

# City of Memphis

## Asset Allocation Comparison as of March 31, 2022

\$2,677,817

<u>Target Allocations</u>		<u>Current Managers &amp; Allocations</u>			<u>Difference</u>	<u>Range</u>	
<b>Equity</b>							
Large Cap Equity	20.00%	(000) \$535,563	Barrow, Hanley (large cap value) Rhumbline Russell 1000 Growth (large cap growth) Winslow (large cap growth) Rhumbline S&P 500 (large cap core)	7.29% 3.42% 3.26% 8.29%	(000) \$195,096 \$91,574 \$87,360 \$221,925	2.26%	15%-25%
Mid/SMID Cap Equity	4.00%	\$107,113	Northern Trust (mid cap core) Capital Prospects SMID Cap*	2.43% 2.25%	\$65,017 \$60,123	0.67%	0%-7%
Small Cap Equity	4.00%	\$107,113	Capital Prospects Small Cap Value* Conestoga (small cap growth) Nicholas (small cap growth)	2.21% 1.13% 1.01%	\$59,075 \$30,368 \$27,101	0.35%	0%-7%
<b>Domestic Equity</b>	<b>28.00%</b>	<b>\$749,789</b>	<b>Domestic Equity</b>	<b>31.28%</b>	<b>\$837,641</b>	<b>3.28%</b>	<b>18%-38%</b>
Developed International	15.00%	\$401,673	1607 Capital Partners Principal Global Investors Marathon Asset Mgmt Strategic Global Advisors	4.19% 4.58% 4.04% 2.41%	\$112,213 \$122,540 \$108,144 \$64,454	0.21%	10%-20%
Emerging Markets	7.00%	\$187,447	Acadian JPMorgan	4.24% 3.29%	\$113,621 \$88,053	0.53%	5%-12%
<b>International</b>	<b>22.00%</b>	<b>\$589,120</b>	<b>International</b>	<b>22.74%</b>	<b>\$609,026</b>	<b>0.74%</b>	<b>15%-30%</b>
<b>Equity Total</b>	<b>50.00%</b>	<b>\$1,338,908</b>	<b>Equity Total</b>	<b>54.02%</b>	<b>\$1,446,666</b>	<b>4.02%</b>	
<b>Fixed Income</b>							
Core Fixed Income	13.00%	\$348,116	PIMCO Prudential Core Conserv Bond	5.54% 5.85%	\$148,374 \$156,733	-1.61%	8%-18%
Global Fixed Income	8.00%	\$214,225	Brandywine	8.62%	\$230,883	0.62%	3%-13%
Global High Yield	5.00%	\$133,891	Mackay Shields	5.79%	\$155,089	0.79%	2%-10%
<b>Fixed Income Total</b>	<b>26.00%</b>	<b>\$696,232</b>	<b>Fixed Income Total</b>	<b>25.81%</b>	<b>\$691,079</b>	<b>-0.19%</b>	<b>18%-34%</b>

\* Emerging Managers

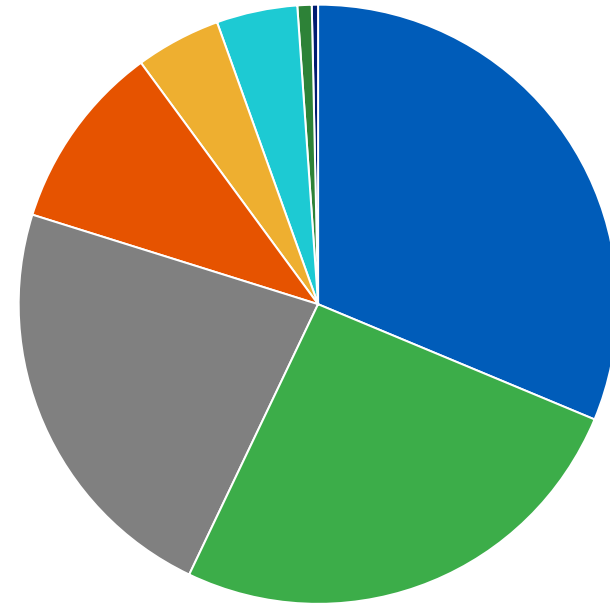
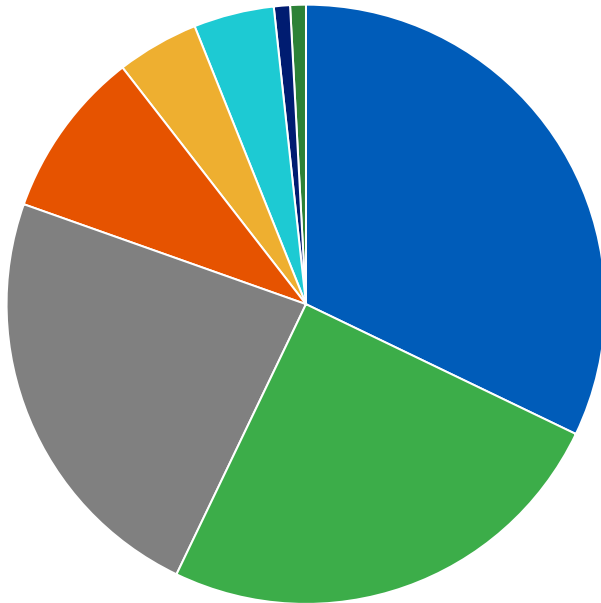
<u>Target Allocations</u>		<u>Current Managers &amp; Allocations</u>		<u>Difference</u>	<u>Range</u>
<b><u>Real Estate</u></b>					
Core/Value Add/REITs	10.00%	\$267,782	BlackRock US Core Property Fund	2.89%	\$77,501
			RREEF REIT II	0.77%	\$20,543
			Vanguard REIT Index	0.67%	\$18,017
			TA Realty Core Property Fund	1.18%	\$31,501
			Long Wharf Real Estate Partners IV	0.05%	\$1,226 (Total Commitment \$20M, Total Drawn \$21.5M, Total Distributed \$29.5M)
			Long Wharf Real Estate Partners Fund V	0.47%	\$12,656 (Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$14.4M)
			Long Wharf Real Estate Partners Fund VI	0.43%	\$11,470 (Total Commitment \$20M, Total Drawn \$13.8M, Total Distributed \$6.0M)
			Cornerstone (Barings) Real Estate Fund X <sup>1</sup>	0.19%	\$5,025 (Total Commitment \$10M, Total Drawn \$8.3M, Total Distributed \$7.4M)
			Green Cities III	0.65%	\$17,336 (Total Commitment \$20M, Total Drawn \$23.7M, Total Distributed \$10.7M)
			Green Cities IV	0.46%	\$12,200 (Total Commitment \$20M, Total Drawn \$12.7, Total Distributed \$1.1M)
			TA Realty Fund XI	0.84%	\$22,441 (Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$15.9M)
			Mesirow Financial Real Estate Value Fund III	1.00%	\$26,738 (Total Commitment \$20M, Total Drawn \$22.1M, Total Distributed \$6.5M)
			Dune Real Estate Partners Fund IV	0.51%	\$13,577 (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>		
<b>Real Estate Total</b>	<b>10.00%</b>	<b>\$267,782</b>	<b>Real Estate Total</b>	<b>10.09%</b>	<b>\$270,230</b>
				<b>0.09%</b>	<b>5%-15%</b>
<b><u>Private Equity</u></b>					
Private Equity	5.00%	\$133,891	Pantheon Global Secondary Fund V	1.34%	\$35,909 (Total Commitment \$50M, Total Drawn \$38.7M, Total Distributed \$28.1M)
			SSM Growth Equity Fund II*	0.25%	\$6,758 (Total Commitment \$10M, Total Drawn \$9.2, Total Distributed \$5.3M)
			SSM Growth Equity Fund III*	0.38%	\$10,268 (Total Commitment \$10M, Total Drawn \$9.3, Total Distributed \$0.8M)
			Neuberger Berman Crossroads XXI	2.39%	\$64,119 (Total Commitment \$50M, Total Drawn \$36.5M, Total Distributed \$18.2M)
			<i>Neuberger Berman Crossroads XXIV (\$40M commitment)</i>		
			<i>Siguler Guff Buyout Fund V (\$20M commitment)</i>		
<b>Private Equity Total</b>	<b>5.00%</b>	<b>\$133,891</b>		<b>4.37%</b>	<b>\$117,053</b>
				<b>-0.63%</b>	<b>3%-7%</b>
<b><u>Private Credit</u></b>					
	5.00%		Brightwood Capital Fund V	0.12%	\$3,164 (Total Commitment \$10M, Total Drawn \$3.0, Total Distributed \$0.0M)
			Churchill Middle Market Senior Loan Fund III	0.25%	\$6,725 (Total Commitment \$10M, Total Drawn \$8.4, Total Distributed \$1.8M)
			Neuberger Berman Private Debt Fund IV	0.40%	\$10,657 (Total Commitment \$30M, Total Drawn \$15.0, Total Distributed \$3.4M)
<b>Private Credit Total</b>	<b>5.00%</b>	<b>\$133,891</b>		<b>0.77%</b>	<b>\$20,547</b>
				<b>-4.23%</b>	<b>3%-7%</b>
<b><u>Hedge Fund of Funds</u></b>					
	4.00%		Aetos	2.03%	\$54,266
			Grosvenor	2.11%	\$56,629
			Preserver, LP*	0.45%	\$12,130
<b>Hedge Fund of Funds Total</b>	<b>4.00%</b>	<b>\$107,113</b>		<b>4.59%</b>	<b>\$123,025</b>
				<b>0.59%</b>	<b>2%-6%</b>
Internal Account	0.00%	\$0	Internal Account	0.34%	\$9,217
<b>Cash</b>	<b>0.00%</b>	<b>\$0</b>	<b>Cash</b>	<b>0.34%</b>	<b>\$9,217</b>
				<b>0.34%</b>	<b>0%-5%</b>
<b>Total</b>	<b>100%</b>	<b>\$2,677,817</b>	<b>Total</b>	<b>100%</b>	<b>\$2,677,817</b>

<sup>1</sup> 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.

\* Emerging Managers

December 31, 2021 : \$2,878,119,994

March 31, 2022 : \$2,677,816,998

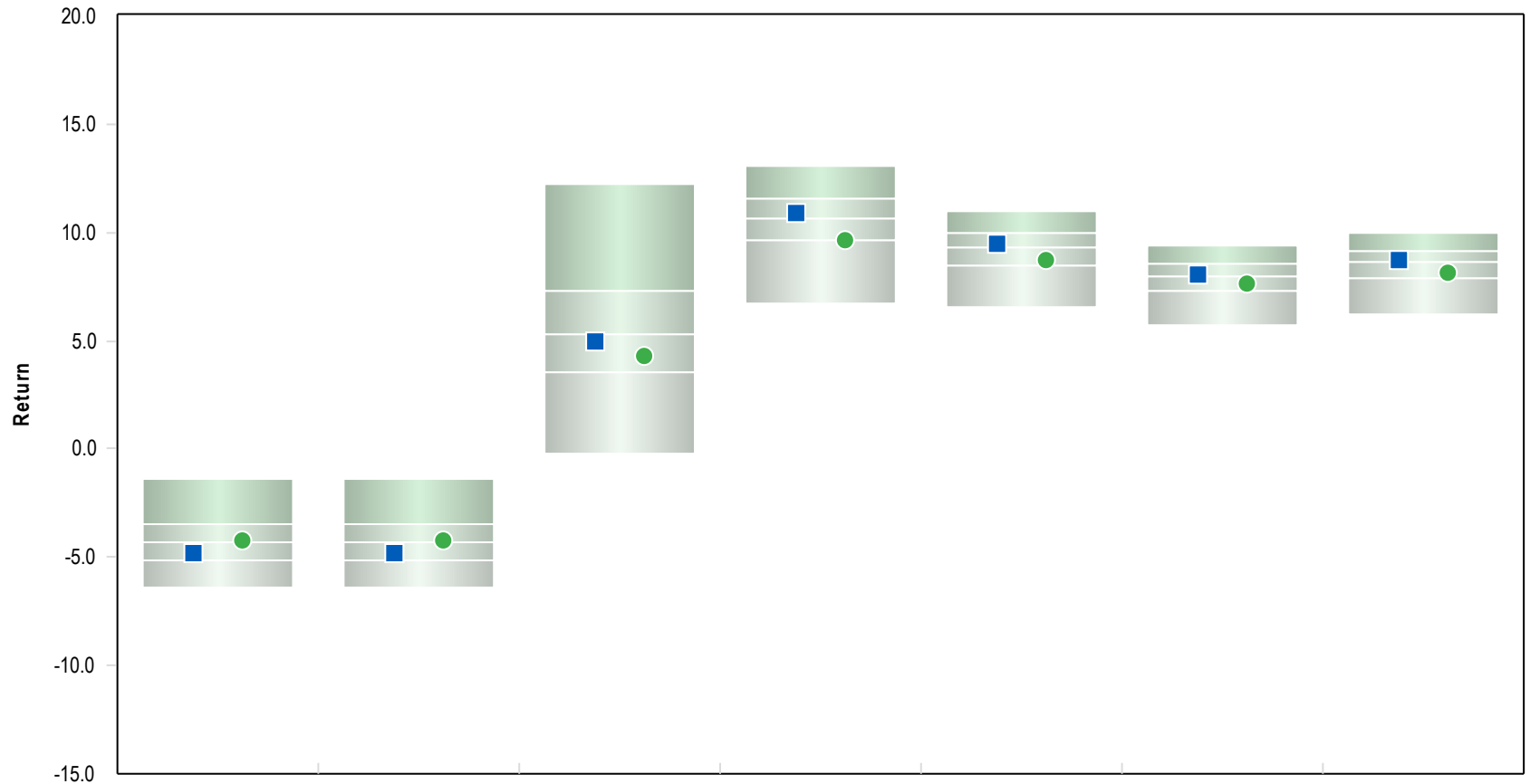


	Market Value (\$)	Allocation (%)
Domestic Equity Composite	924,805,007	32.1
Fixed Income Composite	719,312,541	25.0
International Equity Composite	670,375,561	23.3
Total Real Estate Composite	261,405,058	9.1
Hedge Fund Composite	127,453,464	4.4
Private Equity Composite	125,177,716	4.3
In House Cash	25,002,503	0.9
Private Debt Composite	24,588,144	0.9

	Market Value (\$)	Allocation (%)
Domestic Equity Composite	837,640,596	31.3
Fixed Income Composite	691,079,351	25.8
International Equity Composite	609,025,642	22.7
Total Real Estate Composite	270,229,980	10.1
Hedge Fund Composite	123,024,934	4.6
Private Equity Composite	117,052,716	4.4
Private Debt Composite	20,546,645	0.8
In House Cash	9,217,135	0.3

	<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>
<b>Total Fund Composite</b>	<b>-4.77</b>	<b>-4.77</b>	<b>4.98</b>	<b>10.93</b>	<b>9.50</b>	<b>8.06</b>	<b>8.70</b>	<b>9.56</b>	<b>10/01/1982</b>
<i>Policy Index</i>	-4.26	-4.26	4.27	9.67	8.72	7.64	8.18	9.88	
<b>In House Cash</b>	<b>0.03</b>	<b>0.03</b>	<b>0.07</b>	<b>0.61</b>	<b>0.99</b>	<b>0.79</b>	<b>0.59</b>	<b>3.88</b>	<b>10/01/1982</b>
<i>90 Day U.S. Treasury Bill</i>	0.04	0.04	0.06	0.81	1.13	0.86	0.62	3.66	
<b>Domestic Equity Composite</b>	<b>-6.18</b>	<b>-6.18</b>	<b>9.41</b>	<b>17.89</b>	<b>15.29</b>	<b>12.47</b>	<b>13.49</b>	<b>12.29</b>	<b>10/01/1982</b>
<i>Russell 3000 Index</i>	-5.28	-5.28	11.92	18.24	15.40	13.38	14.28	12.12	
<i>Domestic Equity Index</i>	-5.70	-5.70	8.29	16.70	14.18	12.47	13.66	N/A	
<b>Fixed Income Composite</b>	<b>-3.89</b>	<b>-3.89</b>	<b>-2.53</b>	<b>3.58</b>	<b>3.63</b>	<b>3.29</b>	<b>3.57</b>	<b>7.17</b>	<b>10/01/1982</b>
<i>Fixed Income Index</i>	-5.64	-5.64	-4.15	1.92	2.48	2.27	2.83	6.96	
<b>International Equity Composite</b>	<b>-9.13</b>	<b>-9.13</b>	<b>-3.63</b>	<b>9.37</b>	<b>8.33</b>	<b>7.13</b>	<b>7.91</b>	<b>5.58</b>	<b>01/01/1990</b>
<i>International Equity Index</i>	-6.22	-6.22	-2.80	7.03	6.59	5.11	5.70	5.23	
<b>Hedge Fund Composite</b>	<b>-3.47</b>	<b>-3.47</b>	<b>2.93</b>	<b>6.39</b>	<b>5.07</b>	<b>N/A</b>	<b>N/A</b>	<b>5.73</b>	<b>04/01/2016</b>
<i>90-Day T-Bill+ 5%</i>	1.27	1.27	5.07	5.85	6.19	5.90	5.65	6.04	
<i>HFRI FOF: Conservative Index</i>	0.12	0.12	4.02	5.74	4.46	3.39	3.81	4.60	
<b>Core Private Real Estate Composite</b>	<b>5.86</b>	<b>5.86</b>	<b>27.97</b>	<b>12.77</b>	<b>10.70</b>	<b>10.22</b>	<b>11.01</b>	<b>8.98</b>	<b>09/01/1999</b>
<i>NCREIF Property Index</i>	5.33	5.33	21.88	9.61	8.55	8.83	9.61	9.07	

	<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>
<b>Total Fund Composite</b>	<b>13.57</b>	<b>15.06</b>	<b>18.86</b>	<b>-5.39</b>	<b>18.36</b>	<b>6.76</b>	<b>0.24</b>	<b>5.49</b>	<b>17.71</b>	<b>13.75</b>
<i>Policy Index</i>	11.37	12.73	18.81	-4.51	16.68	8.04	-0.19	5.86	15.19	12.79
<b>In House Cash</b>	<b>0.04</b>	<b>0.26</b>	<b>2.12</b>	<b>1.93</b>	<b>0.67</b>	<b>0.35</b>	<b>0.18</b>	<b>0.11</b>	<b>0.11</b>	<b>0.20</b>
<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
<b>Domestic Equity Composite</b>	<b>25.47</b>	<b>22.41</b>	<b>30.07</b>	<b>-5.88</b>	<b>22.62</b>	<b>10.04</b>	<b>-1.26</b>	<b>8.80</b>	<b>35.55</b>	<b>16.30</b>
<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
<b>Fixed Income Composite</b>	<b>-0.36</b>	<b>9.51</b>	<b>9.88</b>	<b>-0.98</b>	<b>6.94</b>	<b>5.14</b>	<b>-0.23</b>	<b>4.70</b>	<b>0.13</b>	<b>8.15</b>
<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
<b>International Equity Composite</b>	<b>9.15</b>	<b>17.83</b>	<b>24.67</b>	<b>-15.52</b>	<b>33.29</b>	<b>3.30</b>	<b>-0.50</b>	<b>-1.08</b>	<b>20.79</b>	<b>20.28</b>
<i>International Equity Index</i>	6.91	11.18	20.95	-13.99	28.77	3.16	-4.06	-4.13	16.58	17.70
<b>Hedge Fund Composite</b>	<b>7.59</b>	<b>11.20</b>	<b>7.95</b>	<b>-1.55</b>	<b>6.72</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<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
<b>Core Private Real Estate Composite</b>	<b>25.04</b>	<b>2.55</b>	<b>10.16</b>	<b>4.91</b>	<b>7.75</b>	<b>8.50</b>	<b>11.92</b>	<b>20.06</b>	<b>7.12</b>	<b>14.60</b>
<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	-4.77 (66)	-4.77 (66)	4.98 (57)	10.93 (43)	9.50 (44)	8.06 (46)	8.70 (45)
● Policy Index	-4.26 (49)	-4.26 (49)	4.27 (66)	9.67 (75)	8.72 (68)	7.64 (65)	8.18 (65)

5th Percentile	-1.41	-1.41	12.21	13.08	11.02	9.37	9.95
1st Quartile	-3.51	-3.51	7.34	11.58	10.01	8.58	9.10
Median	-4.29	-4.29	5.28	10.65	9.27	7.97	8.61
3rd Quartile	-5.16	-5.16	3.51	9.66	8.51	7.33	7.90
95th Percentile	-6.38	-6.38	-0.21	6.72	6.51	5.72	6.25

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.