Arizona State Retirement System

Investment Committee

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Internally Managed Portfolios Pre-Trade Compliance System

- For the internally managed portfolios, the Investment Management Division (IMD) utilizes Bloomberg's Trade Order Management System (OMS) for executing and processing trades.
- The OMS platform has built-in pre-trade compliance rules capabilities to ensure trades will not surpass the established portfolio guidelines.
- Compliance rules are based on the investment guidelines:
 - Approved Investment Strategy Papers.
 - Applicable Arizona Revised Statutes.

Internally Managed Portfolios Pre-Trade Compliance System

<u>Internally Managed Portfolios Pre-Trade Compliance System Review Summary:</u>

- Pre-Trade Compliance was performed on all internally managed fixed income and equity portfolios, for the period January - March 2018.
- No exceptions occurred during the period under review.

State Street Global Services Investment Compliance Program

Public Markets Portfolios Independent Investment Compliance Review.

- State Street provides daily and monthly compliance monitoring at the individual portfolio level, for all the internal and external investment portfolios on a posttrade basis.
- Daily monitoring allows for closer insight into the managers activity.
- The investment compliance rules are based on the investment guidelines:
 - Letters of Direction & Clarification (LODs) for the externally managed portfolios.
 - Investment Strategy Papers for the internally managed portfolios.
 - Applicable Arizona Revised Statutes.

State Street Global Services Investment Compliance Program

Total Fund Monthly Statutory Investment Compliance Review.

- State Street Compliance Group provides compliance reporting and monitoring at the Total Fund level, known as the "Monthly Statute Tests Compliance" for:
 - Five mandated Arizona Revised Statutes on investment limits, under §A.R.S.
 38-718.H-L.
 - 1. Max 80% Equity Test (§A.R.S. 38-718.H)
 - 2. Max 40% Non-US Public Investments Test (§A.R.S. 38-718.I)
 - 3. Max 60% Internally Managed Assets Test (§A.R.S. 38-718.J)
 - 4. Max 5% Issuer Test (§A.R.S. 38-718.K)
 - 5. Max 10% Debt of Multinational Development Banks Test (§A.R.S. 38-718.L)
 - Arizona Restricted Country Test.
 - The test is setup to look at the Fund's investment's country of incorporation to identify companies that do business in or with countries currently designated by the United States Department of State as State Sponsors of Terrorism, pursuant to §35-392, Arizona Revised Statues, as added by Laws 2007, Chapter 201.
- Per statute requirements, the results are measured using market value.

State Street Global Services Investment Compliance Review

<u>State Street Public Markets Portfolios & Statutory Investment Limits</u> Compliance Review Summary:

- State Street performed compliance reviews on all public markets portfolios, and at the Total Fund level investments for the period October 2017 - January 2018.
- Public Markets Investment Limits:
 - 19 public markets portfolios in October (equities and fixed income) were reviewed.
 - 12 public markets portfolios in November January (equities and fixed income) were reviewed.
 - State Street's review found various findings resulting from index changes, corporate actions, and informational flags.
 - All findings were researched and resolved to both State Street and ASRS's satisfaction, for all periods.
- Total Fund Monthly Statutory Investment Limits:
 - Total Fund investments passed the five mandated statutes on investment limits, as well as the Arizona Restricted Country Test for all periods.

Private Markets Investment Compliance Program

RCLCO - Real Estate Separate Account Investment Compliance Review

- Review and note if financial statements are prepared on a fair value basis noting whether liabilities are marked to market or not.
- Review the calculation of ASRS Net Asset Value (i.e. the waterfall calculation) and comment to the manager and ASRS is any errors are noted.
- Review the management fee calculation, including review of the NOI calculation to determine if it has been calculated correctly and it appropriate reserves have been deducted, and comment to the manager and ASRS if any errors are noted.
- Work with the manager and ASRS as necessary to address concerns and questions.
- Review audited financial statements at a high level for significant issues.
- Review valuation policies for consistency with ASRS policies, operating agreements and standards.
- Review expense policies for consistency with ASRS policies, operating agreements, and standards.

Private Markets Investment Compliance Program

RCLCO - Real Estate Separate Account Investment Compliance Review Summary:

- RLCO completed the compliance reviews for 2016 year end period on 12 RE SMA Funds, and is currently working on the compliance reviews for 2017 year end periods.
- RCLCO's review found immaterial inconsistencies in the NAV and Management Fee calculations. All findings have been satisfactorily resolved.

Private Markets Investment Compliance Program

Meketa Investment Group - Commingled Funds & Non-Real Estate Separate Accounts Investment Compliance Review

- Review managers' calculations of:
 - Asset management fees
 - Partnership expenses
 - Carried interest
- Review investment valuation policy
- Ensure calculation and policy agree to investment documentation, agreements, and manager policies.
- If a deficiency is noted, the consultant will address with the sponsor and work to resolve deficiencies.
- All results are communicated to ASRS.
- A summary report will be presented to the ASRS to communicate findings on an annual basis.

Private Markets Investment Compliance Program

Meketa Investment Group - Commingled Funds & Non-Real Estate Separate Accounts Investment Compliance Summary Review:

- Meketa completed the following compliance reviews for 2016 year end period:
 - 3 Private Debt Funds
 - 1 Opportunistic Debt Fund
 - 4 Private Equity Funds
 - 2 Real Estate Funds
- Meketa is currently working on the compliance reviews for 2017 year end periods.
- Meketa's review found immaterial inconsistencies in the incentive fee calculations.
 All findings have been satisfactorily resolved.