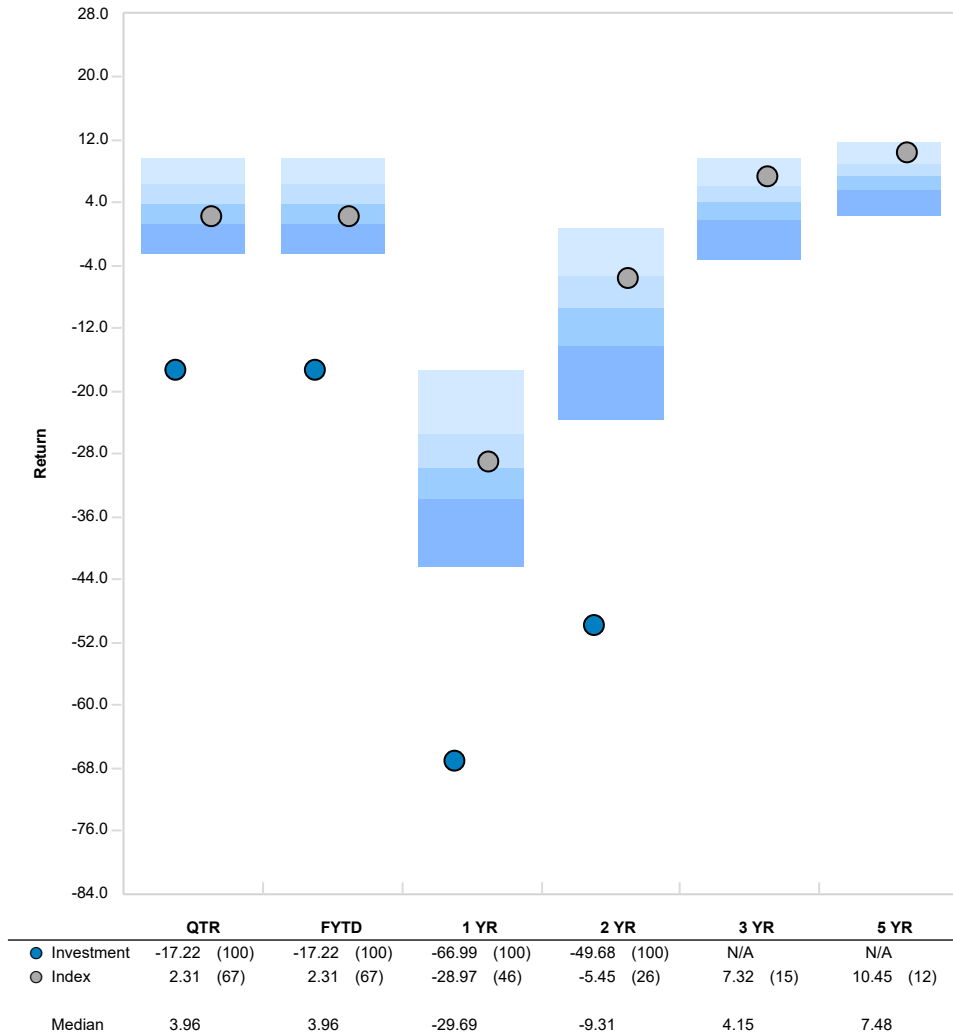
Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Growth Equity (SA+CF)



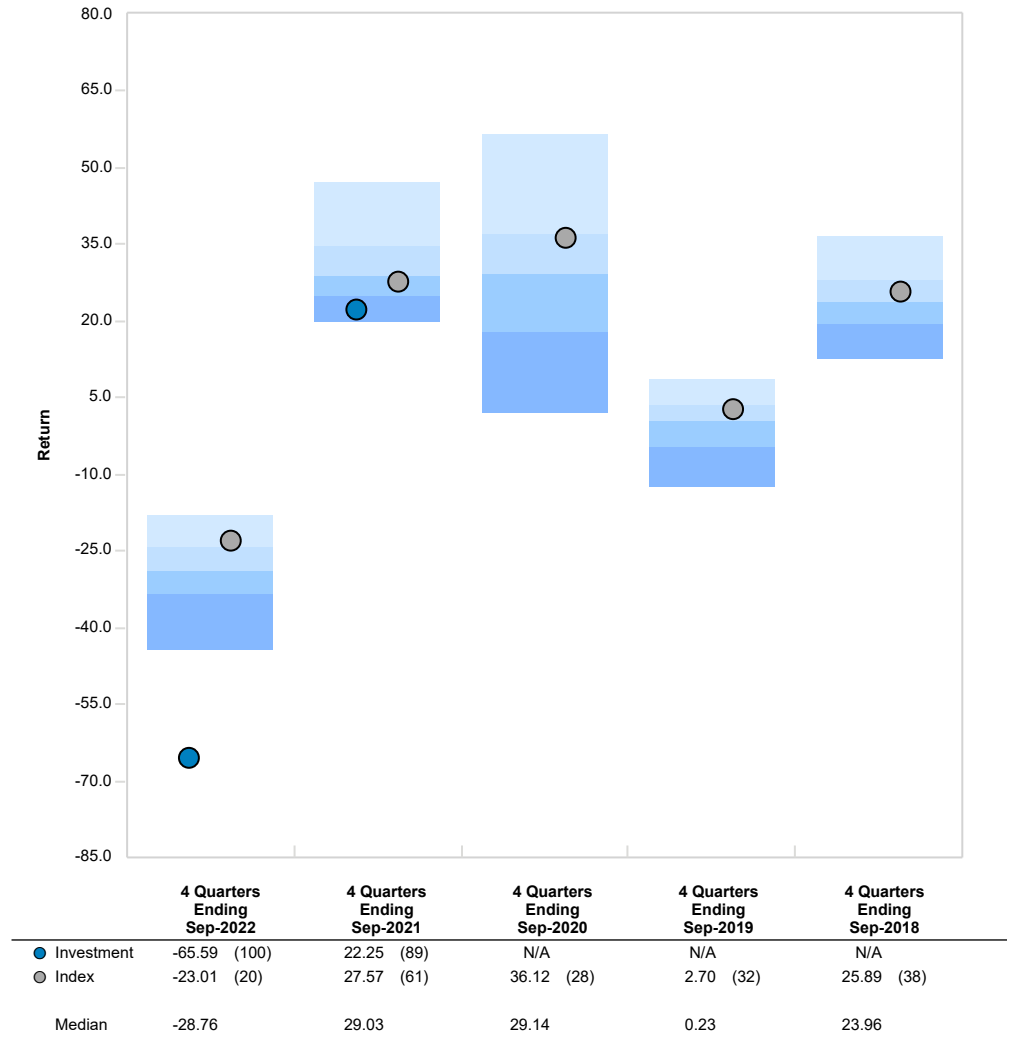
Comparative Performance

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-5.21 (76)	-23.80 (84)	-13.42 (87)	5.52 (81)	2.80 (9)	13.32 (12)
Index	-3.60 (38)	-20.92 (56)	-9.04 (36)	11.64 (23)	1.16 (38)	11.93 (33)
Median	-4.12	-20.30	-10.23	9.29	0.73	11.21

**Plan Sponsor Peer Group Analysis vs. IM U.S. Growth Equity (MF)**



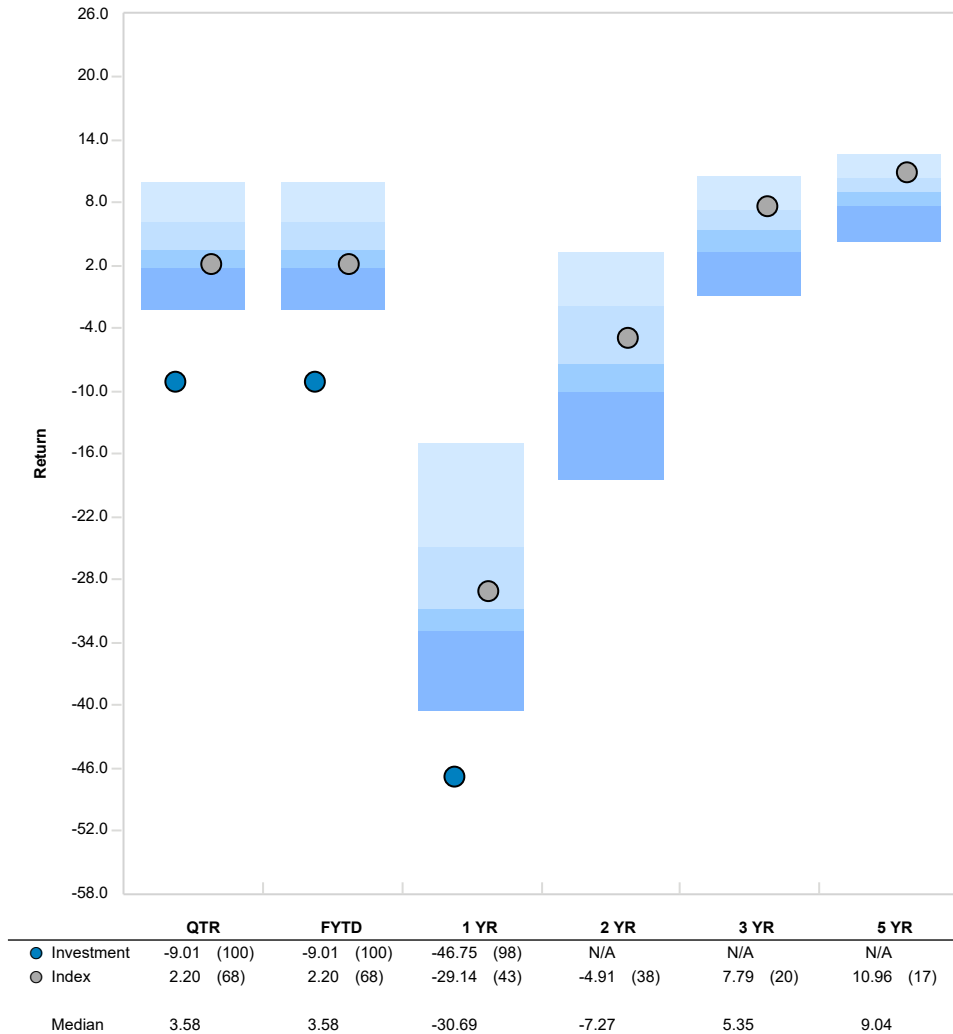
**Plan Sponsor Peer Group Analysis vs. IM U.S. Growth Equity (MF)**



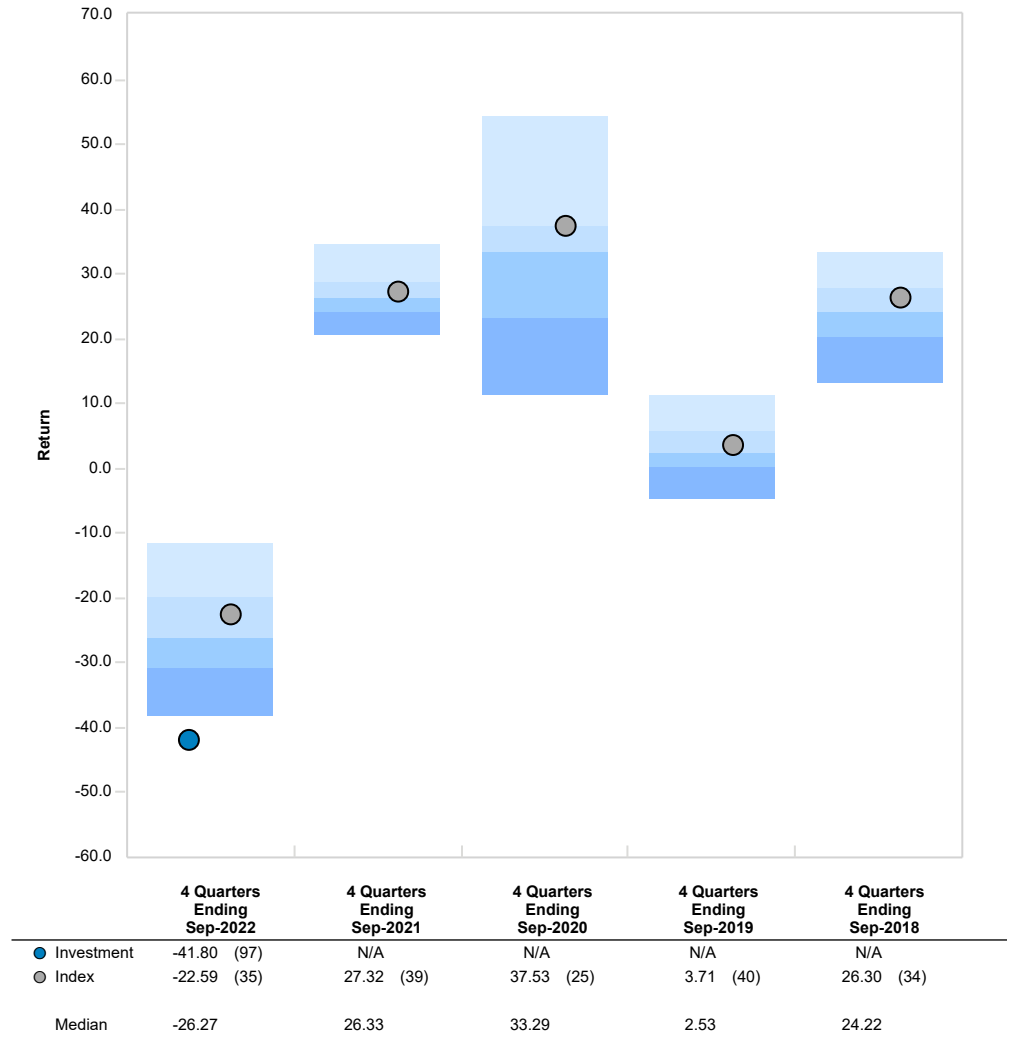
**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-5.39 (88)	-39.84 (99)	-29.93 (100)	-13.71 (100)	-15.50 (100)	9.17 (44)
Index	-3.37 (55)	-20.83 (52)	-9.25 (21)	10.89 (8)	0.69 (32)	11.38 (21)
Median	-3.07	-20.73	-11.99	4.76	-0.09	8.38

**Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Growth Equity (SA+CF)**



**Plan Sponsor Peer Group Analysis vs. IM U.S. Large Cap Growth Equity (SA+CF)**



**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-10.00 (100)	-25.98 (94)	-12.14 (71)	-0.55 (97)	N/A	N/A
Index	-3.60 (40)	-20.92 (52)	-9.04 (32)	11.64 (18)	1.16 (30)	11.93 (30)
Median	-4.09	-20.80	-10.29	8.50	0.49	11.10

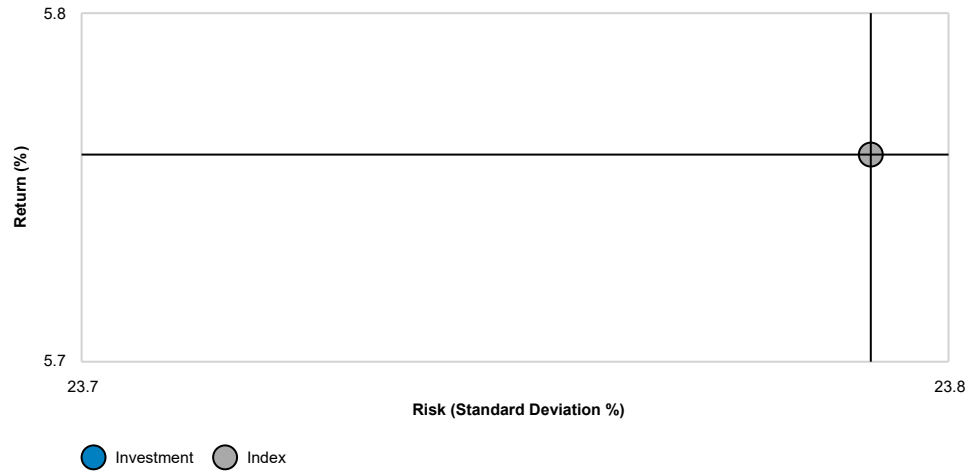
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	5.76	23.79	0.32	100.00	7	100.00	5

### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	6.02	21.16	0.32	100.00	13	100.00	7

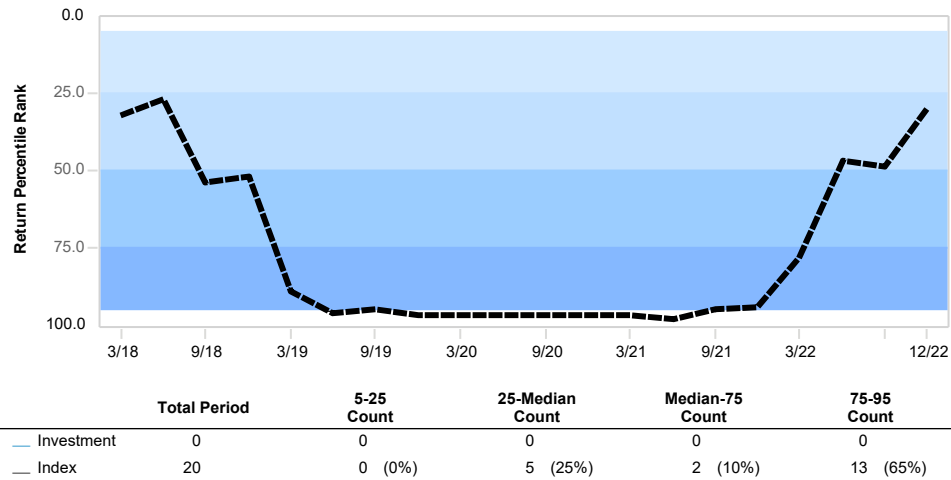
### Risk and Return 3 Years



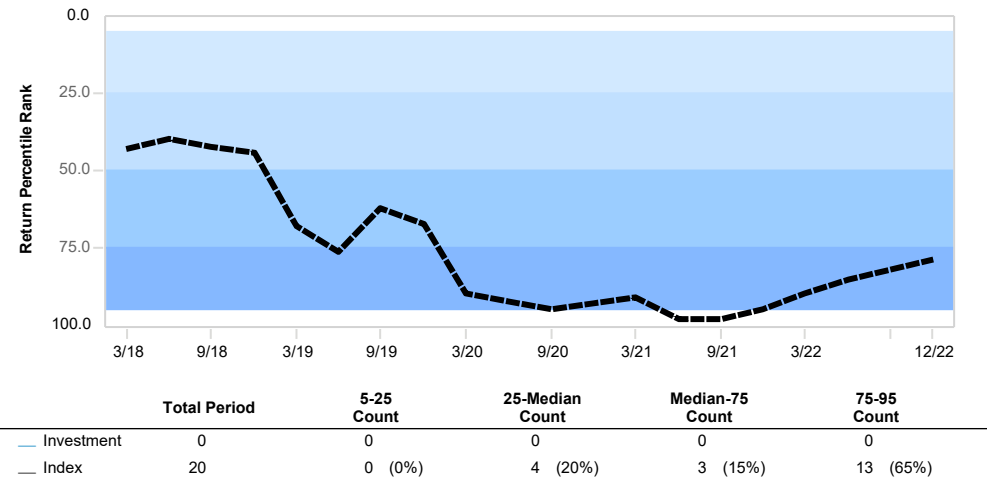
### Risk and Return 5 Years



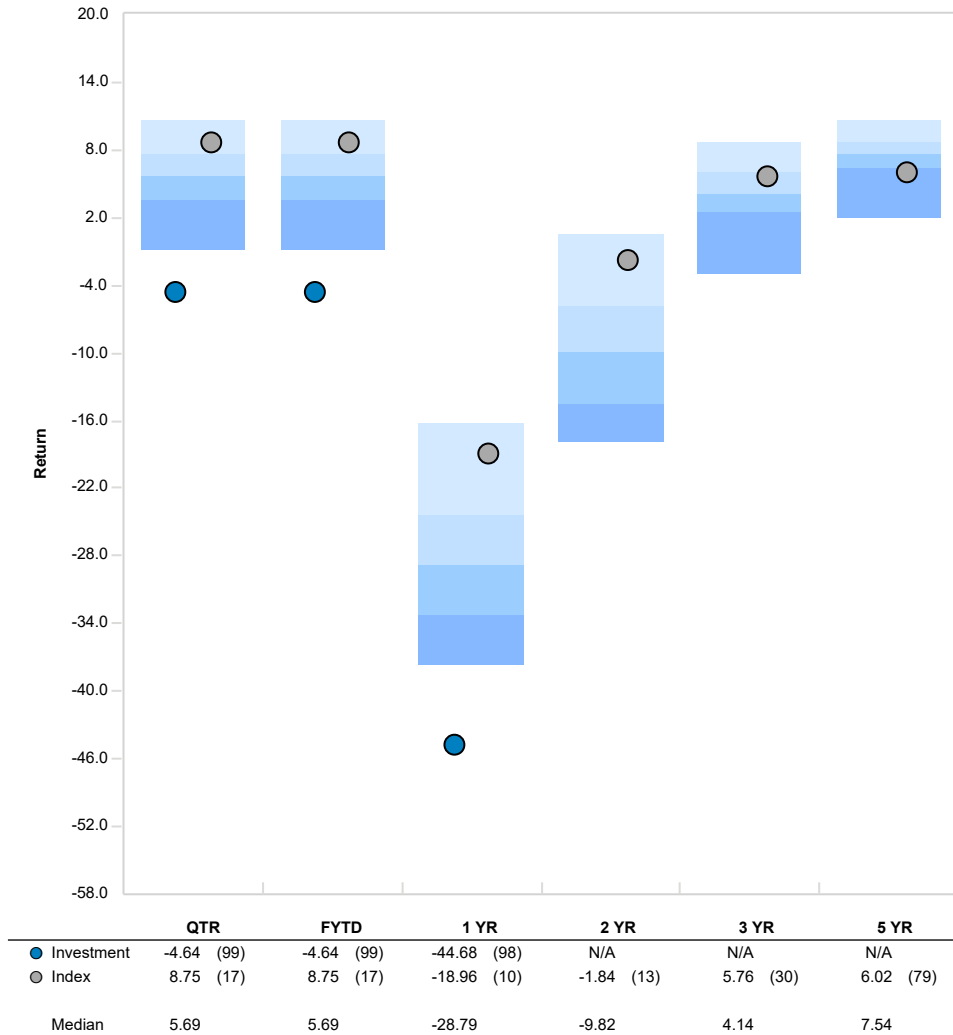
### 3 Year Rolling Percentile Rank IM U.S. Mid Cap Growth Equity (MF)



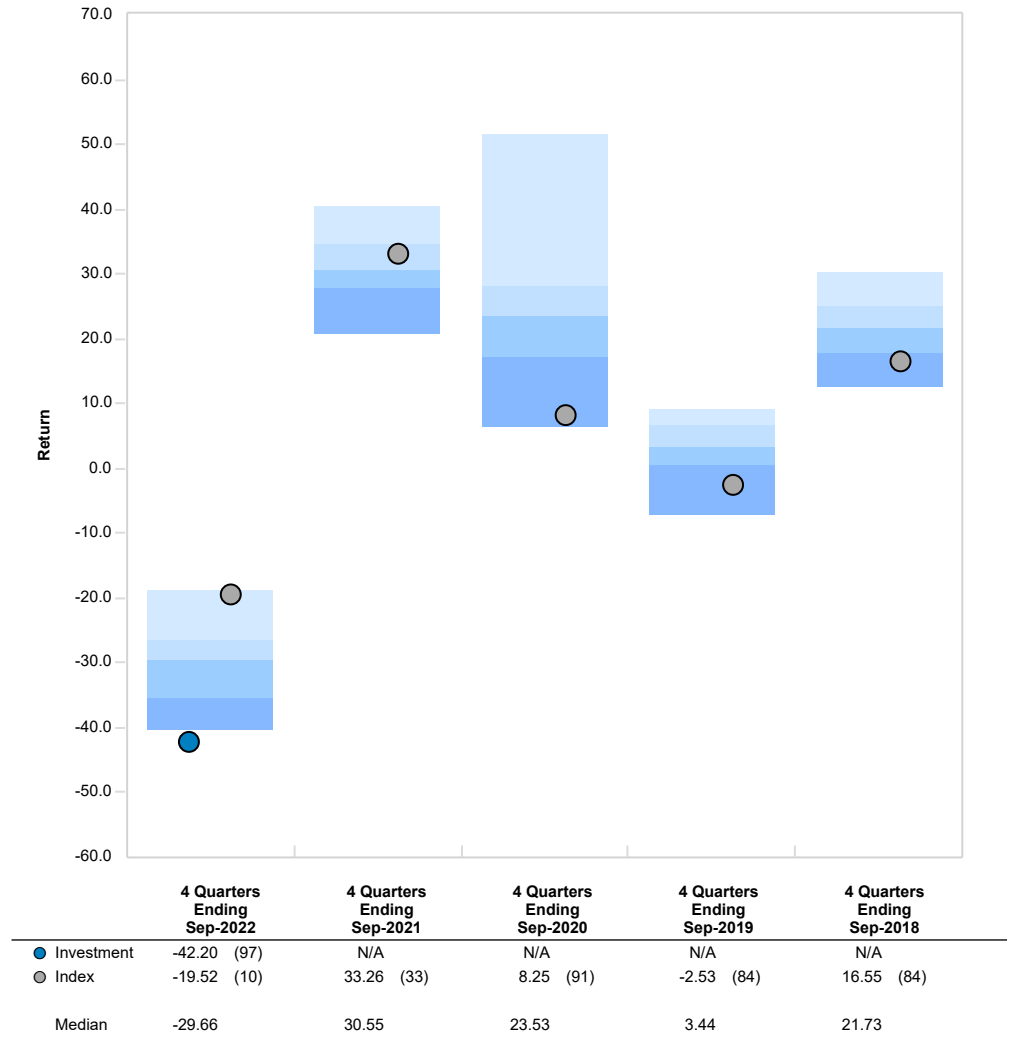
### 5 Year Rolling Percentile Rank IM U.S. Mid Cap Growth Equity (MF)



**Plan Sponsor Peer Group Analysis vs. IM U.S. Mid Cap Growth Equity (MF)**



**Plan Sponsor Peer Group Analysis vs. IM U.S. Mid Cap Growth Equity (MF)**



**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-8.31 (100)	-27.16 (94)	-13.14 (53)	-0.35 (79)	N/A	N/A
Index	-0.74 (32)	-17.46 (21)	-9.04 (14)	8.00 (9)	-1.95 (89)	3.43 (100)
Median	-1.99	-21.01	-13.09	4.02	0.21	7.83

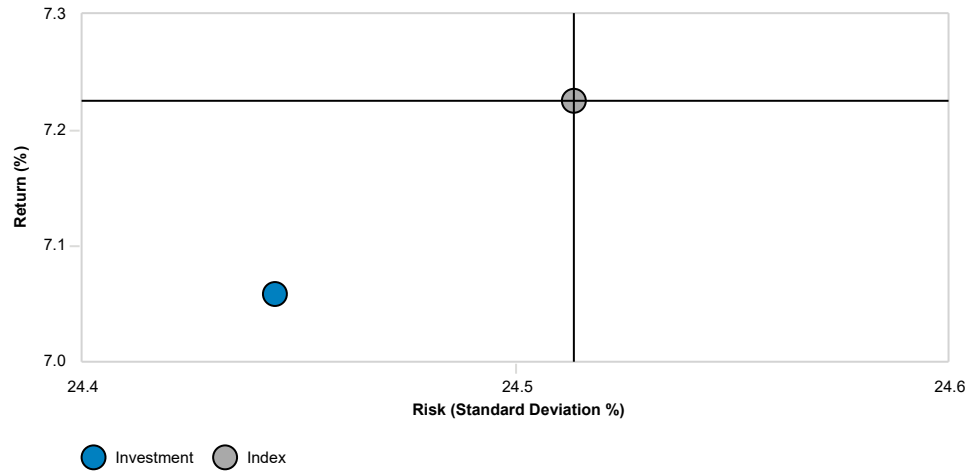
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.06	24.44	0.37	99.41	7	99.81	5
Index	7.23	24.51	0.38	100.00	7	100.00	5

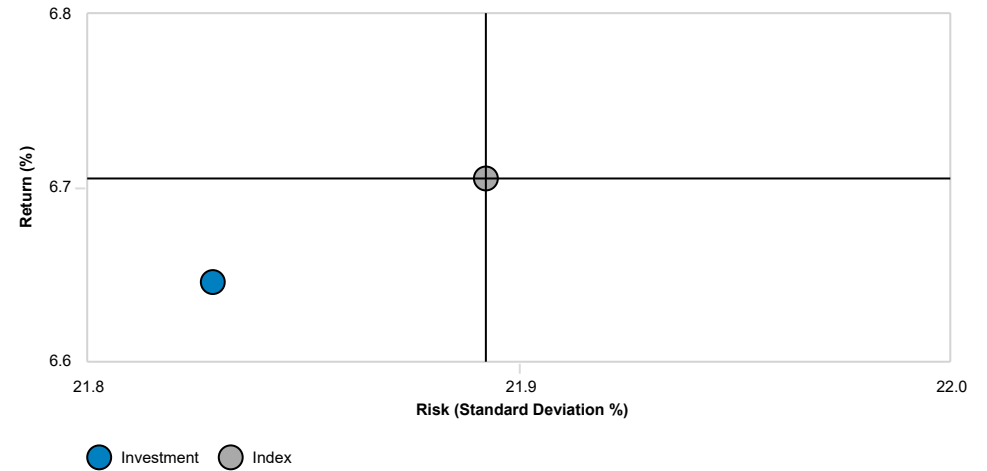
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.65	21.83	0.35	99.60	12	99.74	8
Index	6.71	21.89	0.35	100.00	12	100.00	8

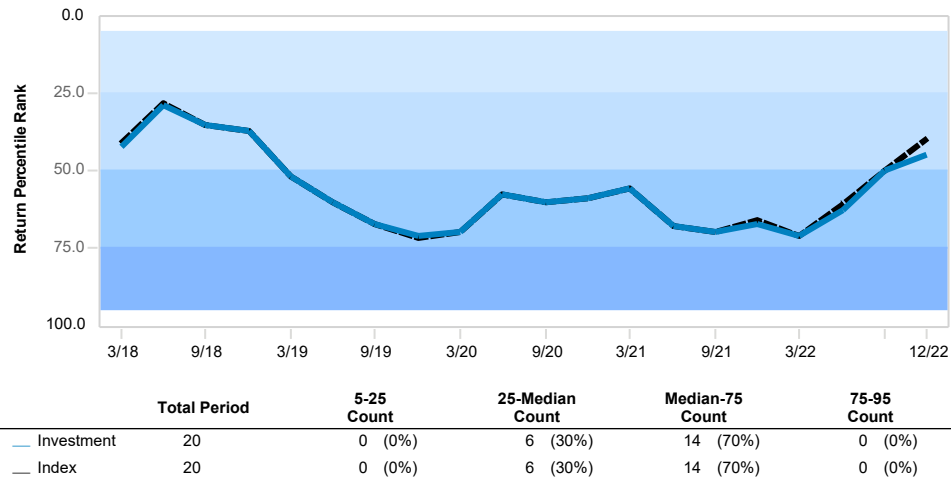
### Risk and Return 3 Years



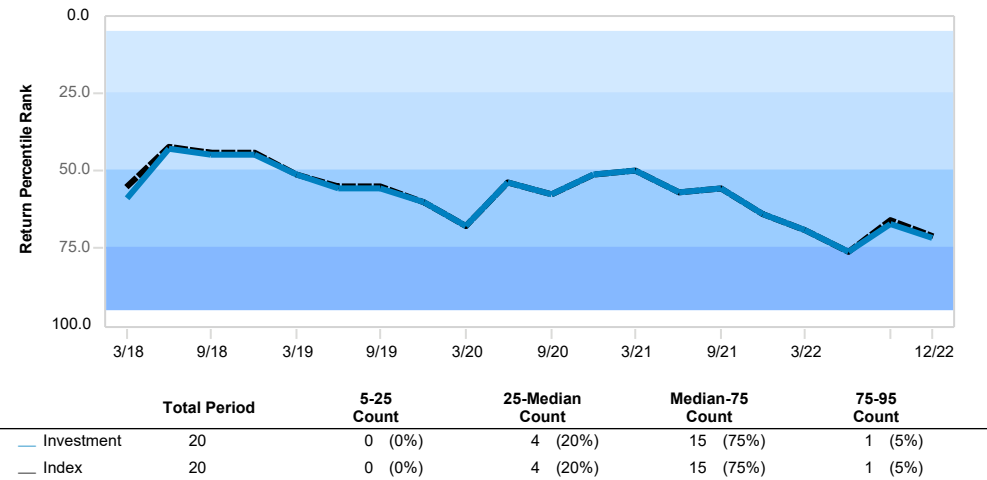
### Risk and Return 5 Years



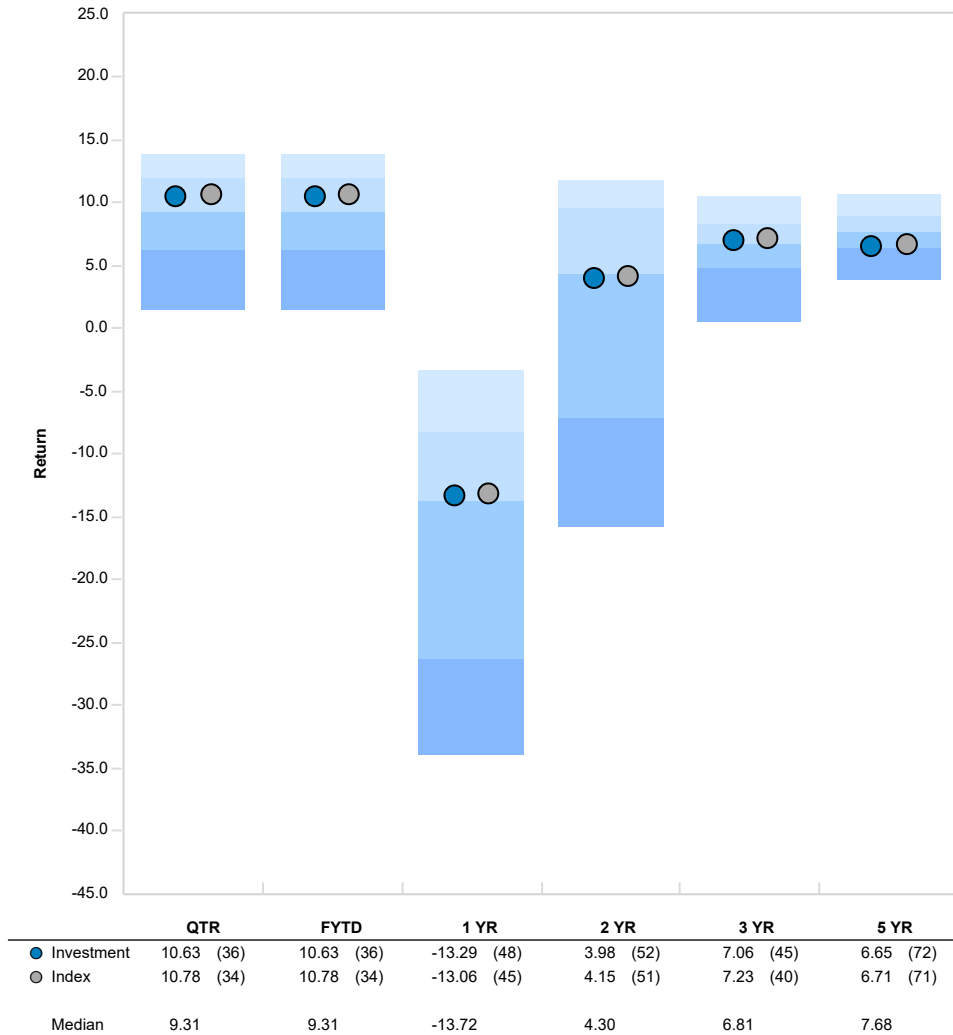
### 3 Year Rolling Percentile Rank IM U.S. Mid Cap Equity (MF)



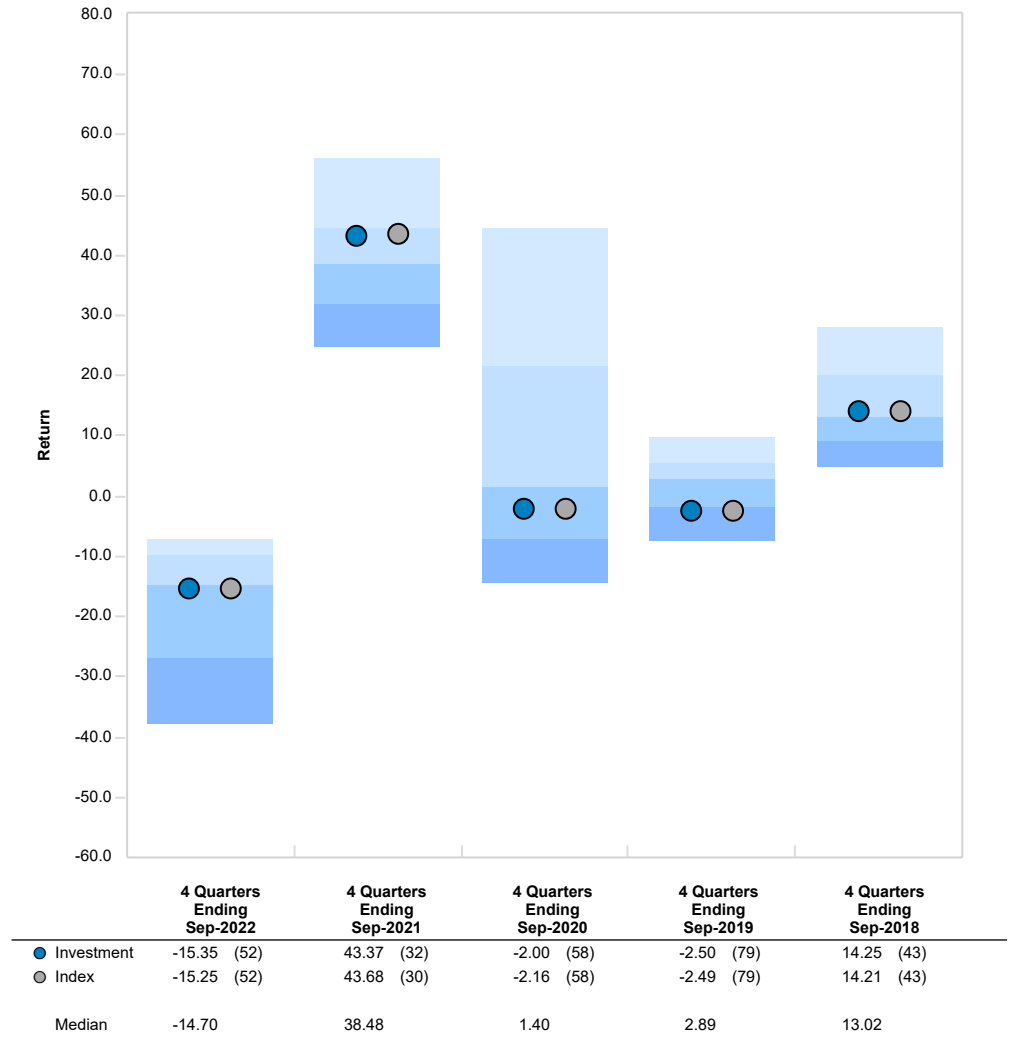
### 5 Year Rolling Percentile Rank IM U.S. Mid Cap Equity (MF)



**Plan Sponsor Peer Group Analysis vs. IM U.S. Mid Cap Equity (MF)**



**Plan Sponsor Peer Group Analysis vs. IM U.S. Mid Cap Equity (MF)**

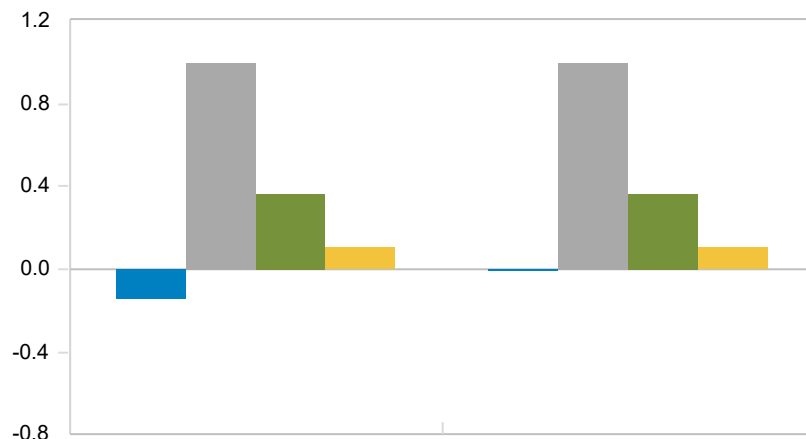


**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-2.46 (31)	-15.40 (56)	-5.01 (49)	8.00 (41)	-1.75 (84)	3.63 (93)
Index	-2.46 (31)	-15.42 (56)	-4.88 (48)	8.00 (41)	-1.76 (85)	3.64 (93)
Median	-3.84	-14.60	-5.18	7.40	-0.19	6.10

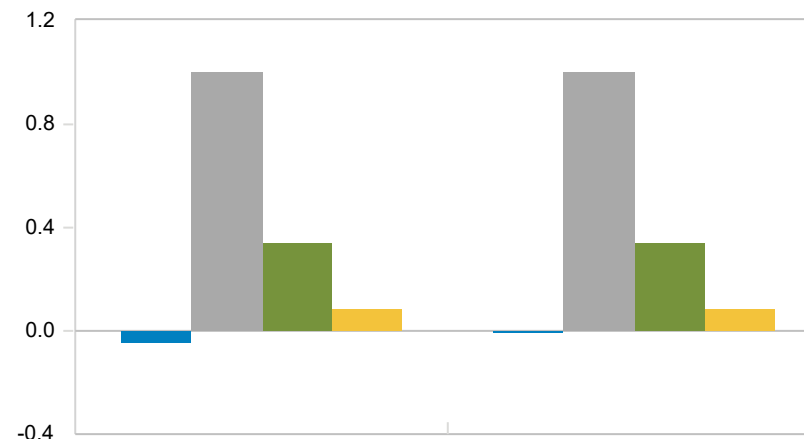


Risk / Reward Historical Statistics 3 Years Ending December 31, 2022



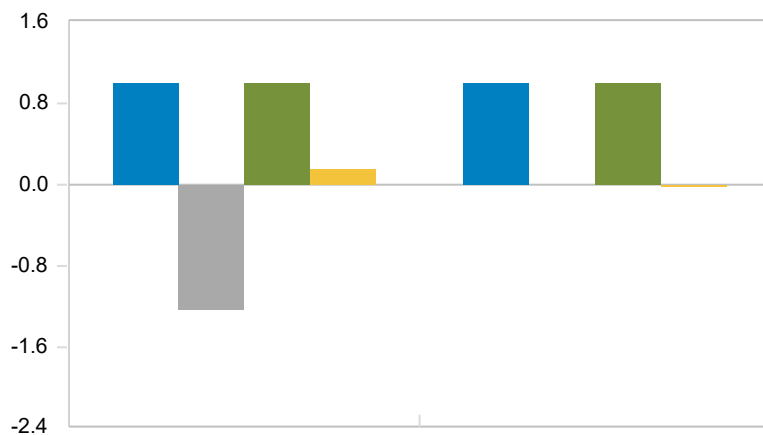
	Mutual of America Equity	S&P MidCap 400 Index
Alpha	-0.15	0.00
Beta	1.00	1.00
Sharpe Ratio	0.36	0.37
Treynor Ratio	0.11	0.11

Risk / Reward Historical Statistics 5 Years Ending December 31, 2022



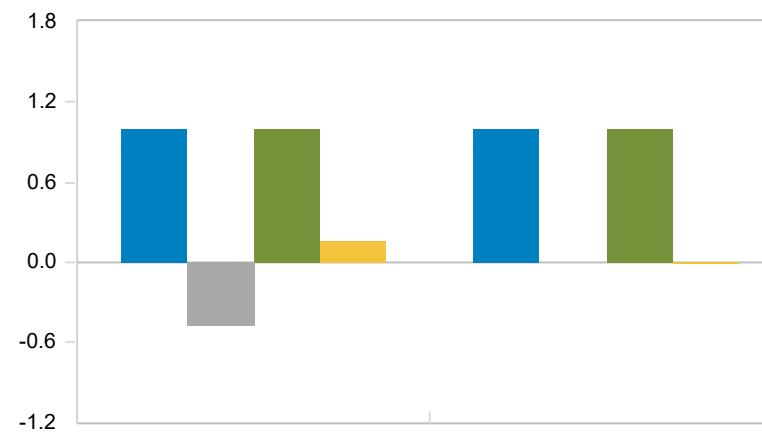
	Mutual of America Equity	S&P MidCap 400 Index
Alpha	-0.05	0.00
Beta	1.00	1.00
Sharpe Ratio	0.34	0.34
Treynor Ratio	0.09	0.09

Index Relative Historical Statistics 3 Years Ending December 31, 2022



	Mutual of America Equity	S&P MidCap 400 Index
Actual Correlation	1.00	1.00
Information Ratio	-1.24	N/A
R-Squared	1.00	1.00
Tracking Error	0.15	0.00

Index Relative Historical Statistics 5 Years Ending December 31, 2022



	Mutual of America Equity	S&P MidCap 400 Index
Actual Correlation	1.00	1.00
Information Ratio	-0.48	N/A
R-Squared	1.00	1.00
Tracking Error	0.16	0.00

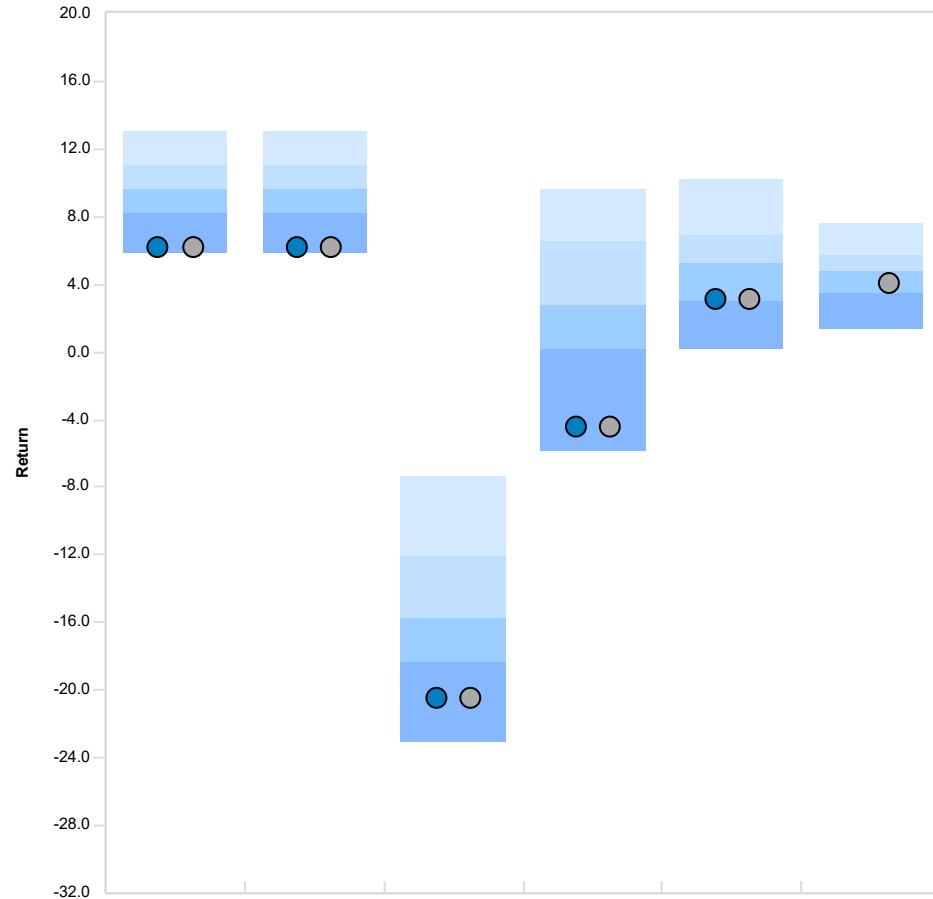
Benchmark: S&P MidCap 400 Index



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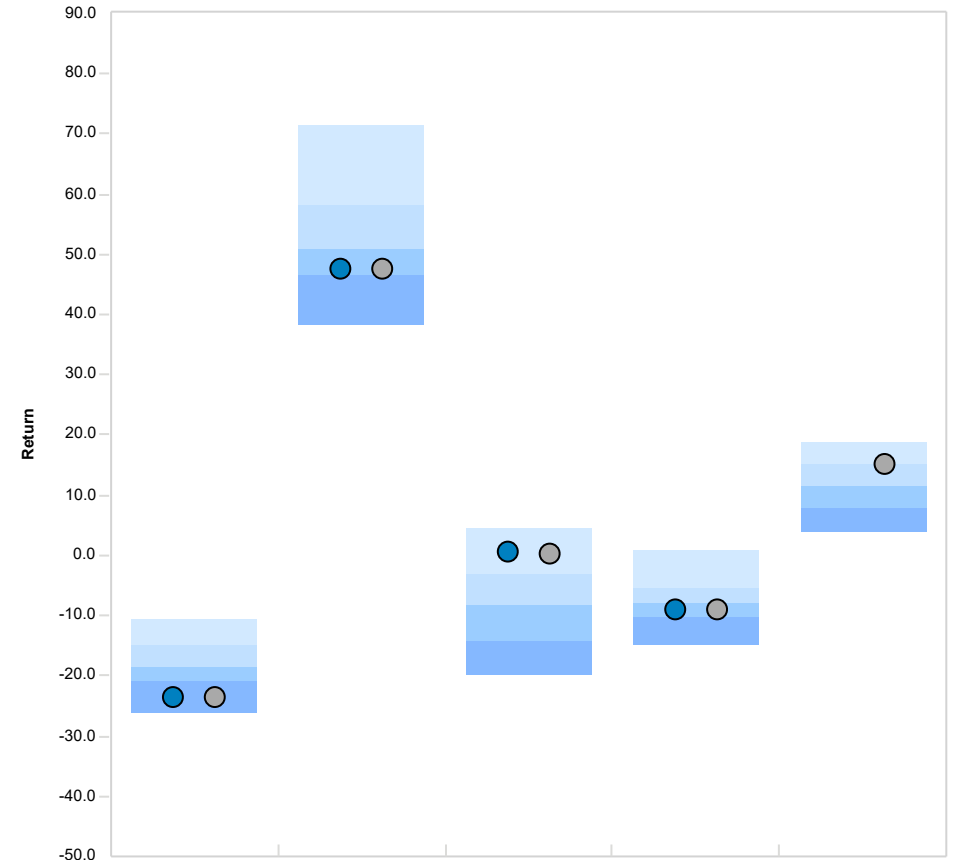


**Plan Sponsor Peer Group Analysis vs. IM U.S. Small Cap Core Equity (MF)**



	QTR	FYTD	1 YR	2 YR	3 YR	5 YR
Investment	6.25 (91)	6.25 (91)	-20.39 (86)	-4.39 (91)	3.17 (74)	N/A
Index	6.23 (92)	6.23 (92)	-20.44 (87)	-4.42 (92)	3.10 (75)	4.13 (64)
Median	9.65	9.65	-15.78	2.84	5.20	4.78

**Plan Sponsor Peer Group Analysis vs. IM U.S. Small Cap Core Equity (MF)**



	4 Quarters Ending Sep-2022	4 Quarters Ending Sep-2021	4 Quarters Ending Sep-2020	4 Quarters Ending Sep-2019	4 Quarters Ending Sep-2018
Investment	-23.48 (88)	47.79 (69)	0.51 (14)	-8.83 (59)	N/A
Index	-23.50 (89)	47.68 (69)	0.39 (15)	-8.89 (61)	15.24 (24)
Median	-18.44	51.01	-8.26	-8.11	11.70

**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-2.15 (16)	-17.19 (84)	-7.53 (77)	2.12 (92)	-4.35 (86)	4.29 (43)
Index	-2.19 (17)	-17.20 (85)	-7.53 (77)	2.14 (91)	-4.36 (87)	4.29 (43)
Median	-4.48	-14.56	-5.65	5.94	-2.38	4.05



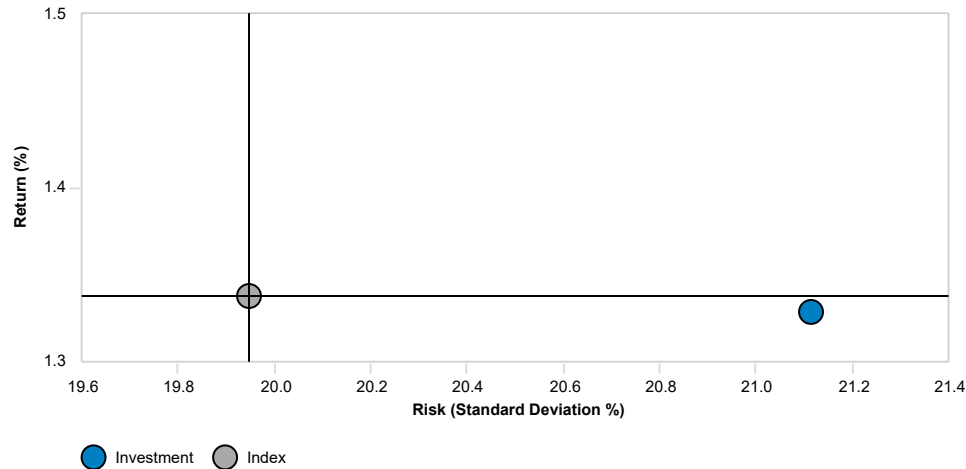
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.33	21.12	0.13	104.56	7	104.21	5
Index	1.34	19.95	0.13	100.00	7	100.00	5

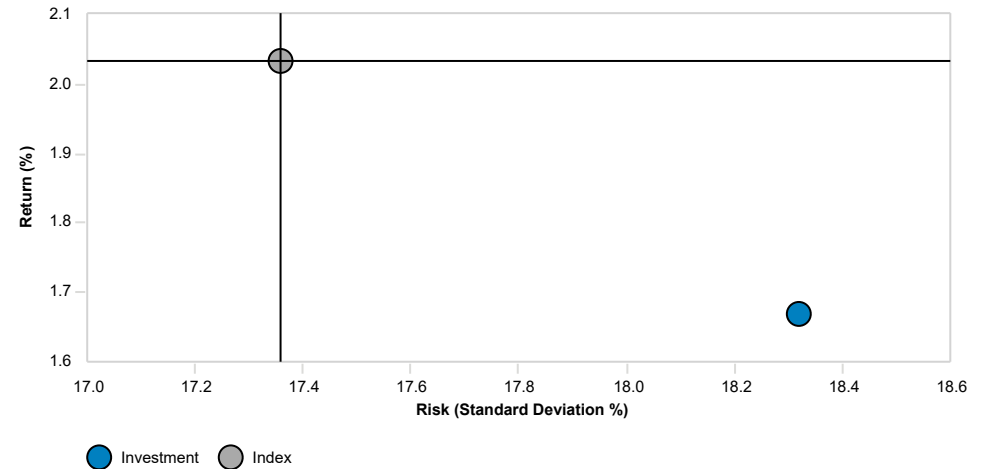
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.67	18.32	0.11	102.32	11	103.52	9
Index	2.03	17.36	0.13	100.00	11	100.00	9

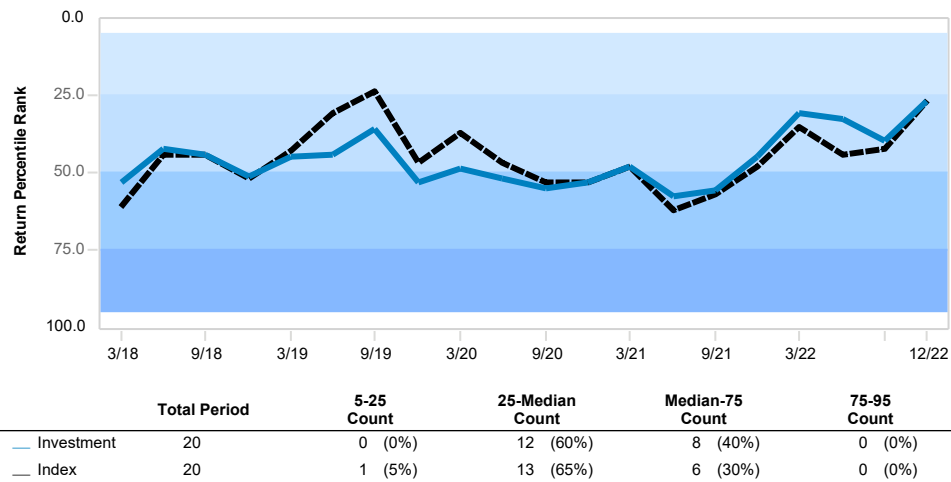
### Risk and Return 3 Years



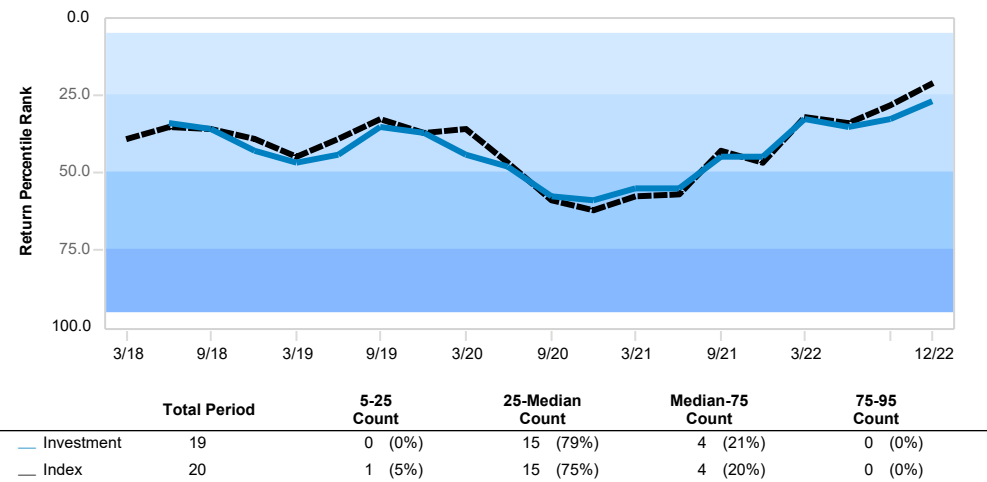
### Risk and Return 5 Years



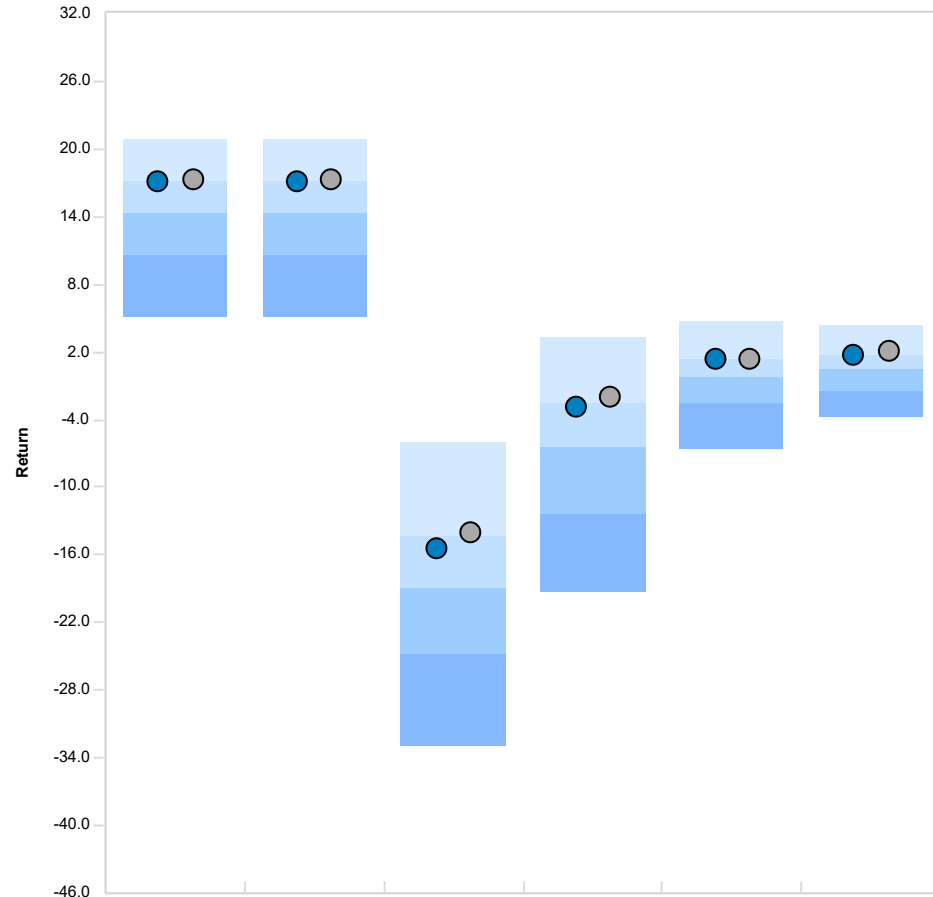
### 3 Year Rolling Percentile Rank IM International Equity (MF)



### 5 Year Rolling Percentile Rank IM International Equity (MF)

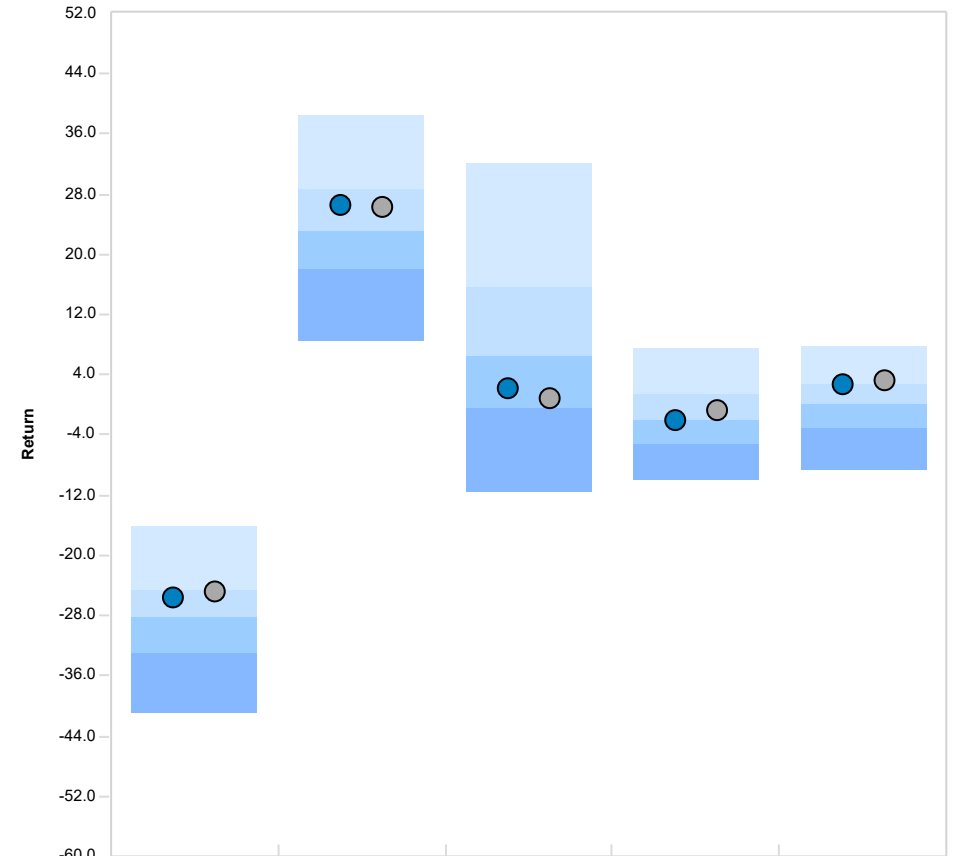


**Plan Sponsor Peer Group Analysis vs. IM International Equity (MF)**



	QTR	FYTD	1 YR	2 YR	3 YR	5 YR
Investment	17.11 (26)	17.11 (26)	-15.32 (31)	-2.86 (28)	1.33 (27)	1.67 (27)
Index	17.40 (23)	17.40 (23)	-14.01 (23)	-1.96 (23)	1.34 (27)	2.03 (21)
Median	14.28	14.28	-18.96	-6.38	-0.14	0.43

**Plan Sponsor Peer Group Analysis vs. IM International Equity (MF)**

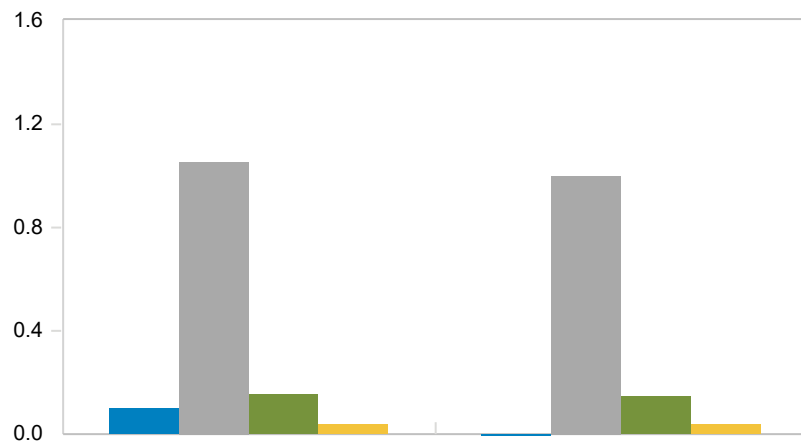


	4 Quarters Ending Sep-2022	4 Quarters Ending Sep-2021	4 Quarters Ending Sep-2020	4 Quarters Ending Sep-2019	4 Quarters Ending Sep-2018
Investment	-25.53 (32)	26.51 (34)	2.18 (65)	-2.08 (52)	2.78 (24)
Index	-24.75 (26)	26.29 (34)	0.93 (69)	-0.82 (41)	3.25 (21)
Median	-28.15	23.07	6.53	-1.89	0.18

**Comparative Performance**

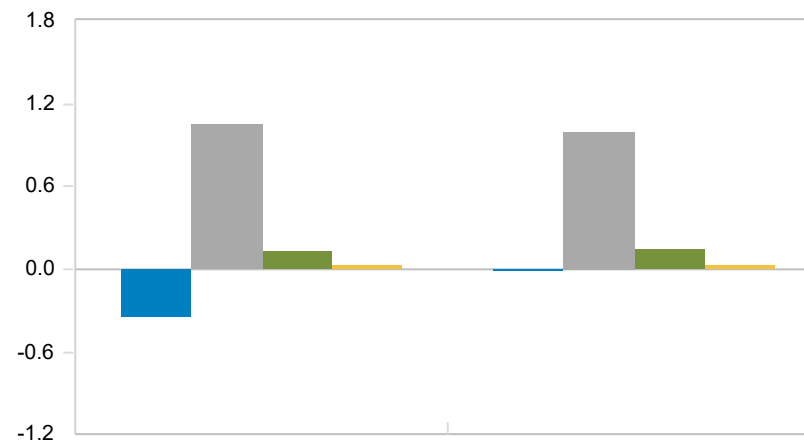
	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-10.44 (52)	-14.06 (63)	-6.05 (29)	2.99 (30)	-1.56 (40)	5.73 (41)
Index	-9.29 (29)	-14.29 (66)	-5.79 (26)	2.74 (33)	-0.35 (22)	5.38 (48)
Median	-10.39	-13.08	-8.77	1.29	-2.46	5.30

Risk / Reward Historical Statistics 3 Years Ending December 31, 2022



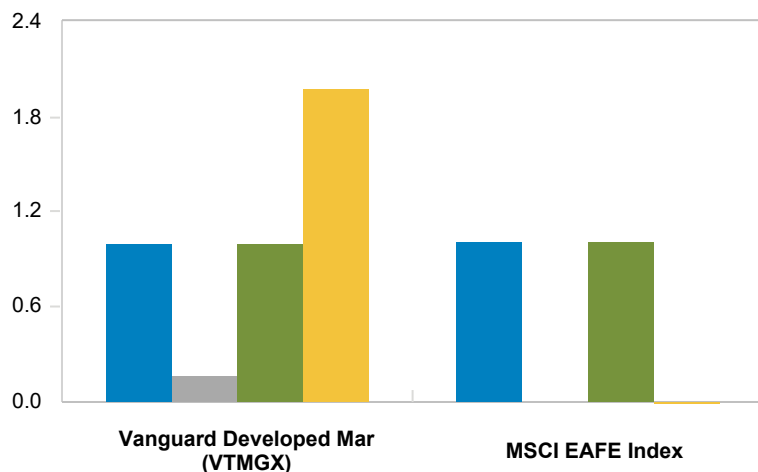
	Vanguard Developed Mar (VTMGX)	MSCI EAFE Index
Alpha	0.10	0.00
Beta	1.05	1.00
Sharpe Ratio	0.15	0.15
Treynor Ratio	0.04	0.04

Risk / Reward Historical Statistics 5 Years Ending December 31, 2022



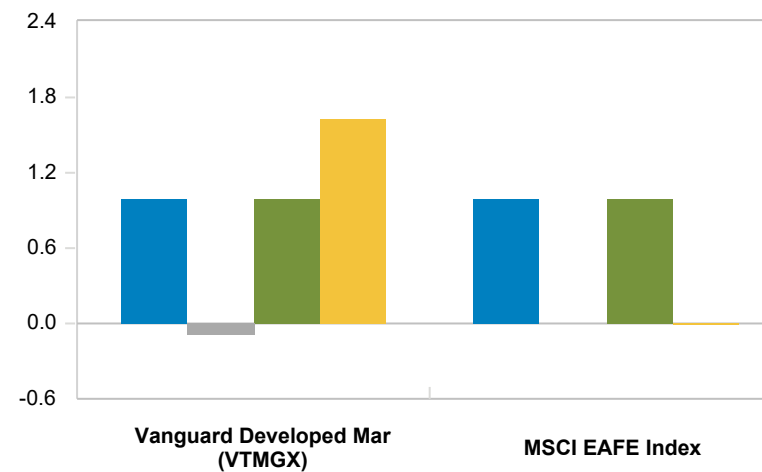
	Vanguard Developed Mar (VTMGX)	MSCI EAFE Index
Alpha	-0.34	0.00
Beta	1.05	1.00
Sharpe Ratio	0.13	0.14
Treynor Ratio	0.03	0.03

Index Relative Historical Statistics 3 Years Ending December 31, 2022



	Vanguard Developed Mar (VTMGX)	MSCI EAFE Index
Actual Correlation	1.00	1.00
Information Ratio	0.16	N/A
R-Squared	1.00	1.00
Tracking Error	1.97	0.00

Index Relative Historical Statistics 5 Years Ending December 31, 2022



	Vanguard Developed Mar (VTMGX)	MSCI EAFE Index
Actual Correlation	1.00	1.00
Information Ratio	-0.09	N/A
R-Squared	1.00	1.00
Tracking Error	1.62	0.00

Benchmark: MSCI EAFE Index



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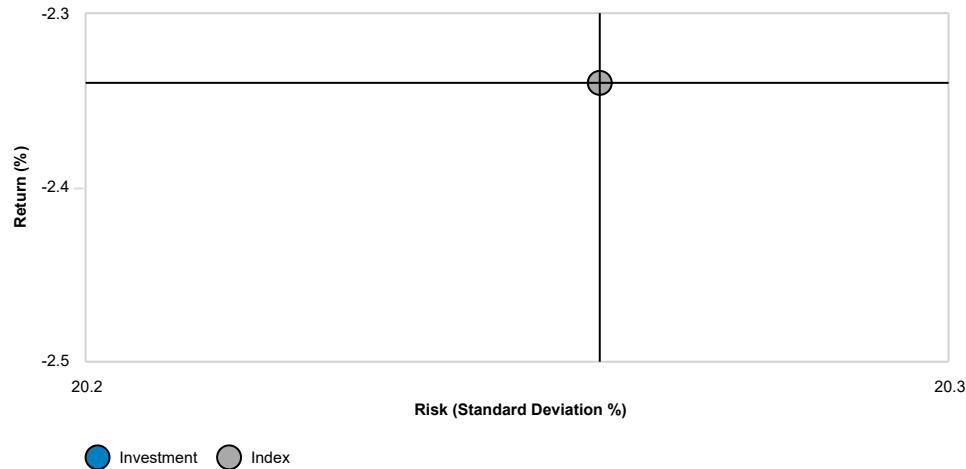
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	-2.34	20.26	-0.05	100.00	6	100.00	6

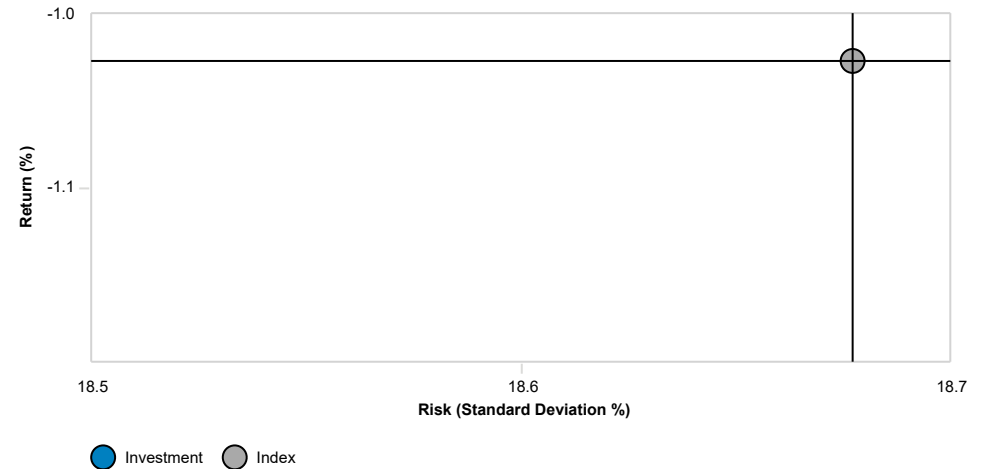
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	-1.03	18.68	-0.03	100.00	10	100.00	10

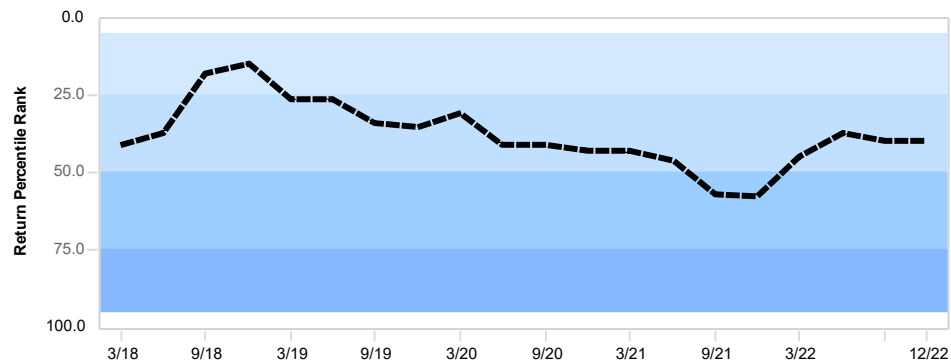
### Risk and Return 3 Years



### Risk and Return 5 Years

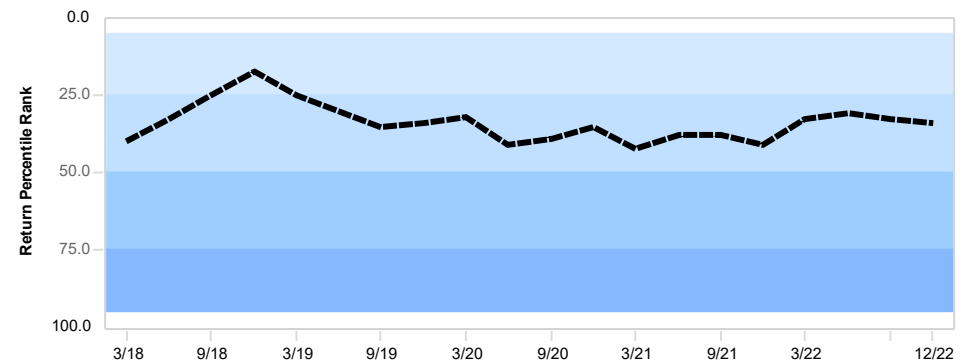


### 3 Year Rolling Percentile Rank IM Emerging Markets Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	0	0	0	0	0
Index	20	2 (10%)	16 (80%)	2 (10%)	0 (0%)

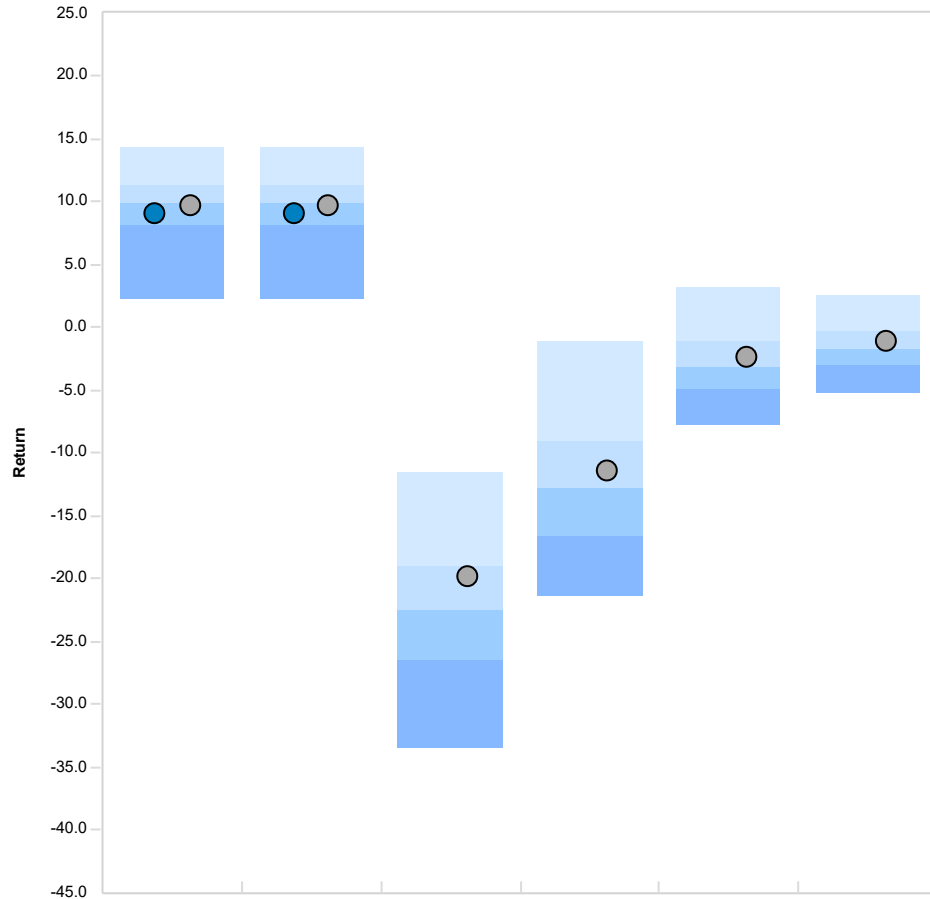
### 5 Year Rolling Percentile Rank IM Emerging Markets Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	0	0	0	0	0
Index	20	3 (15%)	17 (85%)	0 (0%)	0 (0%)

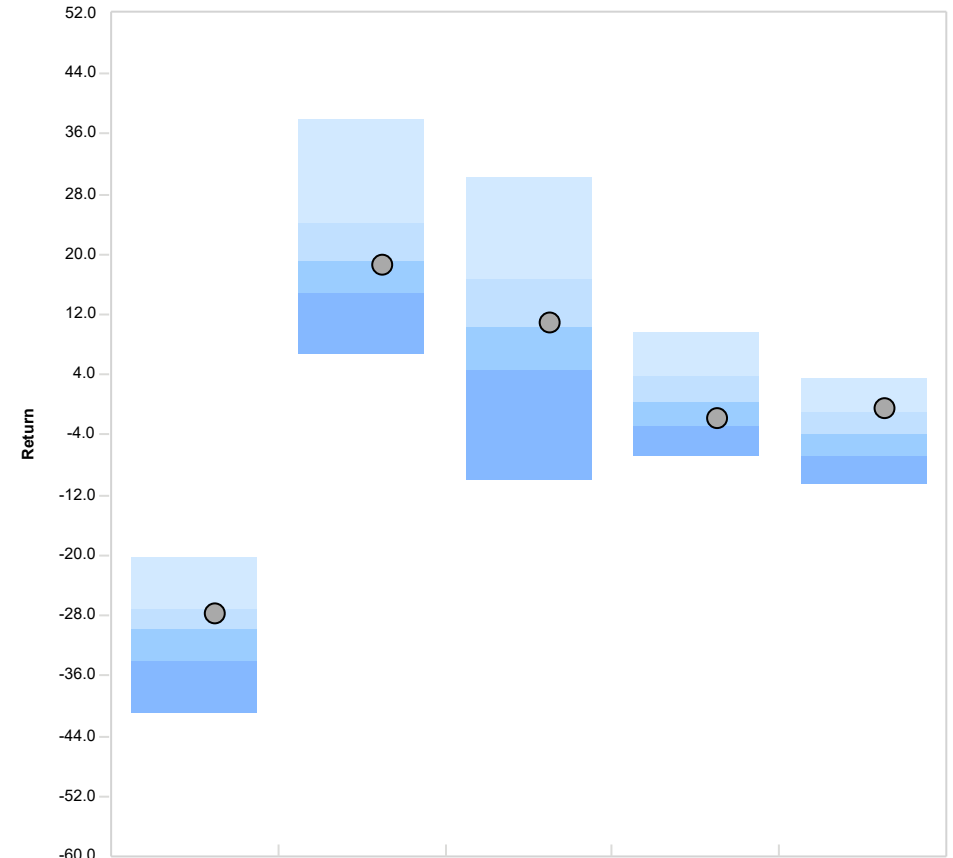


**Plan Sponsor Peer Group Analysis vs. IM Emerging Markets Equity (MF)**



	QTR	FYTD	1 YR	2 YR	3 YR	5 YR
Investment	9.07 (65)	9.07 (65)	N/A	N/A	N/A	N/A
Index	9.79 (53)	9.79 (53)	-19.74 (29)	-11.41 (38)	-2.34 (40)	-1.03 (34)
Median	9.95	9.95	-22.44	-12.84	-3.16	-1.74

**Plan Sponsor Peer Group Analysis vs. IM Emerging Markets Equity (MF)**



	4 Quarters Ending Sep-2022	4 Quarters Ending Sep-2021	4 Quarters Ending Sep-2020	4 Quarters Ending Sep-2019	4 Quarters Ending Sep-2018
Investment	N/A	N/A	N/A	N/A	N/A
Index	-27.80 (30)	18.58 (56)	10.91 (47)	-1.63 (66)	-0.44 (21)
Median	-29.88	19.25	10.39	0.25	-3.86

**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-7.29 (18)	-17.09 (95)	N/A	N/A	N/A	N/A
Index	-11.42 (58)	-11.34 (37)	-6.92 (28)	-1.24 (51)	-7.97 (56)	5.12 (51)
Median	-11.00	-11.91	-9.80	-1.20	-7.60	5.15

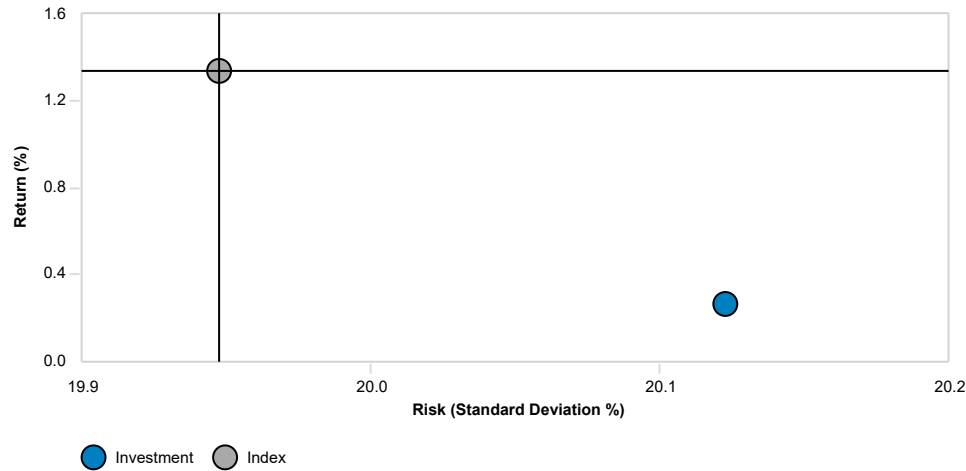
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.27	20.12	0.08	98.31	7	102.10	5
Index	1.34	19.95	0.13	100.00	7	100.00	5

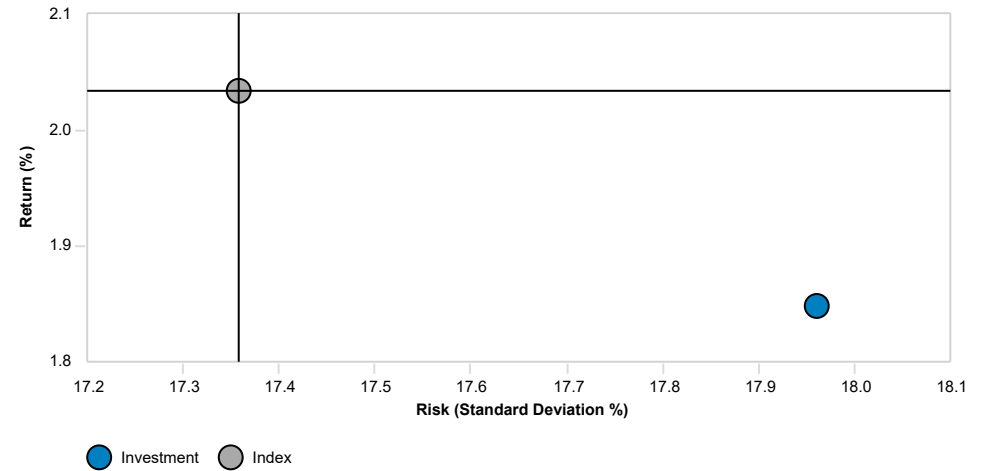
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.85	17.96	0.12	101.34	10	101.90	10
Index	2.03	17.36	0.13	100.00	11	100.00	9

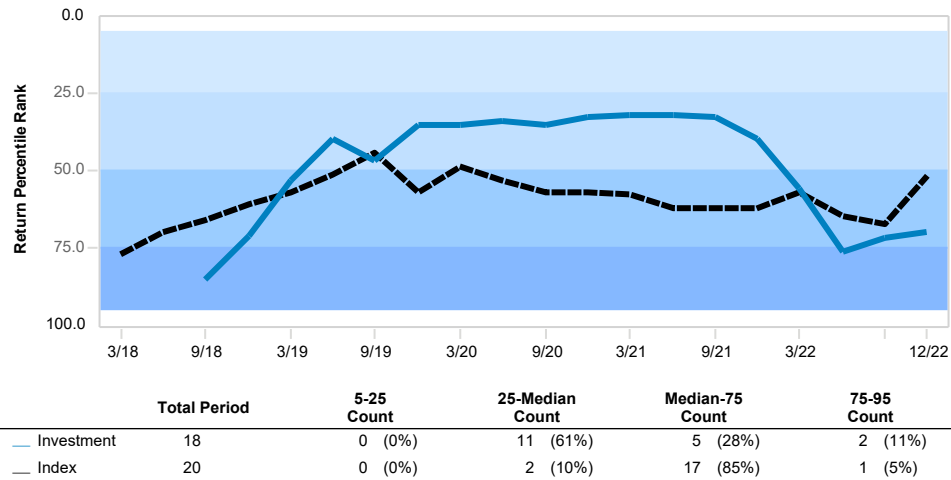
### Risk and Return 3 Years



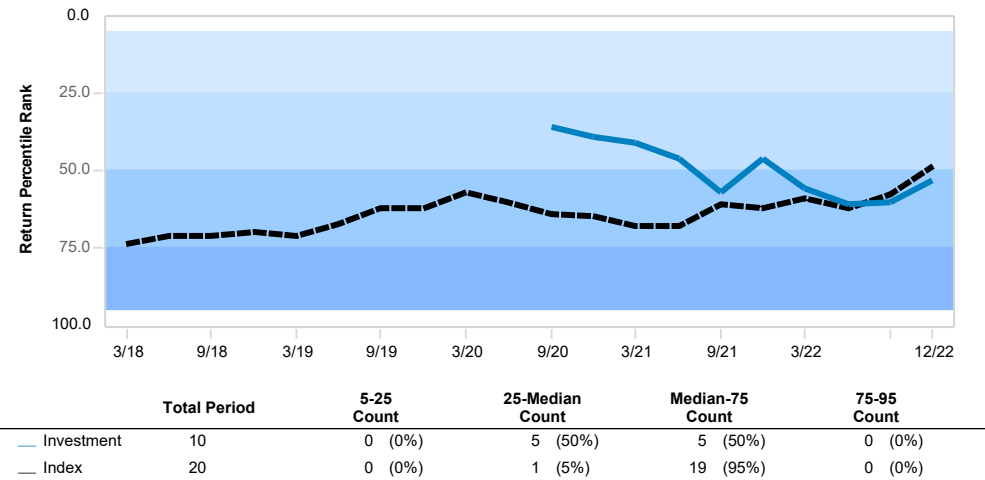
### Risk and Return 5 Years



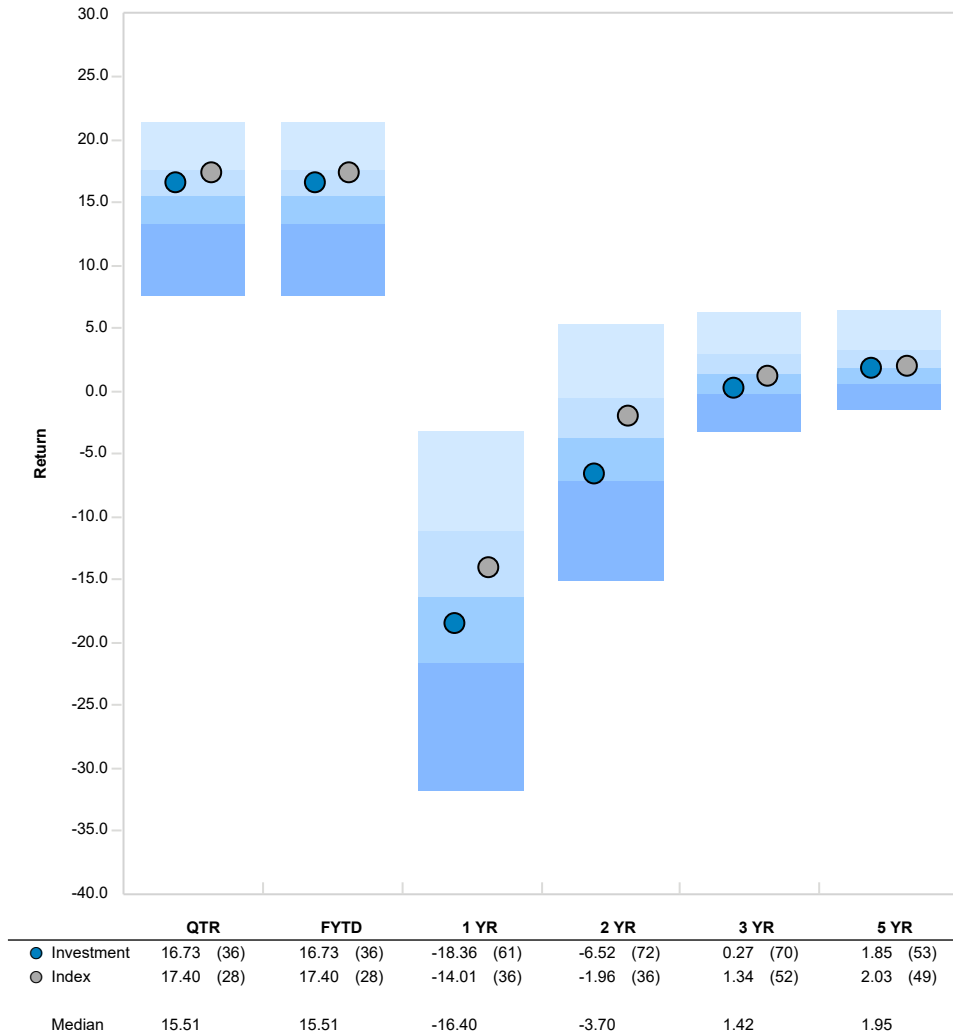
### 3 Year Rolling Percentile Rank IM International Equity (SA+CF)



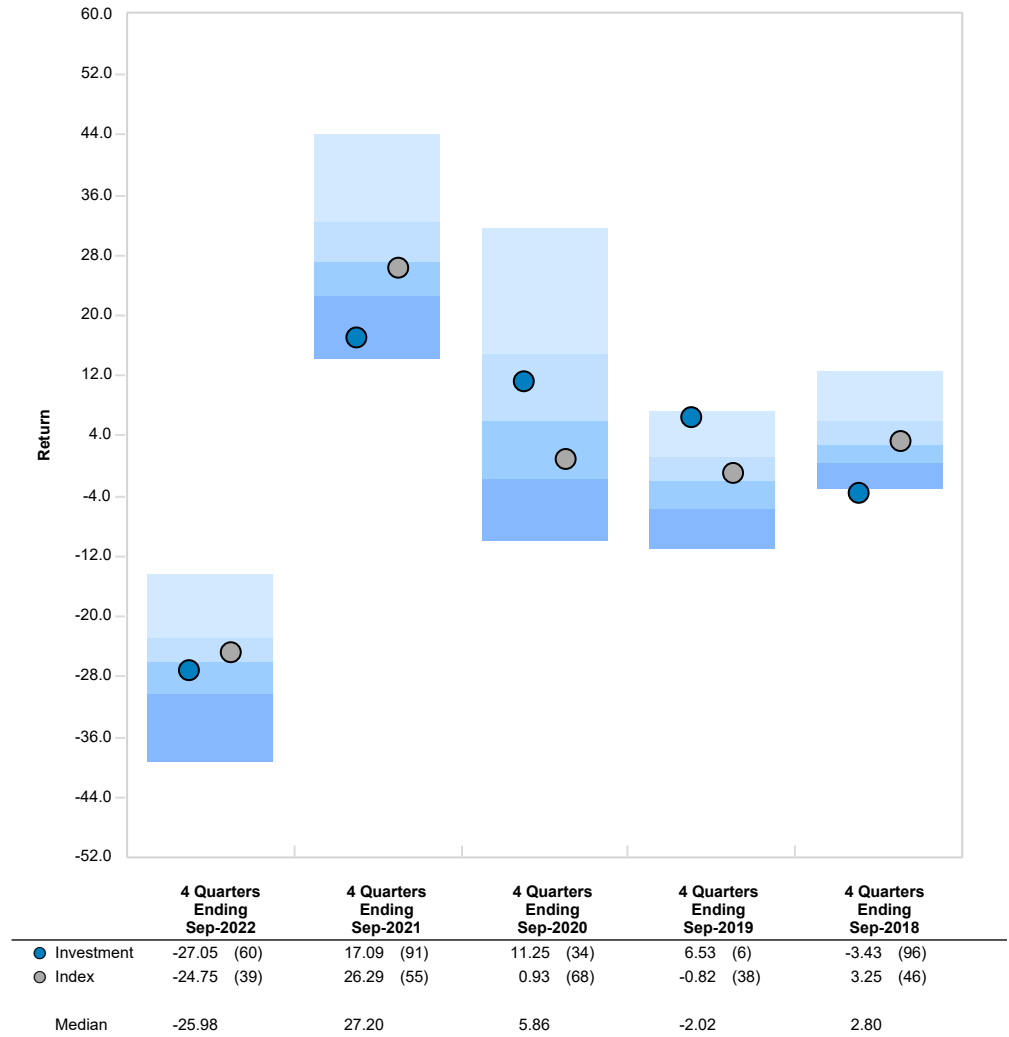
### 5 Year Rolling Percentile Rank IM International Equity (SA+CF)



Plan Sponsor Peer Group Analysis vs. IM International Equity (SA+CF)



Plan Sponsor Peer Group Analysis vs. IM International Equity (SA+CF)



Comparative Performance

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-9.22 (46)	-14.85 (58)	-9.52 (69)	4.31 (17)	-3.64 (88)	4.05 (79)
Index	-9.29 (49)	-14.29 (52)	-5.79 (40)	2.74 (37)	-0.35 (40)	5.38 (57)
Median	-9.37	-14.23	-6.94	1.96	-0.84	5.65

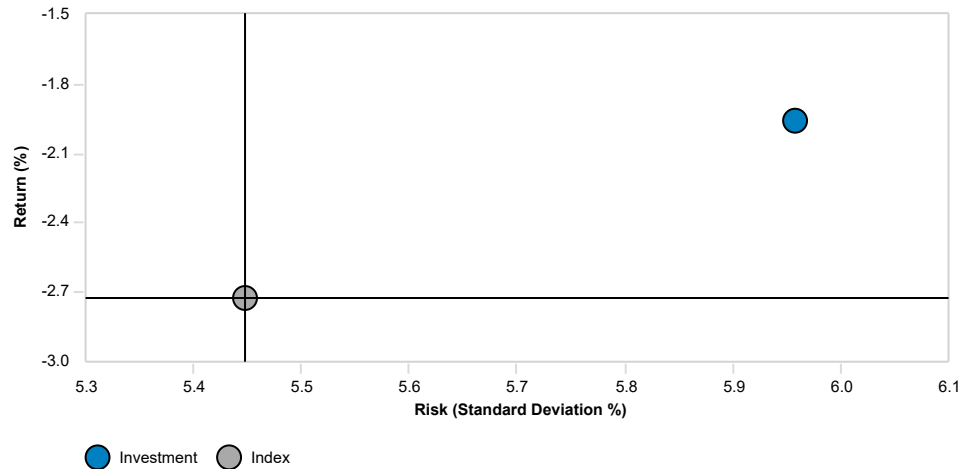
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.96	5.96	-0.42	110.10	6	97.41	6
Index	-2.72	5.45	-0.61	100.00	7	100.00	5

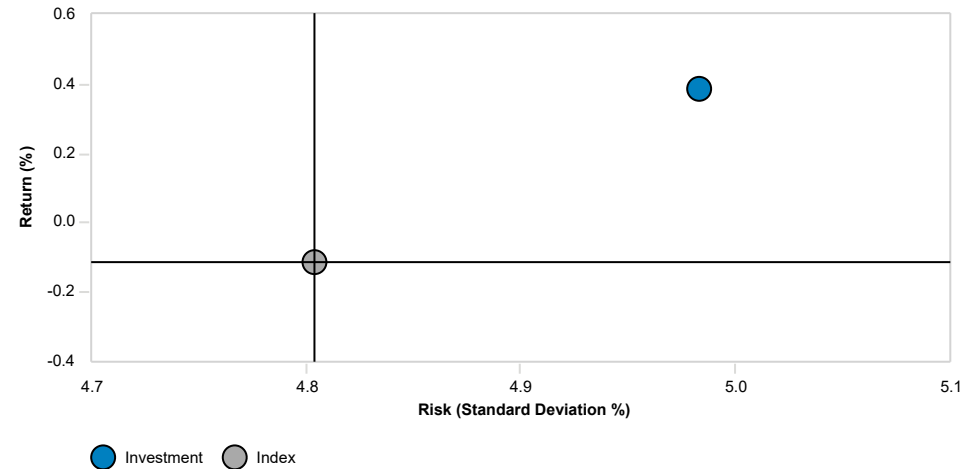
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.39	4.98	-0.15	98.71	11	90.46	9
Index	-0.11	4.80	-0.26	100.00	12	100.00	8

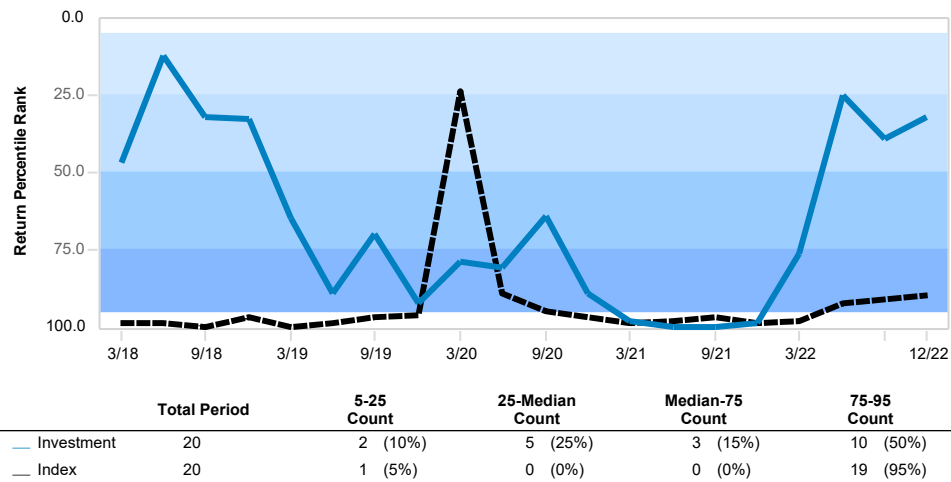
### Risk and Return 3 Years



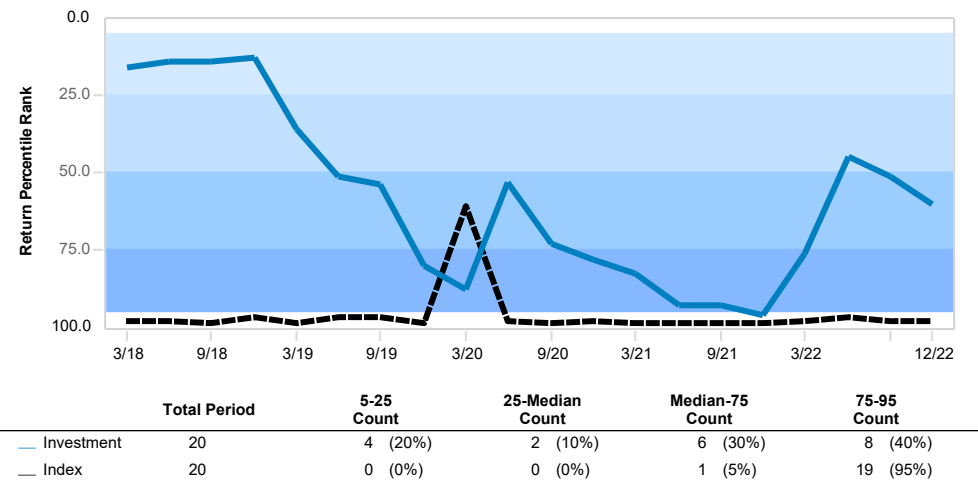
### Risk and Return 5 Years



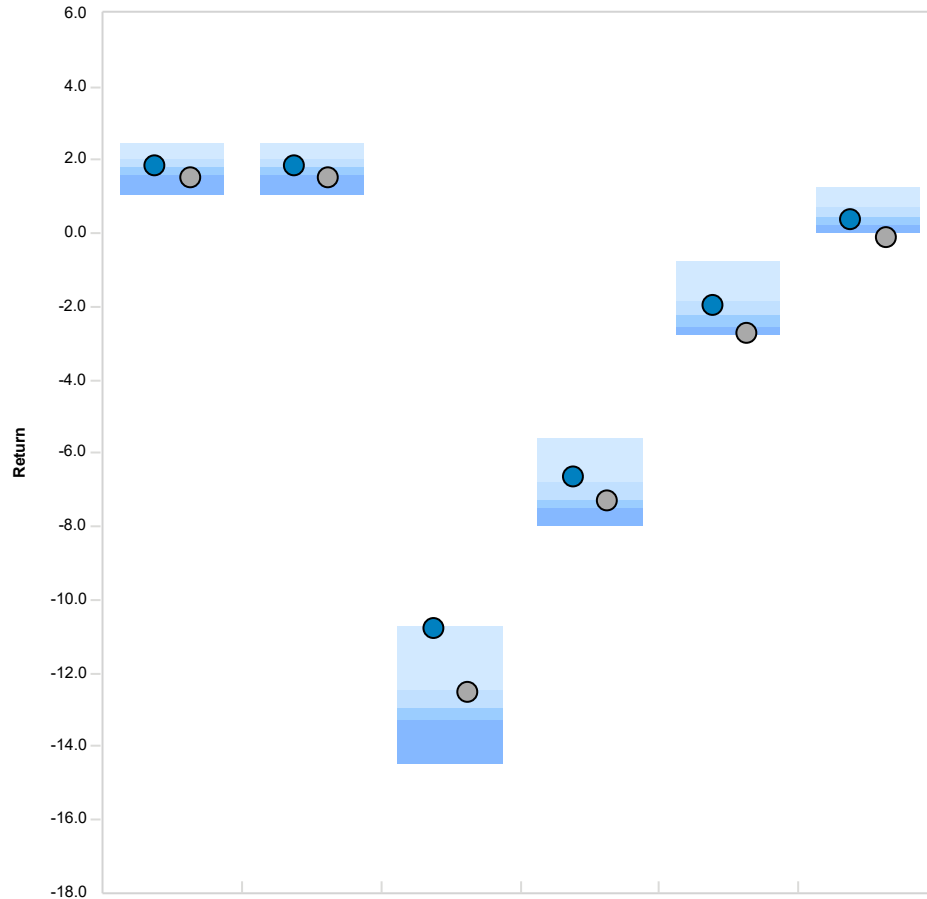
### 3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



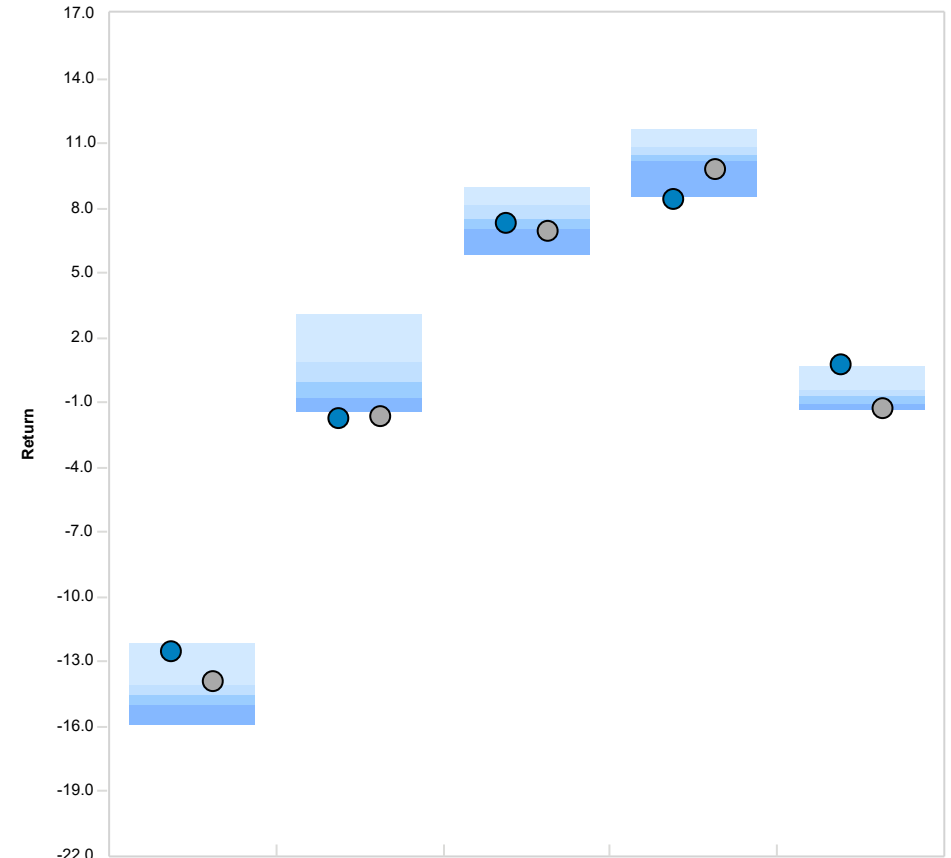
### 5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



Plan Sponsor Peer Group Analysis vs. IM U.S. Broad Market Core Fixed Income (SA+CF)



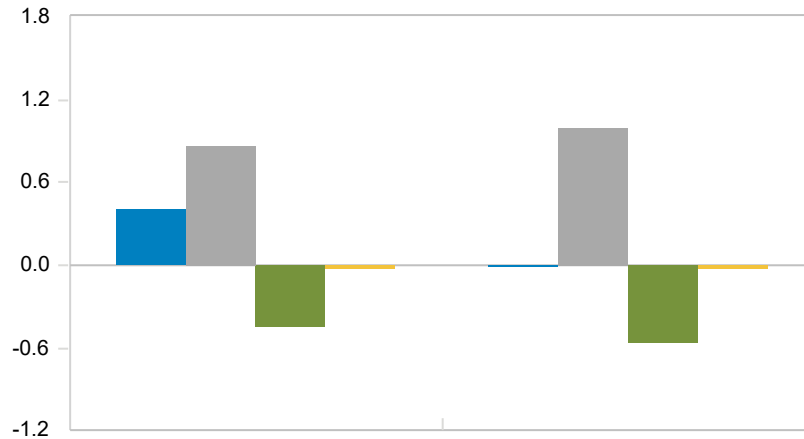
Plan Sponsor Peer Group Analysis vs. IM U.S. Broad Market Core Fixed Income (SA+CF)



Comparative Performance

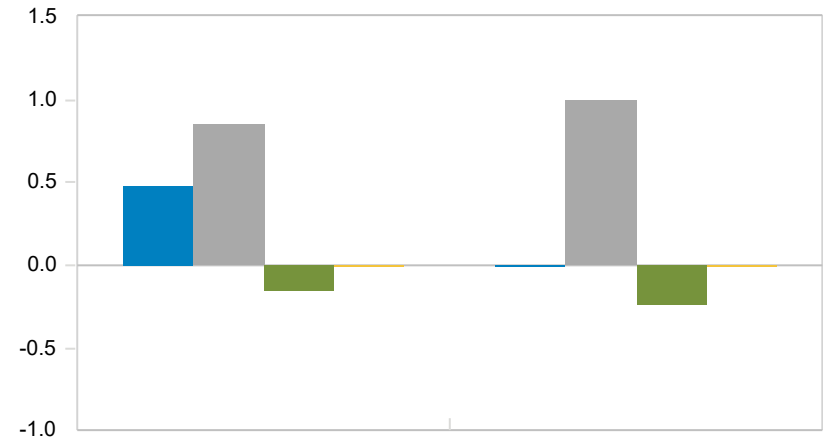
	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-5.13 (97)	-3.80 (7)	-4.05 (2)	-0.07 (61)	-0.05 (90)	1.16 (99)
Index	-4.74 (72)	-4.19 (12)	-5.62 (29)	-0.04 (49)	0.05 (68)	1.51 (96)
Median	-4.56	-4.76	-5.81	-0.04	0.10	1.98

Risk / Reward Historical Statistics 3 Years Ending December 31, 2022



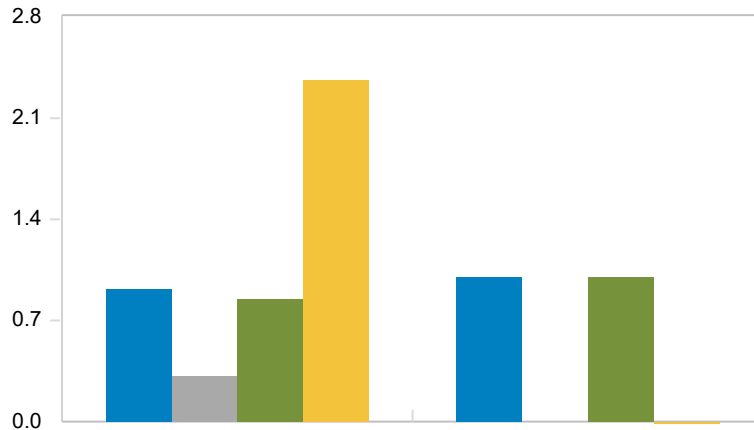
	GHA A+ Fixed Income	Blmbg. U.S. Aggregate: A+
Alpha	0.41	0.00
Beta	0.86	1.00
Sharpe Ratio	-0.45	-0.56
Treynor Ratio	-0.03	-0.03

Risk / Reward Historical Statistics 5 Years Ending December 31, 2022



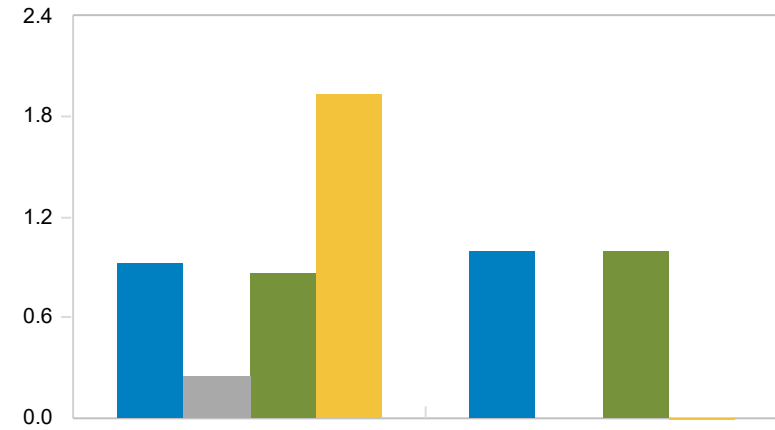
	GHA A+ Fixed Income	Blmbg. U.S. Aggregate: A+
Alpha	0.48	0.00
Beta	0.85	1.00
Sharpe Ratio	-0.16	-0.24
Treynor Ratio	-0.01	-0.01

Index Relative Historical Statistics 3 Years Ending December 31, 2022



	GHA A+ Fixed Income	Blmbg. U.S. Aggregate: A+
Actual Correlation	0.92	1.00
Information Ratio	0.32	N/A
R-Squared	0.85	1.00
Tracking Error	2.36	0.00

Index Relative Historical Statistics 5 Years Ending December 31, 2022



	GHA A+ Fixed Income	Blmbg. U.S. Aggregate: A+
Actual Correlation	0.93	1.00
Information Ratio	0.25	N/A
R-Squared	0.86	1.00
Tracking Error	1.94	0.00

Benchmark: Blmbg. U.S. Aggregate: A+



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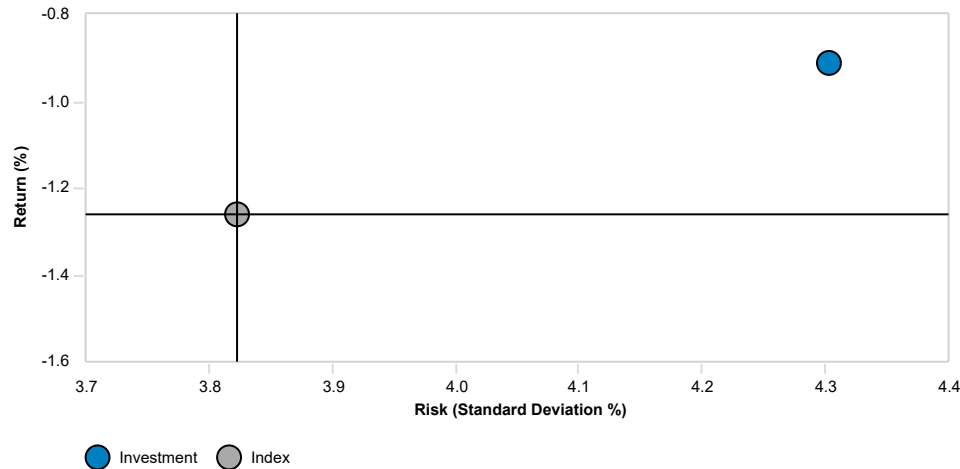
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.91	4.30	-0.36	109.43	7	100.88	5
Index	-1.26	3.82	-0.50	100.00	7	100.00	5

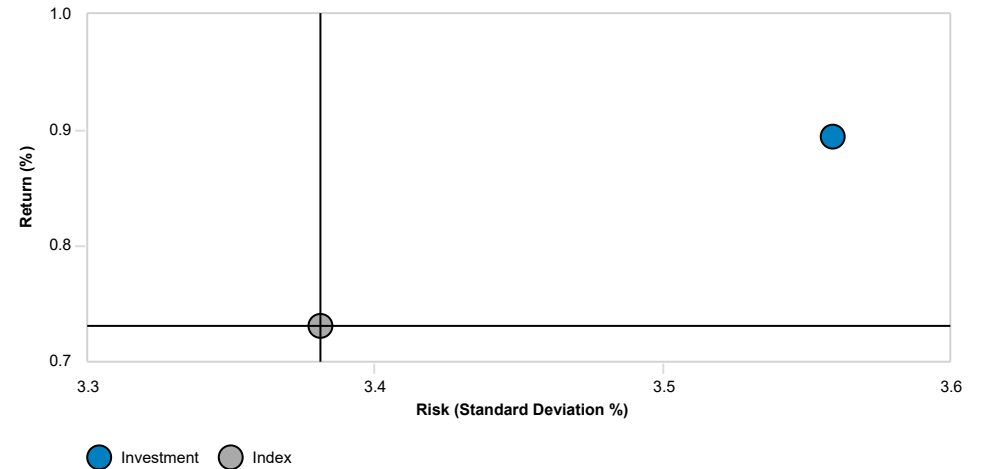
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.90	3.56	-0.08	95.56	14	90.49	6
Index	0.73	3.38	-0.14	100.00	14	100.00	6

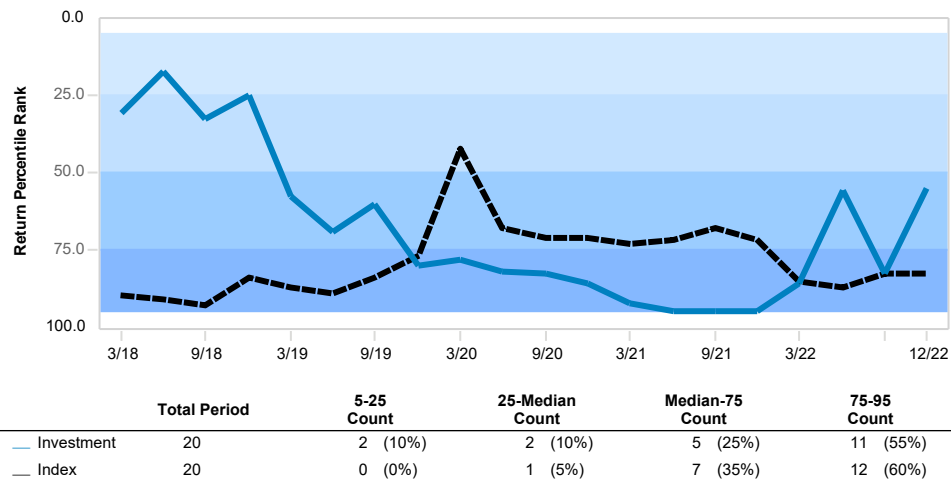
### Risk and Return 3 Years



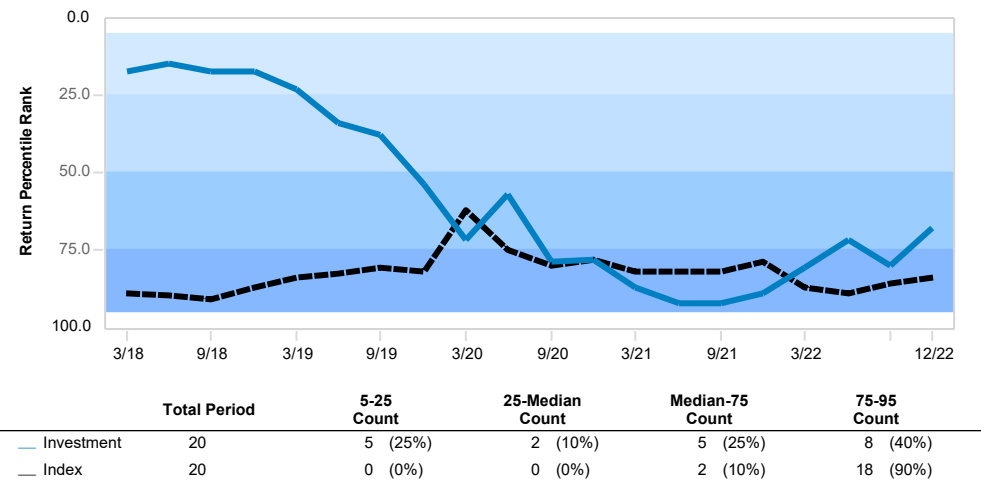
### Risk and Return 5 Years



### 3 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)

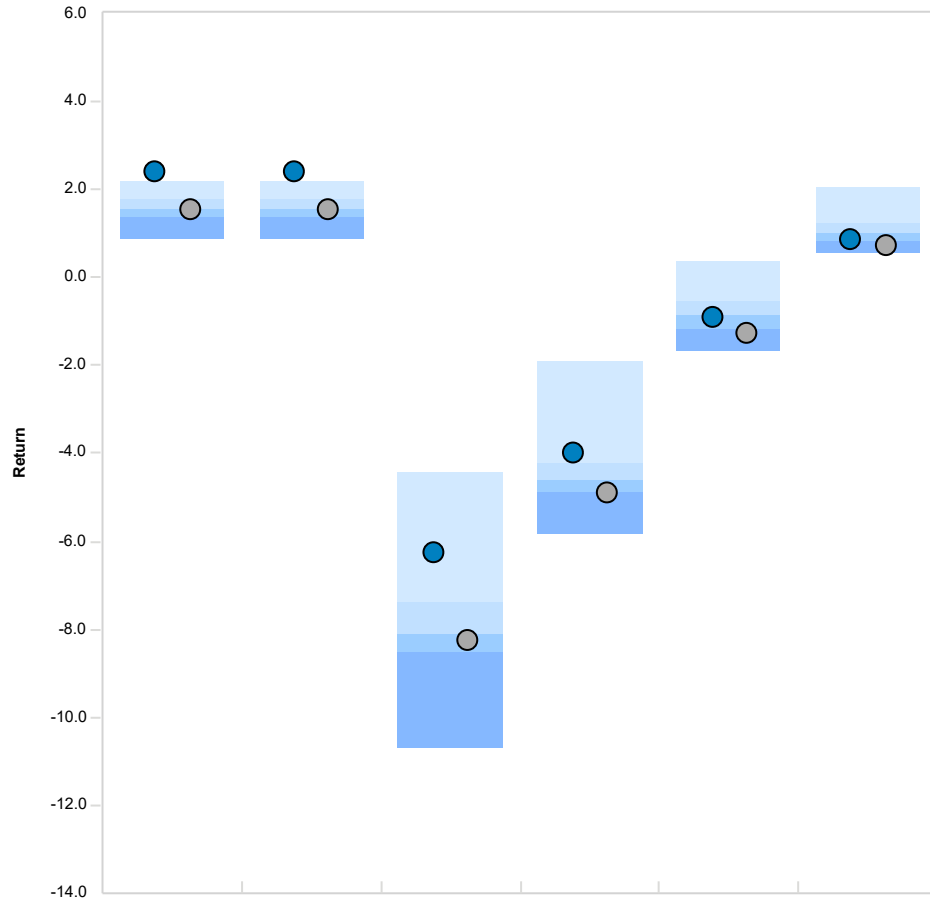


### 5 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)

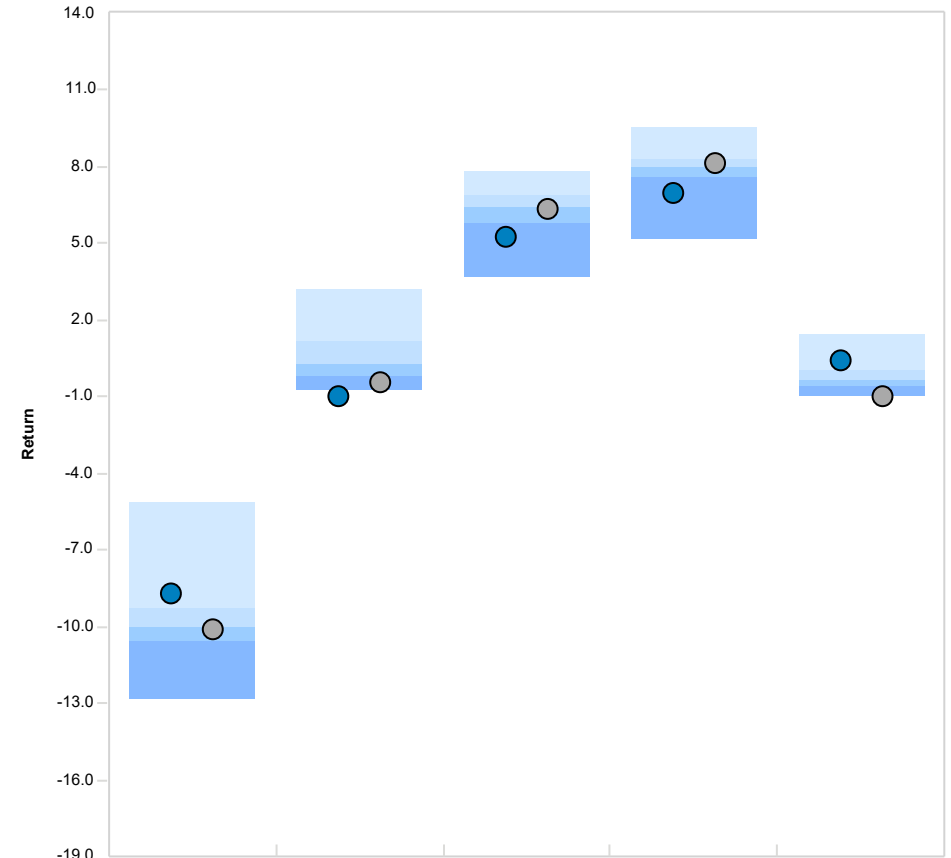




**Plan Sponsor Peer Group Analysis vs. IM U.S. Intermediate Duration (SA+CF)**



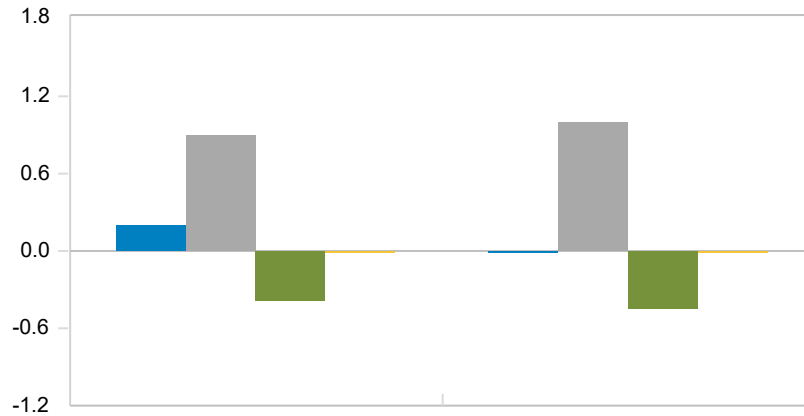
**Plan Sponsor Peer Group Analysis vs. IM U.S. Intermediate Duration (SA+CF)**



**Comparative Performance**

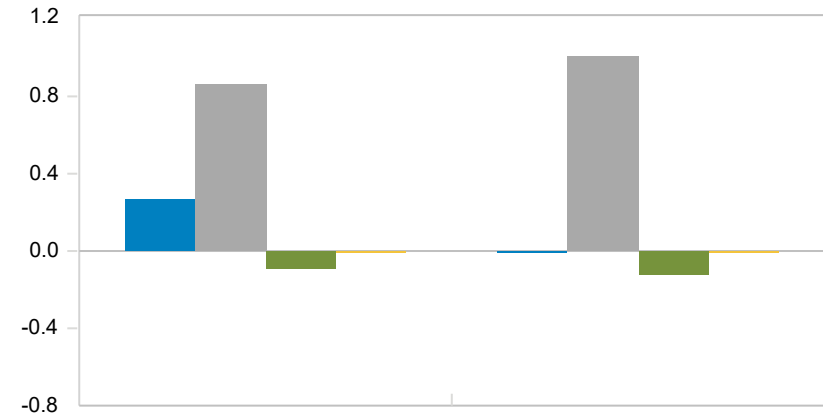
	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-3.73 (91)	-2.07 (18)	-2.89 (8)	-0.28 (12)	0.03 (68)	0.37 (98)
Index	-3.06 (65)	-2.37 (37)	-4.51 (73)	-0.57 (70)	0.02 (71)	0.98 (70)
Median	-2.94	-2.53	-4.34	-0.52	0.07	1.05

Risk / Reward Historical Statistics 3 Years Ending December 31, 2022



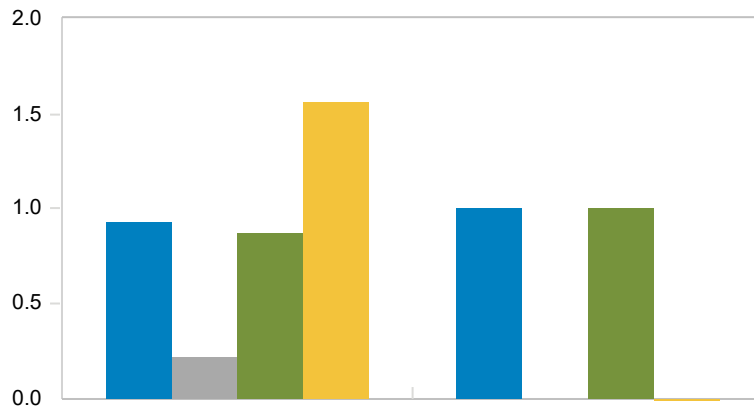
Alpha	0.20	0.00
Beta	0.88	1.00
Sharpe Ratio	-0.39	-0.45
Treynor Ratio	-0.02	-0.02

Risk / Reward Historical Statistics 5 Years Ending December 31, 2022



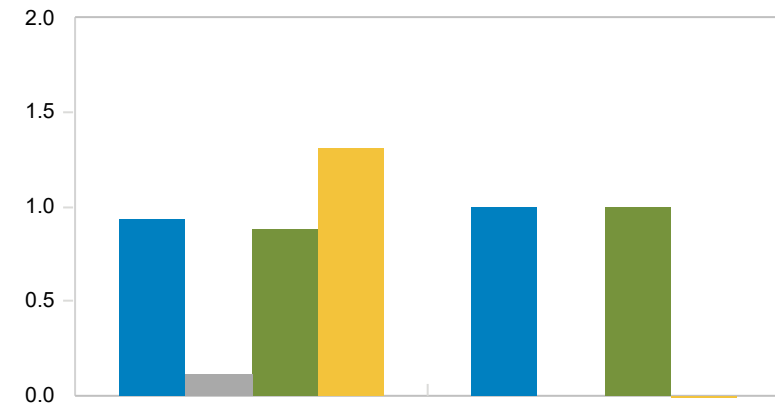
Alpha	0.26	0.00
Beta	0.86	1.00
Sharpe Ratio	-0.09	-0.12
Treynor Ratio	0.00	0.00

Index Relative Historical Statistics 3 Years Ending December 31, 2022



Actual Correlation	0.93	1.00
Information Ratio	0.22	N/A
R-Squared	0.87	1.00
Tracking Error	1.56	0.00

Index Relative Historical Statistics 5 Years Ending December 31, 2022



Actual Correlation	0.94	1.00
Information Ratio	0.11	N/A
R-Squared	0.88	1.00
Tracking Error	1.31	0.00

Benchmark: Bloomberg Intermediate US Govt/Credit Idx



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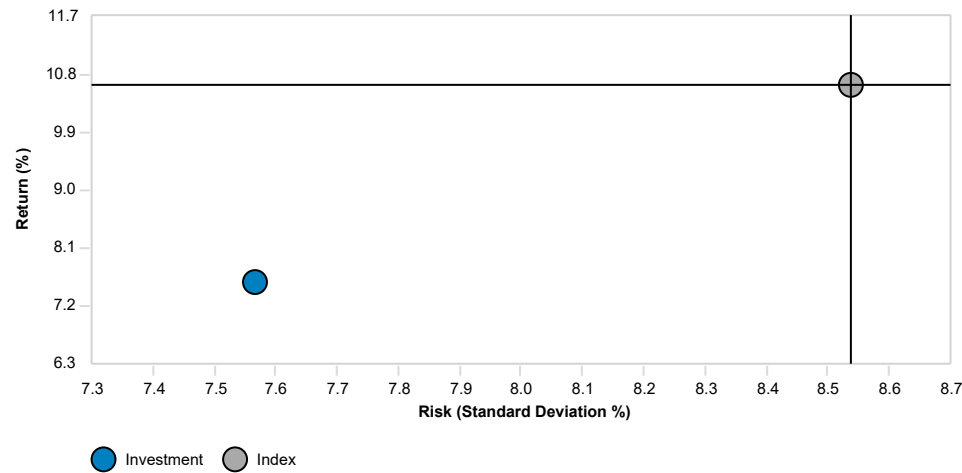
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.56	7.57	0.89	68.45	9	49.07	3
Index	10.64	8.54	1.13	100.00	10	100.00	2

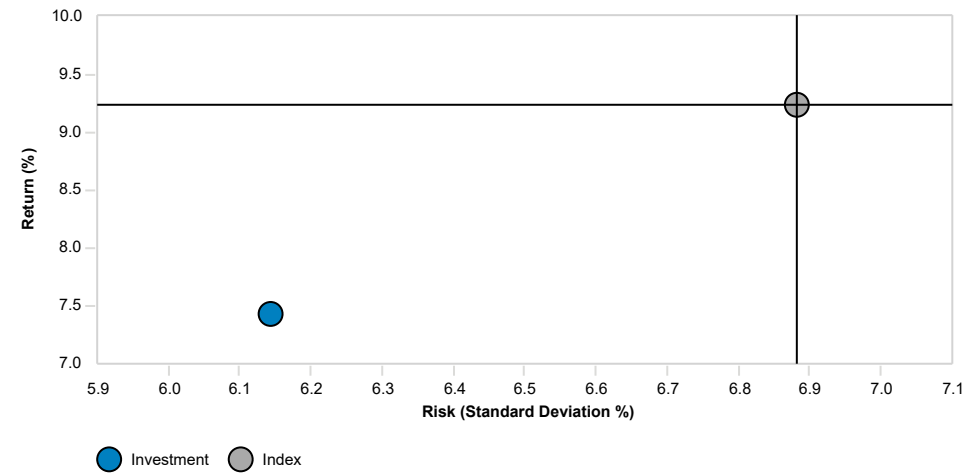
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.43	6.14	0.98	77.21	17	49.07	3
Index	9.23	6.88	1.12	100.00	18	100.00	2

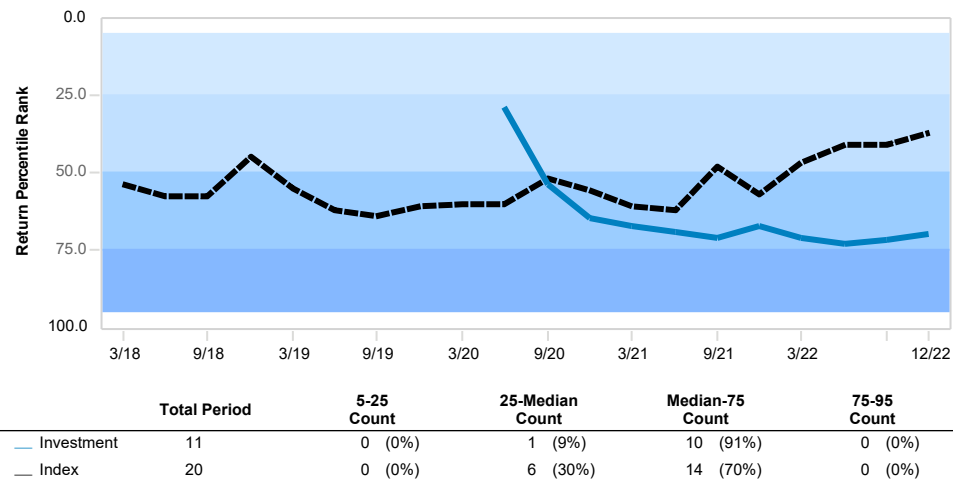
### Risk and Return 3 Years



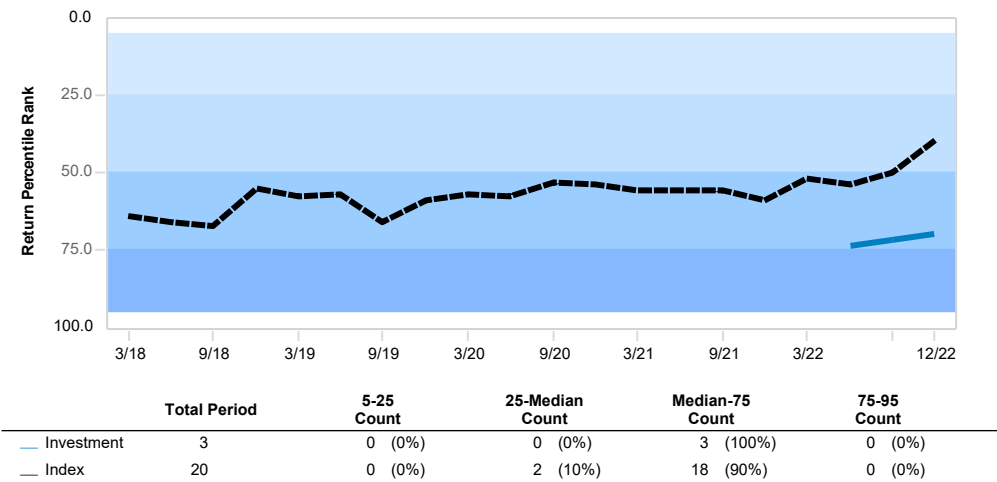
### Risk and Return 5 Years



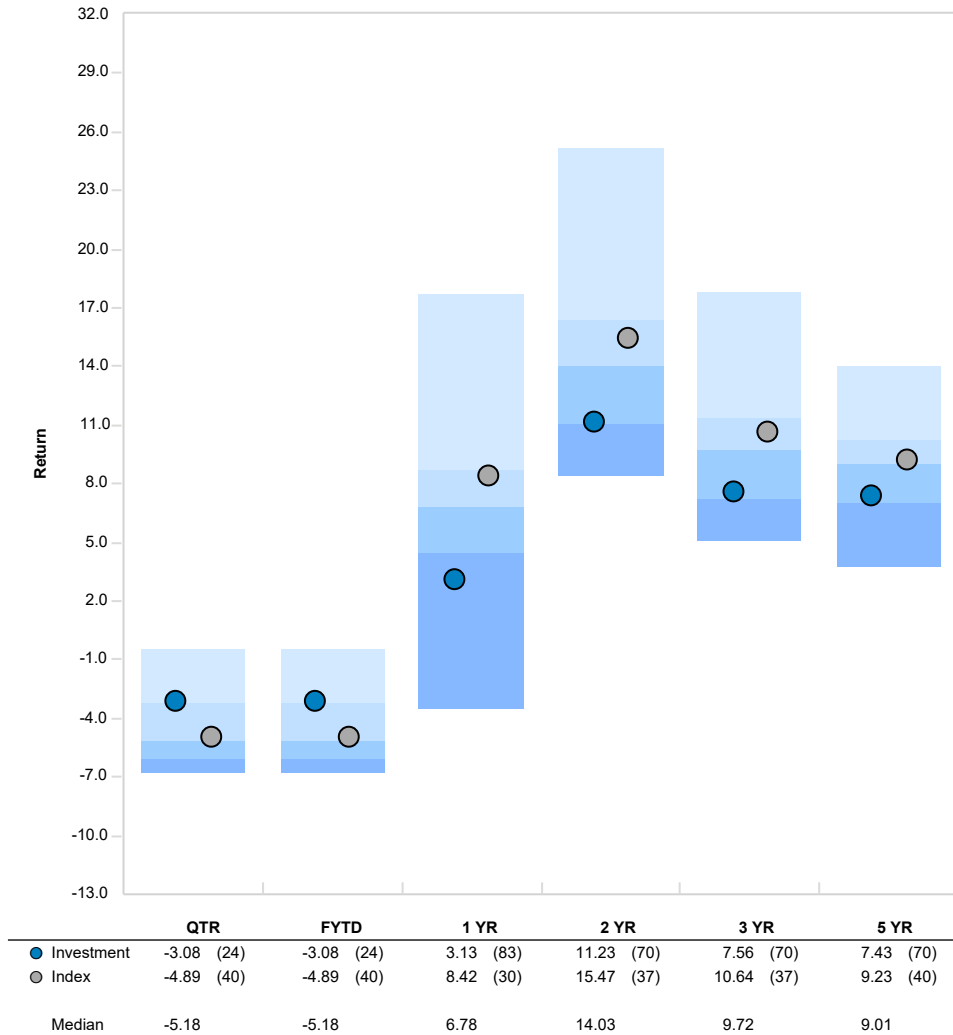
### 3 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



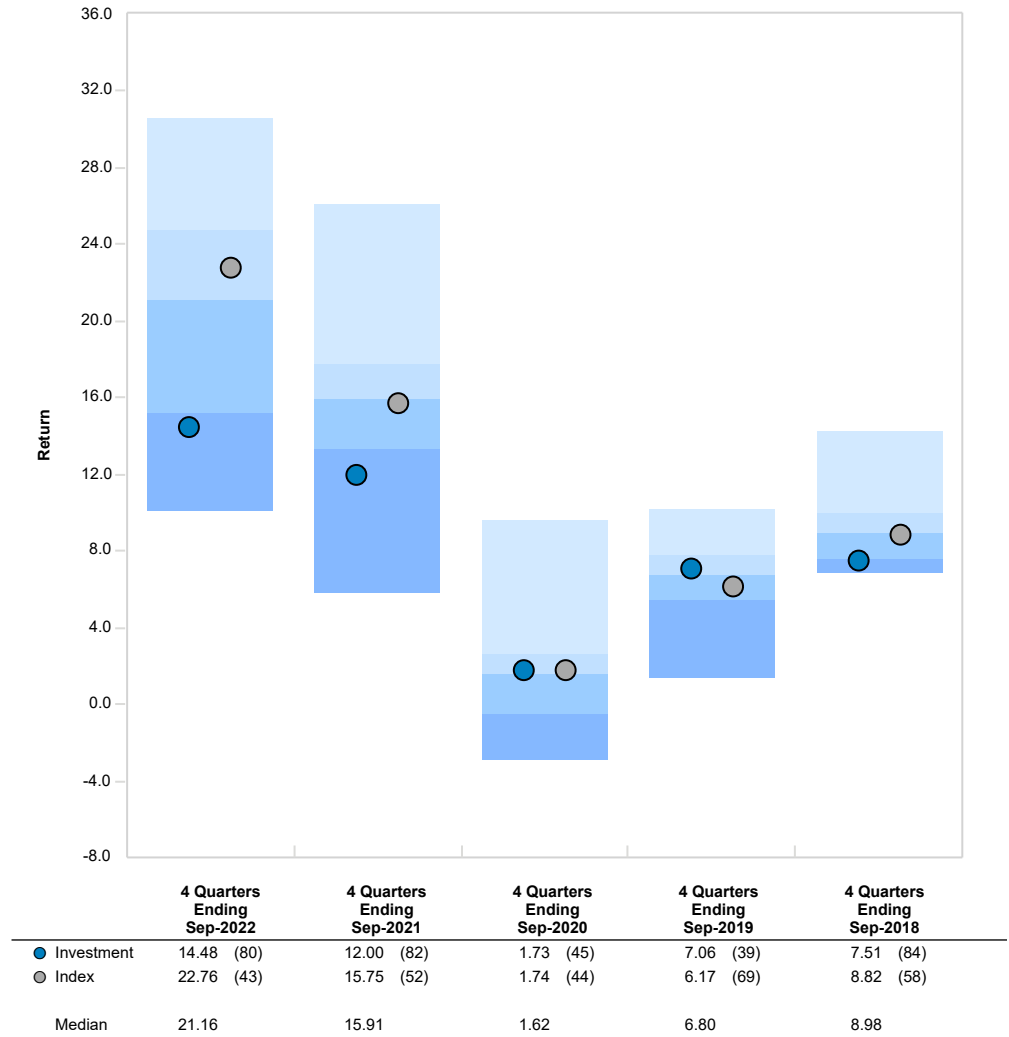
### 5 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



**Plan Sponsor Peer Group Analysis vs. IM U.S. Open End Private Real Estate (SA+CF)**



**Plan Sponsor Peer Group Analysis vs. IM U.S. Open End Private Real Estate (SA+CF)**



**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-3.32 (97)	3.09 (77)	6.75 (52)	7.60 (49)	5.72 (74)	3.56 (82)
Index	0.96 (39)	4.55 (41)	7.99 (17)	7.70 (47)	6.96 (32)	4.39 (41)
Median	0.60	4.39	6.86	7.58	6.33	4.17

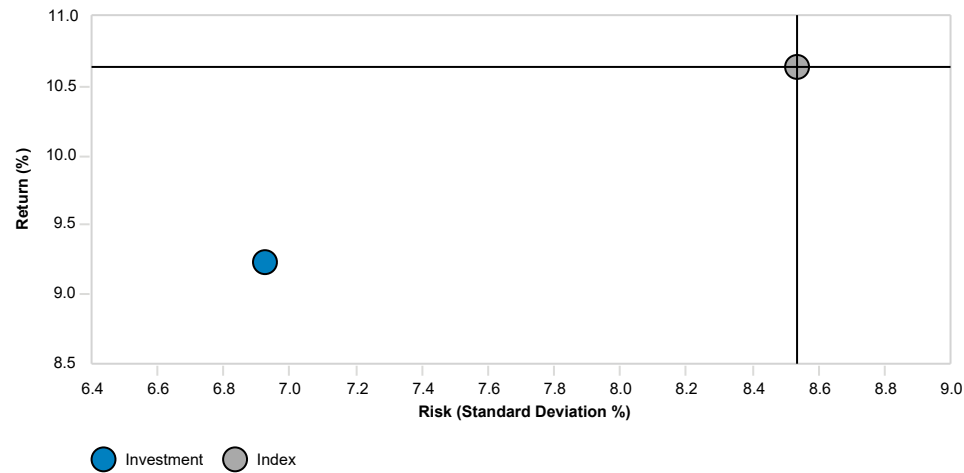
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.24	6.92	1.20	84.56	10	73.90	2
Index	10.64	8.54	1.13	100.00	10	100.00	2

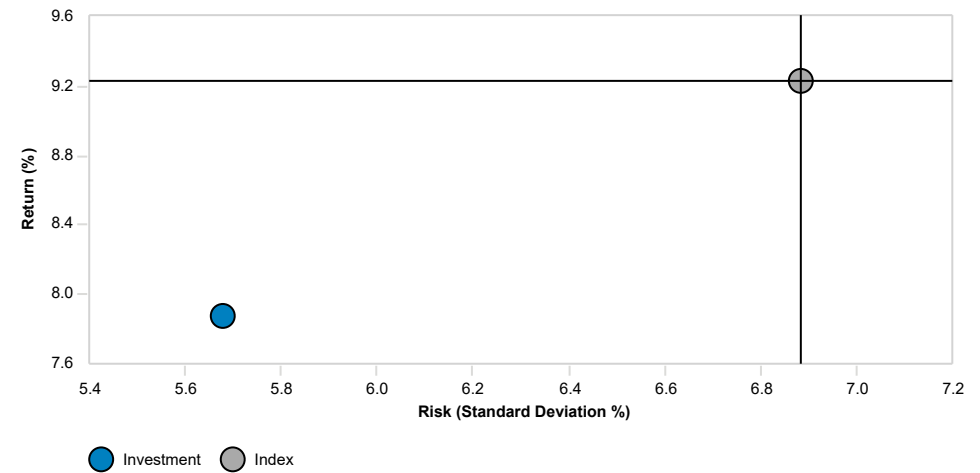
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.88	5.68	1.13	84.04	17	73.90	3
Index	9.23	6.88	1.12	100.00	18	100.00	2

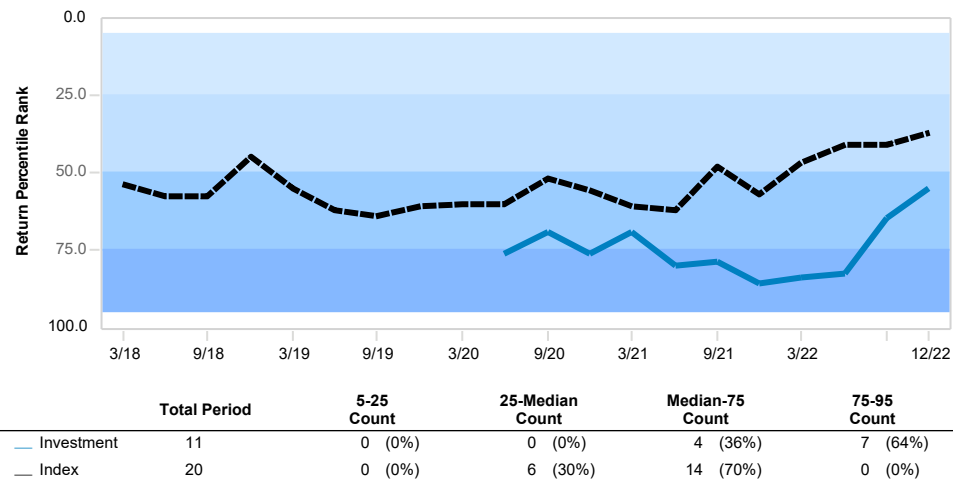
### Risk and Return 3 Years



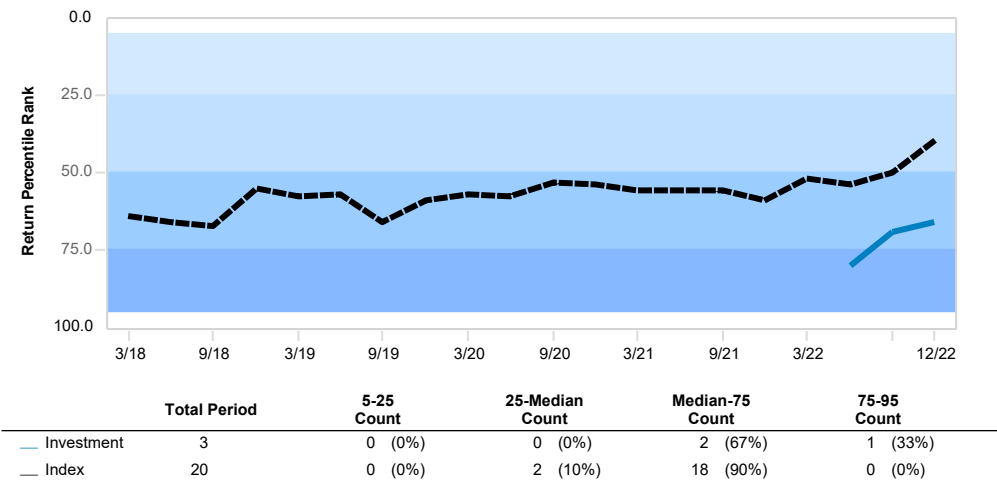
### Risk and Return 5 Years



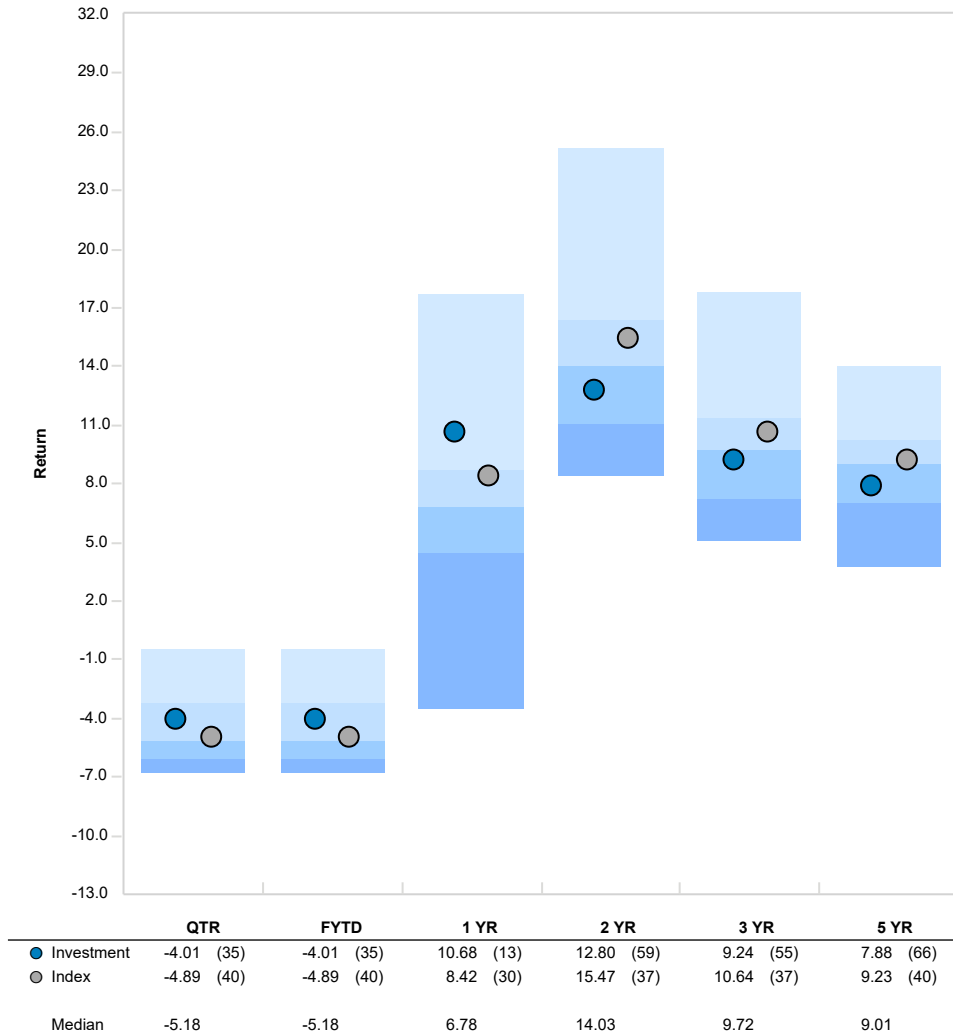
### 3 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



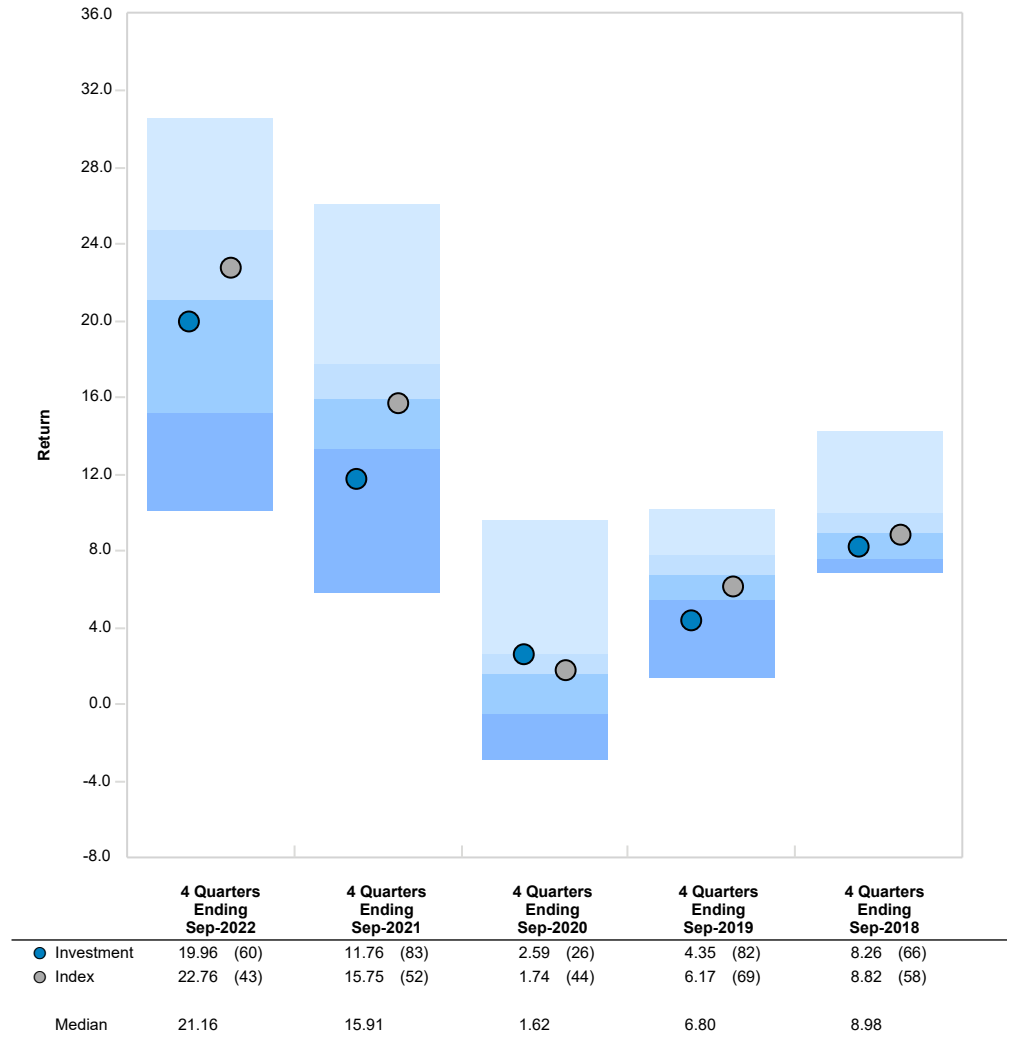
### 5 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



**Plan Sponsor Peer Group Analysis vs. IM U.S. Open End Private Real Estate (SA+CF)**



**Plan Sponsor Peer Group Analysis vs. IM U.S. Open End Private Real Estate (SA+CF)**



**Comparative Performance**

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	2.24 (8)	4.52 (41)	7.90 (18)	4.04 (98)	5.21 (89)	2.56 (94)
Index	0.96 (39)	4.55 (41)	7.99 (17)	7.70 (47)	6.96 (32)	4.39 (41)
Median	0.60	4.39	6.86	7.58	6.33	4.17

Total Fund Historical Hybrid Composition			
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
<b>Jan-1998</b>		<b>Jul-2010</b>	
S&P 500 Index	60.00	Russell 1000 Value Index	15.50
ICE BofAML Govt/ Corp Master	40.00	Bloomberg Intermediate US Govt/Credit Idx	20.00
		S&P MidCap 400 Index	10.00
<b>Jan-2000</b>		Russell 2500 Index	10.00
S&P 500 Index	50.00	Russell 1000 Growth Index	15.50
Blmbg. U.S. Aggregate Index	40.00	MSCI EAFE Index	9.00
MSCI EAFE Index	10.00	Blmbg. U.S. Aggregate: A+	20.00
<b>Apr-2004</b>		<b>Jul-2017</b>	
S&P 500 Index	50.00	Russell 1000 Value Index	15.50
Blmbg. U.S. Aggregate Index	40.00	Bloomberg Intermediate US Govt/Credit Idx	16.00
Russell 2000 Value Index	10.00	S&P MidCap 400 Index	10.00
		Russell 2500 Index	10.00
<b>Jan-2007</b>		Russell 1000 Growth Index	15.50
S&P 500 Index	50.00	MSCI EAFE Index	9.00
Bloomberg Intermediate US Govt/Credit Idx	24.00	Blmbg. U.S. Aggregate: A+	16.00
Russell 2000 Value Index	10.00	NCREIF Fund Index-Open End Diversified Core (EW)	8.00
Barclays Aggregate A+	16.00		
<b>Jan-2008</b>			
S&P 500 Index	40.00		
Bloomberg Intermediate US Govt/Credit Idx	24.00		
S&P MidCap 400 Index	10.00		
Barclays Aggregate A+	16.00		
Russell 2000 Value Index	10.00		
<b>Apr-2008</b>			
Russell 1000 Value Index	20.00		
Bloomberg Intermediate US Govt/Credit Idx	25.00		
S&P MidCap 400 Index	10.00		
Barclays Aggregate A+	15.00		
Russell 2000 Value Index	10.00		
Russell 1000 Growth Index	20.00		
<b>Apr-2009</b>			
Russell 1000 Value Index	20.00		
Bloomberg Intermediate US Govt/Credit Idx	20.00		
S&P MidCap 400 Index	10.00		
Barclays Aggregate A+	20.00		
Russell 2000 Value Index	10.00		
Russell 1000 Growth Index	20.00		





Total Equity Historical Hybrid Composition		Total Fixed Income Historical Hybrid Composition	
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
<b>Jan-1998</b>		<b>Jan-1998</b>	
S&P 500 Index	100.00	ICE BofAML Govt/ Corp Master	100.00
<b>Jan-2000</b>		<b>Jan-2000</b>	
S&P 500 Index	83.30	Blmbg. U.S. Aggregate Index	100.00
MSCI EAFE Index	16.70		
<b>Apr-2004</b>		<b>Jan-2007</b>	
S&P 500 Index	83.30	Bloomberg Intermediate US Govt/Credit Idx	60.00
Russell 2000 Value Index	16.70	Blmbg. U.S. Corporate A+ Index	40.00
<b>Jan-2008</b>		<b>Apr-2008</b>	
S&P 500 Index	66.60	Bloomberg Intermediate US Govt/Credit Idx	62.50
Russell 2000 Value Index	16.70	Blmbg. U.S. Corporate A+ Index	37.50
S&P MidCap 400 Index	16.70	<b>Apr-2009</b>	
<b>Apr-2008</b>		Bloomberg Intermediate US Govt/Credit Idx	50.00
Russell 1000 Growth Index	33.30	Blmbg. U.S. Aggregate: A+	50.00
Russell 2000 Value Index	16.70		
S&P MidCap 400 Index	16.70		
Russell 1000 Value Index	33.30		
<b>Jul-2010</b>			
Russell 1000 Growth Index	25.83		
Russell 2500 Index	16.67		
S&P MidCap 400 Index	16.67		
Russell 1000 Value Index	25.83		
MSCI EAFE Index	15.00		

**Sunrise Police  
Fee Analysis  
As of December 31, 2022**

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Ark Disruptive Technology ETF (ARKK)	0.75		27,573	0.75 % of Assets
Ark Autonomous Technology & Robotics ETF (ARKQ)	0.75		6,298	0.75 % of Assets
Ceredex Equity	0.54		179,809	0.75 % of First \$10 M 0.45 % of Next \$40 M 0.25 % Thereafter
Rhumblin R1000G	0.05		5,375	0.05 % of Assets
Defiance 5G Next Gen Connectivity ETF (FIVG)	0.30		2,943	0.30 % of Assets
Polen Capital	0.60		62,753	0.60 % of Assets
First Trust Cloud Computing ETF (SKYY)	0.60		5,459	0.60 % of Assets
Mutual of America Equity	0.07		14,704	0.07 % of Assets
Vanguard R2000 (VRTIX)	0.08		15,788	0.08 % of Assets
JPM International Equity	0.75		51,902	0.75 % of Assets
Vanguard Emerging Mar Adm (VEMAX)	0.14	2,598,161	3,637	0.14 % of Assets
iShares MSCI EM ex China ETF (EMXC)	0.25	2,528,395	6,321	0.25 % of Assets
Vanguard Emerging Mar (VEMIX)	0.10		-	0.10 % of Assets
<b>Total Equity Composite</b>	<b>0.32</b>		<b>389,367</b>	
GHA EXCL A+ Fixed Income	0.25		62,184	0.25 % of Assets
GHA A+ Fixed Income	0.25		78,898	0.25 % of Assets
<b>Total Fixed Income Composite</b>	<b>0.25</b>		<b>141,082</b>	
Barings Real Estate	1.10		105,380	1.10 % of Assets
ASB Real Estate	1.12		120,837	1.25 % of First \$5 M 1.00 % of Next \$10 M 0.90 % of Next \$60 M 0.75 % Thereafter
<b>Total Real Estate</b>	<b>1.11</b>		<b>226,217</b>	
R&D Cash			-	
<b>Total Fund Composite</b>	<b>0.38</b>		<b>756,666</b>	



## **4th Quarter 2022 Market Environment**



## **The Economy**

- US GDP growth is expected to remain strong in the 4th quarter. While the final measure of 3rd quarter GDP was revised upward to 3.2%, global GDP growth remains challenged with higher energy prices continuing to act as a headwind, especially in Europe. However, China is beginning the process of reopening its economy which should boost emerging markets.
- The US Federal Reserve Bank (the Fed) continued to increase interest rates during the quarter with a 0.75% increase in November and a 0.50% increase in December. Importantly, the Fed signaled it remains committed to fighting inflation through additional rate hikes if needed.
- The US labor market continued to show its resiliency by adding roughly 680 thousand jobs during the 4th quarter. As a result, the unemployment rate fell to 3.5% in December. Despite these gains, the number of announced layoffs during the quarter increased, which could impact labor markets in the future periods.
- Global markets were broadly positive during the 4th quarter. Despite persistent inflation, tighter central bank monetary policy, slowing GDP growth, and continuing geopolitical risks investors were focused on the potential of central banks slowing the pace of tightening as inflation moderated.

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

- US equities moved higher during the 4th quarter despite concerns regarding inflation, the potential for higher interest rates, and a slowing global GDP growth. Large cap value was the best performing domestic segment of the equity market relative to other US market capitalizations and styles during the period while large cap growth performed the worst.
- International stocks also experienced strong returns during the 4th quarter. While local currency performance was solid, the primary catalyst for outsized returns was a weakening USD, which fell against most major and emerging market currencies. GDP growth, especially in Europe, remained under pressure as central bank policies remained restrictive and elevated energy prices acted as a headwind. Finally, China began to relax its zero-tolerance policy regarding Covid-19, which positively contributed to both global GDP growth and equity market performance.

## **Fixed Income**

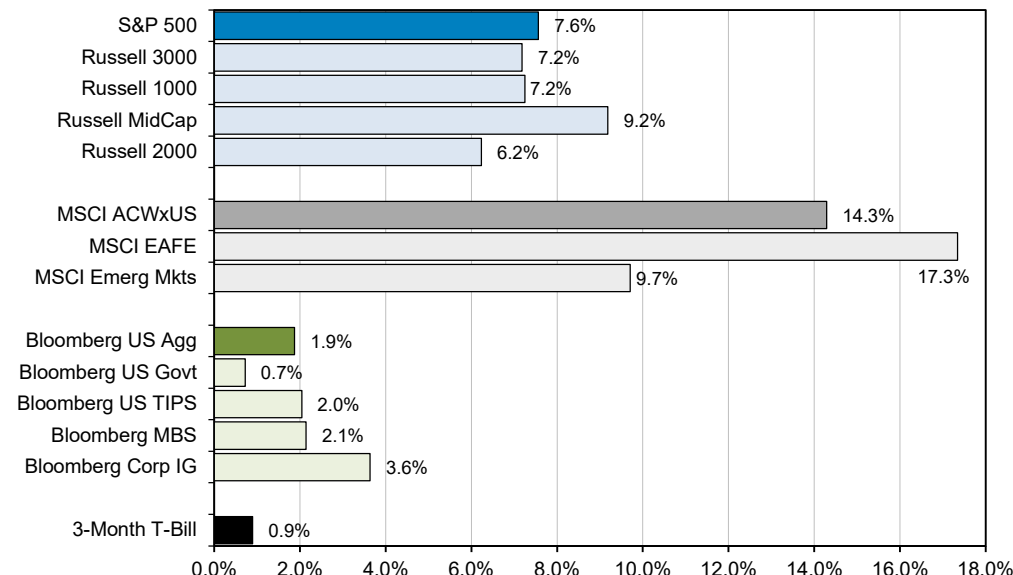
- While inflation declined during the 4th quarter, the Fed continued increasing interest rates with two increases totaling 1.25%. Despite the short-term increases, long-term interest rates remained relatively stable during the period. US interest rates moved slightly higher during the quarter with the US 10-Year Treasury bond rising 0.08% to close the year at a yield of 3.88%.
- Performance across domestic bond market sectors was positive during the quarter, led by US high yield and corporate investment grade bonds. Much like equities, global bonds outperformed their domestic peers mainly due to a weaker USD.
- The combination of higher coupons, a shorter maturity profile relative to high quality government bonds, and narrower credit spreads were the primary drivers of relative return during the period.
- US Treasury bonds lagged their corporate bond peers during the quarter as investors' concerns about rising interest rates and the need for safety subsided.

## **Market Themes**

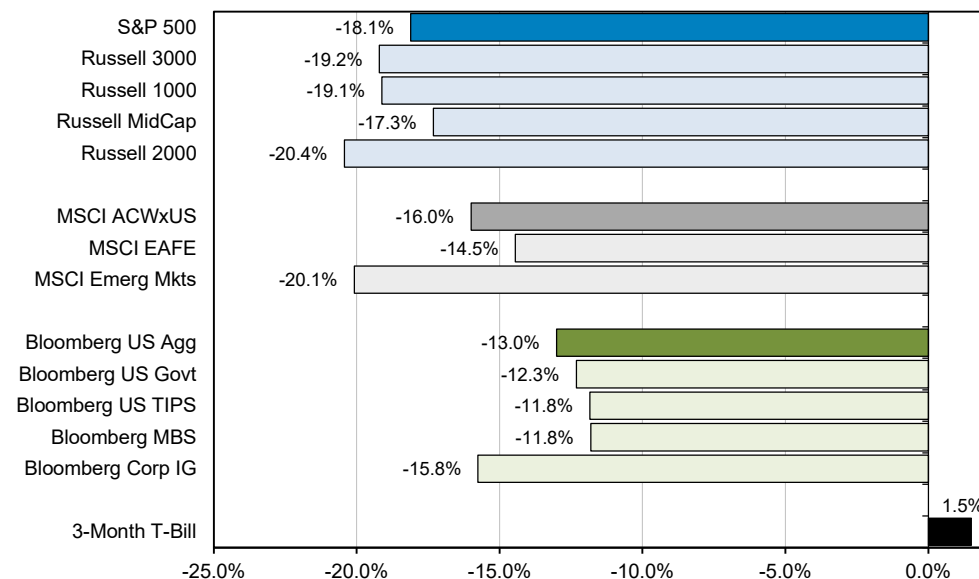
- Central banks remained vigilant in their fight against inflation with the Fed, the Bank of England, and the European Central Bank all raising interest rates during the quarter. Additionally, the Bank of Japan relaxed their targeting of interest rates, allowing the 10-Year Japanese Government Bond to float to 0.50%, above the previous 0.25% level.
- The conflict in Ukraine continues to disrupt global energy markets, in addition to the ongoing humanitarian crisis. Energy costs remain elevated which could further negatively impact economic growth.
- Both US and international equity markets rebounded during the quarter on expectations that inflation would continue to moderate, which could lead central banks to begin the process of slowing the pace of monetary tightening. Value-oriented stocks outperformed growth stocks as investors remained concerned about the pace of future growth.
- Short-term interest rates rose across most developed markets as central banks continued to tighten. Despite concerns about the potential for slowing economic growth, lower quality corporate bonds outperformed higher quality government bonds and USD weakness acted as a tailwind for global bonds during the quarter.

- Equity markets moved higher during the 4th quarter, but it was not sufficient to offset prior quarter pullbacks. Factors that contributed to performance included declining inflation, expectations that the Fed would slow the pace of future interest rate increases, and expectations that China would begin to open its economy. For the period, the S&P 500 large cap benchmark returned 7.6%, compared to 9.2% for mid-cap and 6.2% for small cap benchmarks.
- Like domestic equities, developed markets international and emerging market equities delivered positive results for the 4th quarter. Europe continues to face headwinds from higher-than-expected inflation, elevated energy prices, geopolitical risks related to the conflict in Ukraine, and rising interest rates. Emerging markets were positively impacted by China's decision to loosen restrictions related to the pandemic. Importantly, global equities were positively impacted by a decline in the USD. For the quarter, the MSCI EAFE Index returned 17.3% while the MSCI Emerging Markets Index rose by 9.7%.
- For the quarter, performance of the bond market was broadly positive due to lower inflation and lower interest rate volatility. The Bloomberg (BB) US Aggregate Index returned 1.9%, for the period while investment grade corporate bonds posted a return of 3.6%.
- Performance for developed equity markets was strongly negative over the trailing 1-year period. The bellwether S&P 500 Index dropped -18.1% for the year. The primary drivers of return during the period were concerns related to rising inflation, tighter monetary policy from global central banks, and slowing global economic growth. The weakest relative performance outlier was the Russell 2000 Index which declined by -20.4% for the year.
- Over the trailing 1-year period, international markets declined similarly to domestic markets. The MSCI EAFE Index returned -14.5% while the MSCI Emerging Markets Index fell by -20.1%. Continued concerns related to Ukraine, elevated inflation, and slowing global economic growth negatively impacted markets. However, a weakening USD acted as a tailwind to international performance in the second half of the year.
- Bond market returns were widely negative over the trailing 1-year period due primarily to concerns about persistently high inflation and the expectation of higher future interest rates. US TIPS and mortgage-backed bonds were the least negative sectors with both returning -11.6% for the year. Investment grade corporate bonds suffered the year's largest loss, falling -15.8%.

### Quarter Performance



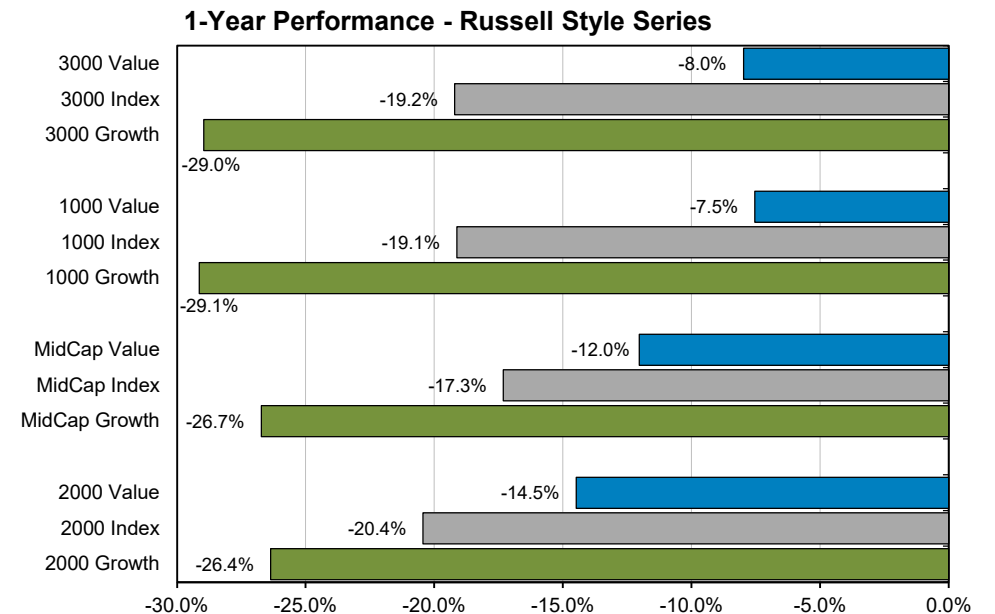
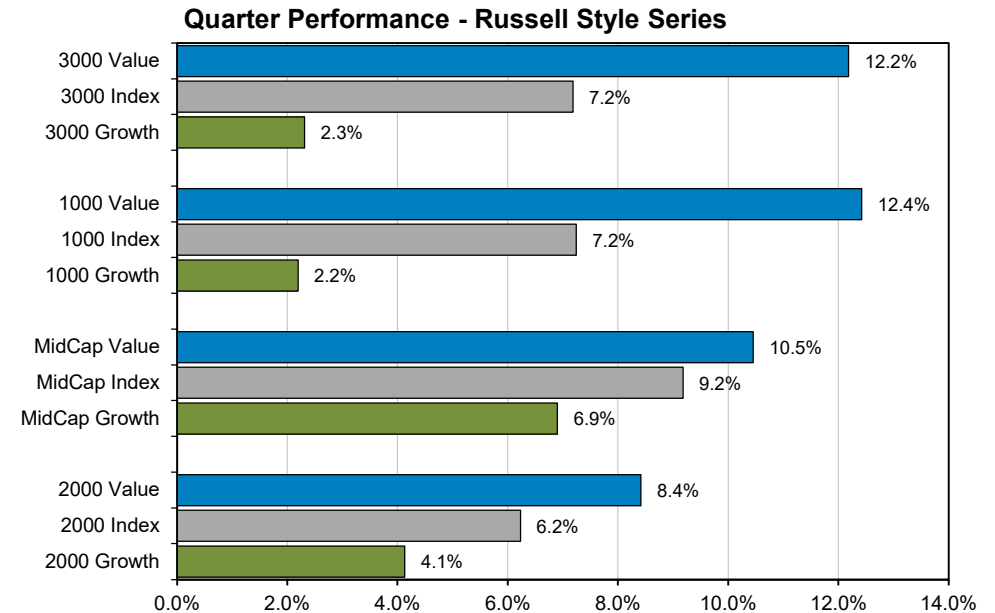
### 1-Year Performance



Source: Investment Metrics



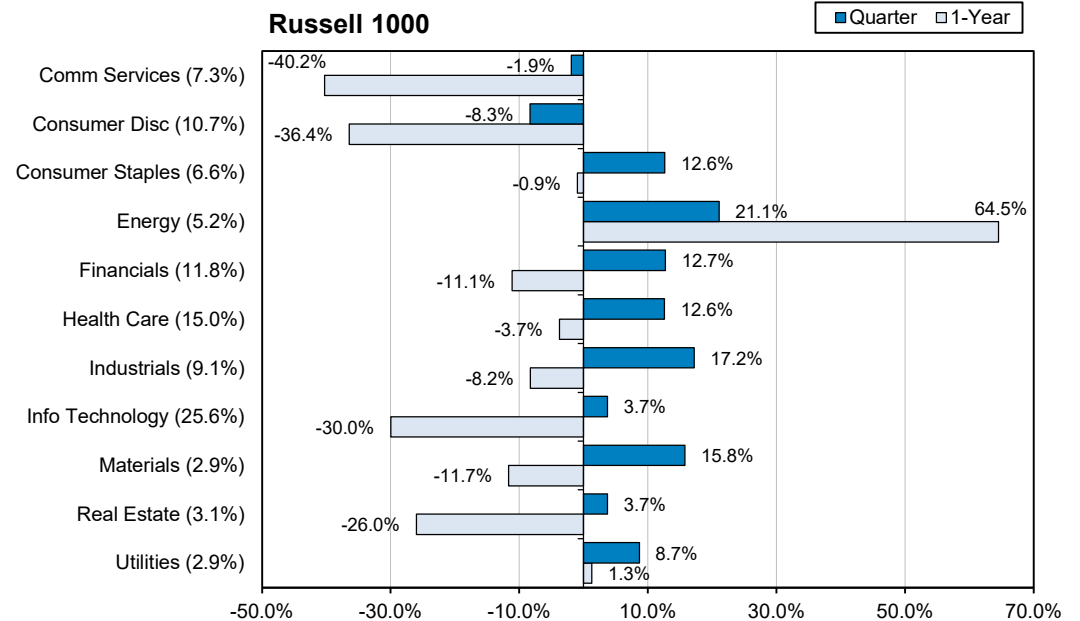
- Despite a pullback in December, equity markets broadly experienced strong absolute returns during the 4th quarter across both the style and market capitalization spectrums. With concerns about the potential for slowing economic conditions, large cap stocks resumed their leadership, followed by mid and small cap stocks. The Russell 1000 Value Index delivered 12.4% for the quarter, followed by while the Russell Mid Cap Value Index and the Russell 2000 Index, which rose by 10.5% and 8.4%, respectively.
- Performance across styles and market capitalizations was disparate during the quarter. Large, mid, and small cap value stocks all outperformed their growth counterparts. For the period, the Russell 1000 Value Index was the best relative performing style index, posting a return of 12.4%. Large and small cap growth stocks were the laggards during the period with the Russell Large Cap Growth Index and Russell 2000 Growth Index returning 2.2% and 4.1%, respectively.
- In contrast to the 4th quarter's positive performance, there was a wide range of negative results across market capitalizations over the trailing 1-year period. The Russell 2000 Index returned a disappointing -20.4% for the year, which underperformed both its large and mid cap index counterparts.
- There was also a wide performance dispersion across the style-based indexes for the year with growth stocks down significantly more than their value counterparts at all capitalization ranges. Within large cap stocks, the Russell 1000 Value Index returned -7.5% compared to much larger -29.1% decline for the Russell Large Cap Growth benchmark. The Russell Mid Cap Value Index returned -12.0% while the Russell 2000 Value Index returned -14.5% for the period. While these value benchmark results represented double-digit losses for the year, the Russell Mid Cap Growth Index fell a much larger -26.7% and the Russell 2000 Growth Index declined by a similar -26.4%.



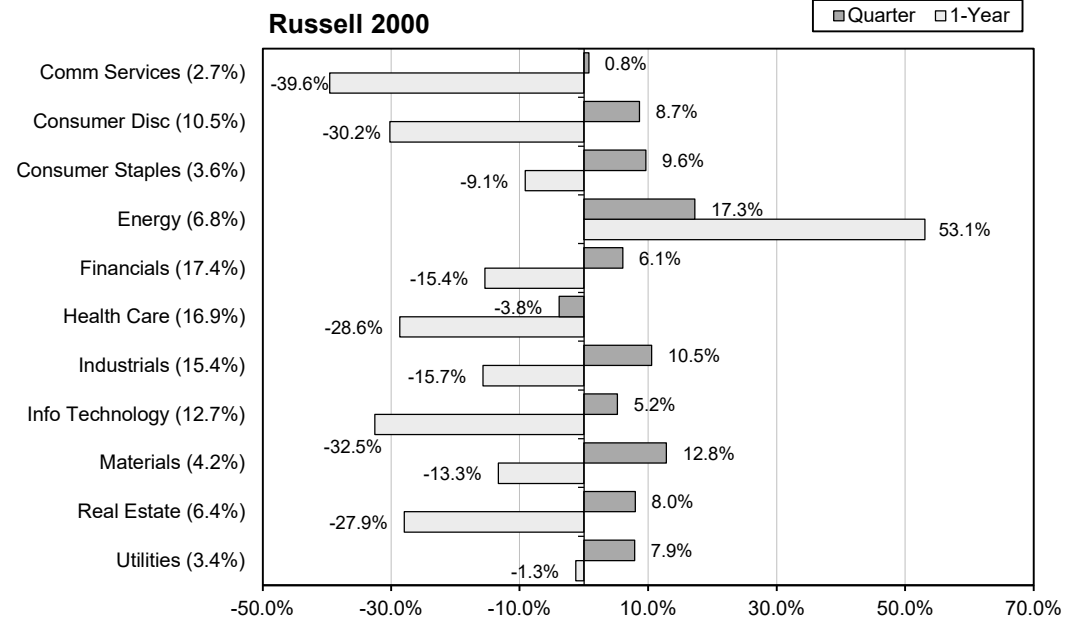
Source: Investment Metrics



- Economic sector performance was positive for nine of the eleven large cap economic sectors for the 4th quarter. Seven sectors outpaced the return of the broad index on a relative basis during the period.
- Energy continued its strong 2022 performance with a 4th quarter return of 21.1%. Other sectors that outpaced the headline index's return for the quarter included industrials (17.2%), materials (15.8%), financials (12.7%), healthcare (12.6%), consumer staples (12.6%), and utilities (8.7%). The real estate (3.7%), information technology (3.7%), communication services (-1.9%), and consumer discretionary (-8.3%) sectors all trailed the Russell 1000 Index return for the period.
- For the full year, seven economic sectors exceeded the return of the broad large cap benchmark but only the energy (64.5%) and utilities (1.3%) sectors managed to post positive, albeit vastly different, results. The weakest economic sector performance in the Russell 1000 for the year was communication services which declined by a staggering -40.2%.



- Ten small cap economic sectors posted positive returns during the quarter and seven exceeded the 6.2% return of the broader Russell 2000 Index. The energy (17.3%), materials (12.8%), and industrials (10.5%) sectors each posted double-digit positive results for the quarter. The only small cap economic sector that posted negative performance for the quarter was health care which fell by -3.8%.
- For the trailing 1-year period, six of the eleven economic sectors were down less than the broad small cap benchmark's return of -20.4%. Energy was the best performing and only positive economic sector for the year with a strong return of 53.1%. The utilities (-1.3%) and consumer staples (-9.1%) sectors were only small cap index segments to fall less than double-digit amounts for the year. The worst performing sector for the full year was communication services with a return of -39.6%. In addition, the information technology (-32.5%), consumer discretionary (-30.2%), health care (28.6%), and real estate (-27.9%) sectors all were down significantly for the year.



Source: Morningstar Direct



**The Market Environment**  
**Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000**  
As of December 31, 2022

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	5.5%	-5.8%	-26.4%	Information Technology
Microsoft Corp	5.1%	3.3%	-28.0%	Information Technology
Amazon.com Inc	2.1%	-25.7%	-49.6%	Consumer Discretionary
Berkshire Hathaway Inc Class B	1.6%	15.7%	3.3%	Financials
Alphabet Inc Class A	1.5%	-7.8%	-39.1%	Communication Services
UnitedHealth Group Inc	1.4%	5.3%	7.0%	Health Care
Alphabet Inc Class C	1.3%	-7.7%	-38.7%	Communication Services
Johnson & Johnson	1.3%	8.8%	6.0%	Health Care
Exxon Mobil Corp	1.3%	27.4%	87.4%	Energy
JPMorgan Chase & Co	1.1%	29.5%	-12.6%	Financials

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Horizon Therapeutics PLC	0.1%	83.9%	5.6%	Health Care
Burlington Stores Inc	0.0%	81.2%	-30.4%	Consumer Discretionary
Halliburton Co	0.1%	60.4%	74.5%	Energy
Universal Health Services Inc Class B	0.0%	60.0%	9.4%	Health Care
PVH Corp	0.0%	57.7%	-33.7%	Consumer Discretionary
Spectrum Brands Holdings Inc	0.0%	57.4%	-38.6%	Consumer Staples
Boeing Co	0.3%	57.3%	-5.4%	Industrials
Under Armour Inc A	0.0%	52.8%	-52.1%	Consumer Discretionary
Exact Sciences Corp	0.0%	52.4%	-36.4%	Health Care
Moderna Inc	0.2%	51.9%	-29.3%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Carvana Co Class A	0.0%	-76.7%	-98.0%	Consumer Discretionary
Opendoor Technologies Inc Class A	0.0%	-62.7%	-92.1%	Real Estate
Tesla Inc	0.9%	-53.6%	-65.0%	Consumer Discretionary
Lucid Group Inc Shs	0.0%	-51.1%	-82.1%	Consumer Discretionary
Guardant Health Inc	0.0%	-49.5%	-72.8%	Health Care
Affirm Holdings Inc - Class A	0.0%	-48.5%	-90.4%	Information Technology
WeWork Inc	0.0%	-46.0%	-83.4%	Real Estate
AppLovin Corp - Class A	0.0%	-46.0%	-88.8%	Information Technology
Ginkgo Bioworks Holdings Inc	0.0%	-45.8%	-79.7%	Materials
Olaplex Holdings Inc	0.0%	-45.5%	-82.1%	Consumer Staples

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Halozyne Therapeutics Inc	0.3%	43.9%	41.5%	Health Care
ShockWave Medical Inc	0.3%	-26.1%	15.3%	Health Care
Inspire Medical Systems Inc	0.3%	42.0%	9.5%	Health Care
EMCOR Group Inc	0.3%	28.4%	16.8%	Industrials
Crocs Inc	0.3%	57.9%	-15.4%	Consumer Discretionary
Matador Resources Co	0.3%	17.2%	55.9%	Energy
Iridium Communications Inc	0.3%	15.8%	24.5%	Communication Services
Murphy Oil Corp	0.3%	22.9%	68.3%	Energy
Agree Realty Corp	0.3%	6.0%	3.5%	Real Estate
Texas Roadhouse Inc	0.3%	4.7%	4.1%	Consumer Discretionary

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Madrigal Pharmaceuticals Inc	0.2%	346.6%	242.5%	Health Care
Immunovant Inc	0.0%	218.1%	108.3%	Health Care
Rayonier Advanced Materials Inc	0.0%	204.8%	68.1%	Materials
Maxar Technologies Inc	0.2%	176.5%	75.5%	Industrials
4D Molecular Therapeutics Inc	0.0%	176.2%	1.2%	Health Care
Icosavax Inc	0.0%	151.3%	-65.3%	Health Care
Imago BioSciences Inc	0.0%	138.9%	51.6%	Health Care
Provention Bio Inc	0.0%	134.9%	88.1%	Health Care
Biohaven Ltd	0.0%	120.3%	N/A	Health Care
Oceaneering International Inc	0.1%	119.7%	54.6%	Energy

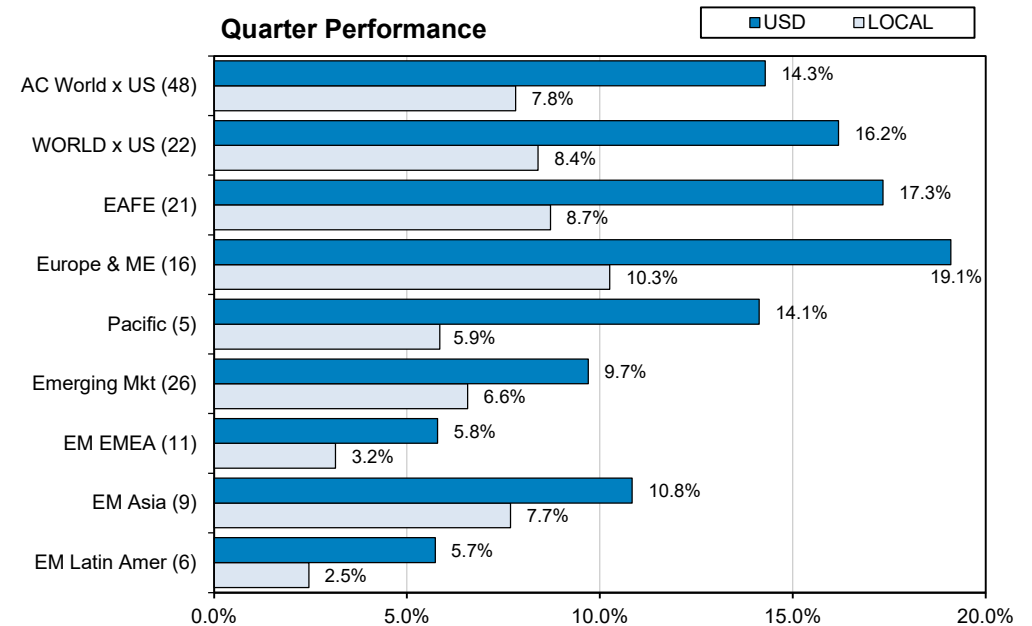
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Tricida Inc	0.0%	-98.5%	-98.4%	Health Care
Relmada Therapeutics Inc	0.0%	-90.6%	-84.5%	Health Care
Avaya Holdings Corp	0.0%	-87.7%	-99.0%	Information Technology
Instil Bio Inc	0.0%	-87.0%	-96.3%	Health Care
Greenidge Generation Holdings Inc.	0.0%	-85.5%	-98.2%	Information Technology
Eiger BioPharmaceuticals Inc	0.0%	-84.3%	-77.3%	Health Care
Cano Health Inc - Class A	0.0%	-84.2%	-84.6%	Health Care
Gossamer Bio Inc	0.0%	-81.9%	-80.8%	Health Care
Rockley Photonics Holdings Ltd	0.0%	-80.3%	-96.8%	Information Technology
Boxed Inc	0.0%	-78.9%	-98.6%	Consumer Discretionary

Source: Morningstar Direct

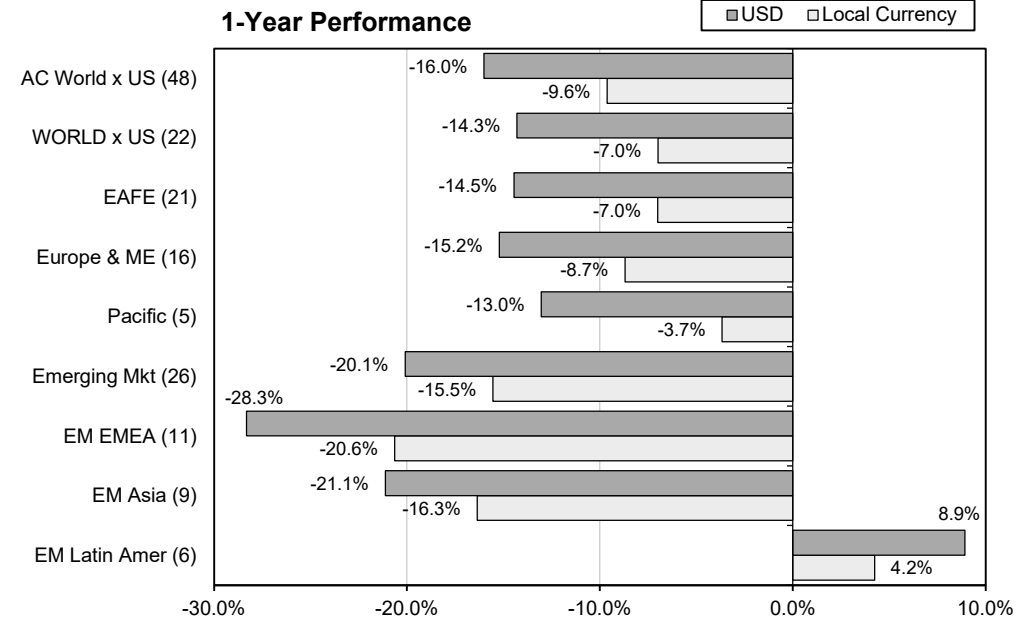




- Each of the developed and emerging market international equity indexes tracked in the chart posted positive returns in both US dollar (USD) and local currency (LC) terms for the 4th quarter. A weaker USD acted as a tailwind for non-US index performance during the quarter. Higher energy prices and the reopening of China also drove performance, especially in emerging markets. The developed market MSCI EAFE Index returned a strong 17.3% in USD and 8.7% in LC terms for the period, and the MSCI Emerging Markets Index rose by 9.7% in USD and 6.6% in LC terms.



- The trailing 1-year results for international developed and emerging markets were negative across most regions and currencies. The MSCI EAFE Index returned -14.5% in USD for the year and -7.0% in LC terms. Similarly, returns across emerging markets were broadly lower except for Latin America which returned 8.9% in USD and 4.2% in LC terms. The MSCI Emerging Markets Index declined by -20.1% in USD and -15.5% in LC terms for the year. Performance in the EMEA regional benchmark significantly detracted from emerging market index performance with the EMEA Index posting returns of -28.3% in USD and -20.6% in LC terms.



Source: MSCI Global Index Monitor (Returns are Net)



**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of December 31, 2022

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.8%	10.1%	-16.8%
Consumer Discretionary	5.0%	17.8%	-22.4%
Consumer Staples	18.7%	10.6%	-13.0%
Energy	4.5%	19.8%	27.7%
Financials	15.1%	23.9%	-4.6%
Health Care	13.6%	14.2%	-11.0%
Industrials	10.5%	19.0%	-20.6%
Information Technology	7.8%	14.9%	-32.4%
Materials	11.1%	20.7%	-10.3%
Real Estate	3.5%	11.0%	-20.9%
Utilities	2.6%	19.4%	-12.4%
<b>Total</b>	<b>100.0%</b>	<b>17.3%</b>	<b>-14.5%</b>

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	8.4%	12.0%	-21.6%
Consumer Discretionary	6.0%	14.7%	-21.7%
Consumer Staples	21.0%	9.8%	-11.9%
Energy	5.9%	13.3%	8.1%
Financials	12.3%	15.6%	-7.3%
Health Care	9.8%	14.1%	-12.9%
Industrials	8.9%	17.3%	-18.4%
Information Technology	10.8%	13.5%	-34.5%
Materials	11.4%	16.6%	-11.2%
Real Estate	3.4%	10.4%	-20.6%
Utilities	2.3%	13.0%	-11.1%
<b>Total</b>	<b>100.0%</b>	<b>14.3%</b>	<b>-16.0%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	8.9%	58.8%	1.8%
Consumer Discretionary	4.9%	46.2%	5.6%
Consumer Staples	22.1%	77.4%	48.9%
Energy	9.9%	92.9%	40.2%
Financials	6.1%	44.6%	24.5%
Health Care	4.1%	53.5%	3.8%
Industrials	6.4%	49.7%	18.8%
Information Technology	18.6%	9.8%	-34.7%
Materials	14.1%	45.6%	10.6%
Real Estate	3.0%	13.8%	-15.4%
Utilities	1.9%	38.8%	26.8%
<b>Total</b>	<b>100.0%</b>	<b>9.7%</b>	<b>-20.1%</b>

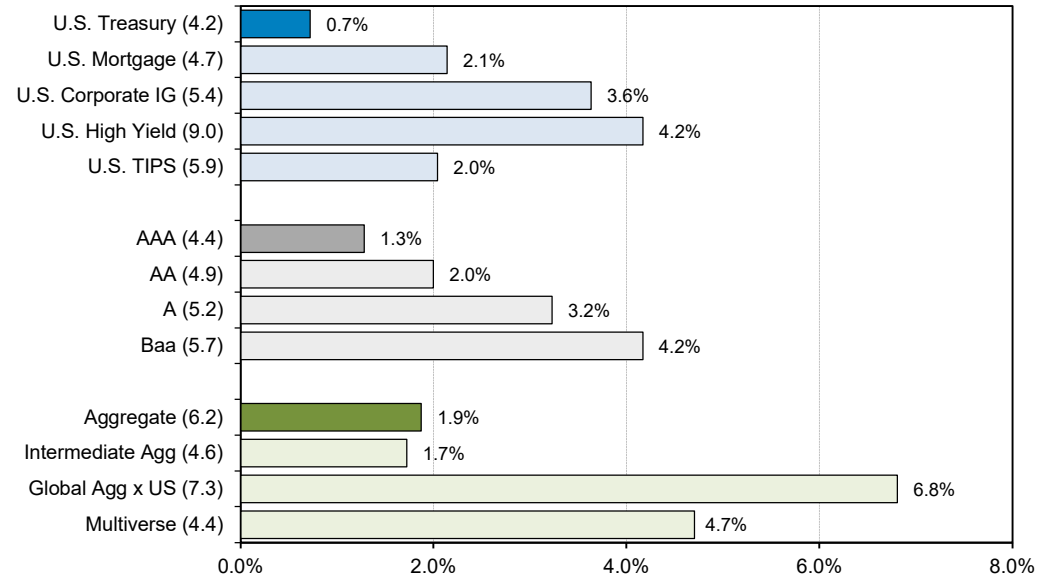
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	21.9%	14.0%	13.2%	-16.6%
United Kingdom	15.3%	9.8%	17.0%	-4.8%
France	11.8%	7.6%	22.2%	-13.3%
Switzerland	10.1%	6.5%	10.4%	-18.3%
Australia	7.9%	5.1%	15.7%	-5.3%
Germany	8.2%	5.2%	24.6%	-22.3%
Netherlands	4.3%	2.7%	21.0%	-27.7%
Sweden	3.3%	2.1%	18.1%	-28.4%
Hong Kong	3.0%	1.9%	18.2%	-4.7%
Denmark	3.0%	1.9%	31.6%	-4.8%
Spain	2.4%	1.5%	22.9%	-7.3%
Italy	2.3%	1.5%	26.4%	-14.4%
Singapore	1.5%	1.0%	10.5%	-11.0%
Belgium	1.0%	0.7%	22.6%	-12.5%
Finland	1.0%	0.7%	16.3%	-15.3%
Norway	0.8%	0.5%	16.9%	-7.0%
Israel	0.7%	0.5%	0.4%	-26.7%
Ireland	0.7%	0.4%	21.5%	-26.2%
Portugal	0.2%	0.1%	17.2%	0.2%
Austria	0.2%	0.1%	31.1%	-26.4%
New Zealand	0.2%	0.1%	24.5%	-13.6%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>63.9%</b>	<b>17.3%</b>	<b>-14.5%</b>
Canada		7.7%	7.4%	-12.9%
<b>Total Developed Countries</b>		<b>71.6%</b>	<b>16.2%</b>	<b>-14.3%</b>
China		9.2%	13.5%	-21.9%
Taiwan		3.9%	9.6%	-29.8%
India		4.1%	2.0%	-8.0%
Korea		3.2%	18.1%	-29.4%
Brazil		1.5%	2.4%	14.2%
Saudi Arabia		1.2%	-7.4%	-5.1%
South Africa		1.0%	18.3%	-3.9%
Mexico		0.6%	12.5%	-2.0%
Thailand		0.6%	16.1%	5.0%
Indonesia		0.5%	-3.6%	3.6%
Malaysia		0.4%	14.0%	-5.8%
United Arab Emirates		0.4%	-1.5%	-6.2%
Qatar		0.3%	-15.3%	-6.9%
Kuwait		0.3%	5.7%	10.1%
Philippines		0.2%	21.1%	-13.9%
Poland		0.2%	47.7%	-27.2%
Chile		0.2%	6.2%	19.4%
Turkey		0.2%	62.9%	90.4%
Peru		0.1%	17.4%	9.4%
Greece		0.1%	29.1%	0.3%
Colombia		0.0%	19.7%	-6.0%
Czech Republic		0.0%	6.5%	-14.4%
Hungary		0.1%	36.3%	-31.1%
Egypt		0.0%	28.5%	-22.6%
<b>Total Emerging Countries</b>		<b>28.4%</b>	<b>9.7%</b>	<b>-20.1%</b>
<b>Total ACWixUS Countries</b>		<b>100.0%</b>	<b>14.3%</b>	<b>-16.0%</b>

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

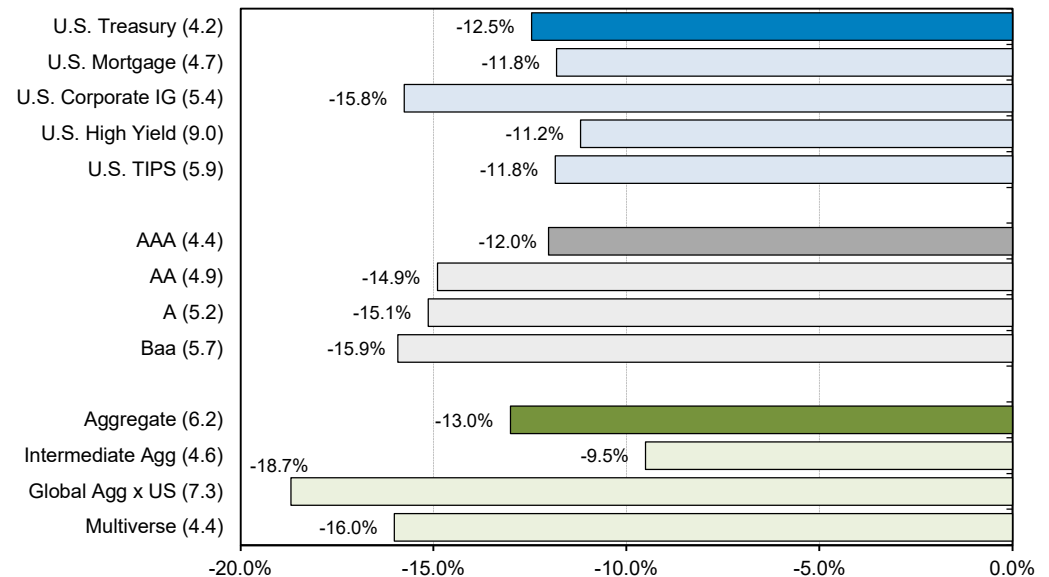


- After an extremely challenging year in fixed income markets, the 4th quarter's positive bond benchmark results were a welcome relief. Despite two rate increases during the quarter, bond performance was aided by lower investor concerns about rising inflation as US CPI declined. This was reflected in both intermediate and long-term interest rates which remained relatively stable during the quarter.
- The return for the BB US Aggregate Bond Index, the bellwether US investment grade benchmark, rose by 1.9% for the period.
- Performance across the investment grade index's segments was also positive during the period with the US Corporate Investment Grade Index returning 3.6% and the US Mortgage Index component posting a return of 2.1%.
- High yield bonds outperformed their investment grade counterparts, surging 4.2% during the quarter. US TIPS, which have delivered strong performance in recent periods, rose by 2.0% as investors' expectations of future inflation declined.
- Outside of domestic markets, the Bloomberg Global Aggregate ex US Index posted a strong return of 6.8% for the quarter. Like domestic bonds, global bond index performance was positively impacted declining inflation, but the benchmark also received a boost from the decline in the USD for the quarter.
- Over the trailing 1-year period, the bellwether BB US Aggregate Bond Index declined by -13.0% and each of the benchmark's components fell by more than -10%. US TIPS, which are excluded from the bellwether index, dropped by -11.8% for the year.
- Lower quality high yield corporate bonds were down less than their investment grade counterparts on a relative basis with the Bloomberg US High Yield Index posting still discouraging return of -11.2% for the period.
- Performance for non-US bonds was also strongly negative for the year with the developed market Bloomberg Global Aggregate ex US Index falling by -18.7%. The combination of rising interest rates overseas, elevated inflation, geopolitical risks, and USD strength earlier in the year hindered non-US index performance.

#### Quarter Performance



#### 1-Year Performance

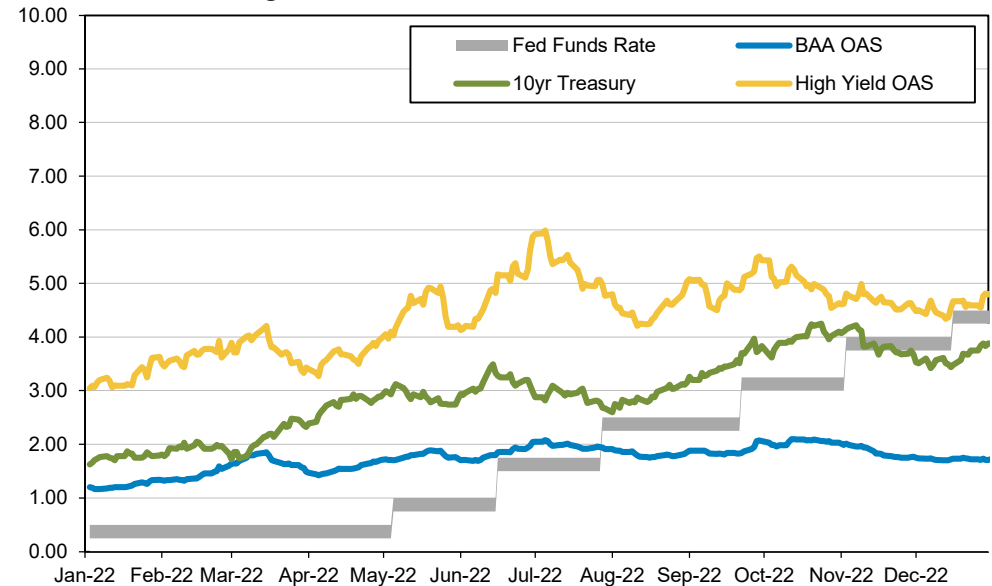


Source: Bloomberg

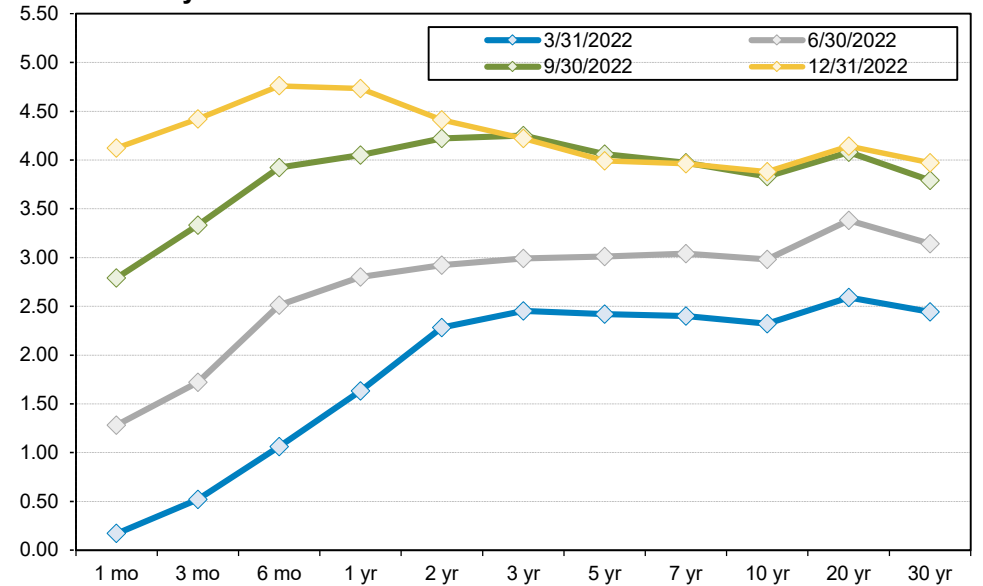


- The gray band across the graph illustrates the range of the current Fed Funds Rate. In the 4th quarter this year, the Fed raised the lower end of its target rate range from 3.00% to 4.25% through a 0.75% increase in November and a 0.50% increase in December. During its December meeting, the Federal Open Market Committee (FOMC) stated it intends to monitor economic growth closely and will continue to raise interest rates to fight inflation if needed. The FOMC also stated that it would continue its policy of removing liquidity from the market by allowing bonds held on its balance sheet to mature without reinvesting those proceeds.
- The yield on the US 10-year Treasury (green line) ended the period slightly higher as concerns over the pace of inflation, combined with the Fed's announced rate increase, drove yields. The closing yield on the 10-Year Treasury was 3.88% at year-end, an increase of 0.08% from its 3rd quarter closing yield. The benchmark's rate peaked in October, reaching a high of roughly 4.25% before declining to end the quarter.
- The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-US Treasury investment grade issues. For the full year, the spread widened slightly from 1.17% to 1.72%. High Yield OAS spreads rose from roughly 3.05% at the beginning of the year to 4.81% at year-end. During 2022, high yield spreads reached a level of 5.80% in early July before trading lower the remainder of the year.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. Short-term rates continued to rise during the 4th quarter as the FOMC increased interest rates twice to combat elevated inflation. Despite these short-term rate increases, both intermediate and longer-term rates remained largely unchanged during the quarter. The yield curve remained inverted between 2-year and 10-year rates. Said differently, the short-term rate was higher than the long-term rate. Historically, a persistent inversion of these two key rates has been an indication of a future recession withing 6- to 24-months.

**1-Year Trailing Market Rates**



**Treasury Yield Curve**



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



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Disclosures

Disclosures as they pertain to GHA balanced account:

- Due to the balanced account, Total Equity, Total Fixed Income Composites, GHA LCG, and GHA EXCL A+ returns are shown as segment level returns that do not include their respective cash balances and returns prior to 12/31/2017.

<b>Active Return</b>	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
<b>Alpha</b>	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
<b>Beta</b>	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
<b>Consistency</b>	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
<b>Distributed to Paid In (DPI)</b>	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
<b>Down Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
<b>Downside Risk</b>	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
<b>Excess Return</b>	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
<b>Excess Risk</b>	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
<b>Information Ratio</b>	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
<b>Public Market Equivalent (PME)</b>	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
<b>R-Squared</b>	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
<b>Return</b>	- Compounded rate of return for the period.
<b>Sharpe Ratio</b>	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
<b>Standard Deviation</b>	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
<b>Total Value to Paid In (TVPI)</b>	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
<b>Tracking Error</b>	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
<b>Treynor Ratio</b>	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
<b>Up Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

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AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

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