



**MEABF**

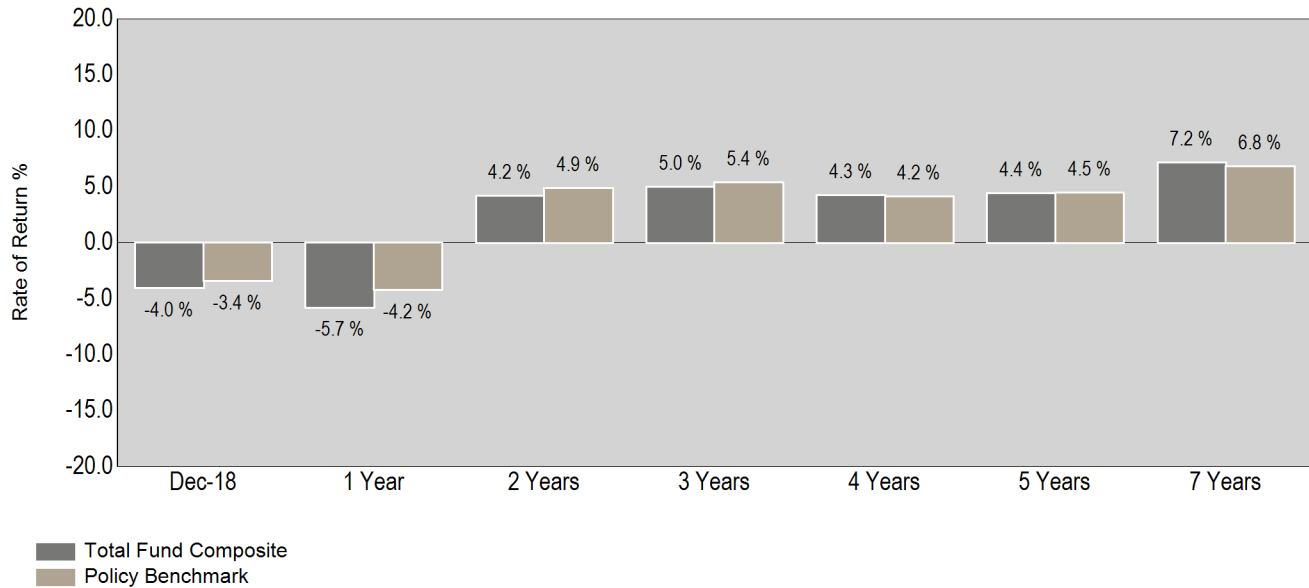
Municipal Employees'  
Annuity & Benefit Fund of Chicago

Monthly Update

**December 31, 2018**



**Net Return Summary  
Ending December 31, 2018**



**Net Return Summary YTD**

**Asset Allocation vs. Target**

	Total Return	Current	Current	Policy	Difference	%
Total Fund Composite	-5.7%	\$911,310,121	25.6%	27.0%	-\$50,265,012	-1.4%
Fixed Income Composite	-0.2%	\$847,165,160	23.8%	26.0%	-\$78,796,079	-2.2%
U.S. Equity Composite	-8.5%	\$738,796,139	20.7%	22.0%	-\$44,709,525	-1.3%
International Equity Composite	-16.8%	\$394,443,039	11.1%	10.0%	\$38,304,101	1.1%
Hedge Fund Composite	-5.9%	\$409,842,176	11.5%	10.0%	\$53,703,238	1.5%
Real Estate Composite	5.8%	\$164,851,740	4.6%	5.0%	-\$13,217,729	-0.4%
Open-End Real Estate Comp	7.3%	\$94,981,006	2.7%	0.0%	\$94,981,006	2.7%
<b>Total</b>		<b>\$3,561,389,380</b>	<b>100.0%</b>	<b>100.0%</b>		

**Summary of Cash Flows**

	Last Month	Year-To-Date	One Year	Three Years	Five Years	Seven Years
Beginning Market Value	\$3,775,234,910.99	\$4,298,382,813.93	\$4,298,382,813.93	\$4,598,855,956.91	\$5,313,270,888.11	\$4,899,571,965.48
Net Cash Flow	-\$65,683,416.70	-\$529,907,894.50	-\$529,907,894.50	-\$1,729,827,823.17	-\$2,824,654,962.92	-\$3,802,460,588.42
Net Investment Change	-\$148,162,114.23	-\$207,085,539.37	-\$207,085,539.37	\$692,361,246.32	\$1,072,773,454.87	\$2,464,278,003.00
<b>Ending Market Value</b>	<b>\$3,561,389,380.06</b>	<b>\$3,561,389,380.06</b>	<b>\$3,561,389,380.06</b>	<b>\$3,561,389,380.06</b>	<b>\$3,561,389,380.06</b>	<b>\$3,561,389,380.06</b>

# Total Fund Composite

Market Value: \$3,561.4 Million and 100.0% of Fund

Ending December 31, 2018

	Asset Class	Market Value 11/30/18 (\$)	1 Mo Net Cash Flows (\$)	Market Value 12/31/18 (\$)	% of Portfolio	Policy %
<b>Total Fund Composite</b>		<b>3,775,234,911</b>	<b>-66,616,986</b>	<b>3,561,389,380</b>	<b>100.0</b>	<b>100.0</b>
<b>Fixed Income Composite</b>		<b>962,318,154</b>	<b>-50,142,735</b>	<b>911,284,482</b>	<b>25.6</b>	<b>27.0</b>
LM Capital	Core Fixed Income	223,778,019	-25,025,962	201,874,070	5.7	
Garcia Hamilton	Core Fixed Income	74,730,013	-11,059	75,634,383	2.1	
NIS	Core Fixed Income	74,607,201	-10,650	75,852,962	2.1	
Segall Bryant & Hamill	Int. Fixed Income	233,194,372	-25,015,106	211,231,524	5.9	
MacKay Shields	High Yield Fixed Income	121,831,461	-45,372	118,485,710	3.3	
Crescent High Income Fund	High Yield Fixed Income	56,005,075	0	54,871,094	1.5	
Symphony	Senior Secured Loans	178,172,013	-34,586	173,334,739	4.9	
<b>U.S. Equity Composite</b>		<b>943,881,120</b>	<b>-128,754</b>	<b>847,165,160</b>	<b>23.8</b>	<b>26.0</b>
<b>Attucks U.S. Equity</b>		<b>63,526,879</b>	<b>-30,442</b>	<b>56,476,640</b>	<b>1.6</b>	<b>--</b>
Great Lakes	Large-Cap Value	71,319,830	-17,512	63,831,953	1.8	
RhumbLine S&P 500 Index	Large-Cap Core	480,624,441	-6,402	437,128,465	12.3	
RhumbLine S&P 400 Growth	Mid-Cap Growth	143,008,661	-3	126,862,729	3.6	
Ariel Investments	Smid-Cap Value	91,405,157	-29,252	79,773,616	2.2	
Kayne Anderson	Small-Cap Value	49,186,538	-23,777	43,675,547	1.2	
Nuveen	Small-Cap Value	44,737,278	-21,353	39,345,581	1.1	
<b>International Equity Composite</b>		<b>775,792,544</b>	<b>-235,249</b>	<b>738,796,139</b>	<b>20.7</b>	<b>22.0</b>
<b>Attucks Non-U.S. Equity</b>		<b>79,926,225</b>	<b>30,210</b>	<b>76,318,646</b>	<b>2.1</b>	<b>--</b>
NTGI MSCI ACWI ex. U.S. Index Fund	Non-U.S. All-Cap Core	153,324,379	-9,506	146,433,612	4.1	
LSV	Non-U.S. Large-Cap Value	78,631,378	-40,278	74,212,921	2.1	
Cornerstone	Non-U.S. Large-Cap Core	76,918,860	-30,245	72,587,836	2.0	
Walter Scott & Partners	Non-U.S. Large-Cap Growth	80,178,814	-59,564	77,461,303	2.2	
NTGI Small Cap International Index	Non-U.S. Small-Cap Core	82,332,721	-5,141	77,106,332	2.2	
Segall Bryant & Hamill	Non-U.S. Small-Cap Core	96,680,546	-41,346	90,181,924	2.5	
William Blair	Emerging Markets	127,800,255	-79,379	124,493,566	3.5	
<b>Hedge Fund Composite</b>		<b>412,141,357</b>	<b>-159,785</b>	<b>394,443,039</b>	<b>11.1</b>	<b>10.0</b>
Rock Creek Georgetown Fund	Hedged Equity Hedge FoF	204,412,201	-106,161	195,990,418	5.5	
K2 Long Short Fund	Hedged Equity Hedge FoF	102,698,542	-53,624	98,997,760	2.8	
Parametric Defensive Equity	Defensive Equity	53,454,011	0	50,769,690	1.4	
Neuberger Berman S&P 500 PutWrite	Defensive Equity	51,576,602	0	48,685,171	1.4	

## Total Fund Composite

Market Value: \$3,561.4 Million and 100.0% of Fund

### Ending December 31, 2018

	Asset Class	Market Value 11/30/18 (\$)	1 Mo Net Cash Flows (\$)	Market Value 12/31/18 (\$)	% of Portfolio	Policy %
<b>Real Estate Composite</b>		<b>409,678,559</b>	<b>-4,297,045</b>	<b>409,842,176</b>	<b>11.5</b>	<b>10.0</b>
<b>Open-End Real Estate Comp</b>		<b>360,312,918</b>	<b>-244,825</b>	<b>364,529,749</b>	<b>10.2</b>	<b>--</b>
American Core Realty Fund, LLC	Core Real Estate	94,163,357	-244,825	95,745,301	2.7	
AFL-CIO Building Investment Trust	Core Real Estate	127,203,843	0	129,226,384	3.6	
JPMorgan Strategic Property Fund	Core Real Estate	138,945,719	0	139,558,064	3.9	
<b>Closed-End Real Estate Composite</b>		<b>49,365,640</b>	<b>-4,052,220</b>	<b>45,312,427</b>	<b>1.3</b>	<b>--</b>
<b>Private Equity Composite</b>		<b>171,087,469</b>	<b>-6,235,730</b>	<b>164,851,740</b>	<b>4.6</b>	<b>5.0</b>
Fund of Funds Private Equity Composite		75,292,950	-2,367,100	72,925,850	2.0	--
Direct Investment Private Equity Composite		95,794,519	-3,868,630	91,925,889	2.6	--
<b>Cash Accounts</b>		<b>100,337,571</b>	<b>-5,417,688</b>	<b>95,006,645</b>	<b>2.7</b>	<b>0.0</b>

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$3,561.4 Million and 100.0% of Fund

Ending December 31, 2018

	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
<b>Total Fund Composite</b>	<b>-4.0</b>	<b>-7.9</b>	<b>-5.7</b>	<b>4.2</b>	<b>5.0</b>	<b>4.3</b>	<b>4.4</b>	<b>7.2</b>	<b>8.3</b>	--	--
Policy Benchmark	-3.4	-6.7	-4.2	4.9	5.4	4.2	4.5	6.8	7.3	--	--
Actuarial Rate	0.6	1.7	7.1	7.3	7.4	7.4	7.4	7.4	7.6	--	--
<b>Fixed Income Composite</b>	<b>-0.1</b>	<b>-0.7</b>	<b>-0.2</b>	<b>1.9</b>	<b>3.4</b>	<b>2.7</b>	<b>3.0</b>	<b>3.2</b>	<b>4.7</b>	--	--
BBgBarc US Aggregate TR	1.8	1.6	0.0	1.8	2.1	1.7	2.5	2.1	3.5	--	--
LM Capital	1.4	0.9	-0.9	1.2	1.5	1.5	2.3	2.1	--	3.7	Mar-09
BBgBarc US Aggregate TR	1.8	1.6	0.0	1.8	2.1	1.7	2.5	2.1	3.5	3.6	Mar-09
Garcia Hamilton	1.2	1.3	--	--	--	--	--	--	--	0.6	Aug-18
BBgBarc US Aggregate TR	1.8	1.6	0.0	1.8	2.1	1.7	2.5	2.1	3.5	1.0	Aug-18
NIS	1.7	1.6	--	--	--	--	--	--	--	0.8	Aug-18
BBgBarc US Aggregate TR	1.8	1.6	0.0	1.8	2.1	1.7	2.5	2.1	3.5	1.0	Aug-18
Segall Bryant & Hamill	1.3	1.8	1.0	1.7	1.8	1.7	2.0	2.0	--	3.4	Apr-09
BBgBarc US Govt/Credit Int TR	1.3	1.7	0.9	1.5	1.7	1.5	1.9	1.7	2.9	3.0	Apr-09
MacKay Shields	-2.8	-4.1	-1.6	2.8	7.1	5.0	4.4	6.0	--	8.7	Apr-09
BBgBarc US High Yield TR	-2.1	-4.5	-2.1	2.6	7.2	4.2	3.8	6.0	11.1	9.6	Apr-09
BarCap Ba High Yield	-1.3	-2.9	-2.4	2.3	5.7	4.0	4.3	5.8	10.2	8.8	Apr-09
Crescent High Income Fund	-2.0	-4.0	-2.1	1.6	--	--	--	--	--	3.8	Jul-16
50% BarCap HY / 50% CSFB Lev Loans	-2.2	-3.8	-0.5	2.6	6.1	3.9	3.6	5.3	9.7	4.7	Jul-16
Symphony	-2.8	-4.3	-0.1	1.5	3.7	3.1	2.8	4.4	--	5.7	Aug-09
Credit Suisse Leveraged Loans	-2.3	-3.1	1.1	2.7	5.0	3.6	3.3	4.6	8.3	5.4	Aug-09
S&P/LSTA U.S. Leveraged Loan 100 Index	-3.2	-4.4	-0.6	1.3	4.4	2.6	2.3	3.8	8.1	4.7	Aug-09
<b>U.S. Equity Composite</b>	<b>-10.3</b>	<b>-15.7</b>	<b>-8.5</b>	<b>4.7</b>	<b>6.8</b>	<b>4.9</b>	<b>5.6</b>	<b>10.7</b>	<b>12.7</b>	--	--
Wilshire 5000 Total Market	-9.3	-14.3	-5.3	7.1	9.1	6.9	8.1	12.5	13.2	--	--
S&P 500	-9.0	-13.5	-4.4	7.9	9.3	7.2	8.5	12.7	13.1	--	--
Russell 2000	-11.9	-20.2	-11.0	1.0	7.4	4.3	4.4	10.4	12.0	--	--
<b>Attucks U.S. Equity</b>	<b>-11.1</b>	<b>-17.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-17.1</b>	<b>Sep-18</b>
U.S. Equity Benchmark	-10.8	-16.6	-10.2	1.1	6.0	4.0	5.1	10.6	12.0	-16.6	Sep-18
Great Lakes	-10.5	-15.3	-13.2	1.3	5.8	3.9	5.4	10.3	11.6	9.6	Mar-91
Russell 1000 Value	-9.6	-11.7	-8.3	2.1	7.0	4.2	5.9	11.0	11.2	9.6	Mar-91
RhumbLine S&P 500 Index	-9.1	-13.5	-4.4	7.9	9.2	7.2	8.5	12.7	13.1	9.1	Aug-08
S&P 500	-9.0	-13.5	-4.4	7.9	9.3	7.2	8.5	12.7	13.1	9.0	Aug-08
RhumbLine S&P 400 Growth	-11.3	-17.7	-10.3	--	--	--	--	--	--	-3.2	Sep-17
S&P 400 MidCap Growth	-11.3	-17.6	-10.3	3.7	7.3	5.9	6.3	11.2	14.4	-3.2	Sep-17
Ariel Investments	-12.8	-19.1	-13.3	0.8	4.7	2.8	4.8	11.8	15.2	12.0	Jun-84
Russell 2500 Value	-11.1	-17.1	-12.4	-1.7	6.6	3.4	4.2	10.0	11.6	11.0	Jun-84

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$3,561.4 Million and 100.0% of Fund

Ending December 31, 2018

	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Kayne Anderson	-11.3	-17.9	--	--	--	--	--	--	--	-13.0	May-18
<i>Russell 2000 Value</i>	-12.1	-18.7	-12.9	-3.1	7.4	3.5	3.6	9.6	10.4	-16.9	May-18
Nuveen	-12.1	-20.2	--	--	--	--	--	--	--	-21.3	May-18
<i>Russell 2000 Value</i>	-12.1	-18.7	-12.9	-3.1	7.4	3.5	3.6	9.6	10.4	-16.9	May-18
<b>International Equity Composite</b>	<b>-4.8</b>	<b>-12.7</b>	<b>-16.8</b>	<b>4.9</b>	<b>4.1</b>	<b>2.8</b>	<b>1.6</b>	<b>6.0</b>	<b>7.8</b>	--	
<i>MSCI ACWI ex USA</i>	-4.5	-11.5	-14.2	4.5	4.5	1.8	0.7	4.8	6.6	--	
<i>MSCI EAFE</i>	-4.9	-12.5	-13.8	3.8	2.9	1.9	0.5	5.8	6.3	--	
<b>Attucks Non-U.S. Equity</b>	<b>-4.5</b>	<b>-12.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-12.7</b>	<b>Sep-18</b>
<i>Non-U.S. Equity Benchmark</i>	-4.8	-12.3	-15.3	4.6	4.0	2.4	1.0	--	--	-12.3	Sep-18
NTGI MSCI ACWI ex. U.S. Index Fund	-4.5	-11.4	-14.0	4.7	4.7	2.1	0.9	5.1	6.8	6.7	Oct-08
<i>MSCI ACWI ex USA</i>	-4.5	-11.5	-14.2	4.5	4.5	1.8	0.7	4.8	6.6	6.4	Oct-08
LSV	-5.7	-14.2	-18.2	1.4	3.0	3.1	0.9	6.4	7.4	4.3	Apr-05
<i>MSCI EAFE Value</i>	-4.9	-11.7	-14.8	1.7	2.8	0.6	-0.6	5.0	5.5	3.2	Apr-05
Cornerstone	-5.7	-14.8	-11.4	8.4	3.7	4.7	3.6	7.7	6.5	5.9	Nov-04
<i>MSCI EAFE</i>	-4.9	-12.5	-13.8	3.8	2.9	1.9	0.5	5.8	6.3	4.0	Nov-04
Walter Scott & Partners	-3.5	-10.0	-8.2	8.1	7.0	5.3	3.6	6.9	7.5	6.0	Nov-04
<i>MSCI EAFE</i>	-4.9	-12.5	-13.8	3.8	2.9	1.9	0.5	5.8	6.3	4.0	Nov-04
<i>MSCI EAFE Growth</i>	-4.8	-13.3	-12.8	6.0	2.9	3.2	1.6	6.5	7.1	4.7	Nov-04
NTGI Small Cap International Index	-6.4	-16.0	-17.8	3.8	4.0	4.3	2.4	7.5	10.2	10.2	Oct-08
<i>MSCI World ex USA Small Cap</i>	-6.4	-16.2	-18.1	3.6	3.8	4.2	2.3	7.4	10.1	10.0	Oct-08
Segall Bryant & Hamill	-6.8	-17.6	-23.0	1.1	--	--	--	--	--	-0.2	Sep-16
<i>MSCI EAFE Small Cap</i>	-6.4	-16.0	-17.9	4.5	3.7	5.2	3.1	8.8	10.5	2.7	Sep-16
William Blair	-2.6	-7.8	-21.8	8.2	6.0	0.6	1.7	4.7	9.8	6.5	Jul-05
<i>MSCI Emerging Markets IMI</i>	-2.5	-7.4	-15.0	7.8	8.5	2.4	1.6	3.3	8.2	6.1	Jul-05

# Investment Manager

# Annualized Performance (Net of Fees)

Market Value: \$3,561.4 Million and 100.0% of Fund

Ending December 31, 2018

	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
<b>Hedge Fund Composite</b>	<b>-4.3</b>	<b>-8.5</b>	<b>-5.9</b>	<b>2.2</b>	<b>1.1</b>	<b>1.7</b>	<b>2.4</b>	<b>5.5</b>	<b>--</b>	<b>--</b>	
<i>HFRX Equity Hedge Index</i>	-4.2	-8.6	-9.4	-0.2	-0.1	-0.7	-0.3	2.0	1.4	--	
<b>Rock Creek Georgetown Fund</b>	<b>-4.1</b>	<b>-8.2</b>	<b>-6.2</b>	<b>2.2</b>	<b>1.1</b>	<b>2.0</b>	<b>2.7</b>	<b>5.7</b>	<b>--</b>	<b>4.8</b>	Jan-09
<i>HFRX Equity Hedge Index</i>	-4.2	-8.6	-9.4	-0.2	-0.1	-0.7	-0.3	2.0	1.4	1.4	Jan-09
<b>K2 Long Short Fund</b>	<b>-3.6</b>	<b>-9.4</b>	<b>-7.0</b>	<b>0.4</b>	<b>-0.2</b>	<b>0.5</b>	<b>1.5</b>	<b>4.7</b>	<b>--</b>	<b>3.9</b>	Jan-09
<i>HFRX Equity Hedge Index</i>	-4.2	-8.6	-9.4	-0.2	-0.1	-0.7	-0.3	2.0	1.4	1.4	Jan-09
<b>Parametric Defensive Equity</b>	<b>-5.0</b>	<b>-8.1</b>	<b>-2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1.1</b>	Jul-17
<i>50% S&amp;P 500/50% 91 Day T-Bill</i>	-4.4	-6.6	-1.0	4.8	5.2	4.1	4.7	6.6	6.8	2.6	Jul-17
<b>Neuberger Berman S&amp;P 500 PutWrite</b>	<b>-5.6</b>	<b>-8.5</b>	<b>-5.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-2.0</b>	Aug-17
<i>CBOE Put Write Index</i>	-7.6	-11.3	-5.9	2.1	4.0	4.6	4.9	6.4	8.9	-2.3	Aug-17
<i>CBOE Putwrite One-Week Index</i>	-5.7	-12.2	-14.2	-2.3	0.9	0.8	0.7	4.0	5.4	-7.6	Aug-17
<b>Real Estate Composite</b>	<b>1.0</b>	<b>1.4</b>	<b>5.8</b>	<b>6.1</b>	<b>6.6</b>	<b>8.4</b>	<b>9.1</b>	<b>9.6</b>	<b>5.7</b>	<b>--</b>	
<i>NFI</i>	0.0	0.0	5.3	6.1	6.7	8.3	9.0	9.5	7.3	--	
<b>Open-End Real Estate Comp</b>	<b>1.2</b>	<b>1.6</b>	<b>7.3</b>	<b>6.5</b>	<b>6.8</b>	<b>8.7</b>	<b>9.3</b>	<b>10.0</b>	<b>5.8</b>	<b>--</b>	
<i>NFI</i>	0.5	1.5	7.4	7.0	7.3	8.9	9.4	10.0	6.0	--	
<b>American Core Realty Fund, LLC</b>	<b>1.7</b>	<b>1.7</b>	<b>7.8</b>	<b>7.5</b>	<b>7.0</b>	<b>8.8</b>	<b>9.1</b>	<b>9.6</b>	<b>5.1</b>	<b>6.4</b>	Nov-03
<i>NFI</i>	0.5	1.5	7.4	7.0	7.3	8.9	9.4	10.0	6.0	7.2	Nov-03
<b>AFL-CIO Building Investment Trust</b>	<b>1.6</b>	<b>1.6</b>	<b>7.1</b>	<b>5.8</b>	<b>6.1</b>	<b>8.1</b>	<b>8.9</b>	<b>9.3</b>	<b>5.8</b>	<b>6.4</b>	Jun-02
<i>NFI</i>	0.5	1.5	7.4	7.0	7.3	8.9	9.4	10.0	6.0	7.3	Jun-02
<b>JPMorgan Strategic Property Fund</b>	<b>0.4</b>	<b>1.6</b>	<b>7.1</b>	<b>6.7</b>	<b>6.9</b>	<b>8.7</b>	<b>8.9</b>	<b>10.0</b>	<b>6.3</b>	<b>8.0</b>	Jun-02
<i>NFI</i>	0.5	1.5	7.4	7.0	7.3	8.9	9.4	10.0	6.0	7.3	Jun-02



## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: \$3,561.4 Million and 100.0% of Fund

Ending December 31, 2018

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
<b>Total Fund Composite</b>	<b>-5.7</b>	<b>15.2</b>	<b>6.6</b>	<b>2.1</b>	<b>5.1</b>	<b>16.1</b>	<b>12.8</b>	<b>0.1</b>	<b>14.2</b>	<b>19.6</b>
Policy Benchmark	-4.2	14.8	6.4	0.6	5.8	14.3	11.4	-0.4	12.8	13.2
Actuarial Rate	7.1	7.5	7.5	7.5	7.5	7.5	7.5	8.0	8.0	8.0
<b>Fixed Income Composite</b>	<b>-0.2</b>	<b>4.0</b>	<b>6.5</b>	<b>0.6</b>	<b>4.3</b>	<b>0.4</b>	<b>7.0</b>	<b>6.7</b>	<b>8.0</b>	<b>10.6</b>
BBgBarc US Aggregate TR	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9
LM Capital	-0.9	3.3	2.2	1.5	5.5	-1.7	5.3	7.3	6.2	--
BBgBarc US Aggregate TR	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9
Garcia Hamilton	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9
NIS	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9
Segall Bryant & Hamill	1.0	2.3	2.1	1.3	3.4	-0.8	4.7	6.3	6.7	--
BBgBarc US Govt/Credit Int TR	0.9	2.1	2.1	1.1	3.1	-0.9	3.9	5.8	5.9	5.2
MacKay Shields	-1.6	7.4	16.2	-1.0	2.1	6.4	13.9	6.6	12.4	--
BBgBarc US High Yield TR	-2.1	7.5	17.1	-4.5	2.5	7.4	15.8	5.0	15.1	58.2
BarCap Ba High Yield	-2.4	7.3	12.8	-1.0	5.4	5.1	14.6	6.8	14.6	46.1
Crescent High Income Fund	-2.1	5.5	--	--	--	--	--	--	--	--
50% BarCap HY / 50% CSFB Lev Loans	-0.5	5.9	13.5	-2.4	2.3	6.8	12.6	3.4	12.5	51.5
Symphony	-0.1	3.2	8.2	1.2	1.8	7.2	9.7	3.8	11.7	--
Credit Suisse Leveraged Loans	1.1	4.2	9.9	-0.4	2.1	6.2	9.4	1.8	10.0	44.9
S&P/LSTA U.S. Leveraged Loan 100 Index	-0.6	3.3	10.9	-2.8	1.0	5.0	10.5	0.6	9.7	52.2
<b>U.S. Equity Composite</b>	<b>-8.5</b>	<b>19.8</b>	<b>11.3</b>	<b>-0.7</b>	<b>8.6</b>	<b>33.6</b>	<b>16.2</b>	<b>0.4</b>	<b>20.5</b>	<b>34.2</b>
Wilshire 5000 Total Market	-5.3	21.0	13.4	0.7	12.7	33.1	16.1	1.0	17.2	28.3
S&P 500	-4.4	21.8	12.0	1.4	13.7	32.4	16.0	2.1	15.1	26.5
Russell 2000	-11.0	14.6	21.3	-4.4	4.9	38.8	16.3	-4.2	26.9	27.2
<b>Attucks U.S. Equity</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
U.S. Equity Benchmark	-10.2	13.8	16.5	-1.6	9.8	35.2	16.8	-1.3	21.4	28.0
Great Lakes	-13.2	18.3	15.4	-1.4	11.4	34.9	13.5	4.8	17.7	22.5
Russell 1000 Value	-8.3	13.7	17.3	-3.8	13.5	32.5	17.5	0.4	15.5	19.7
RhumbLine S&P 500 Index	-4.4	21.6	11.8	1.6	13.6	32.3	16.3	2.4	14.8	26.6
S&P 500	-4.4	21.8	12.0	1.4	13.7	32.4	16.0	2.1	15.1	26.5
RhumbLine S&P 400 Growth	-10.3	--	--	--	--	--	--	--	--	--
S&P 400 MidCap Growth	-10.3	19.9	14.8	2.0	7.6	32.8	17.3	-0.9	30.6	41.1
Ariel Investments	-13.3	17.1	12.9	-2.5	13.2	43.5	20.0	-9.3	26.1	65.7
Russell 2500 Value	-12.4	10.4	25.2	-5.5	7.1	33.3	19.2	-3.4	24.8	27.7

## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: \$3,561.4 Million and 100.0% of Fund

Ending December 31, 2018

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Kayne Anderson	--	--	--	--	--	--	--	--	--	--
<i>Russell 2000 Value</i>	-12.9	7.8	31.7	-7.5	4.2	34.5	18.0	-5.5	24.5	20.6
Nuveen	--	--	--	--	--	--	--	--	--	--
<i>Russell 2000 Value</i>	-12.9	7.8	31.7	-7.5	4.2	34.5	18.0	-5.5	24.5	20.6
<b>International Equity Composite</b>	<b>-16.8</b>	<b>32.1</b>	<b>2.6</b>	<b>-1.1</b>	<b>-2.9</b>	<b>17.6</b>	<b>18.3</b>	<b>-13.8</b>	<b>15.3</b>	<b>41.6</b>
<i>MSCI ACWI ex USA</i>	-14.2	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4
<i>MSCI EAFE</i>	-13.8	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8
<b>Attucks Non-U.S. Equity</b>	--	--	--	--	--	--	--	--	--	--
<i>Non-U.S. Equity Benchmark</i>	-15.3	29.2	2.7	-2.2	-4.6	20.5	--	--	--	--
NTGI MSCI ACWI ex. U.S. Index Fund	-14.0	27.4	4.8	-5.3	-3.7	15.6	17.1	-13.5	11.3	41.6
<i>MSCI ACWI ex USA</i>	-14.2	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4
LSV	-18.2	25.7	6.3	3.4	-7.6	25.8	17.2	-12.0	12.0	34.5
<i>MSCI EAFE Value</i>	-14.8	21.4	5.0	-5.7	-5.4	23.0	17.7	-12.2	3.2	34.2
Cornerstone	-11.4	32.5	-5.1	7.6	-0.6	18.6	19.1	-12.9	5.4	21.3
<i>MSCI EAFE</i>	-13.8	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8
Walter Scott & Partners	-8.2	27.3	4.8	0.5	-3.1	11.5	20.2	-10.5	11.3	29.5
<i>MSCI EAFE</i>	-13.8	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8
<i>MSCI EAFE Growth</i>	-12.8	28.9	-3.0	4.1	-4.4	22.5	16.9	-12.1	12.2	29.4
NTGI Small Cap International Index	-17.8	31.0	4.3	5.5	-5.2	25.6	17.7	-15.2	24.4	50.9
<i>MSCI World ex USA Small Cap</i>	-18.1	31.0	4.3	5.5	-5.3	25.6	17.5	-15.8	24.5	50.8
Segall Bryant & Hamill	-23.0	32.6	--	--	--	--	--	--	--	--
<i>MSCI EAFE Small Cap</i>	-17.9	33.0	2.2	9.6	-4.9	29.3	20.0	-15.9	22.0	46.8
William Blair	-21.8	49.8	1.8	-14.0	6.2	4.1	22.1	-16.8	23.9	79.0
<i>MSCI Emerging Markets IMI</i>	-15.0	36.8	9.9	-13.9	-1.8	-2.2	18.7	-19.5	19.9	82.4

## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: \$3,561.4 Million and 100.0% of Fund

Ending December 31, 2018

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
<b>Hedge Fund Composite</b>	<b>-5.9</b>	<b>10.9</b>	<b>-1.1</b>	<b>3.8</b>	<b>5.4</b>	<b>17.6</b>	<b>9.3</b>	<b>-4.7</b>	<b>5.3</b>	<b>--</b>
<i>HFRX Equity Hedge Index</i>	-9.4	10.0	0.1	-2.3	1.4	11.1	4.8	-19.1	8.9	13.1
<b>Rock Creek Georgetown Fund</b>	<b>-6.2</b>	<b>11.2</b>	<b>-0.9</b>	<b>4.8</b>	<b>5.2</b>	<b>17.6</b>	<b>9.8</b>	<b>-4.0</b>	<b>6.0</b>	<b>--</b>
<i>HFRX Equity Hedge Index</i>	-9.4	10.0	0.1	-2.3	1.4	11.1	4.8	-19.1	8.9	13.1
<b>K2 Long Short Fund</b>	<b>-7.0</b>	<b>8.5</b>	<b>-1.5</b>	<b>2.5</b>	<b>5.5</b>	<b>17.6</b>	<b>8.8</b>	<b>-5.5</b>	<b>4.5</b>	<b>--</b>
<i>HFRX Equity Hedge Index</i>	-9.4	10.0	0.1	-2.3	1.4	11.1	4.8	-19.1	8.9	13.1
<b>Parametric Defensive Equity</b>	<b>-2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>50% S&amp;P 500/50% 91 Day T-Bill</i>	-1.0	10.9	6.1	0.9	6.7	15.3	7.9	1.4	7.8	13.3
<b>Neuberger Berman S&amp;P 500 PutWrite</b>	<b>-5.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>CBOE Put Write Index</i>	-5.9	10.8	7.8	6.4	6.4	12.3	8.1	6.2	9.0	31.5
<i>CBOE Putwrite One-Week Index</i>	-14.2	11.4	7.7	0.4	0.2	14.4	11.5	3.9	6.9	15.2
<b>Real Estate Composite</b>	<b>5.8</b>	<b>6.4</b>	<b>7.6</b>	<b>14.2</b>	<b>11.7</b>	<b>12.4</b>	<b>9.3</b>	<b>15.3</b>	<b>16.9</b>	<b>-31.8</b>
<i>NFI</i>	5.3	7.0	8.0	13.3	11.8	11.0	10.5	14.3	13.1	-16.9
<b>Open-End Real Estate Comp</b>	<b>7.3</b>	<b>5.8</b>	<b>7.4</b>	<b>14.6</b>	<b>11.5</b>	<b>12.7</b>	<b>10.7</b>	<b>15.0</b>	<b>14.8</b>	<b>-31.6</b>
<i>NFI</i>	7.4	6.7	7.8	13.9	11.5	12.9	9.8	15.0	15.3	-30.4
<b>American Core Realty Fund, LLC</b>	<b>7.8</b>	<b>7.2</b>	<b>6.1</b>	<b>14.3</b>	<b>10.6</b>	<b>11.3</b>	<b>10.2</b>	<b>13.8</b>	<b>10.0</b>	<b>-30.8</b>
<i>NFI</i>	7.4	6.7	7.8	13.9	11.5	12.9	9.8	15.0	15.3	-30.4
<b>AFL-CIO Building Investment Trust</b>	<b>7.1</b>	<b>4.5</b>	<b>6.8</b>	<b>14.3</b>	<b>12.0</b>	<b>9.7</b>	<b>10.8</b>	<b>12.5</b>	<b>13.0</b>	<b>-25.5</b>
<i>NFI</i>	7.4	6.7	7.8	13.9	11.5	12.9	9.8	15.0	15.3	-30.4
<b>JPMorgan Strategic Property Fund</b>	<b>7.1</b>	<b>6.3</b>	<b>7.3</b>	<b>14.1</b>	<b>10.1</b>	<b>14.8</b>	<b>11.0</b>	<b>14.9</b>	<b>13.0</b>	<b>-27.1</b>
<i>NFI</i>	7.4	6.7	7.8	13.9	11.5	12.9	9.8	15.0	15.3	-30.4

# Attucks Composite

# Annualized Performance (Net of Fees)

Market Value: \$132.8 Million and 3.7% of Fund

Ending December 31, 2018

	Market Value	% of Portfolio	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
<b>Attucks Composite</b>	<b>132,818,323</b>	<b>100.0</b>	<b>-7.5</b>	<b>-15.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-15.1</b>	<b>Sep-18</b>
<i>Dynamic Benchmark</i>			-7.8	-14.4	-12.9	2.6	6.0	4.0	4.5	11.4	-14.4	Sep-18
<b>Attucks U.S. Equity</b>	<b>56,476,640</b>	<b>42.5</b>	<b>-11.1</b>	<b>-14.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-14.1</b>	<b>Sep-18</b>
<i>U.S. Equity Benchmark</i>			-10.8	-16.6	-10.2	1.1	6.0	4.0	5.1	12.0	-16.6	Sep-18
Mar Vista Investment Partners	13,114,267	9.9	-8.8	--	--	--	--	--	--	--	-8.8	Nov-18
<i>Russell 1000 Growth</i>			-8.6	-15.9	-1.5	13.2	11.1	9.8	10.4	15.3	-8.6	Nov-18
Lisanti Capital Growth	20,750,759	15.6	-9.9	--	--	--	--	--	--	--	-9.9	Nov-18
<i>Russell 2500 Growth</i>			-10.9	-20.1	-7.5	7.3	8.1	6.0	6.2	14.8	-10.9	Nov-18
Channing	22,586,996	17.0	-13.3	-22.4	-17.1	-5.8	4.8	2.4	3.0	11.7	7.7	Aug-08
<i>Russell 2000 Value</i>			-12.1	-18.7	-12.9	-3.1	7.4	3.5	3.6	10.4	6.5	Aug-08
<b>Attucks Non-U.S. Equity</b>	<b>76,318,646</b>	<b>57.5</b>	<b>-4.5</b>	<b>-12.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-12.1</b>	<b>Sep-18</b>
<i>Non-U.S. Equity Benchmark</i>			-4.8	-12.3	-15.3	4.6	4.0	2.4	1.0	--	-12.3	Sep-18
GlobeFlex Capital	21,512,053	16.2	-5.1	--	--	--	--	--	--	--	-5.1	Nov-18
<i>MSCI EAFE IMI NR USD</i>			-5.1	-13.1	-14.4	3.9	3.0	2.4	0.9	6.8	-5.1	Nov-18
Redwood Investments	21,747,224	16.4	-4.4	--	--	--	--	--	--	--	-4.4	Nov-18
<i>MSCI EAFE Growth</i>			-4.8	-13.3	-12.8	6.0	2.9	3.2	1.6	7.1	-4.8	Nov-18
Strategic Global	15,808,890	11.9	-6.0	-15.3	-20.9	--	--	--	--	--	2.9	Jan-17
<i>MSCI World ex USA Small Cap</i>			-6.4	-16.2	-18.1	3.6	3.8	4.2	2.3	10.1	1.9	Jan-17
Ativo	17,040,934	12.8	-2.8	-8.3	-16.9	--	--	--	--	--	3.4	Jan-17
<i>MSCI Emerging Markets</i>			-2.7	-7.5	-14.6	8.3	9.2	2.6	1.6	8.0	5.7	Jan-17

\* The Dynamic Benchmark is updated monthly account benchmark weightings from the beginning of each month.

## Attucks Composite

## Calendar Performance (Net of Fees)

Market Value: \$132.8 Million and 3.7% of Fund

Ending December 31, 2018

	Market Value	% of Portfolio	2018	2017	2016	2015	2014	2013
<b>Attucks Composite</b>	<b>132,818,323</b>	<b>100.0</b>	--	--	--	--	--	--
<i>Dynamic Benchmark</i>			-12.9	20.9	13.1	-1.9	6.6	30.3
<b>Attucks U.S. Equity</b>	<b>56,476,640</b>	<b>42.5</b>	--	--	--	--	--	--
<i>U.S. Equity Benchmark</i>			-10.2	13.8	16.5	-1.6	9.8	35.2
Mar Vista Investment Partners	13,114,267	9.9	--	--	--	--	--	--
<i>Russell 1000 Growth</i>			-1.5	30.2	7.1	5.7	13.0	33.5
Lisanti Capital Growth	20,750,759	15.6	--	--	--	--	--	--
<i>Russell 2500 Growth</i>			-7.5	24.5	9.7	-0.2	7.1	40.6
Channing	22,586,996	17.0	-17.1	7.2	29.5	-4.4	5.4	39.6
<i>Russell 2000 Value</i>			-12.9	7.8	31.7	-7.5	4.2	34.5
<b>Attucks Non-U.S. Equity</b>	<b>76,318,646</b>	<b>57.5</b>	--	--	--	--	--	--
<i>Non-U.S. Equity Benchmark</i>			-15.3	29.2	2.7	-2.2	-4.6	20.5
GlobeFlex Capital	21,512,053	16.2	--	--	--	--	--	--
<i>MSCI EAFE IMI NR USD</i>			-14.4	26.2	1.2	0.5	-4.9	23.5
Redwood Investments	21,747,224	16.4	--	--	--	--	--	--
<i>MSCI EAFE Growth</i>			-12.8	28.9	-3.0	4.1	-4.4	22.5
Strategic Global	15,808,890	11.9	-20.9	--	--	--	--	--
<i>MSCI World ex USA Small Cap</i>			-18.1	31.0	4.3	5.5	-5.3	25.6
Ativo	17,040,934	12.8	-16.9	--	--	--	--	--
<i>MSCI Emerging Markets</i>			-14.6	37.3	11.2	-14.9	-2.2	-2.6

\* The Dynamic Benchmark is updated monthly account benchmark weightings from the beginning of each month.

Ending December 31, 2018

Asset Class	Benchmark	Manager	From	Performance		Difference
				Manager	Benchmark	
SMID-Cap Value Equity	Custom Benchmark <sup>1</sup>	Ariel	July-84	12.0%	11.0%	1.0%
Large-Cap Value Equity	Russell 1000 Value	Great Lakes	April-91	9.6%	9.6%	0.0%
International Growth Equity	MSCI EAFE	Cornerstone	December-04	5.9%	4.0%	1.9%
International Growth Equity	MSCI EAFE	Walter Scott	December-04	6.0%	4.0%	2.0%
International Value Equity	MSCI EAFE Value	LSV	May-05	4.3%	3.2%	1.1%
Int'l Emerging Core Equity	MSCI EM IMI	William Blair	August-05	6.5%	6.1%	0.4%
Large-Cap Core Equity	S&P 500	Rhumblin	September-08	9.1%	9.0%	0.1%
International Core Equity	MSCI ACWI ex. U.S.	NTGI ACWI ex. U.S.	November-08	6.7%	6.4%	0.3%
Int'l Small-Cap Equity	MSCI Small-Cap International	MSCI World Ex USA Small Cap	November-08	10.2%	10.0%	0.2%
Hedged Equity Fund of Funds	HFRX Hedged Equity	K2 Advisors	February-09	3.9%	1.4%	2.5%
Hedged Equity Fund of Funds	HFRX Hedged Equity	Rock Creek	February-09	4.8%	1.4%	3.4%
Core Fixed Income	BarCap Aggregate	LM Capital	April-09	3.7%	3.6%	0.1%
Fixed Income - Intermediate	BarCap Int. Gov/Credit	Segall, Bryant, & Hamill	May-09	-0.2%	2.7%	-2.9%
Fixed Income - High Yield	BarCap High Yield	Mackay Shields	May-09	8.7%	9.6%	-0.9%
Fixed Income - Senior Loan	CSFB Leveraged Loan	Symphony	September-09	5.7%	5.4%	0.3%
Opportunistic Fixed Income	50% BarCap HY/50% CSFB LL	Crescent Capital	July-16	3.8%	4.7%	-0.9%
Int'l Small-Cap Equity	MSCI EAFE Small Cap	Segall, Bryant, & Hamill	September-16	3.4%	3.0%	0.4%
Defensive Equity	50% S&P 500/50% 91 Day T-Bill	Parametric	July-17	1.1%	2.6%	-1.5%
Defensive Equity	CBOE S&P 500 Putwrite Index	Neuberger Berman	August-17	-2.0%	-2.3%	0.3%
Mid-Cap Growth Equity	S&P 400 Growth	Rhumblin	September-17	-3.2%	-3.2%	0.0%
Small-Cap Value Equity	Russell 2000 Value	Kayne Anderson	May-18	-13.0%	-16.9%	3.9%
Small-Cap Value Equity	Russell 2000 Value	Nuveen	May-18	-21.3%	-16.9%	-4.4%
Core Fixed Income	BarCap Aggregate	Garcia Hamilton	August-18	0.8%	1.0%	-0.2%
Core Fixed Income	BarCap Aggregate	NIS	August-18	0.6%	1.0%	-0.4%

<sup>1</sup> Return is net of fees.<sup>1</sup> Ariel Custom Benchmark is Russell 2500 Value, and prior to March 2002, the Russell 2000 Value.

Market Value: \$3,561.4 Million and 100.0% of Fund

**RISK RETURN STATISTICS**

January 01, 2014 Through December 31, 2018

Total Fund Composite

Policy Benchmark

**RETURN SUMMARY STATISTICS**

Number of Periods	60	60
Maximum Return	4.34	4.22
Minimum Return	-4.84	-4.35
Annualized Return	4.43	4.49
Total Return	24.22	24.59
Annualized Excess Return Over Risk Free	3.80	3.86
Annualized Excess Return	-0.06	0.00

**RISK SUMMARY STATISTICS**

Beta	1.03	1.00
Upside Deviation	3.41	3.42
Downside Deviation	5.05	4.43

**RISK/RETURN SUMMARY STATISTICS**

Annualized Standard Deviation	5.99	5.76
Alpha	-0.01	0.00
Sharpe Ratio	0.63	0.67
Excess Return Over Market / Risk	-0.01	0.00
Tracking Error	0.97	0.00
Information Ratio	-0.06	--

**CORRELATION STATISTICS**

R-Squared	0.97	1.00
Correlation	0.99	1.00

Market Proxy: Policy Benchmark

Risk-Free Proxy: 91 Day T-Bills

- The Policy Benchmark is 27% BarCap Aggregate, 26% Wilshire 5000, 22% MSCI ACWI ex-US, 10% HFRX Hedged Equity, 10% NCREIF Property Index, 5% Venture Economics Private Equity Index. Prior to September 2013, the Policy Benchmark is 25% BarCap Aggregate, 25% Wilshire 5000, 20% MSCI ACWI ex-US, 10% HFRX Hedged Equity, 10% NCREIF Property Index, 10% Venture Economics Private Equity Index. Prior to February 2009, the Policy Benchmark is 25% BarCap Aggregate, 55% Wilshire 5000, 10% MSCI ACWI ex-US, 6% NCREIF Property Index, 4% Venture Economics Private Equity Index.

- All Data is to be considered preliminary until the release of the final quarterly report.

- Closed End Real Estate and Private Equity Composites may not include current performance, due to reporting cycle limitations.