Investment Performance Review Period Ending December 31, 2019

Sunrise Police Retirement Plan



AndCo Consulting | (844) 44-ANDCO | AndCoConsulting.com

First and foremost, "Thank you" for giving AndCo the opportunity to serve you. On behalf of our entire organization, we are extremely grateful and appreciative of our client partnerships and will continue working hard to maintain your trust and confidence. Our mission statement reads "To represent the sole interest of our clients by redefining independence." We're happy to report that we remain steadfast in this core belief and continue to build an organization with a service model that is independent, singularly focused, customized and passionately delivered.

2020 is a big year for AndCo. We are celebrating our 20-year anniversary of serving our valuable clients. As we start 2020, we are 89 people strong advising approximately \$92 billion in client assets – a record high. In 2019 we hired 9 new team members. All departments within AndCo have grown over the years as we thoughtfully invest in our firm to provide the services you expect. We have included our organizational chart in this report which your consultant will review to provide you a visualization of our continued commitment to service and quality.

2020 will also represent another year of significant investment in the organization. As a result, your feedback is invaluable as we continue to focus our reinvestment in areas that will enhance our services to clients. We would like to thank everyone for their participation in our client survey last year. Your honesty and candor allowed us to accurately assess where we are strong and where there are opportunities for improvement. The areas where our clients indicate potential room for improvement drive much of our investment and focus. This is a primary reason why we hired 7 new team members in our research group last year to help promote investment ideas and support our consultants. Today, we have 19 dedicated research analysts. As 2020 progresses, we are targeting additional investments within our finance, compliance, human resources, information technology, marketing and research departments.

Moreover, each January we have our annual firmwide retreat. This retreat is a great time for all of our employees to spend time together and for us to reinforce everyone's understanding of AndCo's primary purpose, share results highlighted by our strategic goals, and review areas of focus for the upcoming year. Since the inception of AndCo, the idea has been to make the firm a multigenerational organization owned and operated by its employees. As a result, since 2015, along with the strategic elements of our annual retreat, we also announce new partners of the firm to support our succession plan and the long-term sustainability of the organization. Today we have a total of 10 partners controlling 100% of the company. This year we added two new partners Kim Spurlin and Evan Scussel. Kim has been on our Executive Leadership team for the past 7 years and currently serves as our CFO. Evan has been on our research team for 7 years and was recently promoted to a Research Director. We couldn't be happier for both Kim and Evan.

The evolution of our firm would not be possible without great client partners like you. Our name reminds us who we work for every day "Our Client" &Co. You will always be our first priority. As we continue to discuss strategic decisions regarding our firm, please know every decision is filtered through the following question "How does this benefit our clients?" and if it doesn't benefit you, we don't do it, it's that simple. We said this last year and we'll say it again next year. If this commitment ever falters, you need to find a new consultant.

We know each of our clients is facing many challenges and we want to be there to help support you through all environments. We are honored and humbled that you have chosen AndCo as your partner. We do not take that relationship and responsibility for granted and will continue to work tirelessly to exceed your expectations.

On behalf of AndCo, thank you for your valued partnership and the opportunity to serve you.

Mike Welker, CFA® CEO



# **Organizational Chart**

# PARTNERSHIP

Mike Welker, CFA	Evan Scussel, CFA, CAIA
Bryan Bakardjiev, CFA	Jason Purdy
Dan Johnson	Kim Spurlin, CPA
David Ray	Steve Gordon
Donna Sullivan	Troy Brown, CFA

**Dan Johnson** 

CIMA

Consulting Director

Marketing Director

**Research Director** 

Consulting Director

**Jack Evatt** 

Jason Purdy

Research Director

I.T. Director

I.T.

**Jamie Utt** 

Evan Scussel, CFA, CAIA

# LEADERSHIP & MANAGEMENT

Mike Welker, CFA	
CEO	

Bryan Bakardjiev, CFA Derek Tangeman, CFP, COO **Kim Spurlin, CPA** 

CFO **Sara Searle** CCO

**Rachel Brignoni, MHR** CHRO

**Steve Gordon** Partner

**Troy Brown, CFA Executive Director** 

**David Ray Executive Director** 

# **OPERATIONS**

FINANCE **Brandie Rivera** 

**OPERATIONS** Dan Osika, CFA **Jerry Camel** 

MARKETING **Bonnie Burgess Kim Goodearl** 

# INVESTMENT POLICY COMMITTEE

**Mike Welker, CFA David Ray** Bryan Bakardjiev, CFA Sara Searle

# CONSULTING

**Annette Bidart Brad Hess. CFA Brendon Vavrica, CFP Brian Green Brian King** Chris Kuhn, CFA, CAIA **Christiaan Brokaw, CFA Dave West, CFA Doug Anderson Gwelda Swillev** Ian Jones

# **CLIENT SOLUTIONS**

- Donna Sullivan Albert Sauerland **Amy Foster** Annie Lopez **Brooke Wilson, CIPM David Gough, CPFA**
- **Donnell Lehrer** Jeff Pruniski John Rodak, CIPM **Junyan Peng**

**James Ross** 

Jeff Kuchta, CFA

**Jennifer Brozstek** 

Joe Carter, CPFA

Jennifer Gainfort, CFA

Marv Nve **Michael Fleiner Michael Holycross, CIMA Mike Bostler** Paul Murray, CPFA **Peter Brown Tim Nash Tim Walters Tony Kay Trevor Jackson** Kerry Richardville, CFA

**Troy Brown, CFA** 

Mary Ann Johnson

# RESEARCH

**Austin Brewer, CFA Public Fixed Income** 

Ben Baldridge, CFA, CAIA Private & Hedged Fixed Income

**David Julier** Real Estate & Real Assets

**Elizabeth Wolfe** Capital Markets & Asset Allocation

Evan Scussel, CFA, CAIA Private & Public Equity

Jeffrey Karansky Public Equity

**Jeremy Fisch** Public Multi Assets & Fixed Income

Joseph Ivaszuk **Operational Due Diligence** 

Josue Christiansen, CIPM Public Equity

Julie Baker, CFA Private & Hedged Equity

Justin Ellsesser, CFA, CAIA Private Equity

Kadmiel Onodje, CAIA Hedged & Public Multi Assets

Kai Petersen, CFA Asset Liability & Capital Markets

Kevin Laake, CFA Private Equity

Matthew Ogren Public Fixed Income

Philip Schmitt, CIMA Fixed Income & Capital Markets

**Rob Mills, CAIA** Real Estate & Real Assets

**Tim Kominiarek, CAIA** Private Equity & Infrastructure

Zac Chichinski, CFA, CIPM Public Equity

Updated as of 01/13/20



Page 2

**Tala Chin** 

**Kim Hummel** 

# John McCann, CIMA John Mellinger John Thinnes, CFA, CAIA Jon Breth, CFP Justin Lauver, Esq.

Tyler Grumbles, CFA, CIPM

# **Jacob Peacock Consulting Director**

# Philip Schmitt, CIMA

# Grace Niebrzydowski

# **Meghan Haines** Misha Bell Rosemarie Kieskowski **Yoon Lee-Choi**



# Table Of Contents

1	Compliance Report	Page 3
2	Asset Allocation Compliance Account Based	Page 6
3	Asset Allocation Compliance Segment Based	Page 8
4	Asset Allocation Pie Chart	Page 9
5	Comparative Performance Trailing Returns	Page 11
6	Comparative Performance Calendar Year	Page 14
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 Equity	Page 28
11	Historical Risk Statistics Total Fixed Income	Page 29
12	Ceredex Returns Based Analysis	Page 31
13	Polen Returns Based Analysis	Page 35
14	Rhumbline R1000G Returns Based Analysis	Page 36
15	Mutual of Americal Returns Based Analysis	Page 37
16	Great Lakes SMID Cap Returns Based Analysis	Page 40
17	Vanduard R2000 (VRTIX) Returns Based Analysis	Page 41
18	Vanguard International Returns Based Analysis	Page 42
19	JPM Intl Returns Based Analysis	Page 46
20	GHA A+ Returns Based Analysis	Page 48
21	GHA EXCL A+ Fixed Inc Returns Based Analysis	Page 52
22	Barings Returns Based Analysis	Page 56
23	ASB Returns Based Analysis	Page 57
24	Benchmark History	Page 58
25	Fee Schedule	Page 60
26	Disclosures	Page 72
27	Definitions & Disclosure Pages	Page 73



Total Fund Compliance:	Yes	No
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 7.7% target rate of return over the trailing three year period.	•	
The total plan return equaled or exceeded the 7.7% target rate of return over the trailing five year period.		•

# Equity Compliance:

Ceredex Large Cap Value	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.	•	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	•	

Polen Capital	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.	•	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	•	

Rhumbline R1000G	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.	•	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	•	

Mutual of America	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.	•	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	•	



Great Lakes SMID Equity	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.	•	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	•	
Vanguard R2000 Equity	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.	•	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	•	
Vanguard International Equity	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.	•	

JPM International Equity	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.	•	
The aggregate investment in any one company is less than or equal to 5% of the outstanding shares of the company.	•	



٠

# Fixed Income Compliance:

# GHA Fixed Income BCAB A+

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

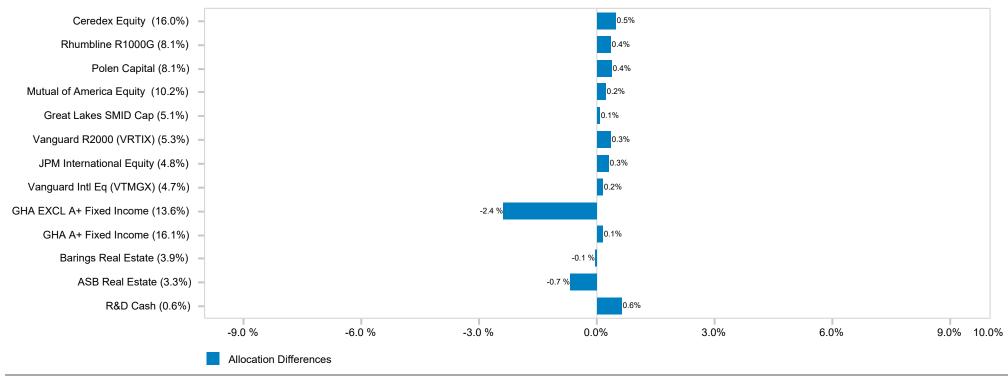
\*\* Since Inception

Net perfomance used when available

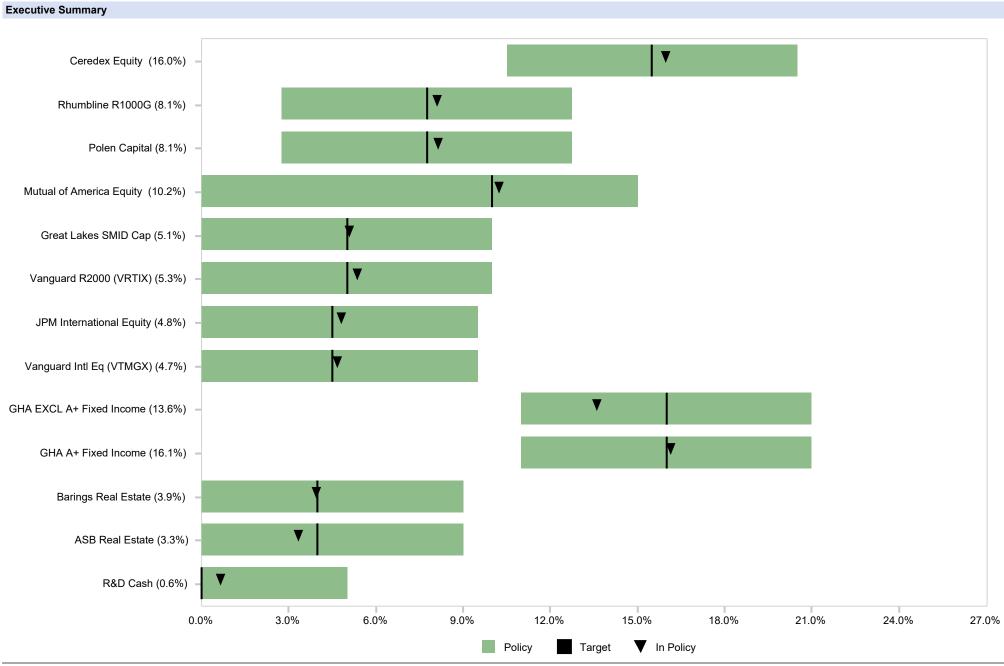


•

•	Asset				
	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. (\$000)
Total Fund Composite	177,654,016	100.0	100.0	0.0	-
Ceredex Equity	28,407,606	16.0	15.5	0.5	-871,233
Rhumbline R1000G	14,422,160	8.1	7.8	0.4	-653,974
Polen Capital	14,456,908	8.1	7.8	0.4	-688,721
Mutual of America Equity	18,184,585	10.2	10.0	0.2	-419,184
Great Lakes SMID Cap	9,001,984	5.1	5.0	0.1	-119,283
Vanguard R2000 (VRTIX)	9,497,789	5.3	5.0	0.3	-615,088
JPM International Equity	8,535,978	4.8	4.5	0.3	-541,547
Vanguard Intl Eq (VTMGX)	8,279,808	4.7	4.5	0.2	-285,377
GHA EXCL A+ Fixed Income	24,156,682	13.6	16.0	-2.4	4,267,961
GHA A+ Fixed Income	28,675,452	16.1	16.0	0.1	-250,810
Barings Real Estate	7,007,769	3.9	4.0	-0.1	98,392
ASB Real Estate	5,891,278	3.3	4.0	-0.7	1,214,882
R&D Cash	1,136,017	0.6	0.0	0.6	-1,136,017

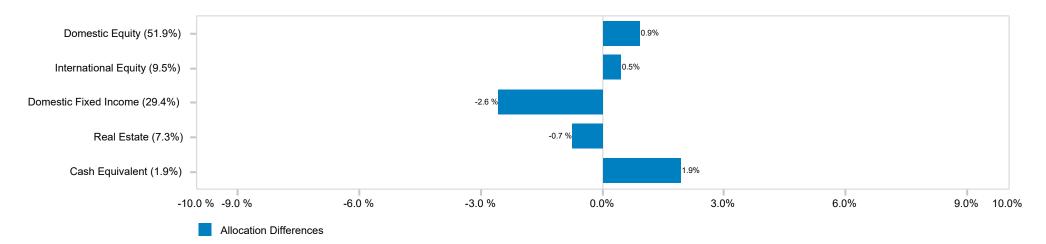








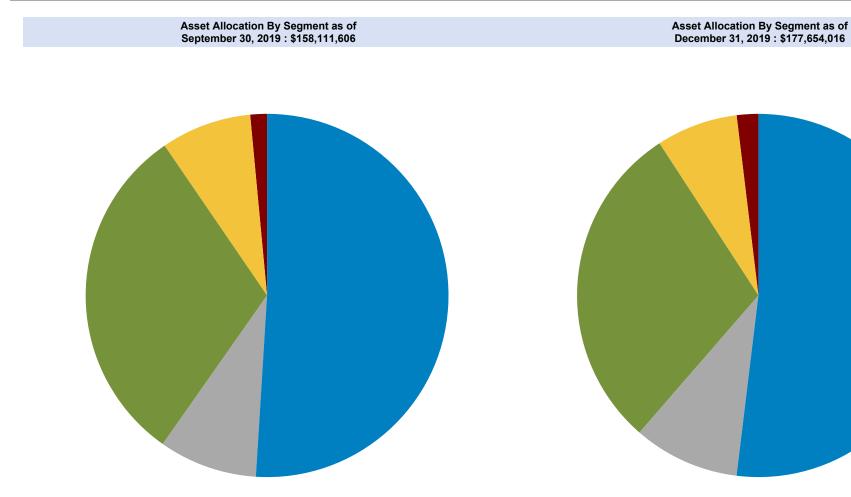
Asset Allocation Compliance	,				
	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. (\$000)
Domestic Equity	92,246,433	51.9	51.0	0.9	-1,642,885
International Equity	16,815,786	9.5	9.0	0.5	-826,924
Domestic Fixed Income	52,270,185	29.4	32.0	-2.6	4,579,100
Real Estate	12,899,047	7.3	8.0	-0.7	1,313,274
Cash Equivalent	3,422,565	1.9	0.0	1.9	-3,422,565
Total Fund	177,654,016	100.0	100.0	0.0	-







Asset Allocation Summary Total Fund Composite As of December 31, 2019

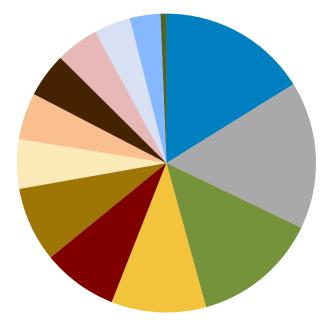


location			Allocation		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	80,617,866	51.0	Domestic Equity	92,246,433	51.9
International Equity	13,867,277	8.8	International Equity	16,815,786	9.5
Domestic Fixed Income	48,520,208	30.7	Domestic Fixed Income	52,270,185	29.4
Real Estate	12,749,281	8.1	Real Estate	12,899,047	7.3
Cash Equivalent	2,356,974	1.5	Cash Equivalent	3,422,565	1.9



Asset Allocation Summary Total Fund Composite As of December 31, 2019

Asset Allocation By Manager as of September 30, 2019 : \$158,111,606



Asset Allocation By Manager as of December 31, 2019 : \$177,654,016

location			Allocation		
	Market Value	Allocation		Market Value	Allocation
GHA A+ Fixed Income	26,141,219	16.5	GHA A+ Fixed Income	28,675,452	16.1
Ceredex Equity	25,381,621	16.1	Ceredex Equity	28,407,606	16.0
GHA EXCL A+ Fixed Income	22,772,900	14.4	GHA EXCL A+ Fixed Income	24,156,682	13.6
Mutual of America Equity	15,966,814	10.1	Mutual of America Equity	18,184,585	10.2
Polen Capital	12,890,756	8.2	Polen Capital	14,456,908	8.1
Rhumbline R1000G	12,705,408	8.0	Rhumbline R1000G	14,422,160	8.1
Great Lakes SMID Cap	7,731,454	4.9	Vanguard R2000 (VRTIX)	9,497,789	5.3
Vanguard R2000 (VRTIX)	7,659,036	4.8	Great Lakes SMID Cap	9,001,984	5.1
Vanguard Intl Eq (VTMGX)	7,230,878	4.6	JPM International Equity	8,535,978	4.8
Barings Real Estate	6,914,565	4.4	Vanguard Intl Eq (VTMGX)	8,279,808	4.7
JPM International Equity	6,636,399	4.2	Barings Real Estate	7,007,769	3.9
ASB Real Estate	5,834,716	3.7	ASB Real Estate	5,891,278	3.3
R&D Cash	245,840	0.2	R&D Cash	1,136,017	0.6

	QTR	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inceptior Date
Fotal Fund Composite (Gross)	5.59 (41)	20.00 (43)	5.59 (41)	20.00 (43)	9.05 (66)	7.17 (38)	6.49 (39)	01/01/1998
Total Fund Policy Index	5.22 (59)	19.82 (47)	5.22 (59)	19.82 (47)	9.34 (57)	7.34 (28)	6.57 (35)	
Difference	0.37	0.18	0.37	0.18	-0.29	-0.17	-0.08	
All Public Plans-Total Fund Median	5.42	19.60	5.42	19.60	9.54	6.96	6.33	
Fotal Fund Composite (Net)	5.51	19.61	5.51	19.61	8.67	6.81	6.14	01/01/1998
Total Fund Policy Index	5.22	19.82	5.22	19.82	9.34	7.34	6.57	
Difference	0.29	-0.21	0.29	-0.21	-0.67	-0.53	-0.43	
Fotal Equity Composite (Gross)	9.09	30.35	9.09	30.35	12.42	9.86	6.53	01/01/1998
Total Equity Policy Index	8.49	28.64	8.49	28.64	12.59	9.90	7.24	
Difference	0.60	1.71	0.60	1.71	-0.17	-0.04	-0.71	
Fotal Domestic Equity								
Ceredex Equity (Gross)	8.98 (29)	31.87 (16)	8.98 (29)	31.87 (16)	11.77 (36)	9.39 (41)	13.64 (40)	01/01/2012
Russell 1000 Value Index	7.41 (61)	26.54 (55)	7.41 (61)	26.54 (55)	9.68 (70)	8.29 (65)	12.85 (64)	
Difference	1.57	5.33	1.57	5.33	2.09	1.10	0.79	
IM U.S. Large Cap Value Equity (SA+CF) Median	7.92	27.39	7.92	27.39	10.75	8.86	13.31	
Ceredex Equity (Net)	8.84	31.17	8.84	31.17	11.17	8.79	13.01	01/01/2012
Russell 1000 Value Index	7.41	26.54	7.41	26.54	9.68	8.29	12.85	
Difference	1.43	4.63	1.43	4.63	1.49	0.50	0.16	
Polen Capital (Gross)	10.62 (25)	38.72 (13)	10.62 (25)	38.72 (13)	N/A	N/A	22.84 (3)	01/01/2018
Russell 1000 Growth Index	10.62 (25)	36.39 (26)	10.62 (25)	36.39 (26)	20.49 (41)	14.63 (31)	15.90 (42)	
Difference	0.00	2.33	0.00	2.33	N/A	N/A	6.94	
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.58	33.80	9.58	33.80	19.28	13.50	15.40	
Polen Capital (Net)	10.45	37.91	10.45	37.91	N/A	N/A	22.19	01/01/2018
Russell 1000 Growth Index	10.62	36.39	10.62	36.39	20.49	14.63	15.90	
Difference	-0.17	1.52	-0.17	1.52	N/A	N/A	6.29	
Rhumbline R1000G (Gross)	10.69 (24)	36.45 (26)	10.69 (24)	36.45 (26)	N/A	N/A	15.93 (41)	01/01/2018
Russell 1000 Growth Index	10.62 (25)	36.39 (26)	10.62 (25)	36.39 (26)	20.49 (41)	14.63 (31)	15.90 (42)	
Difference	0.07	0.06	0.07	0.06	N/A	N/A	0.03	
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.58	33.80	9.58	33.80	19.28	13.50	15.40	
Rhumbline R1000G (Net)	10.67	36.38	10.67	36.38	N/A	N/A	15.88	01/01/2018
Russell 1000 Growth Index	10.62	36.39	10.62	36.39	20.49	14.63	15.90	
Difference	0.05	-0.01	0.05	-0.01	N/A	N/A	-0.02	



	QTR	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
Mutual of America Equity (Gross)	7.23 (45)	26.33 (76)	7.23 (45)	26.33 (76)	9.27 (66)	9.01 (50)	10.27 (26)	04/01/2008
S&P MidCap 400 Index	7.06 (48)	26.20 (77)	7.06 (48)	26.20 (77)	9.26 (66)	9.03 (50)	10.36 (24)	
Difference	0.17	0.13	0.17	0.13	0.01	-0.02	-0.09	
IM U.S. Mid Cap Equity (MF) Median	6.99	30.29	6.99	30.29	11.52	8.98	9.28	
Mutual of America Equity (Net)	7.20	26.27	7.20	26.27	9.20	8.94	10.18	04/01/2008
S&P MidCap 400 Index	7.06	26.20	7.06	26.20	9.26	9.03	10.36	
Difference	0.14	0.07	0.14	0.07	-0.06	-0.09	-0.18	
Great Lakes SMID Cap (Gross)	6.36 (81)	21.89 (100)	6.36 (81)	21.89 (100)	N/A	N/A	-0.78 (92)	09/01/2018
Russell 2500 Index	8.54 (34)	27.77 (73)	8.54 (34)	27.77 (73)	10.33 (70)	8.93 (76)	1.92 (73)	
Difference	-2.18	-5.88	-2.18	-5.88	N/A	N/A	-2.70	
IM U.S. SMID Cap Core Equity (SA+CF) Median	8.07	29.80	8.07	29.80	11.13	9.96	2.94	
Great Lakes SMID Cap (Net)	6.23	21.25	6.23	21.25	N/A	N/A	-1.21	09/01/2018
Russell 2500 Index	8.54	27.77	8.54	27.77	10.33	8.93	1.92	
Difference	-2.31	-6.52	-2.31	-6.52	N/A	N/A	-3.13	
Vanguard R2000 (VRTIX) (Net)	9.97 (16)	25.61 (31)	9.97 (16)	25.61 (31)	N/A	N/A	-1.62 (41)	09/01/2018
Russell 2000 Index	9.94 (17)	25.53 (32)	9.94 (17)	25.53 (32)	8.59 (22)	8.23 (30)	-1.69 (43)	
Difference	0.03	0.08	0.03	0.08	N/A	N/A	0.07	
IM U.S. Small Cap Core Equity (MF) Median	8.12	23.86	8.12	23.86	6.54	7.23	-2.11	
Total International Equity								
Vanguard Intl Eq (VTMGX) (Net)	8.36 (72)	22.05 (50)	8.36 (72)	22.05 (50)	9.69 (53)	6.17 (37)	6.45 (35)	07/01/2013
MSCI EAFE Index	8.21 (75)	22.66 (46)	8.21 (75)	22.66 (46)	10.11 (47)	6.18 (37)	6.67 (31)	
Difference	0.15	-0.61	0.15	-0.61	-0.42	-0.01	-0.22	
IM International Equity (MF) Median	9.60	21.99	9.60	21.99	9.86	5.48	5.75	
JPM International Equity (Net)	10.04 (50)	29.89 (12)	10.04 (50)	29.89 (12)	11.83 (37)	N/A	9.72 (51)	10/01/2015
MSCI EAFE Index	8.21 (79)	22.66 (50)	8.21 (79)	22.66 (50)	10.11 (59)	6.18 (59)	8.59 (67)	
Difference	1.83	7.23	1.83	7.23	1.72	N/A	1.13	
IM International Equity (SA+CF) Median	9.98	22.62	9.98	22.62	10.74	6.61	9.76	



As of December 31, 2019

	QTR	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
Total Fixed Income Composite	0.01	6.28	0.01	6.28	3.57	2.96	5.54	01/01/1998
Total Fixed Income Policy Index	0.16	7.17	0.16	7.17	3.42	2.66	4.37	
Difference	-0.15	-0.89	-0.15	-0.89	0.15	0.30	1.17	
GHA A+ Fixed Income (Gross)	-0.15 (94)	6.81 (98)	-0.15 (94)	6.81 (98)	3.92 (92)	3.09 (83)	5.53 (3)	01/01/2007
Blmbg. Barc. U.S. Aggregate: A+	-0.06 (89)	7.53 (95)	-0.06 (89)	7.53 (95)	3.61 (97)	2.74 (98)	4.01 (98)	
Difference	-0.09	-0.72	-0.09	-0.72	0.31	0.35	1.52	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.22	9.24	0.22	9.24	4.41	3.46	4.76	
GHA A+ Fixed Income (Net)	-0.21	6.55	-0.21	6.55	3.67	2.84	5.27	01/01/2007
Blmbg. Barc. U.S. Aggregate: A+	-0.06	7.53	-0.06	7.53	3.61	2.74	4.01	
Difference	-0.15	-0.98	-0.15	-0.98	0.06	0.10	1.26	
GHA EXCL A+ Fixed Income (Gross)	0.20 (93)	5.70 (91)	0.20 (93)	5.70 (91)	3.19 (80)	2.81 (54)	5.30 (9)	01/01/1998
Bloomberg Barclays Intermediate US Govt/Credit Idx	0.37 (70)	6.80 (59)	0.37 (70)	6.80 (59)	3.24 (76)	2.57 (83)	4.46 (90)	0 1/0 1/ 1000
Difference	-0.17	-1.10	-0.17	-1.10	-0.05	0.24	0.84	
IM U.S. Intermediate Duration (SA+CF) Median	0.44	6.93	0.44	6.93	3.45	2.83	4.82	
GHA EXCL A+ Fixed Income (Net)	0.15	5.44	0.15	5.44	3.02	2.71	5.27	01/01/1998
Bloomberg Barclays Intermediate US Govt/Credit Idx	0.37	6.80	0.37	6.80	3.24	2.57	4.46	
Difference	-0.22	-1.36	-0.22	-1.36	-0.22	0.14	0.81	
Total Real Estate (Gross)	1.45 (73)	5.71 (81)	1.45 (73)	5.71 (81)	N/A	N/A	6.52 (N/A)	06/01/2017
NCREIF Fund Index-Open End Diversified Core (EW)	1.53 (58)	6.08 (77)	1.53 (58)	6.08 (77)	7.37 (72)	9.27 (62)	7.85 (N/A)	
Difference	-0.08	-0.37	-0.08	-0.37	N/A	N/A	-1.33	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.59	7.02	1.59	7.02	7.71	9.54	N/A	
Barings Real Estate (Gross)	1.59 (50)	7.02 (50)	1.59 (50)	7.02 (50)	N/A	N/A	7.50 (67)	07/01/2017
NCREIF Fund Index-Open End Diversified Core (EW)	1.53 (58)	6.08 (77)	1.53 (58)	6.08 (77)	7.37 (72)	9.27 (62)	7.39 (75)	
Difference	0.06	0.94	0.06	0.94	N/A	N/A	0.11	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.59	7.02	1.59	7.02	7.71	9.54	8.10	
Barings Real Estate (Net)	1.35	6.00	1.35	6.00	N/A	N/A	6.41	07/01/2017
NCREIF Fund Index-Open End Diversified Core (EW)	1.53	6.08	1.53	6.08	7.37	9.27	7.39	
Difference	-0.18	-0.08	-0.18	-0.08	N/A	N/A	-0.98	
ASB Real Estate (Gross)	1.28 (80)	4.17 (89)	1.28 (80)	4.17 (89)	N/A	N/A	5.86 (89)	07/01/2017
NCREIF Fund Index-Open End Diversified Core (EW)	1.53 (58)	6.08 (77)	1.53 (58)	6.08 (77)	7.37 (72)	9.27 (62)	7.39 (75)	
Difference	-0.25	-1.91	-0.25	-1.91	N/A	N/A	-1.53	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.59	7.02	1.59	7.02	7.71	9.54	8.10	
ASB Real Estate (Net)	0.97	2.91	0.97	2.91	N/A	N/A	4.57	07/01/2017
NCREIF Fund Index-Open End Diversified Core (EW)	1.53	6.08	1.53	6.08	7.37	9.27	7.39	



Comparative Performance Fiscal Year to Date									
	FYTD	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Total Fund Composite (Gross)	5.59 (41)	8.38 (38)	11.66 (48)	9.56 (44)	0.60 (20)	9.19 (59)	13.87 (16)	18.40 (27)	1.31 (17)
Total Fund Policy Index	5.22 (59)	9.00 (29)	10.90 (69)	10.01 (28)	0.59 (20)	9.47 (52)	13.44 (21)	18.12 (34)	1.19 (18)
Difference	0.37	-0.62	0.76	-0.45	0.01	-0.28	0.43	0.28	0.12
All Public Plans-Total Fund Median	5.42	7.86	11.60	9.28	-0.63	9.51	11.70	17.46	-0.33
Total Fund Composite (Net)	5.51	8.01	11.28	9.25	0.22	8.71	13.36	17.84	0.85
Total Fund Policy Index	5.22	9.00	10.90	10.01	0.59	9.47	13.44	18.12	1.19
Difference	0.29	-0.99	0.38	-0.76	-0.37	-0.76	-0.08	-0.28	-0.34
Total Equity Composite (Gross)	9.09	13.02	19.33	13.45	-1.15	12.14	23.86	25.54	-0.21
Total Equity Policy Index	8.49	14.65	18.53	13.79	-1.26	13.94	24.01	27.57	-1.42
Difference	0.60	-1.63	0.80	-0.34	0.11	-1.80	-0.15	-2.03	1.21
Total Domestic Equity									
Ceredex Equity (Gross)	8.98 (29)	10.74 (62)	17.71 (54)	16.57 (23)	-5.35 (71)	17.16 (65)	26.65 (25)	N/A	N/A
Russell 1000 Value Index	7.41 (61)	9.45 (77)	15.12 (76)	16.19 (26)	-4.42 (65)	18.89 (42)	22.30 (60)	30.92 (26)	-1.89 (62)
Difference	1.57	1.29	2.59	0.38	-0.93	-1.73	4.35	N/A	N/A
IM U.S. Large Cap Value Equity (SA+CF) Median	7.92	11.72	17.92	13.30	-3.28	18.36	23.68	28.14	-0.98
Ceredex Equity (Net)	8.84	10.15	17.06	15.91	-5.89	16.50	25.93	N/A	N/A
Russell 1000 Value Index	7.41	9.45	15.12	16.19	-4.42	18.89	22.30	30.92	-1.89
Difference	1.43	0.70	1.94	-0.28	-1.47	-2.39	3.63	N/A	N/A
GHA LCG (Gross)	N/A	N/A	21.48 (42)	13.71 (24)	1.52 (71)	17.32 (60)	12.80 (99)	27.88 (50)	3.11 (36)
Russell 1000 Growth Index	10.62 (25)	26.30 (37)	21.94 (38)	13.76 (23)	3.17 (54)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
Difference	N/A	N/A	-0.46	-0.05	-1.65	-1.83	-6.47	-1.31	-0.67
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.58	24.44	20.82	11.64	3.53	18.19	20.25	27.69	1.38
Polen Capital (Gross)	10.62 (25)	N/A							
Russell 1000 Growth Index	10.62 (25)	26.30 (37)	21.94 (38)	13.76 (23)	3.17 (54)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
Difference	0.00	N/A							
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.58	24.44	20.82	11.64	3.53	18.19	20.25	27.69	1.38
Polen Capital (Net)	10.45 (26)	N/A							
Russell 1000 Growth Index	10.62 (25)	26.30 (37)	21.94 (38)	13.76 (23)	3.17 (54)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
Difference	-0.17	N/A							
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.58	24.44	20.82	11.64	3.53	18.19	20.25	27.69	1.38



As of December 31, 2019

								AS OI DEC	
	FYTD	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Rhumbline R1000G (Gross)	10.69 (24)	N/A							
Russell 1000 Growth Index	10.62 (25)	26.30 (37)	21.94 (38)	13.76 (23)	3.17 (54)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
Difference	0.07	N/A							
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.58	24.44	20.82	11.64	3.53	18.19	20.25	27.69	1.38
Rhumbline R1000G (Net)	10.67	N/A							
Russell 1000 Growth Index	10.62	26.30	21.94	13.76	3.17	19.15	19.27	29.19	3.78
Difference	0.05	N/A							
Mutual of America Equity (Gross)	7.23 (45)	14.25 (47)	17.31 (41)	15.25 (15)	1.41 (38)	11.52 (53)	27.64 (43)	28.61 (26)	-1.27 (40)
S&P MidCap 400 Index	7.06 (48)	14.21 (47)	17.52 (39)	15.33 (15)	1.40 (38)	11.82 (50)	27.68 (42)	28.54 (26)	-1.28 (40)
Difference	0.17	0.04	-0.21	-0.08	0.01	-0.30	-0.04	0.07	0.01
IM U.S. Mid Cap Equity (MF) Median	6.99	13.62	16.47	10.50	-0.20	11.75	27.09	25.48	-2.48
Mutual of America Equity (Net)	7.20	14.15	17.23	15.17	1.35	11.48	27.55	28.54	-1.32
S&P MidCap 400 Index	7.06	14.21	17.52	15.33	1.40	11.82	27.68	28.54	-1.28
Difference	0.14	-0.06	-0.29	-0.16	-0.05	-0.34	-0.13	0.00	-0.04
New Amsterdam Equity (Gross)	N/A	N/A	20.56 (51)	8.62 (94)	N/A	N/A	N/A	N/A	N/A
Russell 2500 Index	8.54 (37)	16.19 (13)	17.79 (76)	14.44 (61)	0.38 (54)	8.97 (31)	29.79 (65)	30.93 (52)	-2.22 (43)
Difference	N/A	N/A	2.77	-5.82	N/A	N/A	N/A	N/A	N/A
IM U.S. Small Cap Value Equity (SA+CF) Median	7.95	9.10	20.58	15.57	0.75	7.00	31.03	31.14	-2.85
New Amsterdam Equity (Net)	N/A	N/A	19.99	8.11	N/A	N/A	N/A	N/A	N/A
Russell 2500 Index	8.54	16.19	17.79	14.44	0.38	8.97	29.79	30.93	-2.22
Difference	N/A	N/A	2.20	-6.33	N/A	N/A	N/A	N/A	N/A
Great Lakes SMID Cap (Gross)	6.36 (81)	N/A							
Russell 2500 Index	8.54 (34)	16.19 (57)	17.79 (71)	14.44 (35)	0.38 (74)	8.97 (72)	29.79 (58)	30.93 (41)	-2.22 (71)
Difference	-2.18	N/A							
IM U.S. SMID Cap Core Equity (SA+CF) Median	8.07	16.28	18.86	12.61	2.28	11.29	30.27	30.24	-0.86
Great Lakes SMID Cap (Net)	6.23	N/A							
Russell 2500 Index	8.54	16.19	17.79	14.44	0.38	8.97	29.79	30.93	-2.22
Difference	-2.31	N/A							
Vanguard R2000 (VRTIX) (Net)	9.97 (16)	N/A							
Russell 2000 Index	9.94 (17)	15.24 (25)	20.74 (28)	15.47 (36)	1.25 (47)	3.93 (73)	30.06 (43)	31.91 (26)	-3.53 (46)
Difference	0.03	N/A							
IM U.S. Small Cap Core Equity (MF) Median	8.12	11.81	19.13	13.84	1.00	5.47	29.31	29.14	-3.91

As of December 31, 2019

								,
FYTD	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
8.36 (72)	2.78 (24)	19.25 (52)	8.03 (59)	-7.90 (45)	4.01 (54)	N/A	N/A	N/A
8.21 (75)	3.25 (21)	19.65 (48)	7.06 (65)	-8.27 (47)	4.70 (44)	24.29 (19)	14.33 (66)	-8.94 (24)
0.15	-0.47	-0.40	0.97	0.37	-0.69	N/A	N/A	N/A
9.60	0.08	19.36	9.32	-8.75	4.26	17.81	16.20	-12.08
10.04 (50)	-3.43 (85)	18.60 (70)	10.45 (56)	N/A	N/A	N/A	N/A	N/A
8.21 (79)	3.25 (33)	19.65 (61)	7.06 (77)	-8.27 (49)	4.70 (63)	24.29 (32)	14.33 (72)	-8.94 (44)
1.83	-6.68	-1.05	3.39	N/A	N/A	N/A	N/A	N/A
9.98	1.40	21.06	11.48	-8.41	5.80	20.14	17.28	-9.61
	8.36 (72) 8.21 (75) 0.15 9.60 10.04 (50) 8.21 (79) 1.83	FYTD         To Sep-2018           8.36         (72)         2.78         (24)           8.21         (75)         3.25         (21)           0.15         -0.47         9.60         0.08           10.04         (50)         -3.43         (85)           8.21         (79)         3.25         (33)           1.83         -6.68	FYTD         To Sep-2018         To Sep-2017           8.36         (72)         2.78         (24)         19.25         (52)           8.21         (75)         3.25         (21)         19.65         (48)           0.15         -0.47         -0.40         9.60         0.08         19.36           10.04         (50)         -3.43         (85)         18.60         (70)           8.21         (79)         3.25         (33)         19.65         (61)           1.83         -6.68         -1.05         -1.05         -1.05	FYTD         To Sep-2018         To Sep-2017         To Sep-2016           8.36         (72)         2.78         (24)         19.25         (52)         8.03         (59)           8.21         (75)         3.25         (21)         19.65         (48)         7.06         (65)           0.15         -0.47         -0.40         0.97         9.60         0.08         19.36         9.32           10.04         (50)         -3.43         (85)         18.60         (70)         10.45         (56)           8.21         (79)         3.25         (33)         19.65         (61)         7.06         (77)           1.83         -6.68         -1.05         3.39	FYTD         To Sep-2018         To Sep-2017         To Sep-2016         To Sep-2015           8.36         (72)         2.78         (24)         19.25         (52)         8.03         (59)         -7.90         (45)           8.21         (75)         3.25         (21)         19.65         (48)         7.06         (65)         -8.27         (47)           0.15         -0.47         -0.40         0.97         0.37           9.60         0.08         19.36         9.32         -8.75           10.04         (50)         -3.43         (85)         18.60         (70)         10.45         (56)         N/A           8.21         (79)         3.25         (33)         19.65         (61)         7.06         (77)         -8.27         (49)           1.83         -6.68         -1.05         3.39         N/A	FYTD         To Sep-2018         To Sep-2017         To Sep-2016         To Sep-2015         To Sep-2014           8.36         (72)         2.78         (24)         19.25         (52)         8.03         (59)         -7.90         (45)         4.01         (54)           8.21         (75)         3.25         (21)         19.65         (48)         7.06         (65)         -8.27         (47)         4.70         (44)           0.15         -0.47         -0.40         0.97         0.37         -0.69         9.60         0.08         19.36         9.32         -8.75         4.26           10.04         (50)         -3.43         (85)         18.60         (70)         10.45         (56)         N/A         N/A           8.21         (79)         3.25         (33)         19.65         (61)         7.06         (77)         -8.27         (49)         4.70         (63)           1.83         -6.68         -1.05         3.39         N/A         N/A	FYTD         To Sep-2018         To Sep-2017         To Sep-2016         To Sep-2015         To Sep-2014         To Sep-2013           8.36         (72)         2.78         (24)         19.25         (52)         8.03         (59)         -7.90         (45)         4.01         (54)         N/A           8.21         (75)         3.25         (21)         19.65         (48)         7.06         (65)         -8.27         (47)         4.70         (44)         24.29         (19)           0.15         -0.47         -0.40         0.97         0.37         -0.69         N/A           9.60         0.08         19.36         9.32         -8.75         4.26         17.81           10.04         (50)         -3.43         (85)         18.60         (70)         10.45         (56)         N/A         N/A           8.21         (79)         3.25         (33)         19.65         (61)         7.06         (77)         -8.27         (49)         4.70         (63)         24.29         (32)           1.83         -6.68         -1.05         3.39         N/A         N/A         N/A	FYTD         To Sep-2018         To Sep-2017         To Sep-2016         To Sep-2015         To Sep-2014         To Sep-2013         To Sep-2012           8.36         (72)         2.78         (24)         19.25         (52)         8.03         (59)         -7.90         (45)         4.01         (54)         N/A         N/A           8.21         (75)         3.25         (21)         19.65         (48)         7.06         (65)         -8.27         (47)         4.70         (44)         24.29         (19)         14.33         (66)           0.15         -0.47         -0.40         0.97         0.37         -0.69         N/A         N/A           9.60         0.08         19.36         9.32         -8.75         4.26         17.81         16.20           10.04         (50)         -3.43         (85)         18.60         (70)         10.45         (56)         N/A         N/A         N/A           8.21         (79)         3.25         (33)         19.65         (61)         7.06         (77)         -8.27         (49)         4.70         (63)         24.29         (32)         14.33         (72)           1.83         -6.68

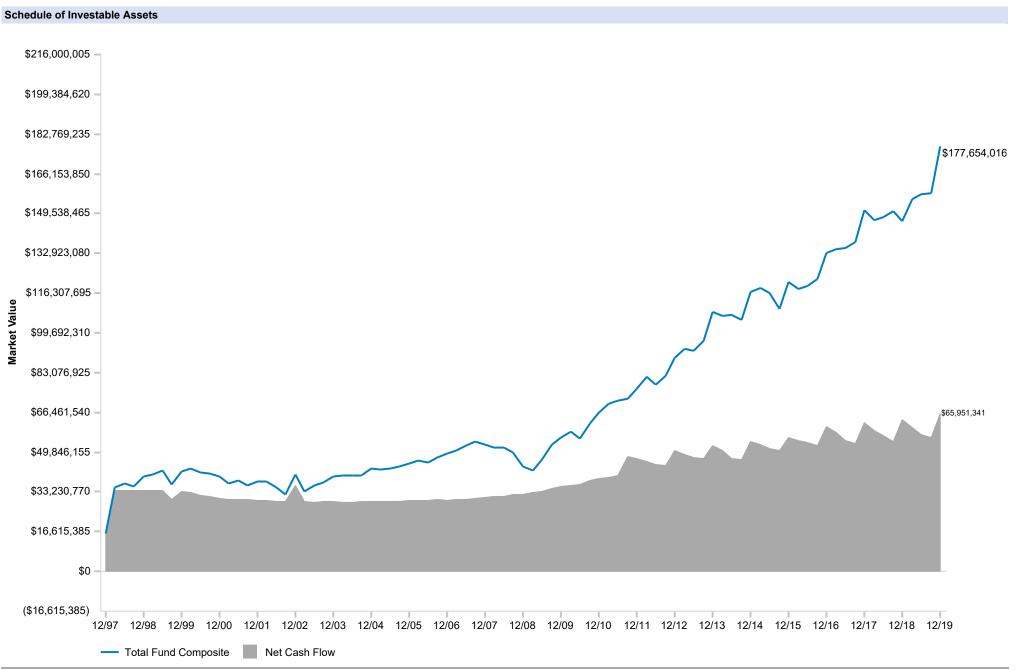
As of December 31, 2019

	FYTD	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Total Fixed Income Composite (Gross)	0.01	0.58	0.36	4.79	3.51	5.32	0.01	10.47	3.21
Total Fixed Income Policy Index	0.16	-1.12	-0.09	4.01	3.06	2.79	-1.09	4.40	4.35
Difference	-0.15	1.70	0.45	0.78	0.45	2.53	1.10	6.07	-1.14
GHA A+ Fixed Income (Gross)	-0.15 (94)	0.74 (4)	0.23 (70)	5.53 (61)	3.53 (12)	5.87 (12)	-0.17 (14)	10.68 (3)	4.02 (92)
Blmbg. Barc. U.S. Aggregate: A+	-0.06 (89)	-1.28 (94)	-0.42 (99)	4.50 (96)	3.44 (17)	3.39 (96)	-1.68 (78)	4.40 (98)	5.30 (48)
Difference	-0.09	2.02	0.65	1.03	0.09	2.48	1.51	6.28	-1.28
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.22	-0.75	0.61	5.66	3.02	4.47	-1.26	6.60	5.26
GHA A+ Fixed Income (Net)	-0.21	0.48	-0.02	5.27	3.27	5.62	-0.43	10.42	3.77
Blmbg. Barc. U.S. Aggregate: A+	-0.06	-1.28	-0.42	4.50	3.44	3.39	-1.68	4.40	5.30
Difference	-0.15	1.76	0.40	0.77	-0.17	2.23	1.25	6.02	-1.53
GHA EXCL A+ Fixed Income (Gross)	0.20 (93)	0.42 (14)	0.52 (66)	4.03 (42)	3.45 (7)	4.56 (12)	0.18 (26)	9.98 (4)	2.13 (96)
Bloomberg Barclays Intermediate US Govt/Credit Idx	0.37 (70)	-0.96 (96)	0.23 (87)	3.52 (76)	2.68 (52)	2.20 (84)	-0.50 (66)	4.40 (81)	3.40 (62)
Difference	-0.17	1.38	0.29	0.51	0.77	2.36	0.68	5.58	-1.27
IM U.S. Intermediate Duration (SA+CF) Median	0.44	-0.39	0.70	3.90	2.70	2.88	-0.27	5.57	3.61
GHA EXCL A+ Fixed Income (Net)	0.15	0.22	0.52	4.03	3.45	4.56	0.18	9.98	2.13
Bloomberg Barclays Intermediate US Govt/Credit Idx	0.37	-0.96	0.23	3.52	2.68	2.20	-0.50	4.40	3.40
Difference	-0.22	1.18	0.29	0.51	0.77	2.36	0.68	5.58	-1.27
Total Real Estate (Gross)	1.45 (73)	7.85 (76)	N/A						
NCREIF Fund Index-Open End Diversified Core (EW)	1.53 (58)	8.82 (57)	7.81 (58)	10.62 (67)	14.71 (60)	12.39 (66)	12.47 (68)	11.77 (64)	18.03 (43)
Difference	-0.08	-0.97	N/A						
IM U.S. Open End Private Real Estate (SA+CF) Median	1.59	9.01	8.17	11.14	15.39	12.66	13.22	12.89	16.62
Barings Real Estate (Gross)	1.59 (50)	7.51 (88)	N/A						
NCREIF Fund Index-Open End Diversified Core (EW)	1.53 (58)	8.82 (57)	7.81 (58)	10.62 (67)	14.71 (60)	12.39 (66)	12.47 (68)	11.77 (64)	18.03 (43)
Difference	0.06	-1.31	N/A						
IM U.S. Open End Private Real Estate (SA+CF) Median	1.59	9.01	8.17	11.14	15.39	12.66	13.22	12.89	16.62
Barings Real Estate (Net)	1.35	6.36	N/A						
NCREIF Fund Index-Open End Diversified Core (EW)	1.53	8.82	7.81	10.62	14.71	12.39	12.47	11.77	18.03
Difference	-0.18	-2.46	N/A						
ASB Real Estate (Gross)	1.28 (80)	8.26 (67)	N/A						
NCREIF Fund Index-Open End Diversified Core (EW)	1.53 (58)	8.82 (57)	7.81 (58)	10.62 (67)	14.71 (60)	12.39 (66)	12.47 (68)	11.77 (64)	18.03 (43)
Difference	-0.25	-0.56	N/A						
IM U.S. Open End Private Real Estate (SA+CF) Median	1.59	9.01	8.17	11.14	15.39	12.66	13.22	12.89	16.62
ASB Real Estate (Net)	0.97	6.92	N/A						
NCREIF Fund Index-Open End Diversified Core (EW)	1.53	8.82	7.81	10.62	14.71	12.39	12.47	11.77	18.03
Difference	-0.56	-1.90	N/A						



Financial Reconciliation Quarter t	o Date				
	Market Value 10/01/2019	Apprec./ Deprec.	Income	Management Fees	Market Value 12/31/2019
Ceredex Equity	25,381,621	2,195,059	145,809	-33,917	28,407,606
Polen Capital	12,890,756	1,366,097	21,435	-19,495	14,456,908
Rhumbline R1000G	12,705,408	1,391,752	-	-1,743	14,422,160
Mutual of America Equity	15,966,814	1,145,581	79,609	-5,083	18,184,585
Great Lakes SMID Cap	7,731,454	496,114	36,255	-10,709	9,001,984
Vanguard R2000 (VRTIX)	7,659,036	841,243	47,510	-	9,497,789
Vanguard Intl Eq (VTMGX)	7,230,878	567,301	81,629	-	8,279,808
JPM International Equity	6,636,399	766,248	33,331	-	8,535,978
GHA A+ Fixed Income	26,141,219	-242,000	196,774	-16,331	28,675,452
GHA EXCL A+ Fixed Income	22,772,900	-79,404	130,927	-14,219	24,156,682
Barings Real Estate	6,914,565	40,126	69,932	-16,854	7,007,769
ASB Real Estate	5,834,716	40,175	34,286	-17,898	5,891,278
R&D Cash	245,840	-	2,537	-	1,136,017
Total Fund Composite	158,111,606	8,528,292	880,034	-136,249	177,654,016







Schedule of Investa	able 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



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
lun-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, 2019

						•	0
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
	15,998,300	295,399,136	245,446,095	49,953,041	111,702,675	177,654,016	6.49

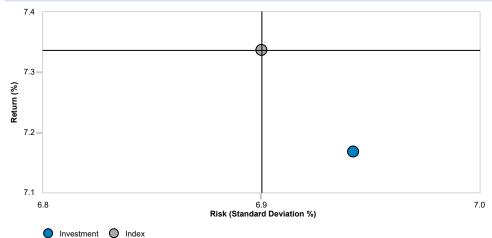


Historical Statistic	s 3 Years							Historical Statis	stics 5 Years						
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters		Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.05	7.22	1.01	98.93	10	101.93	2	Investment	7.17	6.94	0.89	99.95	16	105.46	4
Index	9.34	7.20	1.05	100.00	10	100.00	2	Index	7.34	6.90	0.92	100.00	16	100.00	4

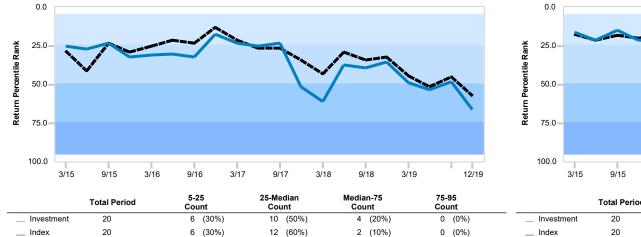
## **Risk and Return 3 Years**



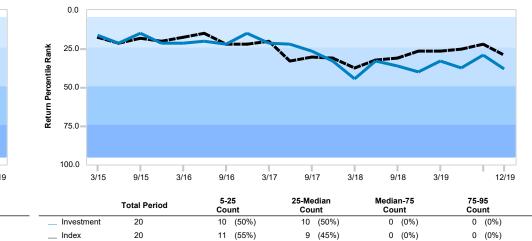
Risk and Return 5 Years



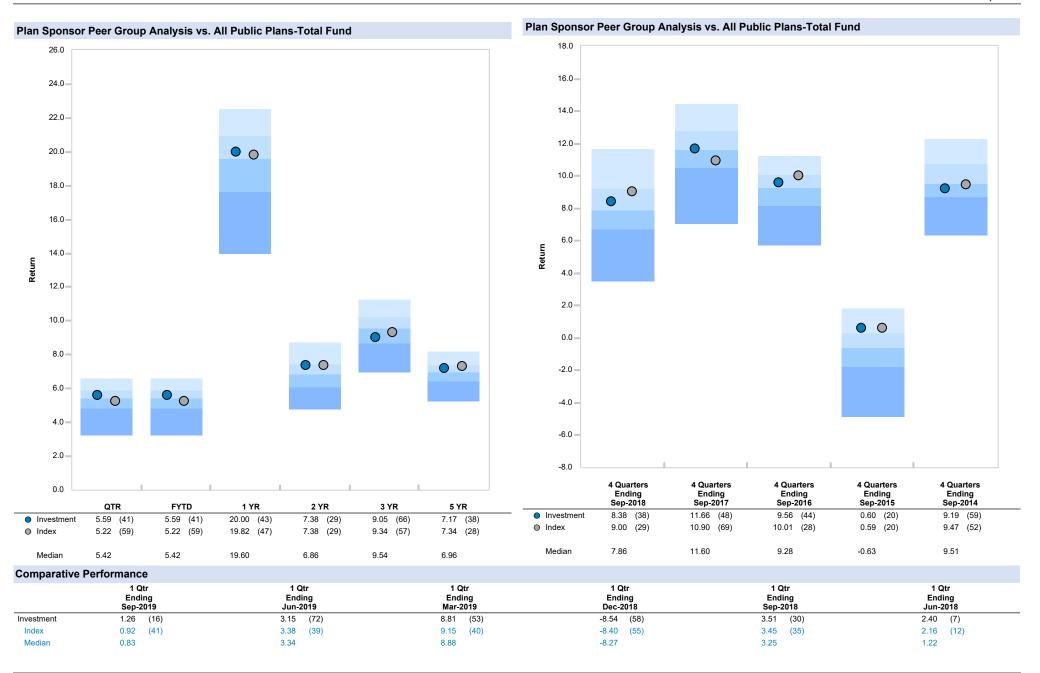
3 Year Rolling Percentile Rank All Public Plans-Total Fund



5 Year Rolling Percentile Rank All Public Plans-Total Fund

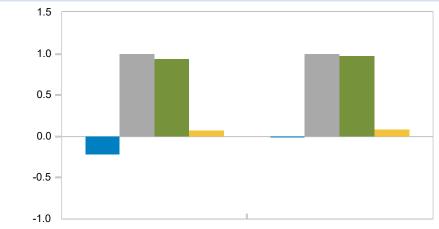








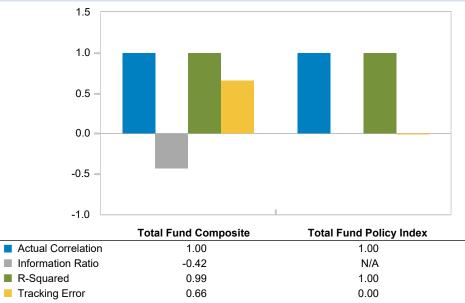
# Portfolio Comparison Total Fund



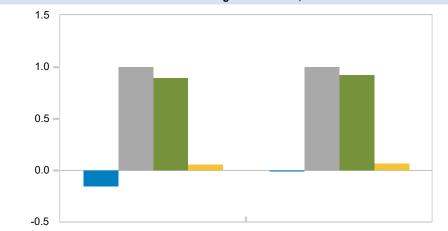
	Total Fund Composite	Total Fund Policy Index
Alpha	-0.22	0.00
Beta	0.99	1.00
Sharpe Ratio	0.94	0.97
Treynor Ratio	0.07	0.08

# Benchmark Relative Historical Statistics 3 Years Ending December 31, 2019

Risk / Reward Historical Statistics 3 Years Ending December 31, 2019

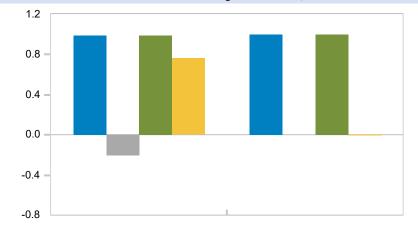


Risk / Reward Historical Statistics 5 Years Ending December 31, 2019



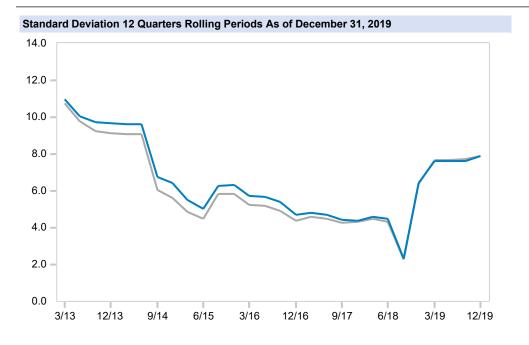
	Total Fund Composite	Total Fund Policy Index
Alpha	-0.16	0.00
Beta	1.00	1.00
Sharpe Ratio	0.89	0.92
Treynor Ratio	0.06	0.06

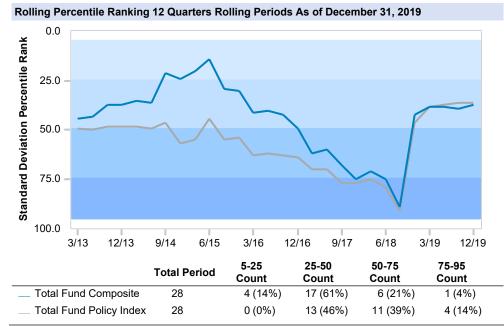
# Benchmark Relative Historical Statistics 5 Years Ending December 31, 2019

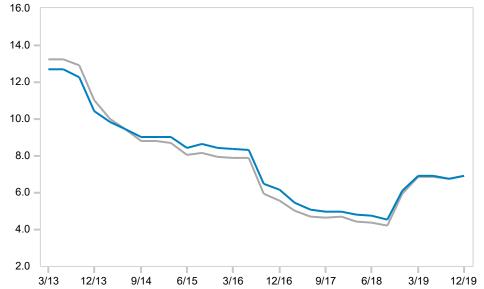


	Total Fund Composite	Total Fund Policy Index
Actual Correlation	0.99	1.00
Information Ratio	-0.21	N/A
R-Squared	0.99	1.00
Tracking Error	0.76	0.00

Benchmark: Total Fund Policy Index

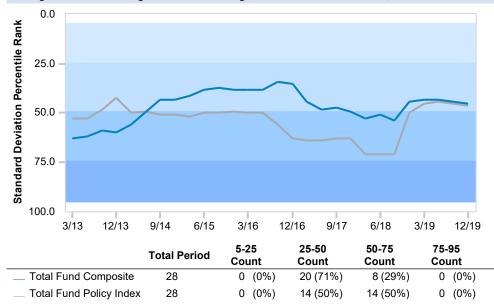




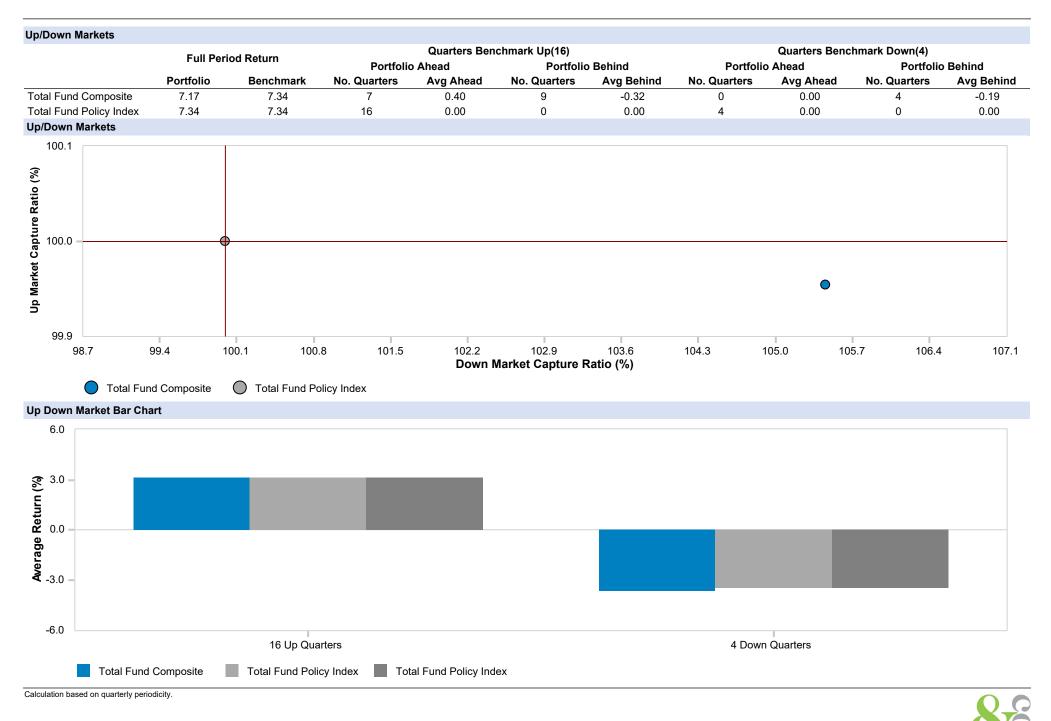


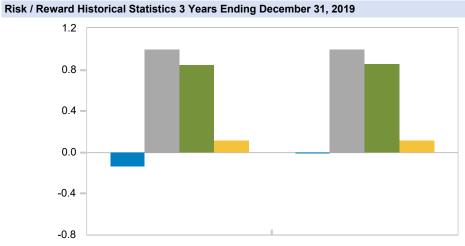
Standard Deviation 20 Quarters Rolling Periods As of December 31, 2019

Rolling Percentile Ranking 20 Quarters Rolling Periods As of December 31, 2019



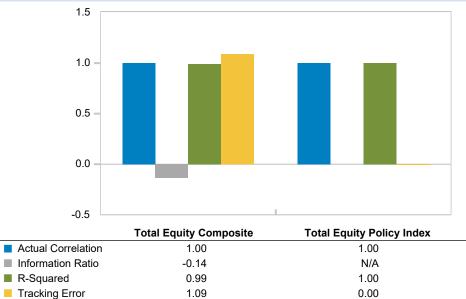
Peer: All Public Plans-Total Fund



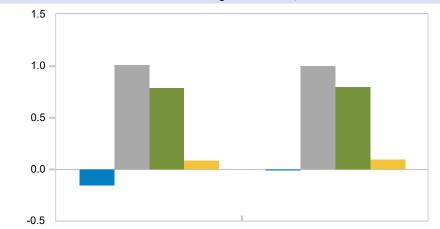


	Total Equity Composite	Total Equity Policy Index
Alpha	-0.13	0.00
Beta	1.00	1.00
Sharpe Ratio	0.85	0.86
Treynor Ratio	0.11	0.11

# Benchmark Relative Historical Statistics 3 Years Ending December 31, 2019

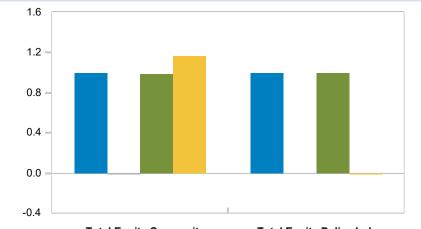


Risk / Reward Historical Statistics 5 Years Ending December 31, 2019



	Total Equity Composite	Total Equity Policy Index
Alpha	-0.16	0.00
Beta	1.01	1.00
Sharpe Ratio	0.79	0.80
Treynor Ratio	0.09	0.09

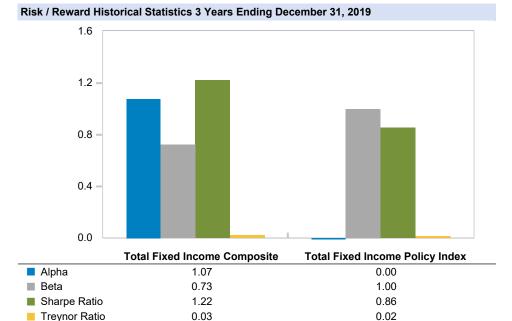
# Benchmark Relative Historical Statistics 5 Years Ending December 31, 2019



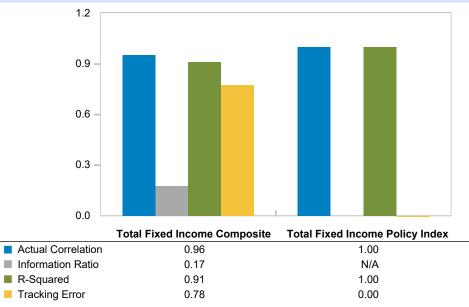
	Total Equity Composite	Total Equity Policy Index
Actual Correlation	1.00	1.00
Information Ratio	-0.01	N/A
R-Squared	0.99	1.00
Tracking Error	1.17	0.00

828

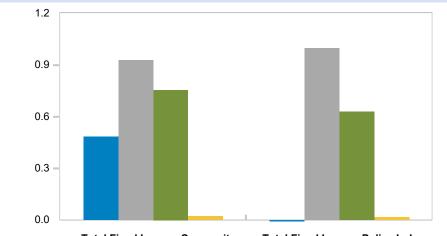
Benchmark: Total Equity Policy Index



# Benchmark Relative Historical Statistics 3 Years Ending December 31, 2019



Risk / Reward Historical Statistics 5 Years Ending December 31, 2019

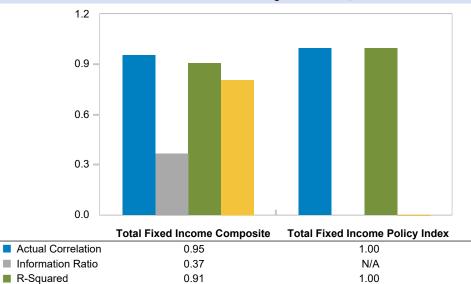


	Total Fixed Income Composite	Total Fixed Income Policy Index
Alpha	0.49	0.00
Beta	0.93	1.00
Sharpe Ratio	0.75	0.63
Treynor Ratio	0.02	0.02

## Benchmark Relative Historical Statistics 5 Years Ending December 31, 2019

0.81

Tracking Error



88

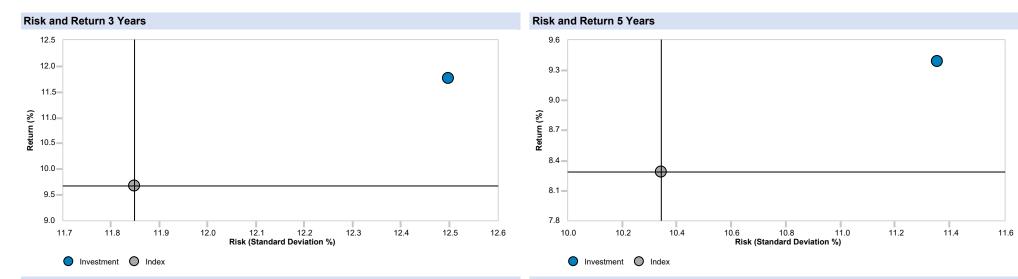
0.00

Benchmark: Total Fixed Income Policy Index

# **Page Intentionally Left Blank**



Historical Statistic	s 3 Years							Historical Statis	stics 5 Years						
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters		Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.77	12.50	0.83	108.93	10	99.00	2	Investment	9.39	11.35	0.77	114.16	16	115.49	4
Index	9.68	11.85	0.70	100.00	10	100.00	2	Index	8.29	10.34	0.73	100.00	16	100.00	4





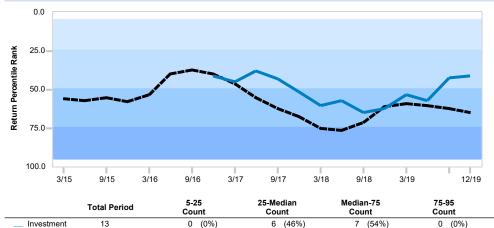
0.0 Return Percentile Rank 25.0 50.0 75.0-100.0 9/15 3/16 9/16 3/17 9/17 3/18 9/18 3/19 12/19 3/15 5-25 25-Median Median-75 75-95 Total Period Count Count Count Count Investment 20 0 (0%) 8 (40%) 12 (60%) 0 (0%) 20 0 (0%) 5 (25%) 15 (75%) 0 (0%) \_\_ Index

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

0 (0%)

20

\_\_ Index

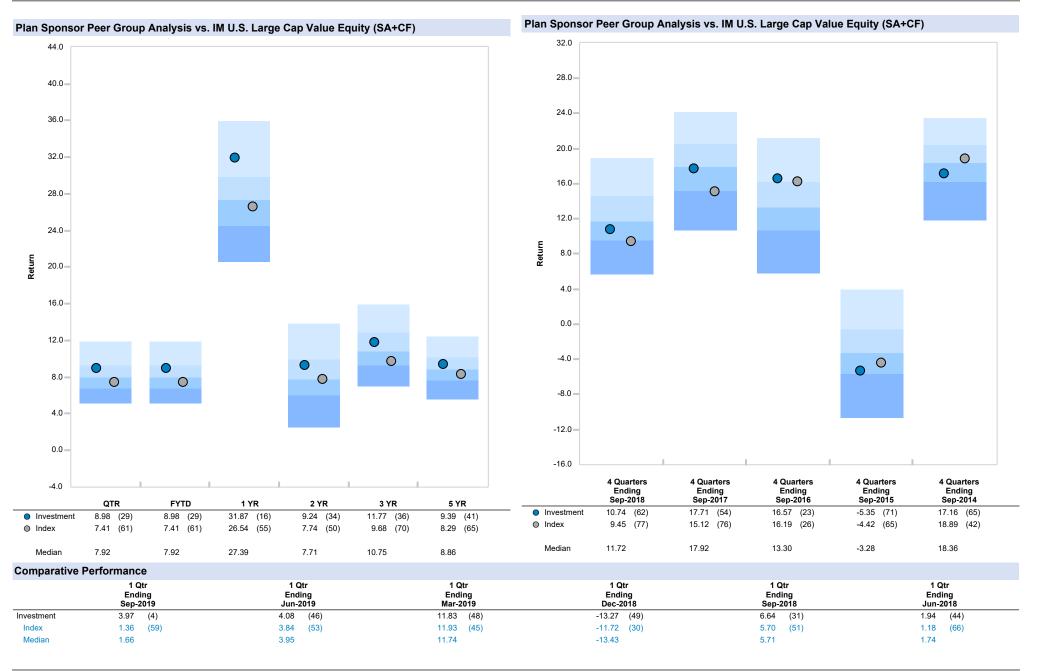


4 (20%)

15 (75%)

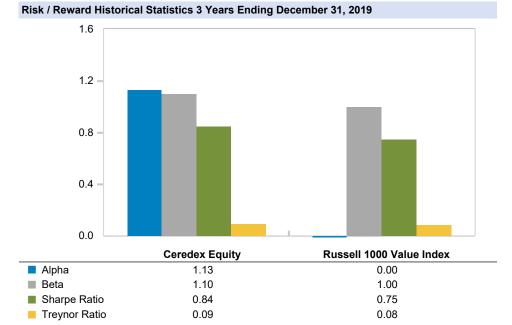


1 (5%)

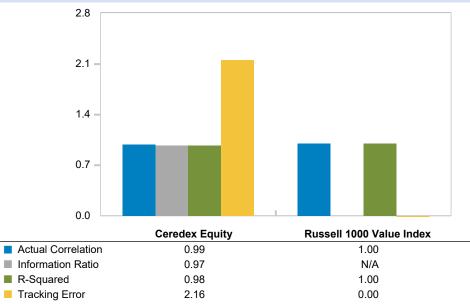




# Portfolio Comparison Ceredex As of December 31, 2019

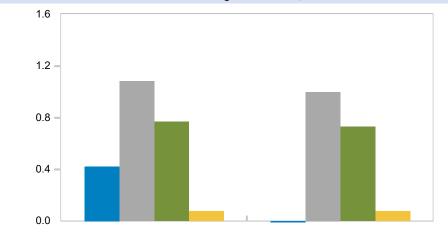


# Benchmark Relative Historical Statistics 3 Years Ending December 31, 2019



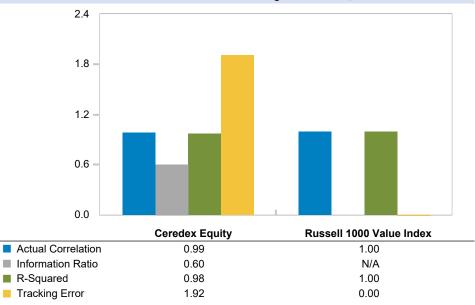
Benchmark: Russell 1000 Value Index

# Risk / Reward Historical Statistics 5 Years Ending December 31, 2019



	Ceredex Equity	Russell 1000 Value Index
Alpha	0.42	0.00
Beta	1.09	1.00
Sharpe Ratio	0.77	0.73
Treynor Ratio	0.08	0.08

# Benchmark Relative Historical Statistics 5 Years Ending December 31, 2019



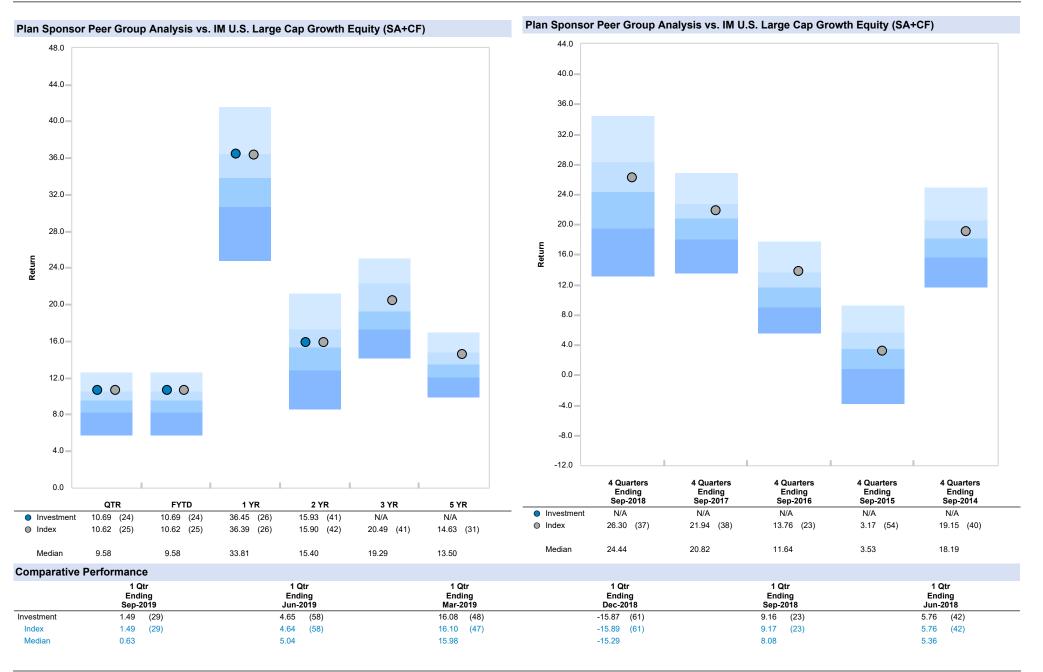


# **Page Intentionally Left Blank**



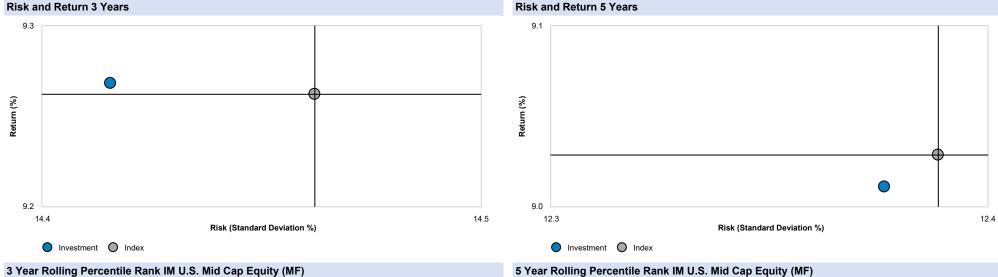


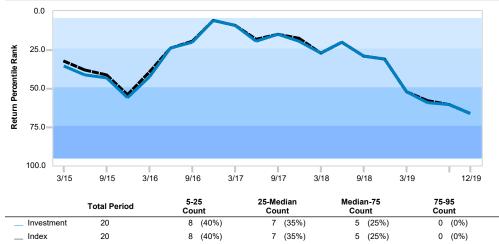




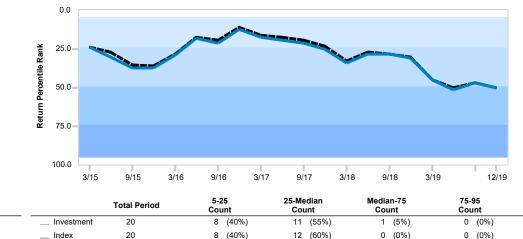


Historical Statistic	cs 3 Years							Historical Stati	stics 5 Years						
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters		Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.27	14.42	0.58	99.79	9	99.64	3	Investment	9.01	12.38	0.68	99.75	15	99.66	5
Index	9.26	14.46	0.57	100.00	9	100.00	3	Index	9.03	12.39	0.68	100.00	15	100.00	5

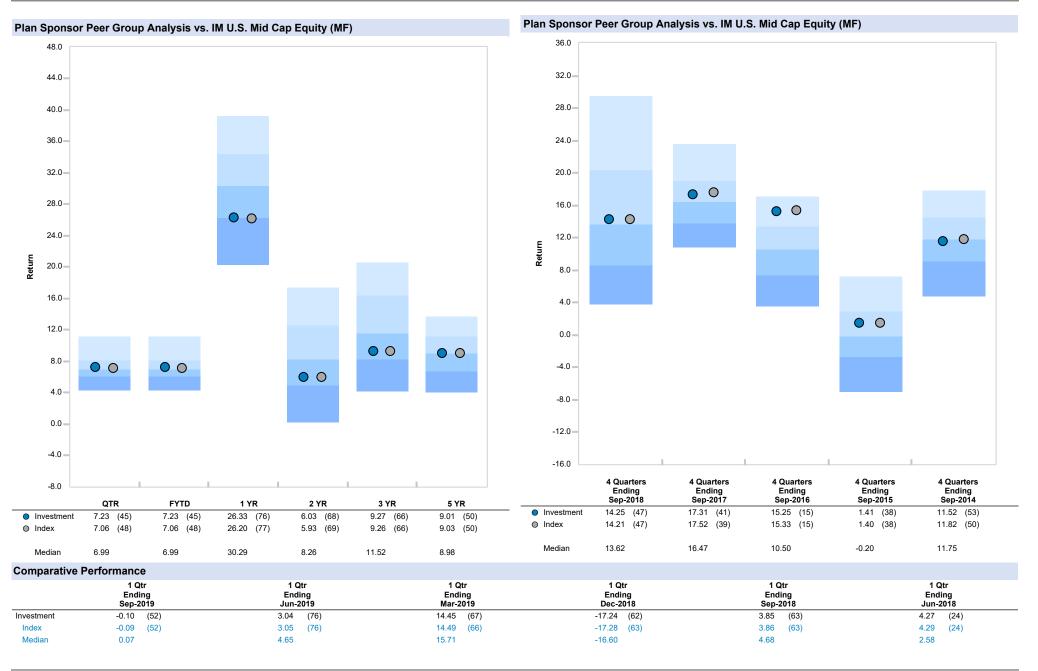




5 Year Rolling Percentile Rank IM U.S. Mid Cap Equity (MF)

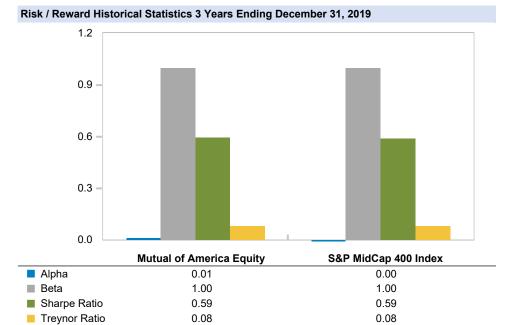




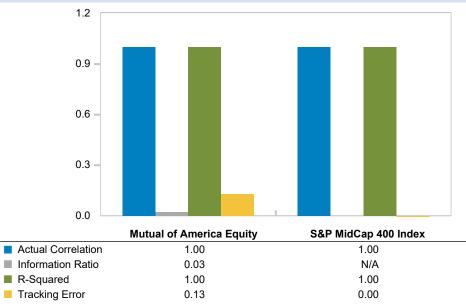




## Portfolio Comparison Mutual of America As of December 31, 2019

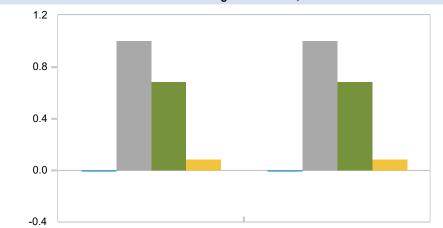


#### Benchmark Relative Historical Statistics 3 Years Ending December 31, 2019



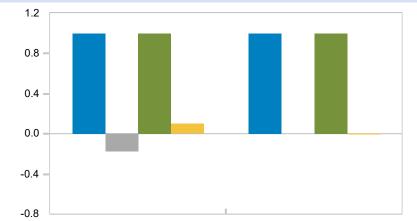
Benchmark: S&P MidCap 400 Index

#### Risk / Reward Historical Statistics 5 Years Ending December 31, 2019



	Mutual of America Equity	S&P MidCap 400 Index
Alpha	-0.01	0.00
Beta	1.00	1.00
Sharpe Ratio	0.68	0.68
Treynor Ratio	0.08	0.08

#### Benchmark Relative Historical Statistics 5 Years Ending December 31, 2019



	Mutual of America Equity	S&P MidCap 400 Index	
Actual Correlation	1.00	1.00	
Information Ratio	-0.18	N/A	
R-Squared	1.00	1.00	
Tracking Error	0.10	0.00	



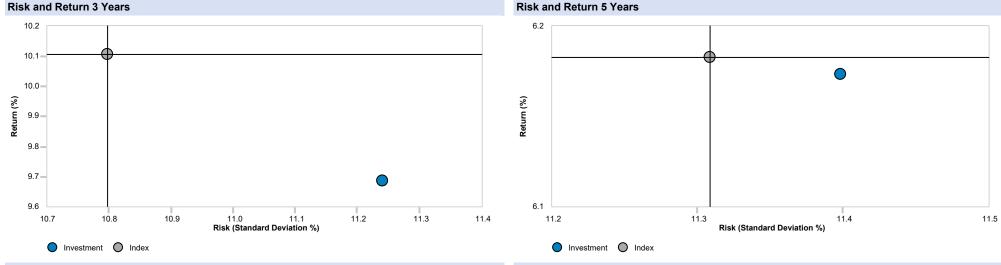


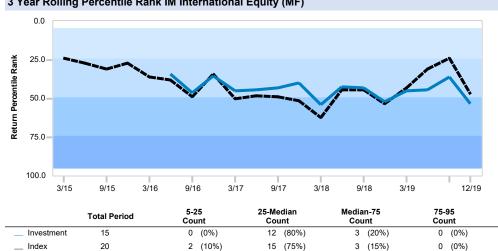






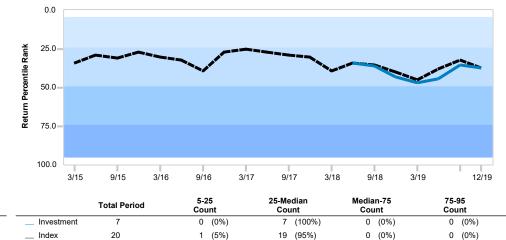
Historical Statistic	s 3 Years							Historical Statis	stics 5 Years						
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters		Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.69	11.24	0.73	98.13	8	99.43	4	Investment	6.17	11.40	0.49	99.45	12	98.81	8
Index	10.11	10.80	0.79	100.00	8	100.00	4	Index	6.18	11.31	0.50	100.00	12	100.00	8





3 Year Rolling Percentile Rank IM International Equity (MF)

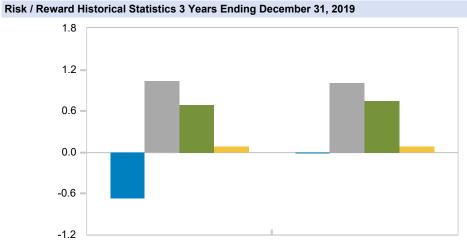
5 Year Rolling Percentile Rank IM International Equity (MF)





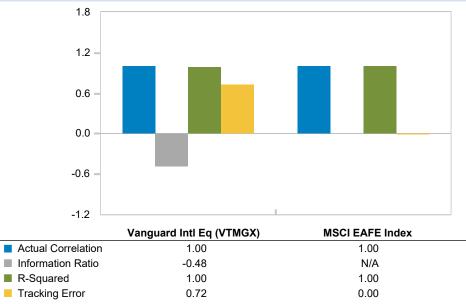






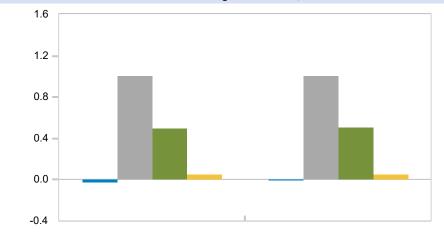
	Vanguard Intl Eq (VTMGX)	MSCI EAFE Index
Alpha	-0.66	0.00
Beta	1.03	1.00
Sharpe Ratio	0.69	0.75
Treynor Ratio	0.08	0.09

#### Benchmark Relative Historical Statistics 3 Years Ending December 31, 2019



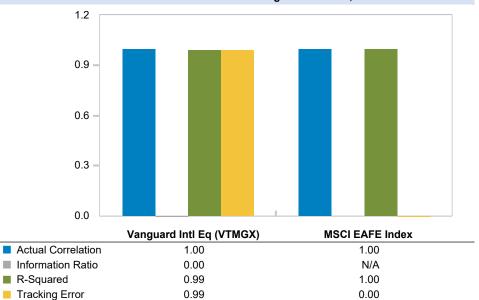
Benchmark: MSCI EAFE Index

#### Risk / Reward Historical Statistics 5 Years Ending December 31, 2019



	Vanguard Intl Eq (VTMGX)	MSCI EAFE Index
Alpha	-0.03	0.00
Beta	1.00	1.00
Sharpe Ratio	0.49	0.50
Treynor Ratio	0.06	0.06

#### Benchmark Relative Historical Statistics 5 Years Ending December 31, 2019

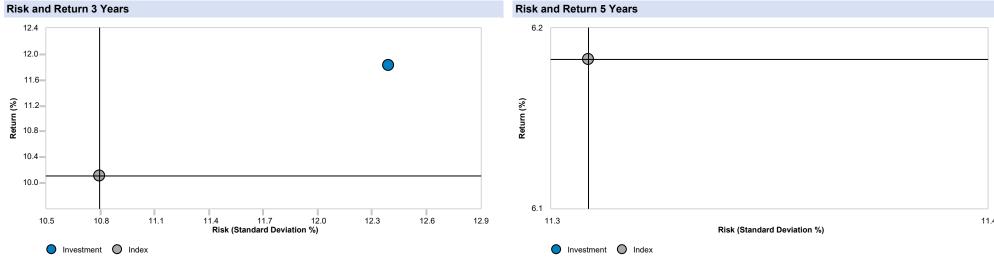


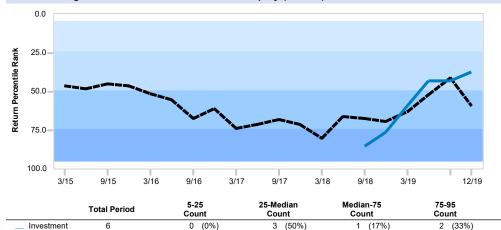


# **Page Intentionally Left Blank**



Historical Statistics	s 3 Years							Historical Statis	stics 5 Years						
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters		Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.83	12.39	0.83	109.24	7	101.96	5	Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	10.11	10.80	0.79	100.00	8	100.00	4	Index	6.18	11.31	0.50	100.00	12	100.00	8





5 (25%)

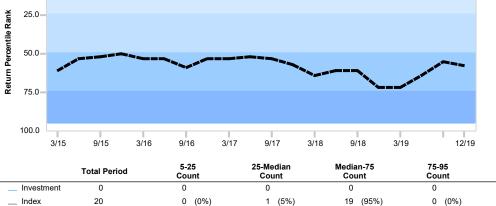
14 (70%)

1 (5%)

0 (0%)

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

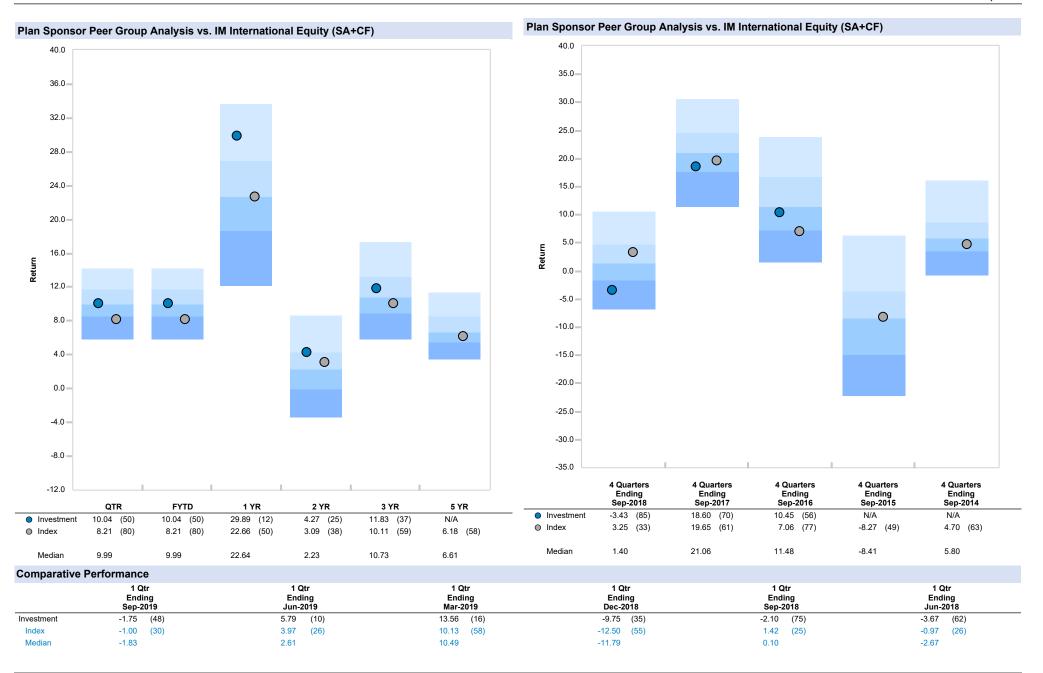






\_\_ Index

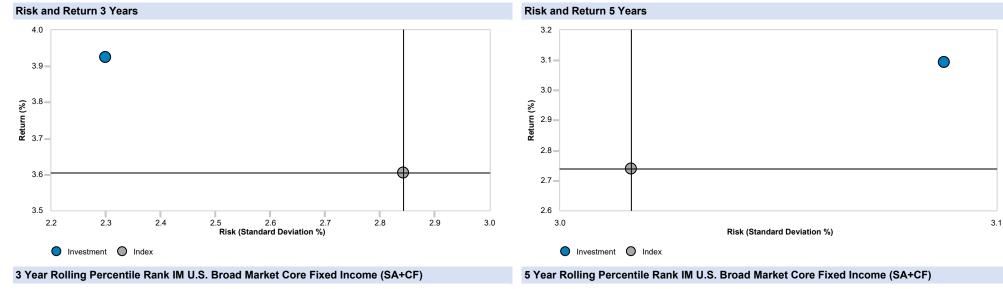
20

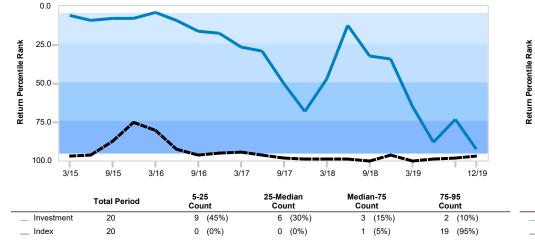


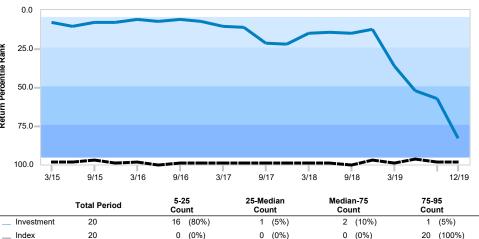


## Strategy Review GHA A+ Fixed Income | BImbg. Barc. U.S. Aggregate: A+ As of December 31, 2019

Historical Statistic	s 3 Years							Historical Statis	stics 5 Years						
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters		Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.92	2.30	0.99	86.25	9	48.56	3	Investment	3.09	3.09	0.68	107.67	14	97.26	6
Index	3.61	2.84	0.70	100.00	9	100.00	3	Index	2.74	3.02	0.59	100.00	14	100.00	6

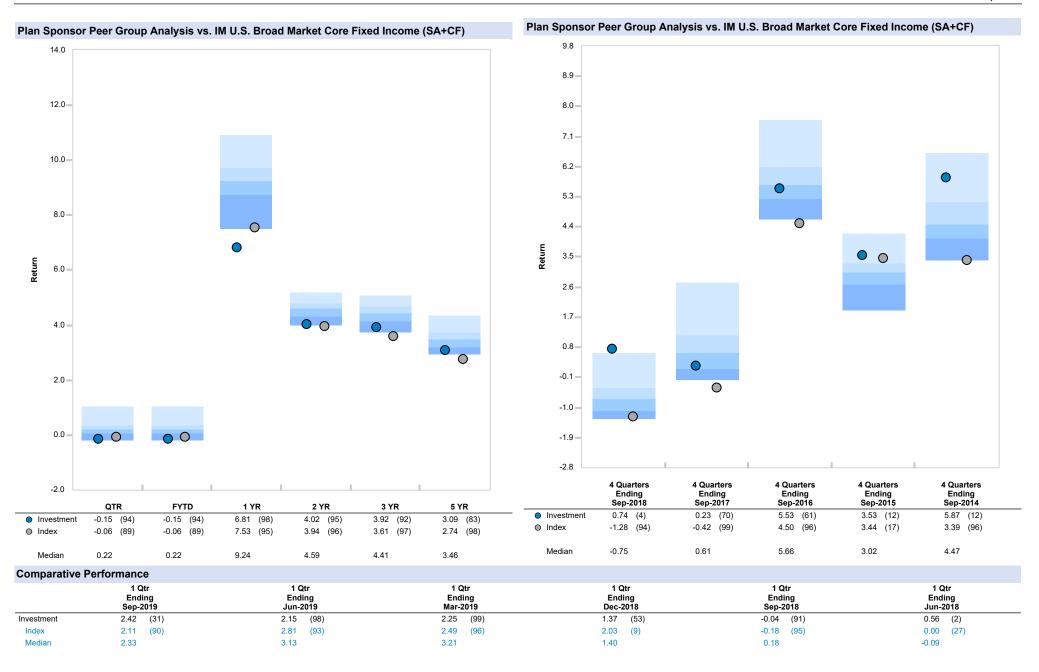




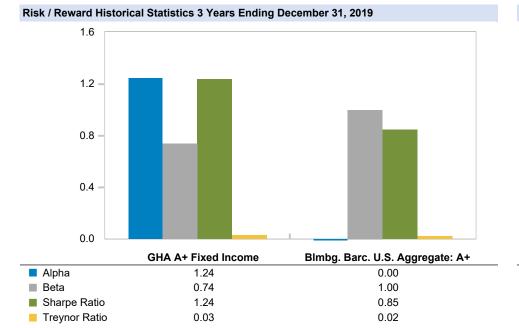




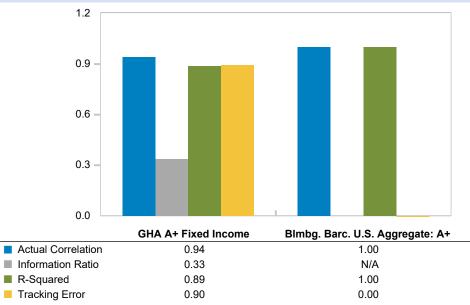
### Strategy Review GHA A+ Fixed Income | BImbg. Barc. U.S. Aggregate: A+ As of December 31, 2019



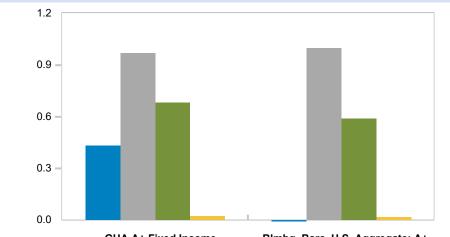




#### Benchmark Relative Historical Statistics 3 Years Ending December 31, 2019

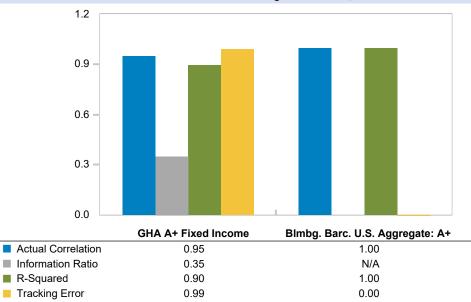


Risk / Reward Historical Statistics 5 Years Ending December 31, 2019



	GHA A+ Fixed Income	Blmbg. Barc. U.S. Aggregate: A+
Alpha	0.43	0.00
Beta	0.97	1.00
Sharpe Ratio	0.68	0.59
Treynor Ratio	0.02	0.02

#### Benchmark Relative Historical Statistics 5 Years Ending December 31, 2019



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

# **Page Intentionally Left Blank**



# **Strategy Review** GHA EXCL A+ Fixed Income | Bloomberg Barclays Intermediate US Govt/Credit Idx

9/17

Count

2 (10%)

0 (0%)

3/18

9/18

Median-75

Count

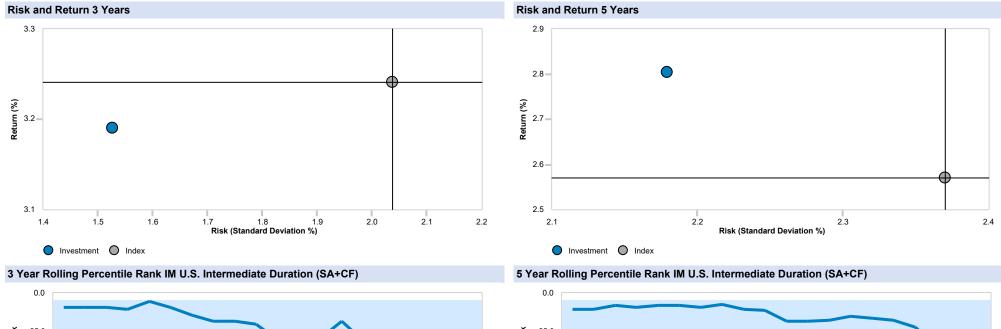
1 (5%)

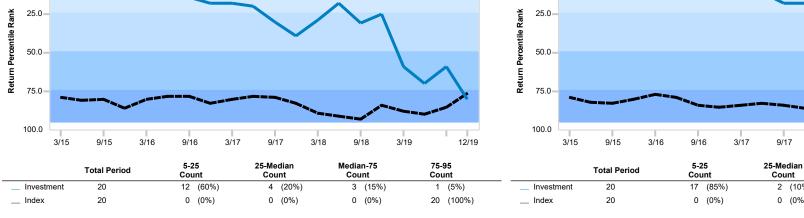
0 (0%)

3/19

As of December 31, 2019

Historical Statistic	s 3 Years							Historical Statis	stics 5 Years						
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters		Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.19	1.53	1.03	80.51	11	37.47	1	Investment	2.81	2.18	0.83	100.68	16	77.87	4
Index	3.24	2.04	0.79	100.00	10	100.00	2	Index	2.57	2.37	0.67	100.00	15	100.00	5







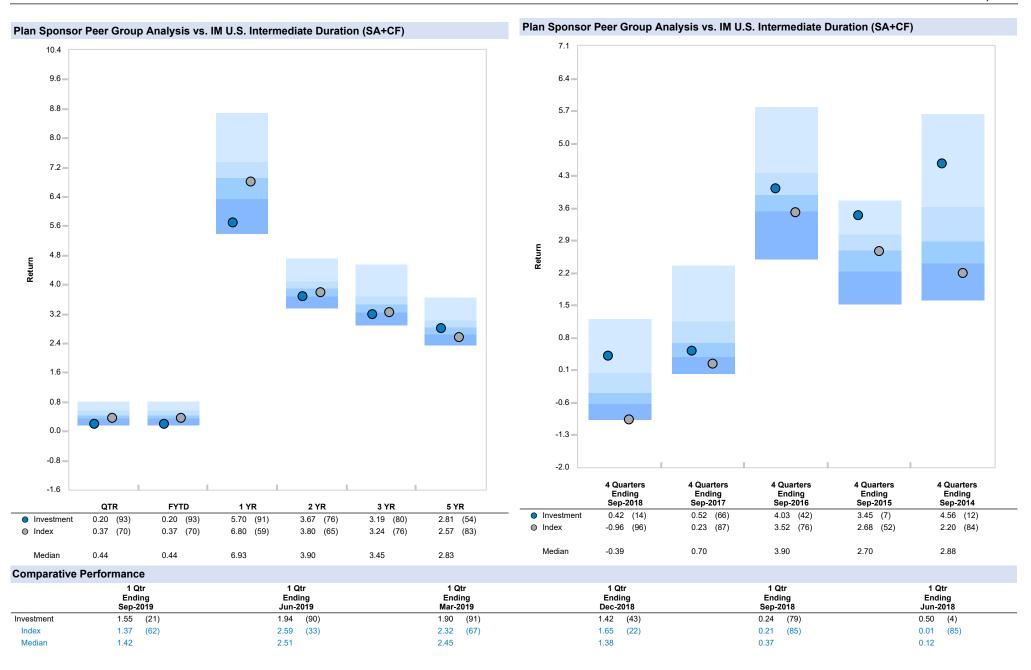
12/19

75-95

Count

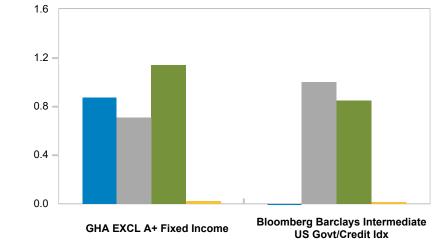
0 (0%)

20 (100%)





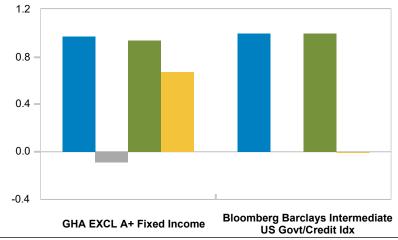
### **Portfolio Comparison GHA EXCL A+ Fixed Income** As of December 31, 2019



		US Govt/Credit Idx
Alpha	0.87	0.00
Beta	0.71	1.00
Sharpe Ratio	1.15	0.85
Treynor Ratio	0.02	0.02

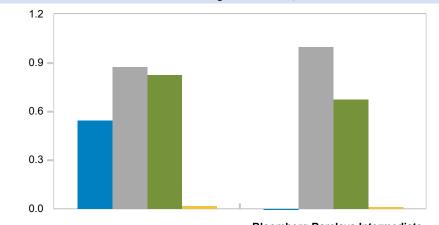
#### Benchmark Relative Historical Statistics 3 Years Ending December 31, 2019

Risk / Reward Historical Statistics 3 Years Ending December 31, 2019



Actual Correlation	0.97	1.00
Information Ratio	-0.09	N/A
R-Squared	0.94	1.00
Tracking Error	0.67	0.00

Risk / Reward Historical Statistics 5 Years Ending December 31, 2019



	GHA EXCL A+ Fixed Income	Bloomberg Barclays Intermediate US Govt/Credit Idx
Alpha	0.55	0.00
Beta	0.88	1.00
Sharpe Ratio	0.83	0.67
Treynor Ratio	0.02	0.02

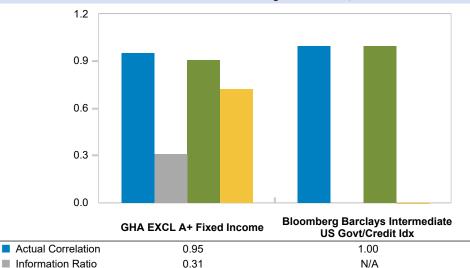
#### Benchmark Relative Historical Statistics 5 Years Ending December 31, 2019

0.91

0.73

R-Squared

Tracking Error



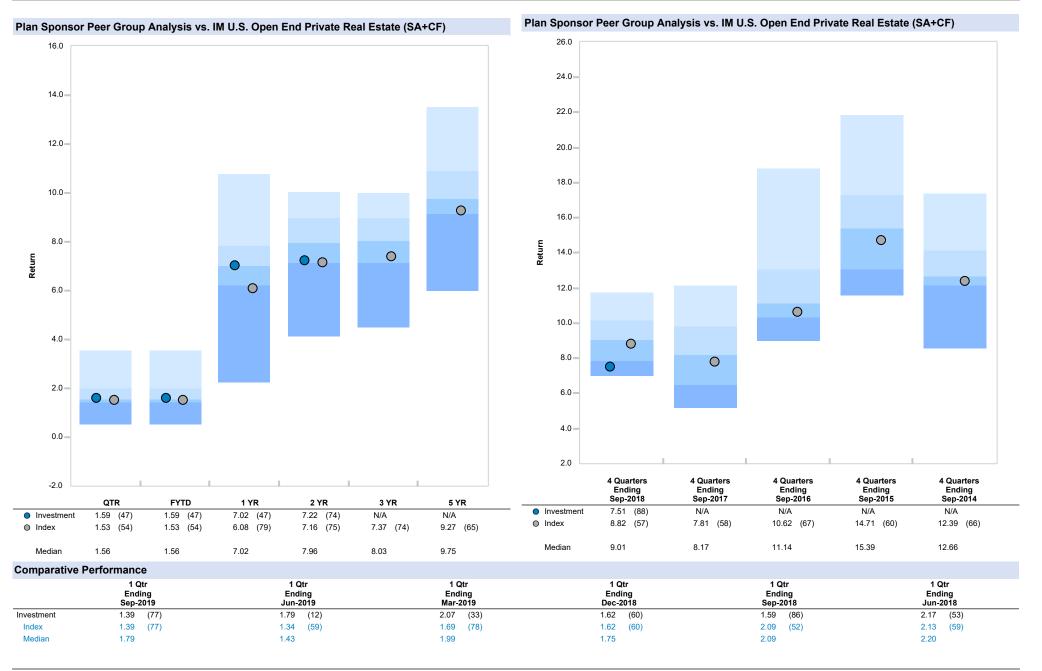
Benchmark: Bloomberg Barclays Intermediate US Govt/Credit Idx

1.00

0.00

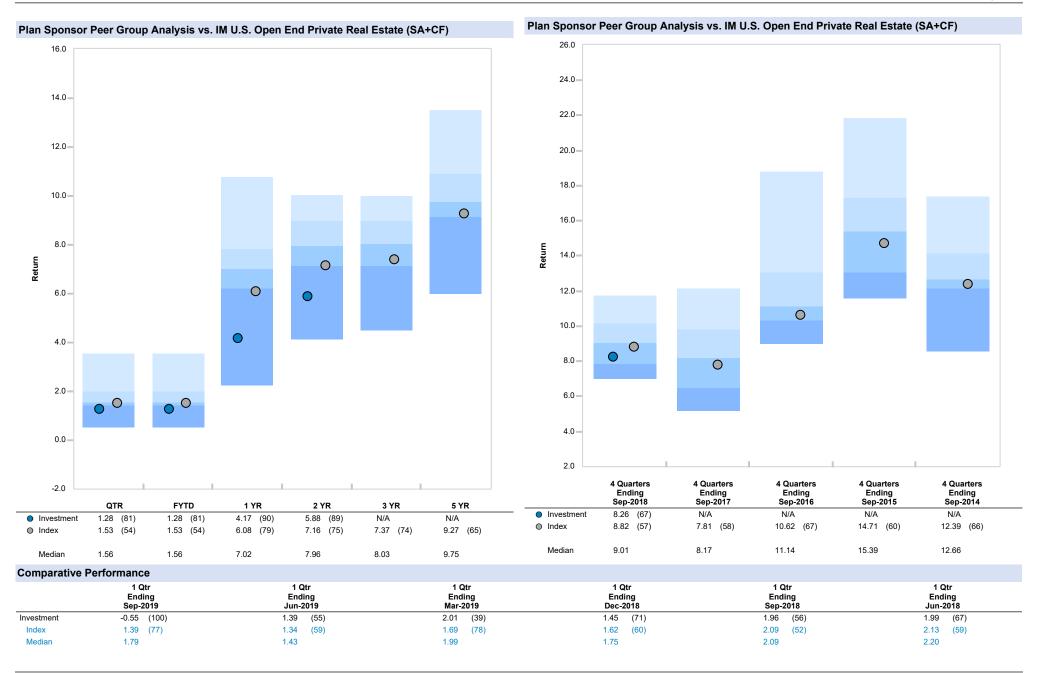
# **Page Intentionally Left Blank**







### Strategy Review ASB Real Estate | NCREIF Fund Index-Open End Diversified Core (EW) As of December 31, 2019





# Benchmark History Investment Policy Benchmarks As of December 31, 2019

Total Fund Historical Hybrid Composition Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1998		Jul-2010	
S&P 500 Index	60.00	Russell 1000 Value Index	15.50
ICE BofAML Govt/ Corp Master	40.00	Bloomberg Barclays Intermediate US Govt/Credit Idx	20.00
	10.00	S&P MidCap 400 Index	10.00
Jan-2000		Russell 2500 Index	10.00
S&P 500 Index	50.00	Russell 1000 Growth Index	15.50
Blmbg. Barc. U.S. Aggregate Index	40.00	MSCI EAFE Index	9.00
MSCI EAFE Index	10.00	Blmbg. Barc. U.S. Aggregate: A+	20.00
Apr-2004		Jul-2017	
S&P 500 Index	50.00	Russell 1000 Value Index	15.50
Blmbg. Barc. U.S. Aggregate Index	40.00	Bloomberg Barclays 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
an-2007		Russell 1000 Growth Index	15.50
S&P 500 Index	50.00	MSCI EAFE Index	9.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	24.00	Blmbg. Barc. 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		0.00
Jan-2008			
S&P 500 Index	40.00		
Bloomberg Barclays 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		
Apr-2008			
Russell 1000 Value Index	20.00		
Bloomberg Barclays 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		
Apr-2009			
Russell 1000 Value Index	20.00		
Bloomberg Barclays 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		



Weight (%)

100.00

100.00

60.00 40.00

62.50 37.50

50.00

50.00

Total Equity Historical Hybrid Co	omposition	Total Fixed Income Historical Hybrid Composition		
Allocation Mandate	Weight (%)	Allocation Mandate		
Jan-1998				
S&P 500 Index	100.00	Jan-1998		
		ICE BofAML Govt/ Corp Master		
Jan-2000		1 0000		
S&P 500 Index	83.30	Jan-2000		
MSCI EAFE Index	16.70	Blmbg. Barc. U.S. Aggregate Index		
Apr-2004		Jan-2007		
S&P 500 Index	83.30	Bloomberg Barclays Intermediate US Govt/Credit Idx		
Russell 2000 Value Index	16.70	Blmbg. Barc. U.S. Corporate A+ Index		
Jan-2008		Apr-2008		
S&P 500 Index	66.60	Bloomberg Barclays Intermediate US Govt/Credit Idx		
Russell 2000 Value Index	16.70	Blmbg. Barc. U.S. Corporate A+ Index		
S&P MidCap 400 Index	16.70			
·		Apr-2009		
Apr-2008		Bloomberg Barclays Intermediate US Govt/Credit Id		
Russell 1000 Growth Index	33.30	BImbg. Barc. U.S. Aggregate: A+		
Russell 2000 Value Index	16.70			
S&P MidCap 400 Index	16.70			
Russell 1000 Value Index	33.30			
Jul-2010				
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, 2019

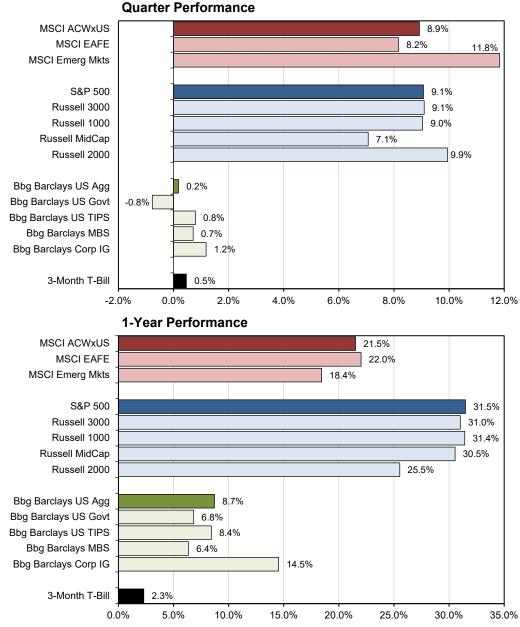
	Estimated Annual Fee	Market Value (\$)	Estimated Annual Fee	Fee Schedule
Ceredex Equity	<b>(%)</b> 0.56	28,407,606	<b>(\$)</b> 157,834	0.75 % of First \$10 M 0.45 % of Next \$40 M 0.25 % Thereafter
Rhumbline R1000G	0.05	14,422,160	7,211	0.05 % of Assets
Polen Capital	0.60	14,456,908	86,741	0.60 % of Assets
Mutual of America Equity	0.07	18,184,585	12,729	0.07 % of Assets
Great Lakes SMID Cap	0.55	9,001,984	49,511	0.55 % of First \$50 M 0.45 % of Next \$50 M 0.35 % Thereafter
Vanguard R2000 (VRTIX)	0.08	9,497,789	7,598	0.08 % of Assets
JPM International Equity	0.75	8,535,978	64,020	0.75 % of Assets
Vanguard Intl Eq (VTMGX)	0.09	8,279,808	7,452	0.09 % of Assets
Total Equity Composite	0.35	110,786,818	393,097	
GHA EXCL A+ Fixed Income	0.25	24,156,682	60,392	0.25 % of Assets
GHA A+ Fixed Income	0.25	28,675,452	71,689	0.25 % of Assets
Total Fixed Income Composite	0.25	52,832,134	132,080	
Barings Real Estate	1.10	7,007,769	77,085	1.10 % of Assets
ASB Real Estate	1.21	5,891,278	71,413	1.25 % of First \$5 M 1.00 % of Next \$10 M 0.90 % of Next \$60 M 0.75 % Thereafter
Total Real Estate	1.15	12,899,047	148,498	
R&D Cash		1,136,017	-	
Total Fund Composite	0.38	177,654,016	673,675	



4th Quarter 2019 Market Environment

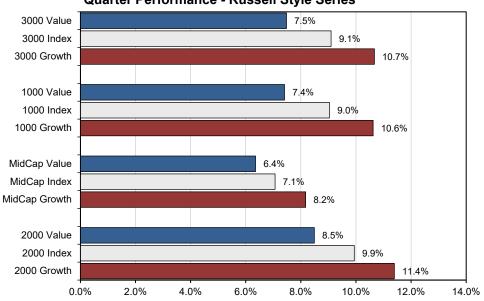


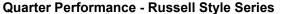
- . Broad asset class returns were positive during the 4<sup>th</sup> guarter of 2019 with the exception of the US Gov't bond index. Both US and international equity markets benefited from positive developments concerning trade disruptions. Generally, the dispersion between US and international developed equities was muted during the guarter. Emerging markets significantly outperformed as previously noted trade tensions between the US and China eased. Monetary policy remained supportive with the Federal Reserve (Fed) cutting rates once during the period in addition to providing liquidity to the market through security purchases which acted as a catalyst to risk assets. Within domestic equity markets, the performance dispersion between large cap and small cap stocks reversed during the quarter with the S&P 500 Index returning 9.1% versus a return of 9.9% for the small cap Russell 2000 Index. 2019 performance of US equity markets was the highest since 2013 with large and mid-cap stocks returning 31.5% and 30.5%, respectively, while small cap stocks posted a return of 25.5%.
- International equity market returns were strong during the 4<sup>th</sup> quarter. Similar to US markets, international performance was impacted by continued monetary policy relief from the Bank of Japan and the European Central Bank, positive developments around global trade, and likely resolution on Brexit. International returns were also buoyed by a weakening US dollar (USD) which declined against most major currencies during the period. Emerging markets outperformed relative to developed markets during the period with the MSCI Emerging Markets Index posting a gain of 11.8% compared to a return of 8.2% for the MSCI EAFE Index. Both developed and emerging markets posted strong returns over the 1-year period, returning 22.0% and 18.4% respectively.
- Fixed income index performance was muted during the 4<sup>th</sup> quarter. The broad market Bloomberg Barclays Aggregate Index managed to gain 0.2% as investors favored equities and interest rates were generally flat during the quarter as concerns over an immanent US recession eased. Investment grade corporate bonds delivered solid performance for the 4<sup>th</sup> quarter returning 1.2%, which outperformed Treasury and securitized issues. Corporate bonds benefitted from the same increased investor risk appetite that fueled equity returns during the quarter. Overall, the bond market delivered strong trailing 1-year returns with the Bloomberg Barclays Aggregate posting a return of 8.7%.

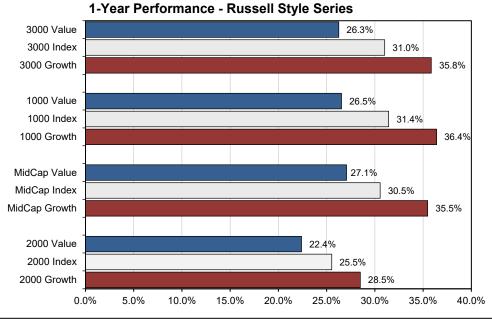




- Against the largely positive global economic backdrop detailed on the previous page, the US equity market delivered strong gains across the capitalization and style spectrum for the 4<sup>th</sup> quarter of 2019. Growth stocks outperformed value stocks for the full capitalization range during the period. Further, as is often the case during periods of strong "risk-on" performance, small cap growth stocks outpaced large cap growth stocks due primarily to an expectation that smaller companies have accelerated earnings growth relative to large companies.
- The Russell 2000 Growth Index was the best performing style index for the period, returning 11.4%, while large cap and mid-cap growth returned a solid 10.6% and 8.2% respectively. The outperformance of small cap stocks across the style spectrum for the period represented a reversal from previous quarters. The small cap Russell 2000 Index gained 9.9% during the period versus a 9.0% return for the large cap Russell 1000 Index.
- When viewed over the most recent 1-year period, large cap stocks significantly outperformed small cap stocks with the Russell 1000 posting a strong 31.4% gain while the Russell 2000 delivered a solid 25.5% return. Unsurprisingly, given the recent strong market environment, value stocks also trailed their growth counterparts over the trailing 1-year period. The technology-heavy Russell 1000 Growth Index was the best performing index over the 1-year period delivering a stellar 36.5% return compared to a return of 26.5% for the Russell 1000 Value Index

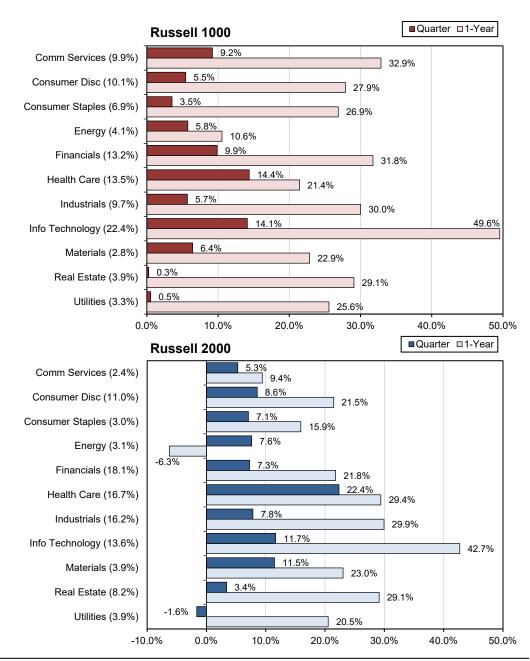








- Performance was positive across all eleven large cap economic sectors for the 4th guarter but four outpaced the return of the broader Russell 1000 Index. The more economically sensitive sectors, such as technology, financials and communication services posted returns of 14.1%, 9.9% and 9.2%, respectively, as investors' expectations of future economic growth improved. Health care stocks rallied as the cost and drug pricing rhetoric from Democratic Presidential candidates softened. Technology was also a leader with stocks such as Apple experiencing strong holiday sales and Microsoft making a strong earnings announcement. Not surprisingly, defensive sectors such as consumer staples, industrials and energy underperformed the broader market during the period. All eleven economic sectors were also positive over the 1-year trailing period with each sector posting a return in excess of 20% for the year. Similar to the guarter's results, economically sensitive sectors outpaced defensive ones by a considerable margin. The technology sector was 2019's standout performer, posting an impressive 49.6% for the year. The sector was buoyed by Apple's 89.0% return and Microsoft's 57.6% return for the year. The financial sector, which returned 31.8% for the year, also experienced strong earnings as recessionary fears subsided and the US yield curve moved toward a more normal, positively slope. The only other economic sector to outperform the broader Russell 1000 index return of 31.4% for the 1-year period was the communication services sector, which posted a return of 32.9% for the year.
- Quarterly results for small cap sectors were mixed compared to their large cap counterparts with seven of the eleven economic sectors outpacing their corresponding large cap equivalents. Ten of the eleven small cap sectors produced positive absolute returns during the quarter, but similar to large cap performance, only three sectors managed to outpace the broad Russell 2000 Index. Economically sensitive sectors were also the strongest performers in the small cap space as investors expressed an appetite for risk. The health care sector was the quarter's standout, posting a return of 22.4% for the guarter. The technology and materials sectors also posted double-digit performance for the period with returns of 11.7% and 11.5% respectively. While not a significant weight in the index, the utilities, which are considered defensive, was the only negative sector, posting a loss of -1.6%. Over the trailing 1-year period, returns were broadly positive with only the highly cyclical energy sector, largely tied to oil prices, producing negative performance with a return of -6.3%. Similar to large cap performance, technology led the way with the sector returning a stellar 42.7% for the year. Returns were also impressive in the industrials, health care and real estate sectors, which posted gains of 29.9%, 29.4% and 29.1%, respectively, and finished ahead of the Russell 2000 index return of 25.5% for the year.



The Market Environment Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000

> Top 10 Weighted Stocks 1-Qtr

1-Year

As of December 31, 2019

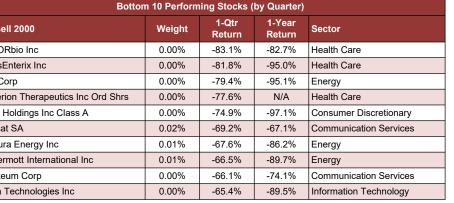
Top 10 Weighted Stocks						
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector		
Apple Inc	4.40%	31.5%	89.0%	Information Technology		
Microsoft Corp	4.02%	13.8%	57.6%	Information Technology		
Amazon.com Inc	2.57%	6.4%	23.0%	Consumer Discretionary		
Facebook Inc A	1.65%	15.3%	56.6%	Communication Services		
Berkshire Hathaway Inc B	1.49%	8.9%	10.9%	Financials		
JPMorgan Chase & Co	1.46%	19.4%	47.3%	Financials		
Alphabet Inc A	1.35%	9.7%	28.2%	Communication Services		
Alphabet Inc Class C	1.35%	9.7%	29.1%	Communication Services		
Johnson & Johnson	1.31%	13.5%	16.2%	Health Care		
Visa Inc Class A	1.08%	9.4%	43.3%	Information Technology		

Top 10 Performing Stocks (by Quarter)						
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector		
Tesla Inc	0.20%	73.7%	25.7%	Consumer Discretionary		
Sarepta Therapeutics Inc	0.03%	71.3%	18.2%	Health Care		
Ubiquiti Inc	0.01%	60.1%	91.6%	Information Technology		
Advanced Micro Devices Inc	0.16%	58.2%	148.4%	Information Technology		
Qorvo Inc	0.05%	56.8%	91.4%	Information Technology		
Zillow Group Inc A	0.01%	54.8%	45.5%	Communication Services		
Align Technology Inc	0.07%	54.2%	33.2%	Health Care		
Zillow Group Inc C	0.02%	54.1%	45.5%	Communication Services		
Transocean Ltd	0.01%	53.9%	-0.9%	Energy		
Skyworks Solutions Inc	0.07%	53.2%	84.1%	Information Technology		

Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
NovoCure Ltd	0.35%	12.7%	151.7%	Health Care
The Medicines Co	0.30%	69.9%	343.8%	Health Care
Generac Holdings Inc	0.29%	28.4%	102.4%	Industrials
Lumentum Holdings Inc	0.29%	48.1%	88.8%	Information Technology
Teladoc Health Inc	0.29%	23.6%	68.9%	Health Care
Arrowhead Pharmaceuticals Inc	0.28%	125.1%	410.7%	Health Care
Haemonetics Corp	0.28%	-8.9%	14.8%	Health Care
Marriott Vacations Worldwide Corp	0.25%	24.8%	85.9%	Consumer Discretionary
Performance Food Group Co	0.25%	11.9%	59.5%	Consumer Staples
Trex Co Inc	0.25%	-1.2%	51.4%	Industrials

Top 10 Performing Stocks (by Quarter)							
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector			
Constellation Pharmaceuticals Inc	0.03%	629.3%	1074.8%	Health Care			
Forty Seven Inc	0.04%	513.2%	150.4%	Health Care			
ChemoCentryx Inc	0.08%	483.3%	262.5%	Health Care			
Axsome Therapeutics Inc	0.12%	410.7%	3565.2%	Health Care			
Kodiak Sciences Inc	0.08%	400.3%	913.4%	Health Care			
Karuna Therapeutics Inc	0.02%	361.6%	N/A	Health Care			
Intra-Cellular Therapies Inc	0.07%	359.3%	201.2%	Health Care			
Synthorx Inc	0.03%	329.6%	302.1%	Health Care			
Mersana Therapeutics Inc	0.01%	262.7%	40.4%	Health Care			
VBI Vaccines Inc	0.01%	192.9%	-13.8%	Health Care			

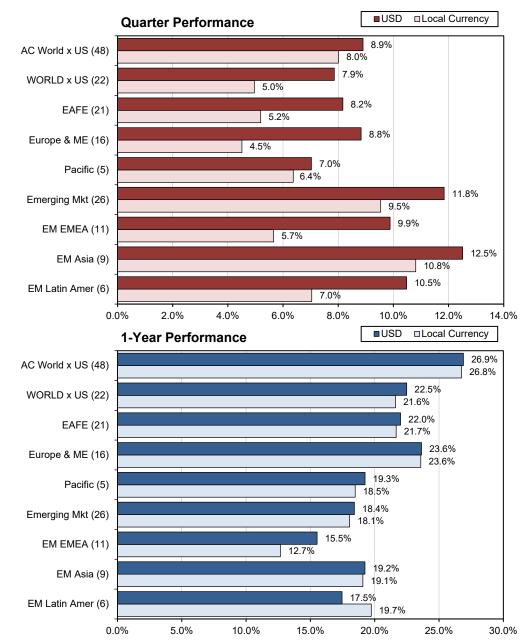
Bottom 10 Performing Stocks (by Quarter)				Bottom 10 Perform	ning Stocks	
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	Russell 2000 Weight	1-Qtr Return
eyond Meat Inc	0.01%	-49.1%	N/A	Consumer Staples	resTORbio Inc 0.00%	-83.1%
Sage Therapeutics Inc	0.01%	-48.5%	-24.6%	Health Care	TransEnterix Inc 0.00%	-81.8%
Chesapeake Energy Corp	0.00%	-41.4%	-60.7%	Energy	Unit Corp 0.00%	-79.4%
ServiceMaster Global Holdings Inc	0.02%	-30.8%	5.2%	Consumer Discretionary	Cyclerion Therapeutics Inc Ord Shrs 0.00%	-77.6%
「witter Inc	0.08%	-22.2%	11.5%	Communication Services	Waitr Holdings Inc Class A 0.00%	-74.9%
Taubman Centers Inc	0.01%	-22.1%	-27.0%	Real Estate	Intelsat SA 0.02%	-69.2%
Elastic NV	0.01%	-21.9%	-10.0%	Information Technology	Contura Energy Inc 0.01%	-67.6%
Etsy Inc	0.02%	-21.6%	-6.9%	Consumer Discretionary	McDermott International Inc 0.01%	-66.5%
Sinclair Broadcast Group Inc	0.01%	-21.5%	29.0%	Communication Services	Pareteum Corp 0.00%	-66.1%
Ventas Inc	0.07%	-19.9%	3.4%	Real Estate	Exela Technologies Inc 0.00%	-65.4%



- Broad international equity returns were positive in both local currency and USD terms for the 4th guarter as investors benefited from a broad "risk-on" environment. US investors also benefited as the USD weakened relative to most major developed and emerging market currencies during the period. Within the broader currency moves that boosted USD return, the British pound and the Euro appreciated relative to the USD during the guarter which acted as a headwind to holdings in those sub-markets. However, the macro impact of the USD weakness for the period was positive for US investors for the broad market international indexes. The MSCI EAFE and ACWI ex US Indexes returned 8.2% and 7.9% respectively for the quarter. Similar to US markets, international equity markets were buoyed by loose central bank monetary policies which supplied the markets with liquidity. Christine Lagarde assumed the presidency of the European Central Bank (ECB) and announced that interest rates would remain negative at -0.5% while the Bank of Japan's key rate also remains in negative territory at -0.1%. The People's Bank of China announced during the guarter that it would continue with its prudent monetary policy with the goal of providing stimulus measures as needed.
- As previously noted, results for developed market indexes were strongly positive for the 4th quarter. European stocks moved higher on expectations of a trade resolution between China and the US. In the UK, Prime Minster Boris Johnson received a resounding mandate in recent elections resulting in a large majority in Parliament. The results make it highly likely that the UK will leave the European Union. The decrease in Brexit uncertainty led the British pound to rally against most major currencies. In contrast, the economy in Hong Kong fell into recession as continued political protests and the Chinese government's response detracted from growth. While not as strong as US equity market returns, each of the broad, developed market benchmarks posted returns in excess of 20% for the trailing 1-year period.
- For the 4th quarter, emerging markets reversed the recent trend and managed to outperform developed international markets. The MSCI Emerging Markets Index returned a strong USD return of 11.8%. As previously noted, the prospect of reduced trade tensions between the US and China stoked returns in emerging markets. As a result, countries with greater sensitivities to commodity prices and global trade activity performed well during the period. As evidence, Russia and Brazil, both large energy exporters, returned 16.6% and 15.6%, respectively, during the quarter. For the full year, emerging markets delivered strong returns in both local currency and USD terms. The MSCI Emerging Markets Index climbed 18.4% in local currency and 18.1% in USD terms. The narrow performance differential between local currency and USD emerging market returns is also observable across each of the international benchmarks for the 1-year period as the year's currency volatility largely balanced out.

#### Source: MSCI Global Index Monitor (Returns are Net)

#### The Market Environment International and Regional Market Index Performance (Country Count) As December 31, 2019





	The Market Environment
US Dollar International Index	Attribution & Country Detail
	As of December 31, 2019

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.2%	4.8%	12.7%
Consumer Discretionary	11.6%	9.4%	24.8%
Consumer Staples	11.3%	1.9%	18.9%
Energy	4.9%	3.8%	7.6%
Financials	18.6%	8.4%	17.7%
Health Care	12.2%	12.4%	30.7%
Industrials	15.0%	10.0%	26.2%
Information Technology	7.1%	12.6%	37.7%
Materials	7.1%	10.5%	22.9%
Real Estate	3.5%	4.2%	14.8%
Utilities	3.7%	5.3%	19.2%
Total	100.0%	8.2%	22.0%
MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.7%	7.0%	12.1%

WISCI - ACWIXUS	Sector Weight	Quarter Return	I-rear Keturn
Communication Services	6.7%	7.0%	12.1%
Consumer Discretionary	11.8%	11.4%	27.7%
Consumer Staples	9.4%	1.9%	17.5%
Energy	6.5%	6.5%	14.8%
Financials	21.4%	8.1%	17.2%
Health Care	8.9%	12.5%	27.7%
Industrials	11.9%	9.6%	24.0%
Information Technology	9.4%	15.5%	40.7%
Materials	7.4%	10.8%	18.6%
Real Estate	3.2%	7.3%	17.1%
Utilities	3.4%	4.8%	17.4%
Total	100.0%	8.9%	26.9%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return	
Communication Services	11.0%	9.8%	11.2%	
Consumer Discretionary	14.2%	16.7%	35.1%	
Consumer Staples	6.3%	2.6%	10.7%	
Energy	7.4%	9.8%	19.8%	
Financials	24.2%	9.8%	12.6%	
Health Care	2.8%	14.7%	3.7%	
Industrials	5.3%	7.8%	7.1%	
Information Technology	15.7%	18.9%	41.6%	
Materials	7.4%	12.3%	5.9%	
Real Estate	3.0%	17.6%	23.9%	
Utilities	2.6%	4.3%	7.9%	
Total	100.0%	11.8%	18.4%	

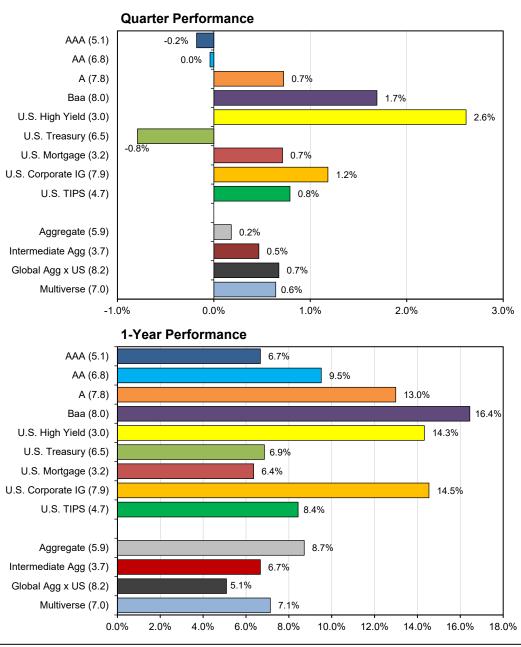
	MSCI-EAFE	MSCI-ACWIxUS	Quarter	1- Year
Country	Weight	Weight	Return	Return
Japan	24.5%	16.1%	7.6%	19.6%
Jnited Kingdom	16.5%	10.8%	10.0%	21.1%
France	11.4%	7.5%	8.5%	25.7%
Switzerland	9.3%	6.1%	7.6%	32.3%
Germany	8.7%	5.7%	9.9%	20.8%
Australia	6.8%	4.5%	4.3%	22.9%
Netherlands	4.0%	2.6%	7.4%	32.1%
Hong Kong	3.5%	2.3%	7.3%	10.3%
Spain	2.8%	1.9%	6.0%	12.0%
Sweden	2.7%	1.8%	13.1%	21.2%
taly	2.3%	1.5%	8.1%	27.3%
Denmark	1.8%	1.2%	13.1%	28.2%
Singapore	1.3%	0.8%	7.4%	15.0%
Belgium	1.0%	0.7%	-1.1%	20.3%
Finland	0.9%	0.6%	3.0%	9.5%
Norway	0.6%	0.4%	4.3%	10.4%
reland	0.6%	0.4%	18.5%	37.5%
srael	0.6%	0.4%	7.2%	9.6%
New Zealand	0.3%	0.2%	17.4%	38.2%
Austria	0.2%	0.2%	8.0%	14.5%
Portugal	0.2%	0.1%	8.7%	23.7%
Total EAFE Countries	100.0%	65.8%	8.2%	22.0%
Canada	100.0 /8	6.7%	4.9%	27.5%
Total Developed Countries		72.5%	7.9%	22.5%
China		9.4%	14.7%	23.5%
Korea		3.2%	13.4%	12.5%
aiwan		3.2%	17.9%	36.4%
ndia		2.4%	5.3%	7.6%
Brazil		2.1%	14.2%	26.3%
South Africa		1.3%	13.1%	10.0%
Russia		1.1%	16.8%	50.9%
Saudi Arabia		0.7%	2.7%	7.2%
Thailand		0.7%	-0.9%	9.5%
Aexico		0.6%	6.2%	9.5%
ndonesia		0.5%	7.0%	9.1%
		0.5%		-2.0%
Malaysia		0.3%	3.1% 2.9%	-2.0%
Philippines Qatar		0.3%	2.9%	-1.0%
Poland		0.3%	4.1%	-1.0%
Chile Jnited Arab Emirates		0.2%	-8.8% -1.5%	-16.9% 4.0%
		0.2%		
Furkey		0.1%	-0.1%	11.1%
Colombia Peru			14.4%	30.8%
		0.1%	6.0%	4.8%
Greece		0.1%	12.7%	43.2%
lungary		0.1%	22.2%	19.4%
Argentina		0.0%	15.4%	-20.8%
Czech Republic		0.0%	8.9%	4.2%
Egypt		0.0%	5.6%	41.8%
Pakistan		0.0%	26.5%	9.7%
Total Emerging Countries		27.5%	11.8%	18.4%
Total ACWIxUS Countries		100.0%	8.9%	26.9%

Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD) As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Page 69 Services sector.



#### The Market Environment Domestic Bond Sector & Broad/Global Bond Market Performance (Duration) As of December 31, 2019

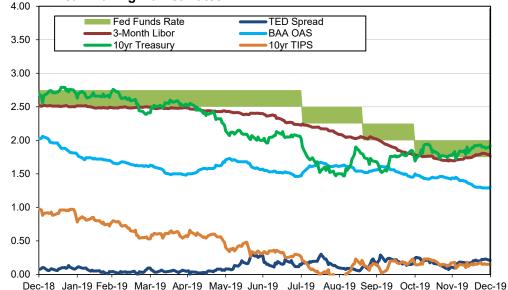
- Fixed income markets extended their gains in the 4th guarter, except for US Treasury bonds which declined during the period. Interest rates rose modestly across the US Treasury Yield Curve through the quarter as investors' confidence generally improved which resulted in bond prices falling. The Fed continued to provide liquidity by cutting short-term interest rates by 25 basis points to between 1.50% and 1.75% in October. The Fed began expanding its balance sheet by purchasing securities to provide the market with liquidity which is another form of monetary easing. The Fed made no changes to monetary policy at their December meeting and signaled that they would remain on hold but would continue to monitor the economy closely for any further deterioration. Importantly, the US Treasury Yield Curve normalized between the 2-year and 10-year issues which suggests that the threat of an imminent recession has been reduced. An inverted yield curve has historically preceded a recession within the next 6-24 months. The bellwether Bloomberg Barclays US Aggregate Index added 0.2% during the 4th guarter while returning 8.7% for the 1-year period ending in December.
- Within investment grade credit, lower quality issues resumed their outperformance over higher quality issues as investors' appetites for risk increased during the quarter. Bonds rated Baa were the best performing investment grade credit quality segment returning 1.7% for the quarter, while AAA was the worst performing, returning -0.2%. High yield corporate bonds outpaced all other credit sectors during the quarter returning 2.6%. For the full year both investment grade and high yield bonds delivered strong performance returning 14.5% and 14.3% respectively.
- Performance across defensive sectors such as US Treasury bonds, mortgage backed securities and TIPS were mixed during the quarter mostly due to their duration profiles. Rising interest rates during the quarter acted as a headwind to performance. As a result, US Treasury bonds, mortgage bonds and TIPS returned -0.8%, 0.7% and 0.8% respectively. Overall, fears of rising inflation remain relatively low while expectations for a positive economic environment remain strong. As a result, for the full 1-year period, US Treasury, mortgages and TIPS returned 6.9%, 6.4% and 8.4% respectively, trailing all corporate credit sectors significantly over the full year.

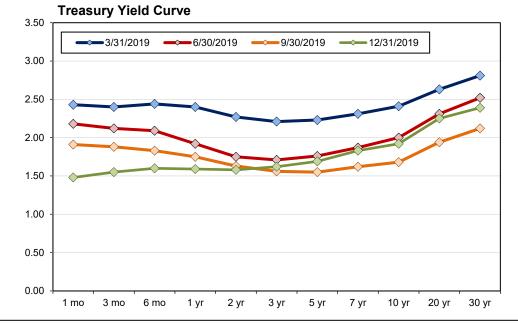




- Global fixed income returns were positive during the 4th quarter. Generally, global central bank monetary policy remains supportive as low economic growth persists in much of the world outside of the US. As a result, negative interest rates persist in much of Europe and Japan. However, the number of bonds with negative yields declined in recent months as future expectations for economic growth improved. As mentioned previously, we saw currency volatility increase during the quarter with the USD moving lower against most major developed and emerging market currencies. The depreciation of the USD acted as a catalyst for US investors compared to local investors. Global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, returned was 0.7% during the quarter which outperformed US bonds represented by the Bloomberg Barclays Aggregate Index. For the full 1-year period, global bonds underperformed domestic bonds 5.1% versus 8.7% respectively.
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that over the last year, the 10-year Treasury yield (green line) fell from highs near 2.8%, to yields below 1.5% before ending the guarter at 1.92%. 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-Treasury issues. This line illustrates the continued decline from nearly 2.5% in the 1st guarter of 2019 to less than 1.6% in 4th guarter as investors sought out higher yielding assets and concerns regarding trade and the potential for a recession in the US declined. Spreads tightened by about 24 basis points during the guarter. Spread tightening is equivalent to an interest rate decrease on corporate bonds, which produces an additional tailwind for corporate bond index returns. The green band across the graph illustrates the decrease in the Federal Funds Rate due to the recent easing in US monetary policy. The Fed cut the Fed Funds Rate three times during the year on fears that economic growth was decelerating.
- The lower graph provides a snapshot of the US Treasury Yield Curve at the end of each of the last four calendar quarters. Interest rates were broadly lower over the full year as the Fed cut interest rates and expectations of future economic growth declined. During the year, the US Treasury curve was inverted between 2-year and 10-year rates. After multiple rate cuts, the curve finished the year with a more normalized shape with the long end of the curve higher than the short end.

#### 1-Year Trailing Market Rates







#### **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.



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



AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

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.

This performance report is based on data obtained by the client's custodian(s), investment fund administrator, or other sources believed to be reliable. While these sources are believed to be reliable, the data providers are responsible for the accuracy and completeness of their statements. Clients are encouraged to compare the records of their custodian(s) to ensure this report fairly and accurately reflects their various asset positions.

The strategies listed may not be suitable for all investors. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. Past performance is not an indication of future performance. Any information contained in this report is for informational purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting, or investment management services.

Additional information included in this document may contain data provided by from index databases, public economic sources and the managers themselves.

This document may contain data provided by Bloomberg Barclays. Bloomberg Barclays Index data provided by way of Barclays Live.

This document may contain data provided by Standard and Poor's. Nothing contained within any document, advertisement or presentation from S&P Indices constitutes an offer of services in jurisdictions where S&P Indices does not have the necessary licenses. All information provided by S&P Indices is impersonal and is not tailored to the needs of any person, entity or group of persons. Any returns or performance provided within any document is provided for illustrative purposes only and does not demonstrate actual performance. Past performance is not a guarantee of future investment results.

This document may contain data provided by MSCI, Inc. Copyright MSCI, 2017. Unpublished. All Rights Reserved. This information may only be used for your internal use, may not be reproduced or redisseminated in any form and may not be used to create any financial instruments or products or any indices. This information is provided on an "as is" basis and the user of this information assumes the entire risk of any use it may make or permit to be made of this information. Neither MSCI, any of its affiliates or any other person involved in or related to compiling, computing or creating this information makes any express or implied warranties or representations with respect to such information or the results to be obtained by the use thereof, and MSCI, its affiliates and each such other person hereby expressly disclaim all warranties (including, without limitation, all warranties of originality, accuracy, completeness, timeliness, non-infringement, merchantability and fitness for a particular purpose) with respect to this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any other person involved in or related to compiling, computing or creating this information. Without limitation, lost profits) even if notified of, or if it might otherwise have anticipated, the possibility of such damages.

This document may contain data provided by Russell Investment Group. Russell Investment Group is the source owner of the data contained or reflected in this material and all trademarks and copyrights related thereto. The material may contain confidential information and unauthorized use, disclosure, copying, dissemination or redistribution is strictly prohibited. This is a user presentation of the data. Russell Investment Group is not responsible for the formatting or configuration of this material or for any inaccuracy in presentation thereof.

This document may contain data provided by Morningstar. All rights reserved. Use of this content requires expert knowledge. It is to be used by specialist institutions only. The information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied, adapted or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information, except where such damages or losses cannot be limited or excluded by law in your jurisdiction. Past financial performance is not guarantee of future results.





**Putting clients first.** 

# CHICAGO | CLEVELAND | DALLAS | DETROIT | ORLANDO | PITTSBURGH | RENO

AndCo Consulting | (844) 44-ANDCO | AndCoConsulting.com