

Board of Trustees - Monthly Performance Report - October 31, 2019

All returns are annualized (for periods greater than one year), gross of fees (before fees) unless otherwise noted, and provided by Callan LLC.

	Market Values as of 10/31/2019*	(A)	(B)	(C)	(D)	(E)	(F)	(G)
		1 Month	3 Months	FYTD	CYTD	1 Year	3 Years	5 Years
1 TOTAL FUND ●	66,172,767,760	1.27%	1.95%	2.53%	12.58%	10.68%	9.51%	7.69%
2 TOTAL FUND w/o FX Overlay ●	66,170,944,445	1.27%	1.94%	2.52%	12.57%	10.69%	9.52%	7.69%
3 Passive Index Benchmark ¹ ●		2.05%	2.63%	2.88%	16.23%	12.47%	8.53%	5.67%
4 Performance Benchmark ² ●		1.21%	2.09%	2.68%	13.13%	11.04%	9.10%	6.56%
5 Total Fund Return Objective ³		0.63%	1.52%	2.09%	6.56%	6.77%	7.11%	6.63%
6 PUBLIC EQUITY	25,568,265,448	2.89%	2.33%	2.71%	18.70%	11.48%	10.65%	6.78%
7 PUBLIC EQUITY w/o FX Overlay	25,564,860,399	2.89%	2.33%	2.71%	18.69%	11.52%	10.68%	6.80%
8 MSCI ACWI IMI		2.75%	2.26%	2.57%	19.06%	12.01%	11.07%	7.02%
9 INTERNATIONAL EQUITY	7,362,291,978	4.07%	2.63%	1.68%	14.80%	11.48%	7.94%	4.20%
10 MSCI ACWI IMI EX-US		3.56%	2.96%	1.79%	15.36%	10.93%	7.93%	4.01%
11 GLOBAL EQUITY	10,179,414,296	2.70%	3.13%	3.63%	19.68%	11.75%	11.02%	7.27%
12 MSCI ACWI IMI		2.75%	2.26%	2.57%	19.06%	12.01%	11.07%	7.02%
13 DOMESTIC EQUITY	8,022,770,432	2.06%	1.06%	2.50%	20.99%	11.29%	12.80%	9.25%
14 RUSSELL 3000 INDEX		2.15%	1.83%	3.34%	22.68%	13.49%	14.47%	10.31%
15 FIXED INCOME PLUS	16,080,761,943	0.69%	2.67%	3.21%	12.96%	13.58%	5.23%	
16 PUBLIC INCOME BENCHMARK ⁴		0.59%	2.67%	3.09%	12.31%	13.12%	4.89%	
17 US FIXED INCOME AGGREGATE	4,309,848,841	0.32%	2.36%	2.77%	9.59%	11.98%	3.69%	3.43%
18 BB AGGREGATE		0.30%	2.35%	2.58%	8.85%	11.51%	3.29%	3.24%
19 US INVESTMENT GRADE CORPORATE	4,325,455,228	0.71%	3.01%	3.70%	14.79%	15.99%	5.38%	5.14%
20 BB CORPORATE		0.61%	3.10%	3.67%	13.89%	15.37%	5.00%	4.64%
21 NON US FIXED INCOME	1,253,214,511	-0.59%	1.12%	2.32%	8.22%	10.11%	4.03%	4.31%
22 BB GLOBAL TREASURY EX-US		-0.68%	1.18%	2.43%	8.22%	10.31%	4.30%	4.53%
23 GLOBAL HIGH YIELD	1,606,147,586	0.29%	0.83%	1.06%	10.93%	7.48%	5.56%	4.72%
24 BB US HIGH YIELD 2% ISSUER CAP		0.28%	1.04%	1.61%	11.71%	8.38%	6.03%	5.19%
25 EMERGING MARKET DEBT	1,054,430,558	1.74%	0.18%	0.94%	11.07%	13.77%	4.20%	3.11%
26 EMD BENCHMARK ⁵		1.59%	0.88%	1.96%	12.19%	15.04%	4.80%	3.18%
27 TIPS	269,914,018	0.27%	1.01%	1.33%	7.08%	8.00%	2.35%	2.19%
28 BB US TIPS		0.26%	1.24%	1.60%	7.85%	8.96%	2.44%	2.33%
29 REITS	1,594,765,514	2.35%	7.57%	8.38%	25.33%	22.35%	9.79%	8.64%
30 S&P GLOBAL REIT		2.30%	7.49%	7.49%	24.95%	21.68%	8.46%	6.34%
31 LISTED INFRASTRUCTURE	802,027,682	1.27%	3.98%	3.33%	22.59%	19.82%	12.11%	8.82%
32 S&P GLOBAL LISTED INFRASTRUCTURE		1.50%	3.96%	1.86%	21.68%	19.94%	8.56%	4.78%
33 FIXED INCOME PLUS CASH	864,924,584	0.21%	0.62%	0.82%	2.57%	2.95%		
34 90 DAY T-BILLS		0.19%	0.57%	0.76%	2.01%	2.40%		
35 PRIVATE EQUITY & SPECIAL OPPORTUNITIES ●	8,904,301,115	N/A	2.66%	4.22%	10.45%	15.72%	22.50%	22.73%
36 CAMBRIDGE PRIVATE EQUITY ●		N/A	2.86%	4.31%	8.56%	11.00%	14.88%	12.21%
37 PRIVATE EQUITY ●	5,542,268,168	N/A	5.34%	8.02%	15.39%	19.82%	23.15%	19.90%
38 PRIVATE EQUITY CUSTOM BENCHMARK ⁶ ●		N/A	2.86%	4.31%	8.56%	11.00%	14.88%	9.31%
39 SPECIAL OPPORTUNITIES ●	3,362,032,947	N/A	-1.38%	-1.37%	3.30%	9.72%	21.49%	36.09%
40 CAMBRIDGE PRIVATE EQUITY ●		N/A	2.86%	4.31%	8.56%	11.00%	14.88%	12.21%
41 REAL ESTATE ●	3,970,863,819	N/A	-0.35%	-0.62%	0.14%	0.32%	2.81%	6.30%
42 NCREIF TOTAL INDEX ●		N/A	1.00%	1.51%	4.76%	5.92%	6.68%	8.64%
43 RE SEPARATE ACCTS & DIRECT ●	3,821,270,883	N/A	-0.44%	-0.75%	0.00%	0.14%	2.74%	6.27%
44 RE FUNDS & CO-INVEST ●		N/A	2.27%	3.85%				
45 INFRA. & PRIVATE INCOME ●	5,207,207,680	N/A	0.46%	1.06%	4.98%	7.39%	11.63%	11.28%
46 INFRA. & INCOME OPPORTUNITIES ⁷ ●			1.76%	2.95%	10.15%	10.70%	8.69%	6.95%
47 INFRASTRUCTURE ●	2,471,679,661	N/A	-0.05%	0.34%	5.82%	9.74%	15.18%	16.31%
48 FTSE DEVELOPED CORE INFRA. TRI ●		N/A	2.22%	3.25%	13.64%	13.62%	10.01%	8.16%
49 PRIVATE CREDIT ●	1,497,816,970	N/A	0.91%	1.86%	3.34%	4.18%	7.44%	6.18%
50 BB US HIGH YIELD 2% ISSUER CAP ●		N/A	1.04%	1.61%	11.71%	8.38%	6.03%	5.19%
51 INCOME OPPORTUNITIES ●	1,237,711,050	N/A	1.00%	1.69%	4.72%	5.31%	4.52%	
52 ABSOLUTE RETURN	4,145,372,247	N/A	-0.12%	0.92%	3.71%	2.57%	4.45%	3.05%
53 ABSOLUTE RETURN BENCHMARK ⁸		N/A	-0.20%	0.24%	7.49%	4.37%	4.21%	4.56%
54 ASSET ALLOCATION	2,297,577,242	0.27%	0.84%	1.09%	8.42%	6.43%	2.80%	2.28%
55 ASSET ALLOCATION BENCHMARK ⁹		0.80%	1.48%	1.90%	8.57%	7.62%	6.43%	5.03%
56 APF ALLOCATION CASH	1,256,750,717	0.21%	0.58%	0.76%				
57 APF OPERATING CASH		0.16%	0.49%	0.66%	1.79%	2.15%	1.49%	0.92%
58 90 DAY T-BILLS		0.19%	0.57%	0.76%	2.01%	2.40%	1.60%	1.02%
59 ASSET ALLOCATION OVERLAY	57,159,301	1.75%	2.96%	2.00%	18.05%	14.01%		
60 Asset Allocation Overlay Benchmark ¹⁰		1.90%	2.34%	2.62%	15.63%	12.19%		
61 RISK PARITY	661,729,362	0.34%	1.85%	3.08%				
62 HFR 12% Vol Institutional Index		1.29%	1.53%	2.53%				

* Reported market values represent total fund holdings, which consists of 99.17% APF and 0.83% AMH, and are consistent with the timing of the APF and AMH Financial Statements.

● For investments within Private Equity and Growth Opportunities, Real Estate, and Infrastructure, Private Credit, and Income Opportunities asset classes, returns are lagged one (1) quarter. Composites that incorporate these investments as well as associated benchmarks are also lagged one (1) quarter.

	Market Values as of 10/31/2019*	(A)	(B)	(C)	(D)	(E)	(F)	(G)	
		Returns as of 10/31/2019							
		1 Month	3 Months	FYTD	CYTD	1 Year	3 Years	5 Years	
63	PUBLIC EQUITY	25,568,265,448	2.89%	2.33%	2.71%	18.70%	11.48%	10.65%	6.78%
64	PUBLIC EQUITY w/o FX Overlay	25,564,860,399	2.89%	2.33%	2.71%	18.69%	11.52%	10.68%	6.80%
65	MSCI ACWI IMI		2.75%	2.26%	2.57%	19.06%	12.01%	11.07%	7.02%
66	INTERNATIONAL EQUITY	7,362,291,978	4.07%	2.63%	1.68%	14.80%	11.48%	7.94%	4.20%
67	MSCI ACWI IMI EX-US		3.56%	2.96%	1.79%	15.36%	10.93%	7.93%	4.01%
68	Macquarie Emerging Markets	199,267,432	4.48%	4.21%	3.62%	14.49%	15.50%	10.97%	4.86%
69	JP Morgan Emerging Markets	420,919,525	3.90%	0.66%	0.26%	15.58%	19.74%	11.14%	6.31%
70	Mondrian Investment Partners	502,268,657	5.47%	1.34%	0.52%	11.24%	12.11%	6.05%	1.54%
71	SSGA MSCI Emerging Markets	115,841,591	4.47%	1.47%	0.21%	10.82%	12.37%	7.23%	3.04%
72	William Blair Emerging Markets	375,923,610	4.38%	4.46%	4.00%	22.57%	26.26%	10.48%	4.95%
73	MEASA Fund	77,299,735	1.00%	-5.03%	-3.95%	-2.66%	-1.56%		
74	MSCI Emerging Markets Index		4.22%	1.03%	-0.21%	10.36%	11.87%		
75	DFA Emerging Markets Value	460,184,426	3.62%	0.25%	-3.13%	3.96%	5.39%	6.15%	
76	MSCI Emerging Markets Value Index		3.45%	-0.58%	-3.26%	5.35%	6.02%	5.49%	
77	DFA Emerging Markets Small Cap	144,039,081	3.95%	0.85%	-0.67%	9.12%	13.83%	4.48%	
78	MSCI Emerging Markets Small Cap Index		3.84%	0.58%	-0.92%	5.73%	9.72%	3.12%	
79	Trustbridge Emerging Markets	236,020,798	3.24%	-2.52%	-1.08%	14.11%	12.74%	12.79%	
80	MSCI All China Net Total Return Index		3.41%	-0.49%	-0.52%	19.45%	18.98%	3.69%	
81	Wells Capital	161,907,112	3.76%	-0.13%	0.57%	16.60%	16.90%		
82	MSCI All China Net Total Return Index		3.41%	-0.49%	-0.52%	19.45%	18.98%		
83	Mellon MSCI World ex-USA	333,486,044	3.21%	3.56%	2.33%	16.74%	10.74%	8.45%	4.25%
84	DFA International Large Cap	500,163,393	3.60%	3.96%	2.30%	15.53%	8.86%	8.19%	4.09%
85	Int'l Passive/Quasi-Passive Custom ¹¹		3.23%	3.52%	2.27%	17.24%	11.08%	8.33%	4.05%
86	DFA International Small Cap Value	388,337,301	4.74%	5.06%	4.18%	13.64%	3.93%	5.19%	4.95%
87	MSCI World ex-USA Small Cap Value Index		4.32%	5.84%	4.59%	15.24%	6.95%	7.00%	5.32%
88	DFA International Small Company	358,433,291	4.44%	4.25%	3.39%	16.56%	7.72%	7.76%	6.57%
89	SSGA International Developed Small Cap	411,608,103	4.10%	4.28%	3.84%	17.33%	8.86%	8.24%	6.78%
90	MSCI World ex-USA Small Cap Index		4.11%	4.29%	3.83%	17.20%	8.61%	8.04%	6.53%
91	Acadian Asset Mgmt	517,150,903	2.40%	-0.02%	-0.78%	8.02%	3.70%	7.99%	5.68%
92	MSCI Custom Benchmark ¹²		3.29%	4.00%	1.80%	12.37%	5.95%	6.42%	3.19%
93	LSV International Large Cap	562,548,569	4.81%	5.07%	3.04%	14.03%	8.52%	8.34%	3.85%
94	Schroders International Large Cap	605,574,649	4.55%	4.02%	1.94%	13.35%	7.74%	6.77%	4.28%
95	MSCI All Country World ex-USA Value Index		3.33%	2.77%	0.44%	10.50%	5.95%	6.20%	1.89%
96	Johnston International Large Cap	426,794,606	5.26%	3.04%	3.51%	24.26%	22.41%	13.98%	9.18%
97	JP Morgan International Large Cap	564,327,889	3.44%	3.31%	2.79%	25.22%	19.04%	11.41%	7.43%
98	MSCI World ex-USA Growth Index		3.18%	3.09%	2.72%	22.11%	16.25%	10.18%	5.92%
99	GLOBAL EQUITY	10,179,414,296	2.70%	3.13%	3.63%	19.68%	11.75%	11.02%	7.27%
100	MSCI ACWI IMI		2.75%	2.26%	2.57%	19.06%	12.01%	11.07%	7.02%
101	AQR Global Equity	1,356,423,401	3.21%	2.43%	2.59%	16.56%	6.39%	9.09%	7.15%
102	SSGA MSCI World	123,726,637	2.58%	2.70%	2.85%	20.57%	12.80%	12.17%	7.96%
103	CDAM Global Equity	411,793,854	0.66%	-0.96%	0.50%	21.01%	9.12%		
104	MSCI World Index		2.54%	2.58%	3.09%	20.60%	12.69%	11.86%	7.58%
105	SSGA Russell Fundamental Developed Lrg Co	1,442,602,837	2.64%	3.23%	2.94%	17.45%	9.08%	10.24%	6.59%
106	Russell Fundamental Dvlpd Lrg Co Index		2.69%	3.31%	3.03%	17.59%	9.21%	10.42%	6.73%
107	Lazard Asset Management	1,134,980,991	2.09%	2.15%	2.47%	20.19%	13.35%	10.88%	7.14%
108	McKinley Capital Management	351,218,434	3.27%	1.65%	3.32%	24.13%	13.96%	12.45%	7.89%
109	RBA Global Equity	326,010,539	2.03%	2.89%	3.38%	19.20%	12.36%		
110	WCM Global Equity	399,932,691	0.77%	-0.18%	-0.48%	27.39%	23.71%		
111	MSCI All-Country World Index		2.74%	2.41%	2.71%	19.38%	12.59%	11.33%	7.08%
112	APF Tactical Tilts	2,373,865,427	2.95%	5.29%	6.33%	21.21%	13.03%	9.47%	0.68%
113	SSGA MSCI ACWI IMI	103,706,748	2.82%	2.43%	2.23%	19.05%	12.13%	11.27%	
114	APF Global Equities	108,787,477	1.98%	2.14%	2.27%	16.77%	10.64%		
115	Arrowstreet Global Equity	1,010,875,005	3.02%	2.40%	2.92%	18.28%	12.11%		
116	Longview Global Equity	1,035,490,255	3.60%	4.80%	5.64%	18.60%	13.13%		
117	MSCI All-Country World IMI		2.75%	2.26%	2.57%	19.06%	12.01%	11.07%	
118	DOMESTIC EQUITY	8,022,770,432	2.06%	1.06%	2.50%	20.99%	11.29%	12.80%	9.25%
119	RUSSELL 3000 INDEX		2.15%	1.83%	3.34%	22.68%	13.49%	14.47%	10.31%
120	Mellon S&P 500	611,958,790	2.17%	2.43%	3.95%	23.95%	15.06%	15.16%	10.87%
121	S&P 500 Index		2.17%	2.43%	3.90%	23.16%	14.33%	14.91%	10.78%
122	Mellon FTSE RAFI US Large Cap	759,276,921	1.72%	2.16%	3.43%	20.14%	10.10%	11.95%	8.55%
123	FTSE RAFI US 1000 Index		1.73%	2.16%	3.44%	20.17%	10.11%	11.96%	8.63%
124	AGI - Large Cap	652,247,778	2.03%	0.78%	2.75%	26.34%	15.20%	15.64%	11.89%
125	SSGA Large Cap	273,277,178	4.68%	3.00%	4.41%	27.48%	18.31%	17.78%	12.17%
126	DSM - Large Cap	760,455,730	2.44%	-1.27%	1.17%	25.64%	20.44%	18.79%	13.14%
127	CastleArk - Large Cap	106,878,928	1.47%	-1.14%	0.51%	20.56%	10.12%	16.47%	12.44%
128	APF SPDR Yield	417,662,760	1.73%	1.74%	2.78%	18.94%	8.67%	10.65%	
129	APF SPDR Momentum	426,071,029	1.19%	1.03%	2.42%	20.04%	8.80%	10.56%	
130	APF SPDR Low Val	472,236,388	1.15%	2.24%	3.37%	24.03%	15.72%	13.78%	
131	Russell 1000 Growth Index		2.82%	2.04%	4.35%	26.77%	17.10%	18.92%	13.43%
132	Russell 1000 Index		2.12%	1.99%	3.57%	23.09%	14.15%	14.73%	10.55%
133	Lyrical - Large Cap	837,856,956	2.24%	-0.14%	1.23%	15.68%	7.55%	6.22%	4.63%
134	SKBA - Large Cap	379,124,305	0.79%	1.45%	2.29%	16.84%	8.55%	10.55%	8.06%
135	LSV - Large Cap Value	986,713,221	3.10%	3.75%	4.78%	19.36%	9.34%	10.78%	
136	APF Domestic Equity	99,625,386	1.64%						
137	Russell 1000 Value Index		1.40%	1.93%	2.77%	19.46%	11.21%	10.51%	7.61%
138	Mellon S&P 400	97,345,992	1.13%	-0.14%	1.04%	19.19%	8.30%	10.55%	8.24%
139	S&P 400 Index		1.13%	-0.14%	1.04%	19.20%	9.02%	10.79%	8.37%
140	Jennison Associates LLC	286,246,803	1.33%	-2.66%	-1.71%	17.45%	4.88%	11.05%	6.91%
141	Russell 2000 Index		2.63%	-0.40%	0.17%	17.18%	4.90%	10.96%	7.37%
142	RBC Asset Mgmt	128,899,440	2.55%	-0.99%	0.45%	23.27%	9.03%	13.72%	9.77%
143	Eagle Asset Mgmt	126,301,327	1.40%	-4.97%	-2.95%	16.13%	4.55%	15.55%	10.55%
144	Russell 2000 Growth Index		2.85%	-2.40%	-1.45%	18.62%	6.40%	13.22%	8.38%
145	Russell 2000 Index		2.63%	-0.40%	0.17%	17.18%	4.90%	10.96%	7.37%
146	T Rowe Price	192,431,953	1.59%	0.93%	1.99%	20.26%	8.06%	11.64%	9.10%
147	Pzena Investment Mgmt	233,558,011	1.80%	-2.98%	-2.59%	11.69%	-1.25%	7.43%	7.21%
148	Russell 2000 Value Index		2.42%	1.67%	1.84%	15.55%	3.22%	8.60%	6.24%
149	Russell 2000 Index		2.63%	-0.40%	0.17%	17.18%	4.90%	10.96%	7.37%
150	AGI Structured Alpha	174,601,536	2.56%	3.04%	4.79%	27.25%	18.14%	16.37%	
151	S&P 500 Index		2.17%	2.43%	3.90%	23.16%	14.33%	14.91%	

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		1 Month	3 Months	FYTD	CYTD	1 Year	3 Years	5 Years		
152	FIXED INCOME PLUS	16,080,761,943	0.69%	2.67%	3.21%	12.96%	13.58%	5.23%		
153	PUBLIC INCOME BENCHMARK ⁴		0.59%	2.67%	3.09%	12.31%	13.12%	4.89%		
154	US FIXED INCOME AGGREGATE	4,309,848,841	0.32%	2.36%	2.77%	9.59%	11.98%	3.69%	3.43%	
155	BB AGGREGATE		0.30%	2.35%	2.58%	8.85%	11.51%	3.29%	3.24%	
156	APF Fixed Income - Aggregate	4,309,848,841	0.32%	2.36%	2.77%	9.59%	11.98%	3.69%	3.43%	
157	US INVESTMENT GRADE CORPORATE	4,325,455,228	0.71%	3.01%	3.70%	14.79%	15.99%	5.38%	5.14%	
158	BB CORPORATE		0.61%	3.10%	3.67%	13.89%	15.37%	5.00%	4.64%	
159	APF Corporate Bonds	4,325,455,228	0.71%	3.01%	3.70%	14.79%	15.99%	5.38%	5.14%	
160	NON US FIXED INCOME	1,253,214,511	-0.59%	1.12%	2.32%	8.22%	10.11%	4.03%	4.31%	
161	BB GLOBAL TREASURY EX-US		-0.68%	1.18%	2.43%	8.22%	10.31%	4.30%	4.53%	
162	Rogge Global Partners	299,694,215	-0.54%	1.18%	2.44%	8.57%	10.44%	4.08%	4.49%	
163	APF Global Government Bonds	953,520,296	-0.61%	1.11%	2.29%	8.12%	10.02%	4.28%	4.24%	
164	GLOBAL HIGH YIELD	1,606,147,586	0.29%	0.83%	1.06%	10.93%	7.48%	5.56%	4.72%	
165	BB US HIGH YIELD 2% ISSUER CAP		0.28%	1.04%	1.61%	11.71%	8.38%	6.03%	5.19%	
166	Oaktree High Yield	637,594,719	0.70%	1.84%	2.30%	12.31%	8.86%	5.58%	4.46%	
167	APF High Yield	541,719,815	-0.02%	1.13%	1.34%	11.35%	8.92%			
168	BB US High Yield 2% Issuer Cap Index		0.28%	1.04%	1.61%	11.71%	8.38%	6.03%	5.19%	
169	HY Fixed Income Custom Blend ¹³		0.28%	1.04%	1.61%	11.71%	8.38%	6.03%	5.39%	
170	Capital Guardian High Yield	426,833,052	0.09%	-1.12%	-1.17%	8.28%	3.69%	5.33%	5.37%	
171	Cap Guard Custom Blend ¹⁴		0.28%	1.04%	1.61%	11.71%	8.38%	6.02%	5.34%	
172	EMERGING MARKET DEBT	1,054,430,558	1.74%	0.18%	0.94%	11.07%	13.77%	4.20%	3.11%	
173	EMD BENCHMARK ⁵		1.59%	0.88%	1.96%	12.19%	15.04%	4.80%	3.18%	
174	Investec EMD BL	239,897,600	1.78%	1.90%						
175	PGIM EMD BL	409,366,515	1.48%	1.00%						
176	EMD Benchmark ⁵		1.59%	0.88%						
177	Payden EMD HC	201,123,405	0.62%	0.31%						
178	JPM EMBI Global Diversified		0.28%	0.57%						
179	Colchester EMD LC	204,031,447	3.33%							
180	JPM EMBI Global Diversified		2.90%							
181	TIPS	269,914,018	0.27%	1.01%	1.33%	7.08%	8.00%	2.35%	2.19%	
182	BB US TIPS		0.26%	1.24%	1.60%	7.85%	8.96%	2.44%	2.33%	
183	APF TIPS	135,291,347	0.26%	1.27%	1.73%	8.00%	9.08%	2.54%	2.41%	
184	BB U.S. TIPS		0.26%	1.24%	1.60%	7.85%	8.96%	2.44%	2.33%	
185	Alaska Permanent Capital Mgmt	134,622,671	0.28%	0.75%	0.92%	6.18%	6.93%	2.16%	1.97%	
186	BB U.S. TIPS 1-10 Year Index		0.28%	0.73%	0.89%	6.10%	6.87%	2.08%	1.92%	
187	REITS	1,594,765,514	2.35%	7.57%	8.38%	25.33%	22.35%	9.79%	8.64%	
188	S&P GLOBAL REIT		2.30%	7.49%	8.15%	24.95%	21.68%	8.46%	6.34%	
189	AEW Global RE Securities	636,018,703	2.36%	7.39%	8.34%	24.59%	21.65%	10.51%	8.25%	
190	SSGA REITS	958,746,811	2.36%	7.70%	8.43%	25.75%	22.83%			
191	S&P GLOBAL REIT		2.30%	7.49%	8.15%	24.95%	21.68%			
192	LISTED INFRASTRUCTURE	802,027,682	1.27%	3.98%	3.33%	22.59%	19.82%	12.11%	8.82%	
193	S&P GLOBAL LISTED INFRASTRUCTURE		1.50%	3.96%	1.86%	21.68%	19.94%	8.56%	4.78%	
194	Lazard Listed Infrastructure	228,776,232	1.78%	4.53%	5.77%	22.26%	17.99%	15.87%	13.23%	
195	FTSE Core Developed Infrastructure (Hedged)		-0.14%	3.51%	3.83%	22.73%	20.68%	12.93%	9.31%	
196	Cohen & Steers Listed Infrastructure	173,786,650	0.05%	2.96%	3.46%	23.45%	19.47%	13.81%	7.67%	
197	FTSE Core Developed Infrastructure Custom		0.53%	3.49%	3.36%	22.29%	20.35%	12.22%	7.43%	
198	SSGA Listed Infrastructure	399,464,800	1.53%	4.15%	2.11%	22.47%	20.97%			
199	S&P Global Listed Infrastructure		1.50%	3.96%	1.86%	21.68%	19.94%			
200	FIXED INCOME PLUS CASH	864,924,584	0.21%	0.62%	0.82%	2.57%	2.95%			
201	90 DAY T-BILLS		0.19%	0.57%	0.76%	2.01%	2.40%			
202	APF Fixed Income Plus Cash	864,924,584	0.21%	0.62%	0.82%	2.57%	2.95%			
203	ABSOLUTE RETURN	4,145,372,247	N/A	-0.12%	0.92%	3.71%	2.57%	4.45%	3.05%	Net
204	ABSOLUTE RETURN BENCHMARK ⁸		N/A	-0.20%	0.24%	7.49%	4.37%	4.21%	4.56%	
205	ASSET ALLOCATION	2,297,577,242	0.27%	0.84%	1.09%	8.42%	6.43%	2.80%	2.28%	
206	ASSET ALLOCATION BENCHMARK ⁹		0.80%	1.48%	1.90%	8.57%	7.62%	6.43%	5.03%	
207	APF ALLOCATION CASH	1,256,750,717	0.21%	0.58%						
208	APF OPERATING CASH	321,937,862	0.16%	0.49%	0.66%	1.79%	2.15%	1.49%	0.92%	
209	90 DAY T-BILLS		0.19%	0.57%	0.76%	2.01%	2.40%	1.60%	1.02%	
210	ASSET ALLOCATION OVERLAY	57,159,301	1.75%	2.96%	2.00%	18.05%	14.01%			
211	Asset Allocation Overlay Benchmark ¹⁰		1.90%	2.34%	2.62%	15.63%	12.19%			
212	RISK PARITY	661,729,362	0.34%	1.85%	3.08%					Net
213	HFR 12% Vol Institutional Index		1.29%	1.53%	2.53%					
214	PanAgora	230,001,935	0.22%	3.55%	4.55%					Net
215	Bridgewater All Weather	217,154,213	0.82%	1.36%	2.58%					Net
216	BlackRock Market Adv	214,573,214	0.00%	0.56%	2.04%					Net

	Market Values as of 10/31/2019*	(A)	(B)	(C)	(D)	(E)	(F)	(G)		
		Returns as of 10/31/2019								
		1 Month	3 Months	FYTD	CYTD	1 Year	3 Years	5 Years		
217	PRIVATE EQUITY & SPECIAL OPPORTUNITIES ●	8,904,301,115	N/A	4.08%	4.08%	10.01%	17.13%	21.71%	22.26%	
218	CAMBRIDGE PRIVATE EQUITY ●			4.31%	4.31%	8.56%	12.23%	15.37%	12.22%	
219	PRIVATE EQUITY ●	5,542,268,168	N/A	7.78%	7.78%	14.62%	20.97%	22.62%	19.24%	
220	PRIVATE EQUITY CUSTOM BENCHMARK ⁶ ●			4.31%	4.31%	8.56%	12.23%	15.37%	8.88%	
221	Pathway Capital Mgmt - Direct PE	1,879,521,412	N/A	12.65%	12.65%	21.92%	19.10%	25.60%	20.85%	Various
222	HarbourVest Legacy	1,009,563,811	N/A	8.60%	8.60%	17.15%	28.87%	26.88%	23.05%	Net
223	Pathway Capital Mgmt - PE	2,368,401,179	N/A	4.88%	4.88%	11.23%	20.39%	20.54%	16.88%	Net
224	BlackRock Co-investment Funds	245,315,820	N/A	4.73%	4.73%	15.48%	26.29%	24.02%		Net
225	Rapid Partners LP	6,645,595	N/A	-37.28%	-37.28%	-85.88%	-90.33%	-56.50%		Net
226	Kelso Hammer LP	32,820,350	N/A	2.25%	2.25%	6.77%	3.24%	11.98%		Net
227	SPECIAL OPPORTUNITIES ●	3,362,032,947	N/A	-1.37%	-1.37%	3.30%	11.47%	20.28%	35.25%	Net
228	CAMBRIDGE PRIVATE EQUITY ●			4.31%	4.31%	8.56%	12.23%	15.37%	12.22%	
229	REAL ESTATE ●	3,970,863,819	N/A	-0.77%	-0.77%	-0.31%	-0.25%	2.93%	6.06%	Net
230	NCREIF TOTAL INDEX ●			1.51%	1.51%	4.76%	6.51%	6.89%	8.83%	Net
231	RE SEPARATE ACCTS & DIRECT ●	3,821,270,883	N/A	-0.87%	-0.87%	-0.34%	-0.21%	2.94%	6.07%	Net
232	L&B Realty Advisors	1,840,359,166	N/A	1.35%	1.35%	2.56%	2.43%	4.59%	8.87%	Net
233	Sentinel Real Estate	505,606,461	N/A	1.04%	1.04%	1.42%	-0.05%	-1.59%	3.05%	Net
234	LaSalle Investment Mgmt-United Kingdom	107,015,766	N/A	-31.31%	-31.31%	-46.13%	-46.81%	-23.82%	-20.00%	Net
235	Lincoln Industrial	161,178,120	N/A	2.75%	2.75%	4.96%	9.80%	14.47%		Net
236	CB Richard Ellis - Europe	141,332,716	N/A	3.80%	3.80%	2.39%	4.53%	13.72%		Net
237	CS Capital	400,073,227	N/A	2.33%	2.33%	12.02%	16.13%	14.08%		Net
238	Heitman Direct	665,705,427	N/A							Net
239	RE FUNDS & CO-INVEST ●	149,592,936	N/A	2.80%	2.80%	-2.68%				Net
240	HIG Europe RE II	15,435,843	N/A	0.40%	0.40%	3.31%				Net
241	Heitman Capital	51,053,579	N/A	1.42%	1.42%	4.60%				Net
242	Harbert Europe RE V	10,217,200	N/A	-0.06%	-0.06%	-28.02%				Net
243	Brookfield RE III	72,886,314	N/A							Net
244	INFRA. & PRIVATE INCOME ●	5,207,207,680	N/A	1.06%	1.06%	4.97%	8.94%	12.07%	11.23%	Net
245	INFRA. & INCOME OPPORTUNITIES ⁷ ●			2.95%	2.95%	10.15%	12.93%	9.42%	6.58%	
246	INFRASTRUCTURE ●	2,471,679,661	N/A	0.34%	0.34%	5.82%	11.65%	15.67%	16.43%	Net
247	FTSE DEVELOPED CORE INFRA. TRI ●			3.25%	3.25%	13.64%	16.60%	10.58%	7.73%	
248	GIP	40,032,661	N/A	0.86%	0.86%	17.24%	25.48%	29.77%	33.40%	Net
249	GIP II	397,303,983	N/A	1.11%	1.11%	9.32%	14.18%	16.56%	15.42%	Net
250	Gateway IFR	82,056,983	N/A	-18.16%	-18.16%	-22.02%	-23.88%	-3.79%	-2.53%	Net
251	G Sachs	289,035,726	N/A	5.97%	5.97%	18.22%	22.73%	24.39%	22.80%	Net
252	EQT II	30,517,149	N/A	2.85%	2.85%	3.18%	3.63%	11.52%	12.78%	Net
253	GIP II Co-Invest 2	106,584,482	N/A	1.68%	1.68%	21.11%	38.00%	24.44%	25.34%	Net
254	ACTIS Energy 3	36,114,116	N/A	4.17%	4.17%	8.68%	4.70%	7.94%	4.34%	Net
255	LS Power III	169,703,509	N/A	-0.77%	-0.77%	-2.02%	13.03%	22.67%	16.38%	Net
256	North Haven	211,551,206	N/A	3.43%	3.43%	12.02%	14.70%	16.42%		Net
257	GIP III	409,291,494	N/A	0.79%	0.79%	2.25%	10.55%	-39.03%		Net
258	GIP III Canary	128,373,917	N/A	-2.97%	-2.97%	8.29%	19.11%			Net
259	CIM Fund II	64,566,265	N/A	0.52%	0.52%	-0.44%	6.12%			Net
260	IFR ACTIS Energy 4	56,067,725	N/A	14.49%	14.49%	36.62%	42.84%			Net
261	IFR Meridiam III	1,165,915	N/A	N/A	N/A	N/A	N/A			Net
262	IFR GIP III Zenith	115,988,234	N/A	5.09%	5.09%	14.38%	14.36%			Net
263	IFR ENCAP FM IV	7,413,075	N/A	0.09%	0.09%	13.17%	6.64%			Net
264	IFR INFRARED V	33,927,607	N/A	7.55%	7.55%	3.97%	0.85%			Net
265	IFR NHIP II Bison	59,370,295	N/A	0.00%	0.00%	4.53%	9.23%			Net
266	IFR GIP III Stetson	30,376,579	N/A	-29.04%	-29.04%	-46.60%				Net
267	IFR EFM Moda	54,083,792	N/A	1.51%	1.51%	27.35%				Net
268	North Haven India	12,775,248	N/A	-0.59%	-0.59%					Net
269	IFR LS Power IV	10,355,585	N/A	N/A	N/A					Net
270	IFR KKR Infrastructure III	39,362,579	N/A	-3.09%	-3.09%					Net
271	IFR KKR Starlight II	47,467,934	N/A	-1.77%	-1.77%					Net
272	IFR Energy Spec VIII	3,401,978	N/A	-21.69%	-21.69%					Net
273	LS Power Bolt	16,966,184	N/A	2.40%	2.40%					Net
274	IFR EQT IV	17,825,440	N/A							Net
275	PRIVATE CREDIT ●	1,497,816,970	N/A	1.86%	1.86%	3.34%	5.70%	7.65%	6.10%	Net
276	BB US HIGH YIELD 2% ISSUER CAP ●			2.50%	2.50%	4.95%	7.48%	7.52%	4.71%	
277	Crestline Credit Opportunities Fund	347,661,138	N/A	0.84%	0.84%	-1.00%	0.73%	5.19%	3.90%	Net
278	Oaktree III Mezzanine Debt	9,400,300	N/A	1.16%	1.16%	24.72%	24.36%	18.86%	15.45%	Net
279	Audax III Mezzanine Debt	37,077,267	N/A	12.06%	12.06%	18.94%	21.85%	11.20%	11.09%	Net
280	Oaktree Opportunities Fund VIII	10,459,699	N/A	7.91%	7.91%	-12.41%	-6.57%	11.03%	2.83%	Net
281	Crestline Opps Fund	186,862,359	N/A	2.82%	2.82%	7.95%	12.71%	11.54%		Net
282	Pathway Capital Mgmt - Direct Private Cred	439,918,684	N/A	5.97%	5.97%	18.22%	22.73%	24.39%		Net
283	Audax IV Mezzanine Debt	18,140,084	N/A	2.20%	2.20%	6.20%	7.51%			Net
284	Aurelius II	202,732,851	N/A	1.14%	1.14%	4.01%				Net
285	Crestline SLF II	35,306,546	N/A	2.67%	2.67%					Net
286	King Street Capital	196,457,706	N/A	0.98%	0.98%					Net
287	CL Opps Fund IV	13,800,336	N/A							Net
288	INCOME OPPORTUNITIES ●	1,237,711,050	N/A	1.68%	1.68%	4.69%	5.96%	4.85%		Net
289	INFRA. & INCOME OPPORTUNITIES ⁷ ●			2.95%	2.95%	10.15%	12.93%	9.42%		
290	American Homes 4 Rent II	156,735,932	N/A	0.75%	0.75%	3.82%	-2.58%	2.31%		Net
291	Twin Creeks Timber	77,597,539	N/A	0.88%	0.88%	-2.40%	-2.09%	-1.37%		Net
292	Athyrium III	13,471,548	N/A	-0.84%	-0.84%	1.08%	1.77%			Net
293	Generate Capital	93,320,283	N/A	0.01%	0.01%	6.34%	16.59%			Net
294	Broadriver III	17,054,140	N/A	-1.09%	-1.09%	5.13%				Net
295	Generate Capital II	26,627,125	N/A	-0.04%	-0.04%	1.32%				Net
296	APF ADAC	807,700,630	N/A	2.43%	2.43%	5.92%				Net
297	Activate Capital	36,985,504	N/A	1.66%	1.66%					Net
298	INC OCM Power Opps V	8,218,350	N/A	-4.74%	-4.74%					Net

NOTES and CURRENT BENCHMARK REFERENCES

(Benchmarks applicable in prior periods can be found in the Investment Policy)

* Market Values	Reported market values represent total fund holdings consistent with Financial Statements	
	As of October 31, 2019, total fund holdings consist of:	
	99.17%	Alaska Permanent Fund
	0.83%	Alaska Mental Health Trust
• Lagged Returns	For investments within the following asset classes, returns are lagged one quarter. Composites that incorporate these investments and benchmarks associated are also lagged one quarter.	
		Real Estate
		Private Equity and Special Opportunities
		Infrastructure and Private Income
1 Passive Benchmark	60%	MSCI All-Country World Index IMI
09/30/2016 to date	20%	BB Global Aggregate Index
	10%	FTSE EPRA/NAREIT Rental Index
	10%	US TIPs
2 Performance Benchmark	39%	MSCI ACWI IMI
06/30/2017 to date	12%	Cambridge Private Equity (1 Q Lagged)
	11%	NCREIF Total Index (1 Q Lagged)
	6%	BB US Corporate
	6%	BB Aggregate
	5%	HFRI Total HFOF Universe
	4%	FTSE Developed Core Infrastructure TRI (1 Q Lagged)
	3%	BB US High Yield 2% Issuer Cap (1 Q Lagged)
	3%	90 Day T-Bills
	2%	S&P Global REIT
	2%	BB US High Yield 2% Issuer Cap
	2%	BB Global Treasury ex-US
	1%	S&P Global Listed Infrastructure
	1%	BC US TIPs
	0.5%	JPM EMBI Global Diversified
	0.5%	JPM GBI-EM Global Diversified TRI
3 Total Fund Return Objective	100%	Consumer Price Index (All Urban Consumers, U.S. City Average, All Items, Unadjusted Index) plus 5%
4 Public Income Benchmark	25%	BB Aggregate
09/30/2016 to date	25%	BB US Corporate
	10%	S&P Global REIT
	10%	BB US High Yield 2% Issuer Cap
	10%	BB Global Treasury ex-US
	5%	S&P Global Listed Infrastructure
	5%	BB US TIPs
	5%	90 Day T-Bills
	2.5%	JPM EMBI Global Diversified
	2.5%	JPM GBI-EM Global Diversified
5 EMD Benchmark	50%	JPM EMBI Global Diversified
09/30/2016 to date	50%	JPM GBI-EM Global Diversified
6 Private Equity Custom Benchmark	100%	Cambridge Private Equity (1 Q Lagged)
09/30/2016 to date		
7 Infra. & Income Opportunities Benchmark	60%	FTSE Developed Core Infrastructure TRI (1 Q Lagged)
09/30/2016 to date	40%	BB US High Yield 2% Issuer Cap (1 Q Lagged)
8 Absolute Return Benchmark	100%	HFRI Total HFOF Universe
09/30/2016 to date		
9 Asset Allocation Benchmark	60%	Performance Benchmark
06/30/2018 to date	40%	90 Day T-Bills
10 Asset Allocation Overlay Benchmark	65%	MSCI ACWI IMI Net Unhedged
06/30/2018 to date	35%	BB US Aggregate
11 Int'l Passive/Quasi Passive Custom	100%	MSCI World ex US
12 MSCI Custom Benchmark	65%	MSCI World ex US Value TRI
4/30/2016 to date		
13 HY Fixed Income Custom Blend	100%	BB US High Yield 2% Issuer Cap Index
7/31/2016 to date		
14 Cap Guard Custom Blend	100%	BB US High Yield 2% Issuer Cap Index
3/31/2017 to date		