

City of Memphis

Asset Allocation Comparison as of December 31, 2021

\$2,859,532,904

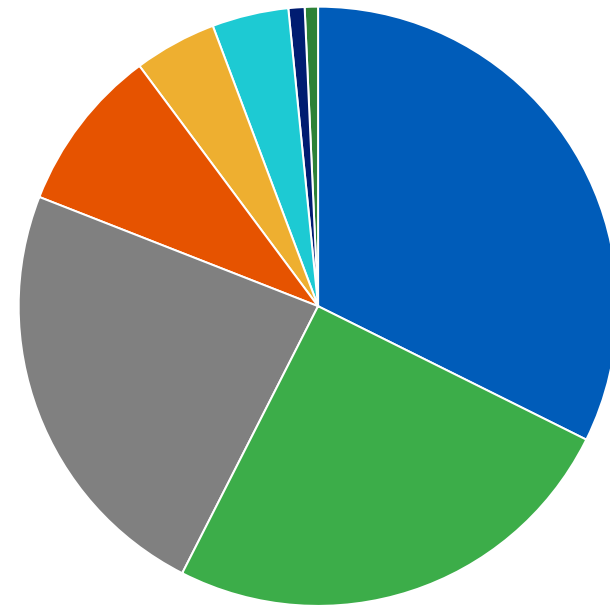
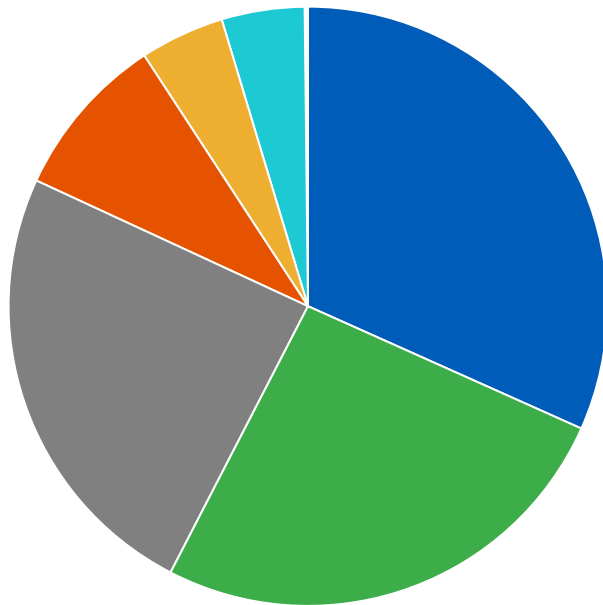
| <u>Target Allocations</u> | | <u>Current Managers & Allocations</u> | | | <u>Difference</u> | <u>Range</u> | |
|---------------------------|---------------|---|---|---------------|--------------------|---------------|----------------|
| Equity | | (000) | | (000) | | | |
| Large Cap Equity | 20.00% | \$571,907 | Barrow, Hanley (large cap value) | 6.87% | \$196,387 | 3.12% | 15%-25% |
| | | | Rhumblin Russell 1000 Growth (large cap growth) | 3.52% | \$100,660 | | |
| | | | Winslow (large cap growth) | 3.50% | \$100,041 | | |
| | | | Rhumblin S&P 500 (large cap core) | 9.23% | \$264,066 | | |
| Mid/SMID Cap Equity | 4.00% | \$114,381 | Northern Trust (mid cap core) | 2.39% | \$68,348 | 0.69% | 0%-7% |
| | | | Capital Prospects SMID Cap* | 2.30% | \$65,774 | | |
| Small Cap Equity | 4.00% | \$114,381 | Capital Prospects Small Cap Value* | 2.19% | \$62,542 | 0.53% | 0%-7% |
| | | | Conestoga (small cap growth) | 1.25% | \$35,617 | | |
| | | | Nicholas (small cap growth) | 1.10% | \$31,371 | | |
| Domestic Equity | 28.00% | \$800,669 | Domestic Equity | 32.34% | \$924,805 | 4.34% | 18%-38% |
| Developed International | 15.00% | \$428,930 | 1607 Capital Partners | 4.29% | \$122,733 | 0.62% | 10%-20% |
| | | | Principal Global Investors | 4.90% | \$140,138 | | |
| | | | Marathon Asset Mgmt | 4.04% | \$115,583 | | |
| | | | Strategic Global Advisors | 2.39% | \$68,223 | | |
| Emerging Markets | 7.00% | \$200,167 | Acadian | 4.04% | \$115,557 | 0.82% | 5%-12% |
| | | | JPMorgan | 3.78% | \$108,141 | | |
| International | 22.00% | \$629,097 | International | 23.44% | \$670,376 | 1.44% | 15%-30% |
| Equity Total | 50.00% | \$1,429,766 | Equity Total | 55.78% | \$1,595,181 | 5.78% | |
| Fixed Income | | | | | | | |
| Core Fixed Income | 13.00% | \$371,739 | PIMCO | 5.50% | \$157,157 | -1.67% | 8%-18% |
| | | | Prudential Core Conserv Bond | 5.83% | \$166,740 | | |
| | | | Smith Graham | 0.01% | \$209 | | |
| Global Fixed Income | 8.00% | \$228,763 | Brandywine | 8.23% | \$235,422 | 0.23% | 3%-13% |
| Global High Yield | 5.00% | \$142,977 | Mackay Shields | 5.59% | \$159,783 | 0.59% | 2%-10% |
| Fixed Income Total | 26.00% | \$743,479 | Fixed Income Total | 25.15% | \$719,313 | -0.85% | 18%-34% |

| <u>Target Allocations</u> | | <u>Current Managers & Allocations</u> | | <u>Difference</u> | <u>Range</u> |
|-----------------------------------|---------------|---|---|-------------------|---|
| <u>Real Estate</u> | | | | | |
| Core/Value Add/REITs | 10.00% | \$285,953 | BlackRock US Core Property Fund | 2.52% | \$72,000 |
| | | | RREEF REIT II | 0.68% | \$19,496 |
| | | | Vanguard REIT Index | 0.67% | \$19,161 |
| | | | TA Realty Core Property Fund | 1.02% | \$29,114 |
| | | | Long Wharf Real Estate Partners IV | 0.04% | \$1,240 (Total Commitment \$20M, Total Drawn \$21.5M, Total Distributed \$29.5M) |
| | | | Long Wharf Real Estate Partners Fund V | 0.47% | \$13,473 (Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$12.5M) |
| | | | Long Wharf Real Estate Partners Fund VI | 0.23% | \$6,643 (Total Commitment \$20M, Total Drawn \$8.3M, Total Distributed \$3.3M) |
| | | | Cornerstone (Barings) Real Estate Fund X ¹ | 0.16% | \$4,674 (Total Commitment \$10M, Total Drawn \$8.3M, Total Distributed \$7.4M) |
| | | | Gerding Edlen Green Cities III | 0.68% | \$19,361 (Total Commitment \$20M, Total Drawn \$23.7M, Total Distributed \$8.8M) |
| | | | Gerding Edlen Green Cities IV | 0.42% | \$12,129 (Total Commitment \$20M, Total Drawn \$12.7, Total Distributed \$0.5M) |
| | | | TA Realty Fund XI | 0.66% | \$18,756 (Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$14.4M) |
| | | | Mesirow Financial Real Estate Value Fund III | 0.98% | \$28,042 (Total Commitment \$20M, Total Drawn \$22.0M, Total Distributed \$2.3M) |
| | | | Dune Real Estate Partners Fund IV | 0.34% | \$9,754 (Total Commitment \$30M, Total Drawn \$11.7M, Total Distributed \$0.5M) |
| Real Estate Total | 10.00% | \$285,953 | Real Estate Total | 8.88% | \$253,843 |
| | | | | -1.12% | 5%-15% |
| <u>Private Equity</u> | | | | | |
| Secondary | 2.50% | | Pantheon Global Secondary Fund V | 1.24% | \$35,407 (Total Commitment \$50M, Total Drawn \$37.7M, Total Distributed \$26.4M) |
| Direct Private Equity | | | SSM Growth Equity Fund II* | 0.23% | \$6,606 (Total Commitment \$10M, Total Drawn \$9.2, Total Distributed \$5.3M) |
| | | | SSM Growth Equity Fund III* | 0.36% | \$10,396 (Total Commitment \$10M, Total Drawn \$9.3, Total Distributed \$0.8M) |
| Diversified FoF | 2.50% | | Neuberger Berman Crossroads XXI | 2.30% | \$65,829 (Total Commitment \$50M, Total Drawn \$36.5M, Total Distributed \$11.3M) |
| Private Equity Total | 5.00% | \$142,977 | | 4.13% | \$118,238 |
| | | | | -0.87% | 3%-7% |
| <u>Private Credit</u> | | | | | |
| | 5.00% | | Brightwood Capital Fund V | 0.07% | \$2,038 (Total Commitment \$10M, Total Drawn \$2.0, Total Distributed \$0.0M) |
| | | | Churchill Middle Market Senior Loan Fund III | 0.24% | \$6,803 (Total Commitment \$10M, Total Drawn \$7.5, Total Distributed \$0.7M) |
| | | | Neuberger Berman Private Debt Fund IV | 0.41% | \$11,650 (Total Commitment \$30M, Total Drawn \$15.0, Total Distributed \$3.4M) |
| Private Credit Total | 5.00% | \$142,977 | | 0.72% | \$20,491 |
| | | | | -4.28% | 3%-7% |
| <u>Hedge Fund of Funds</u> | | | | | |
| | 4.00% | | Aetos | 1.92% | \$54,994 |
| | | | Grosvenor | 2.10% | \$60,017 |
| | | | Preserver, LP* | 0.44% | \$12,455 |
| Hedge Fund of Funds Total | 4.00% | \$114,381 | | 4.46% | \$127,466 |
| | | | | 0.46% | 2%-6% |
| Internal Account | 0.00% | \$0 | Internal Account | 0.87% | \$25,003 |
| Cash | 0.00% | \$0 | Cash | 0.87% | \$25,003 |
| | | | | 0.87% | 0%-5% |
| Total | 100% | \$2,859,533 | Total | 100% | \$2,859,533 |

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.

September 30, 2021 : \$2,778,541,274

December 31, 2021 : \$2,859,532,904

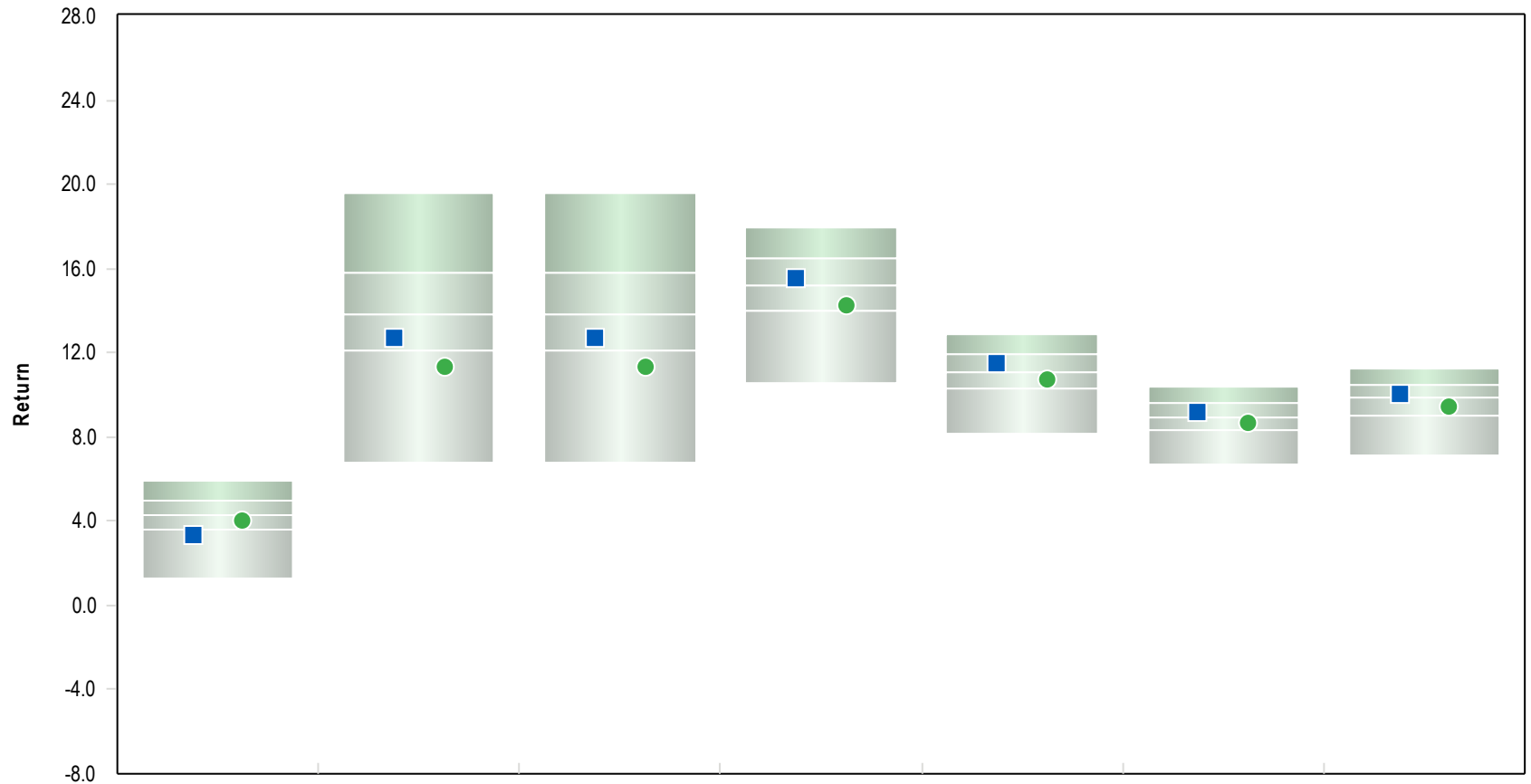


| | Market Value (\$) | Allocation (%) |
|--------------------------------|-------------------|----------------|
| Domestic Equity Composite | 880,543,174 | 31.7 |
| Fixed Income Composite | 719,690,248 | 25.9 |
| International Equity Composite | 675,259,652 | 24.3 |
| Total Real Estate Composite | 247,060,051 | 8.9 |
| Hedge Fund Composite | 126,592,276 | 4.6 |
| Private Equity Composite | 124,356,963 | 4.5 |
| In House Cash | 3,000,869 | 0.1 |
| Private Debt Composite | 2,038,041 | 0.1 |

| | Market Value (\$) | Allocation (%) |
|--------------------------------|-------------------|----------------|
| Domestic Equity Composite | 924,805,007 | 32.3 |
| Fixed Income Composite | 719,312,541 | 25.2 |
| International Equity Composite | 670,375,561 | 23.4 |
| Total Real Estate Composite | 253,842,783 | 8.9 |
| Hedge Fund Composite | 127,465,895 | 4.5 |
| Private Equity Composite | 118,237,878 | 4.1 |
| In House Cash | 25,002,503 | 0.9 |
| Private Debt Composite | 20,490,736 | 0.7 |

| | <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 | 3.35 | 12.70 | 12.70 | 15.51 | 11.53 | 9.16 | 10.06 | 9.74 | 10/01/1982 |
| <i>Policy Index</i> | 4.00 | 11.37 | 11.37 | 14.26 | 10.70 | 8.69 | 9.44 | 10.06 | |
| In House Cash | 0.02 | 0.04 | 0.04 | 0.80 | 1.00 | 0.79 | 0.60 | 3.91 | 10/01/1982 |
| <i>90 Day U.S. Treasury Bill</i> | 0.01 | 0.05 | 0.05 | 0.99 | 1.14 | 0.86 | 0.61 | 3.68 | |
| Domestic Equity Composite | 8.62 | 25.47 | 25.47 | 25.95 | 18.18 | 14.02 | 15.70 | 12.55 | 10/01/1982 |
| <i>Russell 3000 Index</i> | 9.28 | 25.66 | 25.66 | 25.79 | 17.97 | 14.55 | 16.30 | 12.36 | |
| <i>Domestic Equity Index</i> | 8.09 | 23.52 | 23.52 | 24.45 | 16.72 | 13.79 | 15.71 | N/A | |
| Fixed Income Composite | -0.06 | -0.36 | -0.36 | 6.24 | 4.89 | 4.18 | 4.21 | 7.32 | 10/01/1982 |
| <i>Fixed Income Index</i> | -0.10 | -1.25 | -1.25 | 5.15 | 3.98 | 3.39 | 3.58 | 7.16 | |
| International Equity Composite | 0.79 | 8.24 | 8.24 | 16.71 | 12.35 | 9.10 | 10.21 | 5.91 | 01/01/1990 |
| <i>International Equity Index</i> | 1.45 | 6.91 | 6.91 | 12.86 | 9.75 | 6.71 | 7.56 | 5.49 | |
| Hedge Fund Composite | 0.69 | 7.60 | 7.60 | 8.90 | 6.29 | N/A | N/A | 6.64 | 04/01/2016 |
| <i>90-Day T-Bill+ 5%</i> | 1.24 | 5.05 | 5.05 | 6.04 | 6.20 | 5.90 | 5.65 | 6.08 | |
| <i>HFRI FOF: Conservative Index</i> | 0.57 | 7.49 | 7.49 | 6.75 | 4.66 | 3.64 | 4.04 | 4.76 | |
| Core Private Real Estate Composite | 9.32 | 25.04 | 25.04 | 12.20 | 9.81 | 9.92 | 11.07 | 8.80 | 09/01/1999 |
| <i>NCREIF Property Index</i> | 6.15 | 17.70 | 17.70 | 8.37 | 7.75 | 8.56 | 9.32 | 8.92 | |

| | <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 | 2.55 | 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 |



| | 1 Qtr | YTD | 1 Yr | 3 Yrs | 5 Yrs | 7 Yrs | 10 Yrs |
|------------------------|-----------|------------|------------|------------|------------|-----------|------------|
| ■ Total Fund Composite | 3.35 (80) | 12.70 (67) | 12.70 (67) | 15.51 (45) | 11.53 (37) | 9.16 (44) | 10.06 (41) |
| ● Policy Index | 4.00 (62) | 11.37 (83) | 11.37 (83) | 14.26 (69) | 10.70 (65) | 8.69 (60) | 9.44 (62) |

| | | | | | | | |
|-----------------|------|-------|-------|-------|-------|-------|-------|
| 5th Percentile | 5.94 | 19.58 | 19.58 | 17.91 | 12.91 | 10.39 | 11.28 |
| 1st Quartile | 4.95 | 15.81 | 15.81 | 16.44 | 11.95 | 9.60 | 10.46 |
| Median | 4.29 | 13.84 | 13.84 | 15.17 | 11.04 | 8.97 | 9.84 |
| 3rd Quartile | 3.56 | 12.15 | 12.15 | 14.00 | 10.33 | 8.30 | 9.04 |
| 95th Percentile | 1.24 | 6.76 | 6.76 | 10.60 | 8.19 | 6.66 | 7.09 |

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.