

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Total Fund Composite	2.69 (66)	2.69 (66)	38.73 (23)	9.80 (50)	10.61 (36)	8.30 (40)	8.70 (34)
● Policy Index	2.26 (80)	2.26 (80)	33.01 (58)	9.41 (62)	10.18 (51)	7.98 (51)	8.25 (50)

5th Percentile	4.91	4.91	43.82	12.24	12.06	9.46	9.69
1st Quartile	3.79	3.79	38.30	10.83	10.95	8.62	8.87
Median	3.15	3.15	33.91	9.79	10.21	7.99	8.22
3rd Quartile	2.43	2.43	30.39	8.91	9.44	7.34	7.64
95th Percentile	0.00	0.00	13.19	6.40	6.75	5.49	5.59

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

City of Memphis

Asset Allocation Comparison

Portfolio Value 3/31/21

\$2,698,309,617

Target Allocations		Current Managers & Allocations			Difference	Range	
Equity		(000)		(000)			
Large Cap Equity	20.00%	\$539,662	Barrow, Hanley (large cap value)	6.39%	\$172,398	-1.62%	15%-25%
			Rhumblin Russell 1000 Growth (large cap growth)	2.95%	\$79,644		
			Winslow (large cap growth)	4.18%	\$112,665		
			Rhumblin S&P 500 (large cap core)	4.87%	\$131,331		
Mid/SMID Cap Equity	4.00%	\$107,932	Northern Trust (mid cap core)	2.92%	\$78,918	1.33%	0%-7%
			Capital Prospects SMID Cap*	2.40%	\$64,826		
Small Cap Equity	4.00%	\$107,932	Capital Prospects Small Cap Value*	1.33%	\$35,879	1.67%	0%-7%
			Conestoga (small cap growth)	2.43%	\$65,518		
			Nicholas (small cap growth)	1.92%	\$51,712		
Domestic Equity	28.00%	\$755,527	Domestic Equity	29.38%	\$792,893	1.38%	18%-38%
Developed International	15.00%	\$404,746	1607 Capital Partners	6.31%	\$170,269	3.54%	10%-20%
			Principal Global Investors	4.01%	\$108,285		
			Marathon Asset Mgmt	5.92%	\$159,867		
			Strategic Global Advisors	2.29%	\$61,774		
Emerging Markets	7.00%	\$188,882	Acadian	5.02%	\$135,388	3.97%	5%-12%
			JPMorgan	5.95%	\$160,583		
International	22.00%	\$593,628	International	29.51%	\$796,165	7.51%	15%-30%
Equity Total	50.00%	\$1,349,155	Equity Total	58.89%	\$1,589,058	8.89%	
Fixed Income							
Core Fixed Income	13.00%	\$350,780	PIMCO	2.76%	\$74,488	-3.43%	8%-18%
			Prudential Core Conserv Bond	3.47%	\$93,637		
			Smith Graham	3.34%	\$90,057		
Global Fixed Income	8.00%	\$215,865	Brandywine	8.84%	\$238,544	0.84%	3%-13%
Global High Yield	5.00%	\$134,915	Mackay Shields	5.68%	\$153,276	0.68%	2%-10%
Fixed Income Total	26.00%	\$701,561	Fixed Income Total	24.09%	\$650,002	-1.91%	18%-34%

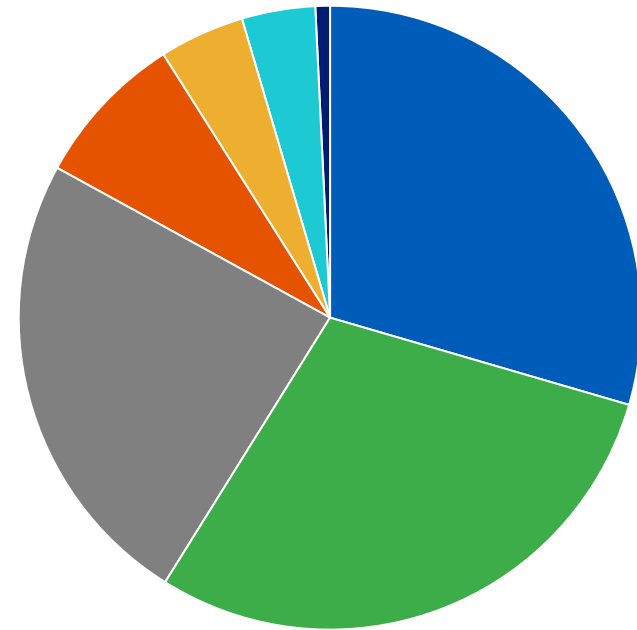
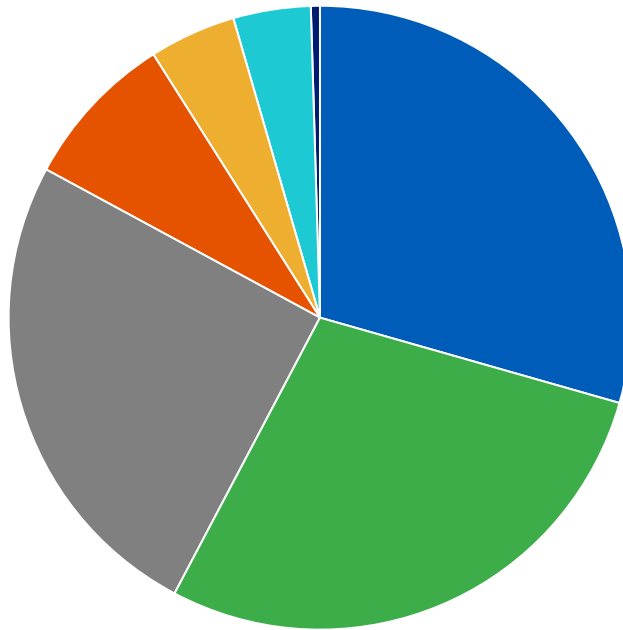
* Emerging Managers

Real Estate						
Core/Value Add/REITs	10.00%	\$269,831	BlackRock US Core Property Fund	2.31%	\$62,333	
			RREEF REIT II	0.61%	\$16,447	
			Vanguard REIT Index	0.55%	\$14,826	
			TA Realty Core Property Fund	0.85%	\$22,990	
			Long Wharf Real Estate Partners IV	0.06%	\$1,490	(Total Commitment \$20M, Total Drawn \$21.5M, Total Distributed \$29.2M)
			Long Wharf Real Estate Partners Fund V	0.53%	\$14,276	(Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$10.2M)
			Long Wharf Real Estate Partners Fund VI	0.11%	\$2,988	(Total Commitment \$20M, Total Drawn \$4.7M, Total Distributed \$1.0M)
			Cornerstone (Barings) Real Estate Fund X ¹	0.23%	\$6,101	(Total Commitment \$10M, Total Drawn \$8.2M, Total Distributed \$4.7M)
			Gerding Edlen Green Cities III	0.79%	\$21,255	(Total Commitment \$20M, Total Drawn \$23.6M, Total Distributed \$6.6M)
			Gerding Edlen Green Cities IV	0.21%	\$5,716	(Total Commitment \$20M, Total Drawn \$4.4, Total Distributed \$0.5M)
			TA Realty Fund XI	0.77%	\$20,751	(Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$5.8M)
			Mesirow Financial Real Estate Value Fund III	0.76%	\$20,448	(Total Commitment \$20M, Total Drawn \$19.8M, Total Distributed \$1.7M)
			Dune Real Estate Partners Fund IV	0.25%	\$6,706	(Total Commitment \$30M, Total Drawn \$9.1M, Total Distributed \$0.0M)
Real Estate Total	10.00%	\$269,831	Real Estate Total	8.02%	\$216,327	-1.98%
						5%-15%
Private Equity						
Secondary	2.50%		Pantheon Global Secondary Fund V	1.25%	\$33,605	(Total Commitment \$50M, Total Drawn \$35.7M, Total Distributed \$15.9M)
Direct Private Equity			SSM Growth Equity Fund II*	0.27%	\$7,301	(Total Commitment \$10M, Total Drawn \$8.9, Total Distributed \$3.2M)
			SSM Growth Equity Fund III*	0.19%	\$5,105	(Total Commitment \$10M, Total Drawn \$3.2, Total Distributed \$0.0M)
Diversified FoF	2.50%		Neuberger Berman Crossroads XXI	2.11%	\$56,855	(Total Commitment \$50M, Total Drawn \$36.5M, Total Distributed \$1.3M)
Private Equity Total	5.00%	\$134,915		3.81%	\$102,865	-1.19%
						3%-7%
Private Credit						
	5.00%		TBD	0.00%		
Private Credit Total	5.00%	\$134,915		0.00%	\$0	-5.00%
						3%-7%
Hedge Fund of Funds						
	4.00%		Aetos	1.95%	\$52,665	
			Grosvenor	2.05%	\$55,381	
			Preserver, LP*	0.43%	\$11,480	
Hedge Fund of Funds Total	4.00%	\$107,932		4.43%	\$119,526	0.43%
						2%-6%
Internal Account	0.00%	\$0	Internal Account	0.76%	\$20,531	
Cash	0.00%	\$0	Cash	0.76%	\$20,531	0.76%
						0%-5%
Total	100%	\$2,698,310	Total	100%	\$2,698,310	

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.

December 31, 2020 : \$2,631,133,790

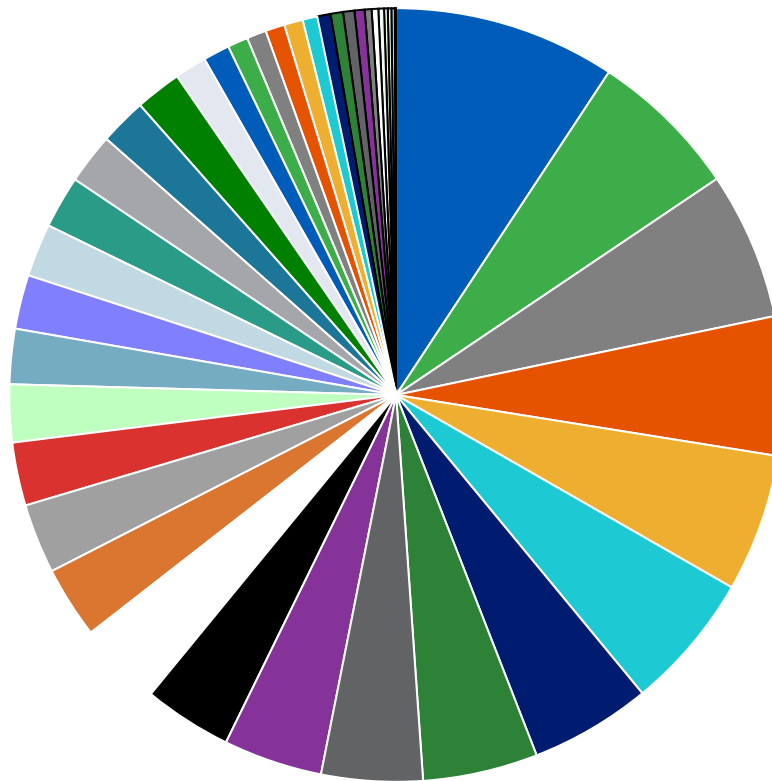
March 31, 2021 : \$2,698,309,617



	Market Value (\$)	Allocation (%)
International Equity Composite	773,758,819	29.4
Domestic Equity Composite	745,439,747	28.3
Fixed Income Composite	661,601,576	25.1
Total Real Estate Composite	213,676,789	8.1
Hedge Fund Composite	118,465,011	4.5
Private Equity Composite	105,660,707	4.0
In House Cash	12,531,142	0.5

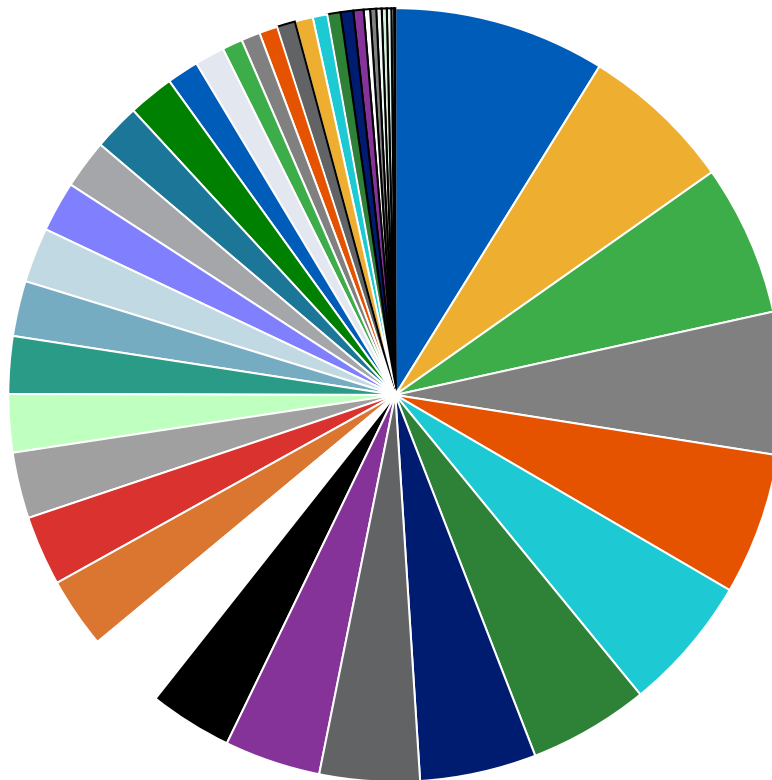
	Market Value (\$)	Allocation (%)
International Equity Composite	796,165,374	29.5
Domestic Equity Composite	792,892,533	29.4
Fixed Income Composite	650,002,264	24.1
Total Real Estate Composite	216,326,929	8.0
Hedge Fund Composite	119,526,148	4.4
Private Equity Composite	102,865,226	3.8
In House Cash	20,531,143	0.8

December 31, 2020 : \$2,631,133,790



	Market Value (\$)	Allocation (%)
Brandywine	243,966,606	9.3
1607 Capital Partners	165,306,108	6.3
J.P. Morgan Global Emerging Markets Discovery Fund	162,276,768	6.2
Marathon Asset Mgmt	152,685,087	5.8
Barrow, Hanley	151,502,671	5.8
Mackay Shields	150,861,524	5.7
Rhumblin S&P 500	133,296,432	5.1
Acadian EM Equity II	126,378,369	4.8
Winslow Capital Management	111,229,154	4.2
Principal Global Investors	108,844,632	4.1
Prudential Core Conserv Bond	96,966,199	3.7
Smith Graham	93,132,469	3.5
Rhumblin Russell 1000 Growth	78,901,051	3.0
PIMCO	76,674,779	2.9
NTGI S&P 400	69,555,707	2.6
Conestoga Capital Advisors	63,444,579	2.4
BlackRock US Core Property Fund	60,684,072	2.3
NB Crossroads Fund XXI	59,344,133	2.3
Strategic Global Advisors	58,267,854	2.2
Capital Prospects SMID	57,443,611	2.2
Grosvenor Institutional Partners, L.P.	55,672,078	2.1
Aetos	51,655,475	2.0
Nicholas Investment Partners	50,820,115	1.9
Pantheon Global Secondary Fund V	35,004,826	1.3
Capital Prospects Small Cap Value	29,246,426	1.1
TA Realty Core Property Fund	22,472,072	0.9
Gerding Edlen Green Cities III, L.P.	21,381,918	0.8
TA Realty Fund XI	21,154,911	0.8
Mesirow Real Estate Value Fund III, L.P.	20,585,318	0.8
RREEF REIT II	16,265,573	0.6
Long Wharf RE Partners V, L.P.	14,565,805	0.6
Vanguard REIT Index Inv	13,640,975	0.5
In House Cash	12,531,142	0.5
Preserver, L.P.	11,137,458	0.4
Dune Real Estate Fund IV	7,606,023	0.3
SSM Partners Growth Equity II L.P.	7,301,007	0.3
Cornerstone (Barings) Real Estate Advisers Fund X	6,141,452	0.2
Long Wharf RE Partners VI, L.P.	4,053,551	0.2
SSM Partners Growth Equity III, LP	4,010,741	0.2
Gerding Edlen Green Cities IV, L.P.	3,541,151	0.1
Long Wharf Real Estate Partners IV, L.P.	1,583,968	0.1

March 31, 2021 : \$2,698,309,617



	Market Value (\$)	Allocation (%)
Brandywine	238,544,291	8.8
Barrow, Hanley	172,398,240	6.4
1607 Capital Partners	170,268,834	6.3
J.P. Morgan Global Emerging Markets Discovery Fund	160,583,187	6.0
Marathon Asset Mgmt	159,866,840	5.9
Mackay Shields	153,275,762	5.7
Acadian EM Equity II	135,388,130	5.0
Rhumblin S&P 500	131,330,711	4.9
Winslow Capital Management	112,665,410	4.2
Principal Global Investors	108,284,856	4.0
Prudential Core Conserv Bond	93,636,992	3.5
Smith Graham	90,057,231	3.3
Rhumblin Russell 1000 Growth	79,644,010	3.0
NTGI S&P 400	78,918,250	2.9
PIMCO	74,487,988	2.8
Conestoga Capital Advisors	65,518,008	2.4
Capital Prospects SMID	64,826,256	2.4
BlackRock US Core Property Fund	62,333,401	2.3
Strategic Global Advisors	61,773,527	2.3
NB Crossroads Fund XXI	56,854,742	2.1
Grosvenor Institutional Partners, L.P.	55,380,899	2.1
Aetos	52,664,851	2.0
Nicholas Investment Partners	51,712,282	1.9
Capital Prospects Small Cap Value	35,879,366	1.3
Pantheon Global Secondary Fund V	33,604,826	1.2
TA Realty Core Property Fund	22,990,167	0.9
Gerding Edlen Green Cities III, L.P.	21,254,595	0.8
TA Realty Fund XI	20,751,303	0.8
In House Cash	20,531,143	0.8
Mesirow Real Estate Value Fund III, L.P.	20,447,728	0.8
RREEF REIT II	16,446,984	0.6
Vanguard REIT Index Inv	14,826,153	0.5
Long Wharf RE Partners V, L.P.	14,275,839	0.5
Preserver, L.P.	11,480,399	0.4
SSM Partners Growth Equity II L.P.	7,301,007	0.3
Dune Real Estate Fund IV	6,705,974	0.2
Cornerstone (Barings) Real Estate Advisers Fund X	6,100,675	0.2
Gerding Edlen Green Cities IV, L.P.	5,716,123	0.2
SSM Partners Growth Equity III, LP	5,104,651	0.2
Long Wharf RE Partners VI, L.P.	2,988,048	0.1
Long Wharf Real Estate Partners IV, L.P.	1,489,937	0.1

	<u>Performance (%)</u>								
	<u>1 Quarter</u>	<u>Year To Date</u>	<u>1 Year</u>	<u>3 Years</u>	<u>5 Years</u>	<u>7 Years</u>	<u>10 Years</u>	<u>Since Inception</u>	<u>Inception Date</u>
Total Fund Composite	2.69	2.69	38.73	9.80	10.61	8.30	8.70	9.67	10/01/1982
<i>Policy Index</i>	2.26	2.26	33.01	9.41	10.18	7.98	8.25	10.02	
In House Cash	0.01	0.01	0.03	1.33	1.04	0.80	0.64	3.98	10/01/1982
<i>90 Day U.S. Treasury Bill</i>	0.02	0.02	0.12	1.49	1.18	0.86	0.62	3.75	
Domestic Equity Composite	7.60	7.60	71.06	17.29	17.06	12.65	13.23	12.36	10/01/1982
<i>Russell 3000 Index</i>	6.35	6.35	62.53	17.12	16.64	13.44	13.79	12.13	
<i>Domestic Equity Index</i>	7.56	7.56	67.87	16.38	16.31	13.01	13.51	N/A	
Fixed Income Composite	-1.75	-1.75	12.83	5.11	4.83	4.36	4.61	7.43	10/01/1982
<i>Fixed Income Index</i>	-2.66	-2.66	7.08	4.45	4.03	3.57	4.03	7.27	
International Equity Composite	2.93	2.93	58.85	8.50	12.16	7.99	7.87	5.89	01/01/1990
<i>International Equity Index</i>	3.14	3.14	49.02	6.28	9.87	5.46	5.31	5.50	
Hedge Fund Composite	0.90	0.90	22.29	5.74	6.30	N/A	N/A	6.30	04/01/2016
<i>90-Day T-Bill+ 5%</i>	1.25	1.25	5.12	6.57	6.24	5.90	5.65	6.24	
<i>HFRI FOF: Conservative Index</i>	3.69	3.69	18.95	4.98	4.74	3.37	3.18	4.74	
Core Private Real Estate Composite	3.40	3.40	7.53	6.99	6.76	8.96	9.71	8.16	09/01/1999
<i>NCREIF Property Index</i>	1.72	1.72	2.62	4.89	5.81	7.62	8.83	8.51	

	<u>Performance (%)</u>									
	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
Total Fund Composite	15.06	18.86	-5.39	18.36	6.76	0.24	5.49	17.71	13.75	0.72
<i>Policy Index</i>	12.73	18.81	-4.51	16.68	8.04	-0.19	5.86	15.19	12.79	0.77
In House Cash	0.26	2.12	1.93	0.67	0.35	0.18	0.11	0.11	0.20	0.54
<i>90 Day U.S. Treasury Bill</i>	0.67	2.28	1.87	0.86	0.25	0.03	0.04	0.05	0.08	0.08
Domestic Equity Composite	22.41	30.07	-5.88	22.62	10.04	-1.26	8.80	35.55	16.30	0.65
<i>Russell 3000 Index</i>	20.89	31.02	-5.24	21.13	12.74	0.48	12.56	33.55	16.42	1.03
<i>Domestic Equity Index</i>	20.08	29.94	-6.47	20.20	13.76	0.19	11.60	34.04	16.47	0.73
Fixed Income Composite	9.51	9.88	-0.98	6.94	5.14	-0.23	4.70	0.13	8.15	6.69
<i>Fixed Income Index</i>	7.78	9.24	-0.91	5.50	4.83	-0.86	4.89	0.39	6.87	6.39
International Equity Composite	17.83	24.67	-15.52	33.29	3.30	-0.50	-1.08	20.79	20.28	-12.77
<i>International Equity Index</i>	11.18	20.95	-13.99	28.77	3.16	-4.06	-4.13	16.58	17.70	-13.18
Hedge Fund Composite	11.20	7.95	-1.55	6.72	N/A	N/A	N/A	N/A	N/A	N/A
<i>90-Day T-Bill+ 5%</i>	5.70	7.39	6.97	5.90	5.27	5.03	5.04	5.05	5.08	5.09
<i>HFRI FOF: Conservative Index</i>	6.47	6.30	-0.87	4.12	1.89	0.37	3.14	7.70	4.22	-3.55
Core Private Real Estate Composite	2.52	10.16	4.91	7.75	8.50	11.92	20.06	7.12	14.60	13.01
<i>NCREIF Property Index</i>	1.60	6.42	6.72	6.96	7.97	13.33	11.82	10.98	10.54	14.26