



**MEABF**

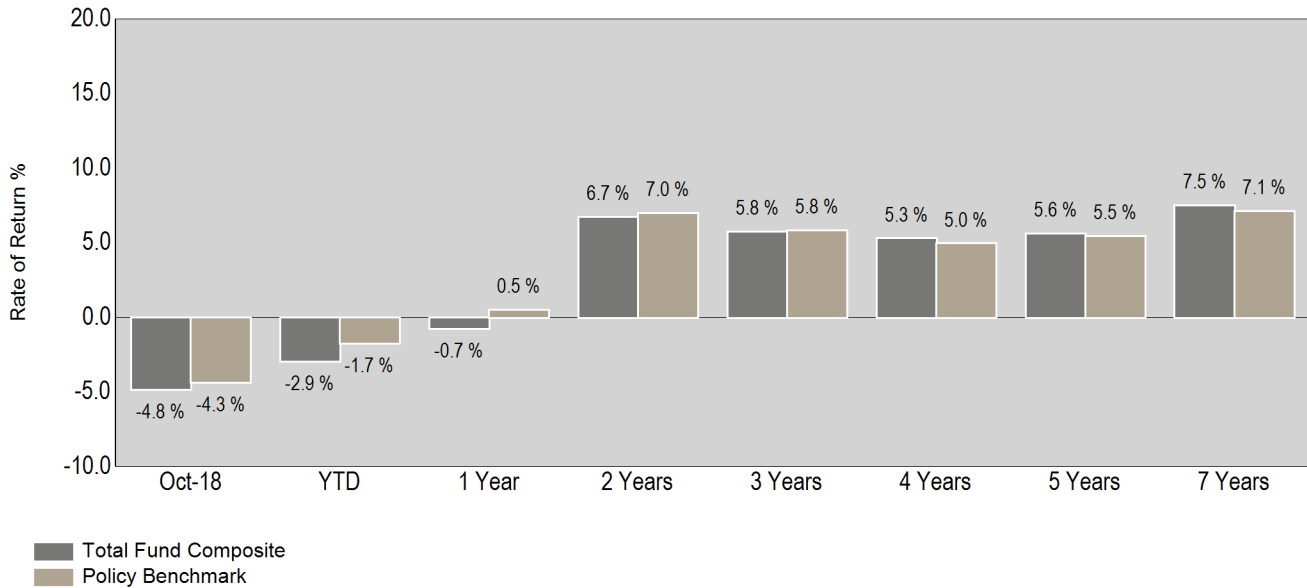
Municipal Employees'  
Annuity & Benefit Fund of Chicago

Monthly Update

**October 31, 2018**



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



**Net Return Summary YTD**

**Asset Allocation vs. Target**

	Total Return	Current	Current	Policy	Difference	%
Total Fund Composite	-2.9%	\$983,866,921	25.9%	27.0%	-\$41,007,558	-1.1%
Fixed Income Composite	0.0%	\$950,154,214	25.0%	26.0%	-\$36,761,950	-1.0%
U.S. Equity Composite	-0.4%	\$781,422,354	20.6%	22.0%	-\$53,660,555	-1.4%
International Equity Composite	-13.4%	\$409,242,504	10.8%	10.0%	\$29,659,364	0.8%
Hedge Fund Composite	-2.4%	\$408,866,652	10.8%	10.0%	\$29,283,512	0.8%
Real Estate Composite	4.3%	\$164,554,209	4.3%	5.0%	-\$25,237,362	-0.7%
Open-End Real Estate Comp	5.7%	\$97,724,549	2.6%	0.0%	\$97,724,549	2.6%
<b>Total</b>		<b>\$3,795,831,403</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	\$4,051,467,697.94	\$4,298,382,813.93	\$4,329,217,050.66	\$4,750,951,414.56	\$5,275,920,307.16	\$4,991,732,503.49
Net Cash Flow	-\$63,773,236.52	-\$400,216,051.94	-\$527,223,239.64	-\$1,716,606,567.75	-\$2,804,078,206.18	-\$3,722,703,228.79
Net Investment Change	-\$191,863,058.40	-\$102,335,358.97	-\$6,162,408.00	\$761,486,556.21	\$1,323,989,302.04	\$2,526,802,128.32
Ending Market Value	\$3,795,831,403.02	\$3,795,831,403.02	\$3,795,831,403.02	\$3,795,831,403.02	\$3,795,831,403.02	\$3,795,831,403.02

# Total Fund Composite

Market Value: \$3,795.8 Million and 100.0% of Fund

Ending October 31, 2018

	Asset Class	Market Value 9/30/18 (\$)	1 Mo Net Cash Flows (\$)	Market Value 10/31/18 (\$)	% of Portfolio	Policy %
<b>Total Fund Composite</b>		<b>4,051,386,863</b>	<b>-64,819,630</b>	<b>3,795,831,403</b>	<b>100.0</b>	<b>100.0</b>
<b>Fixed Income Composite</b>		<b>1,023,540,055</b>	<b>-35,175,920</b>	<b>983,841,283</b>	<b>25.9</b>	<b>27.0</b>
LM Capital	Core Fixed Income	224,855,209	-28,040	223,065,700	5.9	
Garcia Hamilton	Core Fixed Income	74,667,056	-11,687	74,321,460	2.0	
NIS	Core Fixed Income	74,598,708	-11,230	74,116,216	2.0	
Segall Bryant & Hamill	Int. Fixed Income	242,189,635	-10,016,267	231,950,580	6.1	
MacKay Shields	High Yield Fixed Income	143,652,925	-46,558	142,272,497	3.7	
Crescent High Income Fund	High Yield Fixed Income	57,159,241	0	57,159,241	1.5	
Symphony	Senior Secured Loans	206,417,216	-25,062,074	180,955,589	4.8	
<b>U.S. Equity Composite</b>		<b>1,067,687,898</b>	<b>-30,111,275</b>	<b>950,154,214</b>	<b>25.0</b>	<b>26.0</b>
<b>Attacks U.S. Equity</b>		<b>76,949,034</b>	<b>-98</b>	<b>69,967,900</b>	<b>1.8</b>	<b>--</b>
Great Lakes	Large-Cap Value	75,320,504	-19,114	69,869,006	1.8	
RhumbLine S&P 500 Index	Large-Cap Core	538,505,769	-30,005,497	471,166,040	12.4	
RhumbLine S&P 400 Growth	Mid-Cap Growth	154,062,348	-6	138,399,645	3.6	
Ariel Investments	Smid-Cap Value	120,406,674	-36,367	108,316,379	2.9	
Kayne Anderson	Small-Cap Value	53,137,048	-26,216	48,197,731	1.3	
Nuveen	Small-Cap Value	49,217,666	-5,313	44,167,155	1.2	
<b>International Equity Composite</b>		<b>859,658,551</b>	<b>-281,791</b>	<b>781,422,354</b>	<b>20.6</b>	<b>22.0</b>
<b>Attacks Non-U.S. Equity</b>		<b>79,090,725</b>	<b>-69</b>	<b>72,118,269</b>	<b>1.9</b>	<b>--</b>
NTGI MSCI ACWI ex. U.S. Index Fund	Non-U.S. All-Cap Core	165,285,459	-8,943	151,789,091	4.0	
LSV	Non-U.S. Large-Cap Value	108,364,846	-51,966	99,678,389	2.6	
Cornerstone	Non-U.S. Large-Cap Core	85,095,374	-31,372	75,289,664	2.0	
Walter Scott & Partners	Non-U.S. Large-Cap Growth	85,836,116	-60,016	78,365,569	2.1	
NTGI Small Cap International Index	Non-U.S. Small-Cap Core	91,797,714	-5,602	83,070,010	2.2	
Segall Bryant & Hamill	Non-U.S. Small-Cap Core	109,346,678	-45,782	98,903,908	2.6	
William Blair	Emerging Markets	134,841,639	-78,041	122,207,454	3.2	
<b>Hedge Fund Composite</b>		<b>431,188,678</b>	<b>-165,644</b>	<b>409,242,504</b>	<b>10.8</b>	<b>10.0</b>
Rock Creek Georgetown Fund	Hedged Equity Hedge FoF	213,534,087	-109,939	202,964,151	5.3	
K2 Long Short Fund	Hedged Equity Hedge FoF	109,218,733	-55,705	102,839,964	2.7	
Parametric Defensive Equity	Defensive Equity	55,242,798	0	52,591,144	1.4	
Neuberger Berman S&P 500 PutWrite	Defensive Equity	53,193,060	0	50,847,246	1.3	

## Total Fund Composite

Market Value: \$3,795.8 Million and 100.0% of Fund

Ending October 31, 2018

	Asset Class	Market Value 9/30/18 (\$)	1 Mo Net Cash Flows (\$)	Market Value 10/31/18 (\$)	% of Portfolio	Policy %
<b>Real Estate Composite</b>		<b>411,269,592</b>	<b>-3,292,329</b>	<b>408,866,652</b>	<b>10.8</b>	<b>10.0</b>
<b>Open-End Real Estate Comp</b>		<b>361,721,493</b>	<b>-3,292,329</b>	<b>359,318,552</b>	<b>9.5</b>	<b>--</b>
American Core Realty Fund, LLC	Core Real Estate	95,362,975	-1,199,618	94,163,357	2.5	
AFL-CIO Building Investment Trust	Core Real Estate	127,993,690	-789,847	127,203,843	3.4	
JPMorgan Strategic Property Fund	Core Real Estate	138,364,828	-1,302,863	137,951,353	3.6	
<b>Closed-End Real Estate Composite</b>		<b>49,548,100</b>	<b>0</b>	<b>49,548,100</b>	<b>1.3</b>	<b>--</b>
<b>Private Equity Composite</b>		<b>168,255,646</b>	<b>-3,701,437</b>	<b>164,554,209</b>	<b>4.3</b>	<b>5.0</b>
Fund of Funds Private Equity Composite		75,227,898	-1,661,938	73,565,960	1.9	--
Direct Investment Private Equity Composite		93,027,748	-2,039,499	90,988,248	2.4	--
<b>Cash Accounts</b>		<b>89,786,443</b>	<b>7,908,767</b>	<b>97,750,187</b>	<b>2.6</b>	<b>0.0</b>

# Investment Manager

# Annualized Performance (Net of Fees)

Market Value: \$3,795.8 Million and 100.0% of Fund

Ending October 31, 2018

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
<b>Total Fund Composite</b>	<b>-4.8</b>	<b>-4.6</b>	<b>-2.9</b>	<b>-0.7</b>	<b>6.7</b>	<b>5.8</b>	<b>5.3</b>	<b>5.6</b>	<b>7.5</b>	<b>8.3</b>	--	
Policy Benchmark	-4.3	-3.6	-1.7	0.5	7.0	5.8	5.0	5.5	7.1	7.2	--	
Actuarial Rate	0.6	1.7	5.9	7.2	7.3	7.4	7.4	7.4	7.5	7.6	--	
<b>Fixed Income Composite</b>	<b>-0.5</b>	<b>0.1</b>	<b>0.0</b>	<b>0.3</b>	<b>1.7</b>	<b>3.1</b>	<b>2.8</b>	<b>3.0</b>	<b>3.4</b>	<b>5.3</b>	--	
BBgBarc US Aggregate TR	-0.8	-0.8	-2.4	-2.1	-0.6	1.0	1.3	1.8	1.9	3.9	--	
LM Capital	-0.8	-0.7	-2.6	-2.4	-0.8	0.8	1.3	1.8	2.0	--	3.6	Mar-09
BBgBarc US Aggregate TR	-0.8	-0.8	-2.4	-2.1	-0.6	1.0	1.3	1.8	1.9	3.9	3.4	Mar-09
Garcia Hamilton	-0.5	--	--	--	--	--	--	--	--	--	-1.1	Aug-18
BBgBarc US Aggregate TR	-0.8	-0.8	-2.4	-2.1	-0.6	1.0	1.3	1.8	1.9	3.9	-1.4	Aug-18
NIS	-0.7	--	--	--	--	--	--	--	--	--	-1.4	Aug-18
BBgBarc US Aggregate TR	-0.8	-0.8	-2.4	-2.1	-0.6	1.0	1.3	1.8	1.9	3.9	-1.4	Aug-18
Segall Bryant & Hamill	-0.1	0.2	-0.8	-0.9	-0.1	1.0	1.3	1.5	1.8	--	3.2	Apr-09
BBgBarc US Govt/Credit Int TR	-0.1	0.0	-0.9	-1.1	-0.2	0.9	1.1	1.4	1.6	3.3	2.8	Apr-09
MacKay Shields	-1.0	0.8	1.6	2.2	5.0	6.8	5.3	5.2	6.6	--	9.2	Apr-09
BBgBarc US High Yield TR	-1.6	-0.3	0.9	1.0	4.9	6.6	4.4	4.7	6.5	11.2	10.1	Apr-09
BarCap Ba High Yield	-1.4	-0.2	-0.9	-0.9	3.3	5.1	4.1	4.7	6.2	10.5	9.1	Apr-09
Crescent High Income Fund	0.0	1.2	2.0	1.8	4.6	--	--	--	--	--	5.9	Jul-16
50% BarCap HY / 50% CSFB Lev Loans	-0.8	0.4	2.6	2.9	5.0	6.0	4.4	4.4	5.8	9.3	6.4	Jul-16
Symphony	-0.3	1.1	4.2	4.5	4.3	4.7	4.0	4.0	5.0	--	6.2	Aug-09
Credit Suisse Leveraged Loans	0.0	1.1	4.4	4.9	5.1	5.5	4.3	4.2	5.1	7.3	5.9	Aug-09
S&P/LSTA U.S. Leveraged Loan 100 Index	-0.2	1.0	3.8	4.2	4.3	5.1	3.4	3.3	4.3	7.4	5.3	Aug-09
<b>U.S. Equity Composite</b>	<b>-8.2</b>	<b>-5.9</b>	<b>-0.4</b>	<b>3.6</b>	<b>13.2</b>	<b>9.0</b>	<b>7.6</b>	<b>8.6</b>	<b>12.1</b>	<b>12.9</b>	--	
Wilshire 5000 Total Market	-7.3	-3.9	2.5	6.7	15.0	11.4	9.7	11.0	13.8	13.3	--	
S&P 500	-6.8	-3.3	3.0	7.3	15.2	11.5	9.9	11.3	14.0	13.2	--	
Russell 2000	-10.9	-9.3	-0.6	1.9	14.1	10.7	8.0	8.0	12.2	12.4	--	
<b>Attucks U.S. Equity</b>	<b>-9.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-9.1</b>	<b>Sep-18</b>
U.S. Equity Benchmark	-8.5	-7.1	-1.4	1.9	10.7	8.6	7.1	8.3	12.2	12.3	-8.5	Sep-18
Great Lakes	-7.3	-6.0	-5.0	-1.2	10.1	8.4	6.9	8.7	12.1	11.8	10.1	Mar-91
Russell 1000 Value	-5.2	-3.6	-1.5	3.0	10.2	8.9	6.7	8.6	12.4	11.3	9.9	Mar-91
RhumbLine S&P 500 Index	-6.9	-3.4	2.9	7.2	15.1	11.5	9.9	11.3	14.0	13.3	10.1	Aug-08
S&P 500	-6.8	-3.3	3.0	7.3	15.2	11.5	9.9	11.3	14.0	13.2	10.0	Aug-08
RhumbLine S&P 400 Growth	-10.2	-7.9	-2.2	1.3	--	--	--	--	--	--	4.4	Sep-17
S&P 400 MidCap Growth	-10.2	-7.9	-2.2	1.2	12.7	9.6	9.0	9.2	12.2	14.8	4.3	Sep-17
Ariel Investments	-10.1	-8.8	-3.6	3.4	12.1	7.4	6.9	8.6	13.6	15.3	12.4	Jun-84
Russell 2500 Value	-8.5	-7.9	-3.3	0.3	9.7	9.0	6.4	7.2	11.8	12.1	11.4	Jun-84

# Investment Manager

# Annualized Performance (Net of Fees)

Market Value: \$3,795.8 Million and 100.0% of Fund

Ending October 31, 2018

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Kayne Anderson	-9.3	-8.4	--	--	--	--	--	--	--	--	-3.9	May-18
<i>Russell 2000 Value</i>	-9.0	-9.1	-2.5	-0.6	11.4	10.5	7.0	7.2	11.6	10.9	-6.9	May-18
Nuveen	-10.3	-12.8	--	--	--	--	--	--	--	--	-11.6	May-18
<i>Russell 2000 Value</i>	-9.0	-9.1	-2.5	-0.6	11.4	10.5	7.0	7.2	11.6	10.9	-6.9	May-18
<b>International Equity Composite</b>	<b>-9.1</b>	<b>-11.5</b>	<b>-13.4</b>	<b>-10.5</b>	<b>6.0</b>	<b>4.8</b>	<b>3.3</b>	<b>2.7</b>	<b>5.7</b>	<b>8.4</b>	--	
<i>MSCI ACWI ex USA</i>	-8.1	-9.6	-11.0	-8.2	6.5	4.4	2.0	1.6	4.5	6.9	--	
<i>MSCI EAFE</i>	-8.0	-9.0	-9.3	-6.9	7.2	3.6	2.7	2.0	5.6	6.9	--	
<b>Attucks Non-U.S. Equity</b>	<b>-8.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-8.8</b>	<b>Sep-18</b>
<i>Non-U.S. Equity Benchmark</i>	-8.6	-10.2	-11.8	-8.7	7.6	4.2	2.9	2.2	--	--	-8.6	Sep-18
NTGI MSCI ACWI ex. U.S. Index Fund	-8.2	-9.6	-10.9	-8.2	6.7	4.6	2.3	1.9	4.7	7.2	7.2	Oct-08
<i>MSCI ACWI ex USA</i>	-8.1	-9.6	-11.0	-8.2	6.5	4.4	2.0	1.6	4.5	6.9	6.9	Oct-08
LSV	-8.1	-9.5	-12.4	-10.2	6.3	4.8	4.1	2.7	6.5	8.3	4.9	Apr-05
<i>MSCI EAFE Value</i>	-6.6	-8.2	-9.9	-7.7	6.6	3.2	1.3	0.9	4.9	6.2	3.7	Apr-05
Cornerstone	-11.6	-12.9	-8.0	-3.7	8.9	5.3	6.0	4.8	7.4	7.5	6.3	Nov-04
<i>MSCI EAFE</i>	-8.0	-9.0	-9.3	-6.9	7.2	3.6	2.7	2.0	5.6	6.9	4.4	Nov-04
Walter Scott & Partners	-8.8	-8.3	-7.0	-4.9	7.3	6.8	5.3	3.9	6.3	7.8	6.2	Nov-04
<i>MSCI EAFE</i>	-8.0	-9.0	-9.3	-6.9	7.2	3.6	2.7	2.0	5.6	6.9	4.4	Nov-04
<i>MSCI EAFE Growth</i>	-9.2	-9.7	-8.7	-6.0	7.8	4.0	4.0	3.1	6.3	7.5	5.1	Nov-04
NTGI Small Cap International Index	-9.5	-10.8	-11.4	-7.6	7.9	6.5	6.1	4.4	7.6	11.2	11.2	Oct-08
<i>MSCI World ex USA Small Cap</i>	-9.5	-10.8	-11.6	-7.7	7.8	6.5	6.0	4.3	7.5	11.1	11.1	Oct-08
Segall Bryant & Hamill	-9.6	-11.9	-15.5	-12.9	5.6	--	--	--	--	--	4.4	Sep-16
<i>MSCI EAFE Small Cap</i>	-9.6	-11.0	-11.6	-7.8	8.4	6.6	7.0	5.2	8.8	11.6	6.6	Sep-16
William Blair	-9.4	-16.8	-23.1	-19.9	2.5	3.9	-0.6	1.3	3.4	9.6	6.5	Jul-05
<i>MSCI Emerging Markets IMI</i>	-8.9	-12.1	-16.4	-13.0	4.5	5.9	0.6	0.7	1.8	8.1	6.1	Jul-05

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$3,795.8 Million and 100.0% of Fund

Ending October 31, 2018

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
<b>Hedge Fund Composite</b>	<b>-5.1</b>	<b>-4.4</b>	<b>-2.4</b>	<b>-2.1</b>	<b>4.9</b>	<b>2.4</b>	<b>3.4</b>	<b>3.9</b>	<b>5.9</b>	<b>--</b>	<b>--</b>	
<i>HFRX Equity Hedge Index</i>	-3.9	-5.7	-4.8	-3.0	3.2	1.2	0.7	1.2	2.4	1.5	--	
<b>Rock Creek Georgetown Fund</b>	<b>-4.9</b>	<b>-5.3</b>	<b>-2.8</b>	<b>-3.3</b>	<b>4.8</b>	<b>2.5</b>	<b>3.6</b>	<b>4.1</b>	<b>6.1</b>	<b>--</b>	<b>5.3</b>	Jan-09
<i>HFRX Equity Hedge Index</i>	-3.9	-5.7	-4.8	-3.0	3.2	1.2	0.7	1.2	2.4	1.5	1.9	Jan-09
<b>K2 Long Short Fund</b>	<b>-5.9</b>	<b>-4.7</b>	<b>-3.5</b>	<b>-3.1</b>	<b>3.3</b>	<b>1.0</b>	<b>2.1</b>	<b>3.0</b>	<b>5.1</b>	<b>--</b>	<b>4.3</b>	Jan-09
<i>HFRX Equity Hedge Index</i>	-3.9	-5.7	-4.8	-3.0	3.2	1.2	0.7	1.2	2.4	1.5	1.9	Jan-09
<b>Parametric Defensive Equity</b>	<b>-4.8</b>	<b>-2.5</b>	<b>0.6</b>	<b>2.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.1</b>	Jul-17
<i>50% S&amp;P 500/50% 91 Day T-Bill</i>	-3.3	-1.3	2.4	4.7	8.1	6.2	5.3	6.0	7.2	6.8	5.8	Jul-17
<b>Neuberger Berman S&amp;P 500 PutWrite</b>	<b>-4.4</b>	<b>-2.2</b>	<b>-1.3</b>	<b>0.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1.5</b>	Aug-17
<i>CBOE Put Write Index</i>	-5.6	-3.9	0.1	1.8	6.8	6.2	6.5	6.7	8.3	8.8	2.7	Aug-17
<i>CBOE Putwrite One-Week Index</i>	-5.4	-3.6	-7.6	-5.2	2.1	2.8	2.5	2.8	5.1	6.1	-2.7	Aug-17
<b>Real Estate Composite</b>	<b>0.1</b>	<b>1.4</b>	<b>4.3</b>	<b>6.6</b>	<b>6.5</b>	<b>7.5</b>	<b>9.0</b>	<b>9.5</b>	<b>9.7</b>	<b>4.1</b>	<b>--</b>	
<i>NFI</i>	0.0	1.1	5.3	6.5	6.7	7.4	8.9	9.4	9.8	6.7	--	
<b>Open-End Real Estate Comp</b>	<b>0.2</b>	<b>1.8</b>	<b>5.7</b>	<b>7.3</b>	<b>6.6</b>	<b>7.4</b>	<b>9.0</b>	<b>9.6</b>	<b>10.2</b>	<b>4.3</b>	<b>--</b>	
<i>NFI</i>	0.0	1.2	5.8	7.1	6.9	7.5	9.0	9.5	10.0	5.0	--	
<b>American Core Realty Fund, LLC</b>	<b>0.0</b>	<b>2.0</b>	<b>6.0</b>	<b>7.6</b>	<b>7.1</b>	<b>7.4</b>	<b>8.7</b>	<b>9.3</b>	<b>9.7</b>	<b>4.1</b>	<b>6.4</b>	Nov-03
<i>NFI</i>	0.0	1.2	5.8	7.1	6.9	7.5	9.0	9.5	10.0	5.0	7.2	Nov-03
<b>AFL-CIO Building Investment Trust</b>	<b>0.0</b>	<b>1.7</b>	<b>5.4</b>	<b>7.0</b>	<b>5.6</b>	<b>6.6</b>	<b>8.3</b>	<b>9.0</b>	<b>9.6</b>	<b>4.4</b>	<b>6.4</b>	Jun-02
<i>NFI</i>	0.0	1.2	5.8	7.1	6.9	7.5	9.0	9.5	10.0	5.0	7.3	Jun-02
<b>JPMorgan Strategic Property Fund</b>	<b>0.4</b>	<b>1.8</b>	<b>5.8</b>	<b>7.3</b>	<b>6.9</b>	<b>7.4</b>	<b>9.0</b>	<b>9.3</b>	<b>10.2</b>	<b>5.2</b>	<b>8.0</b>	Jun-02
<i>NFI</i>	0.0	1.2	5.8	7.1	6.9	7.5	9.0	9.5	10.0	5.0	7.3	Jun-02



# Investment Manager

# Calendar Performance (Net of Fees)

Market Value: \$3,795.8 Million and 100.0% of Fund

Ending October 31, 2018

	YTD	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Total Fund Composite</b>	<b>-2.9</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>	<b>-28.6</b>
Policy Benchmark	-1.7	14.8	6.4	0.6	5.8	14.3	11.4	-0.4	12.8	13.2	-26.7
Actuarial Rate	5.9	7.5	7.5	7.5	7.5	7.5	7.5	8.0	8.0	8.0	8.0
<b>Fixed Income Composite</b>	<b>0.0</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>	<b>-4.6</b>
BBgBarc US Aggregate TR	-2.4	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2
LM Capital	-2.6	3.3	2.2	1.5	5.5	-1.7	5.3	7.3	6.2	--	--
BBgBarc US Aggregate TR	-2.4	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2
Garcia Hamilton	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	-2.4	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2
NIS	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	-2.4	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2
Segall Bryant & Hamill	-0.8	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	5.1
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	0.9	7.5	17.1	-4.5	2.5	7.4	15.8	5.0	15.1	58.2	-26.2
BarCap Ba High Yield	-0.9	7.3	12.8	-1.0	5.4	5.1	14.6	6.8	14.6	46.1	-17.5
Crescent High Income Fund	2.0	5.5	--	--	--	--	--	--	--	--	--
50% BarCap HY / 50% CSFB Lev Loans	2.6	5.9	13.5	-2.4	2.3	6.8	12.6	3.4	12.5	51.5	-27.3
Symphony	4.2	3.2	8.2	1.2	1.8	7.2	9.7	3.8	11.7	--	--
Credit Suisse Leveraged Loans	4.4	4.2	9.9	-0.4	2.1	6.2	9.4	1.8	10.0	44.9	-28.8
S&P/LSTA U.S. Leveraged Loan 100 Index	3.8	3.3	10.9	-2.8	1.0	5.0	10.5	0.6	9.7	52.2	-28.2
<b>U.S. Equity Composite</b>	<b>-0.4</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>	<b>-38.7</b>
Wilshire 5000 Total Market	2.5	21.0	13.4	0.7	12.7	33.1	16.1	1.0	17.2	28.3	-37.2
S&P 500	3.0	21.8	12.0	1.4	13.7	32.4	16.0	2.1	15.1	26.5	-37.0
Russell 2000	-0.6	14.6	21.3	-4.4	4.9	38.8	16.3	-4.2	26.9	27.2	-33.8
<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>	<b>--</b>
U.S. Equity Benchmark	-1.4	13.8	16.5	-1.6	9.8	35.2	16.8	-1.3	21.4	28.0	-35.6
Great Lakes	-5.0	18.3	15.4	-1.4	11.4	34.9	13.5	4.8	17.7	22.5	-37.2
Russell 1000 Value	-1.5	13.7	17.3	-3.8	13.5	32.5	17.5	0.4	15.5	19.7	-36.8
RhumbLine S&P 500 Index	2.9	21.6	11.8	1.6	13.6	32.3	16.3	2.4	14.8	26.6	--
S&P 500	3.0	21.8	12.0	1.4	13.7	32.4	16.0	2.1	15.1	26.5	-37.0
RhumbLine S&P 400 Growth	-2.2	--	--	--	--	--	--	--	--	--	--
S&P 400 MidCap Growth	-2.2	19.9	14.8	2.0	7.6	32.8	17.3	-0.9	30.6	41.1	-37.6
Ariel Investments	-3.6	17.1	12.9	-2.5	13.2	43.5	20.0	-9.3	26.1	65.7	-46.8
Russell 2500 Value	-3.3	10.4	25.2	-5.5	7.1	33.3	19.2	-3.4	24.8	27.7	-32.0

## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: \$3,795.8 Million and 100.0% of Fund

Ending October 31, 2018

	YTD	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Kayne Anderson	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 2000 Value</i>	-2.5	7.8	31.7	-7.5	4.2	34.5	18.0	-5.5	24.5	20.6	-28.9
Nuveen	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 2000 Value</i>	-2.5	7.8	31.7	-7.5	4.2	34.5	18.0	-5.5	24.5	20.6	-28.9
<b>International Equity Composite</b>	<b>-13.4</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>	<b>-36.6</b>
<i>MSCI ACWI ex USA</i>	-11.0	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4	-45.5
<i>MSCI EAFE</i>	-9.3	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4
<b>Attucks Non-U.S. Equity</b>	--	--	--	--	--	--	--	--	--	--	--
<i>Non-U.S. Equity Benchmark</i>	-11.8	29.2	2.7	-2.2	-4.6	20.5	--	--	--	--	--
NTGI MSCI ACWI ex. U.S. Index Fund	-10.9	27.4	4.8	-5.3	-3.7	15.6	17.1	-13.5	11.3	41.6	--
<i>MSCI ACWI ex USA</i>	-11.0	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4	-45.5
LSV	-12.4	25.7	6.3	3.4	-7.6	25.8	17.2	-12.0	12.0	34.5	-44.4
<i>MSCI EAFE Value</i>	-9.9	21.4	5.0	-5.7	-5.4	23.0	17.7	-12.2	3.2	34.2	-44.1
Cornerstone	-8.0	32.5	-5.1	7.6	-0.6	18.6	19.1	-12.9	5.4	21.3	-24.8
<i>MSCI EAFE</i>	-9.3	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4
Walter Scott & Partners	-7.0	27.3	4.8	0.5	-3.1	11.5	20.2	-10.5	11.3	29.5	-33.1
<i>MSCI EAFE</i>	-9.3	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4
<i>MSCI EAFE Growth</i>	-8.7	28.9	-3.0	4.1	-4.4	22.5	16.9	-12.1	12.2	29.4	-42.7
NTGI Small Cap International Index	-11.4	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>	-11.6	31.0	4.3	5.5	-5.3	25.6	17.5	-15.8	24.5	50.8	-48.0
Segall Bryant & Hamill	-15.5	32.6	--	--	--	--	--	--	--	--	--
<i>MSCI EAFE Small Cap</i>	-11.6	33.0	2.2	9.6	-4.9	29.3	20.0	-15.9	22.0	46.8	-47.0
William Blair	-23.1	49.8	1.8	-14.0	6.2	4.1	22.1	-16.8	23.9	79.0	-62.1
<i>MSCI Emerging Markets IMI</i>	-16.4	36.8	9.9	-13.9	-1.8	-2.2	18.7	-19.5	19.9	82.4	-53.8

## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: \$3,795.8 Million and 100.0% of Fund

Ending October 31, 2018

	YTD	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Hedge Fund Composite</b>	<b>-2.4</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>	--	--
<i>HFRX Equity Hedge Index</i>	-4.8	10.0	0.1	-2.3	1.4	11.1	4.8	-19.1	8.9	13.1	-25.5
Rock Creek Georgetown Fund	-2.8	11.2	-0.9	4.8	5.2	17.6	9.8	-4.0	6.0	--	--
<i>HFRX Equity Hedge Index</i>	-4.8	10.0	0.1	-2.3	1.4	11.1	4.8	-19.1	8.9	13.1	-25.5
K2 Long Short Fund	-3.5	8.5	-1.5	2.5	5.5	17.6	8.8	-5.5	4.5	--	--
<i>HFRX Equity Hedge Index</i>	-4.8	10.0	0.1	-2.3	1.4	11.1	4.8	-19.1	8.9	13.1	-25.5
Parametric Defensive Equity	0.6	--	--	--	--	--	--	--	--	--	--
<i>50% S&amp;P 500/50% 91 Day T-Bill</i>	2.4	10.9	6.1	0.9	6.7	15.3	7.9	1.4	7.8	13.3	-19.4
Neuberger Berman S&P 500 PutWrite	-1.3	--	--	--	--	--	--	--	--	--	--
<i>CBOE Put Write Index</i>	0.1	10.8	7.8	6.4	6.4	12.3	8.1	6.2	9.0	31.5	-26.8
<i>CBOE Putwrite One-Week Index</i>	-7.6	11.4	7.7	0.4	0.2	14.4	11.5	3.9	6.9	15.2	-15.2
<b>Real Estate Composite</b>	<b>4.3</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>	<b>-16.2</b>
<i>NFI</i>	5.3	7.0	8.0	13.3	11.8	11.0	10.5	14.3	13.1	-16.9	-6.5
<b>Open-End Real Estate Comp</b>	<b>5.7</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>	<b>-11.1</b>
<i>NFI</i>	5.8	6.7	7.8	13.9	11.5	12.9	9.8	15.0	15.3	-30.4	-10.7
American Core Realty Fund, LLC	6.0	7.2	6.1	14.3	10.6	11.3	10.2	13.8	10.0	-30.8	-6.3
<i>NFI</i>	5.8	6.7	7.8	13.9	11.5	12.9	9.8	15.0	15.3	-30.4	-10.7
AFL-CIO Building Investment Trust	5.4	4.5	6.8	14.3	12.0	9.7	10.8	12.5	13.0	-25.5	-10.1
<i>NFI</i>	5.8	6.7	7.8	13.9	11.5	12.9	9.8	15.0	15.3	-30.4	-10.7
JPMorgan Strategic Property Fund	5.8	6.3	7.3	14.1	10.1	14.8	11.0	14.9	13.0	-27.1	-9.0
<i>NFI</i>	5.8	6.7	7.8	13.9	11.5	12.9	9.8	15.0	15.3	-30.4	-10.7

# Attucks Composite

# Annualized Performance (Net of Fees)

Market Value: \$142.3 Million and 3.7% of Fund

Ending October 31, 2018

	Market Value	% of Portfolio	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
<b>Attucks Composite</b>	<b>142,293,264</b>	<b>100.0</b>	<b>-9.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-9.0</b>	<b>Sep-18</b>
<i>Dynamic Benchmark</i>			-8.6	-8.7	-7.0	-3.8	9.9	7.6	6.1	6.9	11.4	-8.6	Sep-18
<b>Attucks U.S. Equity</b>	<b>69,967,900</b>	<b>49.2</b>	<b>-9.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-9.1</b>	<b>Sep-18</b>
<i>U.S. Equity Benchmark</i>			-8.5	-7.1	-1.4	1.9	10.7	8.6	7.1	8.3	12.3	-8.5	Sep-18
Edgar Lomax	12,115,642	8.5	-3.2	1.2	3.1	9.1	15.0	12.6	8.9	10.9	--	13.3	Oct-11
<i>Russell 1000 Value</i>			-5.2	-3.6	-1.5	3.0	10.2	8.9	6.7	8.6	11.3	12.4	Oct-11
Oakbrook Investment	27,174,938	19.1	-9.2	-6.7	-2.8	0.5	11.9	9.7	8.6	10.3	--	13.8	Aug-12
<i>Russell MidCap</i>			-8.3	-6.1	-1.5	2.8	11.6	9.0	7.4	9.0	14.2	12.6	Aug-12
Channing	15,776,513	11.1	-12.6	-12.8	-6.7	-5.5	8.6	7.2	5.8	6.5	12.5	9.1	Aug-08
<i>Russell 2000 Value</i>			-9.0	-9.1	-2.5	-0.6	11.4	10.5	7.0	7.2	10.9	7.8	Aug-08
Bowling	14,900,807	10.5	-9.5	-11.2	-4.8	-5.0	--	--	--	--	--	2.8	Jan-17
<i>Russell 2000</i>			-10.9	-9.3	-0.6	1.9	14.1	10.7	8.0	8.0	12.4	7.5	Jan-17
<b>Attucks Non-U.S. Equity</b>	<b>72,118,269</b>	<b>50.7</b>	<b>-8.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-8.8</b>	<b>Sep-18</b>
<i>Non-U.S. Equity Benchmark</i>			-8.6	-10.2	-11.8	-8.7	7.6	4.2	2.9	2.2	--	-8.6	Sep-18
Martin	14,993,729	10.5	-8.0	-6.6	-3.0	-2.6	--	--	--	--	--	8.9	Jan-17
<i>MSCI EAFE</i>			-8.0	-9.0	-9.3	-6.9	7.2	3.6	2.7	2.0	6.9	5.7	Jan-17
Alpha Architect	16,030,217	11.3	-9.2	-11.3	-15.8	-13.6	--	--	--	--	--	0.5	Apr-17
<i>MSCI EAFE</i>			-8.0	-9.0	-9.3	-6.9	7.2	3.6	2.7	2.0	6.9	2.1	Apr-17
Strategic Global	21,198,153	14.9	-9.2	-13.1	-15.2	-11.7	--	--	--	--	--	7.4	Jan-17
<i>MSCI World ex USA Small Cap</i>			-9.5	-10.8	-11.6	-7.7	7.8	6.5	6.0	4.3	11.1	6.6	Jan-17
Ativo	19,887,504	14.0	-8.7	-10.7	-17.3	-15.0	--	--	--	--	--	3.4	Jan-17
<i>MSCI Emerging Markets</i>			-8.7	-11.6	-15.7	-12.5	5.2	6.5	0.8	0.8	7.8	5.4	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: \$142.3 Million and 3.7% of Fund

Ending October 31, 2018

	Market Value	% of Portfolio	2017	2016	2015	2014	2013	2012
<b>Attucks Composite</b>	<b>142,293,264</b>	<b>100.0</b>	--	--	--	--	--	--
<i>Dynamic Benchmark</i>			20.9	13.1	-1.9	6.6	30.3	18.5
<b>Attucks U.S. Equity</b>	<b>69,967,900</b>	<b>49.2</b>	--	--	--	--	--	--
<i>U.S. Equity Benchmark</i>			13.8	16.5	-1.6	9.8	35.2	16.8
Edgar Lomax	12,115,642	8.5	19.3	17.7	-5.0	15.9	33.7	8.1
<i>Russell 1000 Value</i>			13.7	17.3	-3.8	13.5	32.5	17.5
Oakbrook Investment	27,174,938	19.1	20.4	15.6	-0.2	15.1	36.3	--
<i>Russell MidCap</i>			18.5	13.8	-2.4	13.2	34.8	17.3
Channing	15,776,513	11.1	7.2	29.5	-4.4	5.4	39.6	23.6
<i>Russell 2000 Value</i>			7.8	31.7	-7.5	4.2	34.5	18.0
Bowling	14,900,807	10.5	--	--	--	--	--	--
<i>Russell 2000</i>			14.6	21.3	-4.4	4.9	38.8	16.3
<b>Attucks Non-U.S. Equity</b>	<b>72,118,269</b>	<b>50.7</b>	--	--	--	--	--	--
<i>Non-U.S. Equity Benchmark</i>			29.2	2.7	-2.2	-4.6	20.5	--
Martin	14,993,729	10.5	--	--	--	--	--	--
<i>MSCI EAFE</i>			25.0	1.0	-0.8	-4.9	22.8	17.3
Alpha Architect	16,030,217	11.3	--	--	--	--	--	--
<i>MSCI EAFE</i>			25.0	1.0	-0.8	-4.9	22.8	17.3
Strategic Global	21,198,153	14.9	--	--	--	--	--	--
<i>MSCI World ex USA Small Cap</i>			31.0	4.3	5.5	-5.3	25.6	17.5
Ativo	19,887,504	14.0	--	--	--	--	--	--
<i>MSCI Emerging Markets</i>			37.3	11.2	-14.9	-2.2	-2.6	18.2

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

Ending October 31, 2018

Asset Class	Benchmark	Manager	From	Performance		Difference
				Manager	Benchmark	
SMID-Cap Value Equity	Custom Benchmark <sup>1</sup>	Ariel	July-84	12.4%	11.4%	1.0%
Large-Cap Value Equity	Russell 1000 Value	Great Lakes	April-91	10.1%	9.9%	0.2%
International Growth Equity	MSCI EAFE	Cornerstone	December-04	6.3%	4.4%	1.9%
International Growth Equity	MSCI EAFE	Walter Scott	December-04	6.2%	4.4%	1.8%
International Value Equity	MSCI EAFE Value	LSV	May-05	4.9%	3.7%	1.2%
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	10.1%	10.0%	0.1%
International Core Equity	MSCI ACWI ex. U.S.	NTGI ACWI ex. U.S.	November-08	7.2%	6.9%	0.3%
Int'l Small-Cap Equity	MSCI Small-Cap International	MSCI World Ex USA Small Cap	November-08	11.2%	11.1%	0.1%
Hedged Equity Fund of Funds	HFRX Hedged Equity	K2 Advisors	February-09	4.3%	1.9%	2.4%
Hedged Equity Fund of Funds	HFRX Hedged Equity	Rock Creek	February-09	5.3%	1.9%	3.4%
Core Fixed Income	BarCap Aggregate	LM Capital	April-09	3.6%	3.4%	0.2%
Fixed Income - Intermediate	BarCap Int. Gov/Credit	Segall, Bryant, & Hamill	May-09	4.4%	6.6%	-2.2%
Fixed Income - High Yield	BarCap High Yield	MacKay Shields	May-09	9.2%	10.1%	-0.9%
Fixed Income - Senior Loan	CSFB Leveraged Loan	Symphony	September-09	6.2%	5.9%	0.3%
Opportunistic Fixed Income	50% BarCap HY/50% CSFB LL	Crescent Capital	July-16	5.9%	6.4%	-0.5%
Int'l Small-Cap Equity	MSCI EAFE Small Cap	Segall, Bryant, & Hamill	September-16	3.2%	2.8%	0.4%
Defensive Equity	50% S&P 500/50% 91 Day T-Bill	Parametric	July-17	4.1%	5.8%	-1.7%
Defensive Equity	CBOE S&P 500 Putwrite Index	Neuberger Berman	August-17	1.5%	2.7%	-1.2%
Mid-Cap Growth Equity	S&P 400 Growth	Rhumblin	September-17	4.4%	4.3%	0.1%
Small-Cap Value Equity	Russell 2000 Value	Kayne Anderson	May-18	-3.9%	-6.9%	3.0%
Small-Cap Value Equity	Russell 2000 Value	Nuveen	May-18	-11.6%	-6.9%	-4.7%
Core Fixed Income	BarCap Aggregate	Garcia Hamilton	August-18	-1.1%	-1.4%	0.3%
Core Fixed Income	BarCap Aggregate	NIS	August-18	-1.4%	-1.4%	0.0%

<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: \$3,795.8 Million and 100.0% of Fund

**RISK RETURN STATISTICS**

November 01, 2013 Through October 31, 2018

Total Fund Composite

Policy Benchmark

**RETURN SUMMARY STATISTICS**

Number of Periods	60	60
Maximum Return	4.34	4.22
Minimum Return	-4.83	-4.34
Annualized Return	5.63	5.45
Total Return	31.51	30.39
Annualized Excess Return Over Risk Free	5.07	4.89
Annualized Excess Return	0.18	0.00

**RISK SUMMARY STATISTICS**

Beta	1.02	1.00
Upside Deviation	3.36	3.37
Downside Deviation	4.67	4.24

**RISK/RETURN SUMMARY STATISTICS**

Annualized Standard Deviation	5.68	5.51
Alpha	0.01	0.00
Sharpe Ratio	0.89	0.89
Excess Return Over Market / Risk	0.03	0.00
Tracking Error	0.98	0.00
Information Ratio	0.18	--

**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.