

City of Memphis

Asset Allocation Comparison as of September 30, 2022

\$2,247,082

Target Allocations		Current Managers & Allocations			Difference	Range
Equity						
Large Cap Equity	20.00%	\$449,416 ⁽⁰⁰⁰⁾	Barrow, Hanley (large cap value) Rhumbline Russell 1000 Growth (large cap growth) Winslow (large cap growth) Rhumbline S&P 500 (large cap core)	6.68% 3.11% 2.87% 7.88%	\$150,069 ⁽⁰⁰⁰⁾ \$69,821 \$64,399 \$177,136	0.53% 15%-25%
Mid/SMID Cap Equity	4.00%	\$89,883	Northern Trust (mid cap core) Capital Prospects SMID Cap*	2.03% 2.16%	\$45,546 \$48,466	0.18% 0%-7%
Small Cap Equity	4.00%	\$89,883	Capital Prospects Small Cap Value* Conestoga (small cap growth) Nicholas (small cap growth)	1.50% 1.09% 0.97%	\$33,647 \$24,438 \$21,809	-0.44% 0%-7%
Domestic Equity	28.00%	\$629,183	Domestic Equity	28.27%	\$635,330	0.27% 18%-38%
Developed International	15.00%	\$337,062	1607 Capital Partners Principal Global Investors Marathon Asset Mgmt Strategic Global Advisors	3.80% 4.14% 3.75% 2.20%	\$85,375 \$93,079 \$84,279 \$49,542	-1.10% 10%-20%
Emerging Markets	7.00%	\$157,296	Acadian JPMorgan	3.71% 3.09%	\$83,415 \$69,392	-0.20% 5%-12%
International	22.00%	\$494,358	International	20.70%	\$465,083	-1.30% 15%-30%
Equity Total	50.00%	\$1,123,541	Equity Total	48.97%	\$1,100,413	-1.03%
Fixed Income						
Core Fixed Income	13.00%	\$292,121	PIMCO Prudential Core Conserv Bond	6.00% 6.31%	\$134,873 \$141,797	-0.69% 8%-18%
Global Fixed Income	8.00%	\$179,767	Brandywine	8.05%	\$180,823	0.05% 3%-13%
Global High Yield	5.00%	\$112,354	Mackay Shields	5.37%	\$120,603	0.37% 2%-10%
Fixed Income Total	26.00%	\$584,241	Fixed Income Total	25.73%	\$578,097	-0.27% 18%-34%

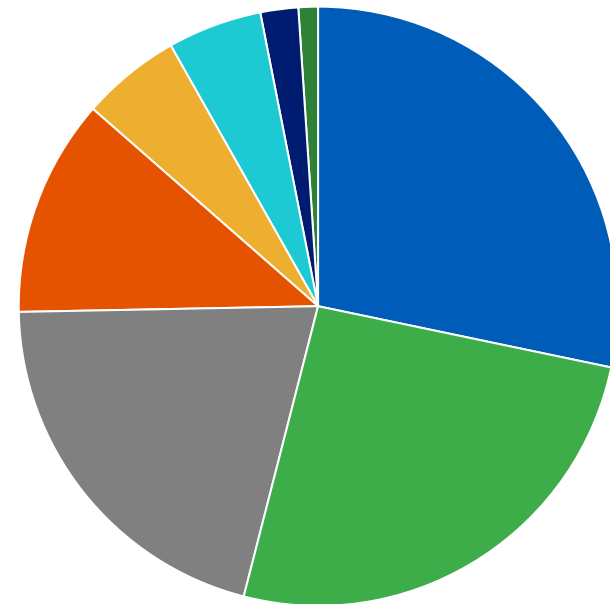
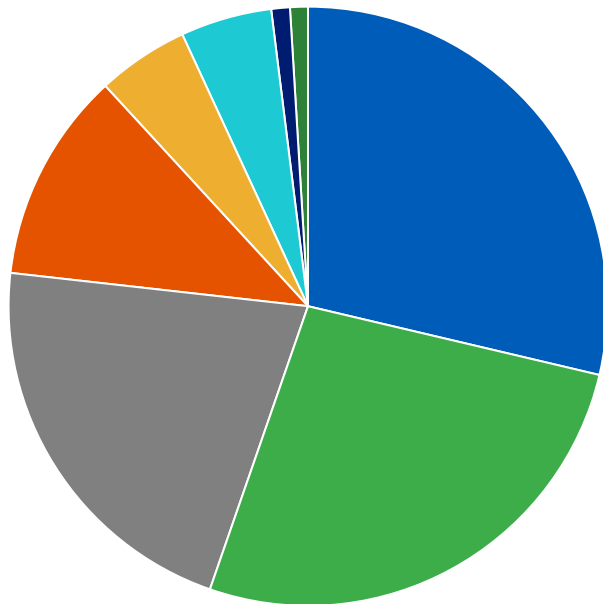
* Emerging Managers

<u>Target Allocations</u>			<u>Current Managers & Allocations</u>		<u>Difference</u>	<u>Range</u>	
Real Estate							
Core/Value Add/REITs	10.00%	\$224,708	BlackRock US Core Property Fund	3.63%	\$81,524		
			RREEF REIT II	0.95%	\$21,357		
			Vanguard REIT Index	0.14%	\$3,078		
			TA Realty Core Property Fund	1.49%	\$33,564		
			Long Wharf Real Estate Partners IV	0.05%	\$1,089	(Total Commitment \$20M, Total Drawn \$21.5M, Total Distributed \$29.5M)	
			Long Wharf Real Estate Partners Fund V	0.55%	\$12,380	(Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$14.9M)	
			Long Wharf Real Estate Partners Fund VI	0.59%	\$13,284	(Total Commitment \$20M, Total Drawn \$17.7M, Total Distributed \$8.6M)	
			Cornerstone (Barings) Real Estate Fund X ¹	0.13%	\$2,867	(Total Commitment \$10M, Total Drawn \$8.3M, Total Distributed \$9.8M)	
			Green Cities III	0.77%	\$17,332	(Total Commitment \$20M, Total Drawn \$23.7M, Total Distributed \$10.7M)	
			Green Cities IV	0.65%	\$14,606	(Total Commitment \$20M, Total Drawn \$14.6, Total Distributed \$1.1M)	
			TA Realty Fund XI	0.98%	\$21,990	(Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$16.2M)	
			Mesirow Financial Real Estate Value Fund III	1.20%	\$26,875	(Total Commitment \$20M, Total Drawn \$22.2M, Total Distributed \$7.0M)	
			Dune Real Estate Partners Fund IV	0.63%	\$14,076	(Total Commitment \$30M, Total Drawn \$13.9M, Total Distributed \$0.5M)	
			<i>Green Cities V (\$20M Commitment)</i>				
			<i>Long Wharf Real Estate Partners VII (\$20M Commitment)</i>				
			<i>TA Realty Fund XII (\$30M Commitment)</i>				
Real Estate Total	10.00%	\$224,708	Real Estate Total	11.75%	\$264,022	1.75%	5%-15%
Private Equity							
Private Equity	5.00%	\$112,354	Pantheon Global Secondary Fund V	1.65%	\$36,992	(Total Commitment \$50M, Total Drawn \$38.7M, Total Distributed \$28.1M)	
			SSM Growth Equity Fund II*	0.32%	\$7,288	(Total Commitment \$10M, Total Drawn \$9.5, Total Distributed \$5.3M)	
			SSM Growth Equity Fund III*	0.55%	\$12,356	(Total Commitment \$10M, Total Drawn \$10.7, Total Distributed \$0.8M)	
			Neuberger Berman Crossroads XXI	2.55%	\$57,196	(Total Commitment \$50M, Total Drawn \$36.5M, Total Distributed \$24.7M)	
			Siguler Guff Small Buyout Opportunities Fund V	0.02%	\$466	(Total Commitment \$20M, Total Drawn \$0.5M, Total Distributed \$0.0M)	
			<i>Neuberger Berman Crossroads XXIV (\$40M commitment)</i>				
Private Equity Total	5.00%	\$112,354		5.09%	\$114,298	0.09%	3%-7%
Private Credit							
	5.00%		Brightwood Capital Fund V	0.19%	\$4,213	(Total Commitment \$10M, Total Drawn \$4.0, Total Distributed \$0.0M)	
			Churchill Middle Market Senior Loan Fund III	0.31%	\$6,937	(Total Commitment \$10M, Total Drawn \$11.3, Total Distributed \$4.6M)	
			Neuberger Berman Private Debt Fund IV	0.56%	\$12,565	(Total Commitment \$30M, Total Drawn \$12.0, Total Distributed \$6.9M)	
Private Credit Total	5.00%	\$112,354		1.06%	\$23,715	-3.94%	3%-7%
Hedge Fund of Funds							
	4.00%		Aetos	2.35%	\$52,855		
			Grosvenor	2.49%	\$55,882		
			Preserver, LP*	0.53%	\$11,817		
Hedge Fund of Funds Total	4.00%	\$89,883		5.36%	\$120,554	1.36%	2%-6%
Internal Account	0.00%	\$0	Internal Account	2.05%	\$45,985		
Cash	0.00%	\$0	Cash	2.05%	\$45,985	2.05%	0%-5%
Total	100%	\$2,247,082	Total	100%	\$2,247,082		

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."

June 30, 2022 : \$2,406,448,215

September 30, 2022 : \$2,247,082,452

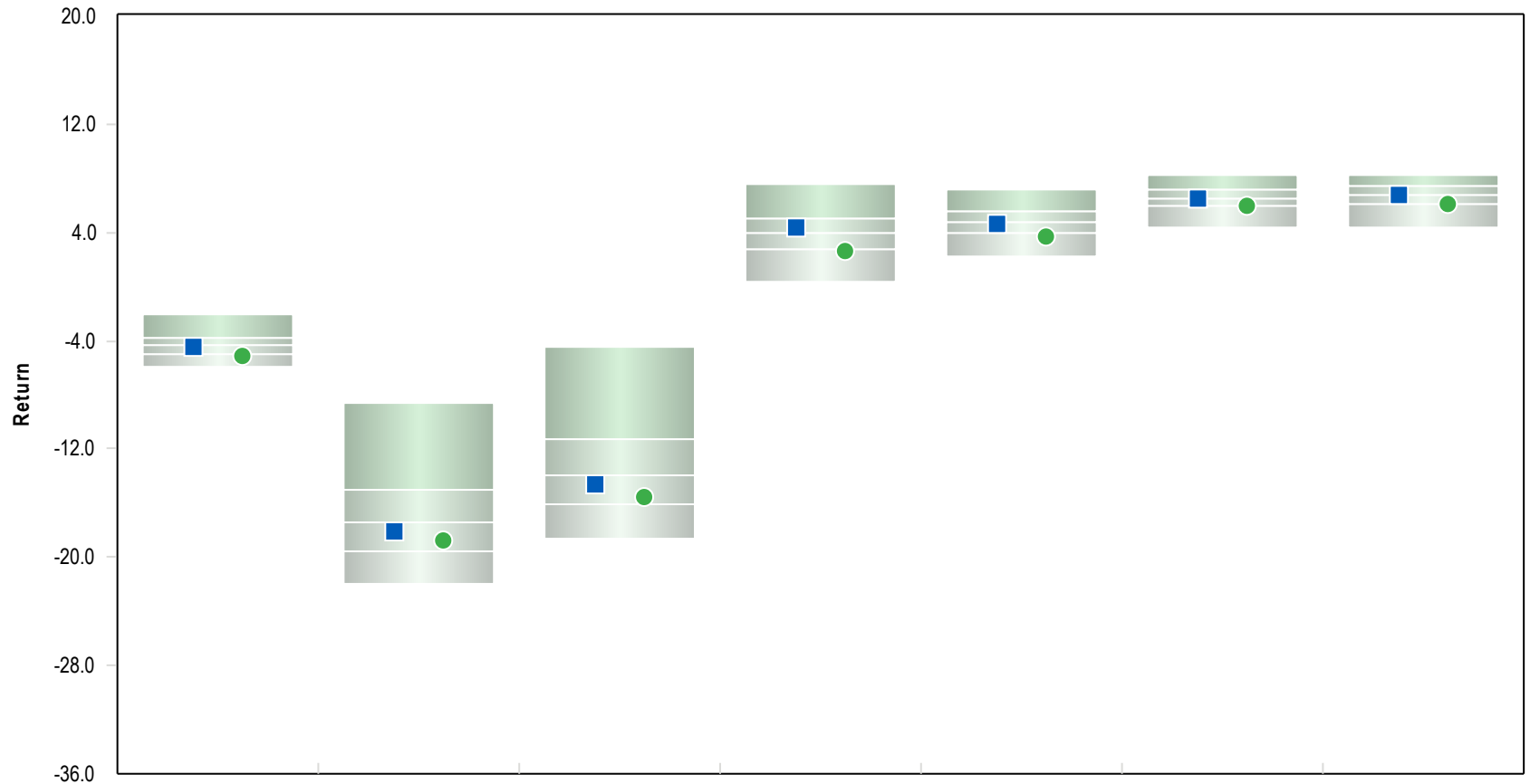


	Market Value (\$)	Allocation (%)
Domestic Equity Composite	690,271,618	28.7
Fixed Income Composite	640,845,814	26.6
International Equity Composite	516,553,786	21.5
Total Real Estate Composite	273,750,677	11.4
Hedge Fund Composite	119,001,575	4.9
Private Equity Composite	118,611,197	4.9
In House Cash	24,261,210	1.0
Private Debt Composite	23,152,337	1.0

	Market Value (\$)	Allocation (%)
Domestic Equity Composite	635,329,973	28.3
Fixed Income Composite	578,096,574	25.7
International Equity Composite	465,082,589	20.7
Total Real Estate Composite	264,021,588	11.7
Hedge Fund Composite	120,553,718	5.4
Private Equity Composite	114,298,183	5.1
In House Cash	45,985,134	2.0
Private Debt Composite	23,714,693	1.1

	<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	-4.46	-18.07	-14.68	4.37	4.58	6.53	6.81	9.03	10/01/1982
<i>Policy Index</i>	-5.18	-18.74	-15.49	2.57	3.75	5.96	6.12	9.30	
In House Cash	0.43	0.59	0.61	0.43	1.03	0.85	0.64	3.85	10/01/1982
<i>90 Day U.S. Treasury Bill</i>	0.46	0.61	0.62	0.59	1.15	0.94	0.67	3.62	
Domestic Equity Composite	-4.10	-24.02	-17.46	8.23	8.72	10.55	10.94	11.53	10/01/1982
<i>Russell 3000 Index</i>	-4.46	-24.62	-17.63	7.70	8.62	10.90	11.39	11.33	
<i>Domestic Equity Index</i>	-3.77	-24.36	-18.25	6.96	7.65	10.20	10.88	N/A	
Fixed Income Composite	-5.04	-15.36	-15.41	-2.00	0.16	1.65	1.79	6.74	10/01/1982
<i>Fixed Income Index</i>	-4.65	-16.35	-16.43	-3.54	-0.61	0.76	1.17	6.55	
International Equity Composite	-9.85	-30.49	-29.35	-0.39	-0.08	4.43	5.06	4.63	01/01/1990
<i>International Equity Index</i>	-9.99	-27.04	-25.99	-1.77	-1.04	3.17	3.17	4.35	
Hedge Fund Composite	1.30	-5.39	-4.75	5.23	4.11	N/A	N/A	4.95	04/01/2016
<i>90-Day T-Bill+ 5%</i>	1.69	4.36	5.65	5.62	6.21	5.98	5.70	6.05	
<i>HFRI FOF: Conservative Index</i>	0.32	-1.24	-0.55	4.77	3.82	3.42	3.67	4.02	
Core Private Real Estate Composite	0.99	9.37	19.56	12.56	10.63	10.30	10.86	8.93	09/01/1999
<i>NCREIF Property Index</i>	0.57	9.34	16.07	9.91	8.62	8.45	9.48	9.04	

	<u>Performance (%)</u>									
	<u>2021</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>
Total Fund Composite	13.57	15.06	18.86	-5.39	18.36	6.76	0.24	5.49	17.71	13.75
<i>Policy Index</i>	11.37	12.73	18.81	-4.51	16.68	8.04	-0.19	5.86	15.19	12.79
In House Cash	0.04	0.26	2.12	1.93	0.67	0.35	0.18	0.11	0.11	0.20
<i>90 Day U.S. Treasury Bill</i>	0.05	0.67	2.28	1.87	0.86	0.25	0.03	0.04	0.05	0.08
Domestic Equity Composite	25.47	22.41	30.07	-5.88	22.62	10.04	-1.26	8.80	35.55	16.30
<i>Russell 3000 Index</i>	25.66	20.89	31.02	-5.24	21.13	12.74	0.48	12.56	33.55	16.42
<i>Domestic Equity Index</i>	23.52	20.08	29.94	-6.47	20.20	13.76	0.19	11.60	34.04	16.47
Fixed Income Composite	-0.36	9.51	9.88	-0.98	6.94	5.14	-0.23	4.70	0.13	8.15
<i>Fixed Income Index</i>	-1.25	7.78	9.24	-0.91	5.50	4.83	-0.86	4.89	0.39	6.87
International Equity Composite	9.15	17.83	24.67	-15.52	33.29	3.30	-0.50	-1.08	20.79	20.28
<i>International Equity Index</i>	6.91	11.18	20.94	-13.98	28.77	3.16	-4.06	-4.13	16.58	17.70
Hedge Fund Composite	7.59	11.20	7.95	-1.55	6.72	N/A	N/A	N/A	N/A	N/A
<i>90-Day T-Bill+ 5%</i>	5.05	5.70	7.39	6.97	5.90	5.27	5.03	5.04	5.05	5.08
<i>HFRI FOF: Conservative Index</i>	7.62	6.47	6.30	-0.87	4.12	1.89	0.37	3.14	7.70	4.22
Core Private Real Estate Composite	25.04	2.55	10.16	4.91	7.75	8.50	11.92	20.06	7.12	14.60
<i>NCREIF Property Index</i>	17.70	1.60	6.42	6.72	6.96	7.97	13.33	11.82	10.98	10.54



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Total Fund Composite	-4.46 (53)	-18.07 (55)	-14.68 (58)	4.37 (39)	4.58 (60)	6.53 (52)	6.81 (51)
● Policy Index	-5.18 (80)	-18.74 (63)	-15.49 (70)	2.57 (79)	3.75 (81)	5.96 (73)	6.12 (74)

5th Percentile	-2.06	-8.60	-4.50	7.57	7.20	8.23	8.23
1st Quartile	-3.73	-15.00	-11.27	5.06	5.58	7.20	7.39
Median	-4.37	-17.48	-13.91	3.92	4.78	6.56	6.81
3rd Quartile	-5.01	-19.61	-16.06	2.81	4.02	5.91	6.04
95th Percentile	-5.92	-21.95	-18.63	0.33	2.18	4.32	4.42

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.