

Managers and Assets Under Management as of June 30, 2017
State of Hawaii Employees' Retirement System

Risk-Based Policy Framework

| Strategic Class | Sub-Class | Manager | Assets Under Management | % of Total |
|-------------------------|--------------------------------------|---|-------------------------|----------------|
| Broad Growth | Traditional Growth | | | |
| | Domestic Large Cap Growth Equity | JP Morgan LCG | 379,503,745 | 2.43% |
| | Domestic Large Cap Value Equity | Barrow Hanley | 303,867,057 | 1.95% |
| | Domestic Large Cap Core Equity | Bank of Hawaii | 208,502,939 | 1.33% |
| | Domestic Large Cap Core Equity | CM Bidwell & Associates | 197,625,786 | 1.27% |
| | World ex-US Equity | Franklin Templeton | 402,118,942 | 2.57% |
| | Emerging Markets Equity | QMA | 338,840,193 | 2.17% |
| | Global Small Cap Equity | Fidelity Institutional | 396,453,477 | 2.54% |
| | Global Small Cap Equity | Wellington | 409,240,757 | 2.62% |
| | Global Equity - Passive | BlackRock - Alpha Tilts | 908,328,727 | 5.81% |
| | Global Equity - Passive | Legal & General | 1,769,492,943 | 11.33% |
| | Stabilized Growth | | | |
| | Public Extended Global Credit | Bradford & Marzec | 235,077,120 | 1.50% |
| | Public Extended Global Credit | PIMCO | 172,117,363 | 1.10% |
| | Public Extended Global Credit | Western Asset Management | 391,358,880 | 2.51% |
| | Core Real Estate (Separate) | Heitman Capital | 288,472,215 | 1.85% |
| | Core Real Estate (Separate) | INVESCO Realty | 225,280,799 | 1.44% |
| | Core Real Estate | Cabot Ind Core | 37,009,726 | 0.24% |
| | Core Real Estate | H2 Core Real Estate Debt Fund | 30,945,533 | 0.20% |
| | Low Volatility Equity | Robeco | 483,951,316 | 3.10% |
| | Low Volatility Equity | TOBAM | 466,753,937 | 2.99% |
| | Options-Based Equity | Gateway Investment Advisers LLC - Put-Write | 636,948,235 | 4.08% |
| | Options-Based Equity | Gateway Investment Advisers LLC - Non-Replication | 1,008,090,974 | 6.45% |
| | Options-Based Equity | Neuberger Berman | 628,527,123 | 4.02% |
| | Options-Based Equity | UBS | 623,418,194 | 3.99% |
| | Private Growth | | | |
| | Private Equity | Hamilton Lane | 991,813,015 | 6.35% |
| | Private Equity | I-Squared Global Infrastructure | 15,685,995 | 0.10% |
| | HiTIP | Stafford | 20,409,799 | 0.13% |
| | Non-Core Real Estate - Opportunistic | BlackSand Capital Fund I | 7,660,150 | 0.05% |
| | Non-Core Real Estate - Opportunistic | Blackstone Real Estate VII | 18,123,053 | 0.12% |
| | Non-Core Real Estate - Opportunistic | Cerberus IV | 2,342,543 | 0.01% |
| | Non-Core Real Estate - Opportunistic | Fortress Japan Opp Fund II | 13,135,079 | 0.08% |
| | Non-Core Real Estate - Opportunistic | Fortress Japan Opp Fund III | 11,513,580 | 0.07% |
| | Non-Core Real Estate - Opportunistic | Lone Star Fund II | 2,381,482 | 0.02% |
| | Non-Core Real Estate - Opportunistic | Lone Star Fund VII | 1,613,819 | 0.01% |
| | Non-Core Real Estate - Opportunistic | Torchlight Debt Opportunity Fund V | 15,655,273 | 0.10% |
| | Non-Core Real Estate - Value-Add | AG Asia Realty Fund III | 13,392,406 | 0.09% |
| | Non-Core Real Estate - Value-Add | AG Core Plus Realty Fund II | 1,912,852 | 0.01% |
| | Non-Core Real Estate - Value-Add | AG Core Plus Realty Fund III | 9,597,569 | 0.06% |
| | Non-Core Real Estate - Value-Add | AG Core Plus Realty Fund IV | 16,586,827 | 0.11% |
| | Non-Core Real Estate - Value-Add | Almanac VI | 8,246,470 | 0.05% |
| | Non-Core Real Estate - Value-Add | Almanac VII | 14,989,011 | 0.10% |
| | Non-Core Real Estate - Value-Add | BlackRock Asia IV | 16,937,150 | 0.11% |
| | Non-Core Real Estate - Value-Add | CBRE Strategic Partners Value Fund VI | 2,170,412 | 0.01% |
| | Non-Core Real Estate - Value-Add | CBRE Strategic Partners Value Fund VII | 18,813,222 | 0.12% |
| | Non-Core Real Estate - Value-Add | DRA GR INC X | 8,704,964 | 0.06% |
| | Non-Core Real Estate - Value-Add | H2 CP (RE Debt) | 33,690,198 | 0.22% |
| | Non-Core Real Estate - Value-Add | LaSalle Income & Growth Fund V | 138,906 | 0.00% |
| | Non-Core Real Estate - Value-Add | LaSalle Income & Growth Fund VII | 17,949,270 | 0.11% |
| | Non-Core Real Estate - Value-Add | Mesa West RE Inc Fund II | 11,074 | 0.00% |
| | Non-Core Real Estate - Value-Add | Mesa West RE Inc Fund III | 12,041,885 | 0.08% |
| | Non-Core Real Estate - Value-Add | Mesa West RE Fund IV | 2,724,337 | 0.02% |
| | Non-Core Real Estate - Value-Add | Prudential Sr Housing Fund IV | 19,486,479 | 0.12% |
| | Non-Core Real Estate - Value-Add | Prudential Sr Housing Fund V | 10,891,751 | 0.07% |
| Opportunities | | Lowe Enterprises | 28,735,141 | 0.18% |
| Principal Protection | | | | |
| | US Intermediate | First Hawaiian Bank | 360,382,315 | 2.31% |
| | US Intermediate | Pacific Income Advisors | 358,717,392 | 2.30% |
| | Non-US Intermediate | PIMCO | 266,481,915 | 1.71% |
| | Non-US Intermediate | Oeschle Intl. Advisors | 425,683,825 | 2.72% |
| Crisis Risk Offset | | | | |
| | Alternative Return Capture | Graham Quant Macro | 151,318,633 | 0.97% |
| | Alternative Return Capture | P/E Global Macro | 150,283,682 | 0.96% |
| | Alternative Return Capture | Welton MultiQuant | 144,619,927 | 0.93% |
| | Systematic Trend Following | Aspect Core Fund | 217,201,820 | 1.39% |
| | Systematic Trend Following | Campbell Core Trend | 220,285,268 | 1.41% |
| | Systematic Trend Following | Crabel Advaned Trend | 214,730,372 | 1.37% |
| | Treasury Duration Capture | Ryan Labs Long Treasury | 393,575,009 | 2.52% |
| Real Return | | | | |
| | Timber | Hancock Timber | 210,319,622 | 1.35% |
| | GILS | BlackRock | 474,303,149 | 3.04% |
| | Infrastructure | KKR Global Infrastructure II | 18,197,685 | 0.12% |
| All Other Assets | | | | |
| | Cash Account | BNY Mellon | 85,250,394 | 0.55% |
| | Cash Account | Bank of Hawaii | 34,693,015 | 0.22% |
| | Transition Account I | BNY Mellon | 13,203,881 | 0.08% |
| | Transition Account II | BNY Mellon | 26,359 | 0.00% |
| | Residual Account | BNY Mellon | 22,823 | 0.00% |
| Closing Accounts | | | | |
| | Domestic Large Cap Value Equity | CS McKee Investment Mgrs | 143,010 | 0.00% |
| | Domestic Large Cap Growth | Sands Capital | 0 | 0.00% |
| | Domestic Small Cap Core Equity | Jennison Associates | 1 | 0.00% |
| | Domestic Small Cap Core Equity | T Rowe Price Associates | 6,362 | 0.00% |
| | World ex-US Equity | JP Morgan Chase | 1,378,995 | 0.01% |
| | World ex-US Equity | Mercator Asset Mgt LP | 672,598 | 0.00% |
| | Emerging Markets Equity | Research Affiliates | 658,009 | 0.00% |
| Total Fund Value | | | 15,621,435,758 | 100.00% |

Source: BNY Mellon