Asset Allocation Chart

As of June 30, 2017

March 31, 2017 : \$2,209,763,084







	Market Value (\$)	Allocation (%)
Fixed Income Composite	722,331,541	32.69
Domestic Equity Composite	647,984,891	29.32
International Equity Composite	568,472,648	25.73
Total Real Estate Composite	133,617,056	6.05
Hedge Fund Composite	86,763,305	3.93
Private Equity Composite	32,268,082	1.46
In House Cash	18,325,560	0.83

	Market Value (\$)	Allocation (%)
Fixed Income Composite	700,448,136	30.94
Domestic Equity Composite	672,137,717	29.69
International Equity Composite	612,166,226	27.04
Total Real Estate Composite	135,593,789	5.99
Hedge Fund Composite	87,625,534	3.87
Private Equity Composite	38,318,082	1.69
In House Cash	17,332,938	0.77



Asset Allocation Chart

As of June 30, 2017

Allocation (%)

9.44

8.34

6.99

6.14

5.88

4.96

4.91

4.82

4.77

4.41

4.08

3.28

2.98

2.98

2.77

2.73

1.99

1.94

1.93

1.83

1.79

1.58

1.58

1.42

1.04

0.91

0.77

0.69

0.67

0.65

0.58

0.35

0.30

0.27

0.14

0.06

0.03

June 30, 2017 : \$2,263,622,423		Market Value (\$)
	Brandywine	213,776,446
	Rhumbline S&P 500	188,689,166
	Mackay Shields	158,263,208
	1607 Capital Partners	138,934,816
	Marathon Asset Mgmt	133,136,168
	Acadian EM Equity II	112,216,904
		111,181,690
	Smith Graham	109,164,672
	Prudential Core Conserv Bond	108,062,120
	J.P. Morgan Global Emerging Markets Discovery Fund	99,812,383
	Principal Global Investors	92,257,094
	Winslow Capital Management	74,232,091
	Herndon Capital Management	67,423,740
	Barrow, Hanley	67,411,366
	NTGI S&P 400	62,703,169
	Navellier and Associates Inc.	61,746,785
	BlackRock US Core Property Fund	45,013,716
	Aetos	43,888,797
	Grosvenor Institutional Partners, L.P.	43,736,737
	Nicholas Investment Partners	41,448,272
	Capital Prospects LLC	40,469,113
	Strategic Global Advisors	35,808,861
	Paradigm Small Cap	35,796,268
	SouthernSun	32,217,748
	Vanguard REIT Index Inv	23,611,142
	Pantheon Global Secondary Fund V	20,517,491
	In House Cash	17,332,938
	Long Wharf Real Estate Partners IV, L.P.	15,722,240
	RREEF REIT II	15,070,211
	NB Crossroads Fund XXI	14,654,653
	Gerding Edlen Green Cities III, L.P.	13,083,320
	□ TA Realty Fund XI	7,954,679
	Cornerstone (Barings) Real Estate Advisers Fund X	6,833,781
	Long Wharf RE Partners V, L.P.	6,093,549
	SSM Partners Fund V	3,145,938



1,447,623

763,528

Cornerstone (Barings) Real Estate Advisers VIII

□ Long Wharf Real Estate Partners

City of Memphis Asset Allocation Comparison

			Asset Allocation
Portfolio Value 06/30/17			
<i>\$2,263,622,423</i> Target Allocations			Current Managers & Allocations
Equity		(000)	
Large Cap Equity	17.00%	\$384,816	Barrow, Hanley (large cap value)
			Herndon Capital (large cap value) Navellier and Assocaites (large cap growth)
			Winslow (large cap growth)
			Rhumbline S&P 500 (large cap core)
Mid/SMID Cap Equity	5.00%	\$113,181	Northern Trust (mid cap core)
			Capital Prospects SMID Cap*
Small Cap Equity	5.00%	\$113,181	SouthernSun (small cap value)
			Paradigm (small cap growth)
			Nicholas (small cap growth)
Domestic Equity	27.00%	\$611,178	Domestic Equity
Developed International	18.50%	\$418,770	1607 Capital Partners
			Principal Global Investors
			Marathon Asset Mgmt Strategic Global Advisors
		* · · · ·	
Emerging Markets	8.50%	\$192,408	Acadian JPMorgan
International	27.00%	\$611,178	International
Equity Total	54.00%	\$1,222,356	Equity Total
Fixed Income			
Core Fixed Income	12.00%	\$271,635	PIMCO
			Prudential Core Conserv Bond Smith Graham
Global Fixed Income	10.00%	\$226,362	Brandywine
Global High Yield	6.00%	\$135,817	Mackay Shields
Fixed Income Total	28.00%	\$633,814	Fixed Income Total
<u>Real Estate</u> Core/Value Add/REITs	10.00%	\$226,362	BlackRock Granite Property Fund
			RREEF REIT II
			Vanguard REIT Index
			Long Wharf Real Estate Partners
			Long Wharf Real Estate Partners IV Long Wharf Real Estate Partners Fund V
			Cornerstone (Barings) Real Estate Fund VIII ¹
			Cornerstone (Barings) Real Estate Fund X^1
			Gerding Edlen Green Cities III
			TA Realty Fund XI
Real Estate Total	10.00%	\$226,362	Real Estate Total
Private Equity			
Private Equity Secondary	2.00%		Pantheon Global Secondary Fund V
Direct Private Equity			SSM Partners V*
Diversified FoF	2.00%		Neuberger Berman Crossroads XXI
Private Equity Total	4.00%	\$90,545	
<u>Hedge Fund of Funds</u>			
	4.00%		Aetos
Hedge Fund of Funds Total	4.00%	\$90,545	Grosvenor
Internal Account	0.00%	\$0	Internal Account
Cash	0.00%	\$0	Cash
Total	100%	\$2,263,622	Total
	20070	<i>~</i>	*Emerging Managers
			¹ Cornerstone Real Estate Advisers now operates un

¹ Cornerstone Real Estate Advisers now operates under the investment adviser name "Barings Real Estate Advisers," however; all predecessor funds retain the name Cornerstone. All new products open to new investors will operate under the name "Barings Real Estate Advisers" moving forward.

		Difference	Range
2 0.89/	(000)		13%-21%
2.98% 2.98%	\$67,411 \$67,424	3.30%	13%-21%
2.73%	\$61,747		
3.28%	\$74,232		
8.34%	\$188,689		
2.77%	\$62,703	-0.44%	0%-7%
1.79%	\$40,469		
1.42%	\$32,218	-0.16%	0%-7%
1.58% 1.83%	\$35,796 \$41,448		
29.69%	\$672,138	2.69%	17%37%
6.14%	\$138,935	-0.82%	14%-23%
4.08%	\$92,257		
5.88% 1.58%	\$133,136 \$35,809		
4.96%	\$112,217	0.87%	5%-12%
4.41%	\$99,812		
27.04%	\$612,166	0.04%	17%-37%
56.74%	\$1,284,304	2.74%	
4.91%	\$111,182	2.51%	7%-17%
4.77%	\$108,062		
4.82%	\$109,165		
9.44%	\$213,776	-0.56%	3%-13%
6.99%	\$158,263	0.99%	3%-13%
30.94%	\$700,448	2.94%	20%-36%
1.000/	¢ 45 01 4		
1.99% 0.67%	\$45,014 \$15,070		
1.04%	\$23,611		
0.03%	\$764	(Total Commitment \$25)	٨, Total Drawn \$31.9M, Total Distributed \$40.8M)
0.69%			A, Total Drawn \$20.0M, Total Distributed \$40.8M)
0.27%			A, Total Drawn \$6.4M, Total Distributed \$0.2M)
0.06%	\$1,448	(Total Commitment \$10M	A, Total Drawn \$11.1M, Total Distributed \$13.6M)
0.30%	\$6,834	(Total Commitment \$10M	A, Total Drawn \$6.6M, Total Distributed \$0.7M)
0.58%			A, Total Drawn \$15.8M, Total Distributed \$4.2M)
0.35%	\$7,955	(Total Commitment \$20M	A, Total Drawn \$8.0M, Total Distributed \$0.0M)
5.99%	\$135,594	-4.01%	5%-10%
0.010/	¢00 517	(Total Carrier to the car	4 Total Drawn \$17.234 T-4-151 (1.4.161.03.0
0.91% 0.14%			<i>A</i> , Total Drawn \$17.3M, Total Distributed \$1.8M) <i>A</i> , Total Drawn \$2.8, Total Distributed \$0.0M)
0.65%			A, Total Drawn \$14.5M, Total Distributed \$0.0M)
1.69%	\$38,318	-2.31%	2%-6%
1.94%	\$43,889 \$43,737		
1.93% 3.87%	\$43,737 \$87,626		2%-6%
0.77%	\$17,333		
0.77%	\$17,333	0.77%	0%-5%
100%	\$2,263,622		

Comparative Performance

As of June 30, 2017

	Performance (%)								
	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Total Fund Composite	4.03	9.45	13.44	5.55	9.24	9.96	5.33	9.62	10/01/1982
Policy Index	3.42	8.34	12.88	5.43	8.74	9.18	5.70	10.07	
In House Cash	0.15	0.26	0.41	0.28	0.22	0.27	0.78	4.28	10/01/1982
90 Day U.S. Treasury Bill	0.20	0.30	0.44	0.20	0.15	0.13	0.55	4.00	
Domestic Equity Composite	3.73	10.16	19.71	7.26	13.48	14.74	6.68	11.88	10/01/1982
Russell 3000 Index	3.02	8.93	18.51	9.10	14.58	15.34	7.26	11.66	
Fixed Income Composite	2.55	4.70	3.51	3.40	3.60	4.58	4.61	7.71	10/01/1982
Blmbg. Barc. U.S. Aggregate	1.45	2.27	-0.31	2.48	2.21	3.19	4.48	7.49	
International Equity Composite	7.72	18.48	24.64	4.27	10.66	9.76	3.01	5.32	01/01/1990
MSCI EAFE (Net)	6.12	13.81	20.27	1.15	8.69	7.91	1.03	4.41	
Hedge Fund Composite	0.99	3.37	8.03	N/A	N/A	N/A	N/A	7.86	04/01/2016
90-Day T-Bill+ 5%	1.43	2.78	5.46	5.21	5.15	5.14	5.58	5.42	
Core Private Real Estate Composite	1.68	3.38	5.12	10.90	10.99	13.77	5.43	8.47	09/01/1999
NCREIF Property Index	1.75	3.32	6.97	10.17	10.49	11.58	6.42	9.10	

As of June 30, 2017

	I						、			<i></i>
	Performance (%)									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Fund Composite	6.77	0.25	5.55	17.71	13.75	0.72	14.05	22.23	-28.95	8.34
Policy Index	8.00	-0.19	5.86	15.19	12.79	0.77	12.11	19.76	-22.15	8.69
In House Cash	0.35	0.18	0.11	0.11	0.20	0.54	0.36	0.34	2.85	5.26
90 Day U.S. Treasury Bill	0.25	0.03	0.04	0.05	0.08	0.08	0.13	0.17	2.10	4.91
Domestic Equity Composite	10.04	-1.26	8.80	35.55	16.30	0.65	18.23	28.67	-38.44	7.64
Russell 3000 Index	12.74	0.48	12.56	33.55	16.42	1.03	16.93	28.34	-37.31	5.14
Fixed Income Composite	5.14	-0.23	4.70	0.13	8.15	6.69	8.81	18.96	-12.34	5.92
Blmbg. Barc. U.S. Aggregate	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
International Equity Composite	3.30	-0.50	-1.08	20.79	20.28	-12.77	13.91	36.19	-44.94	14.29
MSCI EAFE (Net)	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75	31.78	-43.38	11.17
Hedge Fund Composite	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
90-Day T-Bill+ 5%	5.27	5.03	5.04	5.05	5.08	5.09	5.14	5.17	7.20	10.16
Core Private Real Estate Composite	8.50	11.92	20.06	7.12	14.60	13.01	22.87	-27.15	-14.89	15.37
NCREIF Property Index	7.97	13.33	11.82	10.98	10.54	14.26	13.11	-16.85	-6.46	15.85



All Public Plans-Total Fund

As of June 30, 2017



Parentheses contain percentile rankings.

Calculation based on quarterly periodicity.

 \star Segal Marco Advisors