# Callan

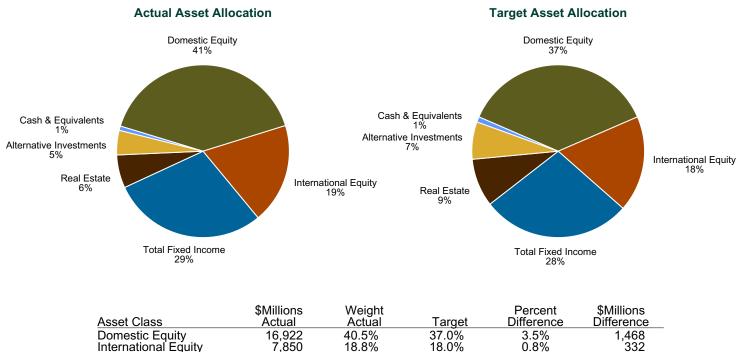
March 31, 2019 Illinois Municipal Retirement Fund Quarterly Performance Report

Investment Measurement Service Quarterly Review

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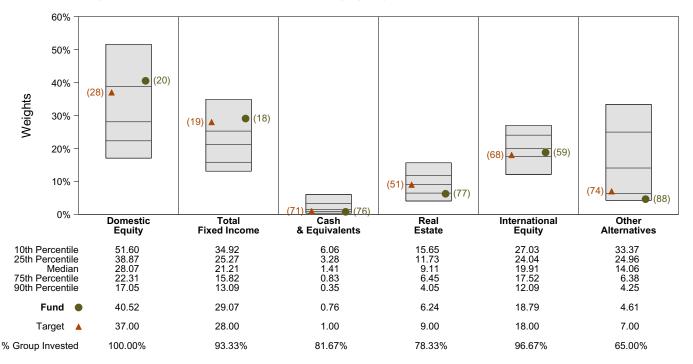
# Actual vs Target Asset Allocation As of March 31, 2019

The top left chart shows the Fund's asset allocation for the period. The bottom pie chart shows the Fund's target asset allocation as outlined in the investment policy statement.



7,850	18.8%	18.0%	0.8%	332
12,141	29.1%	28.0%	1.1%	446
2,607	6.2%	9.0%	(2.8%)	(1,152)
1,927	4.6%	7.0%		<b>)</b> (997)
319	0.8%	1.0%	(0.2%)	(98)
41,768	100.0%	100.0%		
	12,141 2,607 1,927 319	12,141 29.1% 2,607 6.2% 1,927 4.6% 319 0.8%	12,141 29.1% 28.0% 2,607 6.2% 9.0% 1,927 4.6% 7.0% 319 0.8% 1.0%	12,141         29.1%         28.0%         1.1%           2,607         6.2%         9.0%         (2.8%)           1,927         4.6%         7.0%         (2.4%)           319         0.8%         1.0%         (0.2%)

#### Asset Class Weights vs Callan Public Fund Sponsor - Large (>1B)



\* Current Quarter Target = 37.0% Russell 3000 Index, 28.0% Blmbg Aggregate, 18.0% MSCI ACWI ex US, 9.0% NCREIF NFI-ODCE Val Wt Nt, 7.0% 9% Annually and 1.0% 3-month Treasury Bill.

# **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2019, with the distribution as of December 31, 2018. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

	March 31,	2019			December 3 <sup>°</sup>	1. 2018
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Equity	\$16,922,204,142	40.52%	\$(629,484,109)	\$2,200,025,014	\$15,351,663,236	39.93%
Large Cap Growth						
NTGI S&P 500 Growth Idx	2,229,191,651	5.34%	0	290,013,443	1,939,178,208	5.04%
Piedmont Russell 1000 G	982,561,181	2.35%	0	136,174,564	846,386,617	2.20%
Sands	1,924,165,514	4.61%	0	352,207,435	1,571,958,078	4.09%
Large Cap Value						
Dodge & Cox	1,303,912,863	3.12%	(7,898,712)	118,672,281	1,193,139,294	3.10%
BMO	1,336,615,458	3.20%	(8,049,525)	142,551,251	1,202,113,731	3.13%
LSV	1,489,574,324	3.57%	(11,313,732)	152,282,706	1,348,605,351	3.51%
NTGI S&P 500 Value Idx	1,596,494,975	3.82%	(100,000,000)	177,353,831	1,519,141,144	3.95%
Large Cap Core						
NTGI MarketCap Index	2,667,466,464	6.39%	(200,032,404)	351,627,555	2,515,871,313	6.54%
Small Cap Growth						
Frontier	562,414,557	1.35%	0	102,088,274	460,326,283	1.20%
FIAM	462,671,921	1.11%	(300,000,000)	98,577,047	664,094,875	1.73%
Small Cap Value						
Channing	221,810,048	0.53%	0	29,391,794	192,418,255	0.50%
Dimensional Small Cap Value	561,889,112	1.35%	0 0	56,228,892	505,660,219	1.32%
Inv. Counselors of Maryland	654,592,639	1.57%	0	83,136,962	571,455,677	1.49%
Micro Cap						
Ativo	0	0.00%	(2,189,736)	(930)	2,190,666	0.01%
Dimensional Micro Cap	421,534,608	1.01%	0	44,521,763	377,012,845	0.98%
Public Real Assets						
Cohen & St Public Global Infrastru	346.039.999	0.83%	0	42,404,634	303,635,365	0.79%
Brookfield Public Global Infrastru	161,268,829	0.39%	0	22,793,513	138,475,315	0.36%
International Equity	\$7,850,107,646	18.79%	\$(71,048,980)	\$792,278,039	\$7,128,878,587	18.54%
International Large Cap Growth						
EARNEST Partners	623,647,261	1.49%	0	62,090,639	561,556,621	1.46%
William Blair	724,085,603	1.73%	0	89,109,509	634,976,094	1.65%
International Large Cap Value						
Brandes	597,669,193	1.43%	0	37,873,341	559,795,851	1.46%
Mondrian	532,482,095	1.27%	631,889	47,704,175	484,146,031	1.26%
Lazard	111,333,048	0.27%	0	10,248,804	101,084,244	0.26%
International Large Cap Core						
Arrowstreet	682,511,323	1.63%	0	66,955,789	615,555,533	1.60%
Brown	340,864,762	0.82%	0	34,598,315	306,266,447	0.80%
GlobeFlex	594,247,058	1.42%	0	61,462,025	532,785,032	1.39%
NTGI MSCI EAFE Index	1,809,073,759	4.33% 0.73%	(350,028,766) 0	187,034,815	1,972,067,710	5.13% 0.71%
Progress	305,202,105	0.73%	0	30,888,796	274,313,309	0.71%
International All Cap Developed						
Ativo International	132,904,215	0.32%	129,200,000	3,704,215	-	-
International Small Cap						
Franklin Templeton	188,089,124	0.45%	318,194	21,186,965	166,583,965	0.43%
William Blair	262,163,554	0.63%	0	30,818,617	231,344,937	0.60%
Emerging Markets						
Genesis	945,834,547	2.26%	148,829,703	108,602,032	688,402,812	1.79%
Total Fixed Income	\$12,141,408,312	29.07%	\$168,024,911	\$409,698,044	\$11,563,685,358	30.08%
Domestic Fixed Core						
Brandes Core	355,758,618	0.85%	0	10,363,326	345,395,292	0.90%
EARNEST Partners	1,040,874,149	2.49%	0	28,709,497	1,012,164,652	2.63%
Piedmont Garcia Hamilton	1,026,900,495	2.46% 2.43%	175,000,000 0	28,778,669 26,471,164	823,121,826 990,483,905	2.14%
Domestic Fixed Passive Core	1,016,955,069	2.43%	U	20,471,104	<del>990,400,90</del> 5	2.58%
NTGI Blmbg Agg. Index	1,712,818,585	4.10%	0	49,563,016	1,663,255,569	4.33%
BlackRock US Debt	1,641,758,049	3.93%	0	47,653,906	1,594,104,143	4.15%
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#### **Asset Distribution Across Investment Managers**



# **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2019, with the distribution as of December 31, 2018. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

March 31, 3Market ValueDomestic Fixed Core PlusLM Capital880,661,394Progress Fixed Income921,564,229BMO-TCH909,583,056Western1,074,541,087Bank LoansBarings Global Loan Fund574,916,173Emerging Markets DebtStandish206,054,666Opportunistic Fixed Income11,117,986High Yield767,570,501MacKay Shields767,570,501Real EstateTA Buckhead Ind. Prop.Barings Core Property Fund1,070Barings Core Property Pund1,070Barings Core Property Roberty85,473,482INVESCO Core RE208,383,270Invesco Euro real estate56,804,509AEW Core Property235,144,734CBRE Core Partners189,500,154Real Estate Non-Core713,528,871Franklin Templeton EMREFF18,234,052Security Capital55,536,045Dune II28,018,636Non-Core Intil Real Estate Funds**807,462,960Non-Core Real Estate Funds**119,496,055Rockwood Fund VIII248,553Almanac ARS V1,603,723TA Realty IX4,653Alternative Investments\$1,927,183,981Absolute Return339,143,602Muller & Monroe MPEFF5,800,581Paritheon257,568,319Private Equity Funds - International104,757,611Agriculture Premiere Partners IV197,	Weight           2.11%           2.21%           2.18%           2.57%           1.38%           0.49%	Net New Inv. 0 0 354,105 (7,329,179)	Inv. Return 32,143,381 30,354,209 32,043,924 41,098,369 19,682,948	December 31 Market Value 848,518,013 891,210,020 877,539,132 1,033,088,613	2.21% 2.32% 2.28%
Domestic Fixed Core Plus LM Capital880,661,394 921,564,229BMO-TCH909,583,056Western1,074,541,087Bank Loans Barings Global Loan Fund574,916,173Emerging Markets Debt Standish206,054,666Opportunistic Fixed Income Crescent11,117,986High Yield MacKay Shields767,570,501Real Estate Real Estate Core TA Buckhead Ind. Prop. Barings Core Property Fund Invesco Euro real estate AEW Core Property Invesco Euro real estate AEW Core Property ECRE Core Partners505,903,023 10,070Real Estate Non-Core Artemis MWBE Spruce Franklin Templeton EMREFF Security Capital Dune II Aurora173,528,871 25,536,045Alternative Investments Abbolt Aurora\$1,927,183,981 339,143,602Abbolt Muller & Monroe MPEFF Private Equity Abbolt339,143,602 25,568,319Private Equity Funds - International339,143,602 25,568,319Private Equity Funds - International339,143,602 25,568,319Private Equity Funds - International339,143,602 25,568,319Private Equity Funds - International304,757,611Agriculture Premiere Partners IV197,511,092Timberland97,511,092	2.11% 2.21% 2.18% 2.57% 1.38%	0 0 354,105	32,143,381 30,354,209 32,043,924 41,098,369	848,518,013 891,210,020 877,539,132	2.21% 2.32%
LM Capital880,661,394Progress Fixed Income921,564,229BMO-TCH909,583,056Western1,074,541,087Bank Loans206,054,666Barings Global Loan Fund574,916,173Emerging Markets Debt206,054,666Standish206,054,666Opportunistic Fixed Income11,117,986High Yield767,570,501Real Estate\$2,607,214,338Real Estate Core505,903,023TA Buckhead Ind. Prop.505,903,023Barings Core Property Fund1,070Barings Core Property Fund1,070Barings Core Property85,473,482INVESCO Core RE208,383,270Invesco Euro real estate56,804,509AEW Core Property235,144,734CBRE Core Partners189,500,154Real Estate Non-Core173,528,871Artemis MWBE Spruce173,528,871Franklin Templeton EMREFF18,234,052Security Capital28,018,636Dune II248,553Alternative Investments\$1,927,183,981Absolute Return657,791Private Equity339,143,602Muller & Monroe MPEFF5,800,681Private Equity Funds - International104,757,611AgriculturePremiere Partners IV197,511,092Timberland104,757,11,092	2.21% 2.18% 2.57% 1.38%	0 0 354,105	30,354,209 32,043,924 41,098,369	891,210,020 877,539,132	2.32%
Progress Fixed Income BMO-TCH921,564,229 909,583,056 909,583,056 909,583,056 909,583,056 1,074,541,087Bank Loans Barings Global Loan Fund574,916,173Emerging Markets Debt Standish206,054,666Opportunistic Fixed Income Crescent11,117,986High Yield MacKay Shields767,570,501Real Estate Real Estate Core T A Buckhead Ind. Prop. Barings Core Property Fund Invesco Euro real estate New Core Property Invesco Euro real estate AEW Core Property Experience Security Capital Dune II Franklin Templeton EMREFF Security Capital Non-Core Intl Real Estate Funds** Rockwood Fund VIII Aurora73,528,871 4,832 4,653Alternative Investments Abbolt Muler & Monroe MPEFF Private Equity Abbott Muler & Monroe MPEFF Autora\$1,927,183,981 4,500,581 5,506,045 5,500,581 5,506,045Private Equity Abbott Muler & Monroe MPEFF Private Equity Funds - Domestic Private Equity Funds - International339,143,602 104,757,611Agriculture Premiere Partners IV197,511,092Timberland197,511,092	2.21% 2.18% 2.57% 1.38%	0 0 354,105	30,354,209 32,043,924 41,098,369	891,210,020 877,539,132	2.32%
BMÖ-TCH Western909,583,056 1,074,541,087Bank Loans Barings Global Loan Fund574,916,173Emerging Markets Debt Standish206,054,666Opportunistic Fixed Income Crescent11,117,986High Yield MacKay Shields767,570,501Real Estate Barings Core Property Fund Barings Core Property Fund Invesco Euro real estate AEW Core Property Invesco Euro real estate CBRE Core Partners505,903,023 85,873,482Real Estate Non-Core AEW Core Property Invesco Euro real estate AEW Core Property Security Capital Dune II Non-Core Int Real Estate Funds** Non-Core Real Estate Funds** Non-Core Int Real Estate Funds** Non-Core Real Estate Funds** Non-Core Int Real Estate Funds** Non-Core Real Estate Funds** 	2.18% 2.57% 1.38%	0 354,105	32,043,924 41,098,369	877,539,132	
Western1,074,541,087Bank Loans Barings Global Loan Fund574,916,173Emerging Markets Debt Standish206,054,666Opportunistic Fixed Income Crescent11,117,986High Yield MacKay Shields767,570,501Real Estate Real Estate Core TA Buckhead Ind. Prop. Barings Core Property Fund Barings Core Property Fund Barings Core Property Invesco Euro real estate AEW Core Property Ecropean Core Property 	2.57%	354,105	41,098,369		/ /ጸッ/~
Bank Loans Barings Global Loan Fund574,916,173Emerging Markets Debt Standish206,054,666Opportunistic Fixed Income Crescent11,117,986High Yield MacKay Shields767,570,501Real Estate Real Estate Core TA Buckhead Ind. Prop. Barings Core Property Fund Invesco Core RE Invesco Euro real estate AEW Core Property ECRE Core Partners\$05,903,023 1,070Real Estate Non-Core Arternis MWBE Spruce Franklin Templeton EMREFF Security Capital Dune II Mon-Core Real Estate Funds* Rockwood Fund VIII Almanac ARS V At Realty IX173,528,871 1,5536,045Atternative Investments Absolut Return Aurora\$1,927,183,981 4,653Atternative Investments Absolut Return Aurora\$1,927,183,981 3,91,43,602 3,91,43,602 3,91,43,602 3,91,43,602 3,91,43,602 3,91,43,602 1,91,757,611Agriculture Premiere Partners IV197,511,092Timberland104,757,611	1.38%			1,033,088,613	
Barings Global Loan Fund574,916,173Emerging Markets Debt Standish206,054,666Opportunistic Fixed Income Crescent11,117,986High Yield MacKay Shields767,570,501Real Estate Real Estate Core TA Buckhead Ind. Prop. Barings Core Property Fund INVESCO Core RE INVESCO Core RE Der Property505,903,023 8,473,482 208,383,270 1,070 8,473,482 208,383,270 1,0700 Barings European Core Property INVESCO Core RE 208,383,270 1,0700 Barings European Core Property 235,144,734 CBRE Core Partners773,528,871 1,3528,871 5,536,045 20,154Real Estate Non-Core Artemis MWBE Spruce Security Capital Dune II Real Estate Funds** Rockwood Fund VIII Aurora807,462,960 246,553 81,927,183,981 Absolute Return Aurora\$1,927,183,981 246,553Alternative Investments Absolute Return Aurora\$1,927,183,981 257,568,319 914,504,783 Private Equity Funds - Domestic 914,504,783 Private Equity Funds - International\$1,927,11,092Agriculture Premiere Partners IV197,511,092Timberland104,757,611		(7,329,179)	10 692 049		2.69%
Emerging Markets Debt Standish206,054,666Opportunistic Fixed Income Crescent11,117,986High Yield MacKay Shields767,570,501Real Estate Core TA Buckhead Ind. Prop. Barings Core Property Fund Barings European Core Property INVESCO Core RE INVESCO Core RE Core Property AEW Core Property AEW Core Property Core Property 235,144,734 CBRE Core Partners\$05,903,023 1,070 1,070 85,473,482 208,383,270 1,070 1,070 1,070 85,473,482 208,383,270 1,070 85,473,482 1,070 85,473,482 1,070 85,473,482 1,070 85,473,482 1,070 85,473,482 1,070 85,53,144,734 CBRE Core Partners\$1,070 1,070 1,070 85,473,482 208,383,270 1,070 235,144,734 CBRE Core PartnersReal Estate Non-Core Artemis MWBE Spruce Franklin Templeton EMREFF Security Capital Dune II Non-Core Real Estate Funds** Non-Core Intl Real Estate Funds** Non-Core Intl Real Estate Funds** 119,496,055 Rockwood Fund VIII 248,553 Almanac ARS V TA Realty IX\$1,927,183,981 4,653Alternative Investments Absolute Return Aurora\$1,927,183,981 4,503,723 1,603,723 1,71Private Equity Abbott Pantheon Private Equity Funds - Domestic Pantheon Private Equity Funds - Domestic Pantheon Private Equity Funds - International104,757,611Agriculture Premiere Partners IV197,511,092Timberland104,7		(1,020,110)	19 007 948	562,562,404	1.46%
Standish206,054,666Opportunistic Fixed Income Crescent11,117,986High Yield MacKay Shields767,570,501Real Estate Real Estate Core TA Buckhead Ind. Prop. Barings Core Property Fund Invesco Euro real estate AEW Core Property 235,144,734 CBRE Core Partners\$05,903,023 85,473,482 208,383,270 1000000000000000000000000000000000000	0.49%		10,002,010	002,002,101	1.1070
Opportunistic Fixed Income Crescent11,117,986High Yield MacKay Shields767,570,501Real Estate Real Estate Core TA Buckhead Ind. Prop. Barings Core Property Fund Barings European Core Property Invesco Core RE Revent Core Property AEW Core Property AEW Core Property Core Property Core Property 235,144,734 CBRE Core Partners\$2,607,214,338 (1,070) (1,092) (1,081) (1,070) (1,081) (1,070) (1,092) (1,081) (1,081) (1,070) (1,092) (1,081) (1,070) (1,092) (1,081) (1,092) (1,081) (1,092) (1,081) (1,092) (1,081) (1,092) (1,081) (1,092) (1,081) (1,081) (1,081) (1,081) (1,081) (1,081) (1,081) <br< td=""><td>0.49%</td><td>0</td><td>9,644,517</td><td>196,410,149</td><td>0.51%</td></br<>	0.49%	0	9,644,517	196,410,149	0.51%
Crescent         11,117,986           High Yield MacKay Shields         767,570,501           Real Estate Real Estate Core TA Buckhead Ind. Prop. Barings Core Property Fund Barings European Core Property Invesco Euro real estate AEW Core Property         505,903,023 (1,070)           NVESCO Core RE Invesco Euro real estate         56,804,509 (208,383,270)           AEW Core Property AEW Core Property         235,144,734 (2BRE Core Partners)           Real Estate Non-Core Artemis MWBE Spruce         173,528,871 (18,234,052)           Security Capital Dune II         28,018,636 (Non-Core Real Estate Funds*           Non-Core Real Estate Funds*         807,462,960 (Non-Core Intl Real Estate Funds**           Rockwood Fund VIII Aurora         248,553 (Almanac ARS V)           Alternative Investments Absolute Return Aurora         \$1,927,183,981           Absolut Return Aurora         339,143,602 (58,319)           Private Equity Funds - Domestic Pantheon         57,568,319           Private Equity Funds - International         104,757,611           Agriculture Premiere Partners IV         197,511,092		0	9,044,017	190,410,149	0.0176
High Yield MacKay Shields767,570,501Real Estate Real Estate Core TA Buckhead Ind. Prop. Barings Core Property Fund Barings European Core Property INVESCO Core RE Invesco Euro real estate AEW Core Property Core Property 235,144,734 CBRE Core Partners505,903,023 505,903,023 1,070 85,473,482 208,383,270 1,070 235,144,734 CBRE Core PartnersReal Estate Non-Core Artemis MWBE Spruce Franklin Templeton EMREFF Security Capital Dune II Non-Core Real Estate Funds** Rockwood Fund VIII Almanac ARS V TA Realty IX173,528,871 4,653Alternative Investments Absolute Return Aurora\$1,927,183,981 6,57,791Private Equity Monroe MPEFF Private Equity Funds - International\$1,927,183,981 104,757,611Agriculture Premiere Partners IV197,511,092Timberland197,511,092	0.020/	0	0.050	11 115 622	0.020/
MacKay Shields767,570,501Real Estate\$2,607,214,338Real Estate Core505,903,023TA Buckhead Ind. Prop.505,903,023Barings Core Property Fund1,070Barings Core Property Fund1,070Barings European Core Property85,473,482INVESCO Core RE208,383,270Invesco Euro real estate56,804,509AEW Core Property235,144,734CBRE Core Partners189,500,154Real Estate Non-Core173,528,871Artemis MWBE Spruce173,528,871Franklin Templeton EMREFF18,234,052Security Capital55,536,045Dune II28,018,636Non-Core Real Estate Funds**807,462,960Non-Core Intl Real Estate Funds**119,496,055Rockwood Fund VIII248,553Alternative Investments\$1,927,183,981Absolute Return339,143,602Muller & Monroe MPEFF5,800,581Private Equity257,568,319Private Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611Agriculture Premiere Partners IV197,511,092Timberland197,511,092	0.03%	U	2,353	11,115,633	0.03%
Real Estate\$2,607,214,338Real Estate CoreTA Buckhead Ind. Prop.505,903,023Barings Core Property Fund1,070Barings European Core Property85,473,482INVESCO Core RE208,383,270Invesco Euro real estate56,804,509AEW Core Property235,144,734CBRE Core Partners189,500,154Real Estate Non-Core173,528,871Artemis MWBE Spruce173,528,871Franklin Templeton EMREFF18,234,052Security Capital25,536,045Dune II28,018,636Non-Core Real Estate Funds*807,462,960Non-Core Real Estate Funds**119,496,055Rockwood Fund VIII248,553Alternative Investments\$1,927,183,981Absolute Return339,143,602Muller & Monroe MPEFF5,800,581Private Equity257,568,319Private Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611AgriculturePremiere Partners IV197,511,092Timberland197,511,092	4.0.4%	0	50 407 000	744,000,000	4.000/
Real Estate CoreTA Buckhead Ind. Prop.505,903,023Barings Core Property Fund1,070Barings European Core Property85,473,482INVESCO Core RE208,383,270Invesco Euro real estate56,804,509AEW Core Property235,144,734CBRE Core Partners189,500,154Real Estate Non-CoreArtemis MWBE Spruce173,528,871Franklin Templeton EMREFF18,234,052Security Capital55,536,045Dune II28,018,636Non-Core Real Estate Funds**807,462,960Non-Core Intl Real Estate Funds**119,496,055Rockwood Fund VIII248,553Almanac ARS V1,603,723TA Realty IX4,653Alternative Investments\$1,927,183,981Absolute Return257,568,319Aurora257,568,319Private EquityDomesticPrivate Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611AgriculturePremiere Partners IV197,511,092Timberland104,757,611	1.84%	0	53,187,839	714,382,662	1.86%
TA Buckhead Ind. Prop.505,903,023Barings Core Property Fund1,070Barings European Core Property85,473,482INVESCO Core RE208,383,270Invesco Euro real estate56,804,509AEW Core Property235,144,734CBRE Core Partners189,500,154Real Estate Non-CoreArtemis MWBE Spruce173,528,871Franklin Templeton EMREFF18,234,052Security Capital55,536,045Dune II28,018,636Non-Core Real Estate Funds*807,462,960Non-Core Intl Real Estate Funds**119,496,055Rockwood Fund VIII248,553Almanac ARS V1,603,723TA Realty IX4,653Alternative Investments\$1,927,183,981Absolute Return339,143,602Muller & Monroe MPEFF5,800,581Private Equity257,568,319Private Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611AgriculturePremiere Partners IV197,511,092Timberland197,511,092	6.24%	\$121,908,539	\$28,598,234	\$2,456,707,565	6.39%
Barings Core Property Fund         1,070           Barings European Core Property         85,473,482           INVESCO Core RE         208,383,270           Invesco Euro real estate         56,804,509           AEW Core Property         235,144,734           CBRE Core Partners         189,500,154           Real Estate Non-Core         173,528,871           Artemis MWBE Spruce         173,528,871           Franklin Templeton EMREFF         18,234,052           Security Capital         55,536,045           Dune II         28,018,636           Non-Core Real Estate Funds*         807,462,960           Non-Core Intl Real Estate Funds**         119,496,055           Rockwood Fund VIII         248,553           Alternative Investments         \$1,927,183,981           Absolute Return         4,653           Aurora         657,791           Private Equity         339,143,602           Muller & Monroe MPEFF         5,800,581           Pantheon         257,568,319           Private Equity Funds - Domestic         914,504,783           Private Equity Funds - International         104,757,611           Agriculture         197,511,092           Timberland         197,511,092	1.21%	8,246,590	18,371,920	479,284,513	1.25%
Barings European Core Property INVESCO Core RE         85,473,482           INVESCO Core RE         208,383,270           Invesco Euro real estate         56,804,509           AEW Core Property         235,144,734           CBRE Core Partners         189,500,154           Real Estate Non-Core         173,528,871           Artemis MWBE Spruce         173,528,871           Franklin Templeton EMREFF         18,234,052           Security Capital         55,536,045           Dune II         28,018,636           Non-Core Real Estate Funds*         807,462,960           Non-Core Intl Real Estate Funds**         119,496,055           Rockwood Fund VIII         248,553           Alternative Investments         \$1,927,183,981           Absolute Return         4,653           Aurora         657,791           Private Equity         339,143,602           Muller & Monroe MPEFF         5,800,581           Pantheon         257,568,319           Private Equity Funds - Domestic         914,504,783           Private Equity Funds - International         104,757,611           Agriculture         197,511,092           Timberland         197,511,092		, ,			
INVESCO Core RE         208,383,270           Invesco Euro real estate         56,804,509           AEW Core Property         235,144,734           CBRE Core Partners         189,500,154           Real Estate Non-Core         173,528,871           Artemis MWBE Spruce         173,528,871           Franklin Templeton EMREFF         18,234,052           Security Capital         55,536,045           Dune II         28,018,636           Non-Core Real Estate Funds*         807,462,960           Non-Core Intl Real Estate Funds**         119,496,055           Rockwood Fund VIII         248,553           Almanac ARS V         1,603,723           TA Realty IX         4,653           Alternative Investments         \$1,927,183,981           Absolute Return         657,791           Private Equity         339,143,602           Muller & Monroe MPEFF         5,800,581           Pantheon         257,568,319           Private Equity Funds - Domestic         914,504,783           Private Equity Funds - International         104,757,611           Agriculture         197,511,092           Timberland         197,511,092	0.00%	0	0	1,070	0.00%
Invesco Euro real estate         56,804,509           AEW Core Property         235,144,734           CBRE Core Partners         189,500,154           Real Estate Non-Core         173,528,871           Franklin Templeton EMREFF         18,234,052           Security Capital         55,536,045           Dune II         28,018,636           Non-Core Real Estate Funds*         807,462,960           Non-Core Intl Real Estate Funds**         119,496,055           Rockwood Fund VIII         248,553           Almanac ARS V         1,603,723           TA Realty IX         4,653           Alternative Investments         \$1,927,183,981           Absolute Return         657,791           Private Equity         339,143,602           Muller & Monroe MPEFF         5,800,581           Pantheon         257,568,319           Private Equity Funds - Domestic         914,504,783           Private Equity Funds - International         104,757,611           Agriculture         Premiere Partners IV         197,511,092           Timberland         197,511,092         197,511,092	0.20%	57,350,000	(1,751,634)	29,875,116	0.08%
AEW Core Property CBRE Core Partners       235,144,734         CBRE Core Partners       189,500,154         Real Estate Non-Core Artemis MWBE Spruce       173,528,871         Franklin Templeton EMREFF       18,234,052         Security Capital       55,536,045         Dune II       28,018,636         Non-Core Real Estate Funds*       807,462,960         Non-Core Intl Real Estate Funds**       119,496,055         Rockwood Fund VIII       248,553         Almanac ARS V       1,603,723         TA Realty IX       4,653         Alternative Investments       \$1,927,183,981         Absolute Return       657,791         Private Equity       339,143,602         Muller & Monroe MPEFF       5,800,581         Pantheon       257,568,319         Private Equity Funds - Domestic       914,504,783         Private Equity Funds - International       104,757,611         Agriculture Premiere Partners IV       197,511,092         Timberland       197,511,092	0.50%	(1,354,489)	(422,585)	210,160,344	0.55%
CBRE Core Partners         189,500,154           Real Estate Non-Core Artemis MWBE Spruce         173,528,871           Franklin Templeton EMREFF         18,234,052           Security Capital         55,536,045           Dune II         28,018,636           Non-Core Real Estate Funds*         807,462,960           Non-Core Intl Real Estate Funds**         119,496,055           Rockwood Fund VIII         248,553           Almanac ARS V         1,603,723           TA Realty IX         4,653           Alternative Investments         \$1,927,183,981           Absolute Return Aurora         657,791           Private Equity         339,143,602           Muller & Monroe MPEFF         5,800,581           Pantheon         257,568,319           Private Equity Funds - Domestic         914,504,783           Private Equity Funds - International         104,757,611           Agriculture Premiere Partners IV         197,511,092           Timberland         197,511,092	0.14%	(582,570)	229,926	57,157,154	0.15%
Real Estate Non-Core       173,528,871         Artemis MWBE Spruce       173,528,871         Franklin Templeton EMREFF       18,234,052         Security Capital       55,536,045         Dune II       28,018,636         Non-Core Real Estate Funds*       807,462,960         Non-Core Intl Real Estate Funds**       119,496,055         Rockwood Fund VIII       248,553         Almanac ARS V       1,603,723         TA Realty IX       4,653         Alternative Investments       \$1,927,183,981         Absolute Return       657,791         Private Equity       339,143,602         Muller & Monroe MPEFF       5,800,581         Pantheon       257,568,319         Private Equity Funds - Domestic       914,504,783         Private Equity Funds - International       104,757,611         Agriculture       Premiere Partners IV       197,511,092         Timberland       197,511,092       197,511,092	0.56%	(2,197,302)	2	237,342,034	0.62%
Artemis MWBE Spruce       173,528,871         Franklin Templeton EMREFF       18,234,052         Security Capital       55,536,045         Dune II       28,018,636         Non-Core Real Estate Funds*       807,462,960         Non-Core Intl Real Estate Funds**       119,496,055         Rockwood Fund VIII       248,553         Almanac ARS V       1,603,723         TA Realty IX       4,653         Alternative Investments       \$1,927,183,981         Absolute Return       657,791         Private Equity       339,143,602         Muller & Monroe MPEFF       5,800,581         Pantheon       257,568,319         Private Equity Funds - Domestic       914,504,783         Private Equity Funds - International       104,757,611         Agriculture       Premiere Partners IV       197,511,092         Timberland       197,511,092	0.45%	0	0	189,500,154	0.49%
Franklin Templeton EMREFF       18,234,052         Security Capital       55,536,045         Dune II       28,018,636         Non-Core Real Estate Funds**       119,496,055         Rockwood Fund VIII       248,553         Almanac ARS V       1,603,723         TA Realty IX       4,653         Alternative Investments       \$1,927,183,981         Absolute Return       657,791         Private Equity       339,143,602         Muller & Monroe MPEFF       5,800,581         Patheon       257,568,319         Private Equity Funds - Domestic       914,504,783         Private Equity Funds - International       104,757,611         Agriculture       Premiere Partners IV       197,511,092         Timberland       197,511,092					
Franklin Templeton EMREFF       18,234,052         Security Capital       55,536,045         Dune II       28,018,636         Non-Core Real Estate Funds**       119,496,055         Rockwood Fund VIII       248,553         Almanac ARS V       1,603,723         TA Realty IX       4,653         Alternative Investments       \$1,927,183,981         Absolute Return       657,791         Private Equity       339,143,602         Muller & Monroe MPEFF       5,800,581         Patheon       257,568,319         Private Equity Funds - Domestic       914,504,783         Private Equity Funds - International       104,757,611         Agriculture       Premiere Partners IV       197,511,092         Timberland       197,511,092	0.42%	462,011	(47,685)	173,114,545	0.45%
Security Capital         55,536,045           Dune II         28,018,636           Non-Core Real Estate Funds**         807,462,960           Non-Core Intl Real Estate Funds**         119,496,055           Rockwood Fund VIII         248,553           Almanac ARS V         1,603,723           TA Realty IX         4,653           Alternative Investments         \$1,927,183,981           Absolute Return         657,791           Private Equity         339,143,602           Muller & Monroe MPEFF         5,800,581           Patheon         257,568,319           Private Equity Funds - Domestic         914,504,783           Private Equity Funds - International         104,757,611           Agriculture         Premiere Partners IV         197,511,092           Timberland         197,511,092	0.04%	(1,947,379)	109,699	20,071,732	0.05%
Dune II         28,018,636           Non-Core Real Estate Funds*         807,462,960           Non-Core Intl Real Estate Funds**         119,496,055           Rockwood Fund VIII         248,553           Almanac ARS V         1,603,723           TA Realty IX         4,653           Alternative Investments         \$1,927,183,981           Absolute Return         657,791           Private Equity         339,143,602           Muller & Monroe MPEFF         5,800,581           Pantheon         257,568,319           Private Equity Funds - Domestic         914,504,783           Private Equity Funds - International         104,757,611           Agriculture         197,511,092           Timberland         197,511,092	0.13%	(553,998)	3,638,287	52,451,755	0.14%
Non-Core Real Estate Funds*807,462,960Non-Core Intl Real Estate Funds**119,496,055Rockwood Fund VIII248,553Almanac ARS V1,603,723TA Realty IX4,653Alternative Investments\$1,927,183,981Absolute Return657,791Private Equity339,143,602Muller & Monroe MPEFF5,800,581Pantheon257,568,319Private Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611Agriculture Premiere Partners IV197,511,092Timberland104,757,11,092	0.07%	(000,000)	(387,341)	28,405,977	0.07%
Non-Core Intl Real Estate Funds**119,496,055Rockwood Fund VIII248,553Almanac ARS V1,603,723TA Realty IX4,653Alternative Investments\$1,927,183,981Absolute Return657,791Private Equity657,791Private Equity5,800,581Pantheon257,568,319Private Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611AgriculturePremiere Partners IV197,511,092Timberland104,757,100	1.93%	41,524,147	9,255,336	756,683,477	1.97%
Rockwood Fund VIII248,553Almanac ARS V1,603,723TA Realty IX4,653Alternative Investments\$1,927,183,981Absolute Return Aurora657,791Private Equity Abbott339,143,602Muller & Monroe MPEFF5,800,581Pantheon257,568,319Private Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611Agriculture Premiere Partners IV197,511,092Timberland104,757,11,092	0.29%	21,630,143	(735,757)	98,601,669	0.26%
Almanac ARS V TA Realty IX1,603,723 4,653Alternative Investments Absolute Return Aurora\$1,927,183,981Absolute Return Aurora657,791Private Equity Muller & Monroe MPEFF339,143,602 5,800,581 9 rivate Equity Funds - Domestic 914,504,783 	0.23%	21,030,143		, ,	0.20%
TA Realty IX4,653Alternative Investments Absolute Return Aurora\$1,927,183,981Absolute Return Aurora657,791Private Equity Muller & Monroe MPEFF339,143,602 5,800,581 Pantheon 257,568,319 914,504,783 Private Equity Funds - Domestic Private Equity Funds - International339,143,602 104,757,611Agriculture Premiere Partners IV914,504,783 197,511,092197,511,092Timberland104,757,611104,757,611		•	(14,048)	262,601	
Alternative Investments\$1,927,183,981Absolute Return Aurora657,791Private Equity Abbott339,143,602Muller & Monroe MPEFF5,800,581Pantheon257,568,319Private Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611Agriculture Premiere Partners IV197,511,092Timberland104,757,11	0.00%	(646,285)	67,396	2,182,612	0.01%
Absolute Return Aurora657,791Private Equity Abbott339,143,602 5,800,581Muller & Monroe MPEFF5,800,581 257,568,319 Private Equity Funds - Domestic 914,504,783 Private Equity Funds - InternationalAgriculture Premiere Partners IV197,511,092Timberland104,757,611	0.00%	(22,330)	(1,155)	28,138	0.00%
Aurora657,791Private Equity Abbott339,143,602 5,800,581Muller & Monroe MPEFF5,800,581 257,568,319 Private Equity Funds - Domestic 914,504,783 Private Equity Funds - InternationalAgriculture Premiere Partners IV197,511,092Timberland104,757,611	4.61%	\$78,289,504	\$36,090,571	\$1,812,803,905	4.72%
Private Equity Abbott339,143,602 \$380,581Muller & Monroe MPEFF5,800,581 \$5,803,581Pantheon257,568,319 \$14,504,783 Private Equity Funds - DomesticPrivate Equity Funds - Domestic914,504,783 \$104,757,611Agriculture Premiere Partners IV197,511,092Timberland104,757,611	0.00%	(03.055)	10.000	727 400	0.00%
Abbott 339,143,602 Muller & Monroe MPEFF 5,800,581 Pantheon 257,568,319 Private Equity Funds - Domestic 914,504,783 Private Equity Funds - International 104,757,611 Agriculture Premiere Partners IV 197,511,092 Timberland	0.00%	(93,055)	13,366	737,480	0.00%
Muller & Monroe MPEFF5,800,581Pantheon257,568,319Private Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611Agriculture Premiere Partners IV197,511,092TimberlandInternational	0.0404	(0.400.000)	(0.054.755)	040 005 050	0.046
Pantheon257,568,319Private Equity Funds - Domestic914,504,783Private Equity Funds - International104,757,611Agriculture Premiere Partners IV197,511,092Timberland104,757,611	0.81%	(6,499,999)	(3,051,755)	348,695,356	0.91%
Private Equity Funds - Domestic       914,504,783         Private Equity Funds - International       104,757,611         Agriculture       Premiere Partners IV       197,511,092         Timberland       197,511,092       104,757,611	0.01%	0	0	5,800,581	0.02%
Private Equity Funds - International 104,757,611 Agriculture Premiere Partners IV 197,511,092 Timberland	0.62%	(2,746,112)	2,326,156	257,988,274	0.67%
Agriculture Premiere Partners IV 197,511,092 Timberland	2.19%	87,124,110	27,588,776	799,791,897	2.08%
Premiere Partners IV 197,511,092 Timberland	0.25%	(5,655,440)	12,626,104	97,786,947	0.25%
Timberland					
	0.47%	7,160,000	(4,384,470)	194,735,562	0.51%
Forest Investment Assoc 73 093 535					
	0.18%	(1,000,000)	972,394	73,121,141	0.19%
Unlisted Infrastructure					
Unlisted Infrastructure 34,146,667		0	0	34,146,667	0.09%
Cash & Equivalents \$319,469,749	0.08%	\$187,850,298	\$1,101,630	\$130,517,820	0.34%
Total Fund \$41,767,588,167	0.08% <b>0.76%</b>			\$38,444,256,471	100.0%

#### **Asset Distribution Across Investment Managers**

\* Non-Core Real Estate Funds funded since September 2011. \*\* Non-Core International Real Estate Funds funded since August 2014.



### **Asset Class Returns**

The table below details the rates of return for the fund's asset class composites over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	Last		Last		Last 3	
	Quarter		Last Year		ہ Years	
Domestic Equity Custom Benchmark** Domestic Equity - Net Pub PIn- Dom Equity	<b>14.59%</b> 14.04% 14.53% 14.03%	<b>19</b> 48 21	<b>7.34%</b> 8.77% 7.13% 7.56%	<b>58</b> 24 62	<b>13.72%</b> 13.48% 13.49% 13.23%	<b>26</b> 34 34
International Equity MSCI ACWI x US (Net) International Equity - Net Pub Pln- Intl Equity	<b>11.16%</b> 10.31% 11.10% 10.28%	<b>13</b> 45 16	<b>(4.64%)</b> (4.21%) (4.91%) (5.24%)	<b>39</b> 30 42	<b>8.35%</b> 8.09% 8.00% 8.39%	<b>51</b> 63 68
<b>Total Fixed Income</b> Blmbg Aggregate Index Total Fixed-Inc Net Pub PIn- Dom Fixed	<b>3.50%</b> 2.94% 3.47% 3.27%	<b>33</b> 67 34	<b>4.29%</b> 4.48% 4.16% 4.46%	<b>68</b> 43 81	<b>3.30%</b> 2.03% 3.15% 2.84%	<b>34</b> 76 39
Real Estate Custom Benchmark*** Real Estate - Net Pub PIn- Real Estate	<b>1.13%</b> 1.20% 1.13% 1.48%	<b>81</b> 79 81	<b>8.16%</b> 6.55% 8.16% 7.73%	<b>38</b> 92 38	<b>8.80%</b> 7.01% 8.80% 7.87%	<b>14</b> 81 14
Alternative Investments Alternatives Custom Benchmark**** Alternative Investments - Net	<b>2.10%</b> 2.18% 2.05%		<b>17.21%</b> 9.00% 17.02%		<b>12.33%</b> 9.00% 12.12%	
Private Equity Alternatives Custom Benchmark**** Post Venture Cap Idx	<b>2.73%</b> 2.18% 4.60%		<b>21.41%</b> 9.00% (10.36%)		<b>15.64%</b> 9.00% 6.91%	
Agriculture NCREIF Farmland Index NCREIF Total Index	<mark>(2.17%)</mark> 2.85% 1.37%		<mark>(1.37%)</mark> 6.74% 6.72%		<mark>(2.38%)</mark> 6.67% 7.21%	
Timberland NCREIF Timberland Index	<b>1.33%</b> 0.97%		<b>(2.17%)</b> 3.44%		<b>1.04%</b> 3.22%	
Unlisted Infrastructure Alternatives Custom Benchmark****	<b>0.00%</b> 2.18%		<b>8.14%</b> 9.00%		9.00%	
<b>Total Fund</b> Total Fund Benchmark* Total Fund - Net Callan Public Fund Lg DB	<b>9.03%</b> 8.09% 8.99% 7.75%	<b>14</b> 43 15	<b>4.39%</b> 5.22% 4.22% 3.89%	<b>37</b> 14 44	<b>9.26%</b> 8.34% 9.05% 8.88%	<b>28</b> 75 37

#### **Returns and Rankings for Periods Ended March 31, 2019**

\* Current Quarter Target = 37.0% Russell 3000 Index, 28.0% Blmbg Aggregate, 18.0% MSCI ACWI ex US, 9.0% NCREIF NFI-ODCE Val Wt Nt, 7.0% 9% Annually and 1.0% 3-month Treasury Bill.
\*\* The Blended Benchmark is currently Russell 3000 Index. Returns prior to January 1, 2015, reflect those of the Dow Jones U.S. Total Stock Market Index.
\*\*\* The Blended Benchmark is currently ODCE Value Weigh Index. Returns between January 1, 2007 and December 31, 2012 reflect NPI+1%. Returns prior to January 1, 2007, reflect those of the Consumer Price Index +5%.
\*\*\*\* The Alternatives Custom Benchmark is based on an annualized rate of return of 9.0%. Prior to July 1, 2010 the Benchmark was based on an annual return of 15.0%.

13.0%. Prior to 2003, it was based on an annual return of 15.0%. Private Equity performance is lagged one quarter.

Agriculture and Timberland performance is lagged one month.



### **Asset Class Returns**

The table below details the rates of return for the fund's asset class composites over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	Last		Last			
	5		10		Since	
	Years		Years		Inception	า
Domestic Equity Custom Benchmark** Domestic Equity - Net Pub Pln- Dom Equity	<b>9.42%</b> 10.33% 9.17% 9.78%	<b>68</b> 24 76	<b>16.10%</b> 16.03% 15.83% 15.84%	<b>30</b> 35 51	<b>11.55%</b> 11.35% 8.40%	(1/82) (1/82)
International Equity MSCI ACWI x US (Net) International Equity - Net Pub PIn- Intl Equity	<b>3.54%</b> 2.57% 3.20% 3.44%	<b>46</b> 81 58	<b>10.39%</b> 8.85% 10.05% 9.64%	<b>25</b> 81 39	<b>7.70%</b> 5.40%	(9/86) (1/05)
Total Fixed Income Blmbg Aggregate Index Total Fixed-Inc Net Pub PIn- Dom Fixed	<b>3.33%</b> 2.74% 3.18% 3.07%	<b>30</b> 71 38	<b>5.58%</b> 3.77% 5.43% 4.80%	<b>31</b> 70 33	<b>8.20%</b> 7.67% 4.66%	(1/82) (1/82) (1/05)
Real Estate Custom Benchmark*** Real Estate - Net Pub PIn- Real Estate	<b>10.14%</b> 9.17% 10.13% 9.48%	<b>30</b> 54 31	<b>7.53%</b> 9.05% 7.52% 8.89%	<b>79</b> 42 79	<b>5.43%</b> 7.32%	(5/85) (1/05)
Alternative Investments Alternatives Custom Benchmark**** Alternative Investments - Net	<b>10.08%</b> 9.00% 9.78%		<b>9.09%</b> 9.37% 8.79%		<b>10.89%</b> 12.74% 8.70%	(2/86) (2/86) (1/05)
Private Equity Alternatives Custom Benchmark**** Post Venture Cap Idx	<b>13.00%</b> 9.00% 0.58%		<b>11.18%</b> 9.37% 11.04%		<b>13.11%</b> 12.74% 7.07%	(2/86) (2/86) (2/86)
Agriculture NCREIF Farmland Index NCREIF Total Index	<b>5.69%</b> 8.57% 9.33%		<b>8.42%</b> 11.16% 7.49%		7.40% - -	(10/97)
Timberland NCREIF Timberland Index	<b>1.58%</b> 4.98%		<b>2.22%</b> 3.83%		7.57% -	(10/92)
Unlisted Infrastructure Alternatives Custom Benchmark****	9.00%		9.37%		<b>8.14%</b> 9.00%	(4/18) (4/18)
Total Fund	6.49%	48	11.00%	21	9.83%	(1/82)
Total Fund Benchmark* Total Fund - Net Callan Public Fund Lg DB	6.69% 6.27% 6.45%	33 61	10.28% 10.76% 10.20%	45 34	- 7.05% -	(1/05)

#### **Returns and Rankings for Periods Ended March 31, 2019**

\* Current Quarter Target = 37.0% Russell 3000 Index, 28.0% Blmbg Aggregate, 18.0% MSCI ACWI ex US, 9.0% NCREIF NFI-ODCE Val Wt Nt, 7.0% 9% Annually and 1.0% 3-month Treasury Bill.
\*\* The Blended Benchmark is currently Russell 3000 Index. Returns prior to January 1, 2015, reflect those of the Dow Jones U.S. Total Stock Market Index.
\*\*\* The Blended Benchmark is currently ODCE Value Weigh Index. Returns between January 1, 2007 and December 31, 2012 reflect NPI+1%. Returns prior to January 1, 2007, reflect those of the Consumer Price Index +5%.
\*\*\*\* The Alternatives Custom Benchmark is based on an annualized rate of return of 9.0%. Prior to July 1, 2010 the Benchmark was based on an annual return of 15.0%.

13.0%. Prior to 2003, it was based on an annual return of 15.0%. Private Equity performance is lagged one quarter.

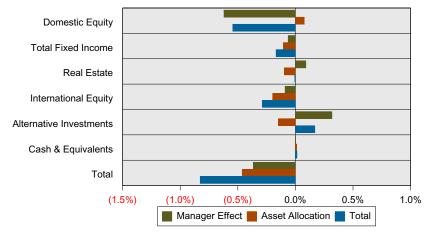
Agriculture and Timberland performance is lagged one month.



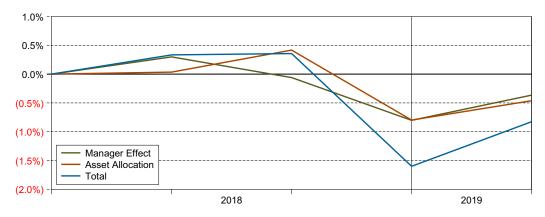
# Cumulative Total Fund Relative Attribution - March 31, 2019

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **One Year Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



#### **One Year Relative Attribution Effects**

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	43%	37%	7.34%	8.77%	(0.62%)	0.08%	(0.54%)
Total Fixed Income	27%	28%	4.29%	4.48%	(0.06%)	(0.11%)	(0.17%)
Real Estate	6%	9%	8.16%	6.55%	0.09%	(0.10%)	(0.01%)
International Equity	19%	18%	(4.64%)	(4.21%)	(0.09%)	(0.20%)	(0.29%)
Alternative Investments		7%	17.21%	9.00%	0.32%	(0.15%)	0.17%
Cash & Equivalents	1%	1%	2.59%	2.12%	0.00%	0.01%	0.01%
Total			4.39% =	5.22%	+ (0.36%) +	(0.46%)	(0.83%)

\* Current Quarter Target = 37.0% Russell 3000 Index, 28.0% Blmbg Aggregate, 18.0% MSCI ACWI ex US, 9.0% NCREIF NFI-ODCE Val Wt Nt, 7.0% 9% Annually and 1.0% 3-month Treasury Bill.

# Large Cap Equity Returns

The table below details the rates of return for the fund's large cap growth and large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

					Last	
	Last		Last		3	
	Quarter		Year		Years	
Large Cap Equity	14.29%	43	8.19%	49	14.04%	40
Russell 1000 Index	14.00%	<b>45</b>	9.30%	43	13.52%	<b>40</b> 46
Callan Large Cap	13.61%	40	8.16%	-12	13.10%	40
					1011070	
Large Cap Growth	17.86%	12	15.22%	29	18.01%	35
Callan Large Cap Growth	16.27%		13.85%		16.74%	
NTGI S&P 500 Growth Idx	14.96%	73	12.75%	59	15.89%	62
S&P/Citi 500 Growth Index	14.95%	73	12.77%	59	15.91%	62
NTGI S&P 500 Growth Idx - Net	14.95%	73	12.75%	59	15.88%	62
Callan Large Cap Growth	16.27%	10	13.85%	00	16.74%	02
Piedmont Russell 1000 G	16.09%	57	-		-	
Russell 1000 Growth Index	16.10%	57	12.75%	59	16.53%	56
Piedmont Russell 1000 G - Net	16.08%	57	-		-	
Callan Large Cap Growth	16.27%		13.85%		16.74%	
Sands	22.41%	3	19.35%	7	22.29%	4
LCG Blended Benchmark*	16.10%	57	12.75%	59	16.53%	<b>4</b> 56
Russell 1000 Growth Index	16.10%	57	12.75%	59	16.53%	56
Sands - Net	22.34%	3	19.08%	8	22.02%	5
Callan Large Cap Growth	16.27%		13.85%		16.74%	
.arge Cap Value	11.38%	53	3.08%	61	11.61%	34
Callan Large Cap Value	11.52%		4.05%	•••	11.17%	•••
						_
Dodge & Cox	9.96%	94	4.07%	49	14.05%	5
LCV Blended Benchmark**	11.93%	35	5.67%	30	10.45%	68
Russell 1000 Value Index	11.93%	35	5.67%	30	10.45%	68
Dodge & Cox - Net	9.90%	94	3.85%	51	13.81%	5
Callan Large Cap Value	11.52%		4.05%		11.17%	
BMO	11.88%	36	2.46%	70	10.79%	66
LCV Blended Benchmark**	11.93%	35	5.67%	30	10.45%	68
Russell 1000 Value Index	11.93%	35	5.67%	30	10.45%	68
BMO - Net	11.82%	38	2.24%	73	10.55%	67
Callan Large Cap Value	11.52%	30	4.05%	15	11.17%	07
Callan Large Cap value	11.52 %		4.03%		11.17 70	
LSV	11.31%	56	(0.19%)	87	11.33%	44
LCV Blended Benchmark**	11.93%	35	5.67%	30	10.45%	68
Russell 1000 Value Index	11.93%	35	5.67%	30	10.45%	68
LSV - Net	11.25%	60	(0.43%)	89	11.07%	53
Callan Large Cap Value	11.52%		4.05%		11.17%	
NTGI S&P 500 Value Idx	12.21%	24	5.98%	28	10.72%	67
S&P/Citi 500 Value Index	12.19%	24	5.93%	28	10.62%	67
NTGI S&P 500 Value Idx - Net	12.19%	24 24	5.98%	28	10.82%	67
Callan Large Cap Value	12.21%	24	5.98%	20	10.71%	07
arge Cap Passive Core	14.06%	29	8.72%	42	13.54%	33
NTGI MarketCap Idx	14.06%	29	8.72%	42	13.54%	33
DJ U.S. Total Stock Market Index	14.04%	30	8.65%	42	13.45%	33
	14.06%	29	0 740/	40	40 500/	22
NTGI MktCap ldx - Net Callan Large Cap Core	13.25%	29	8.71% 7.79%	42	13.53% 12.90%	33

#### **Returns and Rankings for Periods Ended March 31, 2019**

\* The LCG Blended Benchmark is currently the Russell 1000 Growth Index. Returns prior to January 1, 2006, reflect those the S&P 500/Citigroup Growth Index. \*\* The LCV Blended Benchmark is currently the Russell 1000 Value Index. Returns prior to January 1, 2006, reflect those

of the S&P 500/Citigroup Value Index.



# Large Cap Equity Returns

The table below details the rates of return for the fund's large cap growth and large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	Last		Last		
	5		10		Since
	Years		Years		Inception
area Can Equity	10.36%	52	16.18%	40	
Large Cap Equity Russell 1000 Index	10.63%	<b>53</b> 47	16.05%	<b>40</b> 42	<b>11.21%</b> (1/82) 11.55% (1/82)
Callan Large Cap	10.05%	77	15.71%	42	- (1/62)
	10.1070		10.1170		
_arge Cap Growth	12.97%	57	17.53%	30	11.94% (1/82)
Callan Large Cap Growth	13.23%		16.82%		-
NTGI S&P 500 Growth Idx	13.34%	45	17.19%	41	<b>7.81%</b> (8/01)
S&P/Citi 500 Growth Index	13.36%	43	17.17%	41	7.79% (8/01)
NTGI S&P 500 Growth Idx - Net	13.34%	45	17.18%	41	9.73% (1/05)
Callan Large Cap Growth	13.23%	40	16.82%	41	-
	1012070		10.0270		
Piedmont Russell 1000 G	-		-		(2.34%) (10/18)
Russell 1000 Growth Index	13.50%	42	17.52%	30	(2.34%) (10/18)
Piedmont Russell 1000 G - Net	-		-		(2.35%) (10/18)
Callan Large Cap Growth	13.23%		16.82%		-
Sands	13.29%	46	21.76%	2	<b>12.45%</b> (11/03)
LCG Blended Benchmark*	13.50%	<b>40</b> 42	17.52%	<b>∠</b> 30	9.75% (11/03)
Russell 1000 Growth Index	13.50%	42	17.52%	30	
Sands - Net	13.03%	42 54	21.47%	2	9.81% (11/03) 11.42% (1/05)
Callan Large Cap Growth	13.23%	54	16.82%	2	11.42 /8 (1/05)
Callan Large Cap Clowin	15.2570		10.02 /0		
.arge Cap Value	8.33%	36	15.21%	30	10.27% (10/82)
Callan Large Cap Value	8.07%		14.58%		-
Dodge & Cox	8.93%	29	16.38%	7	<b>9.41%</b> (9/03)
LCV Blended Benchmark**	7.72%	66	14.52%	54	8.22% (9/03)
Russell 1000 Value Index	7.72%	66	14.52%	54	8.39% (9/03)
Dodge & Cox - Net	8.70%	31	16.14%	11	7.74% (1/05)
Callan Large Cap Value	8.07%	51	14.58%		- (1/05)
Callari Largo Cap Valuo	0.01 /0		11.0070		
BMO	8.20%	45	14.46%	54	8.03% (2/01)
LCV Blended Benchmark**	7.72%	66	14.52%	54	5.60% (2/01)
Russell 1000 Value Index	7.72%	66	14.52%	54	6.62% (2/01)
BMO - Net	7.97%	54	14.20%	67	8.10% (1/05)
Callan Large Cap Value	8.07%		14.58%		-
LSV	8.23%	44	15.88%	16	<b>10.82%</b> (2/03)
LCV Blended Benchmark**	7.72%	66	14.52%	54	9.17% (2/03)
Russell 1000 Value Index	7.72%	66	14.52%	54	9.18% (2/03)
LSV - Net	7.97%	54	15.59%	22	8.14% (1/05)
Callan Large Cap Value	8.07%	7	14.58%		-
	0.400/		4.4 500/		
NTGI S&P 500 Value Idx	8.12%	49	14.56%	52	<b>5.72%</b> (8/99)
S&P/Citi 500 Value Index	8.05%	52	14.49%	54	5.69% (8/99)
NTGI S&P 500 Value Idx - Net	8.12% 8.07%	49	14.55% 14.58%	53	6.91% (1/05)
Callan Large Cap Value	0.07 %		14.30%		-
arge Cap Passive Core	10.39%	48	16.15%	27	<b>11.10%</b> (1/85)
NTGI MarketCap Idx	10.39%	48	16.16%	25	10.87% (2/85)
DJ U.S. Total Stock Market Index	10.29%	52	16.01%	31	10.82% (2/85)
NTGI MktCap Idx - Net	10.38%	48	16.15%	26	8.52% (1/05)
Callan Large Cap Core	10.32%		15.57%		

#### **Returns and Rankings for Periods Ended March 31, 2019**

\* The LCG Blended Benchmark is currently the Russell 1000 Growth Index. Returns prior to January 1, 2006, reflect those the S&P 500/Citigroup Growth Index. \*\* The LCV Blended Benchmark is currently the Russell 1000 Value Index. Returns prior to January 1, 2006, reflect those

of the S&P 500/Citigroup Value Index.



The table below details the rates of return for the fund's small cap growth, small cap value, and micro cap managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

					Last	
	Last		Last		3	55 46 84 34 83 36 95 83 95 27 26 43 72 26 43 72 26 79 10 26 12
	Quarter		Year		Years	
Small Cap Equity	15.79%	32	2.77%	49	12.20%	55
Russell 2000 Index	14.58%	47	2.05%	52	12.92%	46
Callan Small Cap	14.36%		2.58%		12.66%	
Small Cap Growth	20.95%	29	9.58%	59	14.68%	84
Callan Small Cap Growth	18.45%		10.27%		18.53%	
Frontier	22.18%	20	17.86%	10	20.91%	34
Russell 2000 Growth Index	17.14%	59	3.85%	89	14.87%	83
Frontier - Net	21.67%	25	16.93%	13	20.18%	36
Callan Small Cap Growth	18.45%		10.27%		18.53%	
FIAM	19.91%	38	5.50%	82	11.77%	95
Russell 2000 Growth Index	17.14%	59	3.85%	89	14.87%	83
FIAM - Net	19.91%	38	5.16%	83	11.35%	95
Callan Small Cap Growth	18.45%		10.27%		18.53%	
Small Cap Value	13.29%	36	(1.28%)	42	10.57%	27
Callan Small Cap Value	12.46%		(2.06%)		9.44%	
Channing	15.27%	6	(2.49%)	54	10.13%	32
Russell 2000 Value Index	11.93%	72	0.17%	26	10.86%	26
Channing - Net	15.13%	6	(2.99%)	59	9.59%	43
Callan Small Cap Value	12.46%		(2.06%)		9.44%	<ul> <li>46</li> <li>84</li> <li>83</li> <li>36</li> <li>95</li> <li>83</li> <li>95</li> <li>27</li> <li>22</li> <li>26</li> <li>43</li> <li>72</li> <li>26</li> <li>79</li> <li>10</li> </ul>
DFA Small Cap Value	11.12%	90	(3.26%)	61	8.73%	72
Russell 2000 Value Index	11.93%	72	0.17%	26	10.86%	26
DFA Small Cap Value - Net	11.00%	90	(3.73%)	68	8.17%	79
Callan Small Cap Value	12.46%		(2.06%)		9.44%	
Inv. Counselors of Maryland	14.55%	12	0.90%	18	13.05%	10
Russell 2000 Value Index	11.93%	72	0.17%	26	10.86%	
Inv. Couns. of Maryland - Net	14.44%	14	0.39%	24	12.44%	12
Callan Small Cap Value	12.46%		(2.06%)		9.44%	

#### **Returns and Rankings for Periods Ended March 31, 2019**

The table below details the rates of return for the fund's small cap growth, small cap value, and micro cap managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns	and Rankings fo	r Periods	Ended March 3	1, 2019		
	Last 5		Last 10		Since	
	Years		Years		Inception	
Small Cap Equity	6.59%	73	16.27%	66	12.10% (7/88)	
Russell 2000 Index	7.05%	66	15.36%	83	9.41% (7/88)	
Callan Small Cap	7.96%		17.12%		-	
Small Cap Growth	8.95%	69	16.75%	81	<b>13.00%</b> (7/88)	
Callan Small Cap Growth	10.05%		18.44%		-	
Frontier	9.92%	53	17.19%	77	13.35% (8/88)	
Russell 2000 Growth Index	8.41%	78	16.52%	81	8.23% (8/88)	
Frontier - Net	9.26%	64	16.45%	81	10.11% (1/05)	
Callan Small Cap Growth	10.05%		18.44%		-	
FIAM	9.46%	61	17.40%	68	<b>13.48%</b> (8/88)	
Russell 2000 Growth Index	8.41%	78	16.52%	81	8.23% (8/88)	
FIAM - Net	8.94%	69	16.82%	81	10.70% (1/05)	
Callan Small Cap Growth	10.05%		18.44%	01	-	
Small Cap Value	6.26%	50	16.40%	45	<b>11.71%</b> (9/89)	
Callan Small Cap Value	6.26%		16.19%		-	
Channing	5.63%	68	-		<b>10.14%</b> (7/11)	
Russell 2000 Value Index	5.59%	69	14.12%	91	8.87% (7/11)	
Channing - Net	5.13%	84	-	01	9.54% (7/11)	
Callan Small Cap Value	6.26%	01	16.19%		-	
DFA Small Cap Value	5.15%	84	16.87%	37	<b>11.87%</b> (2/96)	
Russell 2000 Value Index	5.59%	69	14.12%	91	9.45% (2/96)	
DFA Small Cap Value - Net	4.64%	87	16.31%	46	7.47% (1/05)	
Callan Small Cap Value	6.26%	07	16.19%	40	-	
Inv. Counselors of Maryland	8.23%	13	16.84%	38	<b>11.43%</b> (5/99)	
Russell 2000 Value Index	5.59%	69	14.12%	<b>30</b> 91	8.96% (5/99)	
Inv. Couns. of Maryland - Net	7.70%	23	16.29%	46	8.49% (1/05)	
Callan Small Cap Value	6.26%	20	16.19%	40	-	
Callali Sillali Cap Value	0.2070		10.1370		-	

The table below details the rates of return for the fund's small cap growth, small cap value, and micro cap managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

					Last	
	Last		Last		3	
	Quarter		Year		Years	
Micro Cap	11.80%	96	(0.97%)	96	10.64%	95
Callan Small Cap Growth	18.45%		10.27%		18.53%	
DFA Micro Cap	11.81%	74	0.19%	26	12.16%	15
Russell 2000 Value Index	11.93%	72	0.17%	26	10.86%	26
Russell 2000 Index	14.58%	11	2.05%	16	12.92%	11
DFA Micro Cap - Net	11.69%	76	(0.30%)	29	11.60%	21
Callan Small Cap Value	12.46%		(2.06%)		9.44%	
Public Real Assets	14.75%	38	15.32%	13	-	
Public Real Assets Benchmark (1)	13.79%	60	13.57%	26	-	
Callan Publicly List Infr	14.26%		11.94%		9.15%	
Brookfield Public Global Infrastru	16.46%	19	14.58%	23	-	
DJ Global Infra Comp Idx	15.89%	29	12.99%	30	8.13%	84
Brookfield Public Global Infra - Net	16.31%	26	13.98%	25	-	
Callan Publicly List Infr	14.26%		11.94%		9.15%	
Cohen & St Public Global Infrastru	13.97%	55	15.67%	11	-	
FTSE GI Core Infr 50/50 N	13.09%	78	13.70%	26	9.38%	43
Cohen & St Public Global Infra - Net	13.85%	58	15.17%	14	-	
Callan Publicly List Infr	14.26%		11.94%		9.15%	

#### Returns and Rankings for Periods Ended March 31, 2019

(1) 1/3 Dow Jones Global Infrastructure Composite Index + 2/3 FTSE Global Core Infrastructure 50/50 Net Tax Index



The table below details the rates of return for the fund's small cap growth, small cap value, and micro cap managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	Last		Last		0
	5 Years		10 Years		Since Inception
lieve Com					
Aicro Cap	<b>2.74%</b>	99	15.41%	95	<b>11.46%</b> (7/84)
Callan Small Cap Growth	10.05%		18.44%		-
DFA Micro Cap	7.25%	28	16.90%	36	<b>11.10%</b> (8/87)
Russell 2000 Value Index	5.59%	69	14.12%	91	9.77% (8/87)
Russell 2000 Index	7.05%	31	15.36%	69	8.80% (8/87)
DFA Micro Cap - Net	6.72%	41	16.34%	46	7.82% (1/05)
Callan Small Cap Value	6.26%		16.19%		-
Public Real Assets	-		-		<b>7.59%</b> (8/17)
Public Real Assets Benchmark (1)	-		-		5.53% (8/17)
Callan Publicly List Infr	6.89%		13.68%		-
Brookfield Public Global Infrastru	-		-		<b>4.63%</b> (8/17)
DJ Global Infra Comp Idx	4.67%	90	13.41%	57	3.34% (8/17)
Brookfield Public Global Infra - Net	-		-		4.14% (8/17)
Callan Publicly List Infr	6.89%		13.68%		-
Cohen & St Public Global Infrastru	-		-		<b>9.05%</b> (8/17)
FTSE GI Core Infr 50/50 N	7.44%	42	-		6.24% (8/17)
Cohen & St Public Global Infra - Net	-		-		8.64% (8/17)
Callan Publicly List Infr	6.89%		13.68%		-

(1) 1/3 Dow Jones Global Infrastructure Composite Index + 2/3 FTSE Global Core Infrastructure 50/50 Net Tax Index



The table below details the rates of return for the fund's international large cap growth and international large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	_				Last	
	Last		Last		3	
	Quarter		Year		Years	
ntl Large Cap Equity	10.53%	54	(4.28%)	41	8.13%	38
MSCI ACWI ex-US Index	10.31%	58	(4.21%)	41	8.09%	40
Callan NonUS Eq	10.71%	00	(4.77%)		7.54%	10
Salar Nonoo Eq	10.7 170		(4.7770)		1.0470	
ntl Large Cap Growth	12.64%	18	(5.76%)	65	8.65%	28
Callan NonUS Eq	10.71%		(4.77%)		7.54%	
			(,0)			
EARNEST Partners	11.06%	10	(5.740/)		0.40%	
		42	(5.74%)	65	9.48%	20
MSCI ACWI ex-US Index	10.31%	58	(4.21%)	41	8.09%	40
MSCI ACWI ex-US Growth	12.42%	20	(2.66%)	25	8.82%	26
EARNEST Partners - Net	11.00%	43	(5.94%)	66	9.26%	22
Callan NonUS Eq	10.71%		(4.77%)		7.54%	
William Blair	14.03%	9	(5.64%)	65	8.01%	41
MSCI ACWI ex-US Index	10.31%	58	(4.21%)	41	8.09%	40
MSCI ACWI ex-US Growth	12.42%	20	(2.66%)	25	8.82%	26
William Blair - Net	13.93%	9	(5.98%)	66	7.62%	49
Callan NonUS Eq	10.71%	9	(4.77%)	00	7.54%	43
	10.7176		(4.7770)		7.3470	
ntl Large Cap Value	8.37%	92	(3.70%)	34	6.96%	65
Callan NonUS Eq	10.71%	52	(4.77%)	04	7.54%	00
	10.7176		(4.7770)		7.3470	
Brandes	6.77%	99	(4.84%)	51	6.96%	65
MSCI ACWI ex-US Index	10.31%	58	(4.21%)	41	8.09%	40
			· · · · ·			
MSCI ACWI ex-US Value	8.46%	91	(4.82%)	51	8.38%	32
Brandes - Net	6.71%	99	(4.98%)	53	6.72%	69
Callan NonUS Eq	10.71%		(4.77%)		7.54%	
	0.05%		(0.070()		- 400/	
londrian	9.85%	74	(2.07%)	20	7.12%	61
MSCI ACWI ex-US Index	10.31%	58	(4.21%)	41	8.09%	40
MSCI ACWI ex-US Value	8.46%	91	(4.82%)	51	8.38%	32
Mondrian - Net	9.85%	74	(2.19%)	21	6.73%	69
Callan NonUS Eq	10.71%		(4.77%)		7.54%	
azard	10.14%	65	(4.80%)	51	6.44%	73
MSCI ACWI ex-US Index	10.31%	58	(4.21%)	41	8.09%	40
MSCI ACWI ex-US Value	8.46%	91	(4.82%)	51	8.38%	32
Lazard - Net	10.07%	66	(5.04%)	56	6.03%	81
Callan NonUS Eq	10.71%		(4.77%)		7.54%	
	10.7170		(7.11/0)		1.04/0	

#### **Returns and Rankings for Periods Ended March 31, 2019**



The table below details the rates of return for the fund's international large cap growth and international large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns and Rankings for Periods Ended March 31, 2019							
	Last 5 Years		Last 10 Years		Since Inception		
Intl Large Cap Equity	3.43%	52	10.15%	58	7.70% (9/86)		
MSCI ACWI ex-US Index	2.57%	74	8.85%	83	-		
Callan NonUS Eq	3.46%		10.34%		-		
Intl Large Cap Growth	3.38%	54	10.43%	47	<b>8.21%</b> (9/02)		
Callan NonUS Eq	3.46%		10.34%		-		
EADNEST Partners	2 6 4 9/	70	10.96%	24	9 0 2 9/		
EARNEST Partners	<b>2.64%</b>	72		34	<b>8.93%</b> (10/04)		
MSCI ACWI ex-US Index	2.57%	74	8.85%	83	5.78% (10/04)		
MSCI ACWI ex-US Growth	4.39%	23	9.85%	62	6.72% (10/04)		
EARNEST Partners - Net	2.43%	77	10.58%	45	7.63% (1/05)		
Callan NonUS Eq	3.46%		10.34%		-		
William Blair	4.09%	29	11.79%	16	<b>9.42%</b> (10/02)		
MSCI ACWI ex-US Index	2.57%	74	8.85%	83	8.00% (10/02)		
MSCI ACWI ex-US Growth	4.39%	23	9.85%	62	8.37% (10/02)		
William Blair - Net	3.71%	44	11.38%	27	6.05% (1/05)		
Callan NonUS Eq	3.46%		10.34%		-		
Inti Large Cap Value Callan NonUS Eq	<b>2.67%</b> 3.46%	71	<b>8.46%</b> 10.34%	91	<b>8.66%</b> (10/95)		
Brandes	2.41%	78	8.71%	87	<b>8.83%</b> (1/96)		
MSCI ACWI ex-US Index	2.57%	74	8.85%	83	5.06% (1/96)		
MSCI ACWI ex-US Value	1.66%	86	8.81%	85	-		
Brandes - Net	2.17%	80	8.47%	91	4.20% (1/05)		
Callan NonUS Eq	3.46%	00	10.34%	01	-		
Mondrian	3.07%	50			<b>5.40%</b> (4/12)		
MSCI ACWI ex-US Index	2.57%	59	- 8.85%	00	4.73% (4/12)		
		74		83	4.73% (4/12) 4.32% (4/12)		
MSCI ACWI ex-US Value	1.66%	86	8.81%	85			
Mondrian - Net	2.63%	72	-		4.94% (4/12)		
Callan NonUS Eq	3.46%		10.34%		-		
Lazard	2.88%	64	-		<b>6.03%</b> (4/12)		
MSCI ACWI ex-US Index	2.57%	74	8.85%	83	4.73% (4/12)		
MSCI ACWI ex-US Value	1.66%	86	8.81%	85	4.32% (4/12)		
Lazard - Net	2.40%	78	-		5.48% (4/12)		
Callan NonUS Eq	3.46%	.0	10.34%		-		
	0.7070		10.0770				

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The table below details the rates of return for the fund's international large cap core, international small cap, and emerging markets managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	U				Last	
	Last		Last			
	Quarter		Year		Years	
Intl Large Cap Active Core MSCI ACWI ex-US Index Callan NonUS Eq	<b>11.21%</b> 10.31% 10.71%	<b>40</b> 58	<b>(4.20%)</b> (4.21%) (4.77%)	<b>39</b> 41	<b>9.11%</b> 8.09% 7.54%	<b>23</b> 40
Arrowstreet MSCI ACWI ex-US Index Arrowstreet - Net Callan NonUS Eq	<b>10.88%</b> 10.31% 10.75% 10.71%	<b>45</b> 58 48	<b>(3.80%)</b> (4.21%) (4.25%) (4.77%)	<b>36</b> 41 41	<b>10.57%</b> 8.09% 10.07% 7.54%	<b>13</b> 40 17
Brown MSCI ACWI ex-US Index Brown - Net Callan NonUS Eq	<b>11.30%</b> 10.31% 11.23% 10.71%	<b>39</b> 58 40	<b>0.05%</b> (4.21%) (0.20%) (4.77%)	<b>9</b> 41 10	<b>6.14%</b> 8.09% 5.32% 7.54%	<b>80</b> 40 92
GlobeFlex MSCI ACWI ex-US Index GlobeFlex - Net Callan NonUS Eq	<b>11.54%</b> 10.31% 11.42% 10.71%	<b>34</b> 58 37	<b>(7.59%)</b> (4.21%) (7.95%) (4.77%)	<b>81</b> 41 84	<b>8.64%</b> 8.09% 8.23% 7.54%	<b>28</b> 40 33
Progress Intl Equity* Custom Benchmark Progress Intl Equity - Net Callan NonUS Eq	<b>11.26%</b> 10.31% 11.13% 10.71%	<b>39</b> 58 41	<b>(2.70%)</b> (4.21%) (3.19%) (4.77%)	<b>25</b> 41 27	<b>10.31%</b> 8.97% 9.77% 7.54%	<b>15</b> 23 19
Intl Large Cap Pass. Core Callan NonUS Eq	<b>9.98%</b> 10.71%	70	<b>(3.74%)</b> (4.77%)	35	<b>7.68%</b> 7.54%	48
NTGI MSCI EAFE Idx MSCI EAFE Index NTGI EAFE Idx - Net Callan NonUS Eq	<b>9.98%</b> 9.98% 9.98% 10.71%	<b>70</b> 70 70	<b>(3.74%)</b> (3.71%) (3.74%) (4.77%)	<b>35</b> 34 35	<b>7.68%</b> 7.27% 7.67% 7.54%	<b>48</b> 59 49
International Small Cap ACWI Sm Cap ex US Callan Intl Small Cap	<b>13.07%</b> 10.26% 10.90%	<b>23</b> 59	<b>(11.33%)</b> (9.48%) (11.27%)	<b>52</b> 27	<b>6.18%</b> 7.01% 7.28%	<b>74</b> 53
<b>Franklin Templeton</b> ACWI Sm Cap ex US Franklin Templeton - Net Callan Intl Small Cap	<b>12.71%</b> 10.26% 12.71% 10.90%	<b>25</b> 59 25	<b>(8.86%)</b> (9.48%) (9.23%) (11.27%)	<b>17</b> 27 21	<b>8.15%</b> 7.01% 7.50% 7.28%	<b>33</b> 53 45
William Blair ACWI Sm Cap ex US Intl SC Blended Benchmark William Blair - Net Callan Intl Small Cap	<b>13.32%</b> 10.26% 10.26% 13.11% 10.90%	<b>19</b> 59 59 23	(12.97%) (9.48%) (9.48%) (13.67%) (11.27%)	<b>69</b> 27 27 79	<b>4.70%</b> 7.01% 7.01% 3.90% 7.28%	<b>91</b> 53 53 94
Emerging Markets MSCI Emerging Mkts Idx Callan Emerging Core	<b>15.74%</b> 9.97% 11.04%	<b>4</b> 80	<b>(3.43%)</b> (7.05%) (8.28%)	<b>12</b> 39	<b>11.73%</b> 11.09% 12.03%	<b>53</b> 59
Genesis MSCI Emerging Markets Index Genesis - Net Callan Emerging Core	<b>15.74%</b> 9.97% 15.57% 11.04%	<b>4</b> 80 4	<b>(3.43%)</b> (7.05%) (4.01%) (8.28%)	<b>12</b> 39 14	<b>11.73%</b> 11.09% 11.06% 12.03%	<b>53</b> 59 59

#### Returns and Rankings for Periods Ended March 31, 2019

\* Custom benchmark is calculated as a weighted average of each fund s respective benchmark until 201712. after 201712 the benchmark is MSCI ACWI ex US - Net.



The table below details the rates of return for the fund's international large cap core, international small cap, and emerging markets managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns and Rankings for Periods Ended March 31, 2019						
	Last 5 Years		Last 10 Years		Since Inception	
Intl Large Cap Active Core MSCI ACWI ex-US Index Callan NonUS Eq	<b>4.95%</b> 2.57% 3.46%	<b>15</b> 74	<b>12.47%</b> 8.85% 10.34%	<b>9</b> 83	4.70% (2/08) 2.07% (2/08)	
Arrowstreet MSCI ACWI ex-US Index Arrowstreet - Net Callan NonUS Eq	<b>5.54%</b> 2.57% 5.05% 3.46%	<b>11</b> 74 14	<b>12.68%</b> 8.85% 12.15% 10.34%	<b>7</b> 83 12	<b>4.92%</b> (3/08) 1.83% (3/08) 4.43% (3/08)	
Brown MSCI ACWI ex-US Index Brown - Net Callan NonUS Eq	<b>4.12%</b> 2.57% 3.18% 3.46%	<b>27</b> 74 56	<b>12.30%</b> 8.85% 11.51% 10.34%	<b>10</b> 83 23	<b>7.77%</b> (10/04) 5.78% (10/04) 6.23% (1/05)	
GlobeFlex MSCI ACWI ex-US Index GlobeFlex - Net Callan NonUS Eq	<b>4.83%</b> 2.57% 4.42% 3.46%	<b>18</b> 74 22	<b>11.23%</b> 8.85% 10.78% 10.34%	<b>28</b> 83 37	<b>4.85%</b> (3/06) 3.53% (3/06) 4.40% (3/06)	
Progress Intl Equity* Custom Benchmark Progress Intl Equity - Net Callan NonUS Eq	- 3.46%		- - 10.34%		<b>4.17%</b> (7/14) 2.78% (7/14) 3.70% (7/14)	
Intl Large Cap Pass. Core Callan NonUS Eq	<b>2.71%</b> 3.46%	71	<b>9.39%</b> 10.34%	72	<b>3.28%</b> (1/00)	
NTGI MSCI EAFE Idx MSCI EAFE Index NTGI EAFE Idx - Net Callan NonUS Eq	<b>2.71%</b> 2.33% 2.70% 3.46%	<b>71</b> 79 71	<b>9.38%</b> 8.96% 9.38% 10.34%	<b>73</b> 82 73	<b>3.64%</b> (2/00) 3.26% (2/00) 4.72% (1/05)	
International Small Cap ACWI Sm Cap ex US Callan Intl Small Cap	<b>3.49%</b> 3.26% 4.99%	<b>80</b> 81	<b>11.39%</b> 11.86% 14.66%	<b>97</b> 95	<b>4.41%</b> (12/05) 5.85% (12/05)	
Franklin Templeton ACWI Sm Cap ex US Franklin Templeton - Net Callan Intl Small Cap	<b>4.36%</b> 3.26% 3.67% 4.99%	<b>63</b> 81 79	11.86% 14.66%	95	<b>6.09%</b> (8/11) 4.33% (8/11) 5.38% (8/11) -	
William Blair ACWI Sm Cap ex US Intl SC Blended Benchmark William Blair - Net Callan Intl Small Cap	<b>2.85%</b> 3.26% 3.26% 2.05% 4.99%	<b>87</b> 81 81 92	11.86% 11.06% 14.66%	95 98	<b>8.42%</b> (9/10) 6.74% (9/10) 7.12% (9/10) 7.60% (9/10)	
Emerging Markets MSCI Emerging Mkts Idx Callan Emerging Core	<b>4.71%</b> 4.06% 4.68%	<b>50</b> 67	<b>12.70%</b> 9.31% 10.45%	<b>3</b> 87	<b>9.05%</b> (2/92) 7.09% (2/92)	
Genesis MSCI Emerging Markets Index Genesis - Net Callan Emerging Core	<b>4.71%</b> 4.06% 4.08% 4.68%	<b>50</b> 67 67	<b>12.70%</b> 9.31% 12.03% 10.45%	<b>3</b> 87 26	<b>11.22%</b> (5/04) 8.95% (5/04) 9.20% (1/05)	

#### Returns and Rankings for Periods Ended March 31, 2019

\* Custom benchmark is calculated as a weighted average of each fund s respective benchmark until 201712. after 201712 the benchmark is MSCI ACWI ex US - Net.



The table below details the rates of return for the fund's domestic fixed core managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	Last		Last		3	
	Quarter		Year		Years	
Total Fixed Income	3.50%	33	4.29%	68	3.30%	34
Blmbg Aggregate Index	2.94%	67	4.48%	43	2.03%	76
Pub Pln- Dom Fixed	3.27%		4.46%		2.84%	
Dom. Fixed Active Core	2.83%	90	4.25%	93	2.50%	51
Callan Core Bond Fl	3.17%		4.70%		2.52%	
Brandes Core	3.00%	74	4.33%	91	2.02%	89
Blmbg Aggregate Index	2.94%	84	4.48%	75	2.03%	89
Brandes Core - Net	3.00%	74	4.33%	91	2.02%	89
Callan Core Bond Fl	3.17%	·	4.70%		2.52%	
EARNEST Partners	2.84%	90	4.73%	43	2.37%	58
Blmbg Aggregate Index	2.94%	84	4.48%	75	2.03%	89
EARNEST Partners - Net	2.81%	90	4.59%	60	2.21%	78
Callan Core Bond FI	3.17%	30	4.70%	00	2.52%	70
	5.17 /0		4.70/0		Z.JZ /0	
Piedmont	2.90%	86	3.60%	100	2.57%	41
Blmbg Aggregate Index	2.94%	84	4.48%	75	2.03%	89
Piedmont - Net	2.87%	87	3.45%	100	2.42%	56
Callan Core Bond FI	3.17%		4.70%		2.52%	
Garcia Hamilton	2.67%	94	4.27%	93	2.48%	54
Blmbg Aggregate Index	2.94%	84	4.48%	75	2.03%	89
Garcia Hamilton	2.65%	94	4.17%	94	2.38%	58
Callan Core Bond FI	3.17%		4.70%		2.52%	
Dom. Fixed Passive Core	2.98%	78	4.57%	64	2.09%	87
Callan Core Bond FI	3.17%		4.70%	•	2.52%	•
NTGI Blmbg Agg. Index	2.98%	81	4.54%	67	2.05%	88
Blmbg Aggregate Index	2.94%	84	4.48%	75	2.03%	89
NTGI BC Agg. Index - Net	2.98%	81	4.53%	67	2.04%	88
Callan Core Bond Fl	3.17%	01	4.70%		2.52%	00
BlackRock US Debt	2.99%	75	4.60%	59	2.13%	84
Blmbg Aggregate Index	2.94%	84	4.48%	75	2.03%	89
			4.59%			
BlackRock US Debt -Net	2.99%	75	4,09%	60	2.13%	84

#### **Returns and Rankings for Periods Ended March 31, 2019**



The table below details the rates of return for the fund's domestic fixed core managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	is and Rankings for Last		Last		
	5		10		Since
	Years		Years		Inception
Total Fixed Income	3.33%	30	5.58%	31	<b>8.20%</b> (1/82)
Blmbg Aggregate Index	2.74%	<b>30</b> 71	3.77%	70	7.67% (1/82)
Pub Pln- Dom Fixed	3.07%	71	4.80%	10	-
T ub T III- Doill T ixed	5.07 /0		4.00 %		-
om. Fixed Active Core	3.17%	39	4.88%	30	<b>4.48%</b> (4/01)
Callan Core Bond FI	3.05%		4.61%		-
	0.0070				
Brandes Core			-		<b>2.05%</b> (3/16)
Blmbg Aggregate Index	2.74%	91	3.77%	98	2.27% (3/16)
Brandes Core - Net	2.14/0	91	-	90	
	-				2.05% (3/16)
Callan Core Bond FI	3.05%		4.61%		-
	2 2001				4 470/
EARNEST Partners	3.30%	24	4.55%	54	<b>4.47%</b> (5/05)
Blmbg Aggregate Index	2.74%	91	3.77%	98	4.01% (5/05)
EARNEST Partners - Net	3.12%	40	4.35%	66	4.27% (5/05)
Callan Core Bond FI	3.05%		4.61%		-
liadusaut	2.06%		4 770/		4 049/
Piedmont	2.96%	70	4.77%	38	<b>4.21%</b> (6/05)
Blmbg Aggregate Index	2.74%	91	3.77%	98	3.95% (6/05)
Piedmont - Net	2.81%	84	4.60%	50	4.02% (6/05)
Callan Core Bond FI	3.05%		4.61%		-
Garcia Hamilton					<b>2.84%</b> (6/15)
	-		-		
Blmbg Aggregate Index	2.74%	91	3.77%	98	2.26% (6/15)
Garcia Hamilton	-		-		2.74% (6/15)
Callan Core Bond Fl	3.05%		4.61%		-
om. Fixed Passive Core	2.82%	84	3.87%	96	<b>5.88%</b> (1/90)
Callan Core Bond Fl	3.05%	04	<b>3.67%</b> 4.61%	90	J.00 70 (1/90) -
	0.0070				
NTGI BImbg Agg. Index	2.79%	87	3.86%	96	5.94% (2/90)
Blmbg Aggregate Index	2.74%	91	3.77%	98	5.93% (2/90)
NTGI BC Agg. Index - Net	2.78%	87	3.85%	96	3.95% (1/05)
Callan Core Bond Fl	3.05%	01	4.61%	50	-
	5.05 /0		<del>4</del> .0170		-
BlackRock US Debt	2.87%	82	-		<b>2.94%</b> (10/13)
Blmbg Aggregate Index	2.74%	91	3.77%	98	2.80% (10/13)
BlackRock US Debt -Net	2.86%	83	-		2.93% (10/13)
Callan Core Bond FI	3.05%	00	4.61%		-
	5.05%		4.01%		-



The table below details the rates of return for the fund's domestic, international and high yield fixed income managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns	and Rankings to	r Periods I	Ended March 3	1, 2019		
	Last		Last		Last 3	
	Quarter		Year		Years	
Domestic Fixed Core Plus	3.72%	54	4.27%	73	3.17%	64
Blmbg Aggregate Index	2.94%	97	4.48%	64	2.03%	99
Callan Core Plus Fl	3.73%		4.62%		3.32%	
LM Capital	3.79%	42	3.94%	89	2.46%	93
Blmbg Aggregate Index	2.94%	97	4.48%	64	2.03%	99
LM Capital - Net	3.75%	47	3.77%	92	2.29%	98
Callan Core Plus Fl	3.73%		4.62%		3.32%	
Progress Fixed Income	3.41%	79	4.58%	55	3.04%	74
Bimbg Aggregate Index	2.94%	97	4.48%	64	2.03%	99
Progress Fixed Inc Net	3.32%	81	4.24%	76	2.71%	82
Callan Core Plus Fl	3.73%		4.62%		3.32%	
ВМО-ТСН	3.65%	55	4.38%	68	4.27%	8
Blmbg Aggregate Index	2.94%	97	4.48%	64	2.03%	99
BMO-TCH - Net	3.62%	55	4.25%	76	4.13%	10
Callan Core Plus Fl	3.73%		4.62%		3.32%	
Western	3.98%	28	4.19%	79	3.79%	27
Blmbg Aggregate Index	2.94%	97	4.48%	64	2.03%	99
Western - Net	3.98%	28	4.08%	83	3.66%	29
Callan Core Plus Fl	3.73%		4.62%		3.32%	
Bank Loans	3.54%		3.13%		6.33%	
Barings Global Loan Fund	3.54%		3.13%		6.33%	
Custom Benchmark*	3.57%		3.60%		5.93%	
Barings Global Loan Fund - Net	3.54%		2.93%		5.86%	
Emerging Markets	4.91%	58	(3.83%)	65	5.37%	56
Standish	4.91%	58	(3.83%)	65	5.37%	56
Custom Benchmark**	4.40%	62	(1.70%)	57	4.51%	68
Standish - Net	4.82%	59	(4.17%)	67	5.01%	59
Emerging Debt Database	5.30%		0.86%		5.72%	
High Yield	7.44%	35	6.46%	16	9.09%	17
Callan High Yield Fix Inc	7.24%		5.87%		7.99%	
MacKay Shields	7.45%	35	6.45%	16	9.29%	13
ML High Yield Cash Pay Index	7.40%	40	5.96%	42	8.65%	30
MacKay Shields - Net	7.37%	41	6.10%	36	8.91%	24
Callan High Yield Fix Inc	7.24%		5.87%		7.99%	

#### Returns and Rankings for Periods Ended March 31, 2019

Taplin, Canida, Habacht switched from core to core plus effective 10/01/2010.

\* Custom Benchmark is Credit Suisse US Leveraged Loan Index and the Credit Suisse Western European Leveraged Loan Index, weighted by the portfolio's market value to each sector.

\*\* Custom Benchmark is 50% JPM GBI-EM Index, 25% JPM EMBI Global Index and 25% JPM Corporate EMBI Diversified Index.

The table below details the rates of return for the fund's domestic, international and high yield fixed income managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns a	and Rankings fo	r Periods	Ended March 3	1, 2019	
	Last 5		Last 10		Since
	Years		Years		Inception
Domestic Fixed Core Plus	3.43%	37	5.70%	61	<b>8.05%</b> (1/82)
Blmbg Aggregate Index	2.74%	97	3.77%	100	7.67% (1/82)
Callan Core Plus Fl	3.31%		6.10%		-
LM Capital	3.11%	72	5.17%	77	<b>4.73%</b> (5/05)
Blmbg Aggregate Index	2.74%	97	3.77%	100	4.01% (5/05)
LM Capital - Net	2.94%	89	5.00%	81	4.56% (5/05)
Callan Core Plus Fl	3.31%		6.10%		-
Progress Fixed Income	3.23%	60	4.82%	92	<b>4.80%</b> (1/06)
Bimbg Aggregate Index	2.74%	97	3.77%	100	4.09% (1/06)
Progress Fixed Inc Net	2.89%	95	4.46%	97	4.46% (1/06)
Callan Core Plus Fl	3.31%		6.10%		-
ВМО-ТСН	3.78%	14	5.75%	60	<b>4.91%</b> (5/05)
Blmbg Aggregate Index	2.74%	97	3.77%	100	4.01% (5/05)
BMO-TCH Net	3.64%	26	5.61%	64	4.78% (5/05)
Callan Core Plus Fl	3.31%	20	6.10%	04	-
Western	3.94%	8	6.68%	21	5.37% (11/01)
Blmbg Aggregate Index	2.74%	97	3.77%	100	4.19% (11/01)
Western - Net	3.80%	11	6.54%	24	4.79% (1/05)
Callan Core Plus Fl	3.31%		6.10%		-
Bank Loans	-		-		<b>4.43%</b> (8/14)
Barings Global Loan Fund	-		-		4.43% (8/14)
Custom Benchmark	-		-		3.99% (8/14)
Barings Global Loan Fund - Net	-		-		3.91% (8/14)
Emerging Markets	-		-		<b>2.10%</b> (8/14)
Standish	-		-		2.10% (8/14)
Custom Benchmark	2.11%	61	6.36%	65	1.47% (8/14)
Standish - Net	-		-		1.76% (8/14)
Emerging Debt Database	3.80%		8.49%		-
High Yield	5.59%	9	11.61%	17	<b>9.56%</b> (4/86)
Callan High Yield Fix Inc	4.59%		10.66%		-
MacKay Shields	5.70%	8	10.83%	38	<b>8.85%</b> (11/00)
ML High Yield Cash Pay Index	4.68%	46	11.12%	32	7.56% (11/00)
MacKay Shields - Net	5.34%	15	10.44%	65	<b>6.90%</b> (1/05)
Callan High Yield Fix Inc	4.59%	-	10.66%		-
<b>U</b>					

# Returns and Rankings for Periods Ended March 31, 2019

Taplin, Canida, Habacht switched from core to core plus effective 10/01/2010.

# **Real Estate Returns**

The table below details the rates of return for the fund's real estate opportunistic, real estate core, and real estate value added managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

			Last	
	Last	Last	3	
	Quarter	Year	Years	
Real Estate Core	1.21%	9.21%	8.78%	
TA Buckhead Ind. Prop. Blended Benchmark**	3.83%	16.86%	11.75%	
Blended Benchmark**	1.20%	6.55%	7.01%	
Barings European Core Property Blended Benchmark**	<mark>(1.94%)</mark> 1.20%	<mark>(8.86%)</mark> 6.55%	- 7.01%	
Diended Benchmark	1.20%	0.55%	7.01%	
INVESCO Core RE Blended Benchmark**	<mark>(0.20%)</mark> 1.20%	<b>8.51%</b> 6.55%	<b>8.11%</b> 7.01%	
Dielided Delicilitärk	1.2076	0.33 %	7.01%	
Invesco European real estate Blended Benchmark**	<b>0.39%</b> 1.20%	<mark>(4.63%)</mark> 6.55%	- 7.01%	
biended benchmark	1.20%	0.33%	7.01%	
AEW Core Property Trust	0.00%	6.88%	6.42%	
Blended Benchmark**	1.20%	6.55%	7.01%	
Real Estate Non-Core	1.03%	6.89%	8.81%	
Artemis MWBE Spruce Blended Benchmark**	<mark>(0.03%)</mark> 1.20%	0.70% 6.55%	7.01%	
	1.20%	0.55%	7.0176	
Franklin Templeton EMREFF Blended Benchmark**	0.62%	10.80%	14.45%	
Blended Benchmark	1.20%	6.55%	7.01%	
Security Capital Blended Benchmark**	7.01%	24.31%	3.33%	
Biended Benchmark	1.20%	6.55%	7.01%	
Dune II	(1.36%)	7.09%	8.58%	
Blended Benchmark**	1.20%	6.55%	7.01%	
Non-Core Real Estate Funds	1.19%	9.26%	10.72%	
Blended Benchmark**	1.20%	6.55%	7.01%	
Rockwood Fund VIII	(5.35%)	(60.63%)	(25.78%)	
Blended Benchmark**	1.20%	6.55%	7.01%	
Almanac ARS V	8.18%	33.59%	21.41%	
Blended Benchmark**	1.20%	6.55%	7.01%	
TA Realty IX	(5.97%)	(14.72%)	1.62%	
Blended Benchmark**	1.20%	6.55%	7.01%	
Non-US Real Estate	(0.49%)	(9.54%)	(0.73%)	
Blended Benchmark**	1.20%	6.55%	7.01%	

#### **Returns for Periods Ended March 31, 2019**

Returns are time-weighted and are reported net of fee for all real estate managers. \*\* The Blended Benchmark is currently ODCE Value Weigh Index+1%. Returns between January 1, 2007 and December 31, 2012 reflect NPI+1%. Returns prior to January 1, 2007, reflect those of the Consumer Price Index +5%.



# **Real Estate Returns**

The table below details the rates of return for the fund's real estate opportunistic, real estate core, and real estate value added managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended March 31, 2019						
	Last 5 Years	Last 10 Years	Since Inception			
Real Estate Core	10.00%	6.23%	<b>7.25%</b> (4/99)			
TA Buckhead Ind. Prop.	<b>12.12%</b>	<b>7.81%</b>	<b>10.67%</b> (8/95)			
Blended Benchmark**	9.17%	9.05%	-			
Barings Euro Core Property	-	9.05%	<b>4.79%</b> (3/17)			
Blended Benchmark**	9.17%		6.81% (3/17)			
INVESCO Core RE	<b>9.68%</b>	9.05%	<b>9.81%</b> (4/11)			
Blended Benchmark**	9.17%		10.50% (4/11)			
Invesco European real estate	9.17%	-	<b>(4.63%)</b> (4/18)			
Blended Benchmark**		9.05%	6.55% (4/18)			
AEW Core Property Trust	<b>8.32%</b>	9.05%	<b>8.74%</b> (10/13)			
Blended Benchmark**	9.17%		9.33% (10/13)			
Real Estate Non-Core	10.33%	-	<b>11.90%</b> (1/10)			
Franklin Templeton EMREFF	<b>15.19%</b>	9.05%	<b>11.76%</b> (9/11)			
Blended Benchmark**	9.17%		10.18% (9/11)			
Security Capital	<b>4.28%</b>	<b>15.12%</b>	<b>11.19%</b> (11/97)			
Blended Benchmark**	9.17%	9.05%				
Dune II	<b>11.63%</b>	<b>6.85%</b>	<b>6.74%</b> (2/09)			
Blended Benchmark**	9.17%	9.05%	<b>8.38%</b> (2/09)			
Non-Core Real Estate Funds	<b>11.69%</b>	9.05%	<b>11.24%</b> (10/11)			
Blended Benchmark**	9.17%		<b>10.13%</b> (10/11)			
Rockwood Fund VIII	<b>(7.59%)</b>	<b>(25.30%)</b>	(25.30%) (4/09)			
Blended Benchmark**	9.17%	9.05%	9.05% (4/09)			
Almanac ARS V	<b>18.27%</b>	<b>13.94%</b>	<b>11.33%</b> (10/08)			
Blended Benchmark**	9.17%	9.05%	<b>7.00%</b> (10/08)			
TA Realty IX	<b>6.15%</b>	9.05%	7.65% (5/10)			
Blended Benchmark**	9.17%		11.18% (5/10)			
Non-US Real Estate	9.17%	-	(4.40%) (8/14)			
Blended Benchmark**		9.05%	9.01% (8/14)			

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Returns are time-weighted and are reported net of fee for all real estate managers. \*\* The Blended Benchmark is currently ODCE Value Weigh Index+1%. Returns between January 1, 2007 and December 31, 2012 reflect NPI+1%. Returns prior to January 1, 2007, reflect those of the Consumer Price Index +5%.



## **Alternative Investments Returns**

The table below details the rates of return for the fund's absolute return, private equity, agriculture, and timberland managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	Last Quarter		Last Year		Last 3 Years	
Private Equity	2.73%		21.41%		15.64%	
Abbott	(0.00%)		20.34%		16.15%	
Alternatives Custom Benchmark* Abbott - Net	2.18% (0.10%)		9.00% 19.98%		9.00% 15.76%	
Muller & Monroe MPEFF Alternatives Custom Benchmark*	<b>0.00%</b> 2.18%		<b>7.55%</b> 9.00%		<b>7.54%</b> 9.00%	
Pantheon			9.00 % <b>19.63%</b>			
Alternatives Custom Benchmark*	<b>0.90%</b> 2.18%		9.00%		<b>15.36%</b> 9.00%	
Pantheon - Net	0.80%		19.15%		15.02%	
Private Equity Fds- Domestic	3.20%		24.10%		15.54%	
Alternatives Custom Benchmark* Private Eq Fds- Domestic - Net	2.18% 3.20%		9.00% 24.10%		9.00% 15.54%	
Private Equity Fds- International Alternatives Custom Benchmark*	<b>13.56%</b> 2.18%		<b>10.55%</b> 9.00%		<b>9.79%</b> 9.00%	
Agriculture	(2.17%)		(1.37%)		(2.38%)	
Premiere Partners IV	(2.17%)	95	(1.37%)	96	(2.38%)	
NCREIF Farmland Index (1Q lagged)	2.85%	16	6.74%	5	6.67%	
NCREIF Total Index (1Q lagged) Callan RE Agri Funds	1.37% 1.86%	67	6.72% 5.74%	6	7.21%	
Timberland	1.33%		(2.17%)		1.04%	
Forest Investment Assoc. NCREIF Timberland Index	<b>1.33%</b> 0.97%	<b>18</b> 32	<b>(2.17%)</b> 3.44%		<b>1.04%</b> 3.22%	
Callan Real Estate Timber	0.58%	32	-		-	
Unlisted Infrastructure	0.00%		8.14%		-	
Alternatives Custom Benchmark*	2.18%		9.00%		9.00%	

#### **Returns and Rankings for Periods Ended March 31, 2019**

Returns are reported net of fee for all alternative investment managers with the exception of Abbott and Pantheon.

\* The Alternatives Custom Benchmark is based on an annualized rate of return of 9.0%. Prior to July 1, 2010 the

Benchmark was based on an annual return of 12.0%. Prior to 2004, the Benchmark was based on an annual return of 13.0%. Prior to 2003, it was based on an annual return of 15.0%.

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Private Equity performance is lagged one quarter.

Agriculture and Timberland performance is lagged one month.



## **Alternative Investments Returns**

The table below details the rates of return for the fund's absolute return, private equity, agriculture, and timberland managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	Last Last		
	5 Years	10 Years	Since Inception
Private Equity	13.00%	11.18%	<b>13.11%</b> (2/8
Abbott	12.11%	11.27%	-
Alternatives Custom Benchmark* Abbott - Net	9.00% 12.11%	9.37% 11.27%	-
Muller & Monroe MPEFF	12.78%	8.86%	<b>6.20%</b> (5/0
Alternatives Custom Benchmark*	9.00%	9.37%	9.59% (5/0
Pantheon Alternatives Custom Benchmark*	<b>12.43%</b> 9.00%	<b>10.93%</b> 9.37%	-
Pantheon - Net	12.01%	-	-
Private Equity Fds- Domestic	16.07%		<b>11.49%</b> (6/1
Alternatives Custom Benchmark* Private Eq Fds- Domestic - Net	9.00% 16.07%	9.37%	9.00% (6/1 10.34% (6/1
Private Equity Fds- International	-	-	(12.87%) (7/1
\griculture	5.69%	8.42%	<b>7.40%</b> (10)
Premiere Partners IV	-		<b>2.85%</b> (3/1
NCREIF Farmland Index NCREIF Total Index	8.57% 9.33%	11.16% 7.49%	-
Callan RE Agri Funds	-	-	-
limberland	1.58%	2.22%	<b>7.57%</b> (10)
Forest Investment Assoc.	1.63%	2.65%	<b>7.74%</b> (10)
NCREIF Timberland Index Callan Real Estate Timber	4.98%	3.83%	-
Unlisted Infrastructure	-	<u>-</u>	<b>8.14%</b> (4/1
Alternatives Custom Benchmark*	9.00%	9.37%	9.00% (4/1

#### Returns and Rankings for Periods Ended March 31, 2019

Returns are reported net of fee for all alternative investment managers with the exception of Abbott and Pantheon.

\* The Alternatives Custom Benchmark is based on an annualized rate of return of 9.0%. Prior to July 1, 2010 the

Benchmark was based on an annual return of 12.0%. Prior to 2004, the Benchmark was based on an annual return of

13.0%. Prior to 2003, it was based on an annual return of 15.0%.

Private Equity performance is lagged one quarter.

Agriculture and Timberland performance is lagged one month.

