



Monthly Risk-Return Report

As of July 31, 2017

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Based on actual BNY Mellon data through June 2017 and preliminary data for July 2017.



Asset Allocation and Policy Guidelines

As of July 31, 2017

| Asset Class | Assets and Allocation | | Policy Target | Minimum Target | Maximum Target | Difference | |
|-----------------------------|-----------------------|---------------|---------------|----------------|----------------|--------------------|----------------|
| | \$ (MM) | % | | | | From Policy Target | Within Target? |
| Public Markets Equity | 5,666 | 47.0% | 45.0% | 40.0% | 50.0% | 2.0% | Yes |
| Global Equity | 395 | 3.3% | 3.0% | 0.0% | 10.0% | 0.3% | Yes |
| US Equity | 2,094 | 17.4% | 18.0% | 13.0% | 23.0% | -0.6% | Yes |
| Non-US Equity Developed | 1,913 | 15.9% | 15.0% | 11.0% | 19.0% | 0.9% | Yes |
| Non-US Equity Emerging | 1,264 | 10.5% | 9.0% | 5.0% | 13.0% | 1.5% | Yes |
| Risk-Reducing Fixed Income | 2,150 | 17.8% | 18.0% | 13.0% | 24.0% | -0.2% | Yes |
| Return-Seeking Fixed Income | 718 | 6.0% | 6.0% | 0.0% | 12.0% | 0.0% | Yes |
| Opportunistic | 929 | 7.7% | 8.0% | 0.0% | 9.0% | -0.3% | Yes |
| Private Assets | 2,592 | 21.5% | 23.0% | 10.0% | | -1.5% | Yes |
| Real Estate | 948 | 7.9% | 9.0% | 5.0% | 12.0% | -1.1% | Yes |
| Private Equity | 880 | 7.3% | 8.0% | 3.0% | 10.0% | -0.7% | Yes |
| Private Real Assets | 765 | 6.3% | 6.0% | 3.0% | 8.0% | 0.3% | Yes |
| Total Invested | 12,056 | 100.0% | | | | | |



Portfolio and Benchmark Returns

As of July 31, 2017

| | MTD | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years |
|--------------------------------|------|------|------|-------|--------|---------|---------|
| SDCERA Total Trust Fund | 1.9% | 1.9% | 1.9% | 9.6% | 11.4% | 5.9% | 7.1% |
| SDCERA Policy Benchmark | 2.0% | 2.0% | 2.0% | 10.0% | 11.6% | 5.8% | 7.0% |
| Balanced Benchmark | 2.1% | 2.1% | 2.1% | 10.8% | 11.5% | 5.4% | 8.4% |
| Actuarial Rate of Return | 0.6% | 0.6% | 0.6% | 4.2% | 7.3% | 7.5% | 7.7% |

| | | | | | | | |
|----------------------------------------------|------|------|------|-------|-------|------|-------|
| SDCERA Public Markets | 2.3% | 2.3% | 2.3% | 11.8% | 12.5% | 3.5% | 7.9% |
| Balanced Benchmark | 2.1% | 2.1% | 2.1% | 10.8% | 11.5% | 5.4% | 8.4% |
| Total Public Markets Equity | 3.2% | 3.2% | 3.2% | 16.0% | 18.3% | 3.8% | 11.9% |
| MSCI ACWI IMI | 2.7% | 2.7% | 2.7% | 14.4% | 17.1% | 6.4% | 11.1% |
| Risk-Reducing Fixed Income | 0.3% | 0.3% | 0.3% | 2.2% | 0.3% | 1.5% | 1.3% |
| Bloomberg Barclays US Intermediate Aggregate | 0.5% | 0.5% | 0.5% | 2.1% | 0.0% | 2.3% | 1.8% |
| Return-Seeking Fixed Income | 1.3% | 1.3% | 1.3% | 5.8% | 10.9% | 4.5% | 6.7% |
| BofA Merrill Lynch US High Yield | 1.2% | 1.2% | 1.2% | 6.1% | 11.2% | 5.3% | 6.8% |

| Opportunistic | | | | | | | |
|----------------------|------|------|------|-------|-------|------|------|
| Opportunistic | 1.8% | 1.8% | 1.8% | 3.4% | 2.8% | 7.9% | 6.4% |
| Balanced Benchmark | 2.1% | 2.1% | 2.1% | 10.8% | 11.5% | 5.4% | 8.4% |

| Private Assets | | | | | | | |
|----------------------------|---------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|
| | <i>The industry standard is to present private asset returns with a quarterly lag</i> | | | | | | |
| Real Estate | -0.1% | -0.1% | -0.1% | 3.1% | 8.5% | 12.3% | 10.9% |
| NCREIF ODCE | 0.5% | 0.5% | 0.5% | 3.5% | 6.8% | 10.2% | 10.7% |
| Private Equity | 1.0% | 1.0% | 1.0% | 11.1% | 15.6% | 10.2% | 13.3% |
| MSCI ACWI IMI | 2.7% | 2.7% | 2.7% | 14.4% | 17.1% | 6.4% | 11.1% |
| Private Real Assets | 0.1% | 0.1% | 0.1% | 4.8% | 13.8% | 3.7% | 6.1% |
| MSCI ACWI IMI | 2.7% | 2.7% | 2.7% | 14.4% | 17.1% | 6.4% | 11.1% |

| Equities by Sub-Asset Class | | | | | | | |
|------------------------------------|------|------|------|-------|-------|------|-------|
| Global Equity | 3.3% | 3.3% | 3.3% | 14.9% | 17.6% | 7.2% | 11.7% |
| MSCI ACWI IMI | 2.7% | 2.7% | 2.7% | 14.4% | 17.1% | 6.4% | 11.1% |
| US Equity | 2.0% | 2.0% | 2.0% | 10.6% | 15.4% | 8.5% | 12.8% |
| MSCI USA IMI | 1.9% | 1.9% | 1.9% | 10.8% | 15.4% | 9.9% | 14.1% |
| Non-US Equity Developed | 3.0% | 3.0% | 3.0% | 17.4% | 18.4% | 3.1% | |
| MSCI EAFE IMI | 3.0% | 3.0% | 3.0% | 17.6% | 18.1% | 3.4% | |
| Non-US Emerging | 5.7% | 5.7% | 5.7% | 24.5% | 24.1% | 2.2% | 5.5% |
| MSCI Emerging Markets | 6.0% | 6.0% | 6.0% | 25.5% | 24.8% | 2.4% | 4.8% |
| Total Public Markets Equity | 3.2% | 3.2% | 3.2% | 16.0% | 18.3% | 3.8% | 11.9% |
| MSCI ACWI IMI | 2.7% | 2.7% | 2.7% | 14.4% | 17.1% | 6.4% | 11.1% |

Please note: The Non-US Equity Developed and MSCI EAFE IMI 5 yr returns are blank because the current composite returns calculated by BNY Mellon do not cover these time periods. SDCERA Benchmark returns are before fees.



Portfolio Risk and Tracking Error

| As of July 31, 2017 | 5/31/17 Trailing three years | | 6/30/17 Trailing three years | | 7/31/17 Trailing three years | |
|----------------------------------------------|---------------------------------|----------------|---------------------------------|----------------|---------------------------------|----------------|
| | Volatility | Tracking Error | Volatility | Tracking Error | Volatility | Tracking Error |
| Total Trust Fund | | | | | | |
| SDCERA Total Trust Fund Assets | 5.2% | N/A | 5.2% | N/A | 5.2% | N/A |
| SDCERA Policy Benchmark | 6.1% | 1.9% | 6.1% | 1.9% | 6.1% | 1.9% |
| | Forecasted | | Forecasted | | Forecasted | |
| Total Trust Fund | | | | | | |
| SDCERA Total Trust Fund Assets | 5.8% | N/A | 5.9% | N/A | 5.9% | N/A |
| SDCERA Policy Benchmark | 6.7% | 1.3% | 6.6% | 1.1% | 7.4% | 1.7% |
| Balanced Benchmark | 7.2% | 1.9% | 7.0% | 1.7% | 7.1% | 1.6% |
| SDCERA Public-Only Assets | 6.6% | N/A | 6.8% | N/A | 6.8% | N/A |
| SDCERA Public Benchmark | 6.2% | 0.7% | 6.1% | 0.9% | 7.1% | 0.8% |
| Equities | | | | | | |
| Global Equity | 10.2% | | 9.8% | | 9.8% | |
| MSCI ACWI IMI | 10.1% | 0.6% | 10.0% | 1.0% | 10.0% | 1.7% |
| US Equity | 9.7% | | 9.6% | | 9.7% | |
| MSCI USA IMI | 9.9% | 0.8% | 9.8% | 0.8% | 9.8% | 0.6% |
| Non-US Equity Developed | 12.2% | | 11.9% | | 11.9% | |
| MSCI EAFE IMI | 11.9% | 0.9% | 11.6% | 0.9% | 11.7% | 0.8% |
| Non-US Emerging | 14.8% | | 14.7% | | 14.6% | |
| MSCI Emerging Markets | 14.2% | 1.0% | 14.2% | 1.0% | 14.6% | 0.9% |
| Fixed Income | | | | | | |
| Risk-Reducing Fixed Income | 2.7% | | 3.3% | | 3.0% | |
| Bloomberg Barclays US Intermediate Aggregate | 2.1% | 1.0% | 2.1% | 1.2% | 2.0% | 1.0% |
| Return-Seeking Fixed Income | -- | | -- | | 4.4% | |
| BofA Merrill Lynch US High Yield | -- | -- | -- | -- | 5.3% | 1.0% |
| Opportunistic | | | | | | |
| Opportunistic | 4.0% | | 4.0% | | 5.8% | |
| Balanced Benchmark | 4.0% | 4.0% | 3.9% | 4.0% | 7.1% | 6.5% |
| Private Assets | | | | | | |
| Real Estate | 7.6% | | 7.5% | | 7.3% | |
| NCREIF ODCE | 8.3% | 9.3% | 8.1% | 8.9% | 8.1% | 8.7% |
| Private Equity | 7.2% | | 7.3% | | 7.3% | |
| MSCI ACWI IMI | 10.1% | 5.0% | 10.0% | 4.9% | 10.0% | 5.0% |
| Private Real Assets | 9.7% | | 10.3% | | 9.9% | |
| MSCI ACWI IMI | 10.1% | 11.8% | 10.0% | 12.6% | 10.0% | 12.3% |



Public Markets Portfolio Changes in July 2017

Allocation Changes (millions)

Increase Ryan Labs: \$50
 Increase Blackrock US Intermediate Agg: \$50
 Add Blackrock MSCI USA Index: \$100
 Add Blackrock MSCI US Small Cap Index: \$100
 Add Blackrock MSCI EAFE IMI: \$100
 Add Blackrock Global Allocation: \$300
 Decrease Blackrock ACWI Index: \$281

| | Portfolio % | | Portfolio \$ millions | | Summary Comments |
|--|-------------|-------|-----------------------|---------|--------------------------------------------------------|
| | Begin | End | Begin | End | |
| | 0.9% | 1.3% | \$102 | \$153 | Portfolio diversification and maintain market exposure |
| | 11.6% | 11.4% | \$1,322 | \$1,379 | Portfolio diversification and maintain market exposure |
| | 0.0% | 0.9% | \$0 | \$100 | Portfolio diversification and maintain market exposure |
| | 0.0% | 0.8% | \$0 | \$100 | Portfolio diversification and maintain market exposure |
| | 0.0% | 0.9% | \$0 | \$100 | Portfolio diversification and maintain market exposure |
| | 0.0% | 2.5% | \$0 | \$300 | Rebalance to increase manager alignment |
| | 2.4% | 0.0% | \$281 | \$0 | Rebalance to increase manager alignment |

Private Market Portfolio Changes in July 2017

| | Portfolio % | | Portfolio \$ millions | | Summary Comments |
|--|-------------|-----|-----------------------|-----|------------------|
| | Begin | End | Begin | End | |
| | | | | | |

Benchmarks

- The actuarial rate of return represents the long-term return assumption adopted by the Board of Retirement based on the analysis provided by SDCERA's actuary. SDCERA's actuarial rate of return is 7.25 percent.
- The SDCERA Policy benchmark is composed as follows: 45% MSCI ACWI Investable Market Index (IMI), 18% Bloomberg Barclays US Intermediate Aggregate Index, 6% BofA Merrill Lynch U. S. High Yield Index, 8% Balanced Benchmark, 23% SDCERA Private Asset Benchmark.
- The SDCERA Balanced Benchmark is composed of 70% MSCI ACWI IMI and 30% Bloomberg Barclays U.S. Intermediate Aggregate Index.
- The Total Public Markets Equity Benchmark is the MSCI ACWI IMI.
- The Global Equity Benchmark is the MSCI ACWI IMI.
- The US Equity Benchmark is the MSCI USA IMI.
- The Non-US Equity (Developed) Benchmark is the MSCI EAFE IMI.
- The Non-US Equity Emerging Markets Benchmark is the MSCI Emerging Markets Index.
- The Risk-Reducing Fixed Income Benchmark is the Bloomberg Barclays U.S. Intermediate Aggregate Index.
- The Return-Seeking Fixed Income Benchmark is the BofA Merrill Lynch U.S. High Yield Index.
- The Opportunistic Benchmark is 70% MSCI ACWI IMI and 30% Bloomberg Barclays U.S. Intermediate Aggregate Index.
- The Total Private Assets Benchmark is composed of 1/3 NCREIF and 2/3 MSCI ACWI IMI.
- The Real Estate Benchmark is the NCREIF ODCE Index.
- The Private Equity Benchmark is the MSCI ACWI IMI.
- The Private Real Assets Benchmark is the MSCI ACWI IMI.
- The MSCI ACWI IMI captures large, mid and small cap representation across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries.
- The SDCERA Public Markets Risk Benchmark is an aggregate of 3.9% MSCI ACWI IMI, 23.4% MSCI USA IMI, 19.5% MSCI EAFE IMI, 11.7% MSCI Emerging Markets Index, 23.4% Bloomberg Barclays U.S. Intermediate Aggregate Index, 7.8% BofA Merrill Lynch US High Yield Index, and 10.3% Balanced Benchmark.