

FUND EVALUATION REPORT

Massachusetts Housing Finance Agency Retirement System

Meeting Material
November 12, 2019



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2019Q3 Review

Retirement System Summary

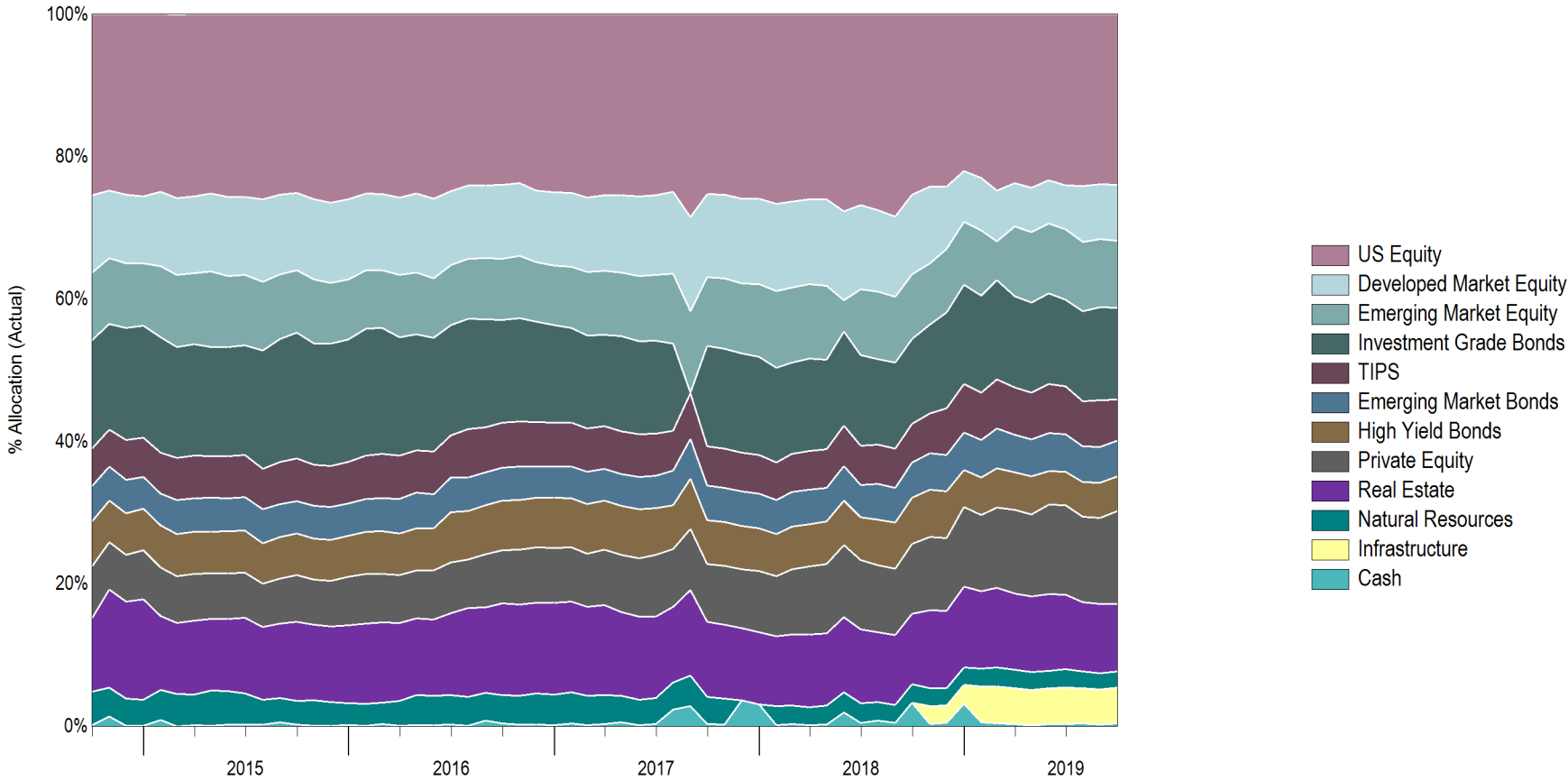
Retirement System Summary

As of September 30, 2019

Allocation vs. Targets and Policy

| | Current Balance | Current Allocation | Policy | Policy Range | Within IPS Range? |
|-------------------------|----------------------|--------------------|-------------|--------------|-------------------|
| US Equity | \$40,628,094 | 24% | 25% | 20% - 30% | Yes |
| Developed Market Equity | \$13,300,523 | 8% | 10% | 6% - 14% | Yes |
| Emerging Market Equity | \$16,027,068 | 9% | 10% | 6% - 14% | Yes |
| Investment Grade Bonds | \$21,784,550 | 13% | 10% | 6% - 14% | Yes |
| TIPS | \$9,776,224 | 6% | 6% | 4% - 8% | Yes |
| Emerging Market Bonds | \$8,482,607 | 5% | 5% | 3% - 7% | Yes |
| High Yield Bonds | \$8,189,559 | 5% | 6% | 3% - 9% | Yes |
| Private Equity | \$22,159,079 | 13% | 10% | 5% - 15% | Yes |
| Real Estate | \$16,122,650 | 10% | 10% | 7% - 13% | Yes |
| Natural Resources | \$3,821,986 | 2% | 3% | 1% - 5% | Yes |
| Infrastructure | \$8,559,218 | 5% | 5% | 0% - 8% | Yes |
| Cash | \$591,867 | 0% | 0% | 0% - 5% | Yes |
| Total | \$169,443,424 | 100% | 100% | | |

Asset Allocation History
5 Years Ending September 30, 2019



Retirement System Summary

As of September 30, 2019

Asset Class Performance Summary

| | Market Value (\$) | % of Portfolio | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|--|----------------------|-------------------|-------------|-------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| Total Retirement System | 169,443,424 | 100.0 | 1.1 | 11.5 | 5.0 | 7.6 | 5.7 | 7.4 | 5.6 | Jul-01 |
| 60% MSCI ACWI / 40% Barclays Global Aggregate | | | 0.3 | 12.4 | 4.2 | 6.6 | 4.9 | 6.1 | 5.8 | Jul-01 |
| InvMetrics Public DB \$50mm-\$250mm Gross Median | | | 0.8 | 12.6 | 4.2 | 7.8 | 6.3 | 7.8 | 6.3 | Jul-01 |
| Domestic Equity Assets | 40,628,094 | 24.0 | 1.0 | 19.9 | 2.4 | 12.7 | 10.3 | 13.1 | 7.1 | Jul-01 |
| Russell 3000 | | | 1.2 | 20.1 | 2.9 | 12.8 | 10.4 | 13.1 | 7.3 | Jul-01 |
| eV US Large Cap Equity Gross Median | | | 1.5 | 19.7 | 3.4 | 12.7 | 10.2 | 13.0 | 8.0 | Jul-01 |
| Total International Developed Market Equity | 13,300,523 | 7.8 | -0.8 | 12.6 | -2.6 | 6.5 | 4.2 | 6.0 | 5.9 | Jul-01 |
| MSCI EAFE | | | -1.1 | 12.8 | -1.3 | 6.5 | 3.3 | 4.9 | 5.0 | Jul-01 |
| eV EAFE Core Equity Gross Median | | | -1.3 | 12.6 | -3.5 | 6.3 | 4.5 | 6.7 | 6.6 | Jul-01 |
| International Emerging Market Equity Assets | 16,027,068 | 9.5 | -4.5 | 6.7 | -3.0 | 4.2 | 0.1 | 1.5 | 0.5 | Jul-07 |
| MSCI Emerging Markets | | | -4.2 | 5.9 | -2.0 | 6.0 | 2.3 | 3.4 | 2.0 | Jul-07 |
| eV Emg Mkts Equity Gross Median | | | -3.8 | 7.9 | 0.0 | 6.3 | 3.4 | 4.9 | 3.3 | Jul-07 |
| Investment Grade Bond Assets | 21,784,550 | 12.9 | 2.3 | 8.8 | 10.0 | 3.0 | 3.5 | 3.8 | 4.7 | Jul-01 |
| BBgBarc US Aggregate TR | | | 2.3 | 8.5 | 10.3 | 2.9 | 3.4 | 3.7 | 4.7 | Jul-01 |
| eV US Core Fixed Inc Gross Median | | | 2.3 | 9.0 | 10.5 | 3.3 | 3.7 | 4.3 | 5.2 | Jul-01 |
| High Yield Bond Assets | 8,189,559 | 4.8 | 0.9 | 12.5 | 7.4 | 5.5 | 5.5 | 7.4 | 6.5 | Feb-05 |
| CSFB High Yield Index | | | 1.0 | 11.1 | 5.8 | 6.0 | 5.1 | 7.7 | 6.9 | Feb-05 |
| eV US High Yield Fixed Inc Gross Median | | | 1.5 | 11.5 | 6.6 | 6.1 | 5.4 | 7.9 | 7.2 | Feb-05 |
| TIPS Assets | 9,776,224 | 5.8 | 1.4 | 7.6 | 7.1 | 2.2 | 2.4 | 3.4 | 4.1 | Jul-07 |
| BBgBarc US TIPS TR | | | 1.3 | 7.6 | 7.1 | 2.2 | 2.4 | 3.5 | 4.2 | Jul-07 |
| eV US TIPS / Inflation Fixed Inc Gross Median | | | 1.2 | 7.6 | 7.0 | 2.4 | 2.6 | 3.6 | 4.3 | Jul-07 |
| Emerging Market Debt Assets | 8,482,607 | 5.0 | 0.1 | 11.1 | 9.7 | 3.5 | 0.2 | -- | -2.0 | Mar-13 |
| 50% JPM EMBI GD / 50% JPM GBI-EM | | | 0.4 | 10.4 | 10.9 | 3.9 | 3.2 | 4.7 | 2.0 | Mar-13 |
| eV Emg Mkt Fixed Inc Unhedged Gross Median | | | -0.1 | 10.3 | 10.2 | 4.5 | 4.1 | 6.1 | 3.5 | Mar-13 |
| Real Estate Assets | 16,122,650 | 9.5 | 2.7 | 6.5 | 8.6 | 8.7 | 10.0 | 10.6 | 6.2 | Apr-05 |
| NCREIF ODCE (net) | | | 1.1 | 3.1 | 4.6 | 6.3 | 8.4 | 9.8 | 6.6 | Apr-05 |
| Private Equity Assets | 22,159,079 | 13.1 | 6.0 | 10.8 | 13.7 | 13.1 | 9.1 | 10.8 | 6.1 | Oct-03 |
| Cambridge Associates US All PE (1 Qtr Lag) | | | 4.7 | 9.4 | 14.7 | 16.5 | 12.2 | 15.0 | 14.7 | Oct-03 |

Retirement System Summary

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| Natural Resources & Commodities Assets | 3,821,986 | 2.3 | -6.0 | 7.4 | -6.1 | -0.5 | -6.9 | -- | -5.2 | Jul-11 |
| <i>S&P Global Large MidCap Commodity and Resources NR USD</i> | | | <i>-6.0</i> | <i>7.3</i> | <i>-6.3</i> | <i>6.3</i> | <i>-0.3</i> | <i>1.6</i> | <i>-1.9</i> | <i>Jul-11</i> |
| Infrastructure Assets | 8,559,218 | 5.1 | 2.2 | 8.9 | 12.0 | -- | -- | -- | 12.0 | Oct-18 |
| <i>CPI+5%</i> | | | <i>1.6</i> | <i>5.1</i> | <i>6.7</i> | <i>7.1</i> | <i>6.5</i> | <i>6.7</i> | <i>6.7</i> | <i>Oct-18</i> |
| Cash | 591,867 | 0.3 | | | | | | | | |

Retirement System Summary

As of September 30, 2019

Trailing Gross Performance

| | Market Value (\$) | % of Portfolio | % of Sector | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|--|----------------------|-------------------|----------------|-------------|-------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| Total Retirement System | 169,443,424 | 100.0 | -- | 1.1 | 11.5 | 5.0 | 7.6 | 5.7 | 7.4 | 5.6 | Jul-01 |
| 60% MSCI ACWI / 40% Barclays Global Aggregate | | | | 0.3 | 12.4 | 4.2 | 6.6 | 4.9 | 6.1 | 5.8 | Jul-01 |
| InvMetrics Public DB \$50mm-\$250mm Gross Median | | | | 0.8 | 12.6 | 4.2 | 7.8 | 6.3 | 7.8 | 6.3 | Jul-01 |
| Domestic Equity Assets | 40,628,094 | 24.0 | 24.0 | 1.0 | 19.9 | 2.4 | 12.7 | 10.3 | 13.1 | 7.1 | Jul-01 |
| Russell 3000 | | | | 1.2 | 20.1 | 2.9 | 12.8 | 10.4 | 13.1 | 7.3 | Jul-01 |
| eV US Large Cap Equity Gross Median | | | | 1.5 | 19.7 | 3.4 | 12.7 | 10.2 | 13.0 | 8.0 | Jul-01 |
| SSgA Russell 1000 Value Index-NL | 18,079,048 | 10.7 | 44.5 | 1.4 | 17.8 | 3.9 | 9.5 | 7.8 | 11.5 | 7.3 | Jan-05 |
| Russell 1000 Value | | | | 1.4 | 17.8 | 4.0 | 9.4 | 7.8 | 11.5 | 7.2 | Jan-05 |
| eV US Large Cap Value Equity Gross Median | | | | 1.8 | 17.7 | 2.6 | 10.5 | 8.2 | 11.9 | 8.1 | Jan-05 |
| SSgA Russell 1000 Growth-NL | 19,053,411 | 11.2 | 46.9 | 1.5 | 23.3 | 3.6 | 16.8 | 13.4 | 14.9 | 10.1 | Jul-07 |
| Russell 1000 Growth | | | | 1.5 | 23.3 | 3.7 | 16.9 | 13.4 | 14.9 | 10.1 | Jul-07 |
| eV US Large Cap Growth Equity Gross Median | | | | 0.6 | 22.4 | 3.9 | 16.2 | 12.7 | 14.5 | 9.9 | Jul-07 |
| SSgA Russell 2000 Index-NL | 3,495,635 | 2.1 | 8.6 | -2.4 | 14.2 | -8.8 | 8.3 | 8.3 | -- | 11.3 | Aug-10 |
| Russell 2000 | | | | -2.4 | 14.2 | -8.9 | 8.2 | 8.2 | 11.2 | 11.2 | Aug-10 |
| eV US Small Cap Core Equity Gross Median | | | | -1.5 | 15.0 | -7.5 | 8.9 | 8.8 | 12.3 | 12.4 | Aug-10 |
| Total International Developed Market Equity | 13,300,523 | 7.8 | 7.8 | -0.8 | 12.6 | -2.6 | 6.5 | 4.2 | 6.0 | 5.9 | Jul-01 |
| MSCI EAFE | | | | -1.1 | 12.8 | -1.3 | 6.5 | 3.3 | 4.9 | 5.0 | Jul-01 |
| eV EAFE Core Equity Gross Median | | | | -1.3 | 12.6 | -3.5 | 6.3 | 4.5 | 6.7 | 6.6 | Jul-01 |
| SSgA MSCI EAFE Index-NL | 7,915,662 | 4.7 | 59.5 | -1.0 | 13.2 | -1.0 | 6.9 | 3.6 | -- | 6.0 | Aug-10 |
| MSCI EAFE | | | | -1.1 | 12.8 | -1.3 | 6.5 | 3.3 | 4.9 | 5.7 | Aug-10 |
| eV EAFE Core Equity Gross Median | | | | -1.3 | 12.6 | -3.5 | 6.3 | 4.5 | 6.7 | 7.4 | Aug-10 |
| SSgA MSCI EAFE Small Cap Index-NL | 5,384,861 | 3.2 | 40.5 | -0.4 | 12.2 | -5.7 | 6.2 | 6.3 | -- | 8.5 | Aug-10 |
| MSCI EAFE Small Cap | | | | -0.4 | 12.1 | -5.9 | 5.9 | 6.0 | 7.5 | 8.2 | Aug-10 |
| eV EAFE Small Cap Core Gross Median | | | | -1.6 | 11.5 | -7.1 | 5.9 | 6.2 | 9.1 | 10.0 | Aug-10 |



Retirement System Summary

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | % of Sector | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|--|----------------------|-------------------|----------------|-------------|-------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| International Emerging Market Equity Assets | 16,027,068 | 9.5 | 9.5 | -4.5 | 6.7 | -3.0 | 4.2 | 0.1 | 1.5 | 0.5 | Jul-07 |
| <i>MSCI Emerging Markets</i> | | | | -4.2 | 5.9 | -2.0 | 6.0 | 2.3 | 3.4 | 2.0 | Jul-07 |
| <i>eV Emg Mkts Equity Gross Median</i> | | | | -3.8 | 7.9 | 0.0 | 6.3 | 3.4 | 4.9 | 3.3 | Jul-07 |
| LMCG Emerging Markets (Net) | 8,462,308 | 5.0 | 52.8 | -5.2 | 2.0 | -7.4 | 2.3 | -- | -- | 1.8 | Aug-15 |
| <i>MSCI Emerging Markets</i> | | | | -4.2 | 5.9 | -2.0 | 6.0 | 2.3 | 3.4 | 5.0 | Aug-15 |
| <i>eV Emg Mkts Equity Net Median</i> | | | | -3.8 | 7.7 | -0.6 | 5.7 | 2.5 | 4.0 | 5.0 | Aug-15 |
| GQG Partners Emerging Markets | 7,564,760 | 4.5 | 47.2 | -3.8 | -- | -- | -- | -- | -- | 3.3 | Mar-19 |
| <i>MSCI Emerging Markets</i> | | | | -4.2 | 5.9 | -2.0 | 6.0 | 2.3 | 3.4 | -3.7 | Mar-19 |
| <i>eV Emg Mkts Equity Gross Median</i> | | | | -3.8 | 7.9 | 0.0 | 6.3 | 3.4 | 4.9 | -2.3 | Mar-19 |
| Investment Grade Bond Assets | 21,784,550 | 12.9 | 12.9 | 2.3 | 8.8 | 10.0 | 3.0 | 3.5 | 3.8 | 4.7 | Jul-01 |
| <i>BBgBarc US Aggregate TR</i> | | | | 2.3 | 8.5 | 10.3 | 2.9 | 3.4 | 3.7 | 4.7 | Jul-01 |
| <i>eV US Core Fixed Inc Gross Median</i> | | | | 2.3 | 9.0 | 10.5 | 3.3 | 3.7 | 4.3 | 5.2 | Jul-01 |
| Longfellow Investment Grade Bond | 21,784,550 | 12.9 | 100.0 | 2.3 | 8.8 | 10.0 | -- | -- | -- | 4.0 | Sep-17 |
| <i>BBgBarc US Aggregate TR</i> | | | | 2.3 | 8.5 | 10.3 | 2.9 | 3.4 | 3.7 | 4.0 | Sep-17 |
| <i>eV US Core Fixed Inc Gross Median</i> | | | | 2.3 | 9.0 | 10.5 | 3.3 | 3.7 | 4.3 | 4.3 | Sep-17 |
| High Yield Bond Assets | 8,189,559 | 4.8 | 4.8 | 0.9 | 12.5 | 7.4 | 5.5 | 5.5 | 7.4 | 6.5 | Feb-05 |
| <i>CSFB High Yield Index</i> | | | | 1.0 | 11.1 | 5.8 | 6.0 | 5.1 | 7.7 | 6.9 | Feb-05 |
| <i>eV US High Yield Fixed Inc Gross Median</i> | | | | 1.5 | 11.5 | 6.6 | 6.1 | 5.4 | 7.9 | 7.2 | Feb-05 |
| Lord Abbett High Yield Core | 8,189,559 | 4.8 | 100.0 | 0.9 | -- | -- | -- | -- | -- | 0.9 | Jul-19 |
| <i>BBgBarc US High Yield TR</i> | | | | 1.3 | 11.4 | 6.4 | 6.1 | 5.4 | 7.9 | 1.3 | Jul-19 |
| <i>eV US High Yield Fixed Inc Gross Median</i> | | | | 1.5 | 11.5 | 6.6 | 6.1 | 5.4 | 7.9 | 1.5 | Jul-19 |

Retirement System Summary

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | % of Sector | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|----------------------|-------------------|----------------|------------|-------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| TIPS Assets | 9,776,224 | 5.8 | 5.8 | 1.4 | 7.6 | 7.1 | 2.2 | 2.4 | 3.4 | 4.1 | Jul-07 |
| BBgBarc US TIPS TR | | | | 1.3 | 7.6 | 7.1 | 2.2 | 2.4 | 3.5 | 4.2 | Jul-07 |
| eV US TIPS / Inflation Fixed Inc Gross Median | | | | 1.2 | 7.6 | 7.0 | 2.4 | 2.6 | 3.6 | 4.3 | Jul-07 |
| SSgA TIPS-NL | 9,776,224 | 5.8 | 100.0 | 1.4 | 7.6 | 7.1 | 2.2 | 2.4 | 3.4 | 4.1 | Jul-07 |
| BBgBarc US TIPS TR | | | | 1.3 | 7.6 | 7.1 | 2.2 | 2.4 | 3.5 | 4.2 | Jul-07 |
| eV US TIPS / Inflation Fixed Inc Gross Median | | | | 1.2 | 7.6 | 7.0 | 2.4 | 2.6 | 3.6 | 4.3 | Jul-07 |
| Emerging Market Debt Assets | 8,482,607 | 5.0 | 5.0 | 0.1 | 11.1 | 9.7 | 3.5 | 0.2 | -- | -2.0 | Mar-13 |
| 50% JPM EMBI GD / 50% JPM GBI-EM | | | | 0.4 | 10.4 | 10.9 | 3.9 | 3.2 | 4.7 | 2.0 | Mar-13 |
| eV Emg Mkt Fixed Inc Unhedged Gross Median | | | | -0.1 | 10.3 | 10.2 | 4.5 | 4.1 | 6.1 | 3.5 | Mar-13 |
| Metlife Emerging Markets Debt (Net) | 4,076,494 | 2.4 | 48.1 | -0.8 | 9.4 | 8.1 | -- | -- | -- | 4.7 | Nov-16 |
| Metlife Custom Benchmark | | | | 0.8 | 10.3 | 10.6 | 4.1 | 3.8 | 5.3 | 4.5 | Nov-16 |
| eV Emg Mkt Fixed Inc Unhedged Net Median | | | | 0.0 | 10.0 | 9.6 | 3.8 | 3.5 | 5.4 | 4.1 | Nov-16 |
| Aberdeen Emerging Markets Bond Fund | 4,406,113 | 2.6 | 51.9 | 1.0 | 12.7 | 11.3 | -- | -- | -- | 6.2 | Dec-16 |
| JP Morgan EMBI Global Diversified | | | | 1.5 | 13.0 | 11.6 | 4.6 | 5.7 | 6.9 | 6.9 | Dec-16 |
| JP Morgan GBI EM Global Diversified TR USD | | | | -0.8 | 7.9 | 10.1 | 3.1 | 0.6 | 2.4 | 6.2 | Dec-16 |
| eV Emg Mkt Fixed Inc Unhedged Gross Median | | | | -0.1 | 10.3 | 10.2 | 4.5 | 4.1 | 6.1 | 6.7 | Dec-16 |
| Real Estate Assets | 16,122,650 | 9.5 | 9.5 | 2.7 | 6.5 | 8.6 | 8.7 | 10.0 | 10.6 | 6.2 | Apr-05 |
| NCREIF ODCE (net) | | | | 1.1 | 3.1 | 4.6 | 6.3 | 8.4 | 9.8 | 6.6 | Apr-05 |
| TA Associates Realty Fund X | 534,985 | 0.3 | 3.3 | | | | | | | | |
| Intercontinental U.S. REIF (Net) | 7,424,534 | 4.4 | 46.1 | 2.5 | 6.1 | 8.3 | 9.6 | 10.1 | -- | 10.1 | Oct-14 |
| NCREIF ODCE (net) | | | | 1.1 | 3.1 | 4.6 | 6.3 | 8.4 | 9.8 | 8.4 | Oct-14 |
| AEW Core Property Trust (Net) | 8,163,131 | 4.8 | 50.6 | 1.3 | 4.1 | 5.7 | 6.4 | 8.1 | -- | 8.1 | Oct-14 |
| NCREIF ODCE (net) | | | | 1.1 | 3.1 | 4.6 | 6.3 | 8.4 | 9.8 | 8.4 | Oct-14 |

Metlife Custom Benchmark consists of 35% JP Morgan EMBI Global Diversified, 35% JP Morgan CEMBI Broad Diversified, and 30% JP Morgan GBI EM Global Diversified.
TA Associates Realty Fund X is based on June 30, 2019 fair market value, adjusted for subsequent cash flows.



Retirement System Summary

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | % of Sector | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|----------------------|-------------------|----------------|------------|-------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| Private Equity Assets | 22,159,079 | 13.1 | 13.1 | 6.0 | 10.8 | 13.7 | 13.1 | 9.1 | 10.8 | 6.1 | Oct-03 |
| <i>Cambridge Associates US All PE (1 Qtr Lag)</i> | | | | 4.7 | 9.4 | 14.7 | 16.5 | 12.2 | 15.0 | 14.7 | Oct-03 |
| Ascent Venture Partners - Fund II | 5,720 | 0.0 | 0.0 | | | | | | | | |
| Ascent Venture Partners - Fund III | 57,093 | 0.0 | 0.3 | | | | | | | | |
| Ascent Venture Partners - Fund IV | 15,996 | 0.0 | 0.1 | | | | | | | | |
| Ascent Venture Partners - Fund V | 854,901 | 0.5 | 3.9 | | | | | | | | |
| Ascent Venture Partners - Fund VI | 1,300,798 | 0.8 | 5.9 | | | | | | | | |
| Constitution Capital Partners Ironsides III | 4,197,866 | 2.5 | 18.9 | | | | | | | | |
| Constitution Capital Partners Ironsides IV | 1,768,741 | 1.0 | 8.0 | | | | | | | | |
| Constitution Capital Direct IV | 3,811,394 | 2.2 | 17.2 | | | | | | | | |
| Constitution Capital Direct V | 2,461,946 | 1.5 | 11.1 | | | | | | | | |
| Goldman Sachs PEP 2005 | 455,043 | 0.3 | 2.1 | | | | | | | | |
| HarbourVest Partners VIII | 749,063 | 0.4 | 3.4 | | | | | | | | |
| HarbourVest Partners IX | 3,839,504 | 2.3 | 17.3 | | | | | | | | |
| HarbourVest X Buyout Fund | 2,423,487 | 1.4 | 10.9 | | | | | | | | |
| HarbourVest Partners XI, L.P. | 217,528 | 0.1 | 1.0 | | | | | | | | |

Private Equity Assets are based on June 30, 2019 fair market value, adjusted for subsequent cash flows.



Retirement System Summary

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | % of Sector | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|----------------------|-------------------|----------------|-------------|------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| Natural Resources & Commodities Assets | 3,821,986 | 2.3 | 2.3 | -6.0 | 7.4 | -6.1 | -0.5 | -6.9 | -- | -5.2 | Jul-11 |
| <i>S&P Global Large MidCap Commodity and Resources NR USD</i> | | | | -6.0 | 7.3 | -6.3 | 6.3 | -0.3 | 1.6 | -1.9 | Jul-11 |
| SSgA S&P Global LargeMidCap Natural Resources Index | 3,821,986 | 2.3 | 100.0 | -6.0 | 7.4 | -6.1 | -- | -- | -- | -4.1 | Feb-18 |
| <i>S&P Global Large MidCap Commodity and Resources NR USD</i> | | | | -6.0 | 7.3 | -6.3 | 6.3 | -0.3 | 1.6 | -4.4 | Feb-18 |
| Infrastructure Assets | 8,559,218 | 5.1 | 5.1 | 2.2 | 8.9 | 12.0 | -- | -- | -- | 12.0 | Oct-18 |
| <i>CPI+5%</i> | | | | 1.6 | 5.1 | 6.7 | 7.1 | 6.5 | 6.7 | 6.7 | Oct-18 |
| IFM Global Infrastructure (U.S.), L.P. | 8,559,218 | 5.1 | 100.0 | 2.2 | 8.9 | 12.0 | -- | -- | -- | 12.0 | Oct-18 |
| <i>CPI+5%</i> | | | | 1.6 | 5.1 | 6.7 | 7.1 | 6.5 | 6.7 | 6.7 | Oct-18 |
| Cash | 591,867 | 0.3 | 0.3 | | | | | | | | |
| Cash STIF | 591,867 | 0.3 | 100.0 | | | | | | | | |

Retirement System Summary

As of September 30, 2019

Calendar Year Performance

| | 2018 (%) | 2017 (%) | 2016 (%) | 2015 (%) | 2014 (%) | 2013 (%) | 2012 (%) | 2011 (%) | 2010 (%) | 2009 (%) |
|--|--------------|-------------|-------------|--------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Total Retirement System | -3.0 | 14.5 | 9.6 | -2.7 | 4.3 | 10.9 | 12.2 | 2.2 | 12.5 | 17.7 |
| <i>60% MSCI ACWI / 40% Barclays Global Aggregate</i> | -6.0 | 17.1 | 5.7 | -2.5 | 2.8 | 12.1 | 11.5 | -2.1 | 10.2 | 23.3 |
| Domestic Equity Assets | -5.5 | 21.0 | 13.1 | 0.4 | 12.4 | 33.5 | 16.3 | 1.0 | 17.5 | 30.8 |
| <i>Russell 3000</i> | -5.2 | 21.1 | 12.7 | 0.5 | 12.6 | 33.6 | 16.4 | 1.0 | 16.9 | 28.3 |
| SSgA Russell 1000 Value Index-NL | -8.3 | 13.8 | 17.3 | -3.7 | 13.4 | 32.5 | 17.4 | 0.4 | 15.6 | 20.0 |
| <i>Russell 1000 Value</i> | -8.3 | 13.7 | 17.3 | -3.8 | 13.5 | 32.5 | 17.5 | 0.4 | 15.5 | 19.7 |
| SSgA Russell 1000 Growth-NL | -1.7 | 30.2 | 7.2 | 5.6 | 13.1 | 33.5 | 15.4 | 2.6 | 16.7 | 37.2 |
| <i>Russell 1000 Growth</i> | -1.5 | 30.2 | 7.1 | 5.7 | 13.0 | 33.5 | 15.3 | 2.6 | 16.7 | 37.2 |
| SSgA Russell 2000 Index-NL | -11.0 | 14.7 | 21.5 | -4.4 | 5.0 | 38.9 | 16.4 | -4.1 | -- | -- |
| <i>Russell 2000</i> | -11.0 | 14.6 | 21.3 | -4.4 | 4.9 | 38.8 | 16.3 | -4.2 | 26.9 | 27.2 |
| Total International Developed Market Equity | -14.7 | 27.5 | 1.6 | 2.0 | -4.7 | 24.4 | 18.1 | -12.6 | 11.4 | 36.3 |
| <i>MSCI EAFE</i> | -13.8 | 25.0 | 1.0 | -0.8 | -4.9 | 22.8 | 17.3 | -12.1 | 7.8 | 31.8 |
| SSgA MSCI EAFE Index-NL | -13.5 | 25.5 | 1.4 | -0.5 | -4.6 | 23.1 | 17.7 | -11.9 | -- | -- |
| <i>MSCI EAFE</i> | -13.8 | 25.0 | 1.0 | -0.8 | -4.9 | 22.8 | 17.3 | -12.1 | 7.8 | 31.8 |
| SSgA MSCI EAFE Small Cap Index-NL | -17.6 | 33.3 | 2.4 | 9.7 | -4.7 | 29.5 | 20.1 | -15.0 | -- | -- |
| <i>MSCI EAFE Small Cap</i> | -17.9 | 33.0 | 2.2 | 9.6 | -4.9 | 29.3 | 20.0 | -15.9 | 22.0 | 46.8 |
| International Emerging Market Equity Assets | -17.3 | 32.5 | 11.7 | -18.1 | -4.4 | -3.8 | 18.8 | -25.6 | 22.1 | 92.3 |
| <i>MSCI Emerging Markets</i> | -14.6 | 37.3 | 11.2 | -14.9 | -2.2 | -2.6 | 18.2 | -18.4 | 18.9 | 78.5 |
| LMCG Emerging Markets (Net) | -18.7 | 35.1 | 7.0 | -- | -- | -- | -- | -- | -- | -- |
| <i>MSCI Emerging Markets</i> | -14.6 | 37.3 | 11.2 | -14.9 | -2.2 | -2.6 | 18.2 | -18.4 | 18.9 | 78.5 |
| GQG Partners Emerging Markets | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>MSCI Emerging Markets</i> | -14.6 | 37.3 | 11.2 | -14.9 | -2.2 | -2.6 | 18.2 | -18.4 | 18.9 | 78.5 |

Retirement System Summary

As of September 30, 2019

| | 2018 (%) | 2017 (%) | 2016 (%) | 2015 (%) | 2014 (%) | 2013 (%) | 2012 (%) | 2011 (%) | 2010 (%) | 2009 (%) |
|-------------------------------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Investment Grade Bond Assets | -0.1 | 3.5 | 2.7 | 0.8 | 6.1 | -3.1 | 4.6 | 8.5 | 6.7 | 9.7 |
| BBgBarc US Aggregate TR | 0.0 | 3.5 | 2.6 | 0.5 | 6.0 | -2.0 | 4.2 | 7.8 | 6.5 | 5.9 |
| Longfellow Investment Grade Bond | -0.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| BBgBarc US Aggregate TR | 0.0 | 3.5 | 2.6 | 0.5 | 6.0 | -2.0 | 4.2 | 7.8 | 6.5 | 5.9 |
| High Yield Bond Assets | -3.2 | 7.2 | 11.5 | -0.2 | 4.1 | 6.0 | 13.6 | 6.2 | 12.9 | 43.2 |
| CSFB High Yield Index | -2.4 | 7.0 | 18.3 | -4.9 | 1.9 | 7.5 | 14.7 | 5.5 | 14.4 | 54.2 |
| Lord Abbett High Yield Core | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| BBgBarc US High Yield TR | -2.1 | 7.5 | 17.1 | -4.5 | 2.5 | 7.4 | 15.8 | 5.0 | 15.1 | 58.2 |
| TIPS Assets | -1.3 | 3.0 | 4.5 | -1.4 | 3.6 | -8.6 | 6.9 | 13.5 | 6.3 | 11.3 |
| BBgBarc US TIPS TR | -1.3 | 3.0 | 4.7 | -1.4 | 3.6 | -8.6 | 7.0 | 13.6 | 6.3 | 11.4 |
| SSgA TIPS-NL | -1.3 | 3.0 | 4.5 | -1.4 | 3.6 | -8.6 | 6.9 | 13.5 | 6.3 | 11.3 |
| BBgBarc US TIPS TR | -1.3 | 3.0 | 4.7 | -1.4 | 3.6 | -8.6 | 7.0 | 13.6 | 6.3 | 11.4 |
| Emerging Market Debt Assets | -6.9 | 13.3 | 10.0 | -15.2 | -8.5 | -- | -- | -- | -- | -- |
| 50% JPM EMBI GD / 50% JPM GBI-EM | -5.2 | 12.7 | 10.2 | -7.1 | 0.7 | -7.1 | 17.2 | 2.8 | 13.8 | 26.0 |
| Metlife Emerging Markets Debt (Net) | -6.6 | 13.4 | -- | -- | -- | -- | -- | -- | -- | -- |
| Metlife Custom Benchmark | -4.0 | 10.6 | 10.0 | -3.8 | 1.9 | -4.4 | 17.9 | 2.0 | 12.6 | 27.9 |
| Aberdeen Emerging Markets Bond Fund | -7.1 | 13.3 | -- | -- | -- | -- | -- | -- | -- | -- |
| JP Morgan EMBI Global Diversified | -4.3 | 10.3 | 10.2 | 1.2 | 7.4 | -5.3 | 17.4 | 7.3 | 12.2 | 29.8 |

Metlife Custom Benchmark consists of 35% JP Morgan EMBI Global Diversified, 35% JP Morgan CEMBI Broad Diversified, and 30% JP Morgan GBI EM Global Diversified.



Retirement System Summary

As of September 30, 2019

| | 2018 (%) | 2017 (%) | 2016 (%) | 2015 (%) | 2014 (%) | 2013 (%) | 2012 (%) | 2011 (%) | 2010 (%) | 2009 (%) |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Real Estate Assets | 8.8 | 8.5 | 9.0 | 13.8 | 12.8 | 10.1 | 12.5 | 16.7 | 12.7 | -38.9 |
| <i>NCREIF ODCE (net)</i> | 7.4 | 6.7 | 7.8 | 14.0 | 11.5 | 12.9 | 9.8 | 15.0 | 15.3 | -30.4 |
| TA Associates Realty Fund X | | | | | | | | | | |
| Intercontinental U.S. REIF (Net) | 10.5 | 7.5 | 10.9 | 12.5 | -- | -- | -- | -- | -- | -- |
| <i>NCREIF ODCE (net)</i> | 7.4 | 6.7 | 7.8 | 14.0 | 11.5 | 12.9 | 9.8 | 15.0 | 15.3 | -30.4 |
| AEW Core Property Trust (Net) | 6.6 | 6.6 | 7.6 | 12.8 | -- | -- | -- | -- | -- | -- |
| <i>NCREIF ODCE (net)</i> | 7.4 | 6.7 | 7.8 | 14.0 | 11.5 | 12.9 | 9.8 | 15.0 | 15.3 | -30.4 |
| Private Equity Assets | 14.0 | 11.8 | 6.3 | 0.8 | 13.5 | 9.5 | 9.2 | 7.9 | 19.9 | -14.2 |
| <i>Cambridge Associates US All PE (1 Qtr Lag)</i> | 19.2 | 16.8 | 8.7 | 6.0 | 17.9 | 17.5 | 15.2 | 15.1 | 18.3 | -10.3 |
| Ascent Venture Partners - Fund II | | | | | | | | | | |
| Ascent Venture Partners - Fund III | | | | | | | | | | |
| Ascent Venture Partners - Fund IV | | | | | | | | | | |
| Ascent Venture Partners - Fund V | | | | | | | | | | |
| Ascent Venture Partners - Fund VI | | | | | | | | | | |
| Constitution Capital Partners Ironsides III | | | | | | | | | | |
| Constitution Capital Partners Ironsides IV | | | | | | | | | | |
| Constitution Capital Direct IV | | | | | | | | | | |
| Constitution Capital Direct V | | | | | | | | | | |
| Goldman Sachs PEP 2005 | | | | | | | | | | |

Retirement System Summary

As of September 30, 2019

| | 2018 (%) | 2017 (%) | 2016 (%) | 2015 (%) | 2014 (%) | 2013 (%) | 2012 (%) | 2011 (%) | 2010 (%) | 2009 (%) |
|---|--------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|
| HarbourVest Partners VIII | | | | | | | | | | |
| HarbourVest Partners IX | | | | | | | | | | |
| HarbourVest X Buyout Fund | | | | | | | | | | |
| HarbourVest Partners XI, L.P. | | | | | | | | | | |
| Natural Resources & Commodities Assets | -13.0 | -0.9 | 53.7 | -38.0 | -22.6 | -0.3 | 6.5 | -- | -- | -- |
| <i>S&P Global Large MidCap Commodity and Resources NR USD</i> | -9.4 | 18.1 | 30.8 | -27.5 | -9.9 | -2.9 | 7.0 | -14.1 | 19.5 | -- |
| SSgA S&P Global LargeMidCap Natural Resources Index | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>S&P Global Large MidCap Commodity and Resources NR USD</i> | -9.4 | 18.1 | 30.8 | -27.5 | -9.9 | -2.9 | 7.0 | -14.1 | 19.5 | -- |
| Infrastructure Assets | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>CPI+5%</i> | 6.9 | 7.1 | 7.1 | 5.7 | 5.7 | 6.5 | 6.8 | 8.1 | 6.4 | 7.8 |
| IFM Global Infrastructure (U.S.), L.P. | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>CPI+5%</i> | 6.9 | 7.1 | 7.1 | 5.7 | 5.7 | 6.5 | 6.8 | 8.1 | 6.4 | 7.8 |
| Cash | | | | | | | | | | |
| Cash STIF | | | | | | | | | | |

Retirement System Summary

As of September 30, 2019

Statistics Summary

5 Years Ending September 30, 2019

| | Anlzd Return | Anlzd Standard Deviation | Information Ratio | Beta | Sharpe Ratio | Tracking Error |
|---|--------------|--------------------------|-------------------|------|--------------|----------------|
| Total Retirement System | 5.6% | 6.3% | 0.3 | 0.8 | 0.7 | 2.1% |
| 60% MSCI ACWI / 40% Barclays Global Aggregate | 4.9% | 7.5% | -- | 1.0 | 0.5 | 0.0% |
| Total Equity | 6.6% | 11.8% | -1.0 | 0.9 | 0.5 | 3.8% |
| Russell 3000 | 10.4% | 12.2% | -- | 1.0 | 0.8 | 0.0% |
| Domestic Equity Assets | 10.3% | 12.2% | -0.8 | 1.0 | 0.8 | 0.2% |
| Russell 3000 | 10.4% | 12.2% | -- | 1.0 | 0.8 | 0.0% |
| SSgA Russell 1000 Value Index-NL | 7.8% | 11.9% | -0.5 | 1.0 | 0.6 | 0.1% |
| Russell 1000 Value | 7.8% | 11.9% | -- | 1.0 | 0.6 | 0.0% |
| SSgA Russell 1000 Growth-NL | 13.3% | 12.9% | -2.4 | 1.0 | 1.0 | 0.1% |
| Russell 1000 Growth | 13.4% | 12.9% | -- | 1.0 | 1.0 | 0.0% |
| SSgA Russell 2000 Index-NL | 8.2% | 16.2% | -0.2 | 1.0 | 0.4 | 0.1% |
| Russell 2000 | 8.2% | 16.2% | -- | 1.0 | 0.4 | 0.0% |
| International Equity Assets | 1.9% | 12.8% | -0.6 | 1.0 | 0.1 | 2.5% |
| MSCI ACWI ex USA IMI Gross | 3.5% | 12.4% | -- | 1.0 | 0.2 | 0.0% |
| Total International Developed Market Equity | 4.1% | 12.2% | 0.7 | 1.0 | 0.3 | 1.2% |
| MSCI EAFE | 3.3% | 12.2% | -- | 1.0 | 0.2 | 0.0% |
| SSgA MSCI EAFE Index-NL | 3.5% | 12.3% | 2.0 | 1.0 | 0.2 | 0.1% |
| MSCI EAFE | 3.3% | 12.2% | -- | 1.0 | 0.2 | 0.0% |
| SSgA MSCI EAFE Small Cap Index-NL | 6.0% | 12.4% | 0.1 | 1.0 | 0.4 | 0.2% |
| MSCI EAFE Small Cap | 6.0% | 12.4% | -- | 1.0 | 0.4 | 0.0% |

Retirement System Summary

As of September 30, 2019

| | Anlzd Return | Anlzd Standard Deviation | Information Ratio | Beta | Sharpe Ratio | Tracking Error |
|---|--------------|-----------------------------|-------------------|------|--------------|----------------|
| International Emerging Market Equity Assets | -0.3% | 15.4% | -0.8 | 1.0 | -0.1 | 3.1% |
| MSCI Emerging Markets | 2.3% | 15.6% | -- | 1.0 | 0.1 | 0.0% |
| LMCG Emerging Markets | -- | -- | -- | -- | -- | -- |
| MSCI Emerging Markets | 2.3% | 15.6% | -- | 1.0 | 0.1 | 0.0% |
| GQG Partners Emerging Markets | -- | -- | -- | -- | -- | -- |
| MSCI Emerging Markets | 2.3% | 15.6% | -- | 1.0 | 0.1 | 0.0% |
| Fixed Income Assets | 3.1% | 3.4% | -0.3 | 1.0 | 0.6 | 1.8% |
| BBgBarc US Universal TR | 3.6% | 2.9% | -- | 1.0 | 0.9 | 0.0% |
| Investment Grade Bond Assets | 3.5% | 3.0% | 0.2 | 1.0 | 0.8 | 0.3% |
| BBgBarc US Aggregate TR | 3.4% | 3.1% | -- | 1.0 | 0.8 | 0.0% |
| Longfellow Investment Grade Bond | -- | -- | -- | -- | -- | -- |
| BBgBarc US Aggregate TR | 3.4% | 3.1% | -- | 1.0 | 0.8 | 0.0% |
| High Yield Bond Assets | 5.3% | 4.8% | 0.1 | 0.8 | 0.9 | 2.1% |
| CSFB High Yield Index | 5.1% | 5.5% | -- | 1.0 | 0.8 | 0.0% |
| Lord Abbett High Yield Core | -- | -- | -- | -- | -- | -- |
| BBgBarc US High Yield TR | 5.4% | 5.3% | -- | 1.0 | 0.8 | 0.0% |
| TIPS Assets | 2.4% | 3.5% | -1.3 | 1.0 | 0.4 | 0.0% |
| BBgBarc US TIPS TR | 2.4% | 3.5% | -- | 1.0 | 0.4 | 0.0% |
| SSgA TIPS-NL | 2.4% | 3.5% | -1.4 | 1.0 | 0.4 | 0.1% |
| BBgBarc US TIPS TR | 2.4% | 3.5% | -- | 1.0 | 0.4 | 0.0% |
| Emerging Market Debt Assets | 0.0% | 10.1% | -0.9 | 1.2 | -0.1 | 3.6% |
| 50% JPM EMBI GD / 50% JPM GBI-EM | 3.2% | 7.8% | -- | 1.0 | 0.3 | 0.0% |
| Metlife Emerging Markets Debt | -- | -- | -- | -- | -- | -- |
| Metlife Custom Benchmark | 3.8% | 6.2% | -- | 1.0 | 0.5 | 0.0% |

Retirement System Summary

As of September 30, 2019

| | Anlzd Return | Anlzd Standard Deviation | Information Ratio | Beta | Sharpe Ratio | Tracking Error |
|---|--------------|--------------------------|-------------------|------|--------------|----------------|
| Aberdeen Emerging Markets Bond Fund | -- | -- | -- | -- | -- | -- |
| JP Morgan EMBI Global Diversified | 5.7% | 5.5% | -- | 1.0 | 0.9 | 0.0% |
| Real Estate Assets | 10.0% | 4.2% | 1.2 | 1.1 | 2.1 | 1.4% |
| NCREIF ODCE (net) | 8.4% | 3.7% | -- | 1.0 | 2.0 | 0.0% |
| TA Associates Realty Fund X | 18.2% | 12.7% | 0.8 | 1.4 | 1.3 | 11.7% |
| NCREIF ODCE (net) | 8.4% | 3.7% | -- | 1.0 | 2.0 | 0.0% |
| Intercontinental U.S. REIF | 10.1% | 4.5% | 0.8 | 1.1 | 2.0 | 2.1% |
| NCREIF ODCE (net) | 8.4% | 3.7% | -- | 1.0 | 2.0 | 0.0% |
| AEW Core Property Trust | 8.1% | 3.6% | -0.3 | 0.9 | 2.0 | 0.8% |
| NCREIF ODCE (net) | 8.4% | 3.7% | -- | 1.0 | 2.0 | 0.0% |
| Private Equity Assets | 9.1% | 5.5% | -0.7 | 0.7 | 1.5 | 3.5% |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Ascent Venture Partners - Fund II | 27.1% | 33.8% | 0.5 | 1.0 | 0.8 | 33.2% |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Ascent Venture Partners - Fund III | -16.9% | 16.2% | -1.5 | -0.6 | -1.1 | 18.8% |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Ascent Venture Partners - Fund IV | -54.4% | 52.0% | -1.2 | -0.9 | -1.1 | 53.0% |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Ascent Venture Partners - Fund V | 1.9% | 7.1% | -1.1 | 0.1 | 0.1 | 9.3% |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Ascent Venture Partners - Fund VI | -- | -- | -- | -- | -- | -- |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Constitution Capital Partners Ironsides III | 13.1% | 14.4% | 0.1 | 0.8 | 0.8 | 13.6% |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |

Retirement System Summary

As of September 30, 2019

| | Anlzd Return | Anlzd Standard Deviation | Information Ratio | Beta | Sharpe Ratio | Tracking Error |
|--|--------------|--------------------------|-------------------|------|--------------|----------------|
| Constitution Capital Partners Ironsides IV | -- | -- | -- | -- | -- | -- |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Constitution Capital Direct IV | -- | -- | -- | -- | -- | -- |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Constitution Capital Direct V | -- | -- | -- | -- | -- | -- |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Goldman Sachs PEP 2005 | 3.9% | 12.5% | -0.7 | 0.7 | 0.2 | 11.8% |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| HarbourVest Partners VIII | 14.5% | 7.5% | 0.7 | 1.0 | 1.8 | 4.0% |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| HarbourVest Partners IX | 16.0% | 7.8% | 0.9 | 1.0 | 1.9 | 4.6% |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| HarbourVest X Buyout Fund | -- | -- | -- | -- | -- | -- |
| Cambridge Associates US All PE (1 Qtr Lag) | 11.7% | 6.3% | -- | 1.0 | 1.7 | 0.0% |
| Natural Resources & Commodities Assets | -7.0% | 25.3% | -0.5 | 1.3 | -0.3 | 12.8% |
| S&P Global Large MidCap Commodity and Resources NR USD | -0.3% | 17.6% | -- | 1.0 | -0.1 | 0.0% |
| SSgA S&P Global LargeMidCap Natural Resources Index | -- | -- | -- | -- | -- | -- |
| S&P Global Large MidCap Commodity and Resources NR USD | -0.3% | 17.6% | -- | 1.0 | -0.1 | 0.0% |
| Infrastructure Assets | -- | -- | -- | -- | -- | -- |
| CPI+5% | 6.5% | 0.7% | -- | 1.0 | 8.4 | 0.0% |
| IFM Global Infrastructure (U.S.), L.P. | -- | -- | -- | -- | -- | -- |
| CPI+5% | 6.5% | 0.7% | -- | 1.0 | 8.4 | 0.0% |

Retirement System Detail

Domestic Equity Assets

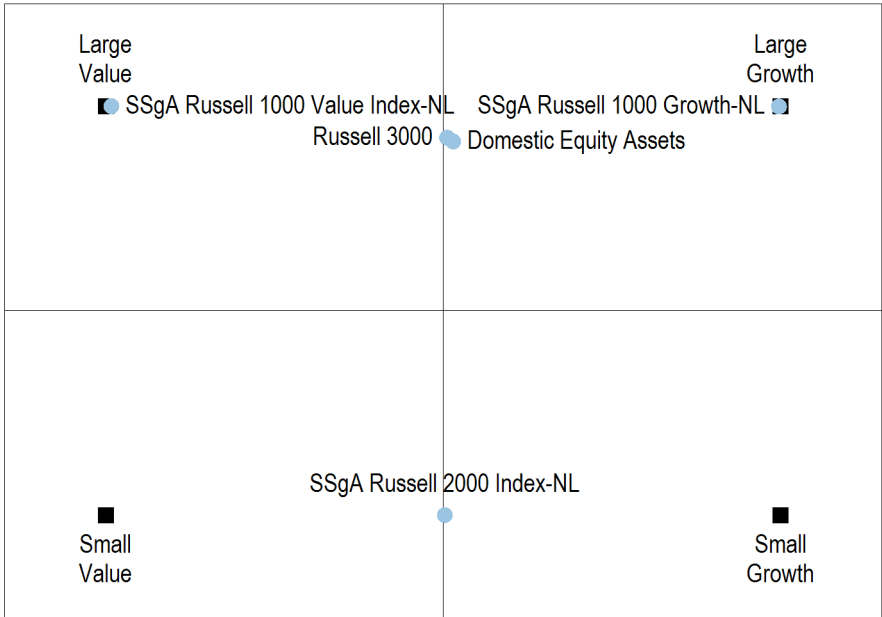
Domestic Equity Assets

As of September 30, 2019

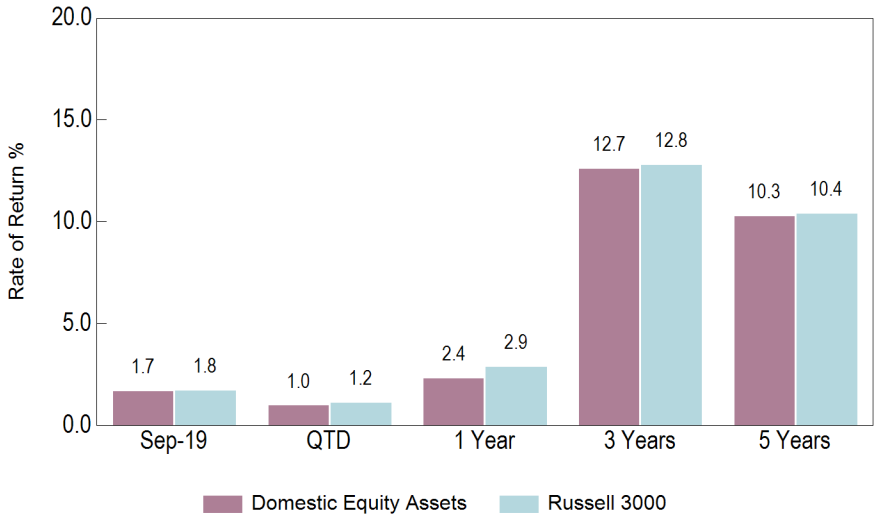
Asset Allocation on September 30, 2019

| | Actual | Actual |
|----------------------------------|---------------------|---------------|
| SSgA Russell 1000 Growth-NL | \$19,053,411 | 46.9% |
| SSgA Russell 1000 Value Index-NL | \$18,079,048 | 44.5% |
| SSgA Russell 2000 Index-NL | \$3,495,635 | 8.6% |
| Total | \$40,628,094 | 100.0% |

Domestic Equity Assets Style Map
3 Years Ending September 30, 2019



Return Summary
Ending September 30, 2019



As of September 30, 2019

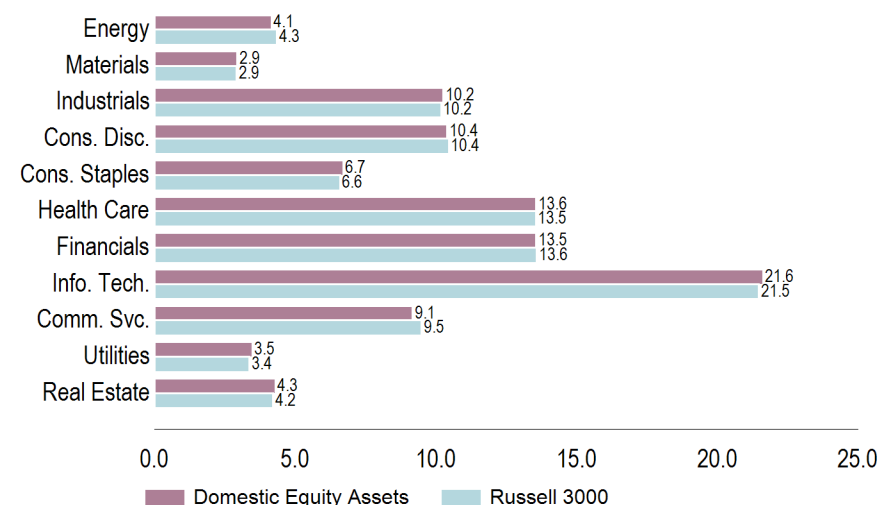
Domestic Equity Assets Characteristics

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|---------------------------------|--------------------|----------------|--------------------|
| Market Value | | | |
| Market Value (\$M) | 40.6 | -- | 38.2 |
| Number Of Holdings | 2987 | 2988 | 2748 |
| Characteristics | | | |
| Weighted Avg. Market Cap. (\$B) | 195.3 | 195.3 | 56.6 |
| Median Market Cap (\$B) | 1.9 | 1.6 | 1.7 |
| P/E Ratio | 20.7 | 20.5 | 18.6 |
| Yield | 1.9 | 1.9 | 2.0 |
| EPS Growth - 5 Yrs. | 13.3 | 13.5 | 8.4 |
| Price to Book | 3.5 | 3.5 | 2.5 |
| Beta (holdings; domestic) | 1.0 | 1.0 | 1.1 |

Top 10 Holdings

| | |
|------------------------|--------------|
| MICROSOFT | 3.6% |
| APPLE | 3.4% |
| AMAZON.COM | 2.4% |
| FACEBOOK CLASS A | 1.4% |
| BERKSHIRE HATHAWAY 'B' | 1.3% |
| ALPHABET 'C' | 1.3% |
| JP MORGAN CHASE & CO. | 1.2% |
| ALPHABET A | 1.2% |
| JOHNSON & JOHNSON | 1.1% |
| PROCTER & GAMBLE | 1.0% |
| Total | 18.1% |

Sector Allocation (%) vs Russell 3000



Sector Performance

| | Portfolio Q3-19 | Index Q3-19 |
|------------------------|--------------------|----------------|
| Energy | -8.83 | -7.36 |
| Materials | -0.58 | -0.68 |
| Industrials | 0.12 | 0.64 |
| Consumer Discretionary | 0.56 | 0.53 |
| Consumer Staples | 6.08 | 5.87 |
| Health Care | -1.47 | -3.33 |
| Financials | 2.05 | 1.86 |
| Information Technology | 2.02 | 2.56 |
| Communication Services | 0.73 | 1.80 |
| Utilities | 8.58 | 8.05 |
| Real Estate | 6.98 | 7.46 |



International Equity Assets

International Equity Assets

As of September 30, 2019

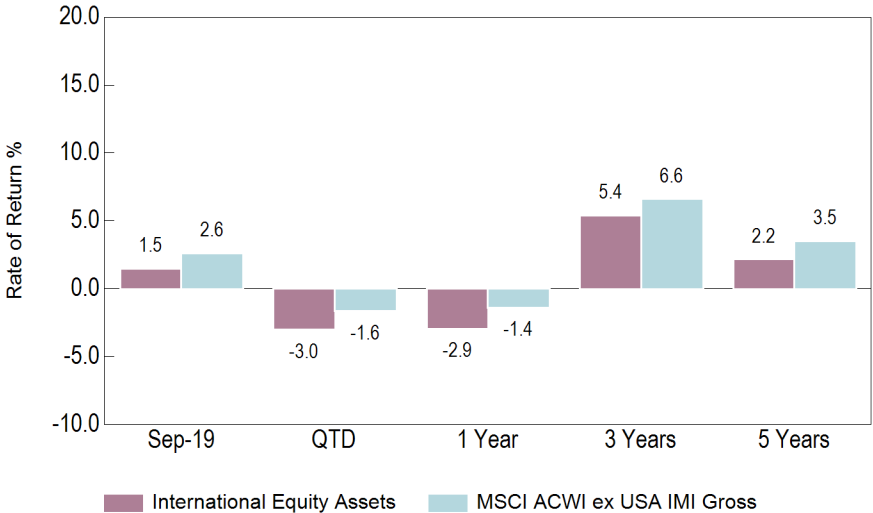
Asset Allocation on September 30, 2019

| | Actual | Actual |
|-----------------------------------|---------------------|---------------|
| GQG Partners Emerging Markets | \$7,564,760 | 25.8% |
| LMCG Emerging Markets | \$8,462,308 | 28.9% |
| SSgA MSCI EAFE Index-NL | \$7,915,662 | 27.0% |
| SSgA MSCI EAFE Small Cap Index-NL | \$5,384,861 | 18.4% |
| Total | \$29,327,591 | 100.0% |

International Equity Assets Style Map
3 Years Ending September 30, 2019



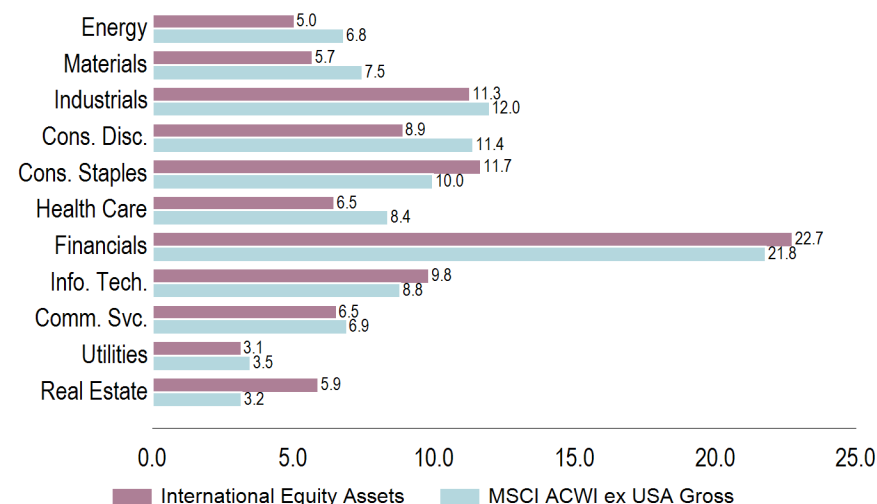
Return Summary
Ending September 30, 2019



Total International Equity Characteristics

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|---------------------------------|--------------------|----------------|--------------------|
| Market Value | | | |
| Market Value (\$M) | 29.3 | -- | 25.6 |
| Number Of Holdings | 3427 | 2206 | 3478 |
| Characteristics | | | |
| Weighted Avg. Market Cap. (\$B) | 50.8 | 64.0 | 47.3 |
| Median Market Cap (\$B) | 1.8 | 7.3 | 1.8 |
| P/E Ratio | 15.6 | 15.0 | 15.0 |
| Yield | 2.9 | 3.3 | 3.0 |
| EPS Growth - 5 Yrs. | 10.6 | 9.0 | 11.5 |
| Price to Book | 2.6 | 2.3 | 2.5 |
| Beta (holdings; domestic) | 0.9 | 1.0 | 1.0 |

Sector Allocation (%) vs MSCI ACWI ex USA Gross



Top 10 Holdings

| | |
|---|--------------|
| TENCENT HOLDINGS | 2.3% |
| HOUSING DEVELOPMENT FINANCE CORPORATION | 1.5% |
| AIA GROUP | 1.4% |
| UNILEVER | 1.3% |
| BANK CENTRAL ASIA | 1.3% |
| TAIWAN SEMICON.MNFG. | 1.2% |
| HDFC BANK ADR 1:3 | 1.2% |
| CASH - USD | 1.1% |
| ISHARES MSCI EMERGING MARKETS ETF | 1.1% |
| IRB BRASIL RESSEGUROS ON | 1.1% |
| Total | 13.4% |

Sector Performance

| | Portfolio Q3-19 | Index Q3-19 |
|------------------------|--------------------|----------------|
| Energy | -6.79 | -4.35 |
| Materials | -3.84 | -6.31 |
| Industrials | -5.27 | -2.53 |
| Consumer Discretionary | -0.91 | -0.80 |
| Consumer Staples | 0.11 | 1.48 |
| Health Care | 1.54 | 1.17 |
| Financials | -3.62 | -3.36 |
| Information Technology | 5.18 | 2.25 |
| Communication Services | -6.20 | -2.70 |
| Utilities | 0.49 | 1.36 |
| Real Estate | -3.72 | -2.94 |



International Equity Assets

As of September 30, 2019

Total International Equity Region Allocation

vs MSCI ACWI ex USA Gross

| Region | % of Total | % of Bench | % Diff |
|------------------------|---------------|---------------|-------------|
| North America ex U.S. | 0.0% | 7.0% | -6.9% |
| United States | 2.4% | 0.0% | 2.4% |
| Europe Ex U.K. | 22.6% | 30.7% | -8.2% |
| United Kingdom | 8.1% | 10.8% | -2.8% |
| Pacific Basin Ex Japan | 15.5% | 8.2% | 7.2% |
| Japan | 13.4% | 16.6% | -3.2% |
| Emerging Markets | 37.2% | 25.3% | 11.8% |
| Other | 0.9% | 1.4% | -0.5% |
| Total | 100.0% | 100.0% | 0.0% |

As of September 30, 2019

Total International Equity Country Allocation

vs MSCI ACWI ex USA Gross

| Country | % of Total | % of Bench | % Diff |
|----------------|------------|------------|--------|
| ARGENTINA | 0.0% | 0.0% | 0.0% |
| AUSTRALIA | 3.6% | 4.7% | -1.2% |
| AUSTRIA | 0.2% | 0.2% | 0.1% |
| BAHRAIN | 0.0% | 0.0% | 0.0% |
| BANGLADESH | 0.0% | 0.0% | 0.0% |
| BELGIUM | 0.7% | 0.7% | 0.0% |
| BRAZIL | 3.4% | 2.0% | 1.4% |
| CANADA | 0.0% | 7.0% | -6.9% |
| CHILE | 0.0% | 0.3% | -0.3% |
| CHINA | 6.6% | 8.6% | -2.0% |
| COLOMBIA | 0.0% | 0.1% | -0.1% |
| CROATIA | 0.0% | 0.0% | 0.0% |
| CZECH REPUBLIC | 0.0% | 0.0% | 0.0% |
| DENMARK | 0.8% | 1.2% | -0.3% |
| EGYPT | 0.0% | 0.0% | 0.0% |
| ESTONIA | 0.0% | 0.0% | 0.0% |
| FINLAND | 0.5% | 0.7% | -0.1% |
| FRANCE | 3.9% | 7.5% | -3.6% |
| GERMANY | 3.6% | 5.7% | -2.1% |
| GREECE | 0.0% | 0.1% | -0.1% |
| HONG KONG | 9.5% | 2.5% | 7.0% |
| HUNGARY | 0.3% | 0.1% | 0.3% |
| INDIA | 8.9% | 2.2% | 6.7% |
| INDONESIA | 2.4% | 0.5% | 1.8% |

International Equity Assets

As of September 30, 2019

| Country | % of Total | % of Bench | % Diff |
|-------------|------------|------------|--------|
| IRELAND | 0.2% | 0.4% | -0.1% |
| ISRAEL | 0.5% | 0.4% | 0.1% |
| ITALY | 1.4% | 1.6% | -0.2% |
| JAPAN | 13.4% | 16.6% | -3.2% |
| JORDAN | 0.0% | 0.0% | 0.0% |
| KAZAKHSTAN | 0.0% | 0.0% | 0.0% |
| KENYA | 0.0% | 0.0% | 0.0% |
| KOREA | 2.9% | 3.2% | -0.2% |
| KUWAIT | 0.0% | 0.0% | 0.0% |
| LEBANON | 0.0% | 0.0% | 0.0% |
| LITHUANIA | 0.0% | 0.0% | 0.0% |
| LUXEMBOURG | 0.1% | 0.0% | 0.1% |
| MALAYSIA | 0.2% | 0.5% | -0.3% |
| MAURITIUS | 0.0% | 0.0% | 0.0% |
| MEXICO | 0.7% | 0.6% | 0.1% |
| MOROCCO | 0.0% | 0.0% | 0.0% |
| NETHERLANDS | 3.6% | 2.5% | 1.1% |
| NEW ZEALAND | 0.3% | 0.2% | 0.1% |
| NIGERIA | 0.0% | 0.0% | 0.0% |
| NORWAY | 0.6% | 0.4% | 0.2% |
| OMAN | 0.0% | 0.0% | 0.0% |
| OTHER | 0.4% | 0.0% | 0.4% |
| PAKISTAN | 0.0% | 0.0% | 0.0% |
| PERU | 0.0% | 0.1% | -0.1% |
| PHILIPPINES | 0.2% | 0.3% | -0.1% |
| POLAND | 0.2% | 0.3% | -0.1% |
| PORTUGAL | 0.1% | 0.1% | 0.0% |

International Equity Assets

As of September 30, 2019

| Country | % of Total | % of Bench | % Diff |
|----------------------|---------------|---------------|-------------|
| QATAR | 0.0% | 0.3% | -0.3% |
| ROMANIA | 0.0% | 0.0% | 0.0% |
| RUSSIA | 2.4% | 1.0% | 1.4% |
| SAUDI ARABIA | 0.0% | 0.7% | -0.7% |
| SERBIA | 0.0% | 0.0% | 0.0% |
| SINGAPORE | 2.1% | 0.9% | 1.3% |
| SLOVENIA | 0.0% | 0.0% | 0.0% |
| SOUTH AFRICA | 1.9% | 1.4% | 0.5% |
| SPAIN | 1.3% | 1.9% | -0.6% |
| SRI LANKA | 0.0% | 0.0% | 0.0% |
| SWEDEN | 1.9% | 1.7% | 0.1% |
| SWITZERLAND | 3.6% | 6.2% | -2.6% |
| TAIWAN | 3.5% | 3.0% | 0.5% |
| THAILAND | 2.8% | 0.8% | 2.1% |
| TUNISIA | 0.0% | 0.0% | 0.0% |
| TURKEY | 0.6% | 0.1% | 0.4% |
| UNITED ARAB EMIRATES | 0.0% | 0.2% | -0.2% |
| UNITED KINGDOM | 8.1% | 10.8% | -2.8% |
| UNITED STATES | 2.4% | 0.0% | 2.4% |
| VIETNAM | 0.0% | 0.0% | 0.0% |
| Total | 100.0% | 100.0% | 0.0% |

Fixed Income Assets

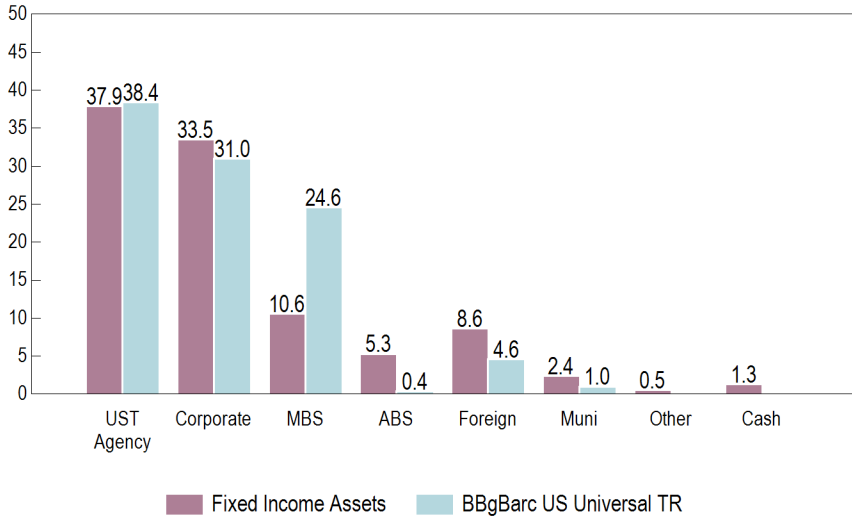
Fixed Income Assets

As of September 30, 2019

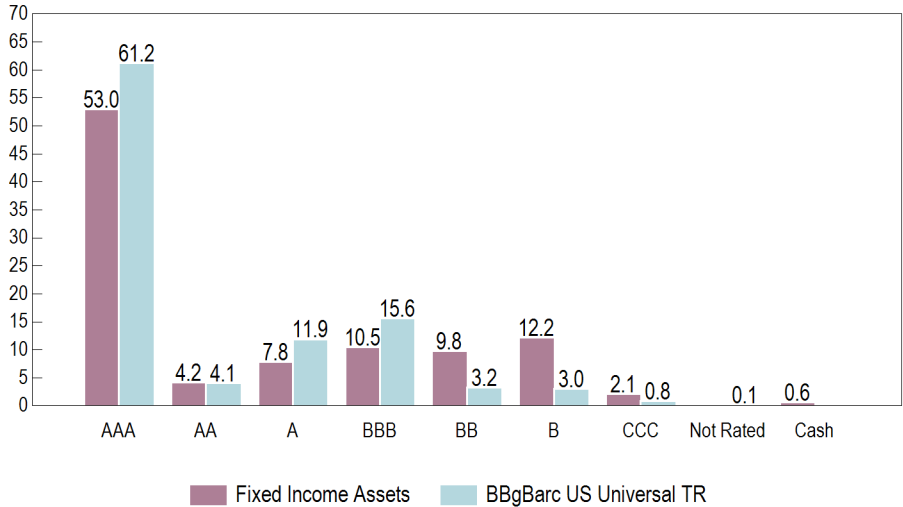
| Asset Allocation on September 30, 2019 | | |
|--|---------------------|---------------|
| | Actual | Actual |
| Aberdeen Emerging Markets Bond Fund | \$4,406,113 | 9.1% |
| Longfellow Investment Grade Bond | \$21,784,550 | 45.2% |
| Lord Abbett High Yield Core | \$8,189,559 | 17.0% |
| Metlife Emerging Markets Debt | \$4,076,494 | 8.5% |
| SSgA TIPS-NL | \$9,776,224 | 20.3% |
| Total | \$48,232,939 | 100.0% |

| Total Fixed Income Fixed Income Characteristics vs. BBgBarc US Universal TR | | | |
|---|-----------------|-------------|-----------------|
| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
| Fixed Income Characteristics | | | |
| Yield to Maturity | 3.23 | 2.68 | 3.39 |
| Average Duration | 4.32 | 6.13 | 4.15 |
| Average Quality | A | AA | A |
| Weighted Average Maturity | 7.75 | 12.18 | 7.70 |

Sector Allocation



Credit Quality Allocation



Portfolio Reviews

SSgA Russell 1000 Value Index-NL

As of September 30, 2019

Account Information

| | |
|-------------------|------------------------------------|
| Account Name | SSgA Russell 1000 Value Index-NL |
| Account Structure | Commingled Fund |
| Investment Style | Passive |
| Inception Date | 1/01/05 |
| Account Type | Equity |
| Benchmark | Russell 1000 Value |
| Universe | eV US Large Cap Value Equity Gross |

Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|---|---------|---------|----------|-----------|-----------|---------------|----------------|
| SSgA Russell 1000 Value Index-NL | 1.4 | 17.8 | 3.9 | 9.5 | 7.8 | 7.3 | Jan-05 |
| Russell 1000 Value | 1.4 | 17.8 | 4.0 | 9.4 | 7.8 | 7.2 | Jan-05 |
| eV US Large Cap Value Equity Gross Median | 1.8 | 17.7 | 2.6 | 10.5 | 8.2 | 8.1 | Jan-05 |
| eV US Large Cap Value Equity Gross Rank | 62 | 50 | 41 | 71 | 62 | 81 | Jan-05 |

Top 10 Holdings

| | |
|------------------------|--------------|
| BERKSHIRE HATHAWAY 'B' | 3.0% |
| JP MORGAN CHASE & CO. | 2.8% |
| EXXON MOBIL | 2.2% |
| JOHNSON & JOHNSON | 2.2% |
| PROCTER & GAMBLE | 2.1% |
| AT&T | 2.0% |
| VERIZON COMMUNICATIONS | 1.8% |
| BANK OF AMERICA | 1.8% |
| INTEL | 1.7% |
| WALT DISNEY | 1.7% |
| Total | 21.4% |

SSgA Russell 1000 Value Index-NL Characteristics

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|---------------------------------|-----------------|-------------|-----------------|
| Market Value | | | |
| Market Value (\$M) | 18.1 | -- | 16.9 |
| Number Of Holdings | 758 | 760 | 718 |
| Characteristics | | | |
| Weighted Avg. Market Cap. (\$B) | 115.1 | 114.2 | 122.9 |
| Median Market Cap (\$B) | 9.0 | 9.0 | 9.2 |
| P/E Ratio | 16.8 | 16.7 | 17.4 |
| Yield | 2.6 | 2.6 | 2.6 |
| EPS Growth - 5 Yrs. | 6.9 | 7.0 | 6.1 |
| Price to Book | 2.3 | 2.2 | 2.3 |
| Beta (holdings; domestic) | 1.0 | 1.0 | 0.9 |
| Sector Distribution | | | |
| Energy | 8.4 | 8.6 | 9.0 |
| Materials | 4.3 | 4.3 | 4.0 |
| Industrials | 9.5 | 9.5 | 8.0 |
| Consumer Discretionary | 6.0 | 6.0 | 5.3 |
| Consumer Staples | 9.2 | 8.9 | 7.8 |
| Health Care | 12.4 | 12.5 | 15.2 |
| Financials | 23.6 | 23.7 | 22.4 |
| Information Technology | 6.0 | 6.1 | 9.7 |
| Communication Services | 8.2 | 8.2 | 7.1 |
| Utilities | 7.0 | 6.7 | 6.4 |
| Real Estate | 5.4 | 5.4 | 5.1 |



SSgA Russell 1000 Growth-NL

As of September 30, 2019

Account Information

| | |
|-------------------|-------------------------------------|
| Account Name | SSgA Russell 1000 Growth-NL |
| Account Structure | Commingled Fund |
| Investment Style | Passive |
| Inception Date | 7/01/07 |
| Account Type | Equity |
| Benchmark | Russell 1000 Growth |
| Universe | eV US Large Cap Growth Equity Gross |

Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|---|------------|------------|-------------|--------------|--------------|------------------|-------------------|
| SSgA Russell 1000 Growth-NL | 1.5 | 23.3 | 3.6 | 16.8 | 13.4 | 10.1 | Jul-07 |
| <i>Russell 1000 Growth</i> | 1.5 | 23.3 | 3.7 | 16.9 | 13.4 | 10.1 | Jul-07 |
| <i>eV US Large Cap Growth Equity Gross Median</i> | 0.6 | 22.4 | 3.9 | 16.2 | 12.7 | 9.9 | Jul-07 |
| <i>eV US Large Cap Growth Equity Gross Rank</i> | 29 | 40 | 55 | 41 | 36 | 44 | Jul-07 |

Top 10 Holdings

| | |
|------------------|--------------|
| MICROSOFT | 7.5% |
| APPLE | 7.3% |
| AMAZON.COM | 5.1% |
| FACEBOOK CLASS A | 3.0% |
| ALPHABET 'C' | 2.7% |
| ALPHABET A | 2.6% |
| VISA 'A' | 2.1% |
| MASTERCARD | 1.7% |
| CISCO SYSTEMS | 1.5% |
| MERCK & COMPANY | 1.5% |
| Total | 35.1% |

SSgA Russell 1000 Growth-NL Characteristics

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|------------------------------------|--------------------|----------------|--------------------|
| Market Value | | | |
| Market Value (\$M) | 19.1 | -- | 17.8 |
| Number Of Holdings | 529 | 526 | 400 |
| Characteristics | | | |
| Weighted Avg. Market Cap. (\$B) | 303.8 | 300.6 | 5.8 |
| Median Market Cap (\$B) | 12.2 | 12.2 | 4.1 |
| P/E Ratio | 26.7 | 26.7 | 19.8 |
| Yield | 1.2 | 1.2 | 1.7 |
| EPS Growth - 5 Yrs. | 21.1 | 21.6 | 10.6 |
| Price to Book | 8.1 | 8.0 | 2.6 |
| Beta (holdings; domestic) | 1.0 | 1.1 | 1.2 |
| Sector Distribution | | | |
| Energy | 0.3 | 0.3 | 3.1 |
| Materials | 1.4 | 1.4 | 6.4 |
| Industrials | 10.0 | 9.9 | 15.9 |
| Consumer Discretionary | 14.4 | 14.6 | 12.3 |
| Consumer Staples | 4.9 | 4.8 | 2.7 |
| Health Care | 14.2 | 14.2 | 9.7 |
| Financials | 3.2 | 3.2 | 16.9 |
| Information Technology | 37.8 | 37.4 | 15.7 |
| Communication Services | 11.2 | 11.6 | 2.5 |
| Utilities | 0.0 | 0.0 | 4.7 |
| Real Estate | 2.6 | 2.5 | 10.1 |

As of September 30, 2019

Account Information

| | |
|-------------------|-----------------------------------|
| Account Name | SSgA Russell 2000 Index-NL |
| Account Structure | Commingled Fund |
| Investment Style | Passive |
| Inception Date | 8/01/10 |
| Account Type | Equity |
| Benchmark | Russell 2000 |
| Universe | eV US Small Cap Core Equity Gross |

Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|--|------------|------------|-------------|--------------|--------------|------------------|-------------------|
| SSgA Russell 2000 Index-NL | -2.4 | 14.2 | -8.8 | 8.3 | 8.3 | 11.3 | Aug-10 |
| Russell 2000 | -2.4 | 14.2 | -8.9 | 8.2 | 8.2 | 11.2 | Aug-10 |
| eV US Small Cap Core Equity Gross Median | -1.5 | 15.0 | -7.5 | 8.9 | 8.8 | 12.4 | Aug-10 |
| eV US Small Cap Core Equity Gross Rank | 70 | 54 | 60 | 60 | 61 | 79 | Aug-10 |

Top 10 Holdings

| | |
|------------------------|-------------|
| HAEMONETICS | 0.3% |
| NOVOCURE | 0.3% |
| TREX | 0.3% |
| SCIENCE APPS.INTL. | 0.3% |
| PORTLAND GEN.ELEC. | 0.3% |
| ONE GAS | 0.3% |
| FIRST INDL.REALTY TST. | 0.3% |
| MAXIMUS | 0.3% |
| SOUTHWEST GAS HOLDINGS | 0.3% |
| TELADOC HEALTH | 0.3% |
| Total | 2.8% |

SSgA Russell 2000 Index-NL Characteristics

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|---------------------------------|--------------------|----------------|--------------------|
| Market Value | | | |
| Market Value (\$M) | 3.5 | -- | 3.6 |
| Number Of Holdings | 1989 | 1991 | 1976 |
| Characteristics | | | |
| Weighted Avg. Market Cap. (\$B) | 2.2 | 2.2 | 2.6 |
| Median Market Cap (\$B) | 0.7 | 0.7 | 0.8 |
| P/E Ratio | 18.6 | 18.5 | 19.2 |
| Yield | 1.5 | 1.5 | 1.4 |
| EPS Growth - 5 Yrs. | 9.6 | 9.6 | 10.2 |
| Price to Book | 2.4 | 2.4 | 2.5 |
| Beta (holdings; domestic) | 1.2 | 1.2 | 1.2 |
| Sector Distribution | | | |
| Energy | 3.3 | 3.5 | 3.2 |
| Materials | 3.8 | 3.9 | 3.7 |
| Industrials | 16.2 | 16.0 | 14.9 |
| Consumer Discretionary | 11.1 | 11.1 | 11.5 |
| Consumer Staples | 3.0 | 2.9 | 2.6 |
| Health Care | 16.1 | 16.5 | 15.5 |
| Financials | 18.2 | 18.0 | 17.3 |
| Information Technology | 13.4 | 13.6 | 15.1 |
| Communication Services | 2.5 | 2.5 | 3.0 |
| Utilities | 4.1 | 3.9 | 3.8 |
| Real Estate | 8.2 | 8.0 | 7.4 |

As of September 30, 2019

Account Information

| | |
|-------------------|---------------------------|
| Account Name | SSgA MSCI EAFE Index-NL |
| Account Structure | Commingled Fund |
| Investment Style | Passive |
| Inception Date | 8/01/10 |
| Account Type | Equity |
| Benchmark | MSCI EAFE |
| Universe | eV EAFE Core Equity Gross |

Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|----------------------------------|---------|---------|----------|-----------|-----------|---------------|----------------|
| SSgA MSCI EAFE Index-NL | -1.0 | 13.2 | -1.0 | 6.9 | 3.6 | 6.0 | Aug-10 |
| MSCI EAFE | -1.1 | 12.8 | -1.3 | 6.5 | 3.3 | 5.7 | Aug-10 |
| eV EAFE Core Equity Gross Median | -1.3 | 12.6 | -3.5 | 6.3 | 4.5 | 7.4 | Aug-10 |
| eV EAFE Core Equity Gross Rank | 40 | 40 | 27 | 39 | 73 | 84 | Aug-10 |

Top 10 Holdings

| | |
|---------------------|--------------|
| NESTLE 'R' | 2.4% |
| ROCHE HOLDING | 1.5% |
| NOVARTIS 'R' | 1.3% |
| HSBC HOLDINGS | 1.1% |
| TOYOTA MOTOR | 1.1% |
| BP | 0.9% |
| ROYAL DUTCH SHELL A | 0.9% |
| TOTAL | 0.9% |
| ASTRAZENECA | 0.8% |
| AIA GROUP | 0.8% |
| Total | 11.7% |

SSgA MSCI EAFE Index-NL Characteristics

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|---------------------------------|-----------------|-------------|-----------------|
| Market Value | | | |
| Market Value (\$M) | 7.9 | -- | 5.5 |
| Number Of Holdings | 948 | 922 | 955 |
| Characteristics | | | |
| Weighted Avg. Market Cap. (\$B) | 60.2 | 59.7 | 61.1 |
| Median Market Cap (\$B) | 9.8 | 9.9 | 10.0 |
| P/E Ratio | 15.9 | 15.8 | 15.5 |
| Yield | 3.3 | 3.3 | 3.3 |
| EPS Growth - 5 Yrs. | 7.0 | 7.0 | 7.9 |
| Price to Book | 2.3 | 2.3 | 2.3 |
| Beta (holdings; domestic) | 1.0 | 1.0 | 1.0 |
| Sector Distribution | | | |
| Energy | 5.1 | 5.1 | 5.3 |
| Materials | 7.0 | 7.2 | 7.2 |
| Industrials | 14.6 | 14.8 | 14.4 |
| Consumer Discretionary | 11.2 | 11.4 | 10.8 |
| Consumer Staples | 11.9 | 11.8 | 11.3 |
| Health Care | 11.5 | 11.3 | 10.8 |
| Financials | 18.5 | 18.8 | 18.6 |
| Information Technology | 6.7 | 6.8 | 6.5 |
| Communication Services | 5.2 | 5.4 | 5.2 |
| Utilities | 3.8 | 3.7 | 3.6 |
| Real Estate | 3.6 | 3.5 | 3.5 |

SSgA MSCI EAFE Small Cap Index-NL

As of September 30, 2019

Account Information

| | |
|-------------------|-----------------------------------|
| Account Name | SSgA MSCI EAFE Small Cap Index-NL |
| Account Structure | Commingled Fund |
| Investment Style | Passive |
| Inception Date | 8/01/10 |
| Account Type | Equity |
| Benchmark | MSCI EAFE Small Cap |
| Universe | eV EAFE Small Cap Core Gross |

Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|-------------------------------------|------------|------------|-------------|--------------|--------------|------------------|-------------------|
| SSgA MSCI EAFE Small Cap Index-NL | -0.4 | 12.2 | -5.7 | 6.2 | 6.3 | 8.5 | Aug-10 |
| MSCI EAFE Small Cap | -0.4 | 12.1 | -5.9 | 5.9 | 6.0 | 8.2 | Aug-10 |
| eV EAFE Small Cap Core Gross Median | -1.6 | 11.5 | -7.1 | 5.9 | 6.2 | 10.0 | Aug-10 |
| eV EAFE Small Cap Core Gross Rank | 17 | 42 | 32 | 45 | 50 | 78 | Aug-10 |

Top 10 Holdings

| | |
|-------------------|-------------|
| LEG IMMOBILIEN | 0.3% |
| LOGITECH 'R' | 0.3% |
| SCOUT24 (XET) | 0.3% |
| SMITH (DS) | 0.3% |
| RIGHTMOVE | 0.3% |
| HISCOX DI | 0.3% |
| INTERXION HOLDING | 0.3% |
| ORIX JREIT | 0.3% |
| CASTELLUM | 0.2% |
| ORPEA | 0.2% |
| Total | 2.7% |

SSgA MSCI EAFE Small Cap Index-NL Characteristics

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|---------------------------------|--------------------|----------------|--------------------|
| Market Value | | | |
| Market Value (\$M) | 5.4 | -- | 4.2 |
| Number Of Holdings | 2349 | 2334 | 2360 |
| Characteristics | | | |
| Weighted Avg. Market Cap. (\$B) | 2.6 | 2.5 | 2.5 |
| Median Market Cap (\$B) | 1.0 | 1.0 | 1.0 |
| P/E Ratio | 15.7 | 15.6 | 15.1 |
| Yield | 2.7 | 2.9 | 2.8 |
| EPS Growth - 5 Yrs. | 11.3 | 11.2 | 12.5 |
| Price to Book | 2.1 | 2.1 | 2.1 |
| Beta (holdings; domestic) | 0.9 | 0.9 | 0.9 |
| Sector Distribution | | | |
| Energy | 2.5 | 2.7 | 2.7 |
| Materials | 7.9 | 8.1 | 8.6 |
| Industrials | 20.9 | 21.3 | 21.4 |
| Consumer Discretionary | 12.6 | 12.7 | 12.4 |
| Consumer Staples | 6.5 | 6.4 | 6.3 |
| Health Care | 7.3 | 7.4 | 7.5 |
| Financials | 10.6 | 10.5 | 11.0 |
| Information Technology | 9.7 | 9.7 | 9.5 |
| Communication Services | 5.3 | 5.2 | 5.2 |
| Utilities | 2.5 | 2.4 | 2.4 |
| Real Estate | 14.0 | 13.5 | 12.9 |

LMCG Emerging Markets

As of September 30, 2019

Account Information

| | |
|-------------------|------------------------|
| Account Name | LMCG Emerging Markets |
| Account Structure | Commingled Fund |
| Investment Style | Active |
| Inception Date | 8/01/15 |
| Account Type | Equity |
| Benchmark | MSCI Emerging Markets |
| Universe | eV Emg Mkts Equity Net |

Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|-------------------------------|---------|---------|----------|-----------|-----------|---------------|----------------|
| LMCG Emerging Markets | -5.0 | 2.6 | -6.7 | 3.0 | -- | 2.3 | Aug-15 |
| MSCI Emerging Markets | -4.2 | 5.9 | -2.0 | 6.0 | 2.3 | 5.0 | Aug-15 |
| eV Emg Mkts Equity Net Median | -3.8 | 7.7 | -0.6 | 5.7 | 2.5 | 5.0 | Aug-15 |
| eV Emg Mkts Equity Net Rank | 82 | 91 | 97 | 89 | -- | 94 | Aug-15 |

Top 10 Holdings

| | |
|-----------------------------------|--------------|
| TENCENT HOLDINGS | 5.6% |
| TAIWAN SEMICON.MNFG. | 4.8% |
| ISHARES MSCI EMERGING MARKETS ETF | 4.2% |
| IRB BRASIL RESSEGUROS ON | 4.2% |
| SAMSUNG ELECTRONICS | 4.0% |
| ANTA SPORTS PRODUCTS | 1.6% |
| CHINA CON.BANK 'H' | 1.5% |
| HINDUSTAN UNILEVER | 1.4% |
| IMPALA PLATINUM | 1.4% |
| LUKOIL OAO SPN.ADR 1:1 | 1.4% |
| Total | 30.0% |

LMCG Emerging Markets Characteristics

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|---------------------------------|-----------------|-------------|-----------------|
| Market Value | | | |
| Market Value (\$M) | 8.5 | -- | 7.9 |
| Number Of Holdings | 94 | 1194 | 125 |
| Characteristics | | | |
| Weighted Avg. Market Cap. (\$B) | 60.8 | 80.2 | 52.8 |
| Median Market Cap (\$B) | 6.3 | 5.3 | 4.7 |
| P/E Ratio | 11.2 | 13.6 | 11.2 |
| Yield | 3.5 | 3.1 | 3.6 |
| EPS Growth - 5 Yrs. | 13.0 | 12.9 | 13.6 |
| Price to Book | 2.8 | 2.4 | 2.3 |
| Beta (holdings; domestic) | 1.0 | 1.1 | 1.0 |
| Sector Distribution | | | |
| Energy | 6.9 | 7.7 | 6.4 |
| Materials | 6.6 | 7.4 | 6.9 |
| Industrials | 4.2 | 5.4 | 7.7 |
| Consumer Discretionary | 12.0 | 13.3 | 11.0 |
| Consumer Staples | 5.8 | 6.6 | 7.3 |
| Health Care | 3.1 | 2.7 | 2.4 |
| Financials | 26.6 | 24.9 | 18.8 |
| Information Technology | 15.0 | 14.7 | 15.5 |
| Communication Services | 11.1 | 11.6 | 12.6 |
| Utilities | 0.0 | 2.8 | 1.3 |
| Real Estate | 3.2 | 2.9 | 6.0 |



As of September 30, 2019

Account Information

| | |
|-------------------|--------------------------------------|
| Account Name | GQG Partners Emerging Markets |
| Account Structure | Commingled Fund |
| Investment Style | Active |
| Inception Date | 3/31/19 |
| Account Type | Non-US Stock Emerging |
| Benchmark | MSCI Emerging Markets |
| Universe | eV Emg Mkts Equity Gross |

Portfolio Performance Summary

| | QTD | YTD | 1 Yr | 3 Yrs | 5 Yrs | Inception | Inception |
|---------------------------------|------|-----|------|-------|-------|-----------|-----------|
| | (%) | (%) | (%) | (%) | (%) | (%) | Date |
| GQG Partners Emerging Markets | -3.8 | -- | -- | -- | -- | 3.3 | Mar-19 |
| MSCI Emerging Markets | -4.2 | 5.9 | -2.0 | 6.0 | 2.3 | -3.7 | Mar-19 |
| eV Emg Mkts Equity Gross Median | -3.8 | 7.9 | 0.0 | 6.3 | 3.4 | -2.3 | Mar-19 |
| eV Emg Mkts Equity Gross Rank | 51 | -- | -- | -- | -- | 3 | Mar-19 |

Top 10 Holdings

| | |
|---|--------------|
| HOUSING DEVELOPMENT FINANCE CORPORATION | 5.5% |
| BANK CENTRAL ASIA | 4.9% |
| HDFC BANK ADR 1:3 | 4.5% |
| UNILEVER | 4.3% |
| AIA GROUP | 4.2% |
| CASH - USD | 4.0% |
| LINK RL.EST.INV.TST. | 3.4% |
| TENCENT HOLDINGS | 3.2% |
| CHINA TOWER 'H' | 3.0% |
| INFOSYS ADR 1:1 | 3.0% |
| Total | 40.1% |

GQG Partners Emerging Markets Characteristics

| | Portfolio | Index |
|---------------------------------|-----------|-------|
| | Q3-19 | Q3-19 |
| Market Value | | |
| Market Value (\$M) | 7.6 | -- |
| Number Of Holdings | 56 | 1194 |
| Characteristics | | |
| Weighted Avg. Market Cap. (\$B) | 68.5 | 80.2 |
| Median Market Cap (\$B) | 34.6 | 5.3 |
| P/E Ratio | 21.3 | 13.6 |
| Yield | 2.0 | 3.1 |
| EPS Growth - 5 Yrs. | 11.9 | 12.9 |
| Price to Book | 3.5 | 2.4 |
| Beta (holdings; domestic) | 0.9 | 1.1 |
| Sector Distribution | | |
| Energy | 5.1 | 7.7 |
| Materials | 1.7 | 7.4 |
| Industrials | 7.2 | 5.4 |
| Consumer Discretionary | 0.7 | 13.3 |
| Consumer Staples | 20.8 | 6.6 |
| Health Care | 3.6 | 2.7 |
| Financials | 32.6 | 24.9 |
| Information Technology | 8.3 | 14.7 |
| Communication Services | 4.5 | 11.6 |
| Utilities | 5.9 | 2.8 |
| Real Estate | 4.9 | 2.9 |

Account Information

| | |
|-------------------|---|
| Account Name | Longfellow Investment Grade Bond |
| Account Structure | Separate Account |
| Investment Style | Active |
| Inception Date | 9/01/17 |
| Account Type | Fixed |
| Benchmark | BBgBarc US Aggregate TR |
| Universe | eV US Core Fixed Inc Gross |

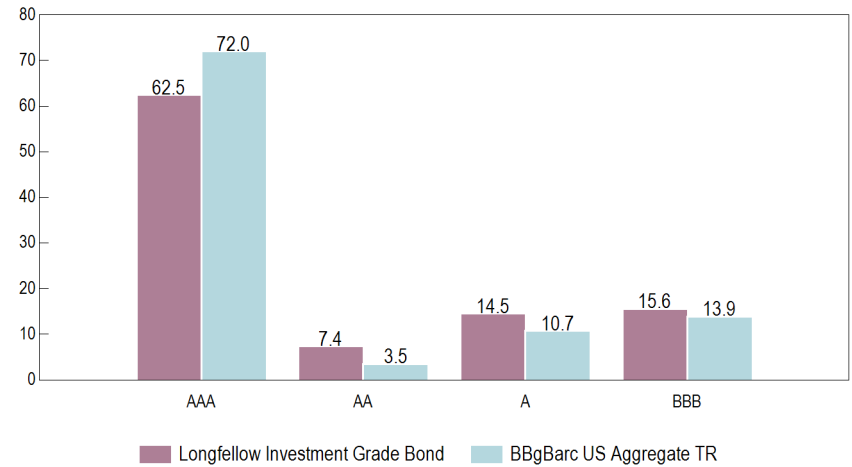
Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|-----------------------------------|---------|---------|----------|-----------|-----------|---------------|----------------|
| Longfellow Investment Grade Bond | 2.3 | 8.8 | 10.0 | -- | -- | 4.0 | Sep-17 |
| BBgBarc US Aggregate TR | 2.3 | 8.5 | 10.3 | 2.9 | 3.4 | 4.0 | Sep-17 |
| eV US Core Fixed Inc Gross Median | 2.3 | 9.0 | 10.5 | 3.3 | 3.7 | 4.3 | Sep-17 |
| eV US Core Fixed Inc Gross Rank | 66 | 66 | 78 | -- | -- | 77 | Sep-17 |

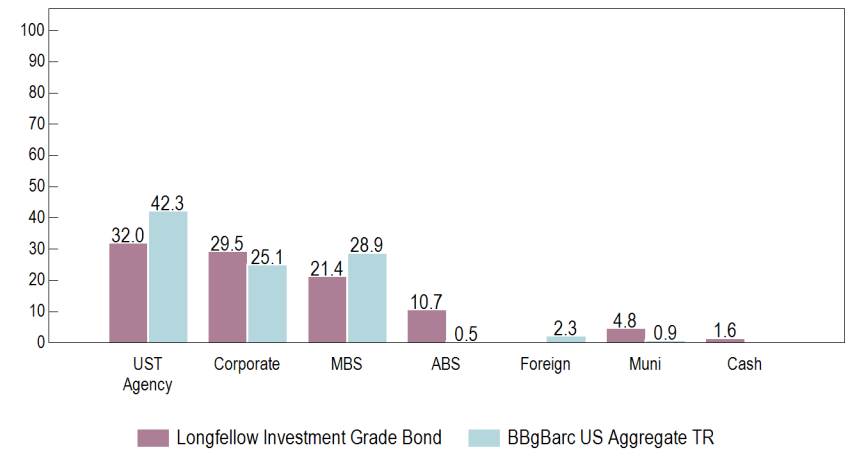
Longfellow Investment Grade Bond Characteristics vs. BBgBarc US Aggregate TR

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|-------------------------------------|-----------------|-------------|-----------------|
| Fixed Income Characteristics | | | |
| Yield to Maturity | 2.5 | 2.3 | 2.7 |
| Average Duration | 5.7 | 6.3 | 5.7 |
| Average Quality | AA | AA | AA |
| Weighted Average Maturity | 7.5 | 13.1 | 7.4 |

Credit Quality Allocation



Sector Allocation



Account Information

| | |
|-------------------|----------------------------------|
| Account Name | Lord Abbett High Yield Core |
| Account Structure | Commingled Fund |
| Investment Style | Active |
| Inception Date | 7/01/19 |
| Account Type | Fixed |
| Benchmark | BBgBarc US High Yield TR |
| Universe | eV US High Yield Fixed Inc Gross |

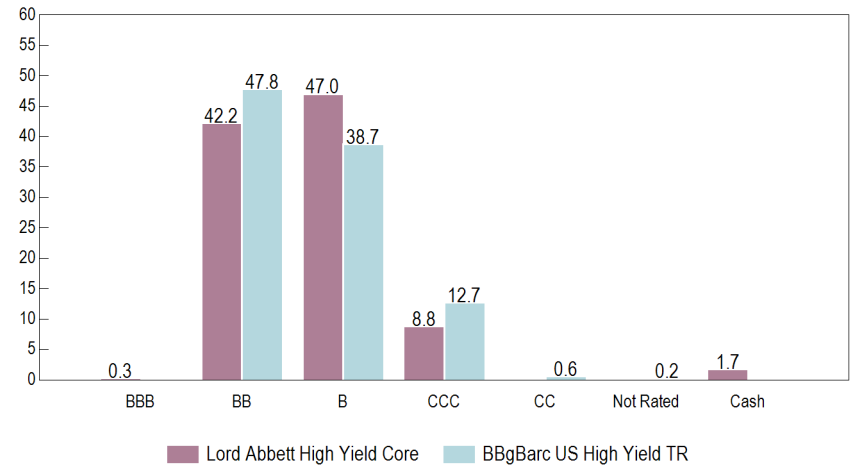
Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|---|---------|---------|----------|-----------|-----------|---------------|----------------|
| Lord Abbett High Yield Core | 0.9 | -- | -- | -- | -- | 0.9 | Jul-19 |
| BBgBarc US High Yield TR | 1.3 | 11.4 | 6.4 | 6.1 | 5.4 | 1.3 | Jul-19 |
| eV US High Yield Fixed Inc Gross Median | 1.5 | 11.5 | 6.6 | 6.1 | 5.4 | 1.5 | Jul-19 |
| eV US High Yield Fixed Inc Gross Rank | 85 | -- | -- | -- | -- | 85 | Jul-19 |

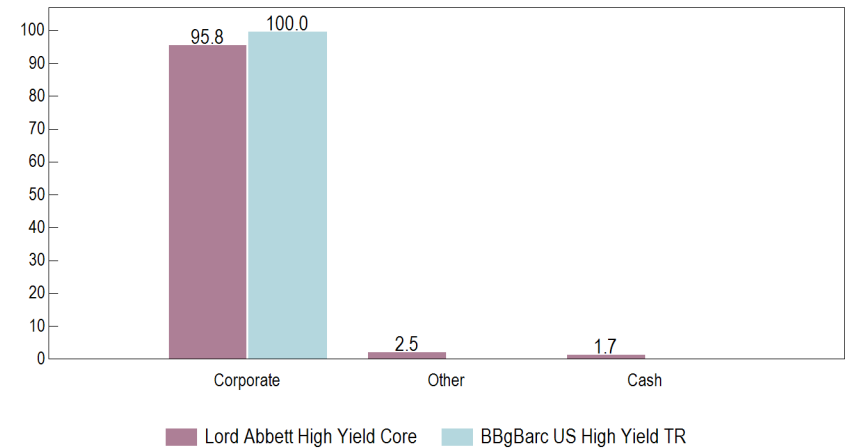
Lord Abbett High Yield Core Characteristics vs. BBgBarc US High Yield TR

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|-------------------------------------|-----------------|-------------|-----------------|
| Fixed Income Characteristics | | | |
| Yield to Maturity | 5.6 | 6.3 | -- |
| Average Duration | 3.1 | 4.5 | -- |
| Average Quality | B | B | -- |
| Weighted Average Maturity | 6.0 | 5.8 | -- |

Credit Quality Allocation



Sector Allocation



Account Information

| | |
|-------------------|---|
| Account Name | SSgA TIPS-NL |
| Account Structure | Commingled Fund |
| Investment Style | Passive |
| Inception Date | 7/01/07 |
| Account Type | Fixed |
| Benchmark | BBgBarc US TIPS TR |
| Universe | eV US TIPS / Inflation Fixed Inc Gross |

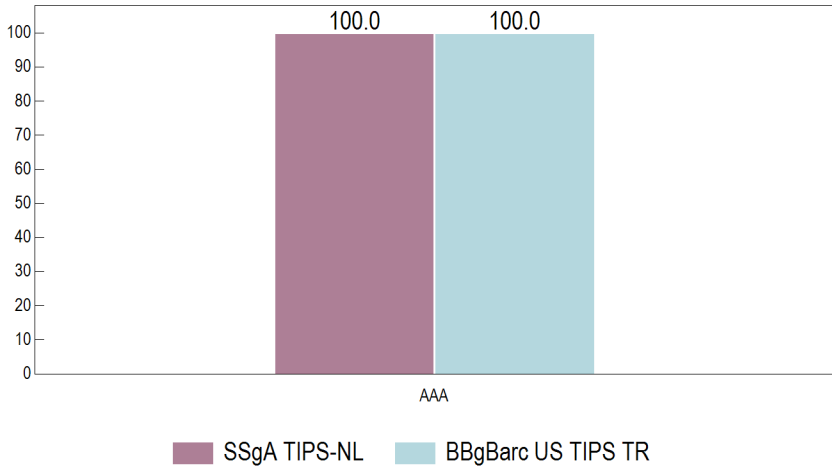
Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|---|---------|---------|----------|-----------|-----------|---------------|----------------|
| SSgA TIPS-NL | 1.4 | 7.6 | 7.1 | 2.2 | 2.4 | 4.1 | Jul-07 |
| BBgBarc US TIPS TR | 1.3 | 7.6 | 7.1 | 2.2 | 2.4 | 4.2 | Jul-07 |
| eV US TIPS / Inflation Fixed Inc Gross Median | 1.2 | 7.6 | 7.0 | 2.4 | 2.6 | 4.3 | Jul-07 |
| eV US TIPS / Inflation Fixed Inc Gross Rank | 35 | 60 | 36 | 77 | 67 | 64 | Jul-07 |

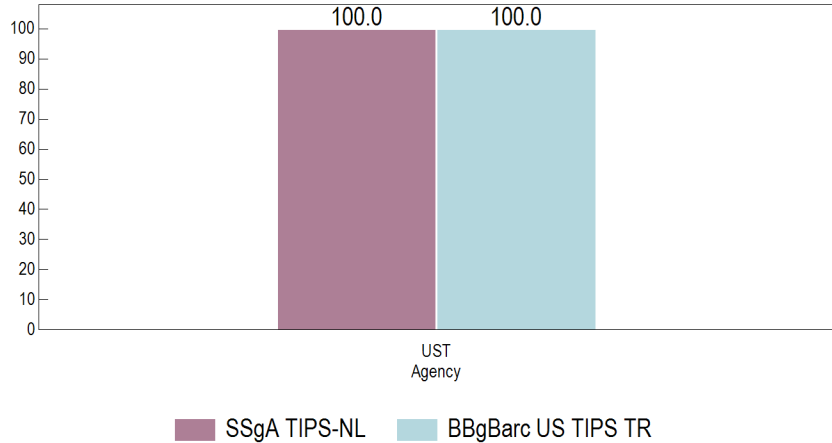
SSgA TIPS-NL Characteristics vs. BBgBarc US TIPS TR

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|-------------------------------------|-----------------|-------------|-----------------|
| Fixed Income Characteristics | | | |
| Yield to Maturity | 1.9 | 0.3 | 2.1 |
| Average Duration | 1.2 | 7.8 | 1.1 |
| Average Quality | AAA | AAA | AAA |
| Weighted Average Maturity | 8.4 | 8.4 | 8.1 |

Credit Quality Allocation



Sector Allocation



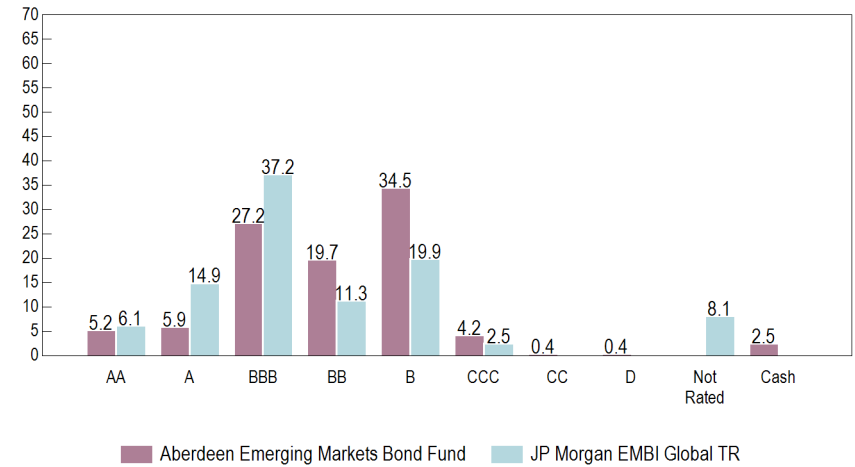
Account Information

| | |
|-------------------|--|
| Account Name | Aberdeen Emerging Markets Bond Fund |
| Account Structure | Commingled Fund |
| Investment Style | Active |
| Inception Date | 12/01/16 |
| Account Type | Fixed |
| Benchmark | JP Morgan EMBI Global Diversified |
| Universe | eV Emg Mkt Fixed Inc Unhedged Gross |

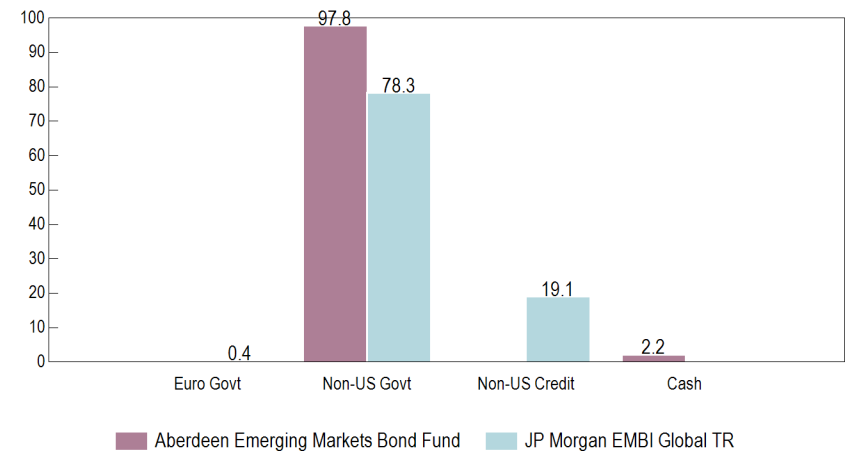
Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|--|---------|---------|----------|-----------|-----------|---------------|----------------|
| Aberdeen Emerging Markets Bond Fund | 1.0 | 12.7 | 11.3 | -- | -- | 6.2 | Dec-16 |
| JP Morgan EMBI Global Diversified | 1.5 | 13.0 | 11.6 | 4.6 | 5.7 | 6.9 | Dec-16 |
| JP Morgan GBI EM Global Diversified TR USD | -0.8 | 7.9 | 10.1 | 3.1 | 0.6 | 6.2 | Dec-16 |
| eV Emg Mkt Fixed Inc Unhedged Gross Median | -0.1 | 10.3 | 10.2 | 4.5 | 4.1 | 6.7 | Dec-16 |
| eV Emg Mkt Fixed Inc Unhedged Gross Rank | 28 | 15 | 24 | -- | -- | 65 | Dec-16 |

Credit Quality Allocation



Global Sector Allocation



Aberdeen Emerging Markets Bond Fund Fixed Income Characteristics vs. JP Morgan EMBI Global TR

| | Portfolio Q3-19 | Index Q3-19 | Portfolio Q2-19 |
|-------------------------------------|-----------------|-------------|-----------------|
| Fixed Income Characteristics | | | |
| Yield to Maturity | 5.4 | 5.2 | 5.9 |
| Average Duration | 6.9 | 7.6 | 6.6 |
| Average Quality | BB | BBB | BB |
| Weighted Average Maturity | 11.0 | 12.4 | 10.8 |



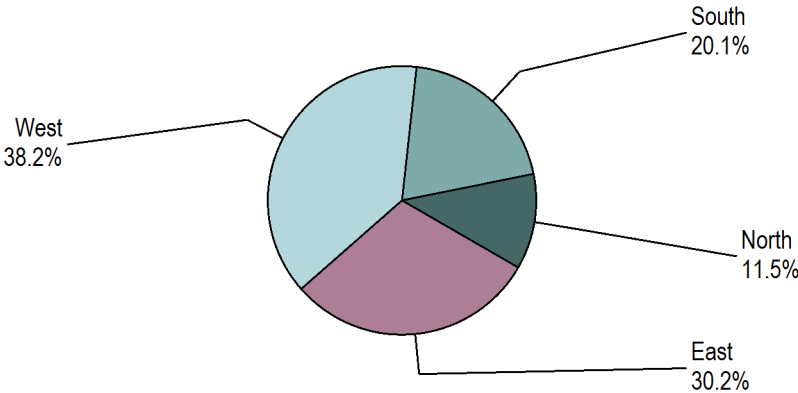
Account Information

| | |
|-------------------|----------------------------|
| Account Name | Intercontinental U.S. REIF |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 10/01/14 |
| Account Type | Real Estate |
| Benchmark | NCREIF ODCE (net) |
| Universe | |

Portfolio Performance Summary

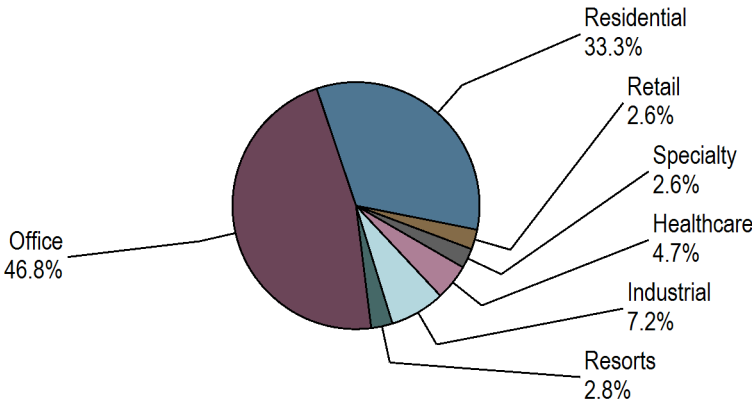
| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|----------------------------|---------|---------|----------|-----------|-----------|---------------|----------------|
| Intercontinental U.S. REIF | 2.5 | 6.1 | 8.3 | 10.0 | 11.3 | 11.3 | Oct-14 |
| NCREIF ODCE (net) | 1.1 | 3.1 | 4.6 | 6.3 | 8.4 | 8.4 | Oct-14 |

Geographic Diversification



North represents Midwest.

Property Type Allocation



Note: As of September 30, 2019, the number of investments is 125.



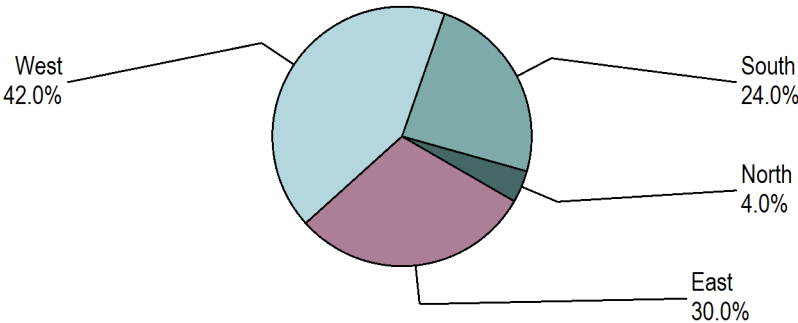
Account Information

| | |
|-------------------|-------------------------|
| Account Name | AEW Core Property Trust |
| Account Structure | Commingled Fund |
| Investment Style | Active |
| Inception Date | 10/01/14 |
| Account Type | Real Estate |
| Benchmark | NCREIF ODCE (net) |
| Universe | |

Portfolio Performance Summary

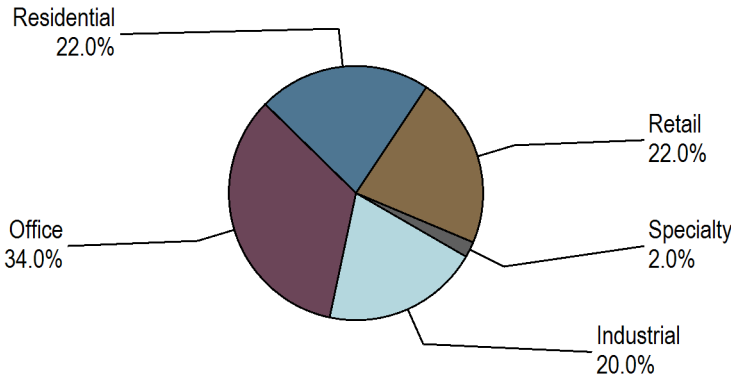
| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|-------------------------|---------|---------|----------|-----------|-----------|---------------|----------------|
| AEW Core Property Trust | 1.3 | 4.1 | 5.7 | 6.6 | 8.6 | 8.6 | Oct-14 |
| NCREIF ODCE (net) | 1.1 | 3.1 | 4.6 | 6.3 | 8.4 | 8.4 | Oct-14 |

Geographic Diversification



North represents Midwest.

Property Type Allocation



Note: As of September 30, 2019, the number of investments is 83.



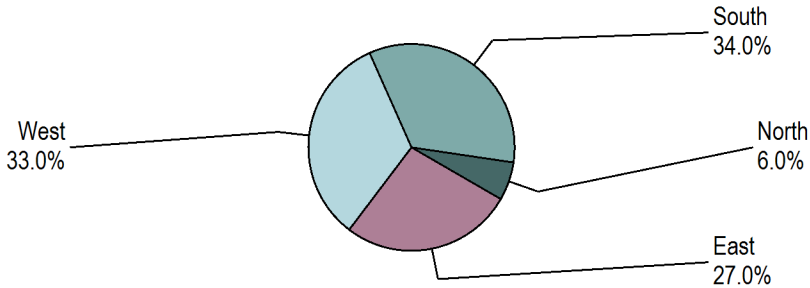
Account Information

| | |
|-------------------|-----------------------------|
| Account Name | TA Associates Realty Fund X |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 4/01/13 |
| Account Type | Real Estate |
| Benchmark | NCREIF ODCE (net) |
| Universe | |

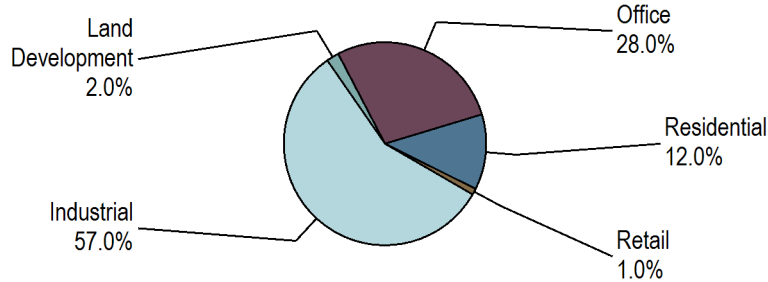
Non-Marketable Securities Overview
As of September 30, 2019

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|--------------|-----------------------------|--------------|--------------------|---------------------|--------------------------|------------------|-------------------------|---------------------|
| Real Estate | TA Associates Realty Fund X | 2013 | \$3,000,000 | \$3,005,227 | \$4,288,200 | \$534,985 | \$4,823,185 | -\$5,227 |
| | Total Account | | \$3,000,000 | \$3,005,227 | \$4,288,200 | \$534,985 | \$4,823,185 | -\$5,227 |

Geographic Diversification



Property Type Allocation



Investment Strategy:

TA Associates Realty Fund X uses a value-added strategy to create a diversified portfolio of direct real estate investments. The strategy is anticipated to target under-leased office, industrial, multifamily, and retail assets that are expected to be well-located, functional buildings with strong net operating income (NOI) growth potential. Geographically, the fund will target over 35 U.S. markets with broad regional diversification targets of 25% to 40% in the west, 20% to 35% in the east, 20% to 30% in the south, and 10% to 20% in the Midwest. The fund will target 35% leverage, with a maximum of 50%. Most value-added improvements include redevelopment, repositioning, retenanting, or recapitalization.

Note: As of June 30, 2019, the number of investments is 53 and Net IRR is 13.27%.



As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | Ascent Venture Partners - Fund II |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 9/01/01 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview by Account Type

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|-----------------------------------|--------------|------------------|---------------------|--------------------------|----------------|-------------------------|---------------------|
| Private Equity | Ascent Venture Partners - Fund II | 1995 | \$500,000 | \$484,254 | \$1,607,392 | \$5,720 | \$1,613,112 | \$15,746 |
| | Total Account | | \$500,000 | \$484,254 | \$1,607,392 | \$5,720 | \$1,613,112 | \$15,746 |

Investment Strategy:

Ascent Venture Partners seeks to build private equity portfolios that are balanced with respect to industry (high and low technology ventures), and diverse with respect to company growth stage (from seed through buyout and re capitalization). Ascent favors proven management teams and reasonable valuations. Ascent has shifted their focus to liquidating the remaining investments in the partnership.

Note: As of June 30, 2019, the Net IRR is 27%.



As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | Ascent Venture Partners - Fund III |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 6/01/01 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview by Account Type

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|------------------------------------|--------------|--------------------|---------------------|--------------------------|-----------------|-------------------------|---------------------|
| Private Equity | Ascent Venture Partners - Fund III | 1999 | \$1,500,000 | \$1,395,000 | \$1,697,063 | \$57,093 | \$1,754,156 | \$105,000 |
| | Total Account | | \$1,500,000 | \$1,395,000 | \$1,697,063 | \$57,093 | \$1,754,156 | \$105,000 |

Investment Strategy:

Ascent Venture Partners seeks to build private equity portfolios that are balanced with respect to industry (high and low technology ventures), and diverse with respects to company growth stage (from seed through buyout and re-capitalization). Ascent favors proven management teams and reasonable valuations. Ascent has shifted their focus to liquidating the remaining investments in the partnership.

Note: As of June 30, 2019, the Net IRR is 3.7%.



As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | Ascent Venture Partners - Fund IV |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 3/19/04 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview by Account Type

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|-----------------------------------|--------------|--------------------|---------------------|--------------------------|-----------------|-------------------------|---------------------|
| Private Equity | Ascent Venture Partners - Fund IV | 2004 | \$1,000,000 | \$1,000,000 | \$155,588 | \$15,996 | \$171,584 | \$0 |
| | Total Account | | \$1,000,000 | \$1,000,000 | \$155,588 | \$15,996 | \$171,584 | \$0 |

Investment Strategy:

Located in Boston, Ascent Venture Partners (formerly known as Pioneer Capital) was formed in 1999, after Landmark Partners purchased Pioneer's interest. Ascent focuses primarily on high growth companies in the information technology sector. Ascent is an active investor, typically taking a board seat in portfolio companies. As a result, Ascent has focused its investments in the Eastern United States.

Note: As of June 30, 2019, the Net IRR is -2.11%.



As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | Ascent Venture Partners - Fund V |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 9/22/08 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview by Account Type

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|----------------------------------|--------------|--------------------|---------------------|--------------------------|------------------|-------------------------|---------------------|
| Private Equity | Ascent Venture Partners - Fund V | 2011 | \$1,000,000 | \$910,000 | \$649,106 | \$854,901 | \$1,504,007 | \$90,000 |
| | Total Account | | \$1,000,000 | \$910,000 | \$649,106 | \$854,901 | \$1,504,007 | \$90,000 |

Investment Strategy:

Ascent Venture Partners V is an early stage venture capital fund focused on making investments within the technology products and services industry. Specific areas of interest include next generation software (open source and Software-as-a-Service), data management and analysis, automated computing, security and compliance, financial services, and applications associated with the convergence of remote devices. The GP is located in Boston and will invest in the eastern United States and Canada. The Fund will target companies that have pre-money valuations of \$3 to \$15 million and have the potential for a \$100 million exit value.

Note: As of June 30, 2019, the Net IRR is 8.4%.



Account Information

| | |
|-------------------|--|
| Account Name | Ascent Venture Partners - Fund VI |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 6/30/15 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview by Account Type

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|-----------------------------------|--------------|--------------------|---------------------|--------------------------|--------------------|-------------------------|---------------------|
| Private Equity | Ascent Venture Partners - Fund VI | 2015 | \$1,500,000 | \$1,005,000 | \$0 | \$1,300,798 | \$1,300,798 | \$495,000 |
| | Total Account | | \$1,500,000 | \$1,005,000 | \$0 | \$1,300,798 | \$1,300,798 | \$495,000 |

Investment Strategy:

Ascent Venture Partners VI is a limited partnership that was formed on November 25, 2013 under the Delaware Uniform Limited Partnership Act and commenced operations on November 16, 2015. The purpose of the Partnership is to provide early stage financing to emerging technology companies.

Note: As of June 30, 2019, the Net IRR is 7.47%.



Account Information

| | |
|-------------------|--|
| Account Name | Goldman Sachs PEP 2005 |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 8/01/06 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview by Account Type

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|------------------------|--------------|--------------------|---------------------|--------------------------|------------------|-------------------------|---------------------|
| Private Equity | Goldman Sachs PEP 2005 | 2006 | \$3,000,000 | \$2,926,669 | \$3,302,645 | \$455,043 | \$3,757,687 | \$73,331 |
| | Total Account | | \$3,000,000 | \$2,926,669 | \$3,302,645 | \$455,043 | \$3,757,687 | \$73,331 |

Investment Strategy:

Goldman Sachs Private Equity Partners 2005 is a fund of funds formed to create a diversified portfolio of 18 to 25 partnerships. The Fund will invest opportunistically in order to commit to the "very best managers." The Fund expects to commit approximately \$40 million to each partnership. Previous funds have invested approximately 30% outside the U.S.

Note: As of June 30, 2019, the Net IRR is 1.33%.



As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | HarbourVest Partners VIII |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 12/20/07 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview by Account Type

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|---------------------------|--------------|--------------------|---------------------|--------------------------|------------------|-------------------------|---------------------|
| Private Equity | HarbourVest Partners VIII | 2006 | \$2,500,000 | \$2,286,178 | \$3,306,336 | \$749,063 | \$4,055,399 | \$213,822 |
| | Total Account | | \$2,500,000 | \$2,286,178 | \$3,306,336 | \$749,063 | \$4,055,399 | \$213,822 |

Investment Strategy:

HarbourVest Partners, known as Hancock Venture Partners until 1997, was founded in 1982 to invest in private equity partnerships. The HarbourVest Partners VIII Investment Program consists of three separate fund of funds, each dedicated to distinct private equity strategies: buyout, venture capital and mezzanine debt partnerships. Each vehicle will invest primarily in newly raised funds, but will also invest a portion of assets in secondary interest.

Note: As of June 30, 2019, the Net IRR is 10.6%.



As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | HarbourVest Partners IX |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 10/22/13 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview

As of September 30, 2019

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|-------------------------|--------------|--------------------|---------------------|--------------------------|--------------------|-------------------------|---------------------|
| Private Equity | HarbourVest Partners IX | 2010 | \$5,000,000 | \$3,530,139 | \$2,276,185 | \$3,839,504 | \$6,115,689 | \$1,469,861 |
| | Total Account | | \$5,000,000 | \$3,530,139 | \$2,276,185 | \$3,839,504 | \$6,115,689 | \$1,469,861 |

Investment Strategy:

HarbourVest Partners, known as Hancock Venture Partners until 1997, was founded in 1982 to invest in private equity partnerships. The HarbourVest Partners IX Fund consists of three separate fund of funds, each dedicated to distinct private equity strategies: buyout, venture capital, and mezzanine debt partnerships. Each vehicle will invest primarily in newly-raised funds, but will also invest a portion of assets in secondary interests.

Note: As of June 30, 2019, the Net IRR is 17.7%.



As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | HarbourVest X Buyout Fund |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 4/06/16 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

As of September 30, 2019

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|---------------------------|--------------|--------------------|---------------------|--------------------------|--------------------|-------------------------|---------------------|
| Private Equity | HarbourVest X Buyout Fund | 2016 | \$6,500,000 | \$1,810,366 | \$130,485 | \$2,423,487 | \$2,553,972 | \$4,689,634 |
| | Total Account | | \$6,500,000 | \$1,810,366 | \$130,485 | \$2,423,487 | \$2,553,972 | \$4,689,634 |

Investment Strategy:

HarbourVest Partners, known as Hancock Venture Partners until 1997, was founded in 1982 to invest in private equity partnerships. The HarbourVest Partners IX Fund consists of three separate fund of funds, each dedicated to distinct private equity strategies: buyout, venture capital, and mezzanine debt partnerships. Each vehicle will invest primarily in newly-raised funds, but will also invest a portion of assets in secondary interests.

Note: As of June 30, 2019, the Net IRR is 24.5%.



Constitution Capital Partners Ironsides III

As of September 30, 2019

Account Information

| | |
|-------------------|---|
| Account Name | Constitution Capital Partners Ironsides III |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 1/29/14 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|---|--------------|--------------------|---------------------|--------------------------|--------------------|-------------------------|---------------------|
| Private Equity | Constitution Capital Partners Ironsides III | 2014 | \$5,000,000 | \$3,166,703 | \$119,753 | \$4,197,866 | \$4,317,619 | \$1,833,298 |
| | Total Account | | \$5,000,000 | \$3,166,703 | \$119,753 | \$4,197,866 | \$4,317,619 | \$1,833,298 |

Investment Strategy:

Constitution Capital seeks investments in underlying private equity funds ranging in size from \$200 million to approximately \$1.0 billion, with a few larger potentially. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution targets a variety of fund types (domestic middle-market buyout, special situations, growth equity, distressed, and sector-specific) and will allocate amongst them opportunistically. The group will not invest in early-stage venture capital funds or mega buyout funds. The portfolio will have 12 to 15 underlying fund investments of approximately \$10 million to \$20 million each. For co-investments, it is anticipated that a total of 12-15 co-investments will each range from \$5 million to \$25 million. The enterprise values of the underlying companies are expected to range from \$100 million to \$1.5 billion.

Note: As of June 30, 2019, the Gross IRR is 18.3%.



Constitution Capital Partners Ironsides IV

As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | Constitution Capital Partners Ironsides IV |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 6/01/16 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |

Non-Marketable Securities Overview

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|--|--------------|--------------------|---------------------|--------------------------|--------------------|-------------------------|---------------------|
| Private Equity | Constitution Capital Partners Ironsides IV | 2016 | \$3,250,000 | \$1,265,466 | \$0 | \$1,768,741 | \$1,768,741 | \$1,984,534 |
| | Total Account | | \$3,250,000 | \$1,265,466 | \$0 | \$1,768,741 | \$1,768,741 | \$1,984,534 |

Investment Strategy:

Constitution Capital seeks investments in underlying private equity funds ranging in size from \$200 million to approximately \$1.0 billion, with a few larger potentially. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution targets a variety of fund types (domestic middle-market buyout, special situations, growth equity, distressed, and sector-specific) and will allocate amongst them opportunistically. The group will not invest in early-stage venture capital funds or mega buyout funds. The portfolio will have 12 to 15 underlying fund investments of approximately \$10 million to \$20 million each. For co-investments, it is anticipated that a total of 12-15 co-investments will each range from \$5 million to \$25 million. The enterprise values of the underlying companies are expected to range from \$100 million to \$1.5 billion.

Note: As of June 30, 2019, the Gross IRR is 24.9%.



As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | Constitution Capital Direct IV |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 6/30/16 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|--------------------------------|--------------|--------------------|---------------------|--------------------------|--------------------|-------------------------|---------------------|
| Private Equity | Constitution Capital Direct IV | 2016 | \$3,250,000 | \$3,146,050 | \$0 | \$3,811,394 | \$3,811,394 | \$103,950 |
| | Total Account | | \$3,250,000 | \$3,146,050 | \$0 | \$3,811,394 | \$3,811,394 | \$103,950 |

Investment Strategy:

Constitution Capital seeks investments in underlying private equity funds ranging in size from \$200 million to approximately \$1.0 billion, with a few larger potentially. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution targets a variety of fund types (domestic middle-market buyout, special situations, growth equity, distressed, and sector-specific) and will allocate amongst them opportunistically. The group will not invest in early-stage venture capital funds or mega buyout funds. The portfolio will have 12 to 15 underlying fund investments of approximately \$10 million to \$20 million each. For co-investments, it is anticipated that a total of 12-15 co-investments will each range from \$5 million to \$25 million. The enterprise values of the underlying companies are expected to range from \$100 million to \$1.5 billion.

Note: As of June 30, 2019, the Gross IRR is 14.2%.



As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | Constitution Capital Direct V |
| Account Structure | Other |
| Investment Style | Active |
| Inception Date | 3/27/19 |
| Account Type | Private Equity |
| Benchmark | Cambridge Associates US All PE (1 Qtr Lag) |
| Universe | |

Non-Marketable Securities Overview

| Account Type | Account | Vintage Year | Commitment | Cumulative Takedown | Cumulative Distributions | Value (RV) | Total Value (RV + Dist) | Unfunded Commitment |
|----------------|-------------------------------|--------------|--------------------|---------------------|--------------------------|--------------------|-------------------------|---------------------|
| Private Equity | Constitution Capital Direct V | 2019 | \$2,500,000 | \$2,383,944 | \$0 | \$2,461,946 | \$2,461,946 | \$116,056 |
| | Total Account | | \$2,500,000 | \$2,383,944 | \$0 | \$2,461,946 | \$2,461,946 | \$116,056 |

Investment Strategy:

Constitution Capital seeks investments in underlying private equity funds ranging in size from \$200 million to approximately \$1.0 billion, with a few larger potentially. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution targets a variety of fund types (domestic middle-market buyout, special situations, growth equity, distressed, and sector-specific) and will allocate amongst them opportunistically. The group will not invest in early-stage venture capital funds or mega buyout funds. The portfolio will have 12 to 15 underlying fund investments of approximately \$10 million to \$20 million each. For co-investments, it is anticipated that a total of 12-15 co-investments will each range from \$5 million to \$25 million. The enterprise values of the underlying companies are expected to range from \$100 million to \$1.5 billion.

Note: As of June 30, 2019, the Gross IRR is 17.9%.



SSgA S&P Global LargeMidCap Natural Resources Index

As of September 30, 2019

Account Information

| | |
|-------------------|--|
| Account Name | SSgA S&P Global LargeMidCap Natural Resources Index |
| Account Structure | Commingled Fund |
| Investment Style | Passive |
| Inception Date | 2/01/18 |
| Account Type | Real Assets |
| Benchmark | S&P Global Large MidCap Commodity and Resources NR USD |
| Universe | |

Portfolio Performance Summary

| | QTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | Inception (%) | Inception Date |
|--|---------|---------|----------|-----------|-----------|---------------|----------------|
| SSgA S&P Global LargeMidCap Natural Resources Index | -6.0 | 7.4 | -6.1 | -- | -- | -4.1 | Feb-18 |
| S&P Global Large MidCap Commodity and Resources NR USD | -6.0 | 7.3 | -6.3 | 6.3 | -0.3 | -4.4 | Feb-18 |

Top 10 Holdings

| | |
|------------------------|--------------|
| NUTRIEN | 5.7% |
| EXXON MOBIL | 5.5% |
| ARCHER DANIELS MIDLAND | 4.6% |
| BHP GROUP | 4.3% |
| CORTEVA | 4.2% |
| CHEVRON | 4.1% |
| RIO TINTO | 3.0% |
| BHP GROUP | 2.6% |
| TOTAL | 2.4% |
| BP | 2.4% |
| Total | 38.8% |

SSgA S&P Global LargeMidCap Natural Resources Index Characteristics

| | Portfolio Q3-19 | Portfolio Q2-19 |
|---------------------------------|-----------------|-----------------|
| Market Value | | |
| Market Value (\$M) | 3.8 | 4.1 |
| Number Of Holdings | 181 | 211 |
| Characteristics | | |
| Weighted Avg. Market Cap. (\$B) | 59.5 | 64.0 |
| Median Market Cap (\$B) | 8.9 | 9.4 |
| P/E Ratio | 14.1 | 14.5 |
| Yield | 3.7 | 3.5 |
| EPS Growth - 5 Yrs. | 1.5 | 1.5 |
| Price to Book | 1.7 | 1.7 |
| Beta (holdings; domestic) | 1.1 | 1.2 |
| Sector Distribution | | |
| Energy | 33.2 | 32.6 |
| Materials | 55.0 | 55.0 |
| Industrials | 0.0 | 0.0 |
| Consumer Discretionary | 0.0 | 0.0 |
| Consumer Staples | 10.7 | 11.1 |
| Health Care | 0.0 | 0.0 |
| Financials | 0.0 | 0.0 |
| Information Technology | 0.0 | 0.0 |
| Communication Services | 0.0 | 0.0 |
| Utilities | 0.0 | 0.0 |
| Real Estate | 0.0 | 0.0 |

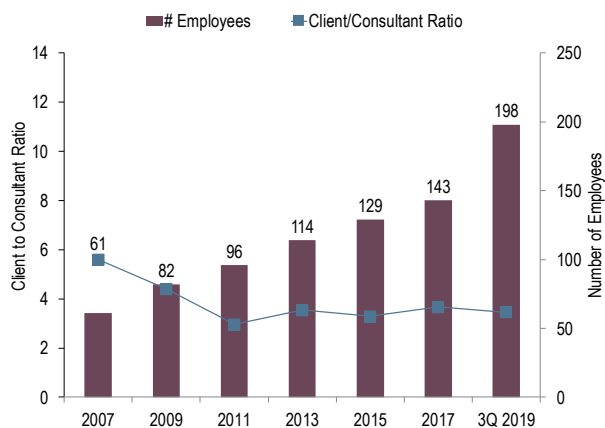


Appendices

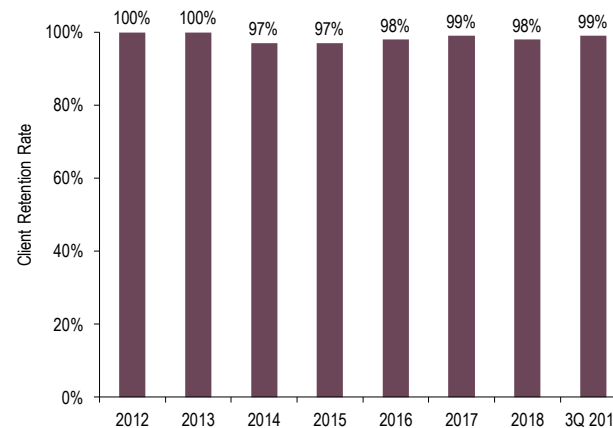
Meketa Investment Group Corporate Update

- Staff of 198, including 133 investment professionals and 41 CFA Charterholders
- 214 clients, with over 300 funds throughout the United States
- Significant investment in staff and resources
- Offices in Boston, Chicago, Miami, New York, Portland (OR), San Diego, and London
- We advise on \$1.4 trillion in client assets
 - Over \$100 billion in assets committed to alternative investments
 - Private Equity
 - Infrastructure
 - Natural Resources
 - Real Estate
 - Hedge Funds
 - Commodities

Client to Consultant Ratio¹



Client Retention Rate²



Meketa Investment Group is proud to work for over 5 million American families everyday.

¹ On March 15, 2019, 31 employees joined the firm as part of the merger of Meketa Investment Group and Pension Consulting Alliance.

² Client Retention Rate is one minus the number of clients lost divided by the number of clients at prior year-end.



Asset Classes Followed Intensively by Meketa Investment Group

| Domestic Equities | International Equities | Private Equity | Real Assets | Fixed Income | Hedge Funds |
|---|--|--|--|---|--|
| <ul style="list-style-type: none"> - Passive - Enhanced Index - Large Cap - Midcap - Small Cap - Microcap - 130/30 | <ul style="list-style-type: none"> - Large Cap Developed - Small Cap Developed - Emerging Markets - Frontier Markets | <ul style="list-style-type: none"> - Buyouts - Venture Capital - Private Debt - Special Situations - Secondaries - Fund of Funds | <ul style="list-style-type: none"> - Public REITs - Core Real Estate - Value Added Real Estate - Opportunistic Real Estate - Infrastructure - Timber - Natural Resources - Commodities | <ul style="list-style-type: none"> - Short-Term - Core - Core Plus - TIPS - High Yield - Bank Loans - Distressed - Global - Emerging Markets | <ul style="list-style-type: none"> - Long/Short Equity - Event Driven - Relative Value - Fixed Income Arbitrage - Multi Strategy - Market Neutral - Global Macro - Fund of Funds - Portable Alpha |

Disclaimer, Glossary, and Notes

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Sources: [Investment Terminology](#), International Foundation of Employee Benefit Plans, 1999.
[The Handbook of Fixed Income Securities](#), Fabozzi, Frank J., 1991.

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.