

# Hoffman Estates Fire Pension Fund

## Quarterly Performance Report

September 30, 2020

## Hoffman Estates Fire Pension Fund

### Asset Allocation Compliance

As of September 30, 2020

	Target Allocation (%)	Asset Allocation (%)	Differences (%)	Asset Allocation (\$)	Target Rebalance (\$)
Cash & Cash Equivalents	2.00	1.07	-0.93	1,043,944.01	900,443.84
Fixed Income	33.00	34.09	1.09	33,144,424.92	-1,062,025.47
Equity	65.00	64.83	-0.17	63,031,023.33	161,581.64
Hoffman Estates Fire Pension	100.00	100.00	0.00	97,219,392.26	-

	Target Allocation (%)	Asset Allocation (%)	Differences (%)	Asset Allocation (\$)	Target Rebalance (\$)
Cash & Cash Equivalents	2.00	1.07	-0.93	1,043,944.01	900,443.84
Real Estate	3.00	1.93	-1.07	1,878,040.69	1,038,541.08
Emerging Market	3.00	2.76	-0.24	2,683,093.51	233,488.26
Mid Cap	4.00	3.81	-0.19	3,707,235.06	181,540.63
Small Cap	4.00	3.79	-0.21	3,685,016.33	203,759.36
International Equity	16.00	12.91	-3.09	12,554,767.72	3,000,335.04
Fixed Income	33.00	34.09	1.09	33,144,424.92	-1,062,025.47
Large Cap	35.00	39.62	4.62	38,522,870.02	-4,496,082.73
Hoffman Estates Fire Pension	100.00	100.00	0.00	97,219,392.26	-

## Hoffman Estates Fire Pension Fund

### Allocation by Asset Class

As of September 30, 2020

	Total Fund		Domestic Equity		International Equity		Domestic Fixed Income		Alternative Investment		Cash Equivalent	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
<b>Hoffman Estates Fire Pension</b>	<b>97,219,392</b>	<b>100.00</b>	<b>43,392,343</b>	<b>44.63</b>	<b>15,757,638</b>	<b>16.21</b>	<b>33,073,971</b>	<b>34.02</b>	<b>2,408,416</b>	<b>2.48</b>	<b>2,587,024</b>	<b>2.66</b>
Large Cap	38,522,870	39.62	36,501,185	94.75	511,277	1.33	-	-	530,375	1.38	980,033	2.54
Aristotle -Value Equity	12,655,667	13.02	11,199,027	88.49	511,277	4.04	-	-	295,034	2.33	650,329	5.14
Madison - LCC	7,427,019	7.64	6,862,034	92.39	-	-	-	-	235,341	3.17	329,645	4.44
T.Rowe Health & Sciences Fund (Schwab)	2,354,310	2.42	2,354,251	100.00	-	-	-	-	-	-	59	0.00
T.Rowe New American Growth	5,816,995	5.98	5,816,995	100.00	-	-	-	-	-	-	-	-
Vanguard S&P 500 (MF)	10,268,878	10.56	10,268,878	100.00	-	-	-	-	-	-	-	-
Mid Cap	3,707,235	3.81	3,707,235	100.00	-	-	-	-	-	-	-	-
Champlain Mid Cap	3,707,235	3.81	3,707,235	100.00	-	-	-	-	-	-	-	-
Small Cap	3,685,016	3.79	3,183,923	86.40	8,500	0.23	-	-	-	-	492,593	13.37
Kayne Anderson- Small Cap Core	3,685,016	3.79	3,183,923	86.40	8,500	0.23	-	-	-	-	492,593	13.37
Real Estate	1,878,041	1.93	-	-	-	-	-	-	1,878,041	100.00	-	-
Cohen & Steers REIT	1,878,041	1.93	-	-	-	-	-	-	1,878,041	100.00	-	-
International Equity	12,554,768	12.91	-	-	12,554,768	100.00	-	-	-	-	-	-
Invesco Intl SMID	4,539,790	4.67	-	-	4,539,790	100.00	-	-	-	-	-	-
Clearbridge Intl Growth	4,505,458	4.63	-	-	4,505,458	100.00	-	-	-	-	-	-
Oakmark International	2,068,694	2.13	-	-	2,068,694	100.00	-	-	-	-	-	-
Tweedy Browne Global Value	1,440,826	1.48	-	-	1,440,826	100.00	-	-	-	-	-	-
Emerging Market	2,683,094	2.76	-	-	2,683,094	100.00	-	-	-	-	-	-
Invesco Opp. DM	2,683,094	2.76	-	-	2,683,094	100.00	-	-	-	-	-	-
Fixed Income	33,144,425	34.09	-	-	-	-	33,073,971	99.79	-	-	70,454	0.21
Garcia Hamilton - Gov/Cred	16,738,087	17.22	-	-	-	-	16,689,501	99.71	-	-	48,586	0.29
Weaver- Intermediate	16,406,338	16.88	-	-	-	-	16,384,470	99.87	-	-	21,868	0.13
Cash & Cash Equivalents	1,043,944	1.07	-	-	-	-	-	-	-	-	1,043,944	100.00
Cash Management Account	274	0.00	-	-	-	-	-	-	-	-	274	100.00
IL Funds	1,043,670	1.07	-	-	-	-	-	-	-	-	1,043,670	100.00

## Hoffman Estates Fire Pension Fund

As of September 30, 2020

	1 Month	Quarter To Date	YTD	Since Inception	Inception Date
<b>Hoffman Estates Fire Pension</b>	<b>-1.34</b>	<b>5.79</b>	<b>5.25</b>	<b>11.80</b>	<b>08/01/2019</b>
Custom Benchmark	-2.20	4.76	1.85	6.93	
<b>Madison - LCC</b>	<b>-1.19</b>	<b>10.67</b>	<b>3.04</b>	<b>12.02</b>	<b>10/01/2019</b>
S&P 500 Total Return	-3.80	8.93	5.57	15.10	
<b>Aristotle -Value Equity</b>	<b>-1.96</b>	<b>7.87</b>	<b>-0.86</b>	<b>8.36</b>	<b>10/01/2019</b>
Russell 1000 VL	-2.46	5.59	-11.58	-5.01	
<b>T.Rowe New American Growth</b>	<b>-4.02</b>	<b>11.38</b>	<b>25.46</b>	<b>29.11</b>	<b>12/01/2019</b>
Russell 1000 Gr	-4.71	13.22	24.33	28.08	
<b>Vanguard S&amp;P 500 (MF)</b>	<b>-3.81</b>	<b>8.92</b>	<b>5.12</b>	<b>8.06</b>	<b>12/01/2019</b>
S&P 500	-3.80	8.93	5.50	8.55	
<b>Champlain Mid Cap</b>	<b>-2.89</b>	<b>7.64</b>	<b>9.63</b>	<b>17.12</b>	<b>09/06/2019</b>
Russell Midcap	-1.95	7.46	-2.35	4.57	
<b>Kayne Anderson- Small Cap Core</b>	<b>-1.95</b>	<b>5.19</b>	<b>1.92</b>	<b>1.92</b>	<b>01/16/2020</b>
Russell 2000	-3.34	4.93	-8.69	-9.47	
<b>T.Rowe Health &amp; Sciences Fund (Schwab)</b>	<b>1.64</b>	<b>6.88</b>	<b>14.33</b>	<b>25.99</b>	<b>09/01/2019</b>
S&P 500	-3.80	8.93	5.57	15.77	
<b>Cohen &amp; Steers REIT</b>	<b>-1.89</b>	<b>3.02</b>	<b>-11.15</b>	<b>-8.49</b>	<b>09/01/2019</b>
FTSE NAREIT All Equity REITS	-2.66	1.19	-12.27	-9.70	
<b>Oakmark International</b>	<b>-5.14</b>	<b>3.75</b>	<b>-20.07</b>	<b>-17.16</b>	<b>12/01/2019</b>
MSCI World Ex USA - USD	-2.77	5.01	-6.75	-3.75	
<b>Invesco Intl SMID</b>	<b>0.77</b>	<b>12.04</b>	<b>9.92</b>	<b>15.47</b>	<b>11/01/2019</b>
MSCI ACWI x USA SMID Net	-1.64	8.93	-4.89	0.77	
<b>Clearbridge Intl Growth</b>	<b>-0.52</b>	<b>8.75</b>	<b>8.27</b>	<b>14.48</b>	<b>11/01/2019</b>
MSCI EAFE	-2.55	4.88	-6.73	-2.58	
<b>Tweedy Browne Global Value</b>	<b>-2.77</b>	<b>0.08</b>	<b>-13.50</b>	<b>-11.36</b>	<b>11/01/2019</b>
MSCI EAFE	-2.55	4.88	-6.73	-2.58	

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

## Hoffman Estates Fire Pension Fund

As of September 30, 2020

	1 Month	Quarter To Date	YTD	Since Inception	Inception Date
<b>Invesco Opp. DM</b>	<b>-2.13</b>	<b>8.27</b>	<b>-1.42</b>	<b>4.17</b>	<b>12/01/2019</b>
MSCI EM Net	-1.60	9.56	-1.16	6.21	
<b>Garcia Hamilton - Gov/Cred</b>	<b>-0.13</b>	<b>0.82</b>	<b>7.82</b>	<b>7.38</b>	<b>12/01/2019</b>
Barclays Govt/Credit Bond	-0.05	0.78	8.04	7.83	
<b>Weaver- Intermediate</b>	<b>0.01</b>	<b>0.95</b>	<b>6.26</b>	<b>5.65</b>	<b>09/01/2019</b>
BC Gov/Cr Intm	-0.01	0.62	5.93	5.44	

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

As of September 30, 2020

	Sep-2020	Aug-2020	Jul-2020	Jun-2020	May-2020	Apr-2020	Mar-2020	Feb-2020	Jan-2020	Dec-2019	Nov-2019
<b>Hoffman Estates Fire Pension</b>											
Beginning Market Value	98,980,220	95,463,628	91,814,414	90,606,792	87,370,580	81,420,141	88,526,062	91,775,522	93,403,301	92,255,415	90,731,634
Net Contributions	-437,446	379,626	61,327	-511,696	-529,904	-513,556	976,877	754,388	-1,441,122	-407,945	-453,390
Income	168,511	78,673	99,235	204,821	139,321	86,502	161,078	81,765	127,753	1,057,396	166,118
Gain/Loss	-1,491,893	3,058,292	3,488,652	1,514,496	3,626,795	6,377,494	-8,243,876	-4,085,614	-314,409	498,435	1,811,053
Ending Market Value	97,219,392	98,980,220	95,463,628	91,814,414	90,606,792	87,370,580	81,420,141	88,526,062	91,775,522	93,403,301	92,255,415
<b>Aristotle -Value Equity</b>											
Beginning Market Value	12,907,955	12,291,593	11,745,851	11,523,452	10,901,609	9,655,838	11,539,733	12,613,291	13,419,237	12,991,455	12,497,712
Net Contributions	-	-14,679	-	-	-12,069	-	-	-16,774	-600,000	-	-8,917
Income	23,792	12,430	14,607	23,134	13,632	14,160	24,824	13,923	11,505	29,025	11,993
Gain/Loss	-276,079	618,612	531,134	199,266	620,279	1,231,610	-1,908,718	-1,070,706	-217,451	398,757	490,668
Ending Market Value	12,655,667	12,907,955	12,291,593	11,745,851	11,523,452	10,901,609	9,655,838	11,539,733	12,613,291	13,419,237	12,991,455
<b>Madison - LCC</b>											
Beginning Market Value	7,516,448	7,177,948	6,717,092	6,684,089	6,338,715	5,678,844	6,641,917	7,198,920	7,228,105	7,120,694	6,904,994
Net Contributions	-	-	-6,713	-	-5,676	-	-	-	-7,216	-	-
Income	6,892	4,715	4,282	7,708	2,923	4,132	10,084	3,875	22,519	9,739	4,486
Gain/Loss	-96,320	333,785	463,287	25,295	348,127	655,740	-973,157	-560,878	-44,488	97,672	211,214
Ending Market Value	7,427,019	7,516,448	7,177,948	6,717,092	6,684,089	6,338,715	5,678,844	6,641,917	7,198,920	7,228,105	7,120,694
<b>T.Rowe New American Growth</b>											
Beginning Market Value	6,060,887	5,658,635	5,222,508	4,954,904	4,628,868	3,996,273	4,479,823	4,779,607	4,636,490	4,505,380	4,488,808
Net Contributions	-	-	-	-	-	-	-	-	-	-	-
Income	-	-	-	-	-	-	-	-	-	308,566	-
Gain/Loss	-243,892	402,253	436,126	267,604	326,036	632,595	-483,550	-299,784	143,117	-177,457	16,573
Ending Market Value	5,816,995	6,060,887	5,658,635	5,222,508	4,954,904	4,628,868	3,996,273	4,479,823	4,779,607	4,636,490	4,505,380
<b>Vanguard S&amp;P 500 (MF)</b>											
Beginning Market Value	10,675,045	9,959,597	9,428,036	9,244,151	8,823,843	7,821,267	8,924,233	9,725,414	14,344,819	13,955,054	13,911,120
Net Contributions	-	-	-	-	-	-	-	-33	-4,700,949	-	-
Income	43,184	-	-	47,047	-	-	38,488	-	33	67,078	-
Gain/Loss	-449,351	715,449	531,561	136,839	420,308	1,002,575	-1,141,453	-801,148	81,511	322,686	43,934
Ending Market Value	10,268,878	10,675,045	9,959,597	9,428,036	9,244,151	8,823,843	7,821,267	8,924,233	9,725,414	14,344,819	13,955,054

## As of September 30, 2020

	Sep-2020	Aug-2020	Jul-2020	Jun-2020	May-2020	Apr-2020	Mar-2020	Feb-2020	Jan-2020	Dec-2019	Nov-2019
<b>Champlain Mid Cap</b>											
Beginning Market Value	3,817,432	3,638,156	3,444,077	3,468,748	3,115,130	2,725,328	3,120,064	3,393,090	3,381,577	3,372,490	3,212,799
Net Contributions	-	-	-	-	-	-	-	-	-	-	-
Income	-	-	-	-	-	-	-	-	-	130,261	-
Gain/Loss	-110,197	179,276	194,079	-24,671	353,618	389,802	-394,737	-273,026	11,513	-121,174	159,691
Ending Market Value	3,707,235	3,817,432	3,638,156	3,444,077	3,468,748	3,115,130	2,725,328	3,120,064	3,393,090	3,381,577	3,372,490
<b>Kayne Anderson- Small Cap Core</b>											
Beginning Market Value	3,758,439	3,647,293	3,513,930	3,516,062	3,212,030	2,915,229	3,242,702	3,490,213	3,627,474	-	-
Net Contributions	-	-11,448	-	-	-	-	-	-	-904	-	-
Income	6,380	3,953	1,024	6,672	3,121	869	7,859	5,203	640	-	-
Gain/Loss	-79,802	118,641	132,339	-8,804	300,911	295,932	-335,332	-252,714	-136,997	-	-
Ending Market Value	3,685,016	3,758,439	3,647,293	3,513,930	3,516,062	3,212,030	2,915,229	3,242,702	3,490,213	-	-
<b>T.Rowe Health &amp; Sciences Fund (Schwab)</b>											
Beginning Market Value	2,316,375	2,275,405	2,202,823	2,186,131	2,031,862	1,783,514	1,917,045	2,004,296	2,059,175	2,001,962	2,849,159
Net Contributions	-	-	-	-	-	-	-	-	-	-	-1,023,654
Income	-	-	-	-	-	-	-	-	-	121,781	25
Gain/Loss	37,935	40,970	72,582	16,691	154,269	248,348	-133,531	-87,251	-54,879	-64,568	176,431
Ending Market Value	2,354,310	2,316,375	2,275,405	2,202,823	2,186,131	2,031,862	1,783,514	1,917,045	2,004,296	2,059,175	2,001,962
<b>Cohen &amp; Steers REIT</b>											
Beginning Market Value	1,914,277	1,895,534	1,823,061	1,769,211	1,732,907	1,599,792	1,993,888	2,135,557	1,525,083	1,513,631	1,534,614
Net Contributions	-	-	-	-	-	-	-	-19	600,000	-1	-757
Income	11,246	-	-	57,481	-	-	12,844	-	19	9,471	32,430
Gain/Loss	-47,482	18,743	72,473	-3,630	36,304	133,114	-406,941	-141,649	10,454	1,982	-52,655
Ending Market Value	1,878,041	1,914,277	1,895,534	1,823,061	1,769,211	1,732,907	1,599,792	1,993,888	2,135,557	1,525,083	1,513,631
<b>Tweedy Browne Global Value</b>											
Beginning Market Value	1,481,891	1,437,851	1,439,636	1,415,831	1,389,050	1,309,896	1,511,053	1,633,056	1,665,788	1,643,565	1,625,477
Net Contributions	-	-	-	-	-	-	-	-	-	-	-18
Income	-	-	-	-	-	-	-	-	-	30,664	-
Gain/Loss	-41,064	44,040	-1,785	23,805	26,781	79,153	-201,156	-122,003	-32,733	-8,440	18,106
Ending Market Value	1,440,826	1,481,891	1,437,851	1,439,636	1,415,831	1,389,050	1,309,896	1,511,053	1,633,056	1,665,788	1,643,565

As of September 30, 2020

	Sep-2020	Aug-2020	Jul-2020	Jun-2020	May-2020	Apr-2020	Mar-2020	Feb-2020	Jan-2020	Dec-2019	Nov-2019
<b>Oakmark International</b>											
Beginning Market Value	2,180,852	2,025,077	1,993,922	1,873,455	1,790,375	1,602,407	2,215,122	2,437,361	2,587,944	2,497,122	2,526,632
Net Contributions	-	-	-	-	-	-	-	-	-	-	-
Income	-	-	-	-	-	-	-	-	-	50,919	-
Gain/Loss	-112,158	155,775	31,155	120,466	83,080	187,969	-612,715	-222,239	-150,583	39,903	-29,510
Ending Market Value	2,068,694	2,180,852	2,025,077	1,993,922	1,873,455	1,790,375	1,602,407	2,215,122	2,437,361	2,587,944	2,497,122
<b>Clearbridge Intl Growth</b>											
Beginning Market Value	4,529,126	4,331,378	4,142,792	3,926,719	3,706,065	3,431,966	3,828,990	4,084,765	4,161,116	4,002,501	3,935,545
Net Contributions	-	-	-	-	-	-	-	-	-	-	-19
Income	-	-	-	-	-	-	-	-	-	13,065	-
Gain/Loss	-23,669	197,748	188,586	216,073	220,654	274,099	-397,024	-255,775	-76,351	145,550	66,975
Ending Market Value	4,505,458	4,529,126	4,331,378	4,142,792	3,926,719	3,706,065	3,431,966	3,828,990	4,084,765	4,161,116	4,002,501
<b>Invesco Intl SMID</b>											
Beginning Market Value	4,505,201	4,279,509	4,052,087	4,020,957	3,614,538	3,243,572	3,641,344	4,015,768	4,129,912	4,076,550	3,931,758
Net Contributions	-	-	-	-	-	-	-	-	-	-	-123
Income	-	-	-	-	-	-	-	-	-	195,800	-
Gain/Loss	34,589	225,692	227,422	31,130	406,419	370,966	-397,772	-374,425	-114,143	-142,438	144,915
Ending Market Value	4,539,790	4,505,201	4,279,509	4,052,087	4,020,957	3,614,538	3,243,572	3,641,344	4,015,768	4,129,912	4,076,550
<b>Invesco Opp. DM</b>											
Beginning Market Value	2,741,473	2,638,415	2,478,168	2,302,433	2,266,690	2,096,316	2,478,764	2,611,657	1,264,224	1,196,359	1,203,663
Net Contributions	-	-	-	-	-	-	-	-49	1,500,000	-	-
Income	-	-	-	-	-	-	-	-	49	30,028	-
Gain/Loss	-58,380	103,058	160,247	175,735	35,743	170,374	-382,448	-132,844	-152,616	37,838	-7,305
Ending Market Value	2,683,094	2,741,473	2,638,415	2,478,168	2,302,433	2,266,690	2,096,316	2,478,764	2,611,657	1,264,224	1,196,359
<b>Weaver- Intermediate</b>											
Beginning Market Value	16,404,349	16,407,890	16,257,849	16,159,691	15,989,334	15,744,176	15,909,973	15,635,886	15,953,495	15,934,350	31,707,972
Net Contributions	-	-	-6,021	-	-	-5,937	-	-	-509,590	-	-15,773,388
Income	40,971	31,464	45,148	42,999	60,321	39,313	40,034	34,721	49,174	34,295	104,604
Gain/Loss	-38,982	-35,005	110,914	55,159	110,036	211,781	-205,830	239,365	142,808	-15,150	-104,838
Ending Market Value	16,406,338	16,404,349	16,407,890	16,257,849	16,159,691	15,989,334	15,744,176	15,909,973	15,635,886	15,953,495	15,934,350



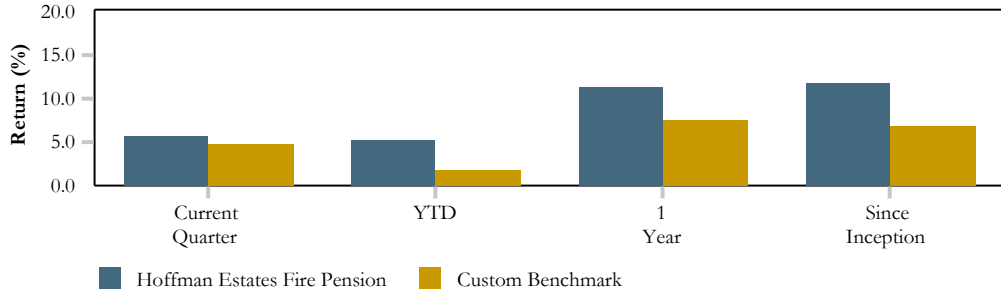
As of September 30, 2020

	Sep-2020	Aug-2020	Jul-2020	Jun-2020	May-2020	Apr-2020	Mar-2020	Feb-2020	Jan-2020	Dec-2019	Nov-2019
<b>Garcia Hamilton - Gov/Cred</b>											
Beginning Market Value	16,760,445	16,877,392	16,618,415	16,386,907	16,216,121	15,773,553	16,087,984	15,871,057	15,651,639	15,716,021	15,773,388
Net Contributions	-	-10,387	-6,934	-	-	-9,861	-	-3,803	-99,969	10	-
Income	35,913	25,926	34,036	19,394	58,398	26,546	25,134	22,912	42,959	24,803	10,809
Gain/Loss	-58,271	-132,485	231,875	212,114	112,387	425,883	-339,565	197,819	276,428	-89,196	-68,176
Ending Market Value	16,738,087	16,760,445	16,877,392	16,618,415	16,386,907	16,216,121	15,773,553	16,087,984	15,871,057	15,651,639	15,716,021
<b>William Blair-091520</b>											
Beginning Market Value	-	-	-	-	-	-	-	-	-	-	-
Net Contributions	-	-	-	-	-	-	-	-	-	-	-
Income	-	-	-	-	-	-	-	-	-	-	-
Gain/Loss	-	-	-	-	-	-	-	-	-	-	-
Ending Market Value	-	-	-	-	-	-	-	-	-	-	-
<b>Rothschild LCV</b>											
Beginning Market Value	-	-	-	-	-	-	-	-	-	1	6,915
Net Contributions	-	-	-	-	-	-	-	-	-	-1	-6,915
Income	-	-	-	-	-	-	-	-	-	-	1
Gain/Loss	-	-	-	-	-	-	-	-	-	-	-
Ending Market Value	-	-	-	-	-	-	-	-	-	-	1
<b>Mutual Fund Account</b>											
Beginning Market Value	-	-	-	-	-	-	-	475	1,025,621	1,024,538	21,385,562
Net Contributions	-	-	-	-	-	-	-	-475	-1,025,621	-	-21,106,450
Income	-	-	-	-	-	-	-	-	475	1,083	397
Gain/Loss	-	-	-	-	-	-	-	-	-	-	745,030
Ending Market Value	-	-	-	-	-	-	-	-	475	1,025,621	1,024,538
<b>Cash Management Account</b>											
Beginning Market Value	147	1	19,652	19,484	13,649	42,271	42,018	41,057	66,569	69,905	63,863
Net Contributions	127	146	-19,652	168	5,835	-28,624	230	922	-25,561	-3,407	5,972
Income	-	-	-	-	-	1	23	39	49	71	70
Gain/Loss	-	-	-	-	-	-	-	-	-	-	-
Ending Market Value	274	147	1	19,652	19,484	13,649	42,271	42,018	41,057	66,569	69,905

## As of September 30, 2020

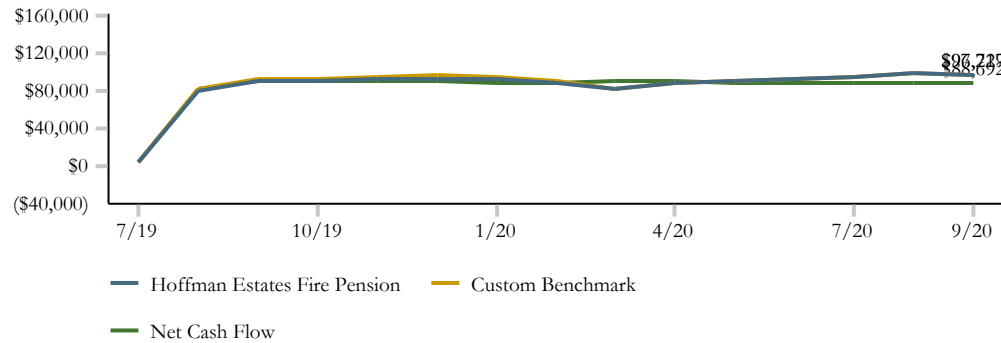
	Sep-2020	Aug-2020	Jul-2020	Jun-2020	May-2020	Apr-2020	Mar-2020	Feb-2020	Jan-2020	Dec-2019	Nov-2019
<b>IL Funds</b>											
Beginning Market Value	1,409,877	921,957	714,514	1,154,569	1,599,796	1,999,899	951,409	104,053	302,507	633,837	1,075,265
Net Contributions	-437,573	415,994	100,647	-511,864	-517,994	-469,135	976,647	774,621	-198,787	-404,547	-442,731
Income	134	186	137	386	924	1,481	1,788	1,092	332	747	1,303
Gain/Loss	71,232	71,741	106,658	71,424	71,842	67,552	70,055	71,644	-	72,469	-
Ending Market Value	1,043,670	1,409,877	921,957	714,514	1,154,569	1,599,796	1,999,899	951,409	104,053	302,507	633,837

**Portfolio Performance (%)**



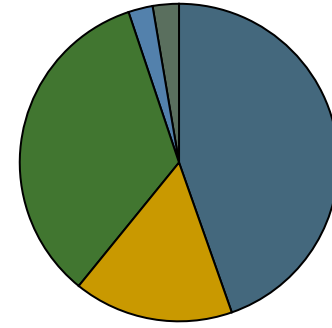
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Hoffman Estates Fire Pension	5.79	5.25	11.33	11.80	08/01/2019
Custom Benchmark	4.76	1.85	7.48	6.93	08/01/2019

	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Hoffman Estates Fire Pension					08/01/2019
Beginning Market Value	91,814	93,403	89,568	4,232	
Net Contributions	80	-1,066	-2,365	84,460	
Fees/Expenses	-76	-196	-249	-259	
Income	346	1,148	2,468	2,751	
Gain/Loss	5,055	3,930	7,798	6,036	
Ending Market Value	97,219	97,219	97,219	97,219	



**Asset Allocation (\$000)**

September 30, 2020 : \$97,219

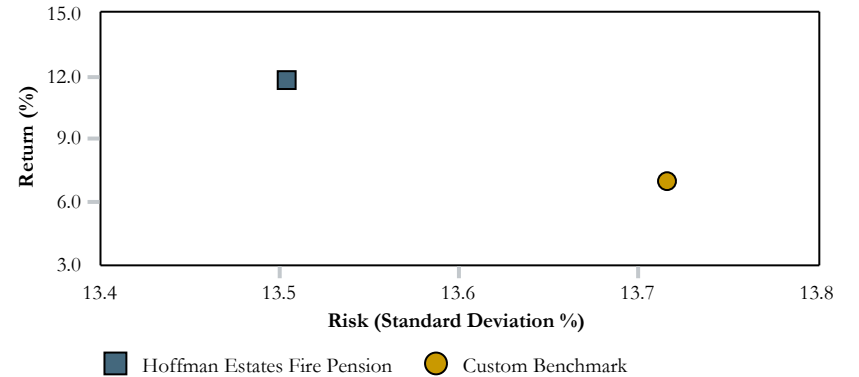


Segments	Market Value (\$000)	Allocation (%)
Domestic Equity	43,392.34	44.63
International Equity	15,757.64	16.21
Domestic Fixed Income	33,073.97	34.02
Alternative Investment	2,408.42	2.48
Cash Equivalent	2,587.02	2.66

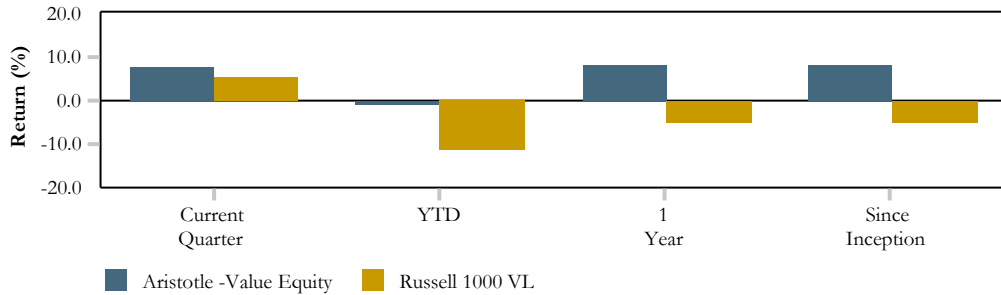
**Portfolio Characteristics vs. Custom Benchmark Since Inception**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Hoffman Estates Fire Pension	0.97	4.78	0.97	0.81	08/01/2019

**Risk/Return Analysis Since 08/19**

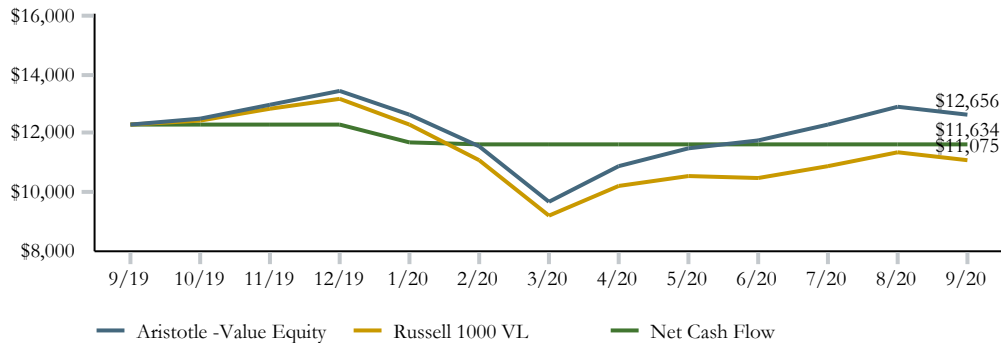


Portfolio Performance (%)



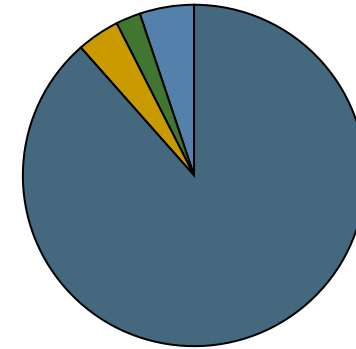
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Aristotle -Value Equity	7.87	-0.86	8.36	8.36	10/01/2019
Russell 1000 VL	5.59	-11.58	-5.02	-5.01	10/01/2019

	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Aristotle -Value Equity					10/01/2019
Beginning Market Value	11,746	13,419	12,286	12,286	
Net Contributions	4	-590	-579	-579	
Fees/Expenses	-18	-54	-74	-74	
Income	51	152	201	201	
Gain/Loss	874	-272	821	821	
Ending Market Value	12,656	12,656	12,656	12,656	



Asset Allocation (\$000)

September 30, 2020 : \$12,656

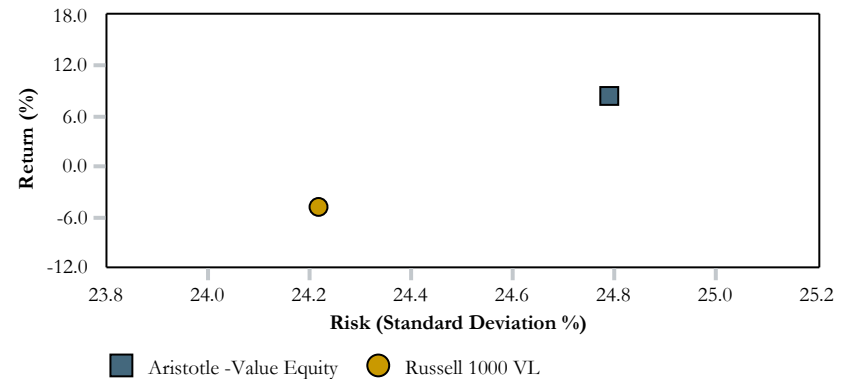


Segments	Market Value (\$000)	Allocation (%)
Domestic Equity	11,199.03	88.49
International Equity	511.28	4.04
Alternative Investment	295.03	2.33
Cash Equivalent	650.33	5.14

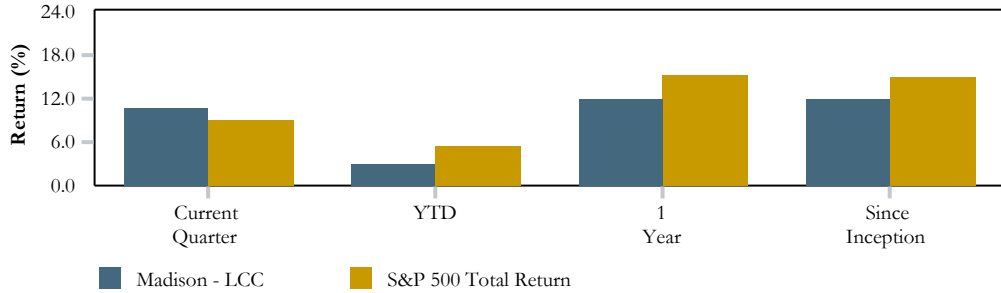
Portfolio Characteristics vs. Russell 1000 VL Since Inception

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Aristotle -Value Equity	1.02	14.19	0.99	0.41	10/01/2019

Risk/Return Analysis Since 10/19

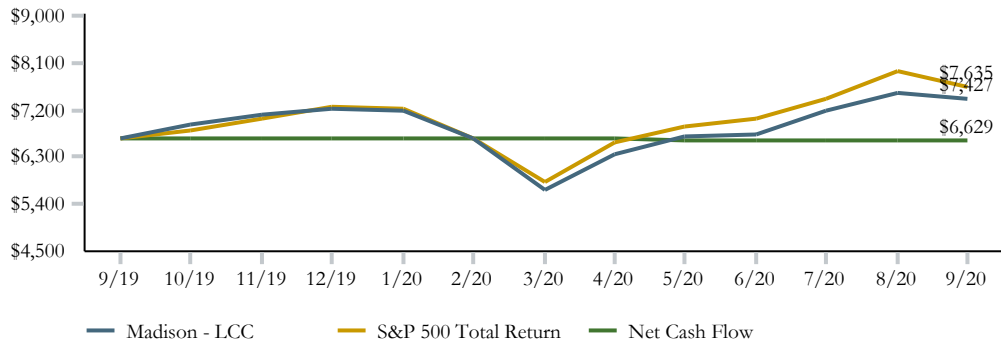


**Portfolio Performance (%)**



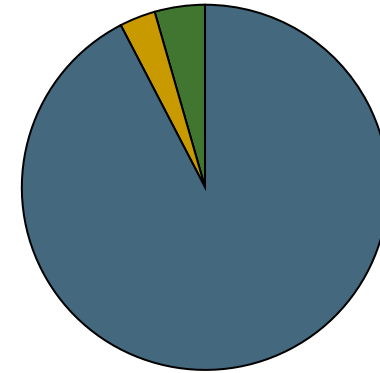
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Madison - LCC	10.67	3.04	12.02	12.02	10/01/2019
S&P 500 Total Return	8.93	5.57	15.15	15.10	10/01/2019

	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Madison - LCC					10/01/2019
Beginning Market Value	6,717	7,228	6,655	6,655	
Net Contributions	2	6	8	8	
Fees/Expenses	-9	-25	-34	-34	
Income	16	67	83	83	
Gain/Loss	701	151	716	716	
Ending Market Value	7,427	7,427	7,427	7,427	



**Asset Allocation (\$000)**

September 30, 2020 : \$7,427

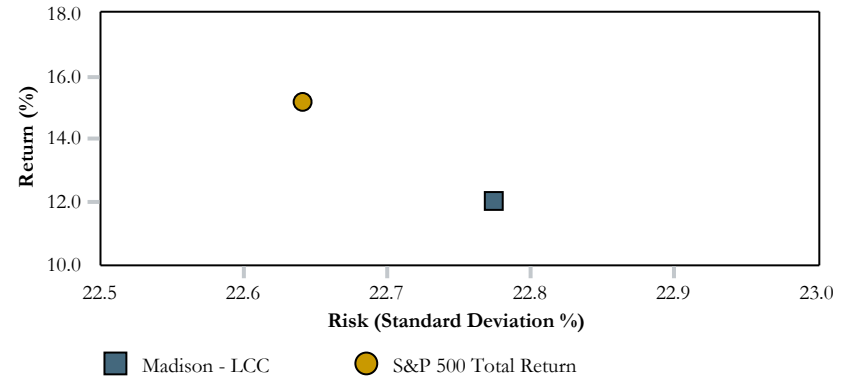


Segments	Market Value (\$000)	Allocation (%)
Domestic Equity	6,862.03	92.39
Alternative Investment	235.34	3.17
Cash Equivalent	329.64	4.44

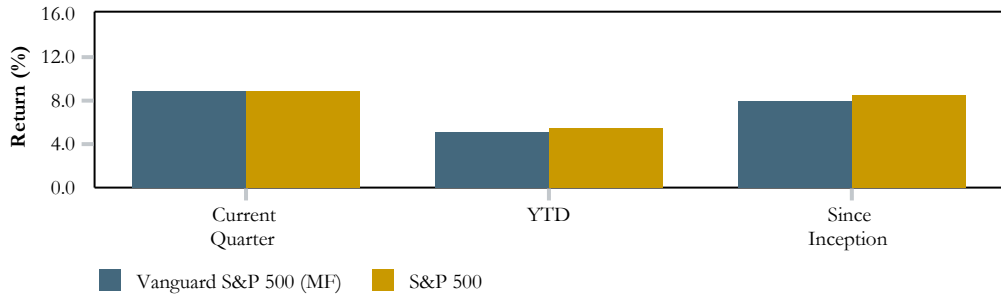
**Portfolio Characteristics vs. S&P 500 Total Return Since Inception**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Madison - LCC	0.98	-2.31	0.95	0.57	10/01/2019

**Risk/Return Analysis Since 10/19**

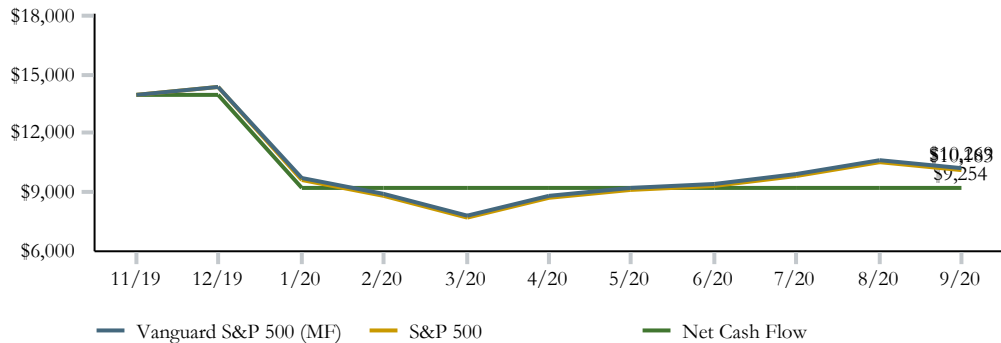


Portfolio Performance (%)



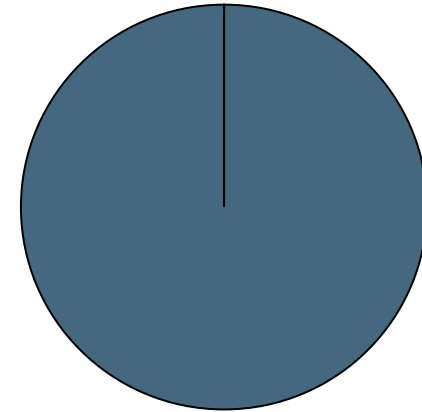
	Current Quarter	YTD	Since Inception	Inception Date
Vanguard S&P 500 (MF)	8.92	5.12	8.06	12/01/2019
S&P 500	8.93	5.50	8.55	12/01/2019

	Current Quarter	YTD	Since Inception	Inception Date
Vanguard S&P 500 (MF)				12/01/2019
Beginning Market Value	9,428	14,345	13,955	
Net Contributions	3	-4,692	-4,690	
Fees/Expenses	-3	-9	-11	
Income	43	129	196	
Gain/Loss	798	496	819	
Ending Market Value	10,269	10,269	10,269	



Asset Allocation (\$000)

September 30, 2020 : \$10,269

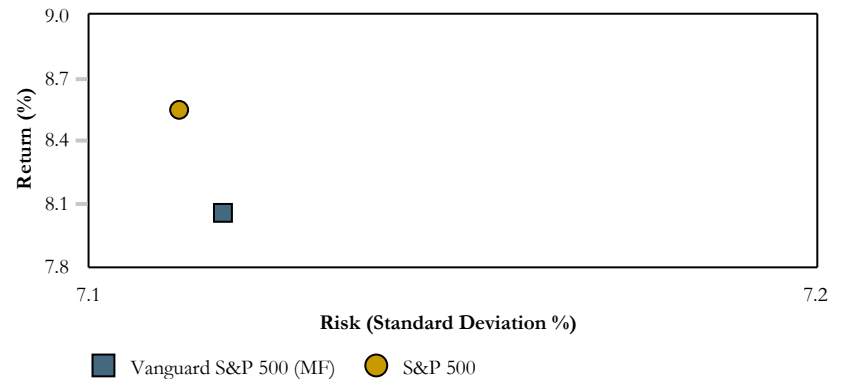


Segments	Market Value (\$000)	Allocation (%)
Domestic Equity	10,268.88	100.00

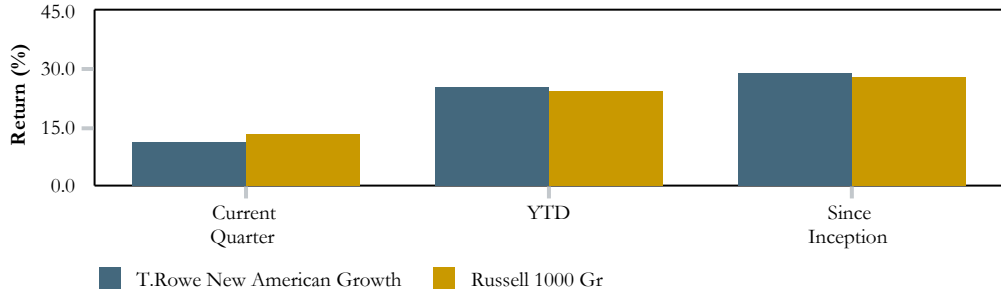
Portfolio Characteristics vs. S&P 500 Since Inception

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Vanguard S&P 500 (MF)	1.00	-0.05	1.00	0.14	12/01/2019

Risk/Return Analysis Since 12/19

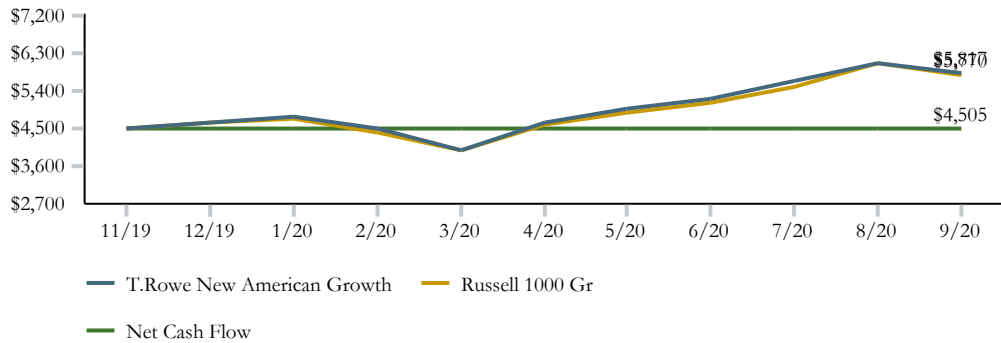


**Portfolio Performance (%)**



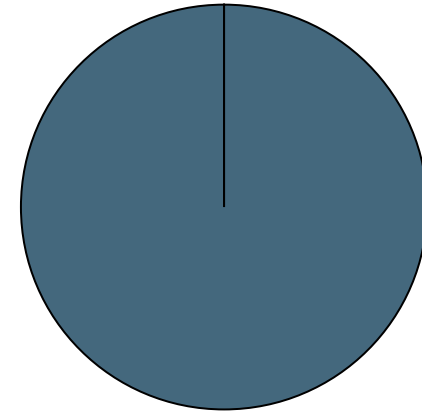
	Current Quarter	YTD	Since Inception	Inception Date
T.Rowe New American Growth	11.38	25.46	29.11	12/01/2019
Russell 1000 Gr	13.22	24.33	28.08	12/01/2019

	Current Quarter	YTD	Since Inception	Inception Date
T.Rowe New American Growth				12/01/2019
Beginning Market Value	5,223	4,636	4,505	
Net Contributions	2	3	3	
Fees/Expenses	-2	-3	-3	
Income	-	-	309	
Gain/Loss	594	1,181	1,003	
Ending Market Value	5,817	5,817	5,817	



**Asset Allocation (\$000)**

September 30, 2020 : \$5,817

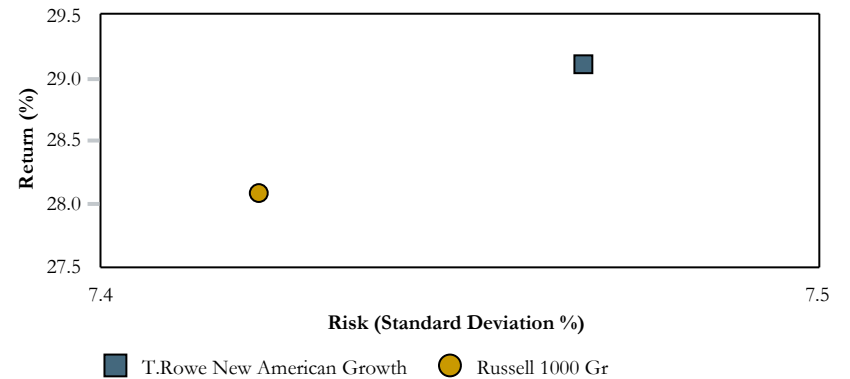


Segments	Market Value (\$000)	Allocation (%)
Domestic Equity	5,817.00	100.00

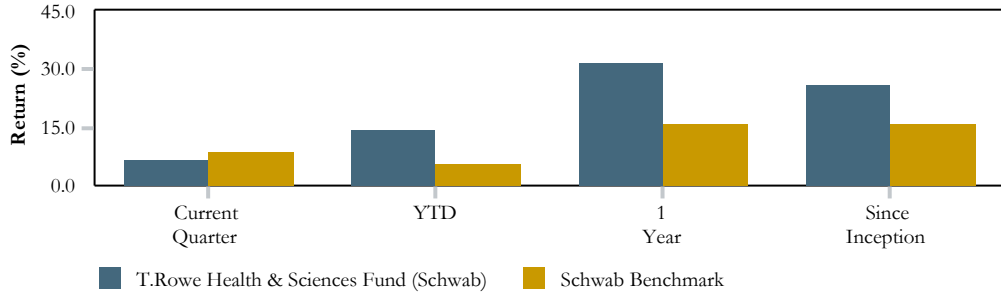
**Portfolio Characteristics vs. Russell 1000 Gr Since Inception**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
T.Rowe New American Growth	0.99	0.11	0.97	0.37	12/01/2019

**Risk/Return Analysis Since 12/19**

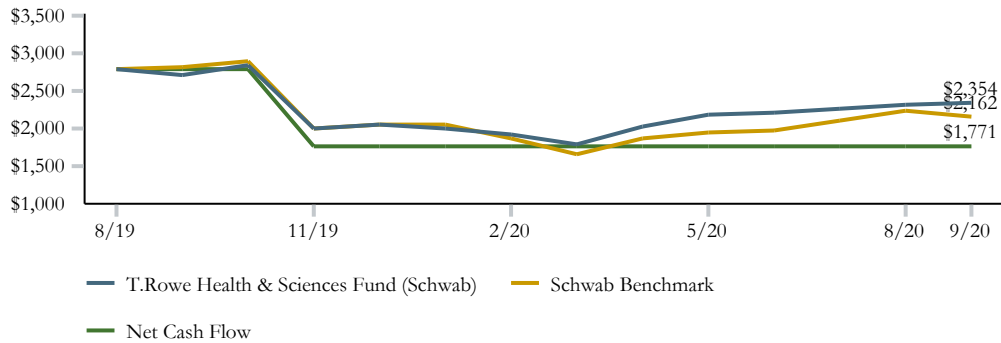


**Portfolio Performance (%)**



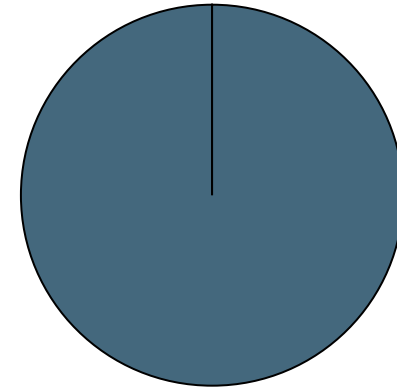
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
T.Rowe Health & Sciences Fund (Schwab)	6.88	14.33	31.93	25.99	09/01/2019
Schwab Benchmark	8.93	5.57	15.88	15.77	09/01/2019

	Current Quarter	YTD	1 Year	Since Inception	Inception Date
T.Rowe Health & Sciences Fund (Schwab)					09/01/2019
Beginning Market Value	2,203	2,059	2,721	2,795	
Net Contributions	-	-	-1,024	-1,024	
Fees/Expenses	-	-	-	-	
Income	-	-	122	122	
Gain/Loss	151	295	535	461	
Ending Market Value	2,354	2,354	2,354	2,354	



**Asset Allocation (\$000)**

September 30, 2020 : \$2,354

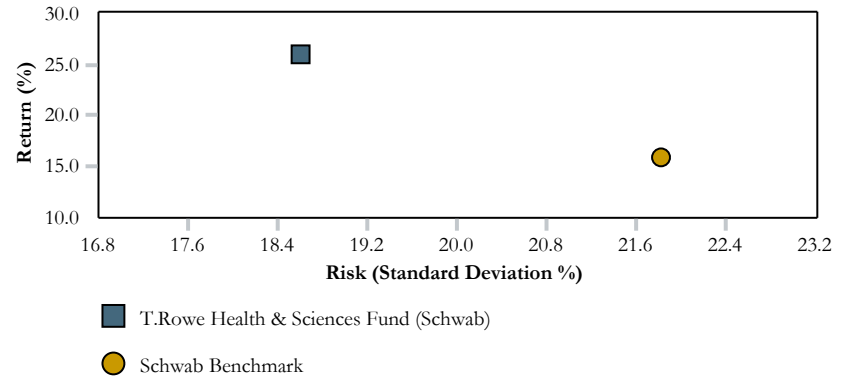


Segments	Market Value (\$000)	Allocation (%)
Domestic Equity	2,354.25	100.00
Cash Equivalent	0.06	0.00

**Portfolio Characteristics vs. Schwab Benchmark Since Inception**

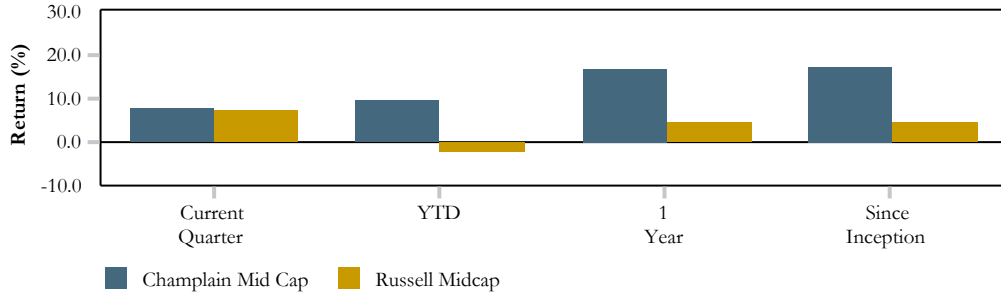
	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
T.Rowe Health & Sciences Fund (Schwab)	0.72	13.44	0.71	1.28	09/01/2019

**Risk/Return Analysis Since 09/19**



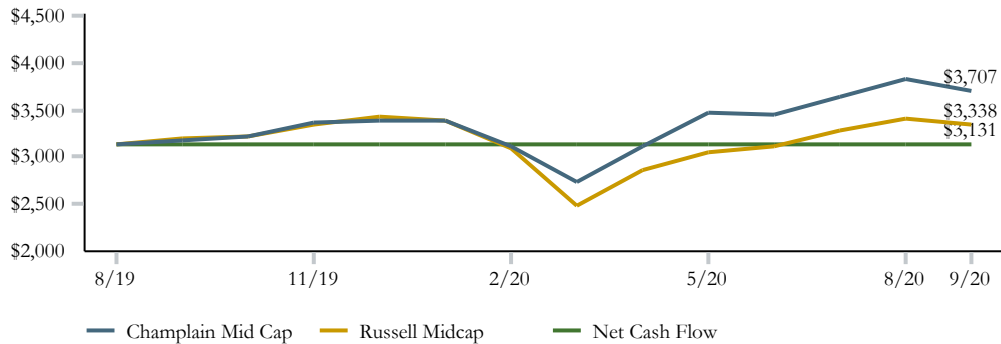


**Portfolio Performance (%)**



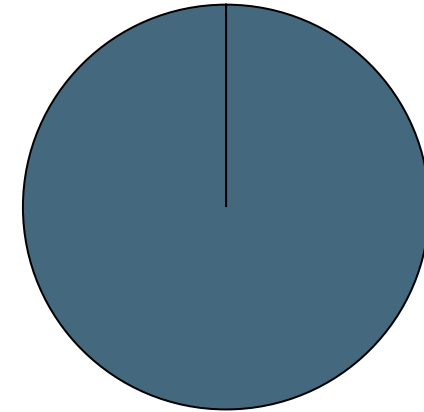
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Champlain Mid Cap	7.64	9.63	16.77	17.12	09/06/2019
Russell Midcap	7.46	-2.35	4.55	4.57	09/06/2019

	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Champlain Mid Cap					09/06/2019
Beginning Market Value	3,444	3,382	3,175	3,131	
Net Contributions	1	3	4	4	
Fees/Expenses	-1	-3	-4	-4	
Income	-	-	130	130	
Gain/Loss	263	326	402	446	
Ending Market Value	3,707	3,707	3,707	3,707	



**Asset Allocation (\$000)**

September 30, 2020 : \$3,707

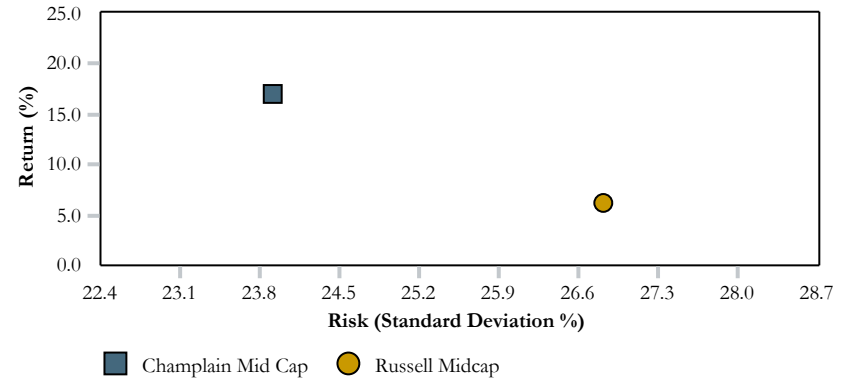


Segments	Market Value (\$000)	Allocation (%)
Domestic Equity	3,707.24	100.00

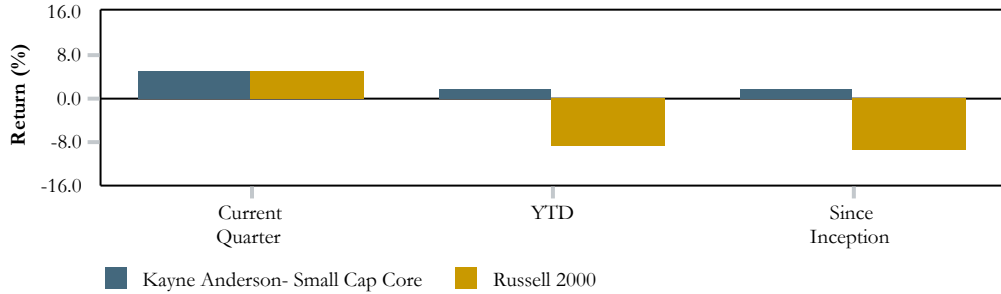
**Portfolio Characteristics vs. Russell Midcap Since Inception**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Champlain Mid Cap	0.85	10.78	0.91	0.73	09/06/2019

**Risk/Return Analysis Since 09/19**

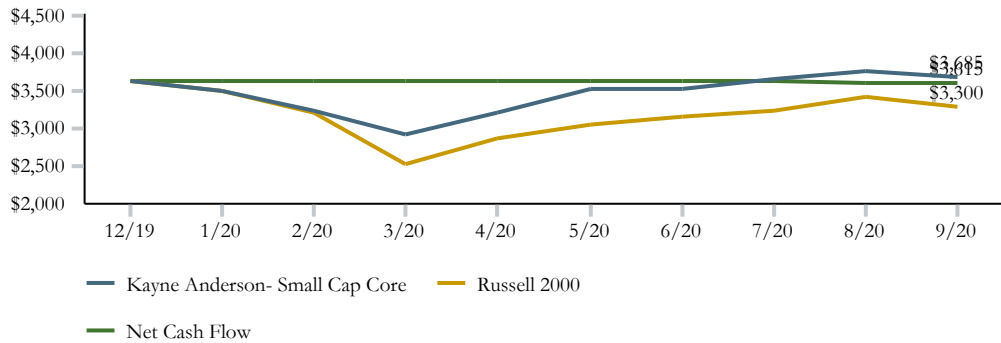


Portfolio Performance (%)



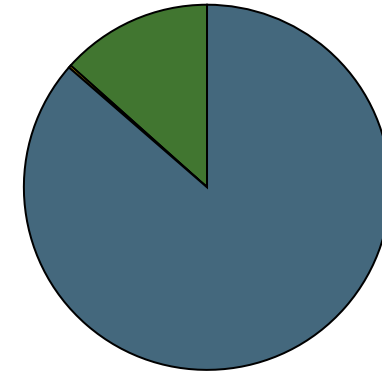
	Current Quarter	YTD	Since Inception	Inception Date
Kayne Anderson- Small Cap Core	5.19	1.92	1.92	01/16/2020
Russell 2000	4.93	-8.69	-9.47	01/16/2020

	Current Quarter	YTD	Since Inception	Inception Date
Kayne Anderson- Small Cap Core				01/16/2020
Beginning Market Value	3,514	3,627	3,627	
Net Contributions	1	2	2	
Fees/Expenses	-13	-14	-14	
Income	11	36	36	
Gain/Loss	171	34	34	
Ending Market Value	3,685	3,685	3,685	



Asset Allocation (\$000)

September 30, 2020 : \$3,685

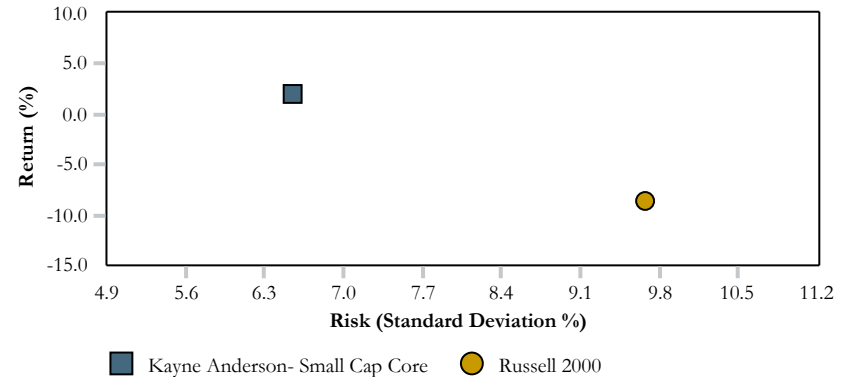


Segments	Market Value (\$000)	Allocation (%)
Domestic Equity	3,183.92	86.40
International Equity	8.50	0.23
Cash Equivalent	492.59	13.37

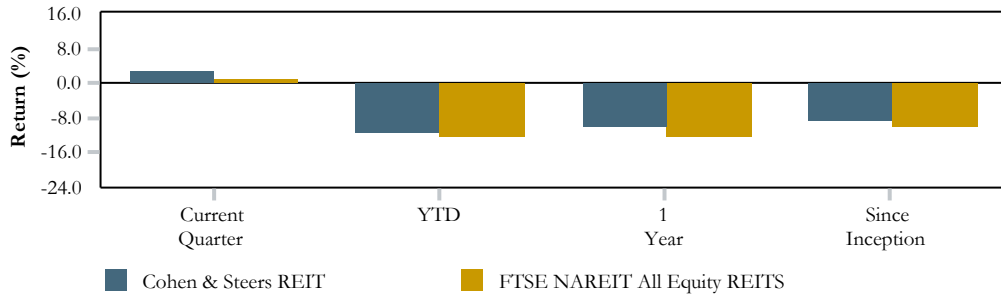
Portfolio Characteristics vs. Russell 2000 Since Inception

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Kayne Anderson- Small Cap Core	0.63	0.74	0.86	0.06	01/16/2020

Risk/Return Analysis Since 01/20

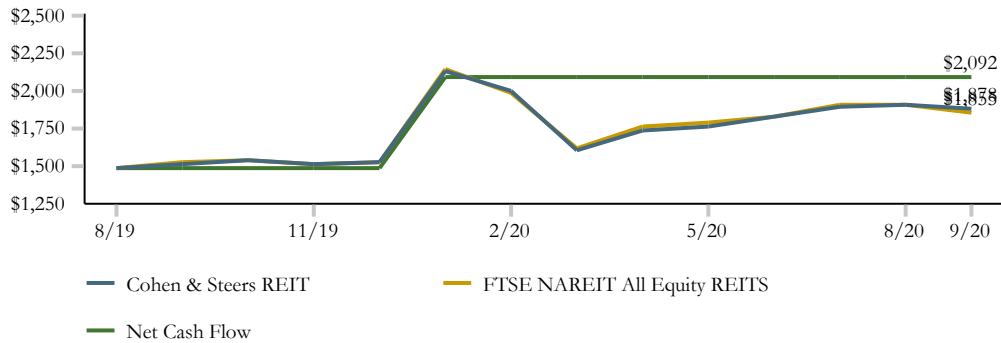


Portfolio Performance (%)



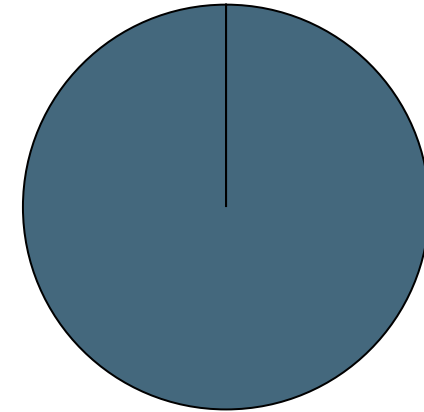
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Cohen & Steers REIT	3.02	-11.15	-10.13	-8.49	09/01/2019
FTSE NAREIT All Equity REITS	1.19	-12.27	-12.15	-9.70	09/01/2019

	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Cohen & Steers REIT					09/01/2019
Beginning Market Value	1,823	1,525	1,509	1,493	
Net Contributions	1	601	601	601	
Fees/Expenses	-1	-1	-2	-2	
Income	11	82	123	133	
Gain/Loss	44	-329	-353	-347	
Ending Market Value	1,878	1,878	1,878	1,878	



Asset Allocation (\$000)

September 30, 2020 : \$1,878

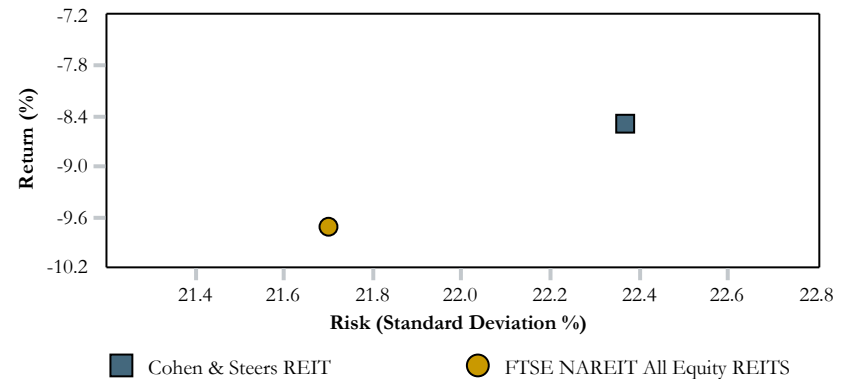


Segments	Market Value (\$000)	Allocation (%)
Alternative Investment	1,878.04	100.00

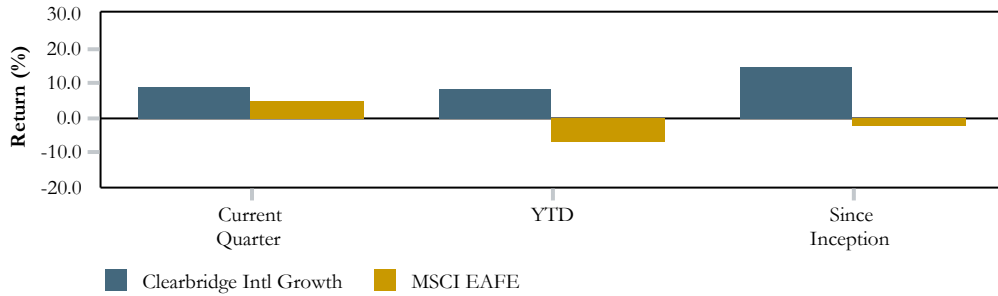
Portfolio Characteristics vs. FTSE NAREIT All Equity REITS

	Beta	Alpha	R-Squared	Sharpe Ratio	Incept Date
Cohen & Steers REIT	1.03	1.77	0.99	-0.32	09/01/20

Risk/Return Analysis Since 09/19

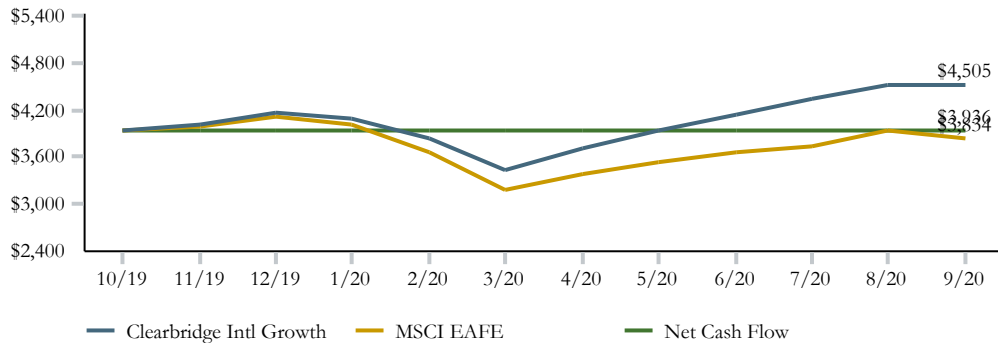


**Portfolio Performance (%)**



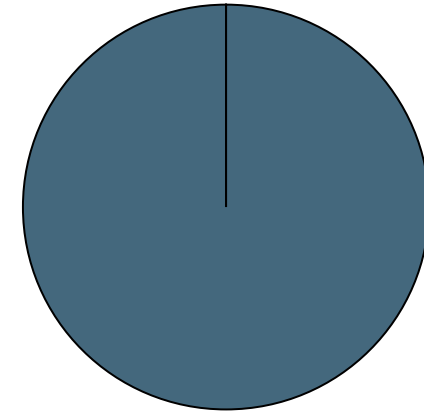
	Current Quarter	YTD	Since Inception	Inception Date
Clearbridge Intl Growth	8.75	8.27	14.48	11/01/2019
MSCI EAFE	4.88	-6.73	-2.58	11/01/2019

	Current Quarter	YTD	Since Inception	Inception Date
Clearbridge Intl Growth				11/01/2019
Beginning Market Value	4,143	4,161	3,936	
Net Contributions	1	4	3	
Fees/Expenses	-1	-4	-4	
Income	-	-	13	
Gain/Loss	363	344	557	
Ending Market Value	4,505	4,505	4,505	



**Asset Allocation (\$000)**

September 30, 2020 : \$4,505

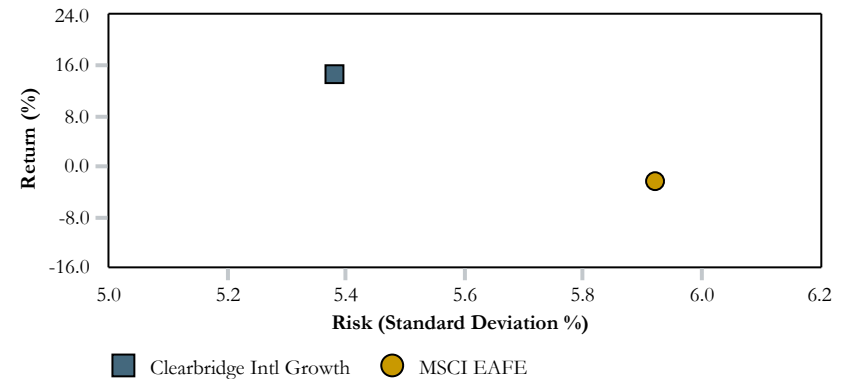


Segments	Market Value (\$000)	Allocation (%)
International Equity	4,505.46	100.00

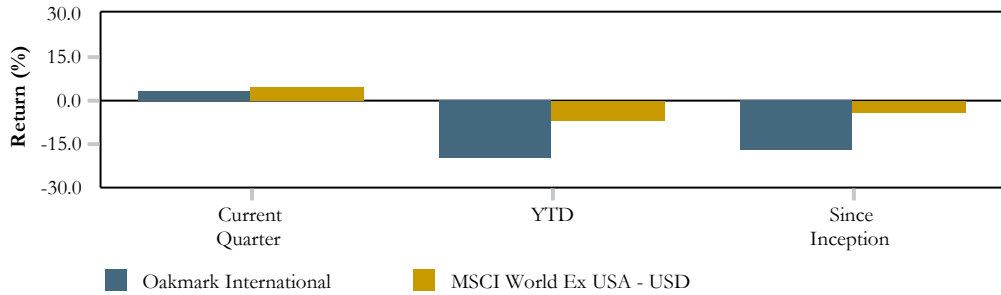
**Portfolio Characteristics vs. MSCI EAFE Since Inception**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Clearbridge Intl Growth	0.90	1.43	0.98	0.24	11/01/2019

**Risk/Return Analysis Since 11/19**

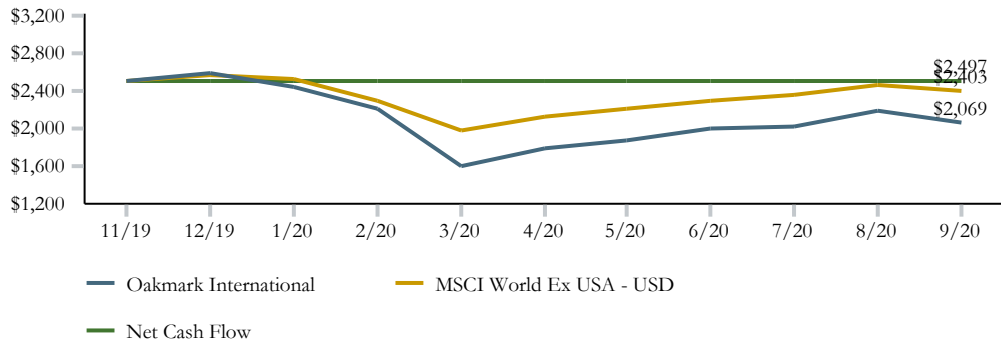


**Portfolio Performance (%)**



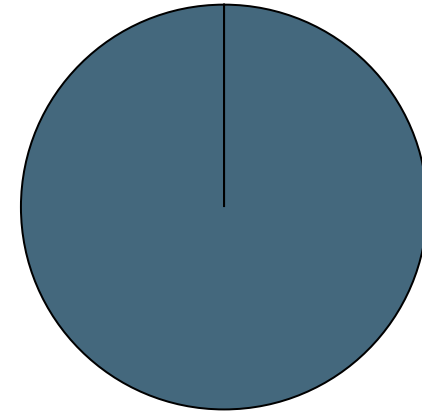
	Current Quarter	YTD	Since Inception	Inception Date
Oakmark International	3.75	-20.07	-17.16	12/01/2019
MSCI World Ex USA - USD	5.01	-6.75	-3.75	12/01/2019

	Current Quarter	YTD	Since Inception	Inception Date
Oakmark International				12/01/2019
Beginning Market Value	1,994	2,588	2,497	
Net Contributions	1	1	1	
Fees/Expenses	-1	-1	-1	
Income	-	-	51	
Gain/Loss	75	-519	-479	
Ending Market Value	2,069	2,069	2,069	



**Asset Allocation (\$000)**

September 30, 2020 : \$2,069

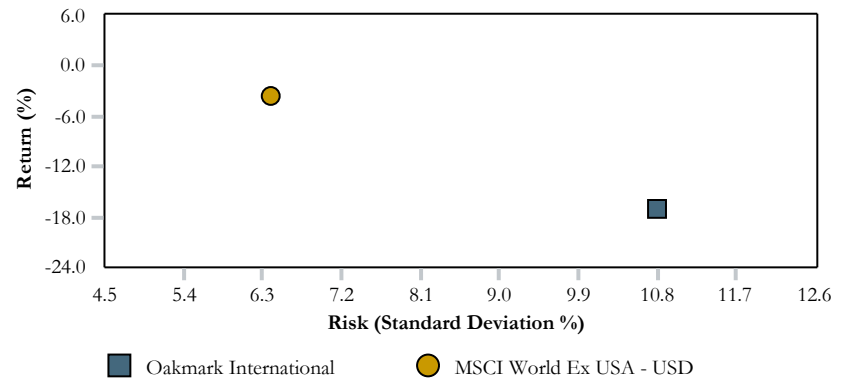


Segments	Market Value (\$000)	Allocation (%)
International Equity	2,068.69	100.00

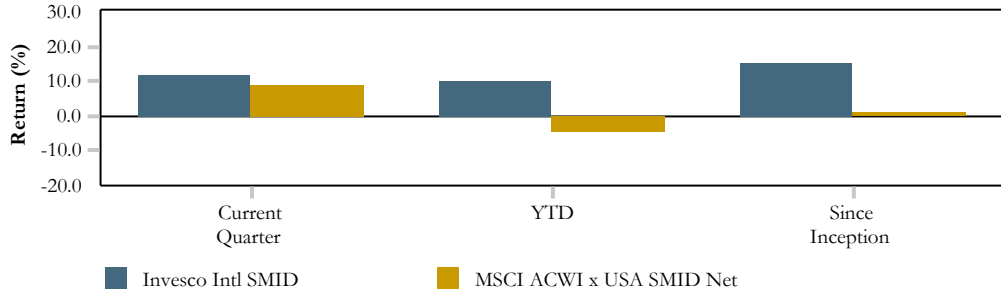
**Portfolio Characteristics vs. MSCI World Ex USA - USD Since Inception**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Oakmark International	1.64	-0.93	0.94	-0.12	12/01/2019

**Risk/Return Analysis Since 12/19**

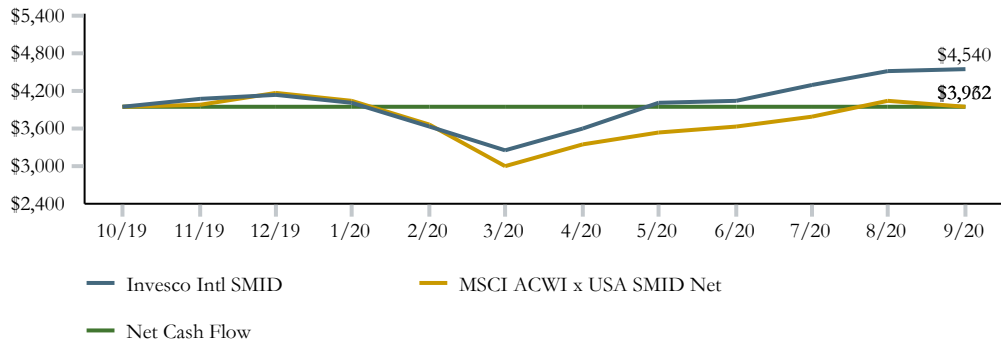


**Portfolio Performance (%)**



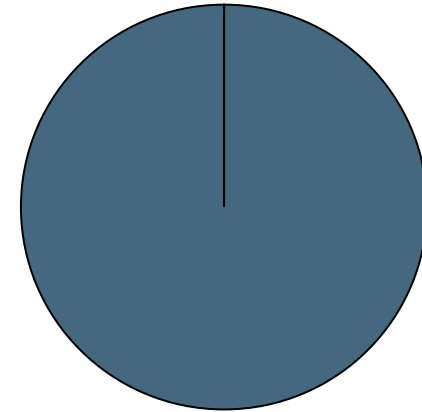
	Current Quarter	YTD	Since Inception	Inception Date
Invesco Intl SMID	12.04	9.92	15.47	11/01/2019
MSCI ACWI x USA SMID Net	8.93	-4.89	0.77	11/01/2019

	Current Quarter	YTD	Since Inception	Inception Date
Invesco Intl SMID				11/01/2019
Beginning Market Value	4,052	4,130	3,932	
Net Contributions	1	3	3	
Fees/Expenses	-1	-3	-3	
Income	-	-	196	
Gain/Loss	488	410	412	
Ending Market Value	4,540	4,540	4,540	



**Asset Allocation (\$000)**

September 30, 2020 : \$4,540

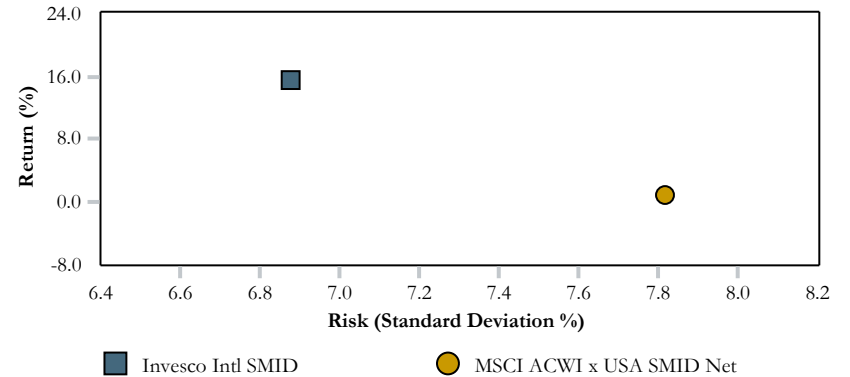


Segments	Market Value (\$000)	Allocation (%)
International Equity	4,539.79	100.00

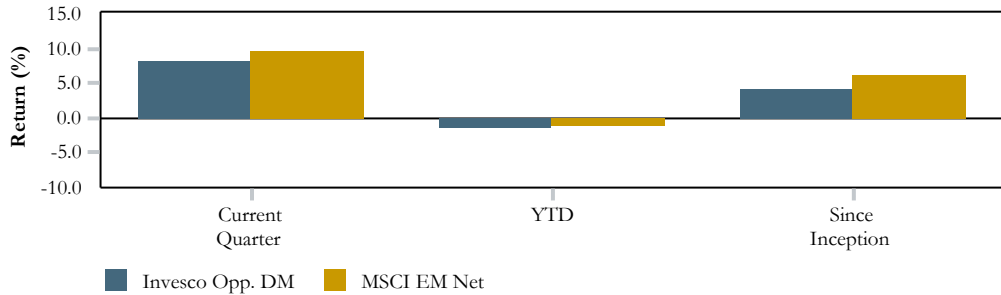
**Portfolio Characteristics vs. MSCI ACWI x USA SMID Net Since**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Invesco Intl SMID	0.81	1.23	0.85	0.21	11/01/2019

**Risk/Return Analysis Since 11/19**

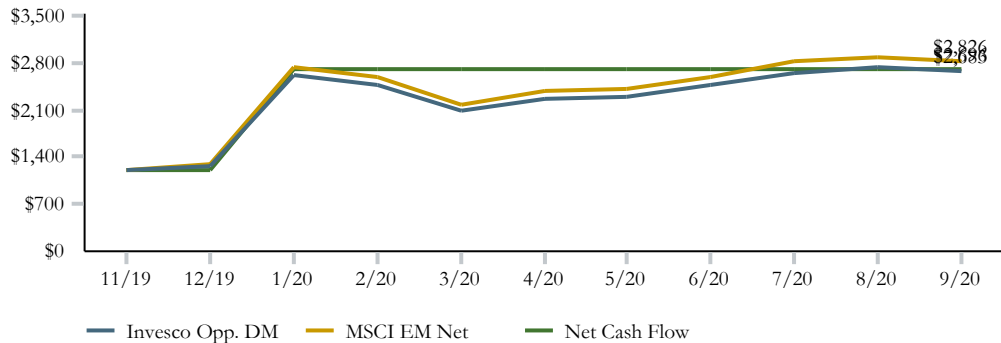


**Portfolio Performance (%)**



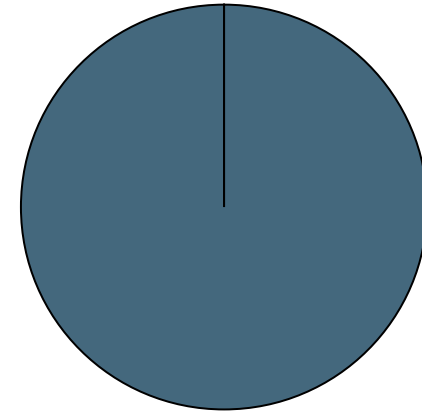
	Current Quarter	YTD	Since Inception	Inception Date
Invesco Opp. DM	8.27	-1.42	4.17	12/01/2019
MSCI EM Net	9.56	-1.16	6.21	12/01/2019

	Current Quarter	YTD	Since Inception	Inception Date
Invesco Opp. DM				12/01/2019
Beginning Market Value	2,478	1,264	1,196	
Net Contributions	1	1,502	1,502	
Fees/Expenses	-1	-2	-2	
Income	-	-	30	
Gain/Loss	205	-81	-43	
Ending Market Value	2,683	2,683	2,683	



**Asset Allocation (\$000)**

September 30, 2020 : \$2,683

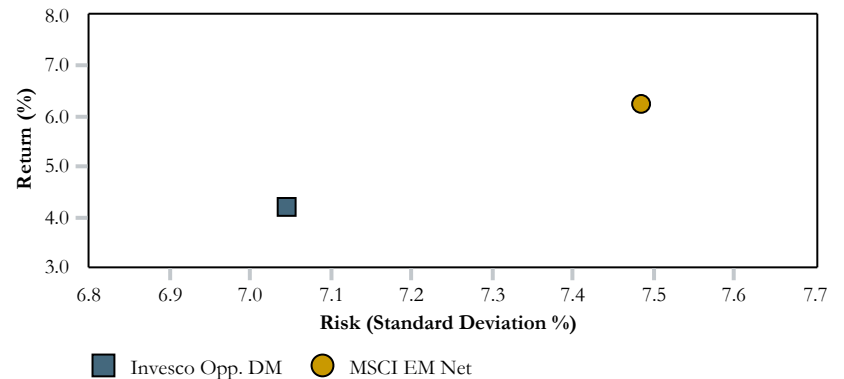


Segments	Market Value (\$000)	Allocation (%)
International Equity	2,683.09	100.00

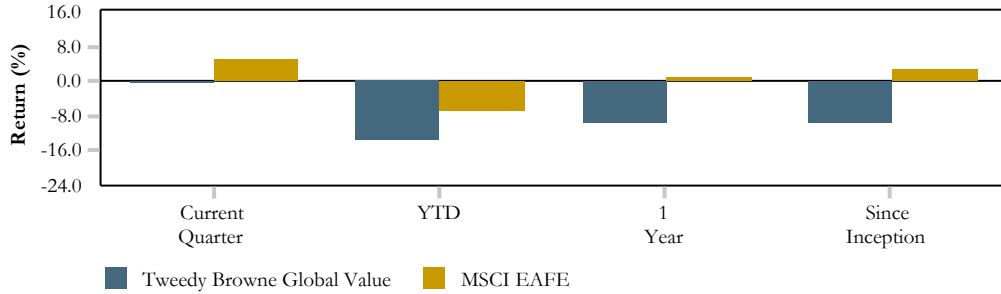
**Portfolio Characteristics vs. MSCI EM Net Since Inception**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Invesco Opp. DM	0.93	-0.16	0.98	0.08	12/01/2019

**Risk/Return Analysis Since 12/19**

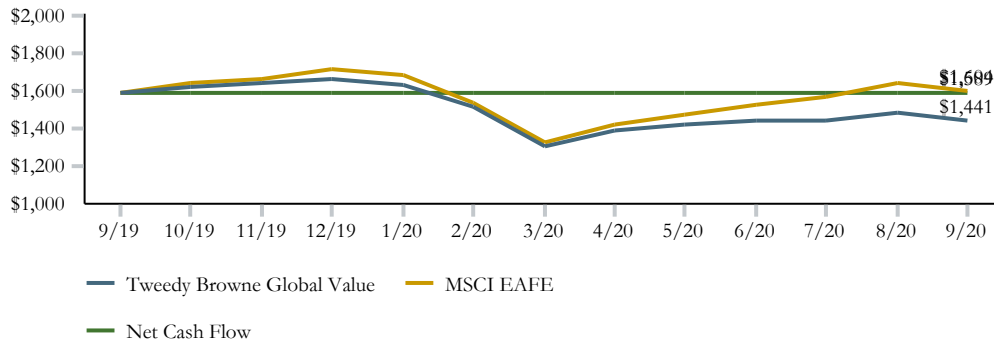


Portfolio Performance (%)



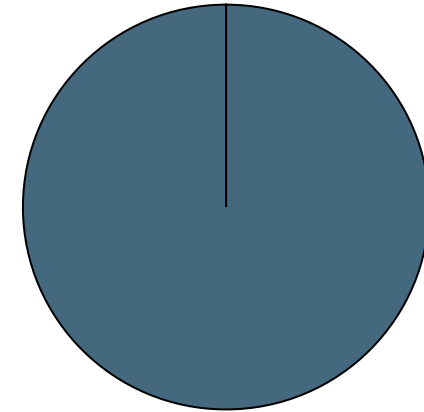
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Tweedy Browne Global Value	0.08	-13.50	-9.36	-9.36	10/07/2019
MSCI EAFE	4.88	-6.73	0.93	2.81	10/07/2019

	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Tweedy Browne Global Value					10/07/2019
Beginning Market Value	1,440	1,666	1,590	1,590	
Net Contributions	-	1	1	1	
Fees/Expenses	-	-1	-2	-2	
Income	-	-	31	31	
Gain/Loss	1	-225	-179	-179	
Ending Market Value	1,441	1,441	1,441	1,441	



Asset Allocation (\$000)

September 30, 2020 : \$1,441

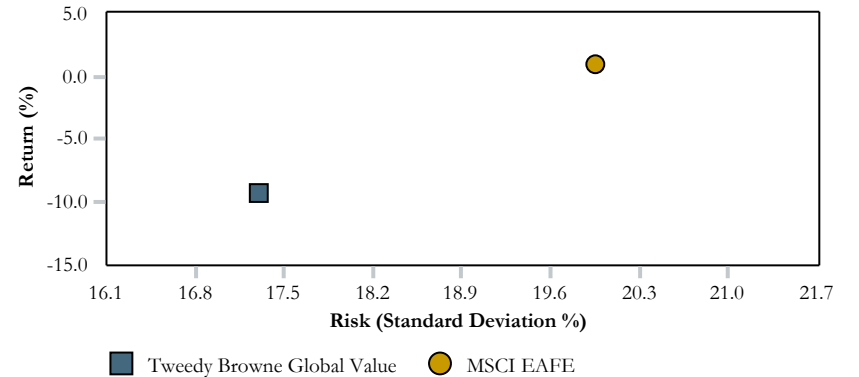


Segments	Market Value (\$000)	Allocation (%)
International Equity	1,440.83	100.00

Portfolio Characteristics vs. MSCI EAFE Since Inception

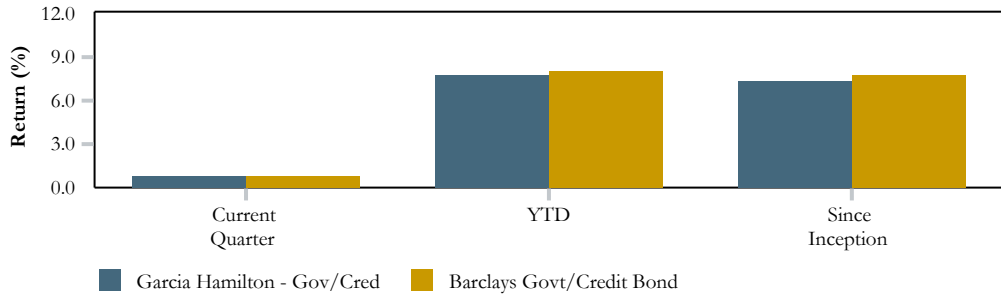
	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Tweedy Browne Global Value	0.85	-10.26	0.97	-0.53	10/07/2019

Risk/Return Analysis Since 10/19



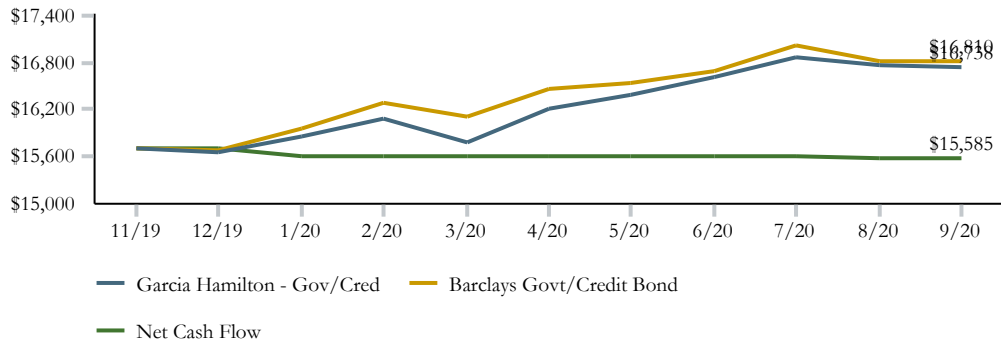


**Portfolio Performance (%)**



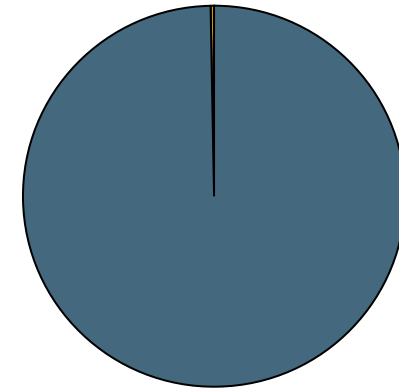
	Current Quarter	YTD	Since Inception	Inception Date
Garcia Hamilton - Gov/Cred	0.82	7.82	7.38	12/01/2019
Barclays Govt/Credit Bond	0.78	8.04	7.83	12/01/2019

	Current Quarter	YTD	Since Inception	Inception Date
Garcia Hamilton - Gov/Cred				12/01/2019
Beginning Market Value	16,618	15,652	15,716	
Net Contributions	-2	-93	-91	
Fees/Expenses	-15	-38	-40	
Income	96	291	316	
Gain/Loss	41	926	837	
Ending Market Value	16,738	16,738	16,738	



**Asset Allocation (\$000)**

September 30, 2020 : \$16,738

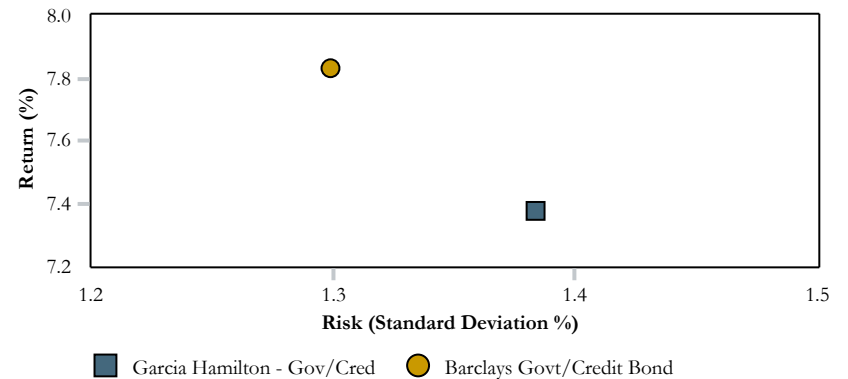


Segments	Market Value (\$000)	Allocation (%)
Domestic Fixed Income	16,689.50	99.71
Cash Equivalent	48.59	0.29

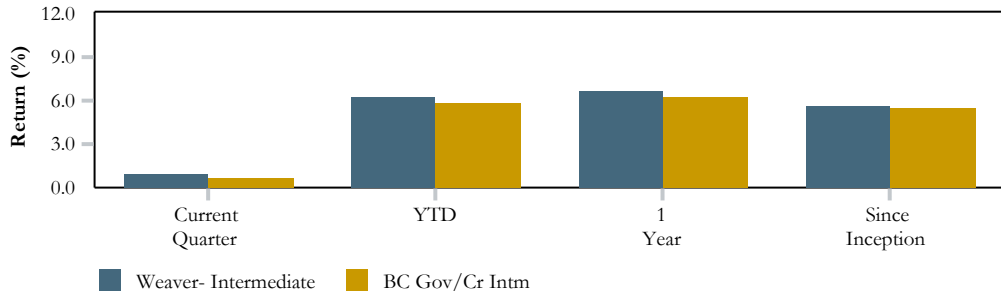
**Portfolio Characteristics vs. Barclays Govt/Credit Bond Since Inception**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Garcia Hamilton - Gov/Cred	0.99	-0.03	0.86	0.47	12/01/2019

**Risk/Return Analysis Since 12/19**

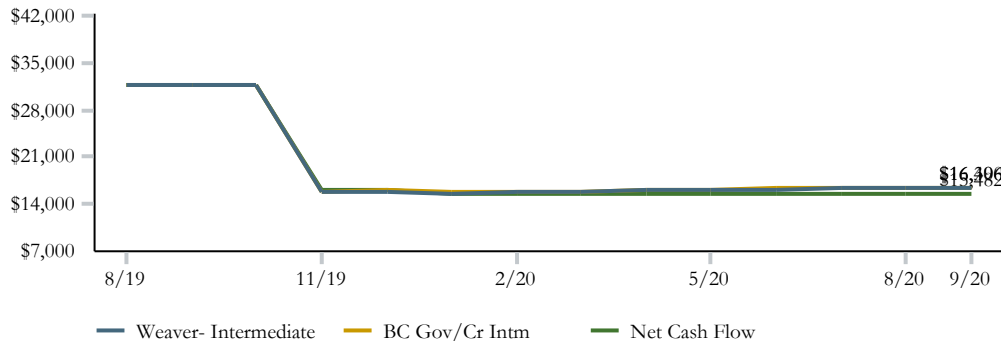


**Portfolio Performance (%)**



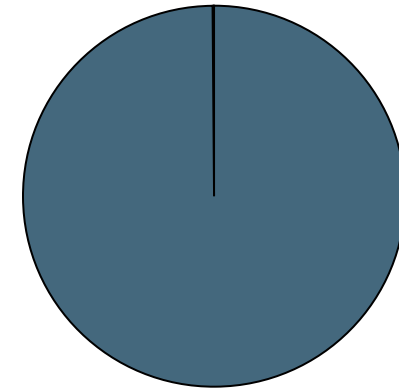
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Weaver- Intermediate	0.95	6.26	6.68	5.65	09/01/2019
BC Gov/Cr Intm	0.62	5.93	6.32	5.44	09/01/2019

	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Weaver- Intermediate					09/01/2019
Beginning Market Value	16,258	15,953	31,621	31,744	
Net Contributions	5	-486	-16,251	-16,213	
Fees/Expenses	-11	-36	-49	-49	
Income	118	384	601	700	
Gain/Loss	37	590	484	224	
Ending Market Value	16,406	16,406	16,406	16,406	



**Asset Allocation (\$000)**

September 30, 2020 : \$16,406

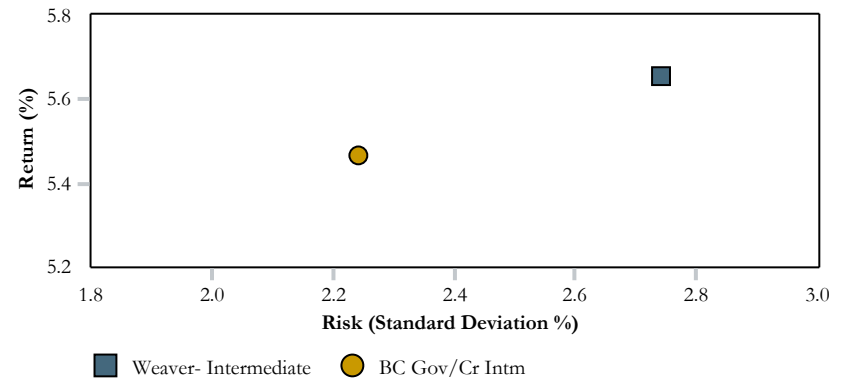


Segments	Market Value (\$000)	Allocation (%)
Domestic Fixed Income	16,384.47	99.87
Cash Equivalent	21.87	0.13

**Portfolio Characteristics vs. BC Gov/Cr Intm Since Inception**

	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Weaver- Intermediate	1.18	-0.77	0.93	1.59	09/01/2019

**Risk/Return Analysis Since 09/19**



**Hoffman Estates Fire Pension Fund**  
**Hoffman Estates Fire Pension**  
**Since Inception Ending September 30, 2020**

	January	February	March	April	May	June	July	August	September	October	November	December	Year
2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.29	1.01	1.81	2.17	1.69	N/A
2020	-0.25	-4.37	-9.08	7.91	4.30	1.90	3.86	3.24	-1.34	N/A	N/A	N/A	N/A

As of September 30, 2020

Passive Portfolios	Weight (%)	Passive Portfolios	Weight (%)
<b>Custom Benchmark : Aug-2019</b>		<b>Schwab Benchmark : Sep-2019</b>	
S&P 500	35.00	S&P 500	65.00
S&P 400 MidCap Net	4.00	MSCI US Small Growth	35.00
S&P 600 SC	4.00		
FTSE NAREIT All Equity REITS	3.00	<b>Schwab Benchmark : Dec-2019</b>	
MSCI EAFE	16.00	S&P 500	100.00
MSCI EM Net	3.00	MSCI US Small Growth	0.00
BC Gov/Cr Intm	33.00		
90 Day T-Bill	2.00		

# Performance Appendix

Performance Data below is net of fees. Please see the Morgan Stanley Smith Barney LLC Form ADV Part 2 Brochure for advisory accounts and/or any applicable brokerage account trade confirmation statements for a full disclosure of the applicable charges, fees and expenses. Your Financial Advisor will provide those documents to you upon request.

Account Name	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Aristotle -Value Equity	7.71	-1.29	7.72	--	--	--	7.72	10/01/2019
Cash Management Account	12.50	12.81	13.21	--	--	--	11.41	08/01/2019
Champlain Mid Cap	7.61	9.53	16.63	--	--	--	16.73	09/06/2019
Clearbridge Intl Growth	8.72	8.18	--	--	--	--	14.38	11/01/2019
Cohen & Steers REIT	2.99	-11.23	-10.23	--	--	--	-8.59	09/01/2019
Garcia Hamilton - Gov/Cred	0.73	7.57	--	--	--	--	7.11	12/01/2019
IL Funds	28.56	86.35	131.55	--	--	--	113.56	07/01/2019
Invesco Intl SMID	12.00	9.83	--	--	--	--	15.37	11/01/2019
Invesco Opp. DM	8.24	-1.51	--	--	--	--	4.07	12/01/2019
Kayne Anderson- Small Cap Core	4.84	1.52	--	--	--	--	1.52	01/16/2020
Madison - LCC	10.54	2.66	11.47	--	--	--	11.47	10/01/2019
Oakmark International	3.72	-20.11	--	--	--	--	-17.21	12/01/2019
T.Rowe Health & Sciences Fund (Schwab)	6.88	14.33	31.93	--	--	--	25.99	09/01/2019
T.Rowe New American Growth	11.35	25.39	--	--	--	--	29.04	12/01/2019
Tweedy Browne Global Value	0.05	-13.58	--	--	--	--	-11.44	11/01/2019
Vanguard S&P 500 (MF)	8.89	5.03	--	--	--	--	7.95	12/01/2019
Weaver- Intermediate	0.88	6.03	6.40	--	--	--	5.40	09/01/2019

All performance above are Time Weighted(TWR) performance

## Glossary of Terms

**Active Contribution Return:** The gain or loss percentage of an investment relative to the performance of the investment benchmark.

**Active Exposure:** The percentage difference in weight of the portfolio compared to its policy benchmark.

**Active Return:** Arithmetic difference between the manager's return and the benchmark's return over a specified time period.

**Actual Correlation:** A measure of the correlation (linear dependence) between two variables X and Y, with a value between +1 and -1 inclusive. This is also referred to as coefficient of correlation.

**Alpha:** A measure of a portfolio's time weighted return in excess of the market's return, both adjusted for risk. A positive alpha indicates that the portfolio outperformed the market on a risk-adjusted basis, and a negative alpha indicates the portfolio did worse than the market.

**Best Quarter:** The highest quarterly return for a certain time period.

**Beta:** A measure of the sensitivity of a portfolio's time weighted return (net of fees) against that of the market. A beta greater than 1.00 indicates volatility greater than the market.

**Consistency:** The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

**Core:** Refers to an investment strategy mandate that is blend of growth and value styles without a pronounced tilt toward either style.

**Cumulative Selection Return (Cumulative Return):** Cumulative investment performance over a specified period of time.

**Distribution Rate:** The most recent distribution paid, annualized, and then divided by the current market price. Distribution rate may consist of investment income, short-term capital gains, long-term capital gains,

and/or return of capital.

**Down Market Capture:** The ratio of average portfolio returns over the benchmark during periods of negative benchmark return. Lower values indicate better product performance.

**Downside Risk:** A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. The higher the value, the more risk the product has.

**Downside Semi Deviation:** A statistical calculation that measures the volatility of returns below a minimum acceptable return. This return measure isolates the negative portion of volatility: the larger the number, the greater the volatility.

**Drawdown:** A drawdown is the peak-to-trough decline during a specific period of an investment, fund or commodity.

**Excess over Benchmark:** The percentage gain or loss of an investment relative to the investment's benchmark.

**Excess Return:** Arithmetic difference between the manager's return and the risk-free return over a specified time period.

**Growth:** A diversified investment strategy which includes investment selections that have capital appreciation as the primary goal, with little or no dividend payouts. These strategies can include reinvestment in expansion, acquisitions, and/or research and development opportunities.

**Growth of Dollar:** The aggregate amount an investment has gained or lost over a certain time period, also referred to as Cumulative Return, stated in terms of the amount to which an initial dollar investment would have grown over the given time period.

**Investment Decision Process (IDP):** A model for structuring the investment process and implementing the correct attribution methodologies. The IDP includes every decision made concerning the division of the assets under management over the various asset categories. To analyze each decision's contribution to the total return, a modeling approach must measure the marginal value of every individual decision. In this respect, the hierarchy of the decisions becomes very important. We therefore use the IDP model, which serves as a proper foundation for registering the decisions and relating them to each other.

**Information Ratio:** Measured by dividing the active rate of return by the tracking error. The higher the Information Ratio, the more value-added contribution by the manager.

**Jensen's Alpha:** The Jensen's alpha measure is a risk-adjusted performance measure that represents the average return on a portfolio or investment above or below that predicted by the capital asset pricing model (CAPM) given the portfolio's or investment's beta and the average market return. This metric is also commonly referred to as alpha..

**Kurtosis:** A statistical measure that is used to describe the distribution, or skewness, of observed data around the mean, sometimes referred to as the volatility of volatility.

**Maximum Drawdown:** The drawdown is defined as the percent retrenchment from a fund's peak to the fund's trough value. It is in effect from the time the fund's retrenchment begins until a new fund high is reached. The maximum drawdown encompasses both the period from the fund's peak to the fund's valley

(length), and the time from the fund's valley to a new fund high (recovery). It measures the largest percentage drawdown that has occurred in any fund's data record.

**Modern Portfolio Theory (MPT):** An investment analysis theory on how risk-averse investors can construct portfolios to optimize or maximize expected return based on a given level of market risk, emphasizing that risk is an inherent part of higher reward.

**Mutual Fund (MF):** An investment program funded by shareholders that trade in diversified holdings and is professionally managed.

**Peer Group:** A combination of funds that share the same investment style combined as a group for comparison purposes.

**Peer/ Plan Sponsor Universe:** A combination of asset pools of total plan investments by specific sponsor and plan types for comparison purposes.

**Performance Ineligible Assets:** Performance returns are not calculated for certain assets because accurate valuations and transaction data for these assets are not processed or maintained by us. Common examples of these include life insurance, some annuities and some assets held externally.

**Performance Statistics:** A generic term for various measures of investment performance measurement terms.

**Portfolio Characteristics:** A generic term for various measures of investment portfolio characteristics.

**Preferred Return:** A term used in the private equity (PE) world, and also referred to as a "Hurdle Rate." It refers to the threshold return that the limited partners of a private equity fund must receive, prior to the PE firm receiving its carried interest or "carry."

**Ratio of Cumulative Wealth:** A defined ratio of the Cumulative Return of the portfolio divided by the Cumulative Return of the benchmark for a certain time period.

**Regression Based Analysis:** A statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables

**Residual Correlation:** Within returns-based style analysis, residual correlation refers to the portion of a strategy's return pattern that cannot be explained by its correlation to the asset-class benchmarks to which it is being compared.

**Return:** A rate of investment performance for the specified period.

**Rolling Percentile Ranking:** A measure of an investment portfolio's ranking versus a peer group for a specific rolling time period (i.e. Last 3 Years, Last 5 years, etc.).

**R-Squared:** The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

**SA/CF (Separate Account/Comingled Fund):** Represents an acronym for Separate Account and Comingled Fund investment vehicles.

**Sector Benchmark:** A market index that serves as a proxy for a sector within an asset class.

**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 the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance results in.

**Standard Deviation:** A statistical measure of the range of a portfolio's performance; the variability of a return around its average return over a specified time period.

**Total Fund Benchmark:** The policy benchmark for a complete asset pool that could consist of multiple investment mandates.

**Total Fund Composite:** The aggregate of multiple portfolios within an asset pool or household.

**Tracking Error:** A measure of standard deviation for a portfolio's investment performance, relative to the performance of an appropriate market benchmark.

**Treynor Ratio:** A ratio that divides the excess return (above the risk free rate) by the portfolio's beta to arrive at a unified measure of risk adjusted return. It is generally used to rank portfolios, funds and benchmarks. A higher ratio is indicative of higher returns per unit of market risk. This measurement can help determine if the portfolio is reaching its goal of increasing returns while managing market risk.

**Up Market Capture:** The ratio of average portfolio returns over the benchmark during periods of positive benchmark return. Higher values indicate better product performance.

**Upside Semi Deviation:** A statistical calculation that measures the volatility of returns above an acceptable return. This return measure isolates the positive portion of volatility: the larger the number, the greater the volatility.

**Value:** A diversified investment strategy that includes investment selections which tend to trade at a lower price relative to its dividends, earnings, and sales. Common attributes are stocks that include high dividend, low price-to-book ratio, and/or low price-to-earnings ratio.

**Worst Quarter:** The lowest rolling quarterly return for a certain time period.

## Information Disclosures

*Performance results are annualized for time periods greater than one year and include all cash and cash equivalents, realized and unrealized capital gains and losses, and dividends, interest and income. The investment results depicted herein represent historical performance. As a result of recent market activity, current performance may vary from the figures shown. Past performance is not a guarantee of future results.*

*Please see the Morgan Stanley Smith Barney LLC Form ADV Part 2 Brochure for advisory accounts and/or any applicable brokerage account trade confirmation statements for a full disclosure of the applicable charges, fees and expenses. Your Financial Advisor will provide those documents to you upon request.*

*Benchmark indices and blends included in this material are for informational purposes only, are provided solely as a comparison tool and may not reflect the underlying composition and/or investment objective(s) associated with the account(s). Indices are unmanaged and not available for direct investment. Index returns do not take into account fees or other charges. Such fees and charges would reduce performance.*

*The performance data shown reflects past performance, which does not guarantee future results. Investment return and principal will fluctuate so that an investor's shares when redeemed may be worth more or less than original cost. Please note, current performance may be higher or lower than the performance data shown. For up to date month-end performance information, please contact your*

*Financial Advisor or visit the funds' company website.*

*Investors should carefully consider the fund's investment objectives, risks, charges and expenses before investing. The prospectus and, if available the summary prospectus, contains this and other information that should be read carefully before investing. Investors should review the information in the prospectus carefully. To obtain a prospectus, please contact your Financial Advisor or visit the funds' company website.*

Past performance is no guarantee of future results.

Investing involves market risk, including possible loss of principal. **Growth investing** does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations. **Value investing** involves the risk that the market may not recognize that securities are undervalued and they may not appreciate as anticipated. **Small and mid-capitalization companies** may lack the financial resources, product diversification and competitive strengths of larger companies. The securities of small capitalization companies may not trade as readily as, and be subject to higher volatility than those of larger, more established companies. **Bond funds** and bond holdings have the same interest rate, inflation and credit risks that are associated with the underlying bonds owned by the funds. The return of principal in bond funds, and in funds with significant bond holdings, is not guaranteed. **International securities'** prices may carry additional risks, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes and differences in financial and accounting standards. International investing may not be for everyone. These risks may be magnified in emerging markets. **Alternative investments**, including private equity funds, real estate funds, hedge funds, managed futures funds, and funds of hedge funds, private equity, and managed futures funds, are speculative and entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in a fund, potential lack of diversification, absence and/or delay of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds and risks associated with the operations, personnel and processes of the advisor. **Master Limited Partnerships** (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk; and MLP interests in the real estate sector are subject to special risks, including interest rate and property value fluctuations, as well as risks related to general and economic conditions. Because of their narrow focus, MLPs maintain exposure to price volatility of commodities and/or underlying assets and tend to be more volatile than investments that diversify across many sectors and companies. MLPs are also subject to additional risks including: investors having limited control and rights to vote on matters affecting the MLP, limited access to capital, cash flow risk, lack of liquidity, dilution risk, conflict of interests, and limited call rights related to acquisitions.

**Mortgage backed securities** also involve prepayment risk, in that faster or slower prepayments than expected on underlying mortgage loans can dramatically alter the yield-to-maturity of a mortgage-backed security and prepayment risk includes the possibility that a fund may invest the proceeds at generally lower interest rates.

**Tax managed funds** may not meet their objective of being tax-efficient.

**Real estate** investments are subject to special risks, including interest rate and property value fluctuations,

as well as risks related to general and economic conditions. **High yield** fixed income securities, also known as “junk bonds”, are considered speculative, involve greater risk of default and tend to be more volatile than investment grade fixed income securities.

Credit quality is a measure of a bond issuer’s creditworthiness, or ability to repay interest and principal to bondholders in a timely manner. The credit ratings shown are based on security rating as provided by Standard & Poor’s, Moody’s and/or Fitch, as applicable. Credit ratings are issued by the rating agencies for the underlying securities in the fund and not the fund itself, and the credit quality of the securities in the fund does not represent the stability or safety of the fund. Credit ratings shown range from AAA, being the highest, to D, being the lowest based on S&P and Fitch’s classification (the equivalent of Aaa and C, respectively, by Moody(s). Ratings of BBB or higher by S&P and Fitch (Baa or higher by Moody’s) are considered to be investment grade-quality securities. If two or more of the agencies have assigned different ratings to a security, the highest rating is applied. Securities that are not rated by all three agencies are listed as “NR”.

“**Alpha tilt strategies** comprise a core holding of stocks that mimic a benchmark type index such as the S&P 500 to which additional securities are added to help tilt the fund toward potentially outperforming the market in an effort to enhance overall investment returns. Tilt strategies are subject to significant timing risk and could potentially expose investors to extended periods of underperformance.”

**Custom Account Index:** The Custom Account Index is an investment benchmark based on your historical target allocations and/or manager selection that you may use to evaluate the performance of your account. The Custom Account index does take into consideration certain changes that may have occurred in your portfolio since the inception of your account, i.e., asset class and/or manager changes. However, in some circumstances, it may not be an appropriate benchmark for use with your specific account composition. For detailed report of the historical composition of this blend please contact your Financial Advisor.

## Peer Groups

Peer Groups are a collection of similar investment strategies that essentially group investment products that share the same investment approach. Peer Groups are used for comparison purposes to compare and illustrate a client’s investment portfolio versus its peer across various quantitative metrics like performance and risk. Peer Group comparison is conceptually another form of benchmark comparison whereby the actual investment can be ranked versus its peer across various quantitative metrics.

All Peer Group data are provided by Investment Metrics, LLC.

The URL below provides all the definitions and methodology about the various Peer Groups

<https://www.invmetrics.com/style-peer-groups>

## Peer Group Ranking Methodology

A percentile rank denotes the value of a product in which a certain percent of observations fall within a peer group. The range of percentile rankings is between 1 and 100, where 1 represents a high statistical value and 100 represents a low statistical value.

The 30th percentile, for example, is the value in which 30% of the highest observations may be found, the 65th percentile is the value in which 65% of the highest observations may be found, and so on.

Percentile rankings are calculated based on a normalized distribution ranging from 1 to 100 for all products in each peer group, where a ranking of 1 denotes a high statistical value and a ranking of 100 denotes a low

statistical value. It is important to note that the same ranking methodology applies to all statistics, implying that a ranking of 1 will always mean highest value across all statistics.

For example, consider a risk/return assessment using standard deviation as a measure of risk. A percentile ranking equal to 1 for return denotes highest return, whereas a percentile ranking of 1 for standard deviation denotes highest risk among peers.

In addition, values may be used to demonstrate quartile rankings. For example, the third quartile is also known as the 75th percentile, and the median is the 50th percentile.

## Alternatives

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Alternatives may be either traditional alternative investment vehicles or non-traditional alternative strategy vehicles. Traditional alternative investment vehicles may include, but are not limited to, Hedge Funds, Fund of Funds (both registered and unregistered), Exchange Funds, Private Equity Funds, Private Credit Funds, Real Estate Funds, and Managed Futures Funds. Non-traditional alternative strategy vehicles may include, but are not limited to, Open or Closed End Mutual Funds, Exchange-Traded and Closed-End Funds, Unit Investment Trusts, exchange listed Real Estate Investment Trusts (REITs), and Master Limited Partnerships (MLPs). These non-traditional alternative strategy vehicles also seek alternative-like exposure but have significant differences from traditional alternative investment vehicles. Non-traditional alternative strategy vehicles may behave like, have characteristics of, or employ various investment strategies and techniques for both hedging and more speculative purposes such as short-selling, leverage, derivatives, and options, which can increase volatility and the risk of investment loss. Characteristics such as correlation to traditional markets, investment strategy, and market sector exposure can play a role in the classification of a traditional security being classified as alternative.

Traditional alternative investment vehicles are illiquid and usually are not valued daily. The estimated



valuation provided will be as of the most recent date available and will be included in summaries of your assets. Such valuation may not be the most recent provided by the fund in which you are invested. No representation is made that the valuation is a market value or that the interest could be liquidated at this value. We are not required to take any action with respect to your investment unless valid instructions are received from you in a timely manner. Some positions reflected herein may not represent interests in the fund, but rather redemption proceeds withheld by the issuer pending final valuations which are not subject to the investment performance of the fund and may or may not accrue interest for the length of the withholding. Morgan Stanley does not engage in an independent valuation of your alternative investment assets. Morgan Stanley provides periodic information to you including the market value of an alternative investment vehicle based on information received from the management entity of the alternative investment vehicle or another service provider.

Traditional alternative investment vehicles often are speculative and include a high degree of risk. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: • Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; • Lack of liquidity in that there may be no secondary market for a fund; • Volatility of returns; • Restrictions on transferring interests in a fund; • Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; • Absence of information regarding valuations and pricing; • Complex tax structures and delays in tax reporting; • Less regulation and higher fees than mutual funds; and • Risks associated with the operations, personnel, and processes of the manager. As a diversified global financial services firm, Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management's interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley Wealth Management can give no assurance that conflicts of interest will be resolved in favor of its clients or any such fund.

Indices are unmanaged and investors cannot directly invest in them. Composite index results are shown for illustrative purposes and do not represent the performance of a specific investment. Past performance is no guarantee of future results. Actual results may vary. Diversification does not assure a profit or protect against loss in a declining market. Any performance or related information presented has not been adjusted to reflect the impact of the additional fees paid to a placement agent by an investor (for Morgan Stanley placement clients, a one-time upfront Placement Fee of up to 3%, and for Morgan Stanley investment advisory clients, an annual advisory fee of up to 2.5%), which would result in a substantial reduction in the returns if such fees were incorporated.

For most investment advisory clients, the program account will be charged an asset-based wrap fee every quarter ("the Fee"). In general, the Fee covers investment advisory services and reporting. In addition to the Fee, clients will pay the fees and expenses of any funds in which their account is invested. Fund fees and expenses are charged directly to the pool of assets the fund invests in and impact the valuations. Clients must understand that these fees and expenses are an additional cost and will not be included in the Fee amount in the account statements.

As fees are deducted quarterly, the compounding effect will be to increase the impact of the fees by an amount directly related to the gross account performance. For example, for an account with an initial value of \$100,000 and a 2.5% annual fee, if the gross performance is 5% per year over a three year period, the compounding effect of the fees will result in a net annual compound rate of return of approximately 2.40% per year over a three year period, and the total value of the client's portfolio at the end of the three year period would be approximately \$115,762.50 without the fees and \$107,372.63 with the fees. Please see the applicable Morgan Stanley Smith Barney LLC Form ADV Part 2A for more information including a description of the fee schedule. It is available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV) <<http://www.morganstanley.com/ADV>> or from your Financial Advisor/Private Wealth Advisor.

Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing

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### Money Market Funds

You could lose money in Money Market Funds. Although MMFs classified as government funds (i.e., MMFs that invest 99.5% of total assets in cash and/or securities backed by the U.S government) and retail funds (i.e., MMFs open to natural person investors only) seek to preserve value at \$1.00 per share, they cannot guarantee they will do so. The price of other MMFs will fluctuate and when you sell shares they may be worth more or less than originally paid. MMFs may impose a fee upon sale or temporarily suspend sales if liquidity falls below required minimums. During suspensions, shares would not be available for purchases, withdrawals, check writing or ATM debits. A MMF investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or other government agency.