

**STATE OF RHODE ISLAND  
INVESTMENT COMMISSION MEETING**

**DATA AT  
July 31, 2017**

**August 23<sup>rd</sup>, 2017  
MEETING**

**MEMBERS OF THE STATE INVESTMENT COMMISSION**

**Honorable Seth Magaziner, Chair**

**Mr. Robert K. Benson  
Mr. J. Michael Costello  
Mr. Thomas P. Fay  
Ms. Karen Hammond  
Mr. Frank J. Karpinski**

**Ms. Marie Langlois  
Ms. Sylvia Maxfield  
Mr. Thomas Mullaney  
Ms. Marcia Reback**

## Section I.

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### Agenda



State of Rhode Island and Providence Plantations  
Office of the General Treasurer

**Seth Magaziner**  
General Treasurer

## **RHODE ISLAND STATE INVESTMENT COMMISSION MEETING NOTICE**

The next meeting of the Rhode Island State Investment Commission has been scheduled for Wednesday, August 23<sup>rd</sup> 2017 at 9:00 a.m. at Room 205 of the State House.

### **AGENDA**

- Chairperson Call to Order
- Membership Roll Call
- Approval of Minutes
  - State Investment Commission Meeting held on July 10<sup>th</sup> 2017\*
- Review and Consideration of Inflation IPS\*
  - John Burns, Pension Investment Consulting (PCA)
- Private Credit Overview
  - Tom Lynch, Cliffwater
- Investment Recommendation, Davidson Kempner Long-Term Distressed Opportunities Fund IV\*
  - Tom Lynch, Cliffwater
  - Nancy Karpf, Davidson Kempner
- Review and Consideration of the 457/401a Investment Lineup\*
  - Ellen Savary, Fidelity
  - Gregory Miller, Voya
  - Larry Brown, TIAA
- Legal Counsel Report
- Chief Investment Officer Report
  - Portfolio Performance
  - New Reporting Format
  - Update on Advisor Search
- Treasurer's General Comments

\* Commission members may be asked to vote on this item.



State of Rhode Island and Providence Plantations  
Office of the General Treasurer

**Seth Magaziner**  
General Treasurer

**POSTED ON August 18th, 2017**

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter, please contact Michael Villapiano at (401) 574-9144 twenty-four hours in advance of the scheduled meeting.

## Section II.

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### Approval of Minutes



**State Investment Commission**  
**Monthly Meeting Minutes**  
**Monday, July 10th, 2017**  
**9:00 a.m.**  
**Room 205, State House**

The Monthly Meeting of the State Investment Commission (SIC) was called to order at 8:59, Monday, July 10<sup>th</sup>, 2017 in Room 205, State House.

## **I. Roll Call of Members**

The following members were present: Mr. Robert Benson, Mr. Michael Costello, Ms. Karen Hammond, Ms. Sylvia Maxfield, Mr. Thomas Mullaney, and Treasurer Seth Magaziner.

Mr. Frank Karpinski arrived at 9:17.

Mr. Thomas Mullaney left at 10:58.

The following member was absent: Ms. Marie Langlois

Also in attendance: Mr. Tom Lynch and Mr. Mark Williams, Cliffwater; Mr. John Burns, Pension Consulting Alliance (PCA); Mr. George Aitken-Davis, Altaris Health Partners; Mr. Adil Rahmathulla and Mr. Andreas Moon, I-Squared Capital; Mr. Larry Brown and Mr. David Iden, TIAA; Ms. Kimberly Shockley, Associate Director of College and Retirement Savings Plan; Mr. Alec Stais, Chief Investment Officer, Ms. Sally Dowling, Adler, Pollock & Sheehan, legal counsel; and other members of the Treasurer's staff.

Treasurer Magaziner called the meeting to order at 8:59 a.m.

## **II. Approval of Minutes**

On a motion by Ms. Maxfield and seconded by Mr. Mullaney, it was unanimously

**VOTED: to approve the draft minutes of the May 24th, 2017 meeting of the State Investment Commission.**

## **III. Treasurer's General Comments**

Treasurer Magaziner provided the board several updates. Notably, he discussed the General Assembly's failure to pass a budget ahead of the new fiscal year and discussed the potential impacts of that inaction as it related to investment staffing and operations.

He then apprised the board that the CPC mandate will move forward with two Systematic Trend Following (STF) managers instead of three but will leave the option open to a third should a suitable opportunity arise in the future. Funding has begun for the two STF managers, the details of which were expressed by Mr. Stais.

Treasurer Magaziner also told the board to expect a different look in the upcoming SIC book as reporting is updated to reflect the new asset allocation.

#### **IV. Chief Investment Officer Report**

Mr. Stais provided the portfolio update for May. The portfolio exceeded the \$8 billion mark having increased by almost \$82 million for the month. On a percentage basis, the portfolio increased 1.37% matching the plan benchmark but lagging the basic 60% global equity/40% fixed income allocation of 1.63%. He also gave a preliminary outlook on the fiscal year end numbers, promising the final numbers be delivered to the group in several weeks.

#### **V. Review and Consideration of the Income IPS**

Treasurer Magaziner prefaced the conversation with the fact that Investment Policy Statements (IPSs) continue to be updated to reflect the new asset allocation adopted last year.

Mr. Burns summarized the Income Class portfolio and its purpose. He reminded the board that the Income class will be increased from 6% to 8% of the portfolio under the new asset allocation. He highlighted the objectives and reasons for doing so based on the model and policy presented and adopted through the asset allocation process. He concluded by describing the transition plan to implement the Income Class portfolio at its new allocation.

The board reviewed the Income Class Investment Policy Statement.

The board asked questions.

On a motion by Mr. Fay and seconded by Ms. Maxfield, it was unanimously

**VOTED: to approve the Income Class Investment Policy Statement**

#### **VI. Private Equity Investment Recommendation, Altaris Health Partners**

Mr. Aitken-Davis provided background information on Altaris, a healthcare focused private equity firm. They target companies that deliver value and efficiency to the healthcare system, and take an active approach to influencing the investment outcome through leveraging industry knowledge and network. He detailed the company culture and described how it influenced their processes and drives their results. He then outlined the Altaris investment strategy and sectors of focus, as well as the fund's principal terms for the board's consideration.

The board asked questions.

Mr. Lynch apprised the board of the due diligence conducted on Altaris. He summarized the firm's organization, strategy and process. He also gave an overview of the historical performance in their previous three funds and outlined the terms of Fund IV.

On a motion by Mr. Maxfield and seconded by Mr. Fay, it was unanimously

**VOTED: that the Employees' Retirement System of the State of Rhode Island make a \$32 million investment in Altaris Health Partners IV, L.P. and an \$8 million investment in its affiliated fund, Altaris Constellation Partners IV, L.P., in each case with an effective closing date as of June 30, 2017, subject to legal and investment staff review and submission of required Subscription documents following the date of this resolution.**

## **VII. Infrastructure Investment Recommendation, ISQ Global Infrastructure Fund**

Mr. Rahmathulla gave an overview of I-Squared Capital, explaining it is a global, employee controlled investment platform. He discussed their organizational structure and company culture, as well as its investment approach which focuses on global infrastructure projects with risk-adjusted returns and downside protection. He went on to detail its current portfolio and the new fund strategy.

Mr. Williams summarized Cliffwater's recommendation of ISQ. He provided an overview of Fund II, noting it was similar to their previous Fund which globally invested in medium sized value-added infrastructure assets across thermal, renewables, utilities and transportation sectors. He also detailed their performance and the terms of the investment.

The board asked questions.

On a motion by Ms. Reback and seconded by Mr. Benson, it was unanimously  
**VOTED: to approve a \$40 million investment with ISQ Global Infrastructure Fund II**

## **VIII. Review and Consideration of the 457/401a Investment Lineup**

Treasurer Magaziner recalled there was a competitive RFP process for both the Defined Contribution and Deferred Compensation plans. The recommendations from that process yielded a change to one of the 457 vendors (the state requires 3 vendors for its 457 plan).

Ms. Shockley presented the recommended investment menu for the transition from Valic to TIAA. The recommended changes would offer a similar diverse menu of options but would come with reduced fees and a more concise package than the lineup under the previous provider.

The board asked questions.

On a motion by Mr. Fay and seconded by Mr. Benson, it was unanimously  
**VOTED: to approve the mapping plan for the 401a/457 investment lineup**

## **IX. Review and Consideration of 529 Investment Options**

Ms. Shockley summarized the recommendations from last month's CollegeBound Update provided by Capital Cities.

In order to streamline the naming convention across portfolios, Capital Cities recommended to change the name of the socially responsible equity portfolio.

On a motion by Ms. Reback and seconded by Ms. Maxfield, it was unanimously  
**VOTED: to approve the name change from "Invesco Global Sustainable Equity Portfolio" to "Global Sustainable Equity Portfolio"**

In order to improve small cap access, Capital Cities recommended to enhance the age-based portfolios' domestic equity component by replacing iShares Core S&P 500 with iShares Core S&P Total U.S. Stock Market.

On a motion by Ms. Reback and seconded by Ms. Maxfield, it was unanimously



**VOTED: to approve Small cap access by enhancing the age-based portfolios' domestic equity component by replacing iShares Core S&P 500 with iShares Core S&P Total US Stock Market**

Capital Cities had assisted in establishing recommendations for the change to the 401a and 457 lineups. Ms. Shockley asked the board for an amendment to the Capital Cities contract that would allow to retroactively acquire and compensate Capital Cities at the amount of \$15,000 for that purpose.

On a motion by Ms. Reback and seconded by Ms. Maxfield, it was unanimously

**VOTED: to approve to approve the hiring of Capital Cities of \$15,000 for the purposes of assisting in the 401a/457 lineup**

## **X. Legal Counsel Report**

There was no legal counsel report.

There being no other business to come before the board, on a motion by Mr. Fay and seconded by Mr. Costello, the meeting adjourned at 11:23 a.m.

Respectfully submitted,

**Seth Magaziner,  
General Treasurer**

## Section III.

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### Staff Summary

# Portfolio Highlights

July 2017

On the month, the total portfolio value increased by approximately \$117.4 million. The month's \$136.9 million of positive investment performance was offset by \$19.5 million of transfers to meet pension payroll in excess of pension contributions. On a percentage basis, the portfolio increased 1.70% net of fees, beating the plan benchmark of 1.67% but lagging the basic 60% global equity/40% fixed income allocation of 1.85%.

Calendar year-to-date, the total portfolio has increased by \$462.5 million, with net gains of \$652.1 million offset by \$189.6 million in pension payments. The portfolio's 8.56% return lagged both the benchmark and 60/40 returns of 8.60% and 9.71%, respectively.

Fiscal year-to-date, the total portfolio value increased by approximately \$117.4 million. The month's \$136.9 million of positive investment performance was offset by \$19.5 million of transfers to meet pension payroll in excess of pension contributions. On a percentage basis, the portfolio increased 1.70%, beating the plan benchmark of 1.67% but lagging the basic 60% global equity/40% fixed income allocation of 1.85%.

Over a 3-year time frame and when comparing against a 60/40 portfolio, the ERSRI portfolio outperformed at 5.25% versus the plan benchmark of 5.07% while the 60/40 portfolio earned 4.96%. Over a 5-year time frame, the ERSRI portfolio earned 7.93%, outperforming the plan benchmark of 7.84% and 60/40 portfolio which posted 7.37%.



State of Rhode Island and Providence Plantations  
Office of the General Treasurer

Seth Magaziner

August 17, 2017

General Treasurer

State Investment Commission  
State of Rhode Island, State House  
Providence, Rhode Island

This is to certify that the amounts so listed below belong to the credit of the Employees' Retirement, Municipal Employees', State Police and Judicial Retirement Systems of the State of Rhode Island at the close of business on July 31, 2017.

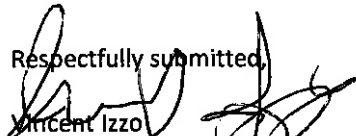
**Employees' Retirement System of Rhode Island**  
**Composite Reporting Investment Valuation**  
**July 31, 2017**

Asset Class	Base Market Value
<b>Grand Total</b>	<b>8,158,527,547</b>
CASH EQUIVALENT*	562,287,071
EQUITY HEDGE FUNDS**	343,523,761
GLOBAL PUBLIC EQUITY	3,801,917,607
CREDIT	380,208,762
INFLATION-LINKED BDS	241,184,594
PRIVATE EQUITY**	545,851,914
REAL ESTATE**	585,761,619
REAL RET HEDGE FUNDS**	325,567,222
INFRASTRUCTURE**	280,329,665
US TRADITIONAL FIXED	933,817,079
CPC Program	158,078,254

Plan Allocations	%	Base Market Value
<b>Grand Total</b>	<b>100.00%</b>	<b>8,158,527,547</b>
STATE EMP RET PLAN	75.22%	6,138,133,487
MUNI EMP RET PLAN	18.26%	1,491,179,471
TEACHER'S SURVIVOR BENEFIT	3.86%	313,931,464
STATE POLICE RET PL	1.60%	131,206,425
JUDICIAL RET PLAN	0.84%	68,705,094
NON-CONTRIB JUD RET	0.01%	628,172
NON-CONT ST POL RET	0.22%	14,743,434

\* Cash & Short-Term Investments, as shown, also includes amounts available within specific active-manager mandates, and thus as aggregated will not tie directly to separate cash allocations as reported elsewhere.

\*\* Alternative Investments – comprising the five components as indicated – have varying degrees of liquidity and may not have readily determinable market values. As such, they may be based on appraisals only.

Respectfully submitted,  
  
Vincent Izzo  
Investment Accounting Manager

## Section IV.

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### Asset Allocation

# Asset Summary

Balance Date: 7/31/2017



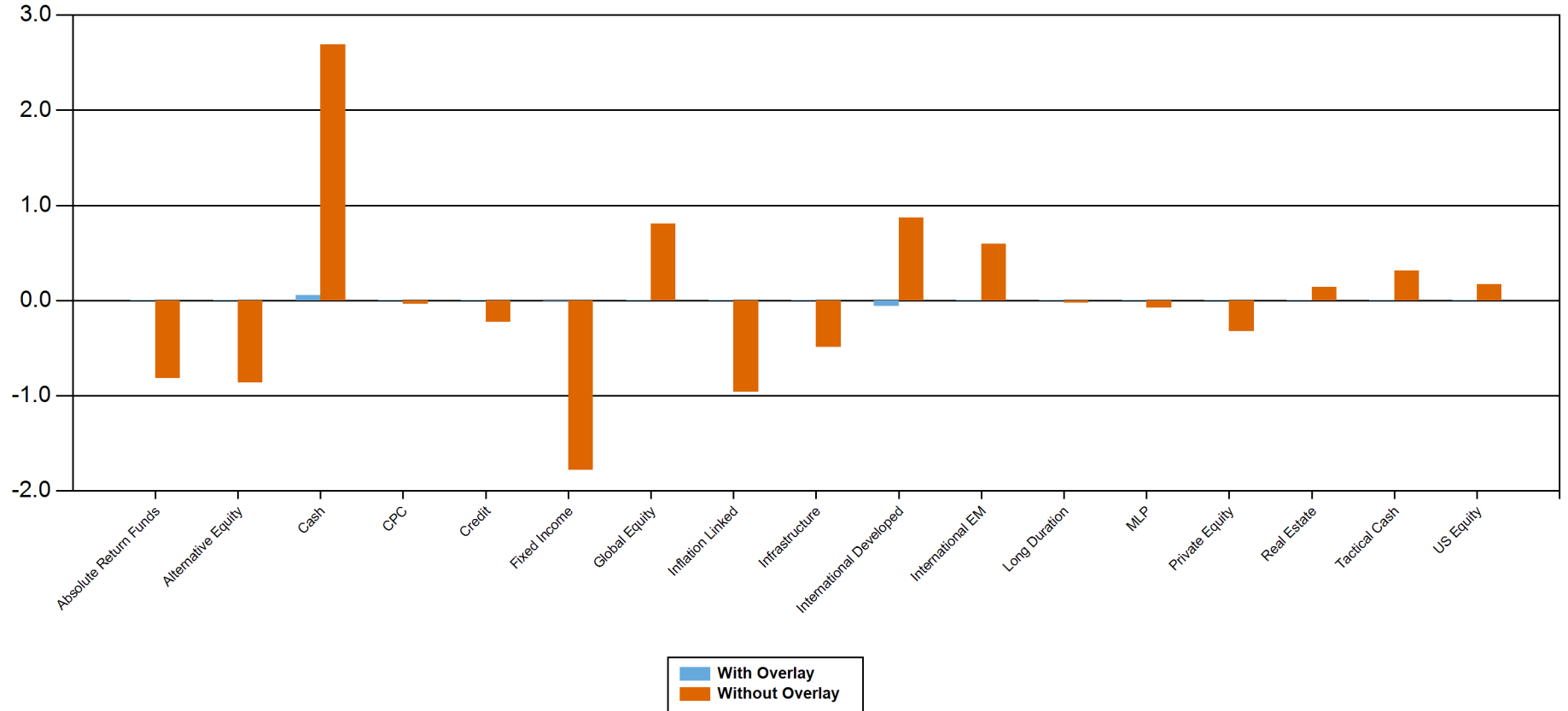
<u>Asset Class</u>	<u>Physical Exposure</u>		<u>Synthetic Exposure</u>		<u>Net Position</u>		<u>Overlay Target</u>		<u>Policy Target</u>	
<b>Total Market Value</b>	<b>8,133.6</b>	<b>100.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>8,133.6</b>	<b>100.0 %</b>	<b>8,133.7</b>	<b>100.0 %</b>	<b>8,133.7</b>	<b>100.00 %</b>
<b>Cash</b>	<b>218.9</b>	<b>2.7 %</b>	<b>-208.7</b>	<b>-2.6 %</b>	<b>10.2</b>	<b>0.1 %</b>	<b>5.5</b>	<b>0.1 %</b>	<b>0.0</b>	<b>0.00 %</b>
Cash	218.9	2.7 %	-208.7	-2.6 %	10.2	0.1 %	5.5	0.1 %	0.0	0.00 %
<b>Equity</b>	<b>4,698.4</b>	<b>57.8 %</b>	<b>30.7</b>	<b>0.4 %</b>	<b>4,729.1</b>	<b>58.1 %</b>	<b>4,733.9</b>	<b>58.2 %</b>	<b>4,595.5</b>	<b>56.50 %</b>
Alternative Equity	348.0	4.3 %	0.0	0.0 %	348.0	4.3 %	348.0	4.3 %	418.1	5.14 %
Global Equity	1,204.4	14.8 %	0.0	0.0 %	1,204.4	14.8 %	1,204.4	14.8 %	1,138.7	14.00 %
International Developed	894.7	11.0 %	-19.2	-0.2 %	875.5	10.8 %	880.3	10.8 %	823.9	10.13 %
International EM	377.3	4.6 %	-26.2	-0.3 %	351.1	4.3 %	351.1	4.3 %	328.6	4.04 %
Private Equity	543.2	6.7 %	0.0	0.0 %	543.2	6.7 %	543.2	6.7 %	569.4	7.00 %
US Equity	1,330.9	16.4 %	76.0	0.9 %	1,406.9	17.3 %	1,406.9	17.3 %	1,316.8	16.19 %
<b>Fixed</b>	<b>961.4</b>	<b>11.8 %</b>	<b>178.0</b>	<b>2.2 %</b>	<b>1,139.5</b>	<b>14.0 %</b>	<b>1,139.5</b>	<b>14.0 %</b>	<b>1,106.2</b>	<b>13.60 %</b>
Fixed Income	961.4	11.8 %	178.0	2.2 %	1,139.5	14.0 %	1,139.5	14.0 %	1,106.2	13.60 %
<b>Other</b>	<b>2,254.9</b>	<b>27.7 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>2,254.9</b>	<b>27.7 %</b>	<b>2,254.9</b>	<b>27.7 %</b>	<b>2,432.0</b>	<b>29.90 %</b>
Absolute Return Funds	334.6	4.1 %	0.0	0.0 %	334.6	4.1 %	334.6	4.1 %	401.0	4.93 %
CPC	77.4	1.0 %	0.0	0.0 %	77.4	1.0 %	77.4	1.0 %	80.5	0.99 %
Credit	388.2	4.8 %	0.0	0.0 %	388.2	4.8 %	388.2	4.8 %	406.7	5.00 %
Inflation Linked	247.1	3.0 %	0.0	0.0 %	247.1	3.0 %	247.1	3.0 %	325.3	4.00 %
Infrastructure	123.0	1.5 %	0.0	0.0 %	123.0	1.5 %	123.0	1.5 %	162.7	2.00 %
Long Duration	78.6	1.0 %	0.0	0.0 %	78.6	1.0 %	78.6	1.0 %	80.5	0.99 %
MLP	156.4	1.9 %	0.0	0.0 %	156.4	1.9 %	156.4	1.9 %	162.7	2.00 %
Real Estate	580.8	7.1 %	0.0	0.0 %	580.8	7.1 %	580.8	7.1 %	569.4	7.00 %
Tactical Cash	268.7	3.3 %	0.0	0.0 %	268.7	3.3 %	268.7	3.3 %	243.2	2.99 %

# Asset Summary

Balance Date: 7/31/2017



Percent Deviation from Overlay Target



Total Absolute Notional Value: 299.3 (USD)

# Asset Summary

Balance Date: 7/31/2017



<u>Manager</u>	<u>Total Market Value</u>		<u>Equity Market Value</u>		<u>Fixed Market Value</u>		<u>Other Market Value</u>		<u>Cash Balance</u>	
<b>Total Assets</b>	<b>8,133.7</b>	<b>100.0 %</b>	<b>4,698.4</b>	<b>57.8 %</b>	<b>961.4</b>	<b>11.8 %</b>	<b>2,254.9</b>	<b>27.7 %</b>	<b>218.9</b>	<b>2.7 %</b>
<b>Cash</b>	<b>218.9</b>	<b>2.7 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>218.8</b>	<b>2.7 %</b>
Cash Acct (Pooled Trust)	201.4	2.5 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	201.3	2.5 %
Municipal EE's Retirement Plan	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Russell Overlay	17.5	0.2 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	17.5	0.2 %
State EE's Retirement Plan	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Tactical Cash-offset Template	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>Equity</b>	<b>4,698.5</b>	<b>57.8 %</b>	<b>4,698.4</b>	<b>57.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.1</b>	<b>0.0 %</b>
<b>Alternative Equity</b>	<b>348.0</b>	<b>4.3 %</b>	<b>348.0</b>	<b>4.3 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Davidson Kempner	84.0	1.0 %	84.0	1.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Elliot Associates, LP	99.3	1.2 %	99.3	1.2 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
ESG	1.1	0.0 %	1.1	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Indus Asia Pacific Fund	0.4	0.0 %	0.4	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Luxor Capital Partners	6.0	0.1 %	6.0	0.1 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
PFM Diversified Fund LP	3.9	0.0 %	3.9	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Samlyn Onshore Fund LP	48.2	0.6 %	48.2	0.6 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Viking Global Equities	105.2	1.3 %	105.2	1.3 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>Global Equity</b>	<b>1,204.5</b>	<b>14.8 %</b>	<b>1,204.4</b>	<b>14.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.1</b>	<b>0.0 %</b>
Global Equity Transition	0.1	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.1	0.0 %
SSGA Global Fundamental Dev LC	1,204.4	14.8 %	1,204.4	14.8 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>International Developed</b>	<b>894.7</b>	<b>11.0 %</b>	<b>894.7</b>	<b>11.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
SSgA MSCI Canada	105.2	1.3 %	105.2	1.3 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA MSCI EAFE	789.4	9.7 %	789.4	9.7 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>International EM</b>	<b>377.3</b>	<b>4.6 %</b>	<b>377.3</b>	<b>4.6 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
SSgA Emerging Mkts	377.3	4.6 %	377.3	4.6 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>Private Equity</b>	<b>543.2</b>	<b>6.7 %</b>	<b>543.2</b>	<b>6.7 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Combined Private Equity	453.2	5.6 %	453.2	5.6 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Opportunistic Private Credit	30.0	0.4 %	30.0	0.4 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Private Credit	60.0	0.7 %	60.0	0.7 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>US Equity</b>	<b>1,329.6</b>	<b>16.3 %</b>	<b>1,329.6</b>	<b>16.3 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Rhode Island Transition Acct	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA Russell 3000	1,329.6	16.3 %	1,329.6	16.3 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>US Large Cap</b>	<b>1.3</b>	<b>0.0 %</b>	<b>1.3</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Shott Capital	1.3	0.0 %	1.3	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>Fixed</b>	<b>961.4</b>	<b>11.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>961.4</b>	<b>11.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
<b>Fixed Income</b>	<b>961.4</b>	<b>11.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>961.4</b>	<b>11.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
MacKay Shields Core	477.8	5.9 %	0.0	0.0 %	477.8	5.9 %	0.0	0.0 %	0.0	0.0 %
Pyramis Core	483.7	5.9 %	0.0	0.0 %	483.7	5.9 %	0.0	0.0 %	0.0	0.0 %
<b>Other</b>	<b>2,254.9</b>	<b>27.7 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>2,254.9</b>	<b>27.7 %</b>	<b>0.0</b>	<b>0.0 %</b>
<b>Tactical Cash</b>	<b>268.7</b>	<b>3.3 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>268.7</b>	<b>3.3 %</b>	<b>0.0</b>	<b>0.0 %</b>
ERSRI SMA CASH	268.7	3.3 %	0.0	0.0 %	0.0	0.0 %	268.7	3.3 %	0.0	0.0 %



# Asset Summary

Balance Date: 7/31/2017

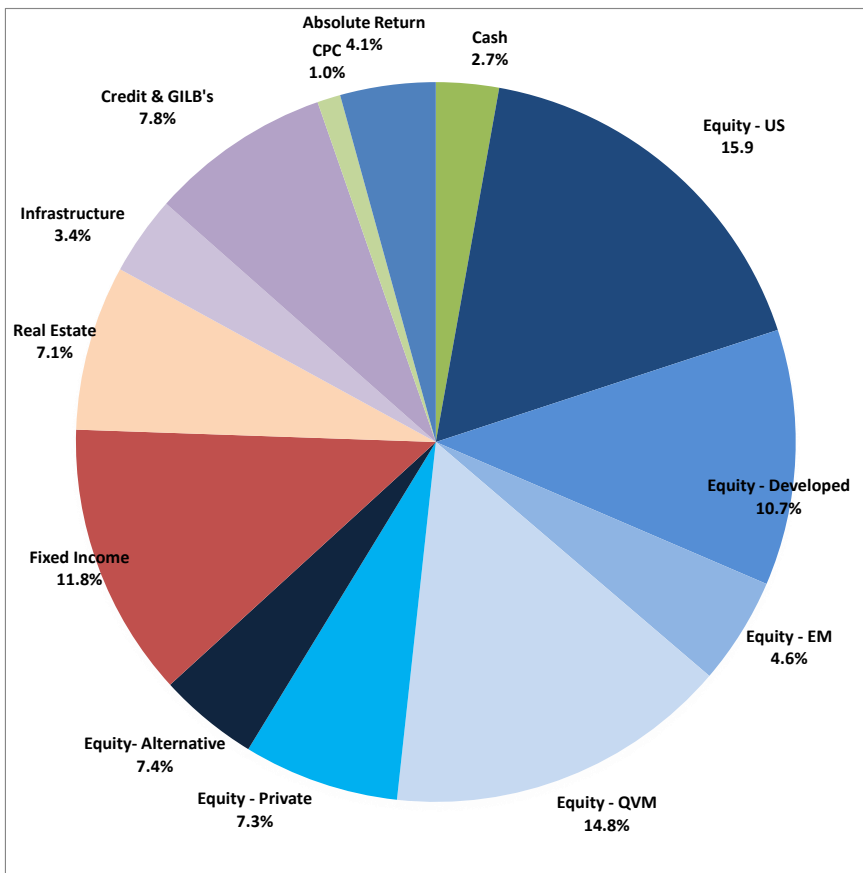


<u>Manager</u>	<u>Total Market Value</u>		<u>Equity Market Value</u>		<u>Fixed Market Value</u>		<u>Other Market Value</u>		<u>Cash Balance</u>	
Tactical Cash Template	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>Absolute Return Funds</b>	<b>334.6</b>	<b>4.1 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>334.6</b>	<b>4.1 %</b>	<b>0.0</b>	<b>0.0 %</b>
Brevan Howard LP	56.7	0.7 %	0.0	0.0 %	0.0	0.0 %	56.7	0.7 %	0.0	0.0 %
Brigade Levered Capital	3.2	0.0 %	0.0	0.0 %	0.0	0.0 %	3.2	0.0 %	0.0	0.0 %
Capula Global Relative Value	69.5	0.9 %	0.0	0.0 %	0.0	0.0 %	69.5	0.9 %	0.0	0.0 %
Claren Road Cr Fund	6.9	0.1 %	0.0	0.0 %	0.0	0.0 %	6.9	0.1 %	0.0	0.0 %
D.E. Shaw Composite Fund	100.0	1.2 %	0.0	0.0 %	0.0	0.0 %	100.0	1.2 %	0.0	0.0 %
Graham Global	57.3	0.7 %	0.0	0.0 %	0.0	0.0 %	57.3	0.7 %	0.0	0.0 %
Oz Domestic Partners II	5.5	0.1 %	0.0	0.0 %	0.0	0.0 %	5.5	0.1 %	0.0	0.0 %
Winton Futures Ltd Fund	35.5	0.4 %	0.0	0.0 %	0.0	0.0 %	35.5	0.4 %	0.0	0.0 %
<b>CPC</b>	<b>77.4</b>	<b>1.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>77.4</b>	<b>1.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
CPC CB LLC	38.4	0.5 %	0.0	0.0 %	0.0	0.0 %	38.4	0.5 %	0.0	0.0 %
CPC QIS LLC	39.0	0.5 %	0.0	0.0 %	0.0	0.0 %	39.0	0.5 %	0.0	0.0 %
<b>Credit</b>	<b>388.2</b>	<b>4.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>388.2</b>	<b>4.8 %</b>	<b>0.0</b>	<b>0.0 %</b>
PIMCO	200.7	2.5 %	0.0	0.0 %	0.0	0.0 %	200.7	2.5 %	0.0	0.0 %
WAMCO	187.5	2.3 %	0.0	0.0 %	0.0	0.0 %	187.5	2.3 %	0.0	0.0 %
<b>Inflation Linked</b>	<b>247.1</b>	<b>3.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>247.1</b>	<b>3.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Brown Brothers Harriman-GILBS	247.1	3.0 %	0.0	0.0 %	0.0	0.0 %	247.1	3.0 %	0.0	0.0 %
<b>Infrastructure</b>	<b>123.0</b>	<b>1.5 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>123.0</b>	<b>1.5 %</b>	<b>0.0</b>	<b>0.0 %</b>
Combined Priv. Infrastructure	123.0	1.5 %	0.0	0.0 %	0.0	0.0 %	123.0	1.5 %	0.0	0.0 %
Infrastructure	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>Long Duration</b>	<b>78.6</b>	<b>1.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>78.6</b>	<b>1.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
ERSRI Mackay Long Duration	39.3	0.5 %	0.0	0.0 %	0.0	0.0 %	39.3	0.5 %	0.0	0.0 %
ERSRI WAMCO Long Duration	39.3	0.5 %	0.0	0.0 %	0.0	0.0 %	39.3	0.5 %	0.0	0.0 %
<b>MLP</b>	<b>156.4</b>	<b>1.9 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>156.4</b>	<b>1.9 %</b>	<b>0.0</b>	<b>0.0 %</b>
Harvest Fund Advisor	156.4	1.9 %	0.0	0.0 %	0.0	0.0 %	156.4	1.9 %	0.0	0.0 %
<b>Real Estate</b>	<b>580.8</b>	<b>7.1 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>580.8</b>	<b>7.1 %</b>	<b>0.0</b>	<b>0.0 %</b>
Core Real Estate	420.8	5.2 %	0.0	0.0 %	0.0	0.0 %	420.8	5.2 %	0.0	0.0 %
Non-Core Real Estate	160.0	2.0 %	0.0	0.0 %	0.0	0.0 %	160.0	2.0 %	0.0	0.0 %

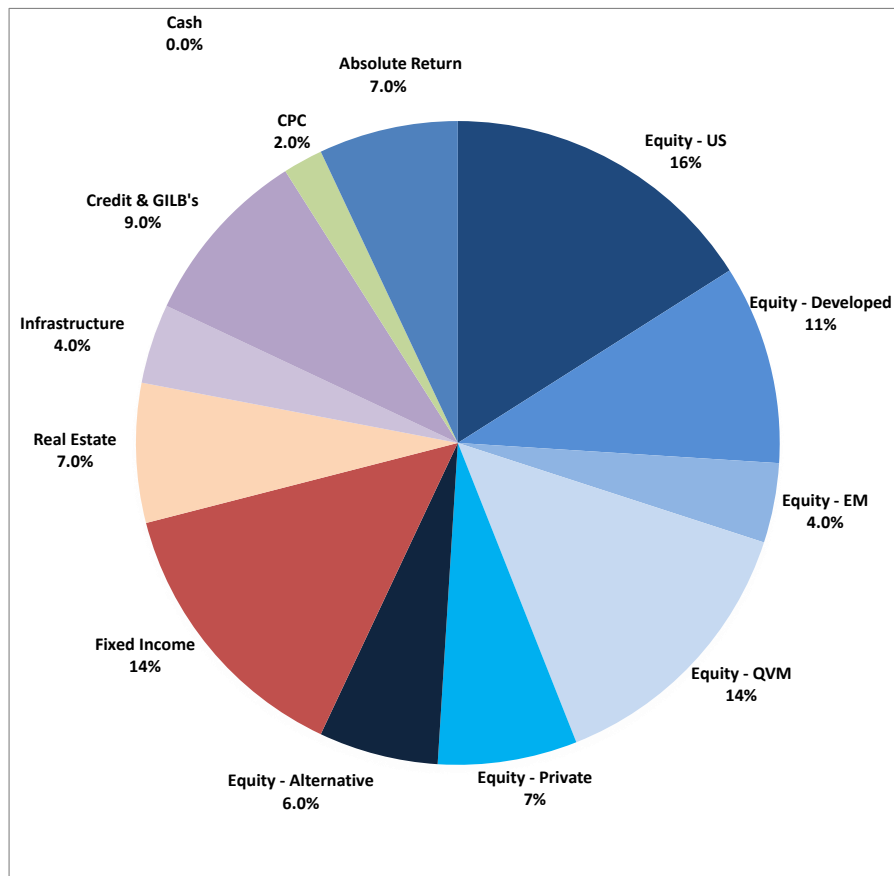
# ERSRI Portfolio

%%% - as of July 31, 2017

### Actual Allocation



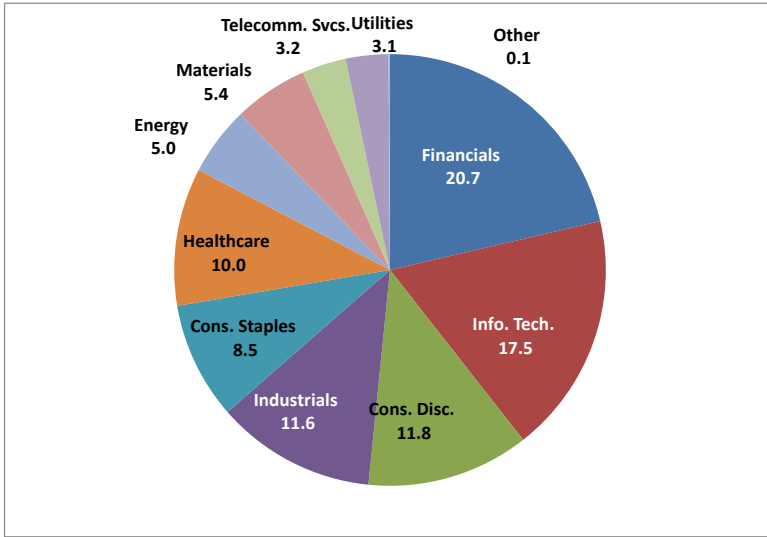
### Policy Allocation



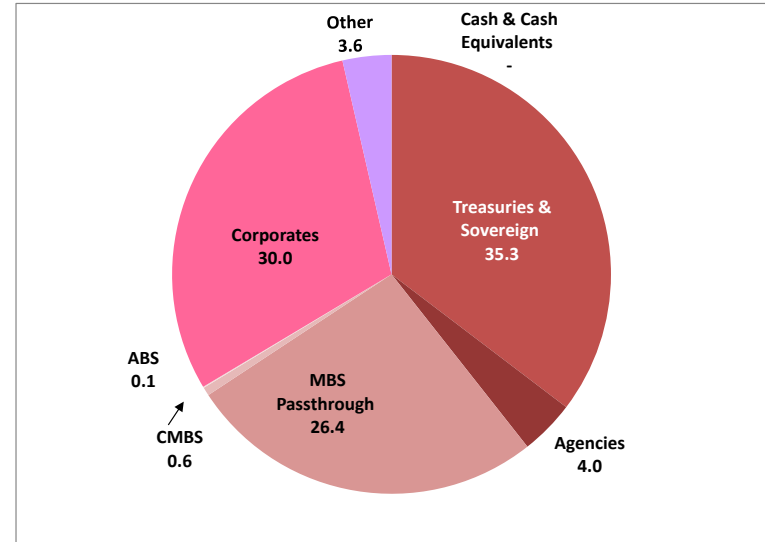
# ERSRI Asset Allocation Public-Asset Portfolios

%%% - as of July 31, 2017

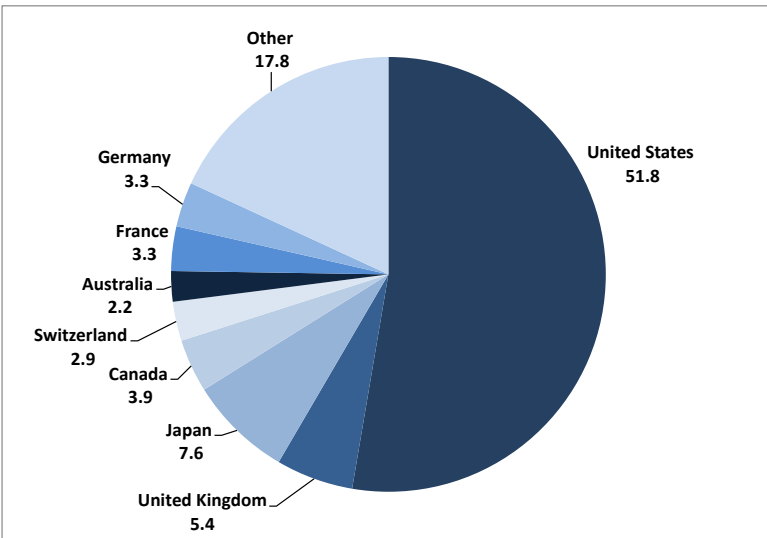
### Global Public Equity - by Industry Sector



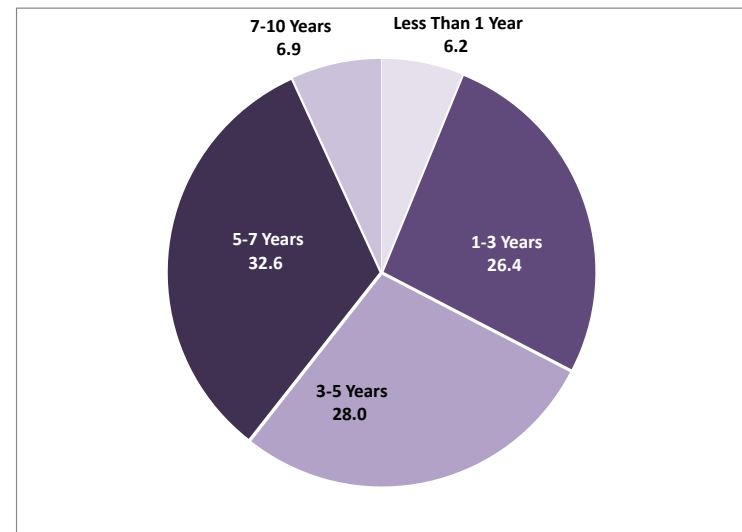
### Core Fixed Income - by Type



### Global Public Equity - by Geography



### Inflation-Linked Bonds - by Duration



## Section V.

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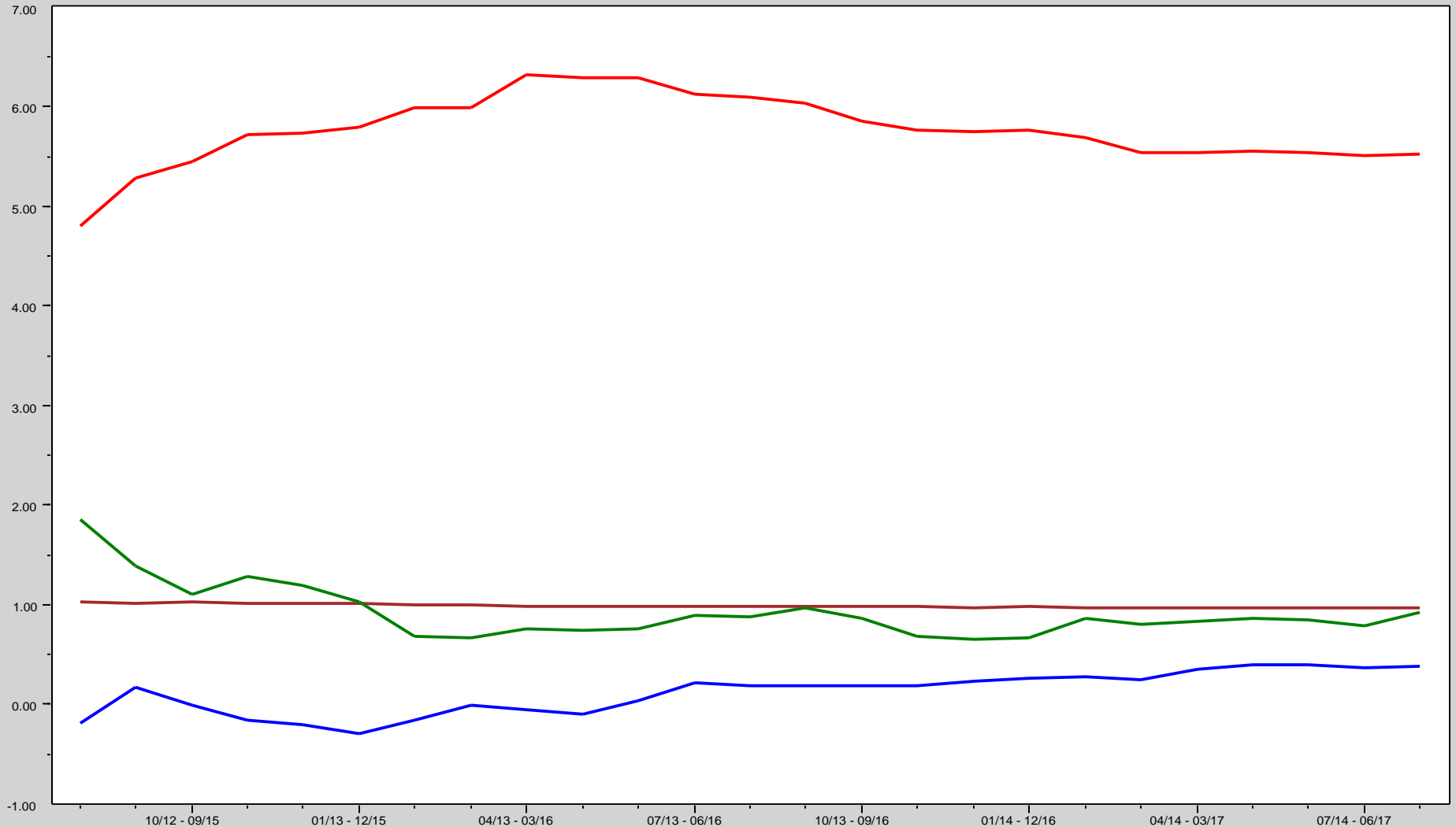
### Risk Overview

# Historical Risk - Three Year Rolling Periods

TOTAL PLAN

5 Years Ending July 31, 2017

Trend



Market Proxy: Total Plan Benchmark; Risk-Free Proxy: BofA Merrill Lynch 3 Month US Treasury Bill G001

Ann Std Dev      Ann Sharpe Ratio      Ann Alpha      Beta

## Risk Exposures

### 3 Years Ending July 31, 2017

	Annualized Return	Ann Std Dev	Beta (ACWI)	Beta (BC AGG)	Beta (GSCI)	Beta (CPI)
<b>US Public Equity</b>	10.60	10.35	0.90	-0.34	0.12	1.17
<b>Non-US Public Equity</b>	2.60	12.38	1.10	0.33	0.26	2.70
<b>Equity Hedge Funds</b>	2.38	3.99	0.21	-0.32	0.02	0.91
<b>TOTAL PRIVATE EQUITY</b>	8.30	5.18	-0.02	-0.24	0.07	1.60
<b>Traditional Fixed Income</b>	2.81	2.82	0.03	0.98	-0.03	-0.24
<b>TOTAL REAL ESTATE</b>	11.08	2.17	0.01	0.27	-0.02	-0.40
<b>Real Return Hedge Funds</b>	4.05	2.77	0.07	-0.11	0.00	-0.01
<b>Inflation-Linked Bonds</b>	1.18	2.55	0.04	0.69	0.01	0.33
<b>Cash</b>	0.87	0.37	0.00	-0.01	-0.00	-0.03
<b>Russell Overlay Fd</b>	0.00	0.09	-0.00	-0.00	-0.00	-0.04
<b>TOTAL PLAN</b>	5.25	5.53	0.51	0.10	0.10	1.14

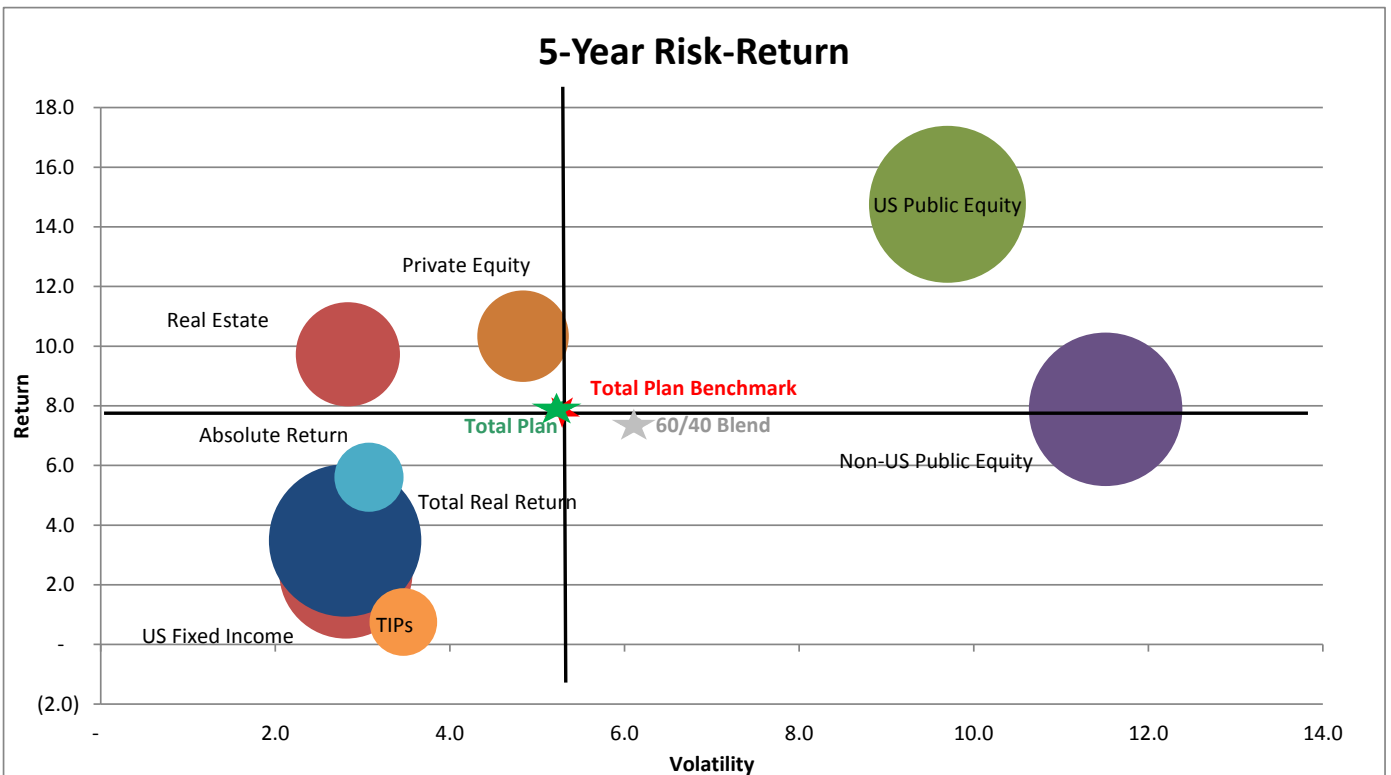
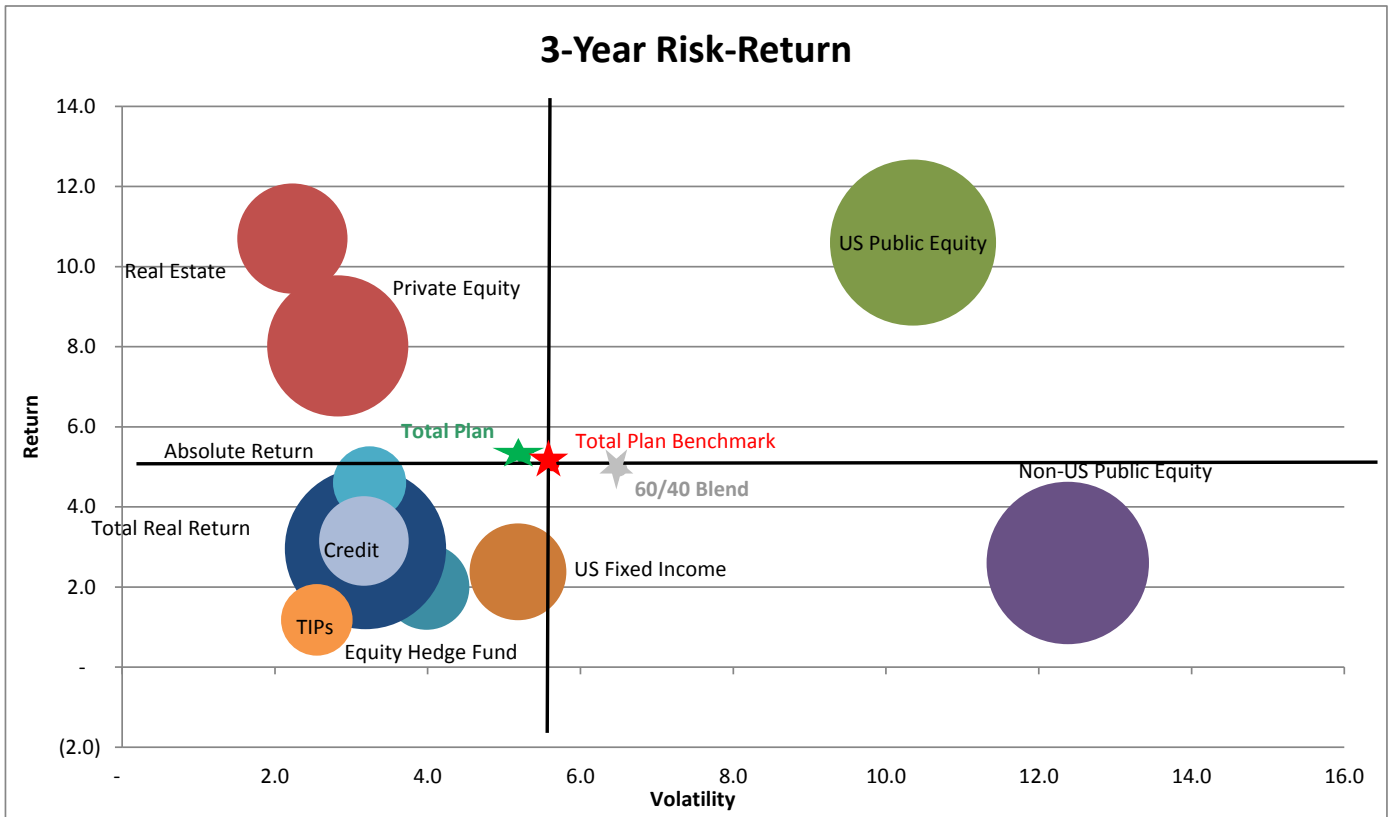
## 5 Years Ending July 31, 2017 Comparison

	TOTAL PLAN	Total Plan Benchmark	60/40 Blend
Ann Return	7.93	7.84	7.37
Ann Ex Ret vs Mkt	0.08		
Ann Tracking Error	0.82		
Ann Std Dev	5.30	5.32	6.13
Beta	0.98		
R-Squared	0.98		
Ann Alpha	0.20		
Ann Sharpe Ratio	1.44	1.41	1.16

# ERSRI Portfolio

% - as of July 31, 2017

Bubble-Size Scaled based on Current Allocations





**3 Years Ending July 31, 2017  
Correlation**

Ann Return

	US Pub EQ	Non-US Pub EQ	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
<b>US Pub</b>	1.00										
<b>Non-US P</b>	0.77	1.00									
<b>Eq HF</b>	0.52	0.52	1.00								
<b>PE</b>	-0.03	-0.03	0.02	1.00							
<b>FI</b>	0.00	0.19	-0.17	-0.14	1.00						
<b>RE</b>	-0.02	0.03	-0.19	-0.29	0.30	1.00					
<b>RR HF</b>	0.33	0.19	0.50	-0.12	-0.07	-0.22	1.00				
<b>TIPS</b>	0.00	0.32	-0.23	-0.10	0.79	0.32	-0.02	1.00			
<b>Cash</b>	0.16	0.16	0.16	-0.02	-0.02	-0.29	0.12	-0.22	1.00		
<b>Overlay</b>	-0.22	-0.18	-0.30	-0.10	-0.06	0.16	-0.14	-0.07	-0.01	1.00	
<b>Total</b>	0.92	0.95	0.58	0.01	0.16	0.01	0.32	0.23	0.17	-0.23	1.00
<b>Tot BM</b>	0.91	0.96	0.55	-0.05	0.18	0.01	0.27	0.24	0.16	-0.22	0.99

**5 Years Ending July 31, 2017  
Correlation**

Ann Return

	US Pub Eq	Non-US Pub Eq	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
<b>US Pub</b>	1.00										
<b>Non-US P</b>	0.76	1.00									
<b>Eq HF</b>	0.63	0.53	1.00								
<b>PE</b>	0.03	0.02	0.07	1.00							
<b>FI</b>	0.00	0.25	-0.09	-0.14	1.00						
<b>RE</b>	0.14	0.21	0.04	-0.16	0.35	1.00					
<b>RR HF</b>	0.42	0.32	0.58	-0.04	0.04	0.12	1.00				
<b>TIPS</b>	0.08	0.38	-0.02	-0.06	0.80	0.39	0.17	1.00			
<b>Cash</b>	0.07	0.06	0.00	-0.07	0.00	-0.05	0.04	-0.13	1.00		
<b>Overlay</b>	0.01	0.02	0.01	-0.04	-0.12	0.11	0.08	0.06	-0.09	1.00	
<b>Total</b>	0.91	0.95	0.64	0.07	0.22	0.22	0.44	0.33	0.06	0.01	1.00
<b>Tot BM</b>	0.91	0.95	0.61	0.01	0.21	0.20	0.39	0.30	0.06	0.02	0.99

# 10-Year Risk-Return



**10 Years Ending July 31, 2017  
Correlation**

**Ann Return**

	<b>US Pub Eq</b>	<b>Non-US Pub Eq</b>	<b>Eq HF</b>	<b>PE</b>	<b>FI</b>	<b>RE</b>	<b>RR HF</b>	<b>TIPS</b>	<b>Cash</b>	<b>Overlay</b>	<b>Total</b>
<b>US Pub</b>	1.00										
<b>Non-US P</b>	---	---									
<b>Eq HF</b>	---	---	---								
<b>PE</b>	0.18	---	---	1.00							
<b>FI</b>	0.30	---	---	-0.02	1.00						
<b>RE</b>	0.00	---	---	0.21	-0.17	1.00					
<b>RR HF</b>	---	---	---	---	---	---	---				
<b>TIPS</b>	---	---	---	---	---	---	---	---			
<b>Cash</b>	-0.05	---	---	0.17	0.02	0.12	---	---	1.00		
<b>Overlay</b>	---	---	---	---	---	---	---	---	---	---	
<b>Total</b>	0.96	---	---	0.25	0.46	0.01	---	---	-0.03	---	1.00
<b>Tot BM</b>	0.96	---	---	0.18	0.46	-0.01	---	---	-0.02	---	0.99

## Section VI.

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### Performance Overview

TOTAL NET OF FEES

7/31/2017

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	Annualized				ITD	Inception Date
						1 Year	3 Years	5 Years	10 Years		
SSGA R3000 INDEX <i>Russell 3000 Index</i>	1,329,621,388	16	1.90 1.89	11.01 10.99	1.90 1.89	16.16 16.13	10.60 10.52			14.18 14.13	10/1/2012 10/1/2012
<b>US Public Equity</b> <i>Russell 3000 Index</i>	<b>1,329,621,462</b>	<b>16</b>	<b>1.90</b> 1.89	<b>11.01</b> 10.99	<b>1.90</b> 1.89	<b>16.16</b> 16.13	<b>10.60</b> 10.52	<b>14.76</b> 14.79	<b>7.83</b> 7.83	<b>7.83</b> 7.83	<b>8/1/2007</b> 8/1/2007
SSGA MSCI EAFE <i>MSCI EAFE Net Dividend Index</i>	789,425,415	10	2.91 2.88	17.43 17.09	2.91 2.88	18.19 17.77	3.06 2.79			8.94 8.64	9/1/2012 9/1/2012
SSGA MSCI CANADA <i>MSCI Canada Net Dividend Index</i>	105,231,825	1	4.00 3.95	7.63 7.23	4.00 3.95	13.00 12.30	-2.08 -2.66			3.23 2.58	9/1/2012 9/1/2012
SSGA MSCI EM <i>MSCI Emerging Markets Net Dividend Index</i>	377,255,644	5	5.94 5.96	25.30 25.49	5.94 5.96	24.55 24.84	2.13 2.39			4.69 4.92	9/1/2012 9/1/2012
<b>Non-US Public Equity</b> <i>Total International Equity BM</i>	<b>1,271,968,392</b>	<b>16</b>	<b>3.88</b> 3.69	<b>18.68</b> 18.30	<b>3.88</b> 3.69	<b>19.48</b> 19.01	<b>2.60</b> 2.37	<b>7.88</b> 7.66		<b>9.15</b> 8.33	<b>5/1/2009</b> 5/1/2009
QVM Tilt <i>MSCI World Net Dividend Index</i>	1,204,196,634	15	2.55 2.39	13.24 13.31	2.55 2.39	16.33 16.12				14.85 14.67	10/1/2015 10/1/2015
<b>TOTAL PUBLIC GROWTH</b> <i>MSCI All Country World Net Index</i>	<b>3,805,786,488</b>	<b>47</b>	<b>2.76</b> 2.79	<b>14.16</b> 14.59	<b>2.76</b> 2.79	<b>17.26</b> 17.06	<b>6.44</b> 6.22	<b>11.28</b> 10.85	<b>5.21</b> 4.16	<b>4.59</b> 4.59	<b>7/1/2000</b> 7/1/2000
Private Equity <i>ILPA All Fds BM 1Q Lag 2</i>	452,171,334	6	0.18 0.19	9.16 6.79	0.18 0.19	13.47 13.40	8.21 9.07	10.33 13.78	8.28 8.87	9.22	2/1/1989 2/1/1989
Non Core Real Estate	166,130,604	2	1.05			1.05				1.05	7/1/2017
Opportunistic Private Credit	30,567,993	0	5.36			5.36				5.36	7/1/2017
<b>TOTAL PRIVATE GROWTH</b>	<b>648,869,931</b>	<b>8</b>	<b>0.63</b>			<b>0.63</b>				<b>0.63</b>	<b>7/1/2017</b>
<b>Total Growth Composite</b>	<b>4,454,656,420</b>	<b>55</b>	<b>2.44</b>			<b>2.44</b>				<b>2.44</b>	<b>7/1/2017</b>
Harvest Fund Advisor <i>Alerian MLP Index</i>	156,132,291	2	1.06 1.29	-1.82 -1.40	1.06 1.29	3.02 1.13				-7.52 -8.88	1/1/2015 1/1/2015
PIMCO <i>30%BoA1-3BB-BHY/70% JPMB/BLLI</i>	200,773,041	2	1.01 0.67	3.09 2.78	1.01 0.67	5.71 5.96	3.80 4.21			3.54 4.25	5/1/2013 5/1/2013
WAMCO <i>30% BoA 1-3 BB-B HY/70% CS LLI</i>	186,181,789	2	1.83 0.71	2.40 3.04	1.83 0.71	7.34 6.81	2.51 4.10			3.13 4.30	4/1/2013 4/1/2013

TOTAL NET OF FEES

7/31/2017

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	Annualized				ITD	Inception Date
						1 Year	3 Years	5 Years	10 Years		
<b>Credit Aggregate</b>	<b>386,954,830</b>	<b>5</b>	<b>1.40</b>	<b>2.75</b>	<b>1.40</b>	<b>6.52</b>	<b>3.15</b>			<b>3.29</b>	<b>5/1/2013</b>
<i>Credit Aggregate</i>			<i>0.69</i>	<i>2.91</i>	<i>0.69</i>	<i>6.39</i>	<i>4.22</i>			<i>4.26</i>	<i>5/1/2013</i>
Private Credit	63,112,182	1	0.00		0.00					0.00	7/1/2017
<i>S&amp;P LSTA Lev Loans + 3%</i>			<i>0.68</i>		<i>0.68</i>					<i>0.68</i>	<i>7/1/2017</i>
<b>TOTAL INCOME</b>	<b>606,199,304</b>	<b>7</b>	<b>1.17</b>		<b>1.17</b>					<b>1.17</b>	<b>7/1/2017</b>
<i>Income Aggregate BM</i>			<i>0.80</i>		<i>0.80</i>					<i>0.80</i>	<i>7/1/2017</i>
Mackay Long Duration	39,299,250	0	-0.65		-0.65					-1.75	6/1/2017
<i>Barclays US Treasury LT Index</i>			<i>-0.62</i>		<i>-0.62</i>					<i>-1.67</i>	<i>6/1/2017</i>
Wamco Long Duration	39,270,447	0	-0.56		-0.56					-1.82	6/1/2017
<i>Barclays US Treasury LT Index</i>			<i>-0.62</i>		<i>-0.62</i>					<i>-1.67</i>	<i>6/1/2017</i>
<b>CPC Long Duration</b>	<b>78,569,697</b>	<b>1</b>	<b>-0.61</b>		<b>-0.61</b>					<b>-1.79</b>	<b>6/1/2017</b>
<i>Barclays US Treasury LT Index</i>			<i>-0.62</i>		<i>-0.62</i>					<i>-1.67</i>	<i>6/1/2017</i>
CPC QIS LLC	40,944,030	1	4.97		4.97					2.36	6/1/2017
<i>Credit Suisse Liquid Alt Beta</i>			<i>4.69</i>		<i>4.69</i>					<i>2.62</i>	<i>6/1/2017</i>
CPC CB LLC	39,569,024	0	3.05		3.05					-1.08	6/1/2017
<i>Credit Suisse Liquid Alt Beta</i>			<i>4.69</i>		<i>4.69</i>					<i>2.62</i>	<i>6/1/2017</i>
<b>CPC Trend Following</b>	<b>80,513,054</b>	<b>1</b>	<b>4.02</b>		<b>4.02</b>					<b>0.64</b>	<b>6/1/2017</b>
<i>Credit Suisse Liquid Alt Beta</i>			<i>4.69</i>		<i>4.69</i>					<i>2.62</i>	<i>6/1/2017</i>
<b>CPC Total Program</b>	<b>159,082,751</b>	<b>2</b>	<b>1.68</b>		<b>1.68</b>					<b>-0.57</b>	<b>6/1/2017</b>
Priv Listed Infrastructure	125,993,835	2	2.40	9.95	2.40	16.26				7.96	3/1/2015
<i>CPI + 4%</i>			<i>0.26</i>	<i>3.72</i>	<i>0.26</i>	<i>5.73</i>				<i>5.75</i>	<i>3/1/2015</i>
Core Real Estate	419,631,016	5	0.86		0.86					0.86	7/1/2017
<i>NFI-ODC BM 2</i>			<i>0.86</i>		<i>0.86</i>					<i>0.86</i>	<i>7/1/2017</i>
<b>Inflation-Linked Bonds</b>	<b>247,091,723</b>	<b>3</b>	<b>0.48</b>	<b>0.95</b>	<b>0.48</b>	<b>-0.35</b>	<b>1.18</b>	<b>0.75</b>		<b>3.84</b>	<b>11/1/2009</b>
<i>Total Inflation Linked Custom</i>			<i>0.50</i>	<i>1.16</i>	<i>0.50</i>	<i>-0.08</i>	<i>1.25</i>	<i>0.82</i>		<i>3.85</i>	<i>11/1/2009</i>
<b>TOTAL INFLATION</b>	<b>792,716,573</b>	<b>10</b>	<b>0.98</b>		<b>0.98</b>					<b>0.98</b>	<b>7/1/2017</b>
<i>Inflation Protection Custom BM</i>			<i>0.64</i>		<i>0.64</i>					<i>0.64</i>	<i>7/1/2017</i>
<b>Absolute Return</b>	<b>690,902,516</b>	<b>8</b>	<b>1.10</b>		<b>1.10</b>					<b>1.10</b>	<b>7/1/2017</b>
<i>HFRI Fund of Funds Composite Index</i>			<i>1.13</i>		<i>1.13</i>					<i>1.13</i>	<i>7/1/2017</i>

TOTAL NET OF FEES

7/31/2017

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	1 Year	Annualized				ITD	Inception Date
							3 Years	5 Years	10 Years			
MACKAY SHIELDS <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	477,778,865	6	0.51 0.43	3.04 2.71	0.51 0.43	-0.02 -0.51	2.75 2.71				2.18 2.04	11/1/2012 11/1/2012
PYRAMIS GLOBAL ADV <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	483,606,734	6	0.58 0.43	2.96 2.71	0.58 0.43	0.26 -0.51	2.87 2.71				2.21 2.04	11/1/2012 11/1/2012
<b>Traditional Fixed Income</b> <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	<b>961,387,103</b>	<b>12</b>	<b>0.55</b> 0.43	<b>3.00</b> 2.71	<b>0.55</b> 0.43	<b>0.12</b> -0.51	<b>2.81</b> 2.71	<b>2.43</b> 2.02	<b>4.46</b> 4.44		<b>5.25</b> 5.11	<b>7/1/2000</b> 7/1/2000
ERSRI SMA Cash <i>BofA Merrill Lynch United States Treasury Notes 0-1 Year (G0)</i>	268,645,060	3	0.14 0.12		0.14 0.12						0.56 0.34	2/1/2017 2/1/2017
ERSRI CASH <i>BofA Merrill Lynch 3 Month US Treasury Bill G001</i>	201,485,303	2	0.10 0.09	1.00 0.39	0.10 0.09	1.23 0.54	1.01 0.26	0.65 0.19	1.41 0.55	12.48 1.64		7/1/2000 7/1/2000
<b>Total Cash and Other Funds</b>	<b>492,320,806</b>	<b>6</b>	<b>-0.02</b>	<b>-1.39</b>	<b>-0.02</b>	<b>-2.92</b>	<b>1.12</b>				<b>1.55</b>	<b>11/1/2012</b>
<b>Russell Overlay Fd</b>	<b>17,452,293</b>	<b>0</b>	<b>-0.01</b>	<b>-0.04</b>	<b>-0.01</b>	<b>-0.03</b>	<b>0.00</b>	<b>0.06</b>			<b>-0.06</b>	<b>9/1/2008</b>
<b>Total Vol Protection</b>	<b>2,144,610,426</b>	<b>26</b>	<b>0.62</b>		<b>0.62</b>						<b>0.62</b>	<b>7/1/2017</b>
<b>Total Stability Composite</b>	<b>3,096,409,750</b>	<b>38</b>	<b>0.77</b>		<b>0.77</b>						<b>0.77</b>	<b>7/1/2017</b>
<b>TOTAL PLAN</b> <i>Total Plan Benchmark</i> <i>60/40 Blend</i>	<b>8,158,527,347</b>	<b>100</b>	<b>1.70</b> 1.67 1.85	<b>8.56</b> 8.60 9.71	<b>1.70</b> 1.67 1.85	<b>10.89</b> 10.37 9.73	<b>5.25</b> 5.07 4.96	<b>7.93</b> 7.84 7.37	<b>4.72</b> 4.62 4.64		<b>4.97</b>	<b>7/1/2000</b> 7/1/2000 7/1/2000
<b>Total Plan ex PE,RE &amp; Priv Inf</b> <i>Total Plan BM ex PE RE</i>	<b>7,580,362,178</b>	<b>93</b>	<b>1.78</b> 1.81	<b>8.70</b> 8.96	<b>1.78</b> 1.81	<b>10.72</b> 10.22	<b>4.64</b> 4.37	<b>7.30</b> 7.28	<b>4.42</b> 4.27		<b>6.37</b>	<b>4/1/1996</b> 4/1/1996

**END NOTES**

7/31/2017

Accounting misvalued part of their transfer from the Private Equity account to the Private Credit account by \$200 for security Summit Partners Credit Fund. GRS made an adjustment to fix the valuation error and GIA made their adjustment in August Processing. Both books will match in August.



TOTAL NET OF FEES

7/31/2017

Account Name Benchmark Name	Market Value	% of Total	Month	Cumulative				Inception Date		
				6/1/2017 - 6/30/2017	5/1/2017 - 5/31/2017	YTD	2016		2015	2014
SSGA R3000 INDEX <i>Russell 3000 Index</i>	1,329,621,388	16	1.90 1.89	0.88 0.90	1.04 1.02	11.01 10.99	12.84 12.74	0.60 0.48	12.59 12.56	10/1/2012 10/1/2012
<b>US Public Equity</b> <i>Russell 3000 Index</i>	<b>1,329,621,462</b>	<b>16</b>	<b>1.90</b> 1.89	<b>0.88</b> 0.90	<b>1.04</b> 1.02	<b>11.01</b> 10.99	<b>12.84</b> 12.74	<b>0.60</b> 0.48	<b>12.57</b> 12.56	<b>8/1/2007</b> 8/1/2007
SSGA MSCI EAFE <i>MSCI EAFE Net Dividend Index</i>	789,425,415	10	2.91 2.88	-0.17 -0.18	3.77 3.67	17.43 17.09	1.28 1.00	-0.59 -0.81	-4.64 -4.90	9/1/2012 9/1/2012
SSGA MSCI CANADA <i>MSCI Canada Net Dividend Index</i>	105,231,825	1	4.00 3.95	3.14 3.06	-0.21 -0.23	7.63 7.23	25.24 24.56	-23.70 -24.16	2.17 1.51	9/1/2012 9/1/2012
SSGA MSCI EM <i>MSCI Emerging Markets Net Dividend Index</i>	377,255,644	5	5.94 5.96	0.98 1.01	2.95 2.96	25.30 25.49	10.82 11.19	-15.16 -14.92	-2.34 -2.19	9/1/2012 9/1/2012
<b>Non-US Public Equity</b> <i>Total International Equity BM</i>	<b>1,271,968,392</b>	<b>16</b>	<b>3.88</b> 3.69	<b>0.43</b> 0.31	<b>3.20</b> 3.25	<b>18.68</b> 18.30	<b>5.01</b> 4.50	<b>-5.77</b> -5.66	<b>-3.63</b> -3.87	<b>5/1/2009</b> 5/1/2009
QVM Tilt <i>MSCI World Net Dividend Index</i>	1,204,196,634	15	2.55 2.39	0.70 0.38	1.99 2.12	13.24 13.31	7.58 7.51			10/1/2015 10/1/2015
<b>TOTAL PUBLIC GROWTH</b> <i>MSCI All Country World Net Index</i>	<b>3,805,786,488</b>	<b>47</b>	<b>2.76</b> 2.79	<b>0.67</b> 0.45	<b>2.05</b> 2.21	<b>14.16</b> 14.59	<b>8.78</b> 7.86	<b>-2.48</b> -2.36	<b>4.35</b> 4.16	<b>7/1/2000</b> 7/1/2000
Private Equity <i>ILPA All Fds BM 1Q Lag 2</i>	452,171,334	6	0.18 0.19	0.15 3.69	3.44 0.00	9.16 6.79	9.19 7.98	7.08 7.31	8.02 16.41	2/1/1989 2/1/1989
Non Core Real Estate	166,130,604	2	1.05							7/1/2017
Opportunistic Private Credit	30,567,993	0	5.36							7/1/2017
<b>TOTAL PRIVATE GROWTH</b>	<b>648,869,931</b>	<b>8</b>	<b>0.63</b>							<b>7/1/2017</b>
<b>Total Growth Composite</b>	<b>4,454,656,420</b>	<b>55</b>	<b>2.44</b>							<b>7/1/2017</b>
Harvest Fund Advisor <i>Alerian MLP Index</i>	156,132,291	2	1.06 1.29	-0.44 -0.65	-4.83 -4.52	-1.82 -1.40	20.64 18.31	-31.01 -32.59		1/1/2015 1/1/2015
PIMCO <i>30%BoA1-3BB-BHY/70% JPMB/BLLI</i>	200,773,041	2	1.01 0.67	0.28 0.13	0.42 0.42	3.09 2.78	7.59 9.17	1.13 1.00	1.22 2.11	5/1/2013 5/1/2013
WAMCO <i>30% BoA 1-3 BB-B HY/70% CS LLI</i>	186,181,789	2	1.83 0.71	-0.08 0.02	0.10 0.44	2.40 3.04	11.69 10.09	-3.69 -0.18	0.10 2.03	4/1/2013 4/1/2013

TOTAL NET OF FEES

7/31/2017

Account Name Benchmark Name	Market Value	% of Total	Month	Cumulative				2016	2015	2014	Inception Date
				6/1/2017 - 6/30/2017	5/1/2017 - 5/31/2017	YTD					
<b>Credit Aggregate</b>	<b>386,954,830</b>	<b>5</b>	<b>1.40</b>	<b>0.11</b>	<b>0.26</b>	<b>2.75</b>	<b>9.59</b>	<b>-1.29</b>	<b>0.66</b>	<b>5/1/2013</b>	
<i>Credit Aggregate</i>			<i>0.69</i>	<i>0.07</i>	<i>0.43</i>	<i>2.91</i>	<i>9.63</i>	<i>0.49</i>	<i>2.11</i>	<i>5/1/2013</i>	
Private Credit	63,112,182	1	0.00							7/1/2017	
<i>S&amp;P LSTA Lev Loans + 3%</i>			<i>0.68</i>							<i>7/1/2017</i>	
<b>TOTAL INCOME</b>	<b>606,199,304</b>	<b>7</b>	<b>1.17</b>							<b>7/1/2017</b>	
<i>Income Aggregate BM</i>			<i>0.80</i>							<i>7/1/2017</i>	
Mackay Long Duration	39,299,250	0	-0.65	-1.11						6/1/2017	
<i>Barclays US Treasury LT Index</i>			<i>-0.62</i>	<i>-1.06</i>						<i>6/1/2017</i>	
Wamco Long Duration	39,270,447	0	-0.56	-1.27						6/1/2017	
<i>Barclays US Treasury LT Index</i>			<i>-0.62</i>	<i>-1.06</i>						<i>6/1/2017</i>	
<b>CPC Long Duration</b>	<b>78,569,697</b>	<b>1</b>	<b>-0.61</b>	<b>-1.19</b>						<b>6/1/2017</b>	
<i>Barclays US Treasury LT Index</i>			<i>-0.62</i>	<i>-1.06</i>						<i>6/1/2017</i>	
CPC QIS LLC	40,944,030	1	4.97	-2.49						6/1/2017	
<i>Credit Suisse Liquid Alt Beta</i>			<i>4.69</i>	<i>-1.98</i>						<i>6/1/2017</i>	
CPC CB LLC	39,569,024	0	3.05	-4.01						6/1/2017	
<i>Credit Suisse Liquid Alt Beta</i>			<i>4.69</i>	<i>-1.98</i>						<i>6/1/2017</i>	
<b>CPC Trend Following</b>	<b>80,513,054</b>	<b>1</b>	<b>4.02</b>	<b>-3.25</b>						<b>6/1/2017</b>	
<i>Credit Suisse Liquid Alt Beta</i>			<i>4.69</i>	<i>-1.98</i>						<i>6/1/2017</i>	
<b>CPC Total Program</b>	<b>159,082,751</b>	<b>2</b>	<b>1.68</b>	<b>-2.22</b>						<b>6/1/2017</b>	
Priv Listed Infrastructure	125,993,835	2	2.40	0.10	1.49	9.95	13.35			3/1/2015	
<i>CPI + 4%</i>			<i>0.26</i>	<i>0.42</i>	<i>0.41</i>	<i>3.72</i>	<i>6.07</i>			<i>3/1/2015</i>	
Core Real Estate	419,631,016	5	0.86							7/1/2017	
<i>NFI-ODC BM 2</i>			<i>0.86</i>							<i>7/1/2017</i>	
<b>Inflation-Linked Bonds</b>	<b>247,091,723</b>	<b>3</b>	<b>0.48</b>	<b>-0.87</b>	<b>0.10</b>	<b>0.95</b>	<b>3.91</b>	<b>-0.26</b>	<b>1.72</b>	<b>11/1/2009</b>	
<i>Total Inflation Linked Custom</i>			<i>0.50</i>	<i>-0.79</i>	<i>-0.05</i>	<i>1.16</i>	<i>4.01</i>	<i>-0.15</i>	<i>2.04</i>	<i>11/1/2009</i>	
<b>TOTAL INFLATION</b>	<b>792,716,573</b>	<b>10</b>	<b>0.98</b>							<b>7/1/2017</b>	
<i>Inflation Protection Custom BM</i>			<i>0.64</i>							<i>7/1/2017</i>	
<b>Absolute Return</b>	<b>690,902,516</b>	<b>8</b>	<b>1.10</b>							<b>7/1/2017</b>	
<i>HFRI Fund of Funds Composite Index</i>			<i>1.13</i>							<i>7/1/2017</i>	

TOTAL NET OF FEES

7/31/2017

Account Name Benchmark Name	Market Value	% of Total	Month	Cumulative		YTD	2016	2015	2014	Inception Date
				6/1/2017 - 6/30/2017	5/1/2017 - 5/31/2017					
MACKAY SHIELDS <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	477,778,865	6	0.51 0.43	-0.04 -0.10	0.83 0.77	3.04 2.71	2.66 2.65	0.48 0.55	6.00 5.97	11/1/2012 11/1/2012
PYRAMIS GLOBAL ADV <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	483,606,734	6	0.58 0.43	-0.12 -0.10	0.72 0.77	2.96 2.71	3.61 2.65	0.01 0.55	5.83 5.97	11/1/2012 11/1/2012
<b>Traditional Fixed Income</b> <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	<b>961,387,103</b>	<b>12</b>	<b>0.55</b> 0.43	<b>-0.08</b> -0.10	<b>0.77</b> 0.77	<b>3.00</b> 2.71	<b>3.15</b> 2.65	<b>0.25</b> 0.55	<b>5.91</b> 5.97	<b>7/1/2000</b> 7/1/2000
ERSRI CASH <i>BofA Merrill Lynch 3 Month US Treasury Bill GOO1</i>	201,485,303	2	0.10 0.09	0.08 0.08	0.15 0.05	1.00 0.39	0.97 0.33	0.40 0.05	0.75 0.03	7/1/2000 7/1/2000
ERSRI SMA Cash <i>BofA Merrill Lynch United States Treasury Notes 0-1 Year (GO)</i>	268,645,060	3	0.14 0.12	0.11 0.08	0.13 0.04					2/1/2017 2/1/2017
<b>Total Cash and Other Funds</b>	<b>492,320,806</b>	<b>6</b>	<b>-0.02</b>	<b>0.12</b>	<b>0.41</b>	<b>-1.39</b>	<b>3.33</b>	<b>0.03</b>	<b>1.56</b>	<b>11/1/2012</b>
<b>Russell Overlay Fd</b>	<b>17,452,293</b>	<b>0</b>	<b>-0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>-0.04</b>	<b>0.06</b>	<b>0.00</b>	<b>-0.02</b>	<b>9/1/2008</b>
<b>Total Vol Protection</b>	<b>2,144,610,426</b>	<b>26</b>	<b>0.62</b>							<b>7/1/2017</b>
<b>Total Stability Composite</b>	<b>3,096,409,750</b>	<b>38</b>	<b>0.77</b>							<b>7/1/2017</b>
<b>TOTAL PLAN</b> <sup>2</sup> <i>Total Plan Benchmark</i> <i>60/40 Blend</i>	<b>8,158,527,347</b>	<b>100</b>	<b>1.70</b> 1.67 1.85	<b>0.25</b> 0.55 0.23	<b>1.37</b> 1.10 1.63	<b>8.56</b> 8.60 9.71	<b>7.35</b> 6.42 5.92	<b>-0.28</b> -0.24 -0.98	<b>4.52</b> 5.05 4.96	<b>7/1/2000</b> 7/1/2000 7/1/2000
<b>Total Plan ex PE,RE &amp; Priv Inf</b> <i>Total Plan BM ex PE RE</i>	<b>7,580,362,178</b>	<b>93</b>	<b>1.78</b> 1.81	<b>0.26</b> 0.25	<b>1.24</b> 1.25	<b>8.70</b> 8.96	<b>6.97</b> 6.13	<b>-1.68</b> -1.64	<b>3.98</b> 3.90	<b>4/1/1996</b> 4/1/1996

**END NOTES**

7/31/2017

1	RI6F07010002	Private Credit	Accounting misvalued part of their transfer from the Private Equity account to the Private Credit account by \$200 for security Summit Partners Credit Fund. GRS made an adjustment to fix the valuation error and GIA made their adjustment in August Processing. Both books will match in August.
2	RI6G23000000	TOTAL PLAN	Month - Current Month Cumulative Months - Prior Month and Second Prior Month Monthly Reporting for Private Equity and Real Estate skew performance on an actual and benchmark basis due to nature of valuations 2014, 2013, 2012 - Calendar Years
	RI6G23000000	TOTAL PLAN	The current composition of the Total Plan Benchmark is as follows: 15.0% Barclays U.S. Aggregate Bond Index 44.5% MSCI All Country World Net Index 7.0% HFRI Fund of Funds Composite Index 3.0% BofA Merrill Lynch 3 Month US Treasury Bill 8.0% HFRI Equity Hedge (Total) Index 5.0% NFI-ODCE Index 4.0% Barclays U.S. Treasury Inflation Notes: 1-10 Year Index 5.0% Credit Aggregate Custom: 30% BoA1-3BB-B HY/35%CSInstLLI/35% JPM BB/B Leveraged Loan Index 7.0% ILPA All Funds Index 1.5% Alerian MLP Total Return Index

## Section VII.

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# Hedge Fund Returns

## Employees' Retirement System of the State of Rhode Island

Hedge Fund Portfolio  
 Portfolio Performance Summary  
 Estimated as of July 31, 2017

Fund	Market Value	Actual %	Returns								Std Dev	Sharpe Ratio	Incep Date
			Jul	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep			
<b>Absolute Return Portfolio</b>													
Brevan Howard LP	57,516,116	8.4%	1.45%	1.45%	-3.65%	1.45%	1.59%	0.07%	0.78%	0.63%	5.66%	0.05	Nov-11
Capula Global Relative Value Fund Ltd.	69,676,444	10.1%			2.56%	0.25%	7.26%	7.54%	6.99%	6.03%	1.92%	2.81	Dec-11
Davidson Kempner Institutional Partners, L.P.	84,316,898	12.3%	0.33%	0.33%	4.43%	0.33%	7.83%	3.78%	6.17%	6.10%	1.98%	2.77	Nov-11
DE Shaw Composite Fund LLC	101,154,162	14.7%			6.20%	1.20%	7.95%	11.17%	13.88%	13.04%	4.11%	2.89	Nov-11
Elliott Associates, L.P.	101,055,124	14.7%	1.30%	1.30%	4.96%	1.30%	12.06%	8.04%	10.32%	9.49%	3.67%	2.37	Nov-11
Graham Absolute Return Trading Ltd.	58,667,510	8.5%	2.40%	2.40%	-5.39%	2.40%	5.08%	4.10%	2.99%	2.90%	5.22%	0.48	Jan-12
Samlyn Onshore Fund, L.P.	48,855,134	7.1%	0.83%	0.83%	7.71%	0.83%	12.67%	5.21%	8.47%	8.14%	6.03%	1.25	Jan-12
Viking Global Equities, LP	107,418,673	15.6%	2.10%	2.10%	9.33%	2.10%	8.24%	7.18%	10.43%	10.82%	7.29%	1.38	Dec-11
Winton Futures Fund Limited	35,469,490	5.2%	-0.13%	-0.13%	-0.79%	-0.13%	-4.78%	3.89%	3.11%	3.00%	8.39%	0.34	Dec-11
<b>Absolute Return Portfolio - Total</b>	<b>664,129,550</b>	<b>96.6%</b>	<b>1.16%</b>	<b>1.16%</b>	<b>4.01%</b>	<b>1.16%</b>	<b>7.39%</b>	<b>3.49%</b>	<b>5.98%</b>	<b>5.51%</b>	<b>3.13%</b>	<b>1.58</b>	<b>Nov-11</b>
HFRI Fund of Funds Composite Index			1.06%	1.06%	4.23%	1.06%	5.95%	2.01%	3.92%	3.43%	3.35%	-	Nov-11
MSCI AC World Index Free - Net			2.79%	2.79%	14.59%	2.79%	17.06%	6.22%	10.85%	10.06%	10.85%	-	Nov-11
ML 3-month T-Bills			0.08%	0.08%	0.39%	0.08%	0.54%	0.26%	0.19%	0.17%	0.07%	-	Nov-11
Russell 3000 Index (DRI)			1.89%	1.89%	10.99%	1.89%	16.13%	10.52%	14.79%	14.81%	10.01%	-	Nov-11
<b>Liquidating Portfolio</b>													
Brigade Leveraged Capital Structures Fund LP - Holdback	3,188,048	0.5%	0.00%	0.00%	3.91%	0.00%	10.57%	3.15%	4.60%	4.59%	5.55%	0.75	Mar-12
Claren Road Credit Fund, Ltd.	3,044,058	0.4%	0.00%	0.00%	6.01%	0.00%	16.85%	-1.43%	-	-0.21%	10.85%	-0.02	Apr-13
ESG Cross Border Equity Fund LP - Holdback	1,095,973	0.2%	0.00%	0.00%	-4.43%	0.00%	-10.73%	-9.41%	-	-9.42%	7.51%	-1.35	Jun-14
Indus Asia Pacific Distribution Holding Company II, 06.30.14 Series (liquidating trust)	350,043	0.1%	0.00%	0.00%	4.28%	0.00%	14.84%	-23.42%	-13.82%	-12.19%	17.68%	-0.66	Jan-12
Luxor Capital Partners, LP - Liquidating SPV	4,620,922	0.7%	1.65%	1.65%	21.42%	1.65%	10.89%	-	-	8.58%	14.01%	0.58	Jul-16
Luxor Capital Partners, LP - Holdback	1,453,695	0.2%	0.00%	0.00%	0.00%	0.00%	-2.73%	-11.89%	-	-12.46%	8.42%	-1.60	May-14
OZ Domestic Partners II, L.P. - Holdback	5,537,981	0.8%	0.00%	0.00%	4.47%	0.00%	10.36%	3.85%	6.92%	7.02%	4.47%	1.43	Nov-11
PFM Diversified Fund, L.P. - Holdback	3,925,246	0.6%	0.00%	0.00%	1.67%	0.00%	2.35%	1.83%	7.04%	5.12%	8.52%	0.57	Mar-12
<b>Liquidating/Redeeming - Total</b>	<b>23,215,965</b>	<b>3.4%</b>	<b>0.32%</b>	<b>0.32%</b>	<b>4.38%</b>	<b>0.32%</b>	<b>6.58%</b>	<b>-4.86%</b>	<b>-1.26%</b>	<b>-0.82%</b>	<b>7.14%</b>	<b>-0.15</b>	<b>Nov-11</b>
<b>Total Hedge Fund Portfolio</b>	<b>687,345,514</b>	<b>100.0%</b>	<b>1.13%</b>	<b>1.13%</b>	<b>3.87%</b>	<b>1.13%</b>	<b>7.23%</b>	<b>3.11%</b>	<b>5.58%</b>	<b>5.16%</b>	<b>3.10%</b>	<b>1.49</b>	<b>Nov-11</b>
HFRI Fund of Funds Composite Index			1.06%	1.06%	4.23%	1.06%	5.95%	2.01%	3.92%	3.43%	3.35%	0.88	Nov-11
<b>Market Indices</b>													
Libor3Month			0.11%	0.11%	0.68%	0.11%	1.06%	0.62%	0.48%	0.48%	0.09%	-	Nov-11
Barclays Aggregate Bond Index			0.43%	0.43%	2.72%	0.43%	-0.51%	2.72%	2.03%	2.60%	2.77%	0.77	Nov-11
Barclays High Yield Credit Bond Index			1.11%	1.11%	6.10%	1.11%	10.97%	5.35%	6.73%	7.56%	5.39%	1.30	Nov-11
S&P 500 TR			2.06%	2.06%	11.59%	2.06%	16.04%	10.87%	14.78%	14.96%	9.77%	1.43	Nov-11
MSCI EAFE - Net			2.88%	2.88%	17.09%	2.88%	17.77%	2.79%	9.06%	7.48%	13.01%	0.58	Nov-11
MSCI EMF (Emerging Markets Free) - Net			5.96%	5.96%	25.49%	5.96%	24.84%	2.39%	4.76%	3.71%	15.82%	0.28	Nov-11

Most recent month returns are based on manager estimates; prior months use final market values.

Hedge Fund Research, Inc. ("HFR") is the source and owner of the HFR data contained or reflected in this report. The HFR indices included in this report are revised by HFR for up to three months following their initial release. The revisions are reflected in the trailing period returns.

This report reflects information only through the date hereof. Our due diligence and reporting rely upon the accuracy and completeness of financial information (which may or may not be audited by the fund manager) and other information publicly available or provided to us by the fund manager, its professional staff, and references we have contacted and other third parties. We have not conducted an independent verification of the information provided other than as described in this report. Our conclusions do not reflect an audit of the investment nor should they be construed as providing legal advice. Past performance does not guarantee future performance. The information contained herein is confidential commercial or financial information, the disclosure of which would cause substantial competitive harm to you, Cliffwater LLC, or the person or entity from whom the information was obtained, and may not be disclosed except as required by applicable law.

## Employees' Retirement System of the State of Rhode Island

Hedge Fund Portfolio  
Fund Level Performance Report  
Estimated as of July 31, 2017

Fund	Trailing Returns					Calendar Year Returns					5 Yr		Sharpe Ratio			Start Date		
	QTD	YTD	Jul	Jun	May	1 Year	3 Year	5 Year	2016	2015	2014	2013	2012	Std Dev	3 yr		5 yr	Incep.
<b>Absolute Return</b>																		
Brevan Howard LP	1.50%	-3.83%	1.50%	-1.50%	-0.70%	1.45%	0.01%	0.83%	3.04%	-1.98%	-0.78%	2.68%	3.91%	5.88%	-0.06	0.09	0.85	Sep-05
Capula Global Relative Value Fund Ltd.		2.56%				7.30%	7.56%	6.98%	8.37%	7.54%	8.14%	7.60%	0.41%	1.78%	3.70	3.51	1.88	Oct-05
Davidson Kempner Institutional Partners, L.P.	0.33%	4.22%	0.33%	0.02%	0.80%	7.52%	3.60%	5.86%	6.71%	1.51%	4.45%	9.52%	6.87%	2.03%	1.52	2.59	1.59	Mar-96
DE Shaw Composite Fund LLC		6.25%				7.94%	10.51%	12.65%	6.12%	13.68%	15.57%	11.51%	13.94%	3.98%	2.30	2.89	1.58	Mar-01
Elliott Associates, L.P.	1.30%	4.88%	1.30%	-0.10%	0.30%	11.65%	7.57%	9.80%	12.98%	2.51%	8.24%	12.44%	13.18%	3.45%	1.70	2.60	1.93	Jan-90
Graham Absolute Return Trading Ltd.	2.40%	-5.14%	2.40%	-0.44%	-1.62%	5.25%	7.36%	6.75%	11.78%	1.50%	10.42%	10.50%	9.29%	7.59%	0.78	0.84	0.98	Jan-05
Samlyn Onshore Fund, L.P.	1.36%	7.85%	1.36%	0.80%	1.18%	12.91%	5.06%	8.30%	1.17%	-1.29%	9.24%	18.93%	10.49%	6.00%	0.75	1.28	1.07	Mar-07
Viking Global Equities, LP	2.10%	9.29%	2.10%	-0.10%	-0.10%	8.25%	7.16%	10.35%	-3.92%	8.27%	13.47%	22.65%	12.75%	7.61%	0.81	1.27	1.43	Oct-99
Winton Futures Fund Limited	-0.13%	-0.86%	-0.13%	-1.97%	0.50%	-4.80%	3.89%	3.12%	-2.96%	0.95%	13.88%	9.43%	-3.56%	8.57%	0.39	0.34	0.66	Oct-97
<b>Liquidating Portfolio</b>																		
Brigade Leveraged Capital Structures Fund LP	1.22%	5.67%	1.22%	0.76%	0.12%	12.44%	3.72%	4.96%	23.04%	-10.73%	0.61%	6.13%	6.91%	5.78%	0.46	0.79	0.75	Jan-07
Claren Road Credit Fund, Ltd.	0.00%	7.36%	0.00%	1.25%	0.58%	4.86%	-8.75%	-3.62%	-12.72%	-7.96%	-10.10%	5.43%	1.49%	7.53%	-1.07	-0.52	0.43	Jan-06
ESG Cross Border Equity Fund LP	0.00%	-2.50%	0.00%	-2.10%	0.70%	-8.89%	-8.89%	-2.76%	-13.04%	-5.06%	-7.16%	13.59%	6.74%	7.51%	-1.18	-0.40	0.55	Jan-04
Indus Asia Pacific Fund, LP	0.00%	4.28%	0.00%	-0.37%	-0.38%	14.84%	-23.42%	-13.53%	-26.00%	-33.23%	-15.60%	4.97%	8.21%	18.50%	-1.05	-0.71	0.04	Dec-00
Luxor Capital Partners, LP	1.65%	29.53%	1.65%	12.75%	0.99%	51.29%	1.89%	4.75%	7.80%	-19.05%	-9.83%	19.53%	5.21%	11.27%	0.16	0.43	0.87	Apr-02
OZ Domestic Partners II, L.P.	1.27%	9.00%	1.27%	1.38%	1.26%	15.15%	5.22%	7.47%	3.79%	-0.44%	5.45%	14.20%	12.01%	4.53%	0.93	1.51	1.14	Jan-04
PFM Diversified Fund, L.P.	0.00%	5.45%	0.00%	3.62%	-0.63%	6.23%	3.05%	7.65%	-7.11%	8.10%	2.84%	22.17%	5.59%	8.51%	0.36	0.85	0.81	Nov-04
<b>Benchmark</b>																		
HFRI Fund of Funds Composite Index	1.06%	4.23%	1.06%	-0.11%	0.33%	5.95%	2.01%	3.92%	0.51%	-0.27%	3.37%	8.96%	4.79%	3.26%				Jan-90
HFRI Fund Weighted Composite Index	1.18%	4.81%	1.18%	0.32%	0.18%	7.18%	3.15%	4.94%	5.44%	-1.12%	2.98%	9.13%	6.36%	3.65%				Jan-90
<b>Market Indices</b>																		
3 Month Libor - BOM	0.11%	0.68%	0.11%	0.11%	0.10%	1.06%	0.62%	0.48%	0.76%	0.33%	0.23%	0.27%	0.42%	0.09%				Jan-87
Barclays Aggregate Bond Index	0.43%	2.72%	0.43%	-0.10%	0.77%	-0.51%	2.72%	2.03%	2.66%	0.57%	5.94%	-2.02%	4.23%	2.81%				Jan-76
Barclays High Yield Credit Bond Index	1.11%	6.10%	1.11%	0.14%	0.87%	10.97%	5.35%	6.73%	17.14%	-4.46%	2.46%	7.46%	15.81%	5.25%				Jul-83
S&P 500 (TR)	2.06%	11.59%	2.06%	0.62%	1.41%	16.04%	10.87%	14.78%	11.96%	1.38%	13.69%	32.39%	16.00%	9.57%				Jun-88
MSCI EAFE - Net - USD	2.88%	17.09%	2.88%	-0.18%	3.67%	17.77%	2.79%	9.06%	1.00%	-0.81%	-4.90%	22.78%	17.31%	11.78%				Dec-69
MSCI EMF (EMERGING MARKETS FREE) - Net - USD	5.96%	25.49%	5.96%	1.01%	2.96%	24.84%	2.39%	4.76%	11.19%	-14.92%	-2.19%	-2.60%	18.23%	14.60%				Dec-87

Note: The above is manager composite history.

## Section VIII.

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### Private Equity Returns



## Portfolio Summary

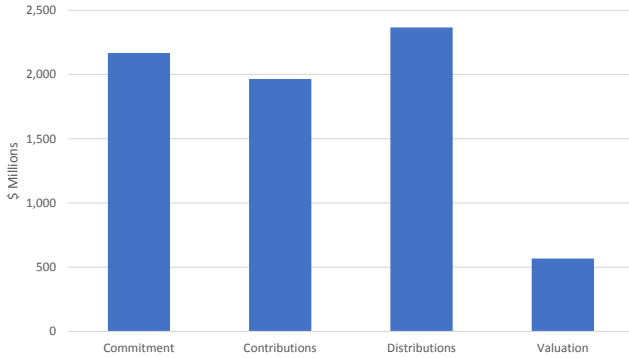
3/31/2017

All Investments

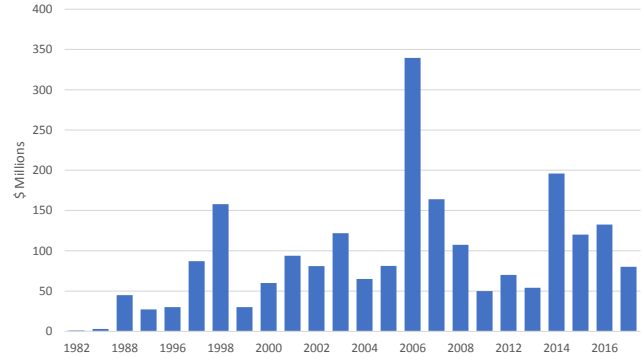
### Performance Summary

Asset Class	Investment Type	Number of Investments	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR	TWR
Private Equity Funds									
	Buyout	79	1,295,185,215	1,202,718,585	1,531,681,827	325,413,184	1.54	13.15%	12.72%
	Direct Lending	3	75,000,000	48,469,720	24,371,714	32,072,027	1.16	9.69%	8.12%
	Distressed Debt	13	213,000,000	220,472,587	231,921,222	72,636,162	1.39	10.29%	10.00%
	Energy	9	198,000,000	139,312,678	188,488,916	25,198,606	1.53	23.92%	8.32%
	Fund of Funds	1	45,000,000	45,000,000	106,748,821	-	2.37	19.94%	-100.00%
	Secondary	4	60,000,000	54,952,240	60,785,089	6,952,608	1.23	6.05%	3.92%
	Venture Capital	22	281,250,000	253,884,890	222,631,665	104,663,066	1.29	5.05%	2.72%
<b>Total: Private Equity Funds</b>		<b>131</b>	<b>2,167,435,215</b>	<b>1,964,810,699</b>	<b>2,366,629,255</b>	<b>566,935,653</b>	<b>1.49</b>	<b>13.43%</b>	<b>11.29%</b>

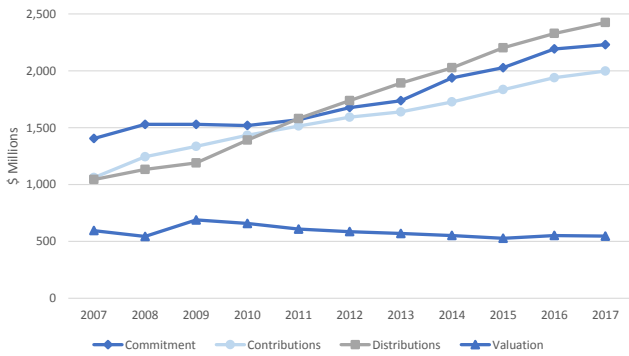
#### Cash Flow and Valuation Summary



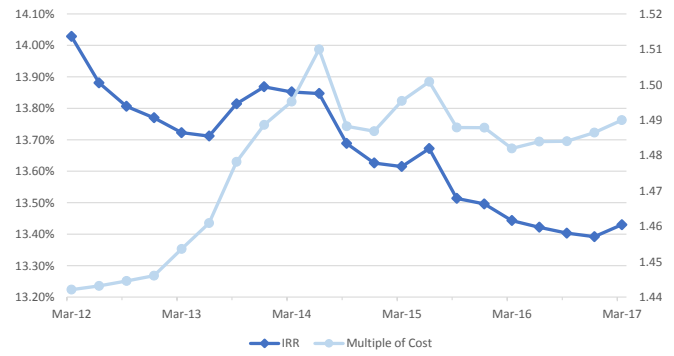
#### Commitment by Vintage Year



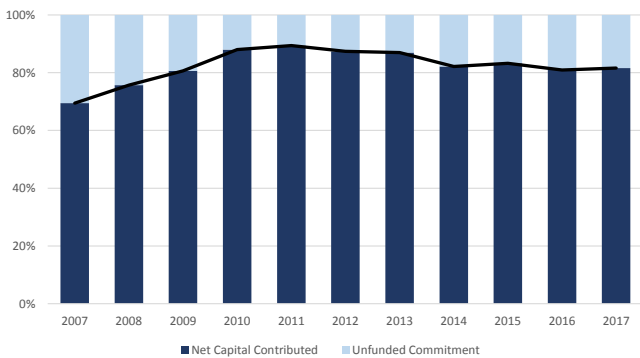
#### Historical Cash Flows and Valuation



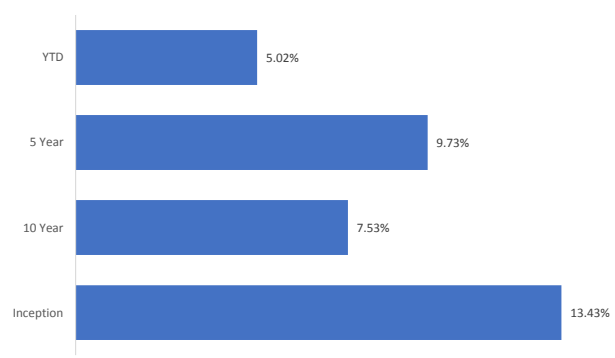
#### Historical Performance



#### Historical Percent Funded



#### Period IRRs



**Employees' Retirement System of Rhode Island Private Equity Performance**  
3/31/2017

Current Partnerships	Vintage Year	Type	Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Cumulative Performance*		
				Amount Drawn	Amount Distributed	Amount Unfunded	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
Fenway Partners Capital Fund II	1998	Buyout	15,000,000	18,513,234	20,350,029	232,336	1,674,808	4.8	1.2
Nautic Partners V	2000	Buyout	20,000,000	20,329,437	40,413,948	638,041	1,466,806	17.2	2.1
Providence Equity Partners IV	2000	Buyout	25,000,000	35,971,884	68,445,391	1,995,291	24,404	23.8	1.9
CVC European Equity Partners III	2001	Buyout	20,000,000	23,158,043	59,551,716	899,966	533,960	41.0	2.6
Parthenon Investors II	2001	Buyout	23,960,000	23,409,381	37,045,489	1,821,022	1,168,677	12.4	1.6
Leeds Equity Partners IV	2003	Buyout	10,000,000	10,209,327	11,467,347	1,099,639	2,127,109	4.6	1.3
Nordic Capital Fund V	2003	Buyout	€ 14,615,550	21,434,529	58,016,017	0	834,936	21.0	2.8
TPG Partners IV	2003	Buyout	15,000,000	16,672,684	30,995,961	64,421	1,541,942	15.7	2.0
Aurora Equity Partners III	2004	Buyout	15,000,000	16,243,392	26,952,245	835,850	805,408	15.3	1.7
Birch Hill Equity Partners III	2005	Buyout	CAD 18,000,000	18,894,996	29,679,973	245,308	4,764,855	12.2	1.8
CVC European Equity Partners IV	2005	Buyout	€ 16,500,000	21,263,481	38,814,993	2,070,183	3,624,087	17.5	2.0
Providence Equity Partners V	2005	Buyout	25,000,000	31,136,262	34,127,175	2,196,098	4,244,482	3.9	1.2
Centerbridge Capital Partners	2006	Buyout	15,000,000	23,563,631	37,895,067	1,095,593	4,675,642	20.0	1.8
Charterhouse Capital Partners VIII	2006	Buyout	€ 15,000,000	18,405,042	17,611,940	39,877	21,446	-0.7	1.0
Fenway Partners Capital Fund III	2006	Buyout	15,000,000	17,031,439	13,785,183	1,210,894	5,975,547	2.9	1.2
LNK Partners	2006	Buyout	12,500,000	12,097,405	16,864,774	404,847	1,144,719	9.3	1.5
Nordic Capital Fund VI	2006	Buyout	€ 15,000,000	22,435,404	28,672,043	-	5,501,163	6.9	1.5
TPG Partners V	2006	Buyout	20,000,000	20,697,887	21,478,163	1,774,959	6,908,509	5.1	1.4
Green Equity Investors V	2007	Buyout	20,000,000	20,422,420	27,630,816	1,731,093	13,126,600	18.0	2.0
Nautic Partners VI	2007	Buyout	20,000,000	23,972,088	46,510,938	777,632	7,145,334	17.6	2.2
Providence Equity Partners VI	2007	Buyout	25,000,000	29,303,648	26,514,779	1,282,420	13,121,806	6.3	1.4
Trilantic Capital Partners IV	2007	Buyout	11,098,351	11,562,139	16,031,603	1,196,107	3,036,719	14.9	1.6
Bain Capital Fund X	2008	Buyout	25,000,000	24,300,000	24,904,346	762,500	12,149,724	9.0	1.5
CVC European Equity Partners V	2008	Buyout	€ 20,000,000	28,873,229	35,362,355	856,284	11,082,845	13.8	1.6
Nordic Capital Fund VII	2008	Buyout	€ 15,000,000	21,087,907	9,600,612	847,385	17,068,178	4.5	1.3
TPG Partners VI	2008	Buyout	10,000,000	13,682,488	12,339,220	808,686	6,247,550	9.3	1.4
Advent International GPE VII	2012	Buyout	20,000,000	17,540,000	17,540,000	2,460,000	18,483,156	16.4	1.4
Providence Equity Partners VII	2012	Buyout	25,000,000	21,955,062	7,211,493	8,792,110	22,042,028	18.2	1.3
Nordic Capital Fund VIII	2013	Buyout	€ 15,000,000	10,917,896	-	6,660,872	12,800,945	8.7	1.2
Riverside Capital Appreciation Fund VI	2013	Buyout	20,000,000	15,521,255	1,566,127	5,179,000	17,893,549	14.1	1.3
Carlyle Asia Partners IV	2014	Buyout	30,000,000	19,645,751	1,655,803	12,050,944	22,856,802	14.2	1.2
CVC Capital Partners VI	2014	Buyout	€ 15,000,000	11,176,000	1,812,986	7,107,545	9,809,766	3.8	1.0
Nautic Partners VII	2014	Buyout	20,000,000	14,766,999	8,556,254	6,455,309	15,963,568	53.8	1.7
Riverside Micro-Cap Fund III	2014	Buyout	20,000,000	17,758,317	(4,719)	2,241,683	24,164,950	14.9	1.4
Sorenson Capital Partners III	2014	Buyout	30,000,000	15,339,453	-	21,439,394	16,270,285	4.3	1.1
Baring Asia Private Equity Fund VI	2015	Buyout	15,000,000	6,844,959	22,568	8,155,041	8,266,377	21.8	1.2
Centerbridge Capital Partners III	2015	Buyout	25,000,000	7,045,467	956,070	18,291,786	8,287,106	21.3	1.3
Paine & Partners Capital Fund IV	2015	Buyout	30,000,000	12,916,760	805,848	17,890,940	10,620,093	-11.2	0.9
Advent International GPE VIII	2016	Buyout	20,000,000	4,680,000	-	15,320,000	4,594,017	-14.4	1.0
Nautic Partners VIII	2016	Buyout	20,000,000	1,097,975	-	18,902,025	1,122,341	3.8	1.0
Southwest Partners VII	2016	Buyout	37,500,000	2,272,488	577,053	35,227,512	655,703	-78.4	0.5
Tenex Capital Partners II	2016	Buyout	25,000,000	6,688,396	75,837	18,311,266	6,097,993	-16.5	0.9
Capital Spring Investment Partners	2016	Direct Lending	30,000,000	10,277,522	-	19,639,939	10,531,694	2.8	1.0
Avenue Special Situations Fund IV	2006	Distressed Debt	20,000,000	25,179,595	32,706,000	-	178,214	8.3	1.3
MHR Institutional Partners III	2006	Distressed Debt	20,000,000	20,800,000	20,578,134	6,974,396	8,684,006	7.0	1.4
Avenue Special Situations Fund V	2007	Distressed Debt	20,000,000	20,329,267	26,322,021	-	165,094	10.6	1.3
WLR Recovery Fund IV	2007	Distressed Debt	8,000,000	7,277,318	8,802,029	275,492	1,156,749	8.0	1.4
Oaktree European Principal Fund III	2011	Distressed Debt	20,000,000	17,150,000	3,675,864	5,783,415	19,114,159	8.9	1.3
Centerbridge Special Credit Partners II	2012	Distressed Debt	25,000,000	22,500,000	11,004,929	2,500,000	12,898,295	1.9	1.1
Garrison Opportunity Fund IV	2014	Distressed Debt	30,000,000	23,913,341	(498,315)	6,031,705	25,764,003	4.8	1.1
First Reserve Fund X	2004	Energy	20,000,000	19,999,999	36,485,800	1	86,096	31.0	1.8
Kayne Anderson Energy Fund III	2005	Energy	15,000,000	15,965,344	15,214,110	366,426	156,836	-2.1	1.0
First Reserve Fund XI	2006	Energy	20,000,000	22,125,580	14,045,315	(1)	2,182,817	-7.9	0.7
Kayne Anderson Energy Fund IV	2007	Energy	15,000,000	16,605,519	16,582,616	-	1,267,586	2.5	1.1
EnCap Energy Capital Fund IX	2013	Energy	18,000,000	17,259,658	10,255,422	3,934,635	13,210,732	20.0	1.4
EnCap Energy Capital Fund X	2015	Energy	25,000,000	9,547,136	3,193,238	16,973,235	8,294,539	25.9	1.2
W Capital Partners	2004	Secondaries	15,000,000	14,197,600	10,320,686	802,500	403,236	-9.5	0.8
Collier International Partners V	2006	Secondaries	15,000,000	12,563,354	15,358,183	3,270,000	2,842,886	8.6	1.4
W Capital Partners II	2007	Secondaries	15,000,000	14,896,718	17,138,822	1,596,691	3,678,534	10.6	1.4
Alta BioPharma Partners III	2003	Venture Capital	15,000,000	14,250,000	20,297,956	750,000	486,695	5.8	1.5
Lighthouse Capital Partners V	2003	Venture Capital	11,250,000	10,462,500	12,208,726	787,500	121,221	3.8	1.2
Granite Global Ventures II	2004	Venture Capital	15,000,000	14,333,510	20,268,907	675,000	3,933,398	6.8	1.7
Leapfrog Ventures II	2005	Venture Capital	10,000,000	9,490,000	6,811,564	510,000	3,765,052	1.9	1.1
Alta Partners VIII	2006	Venture Capital	15,000,000	15,000,000	24,341,057	-	7,051,267	15.9	2.1
Castle Ventures III	2006	Venture Capital	5,000,000	5,009,730	1,396,371	-	1,252,669	-12.2	0.5
Focus Ventures III	2006	Venture Capital	15,000,000	15,000,000	5,411,619	-	2,867,283	-10.8	0.6
Granite Global Ventures III	2006	Venture Capital	15,000,000	14,625,538	24,011,901	375,000	9,671,898	15.9	2.3
Point 406 Ventures I	2006	Venture Capital	10,000,000	10,481,265	4,123,844	370,000	12,146,153	8.0	1.6
Point Judith Venture Fund II	2006	Venture Capital	5,000,000	6,144,917	2,089,642	106,570	4,168,587	7.3	1.0
Lighthouse Capital Partners VI	2007	Venture Capital	15,000,000	14,250,000	19,600,846	750,000	1,180,190	0.3	1.5
Paladin III	2008	Venture Capital	10,000,000	12,524,075	5,918,024	606,803	10,222,181	6.6	1.3
Industry Ventures Partnership Holdings III	2014	Venture Capital	25,000,000	18,812,702	2,282,811	6,250,000	20,861,552	13.4	1.2
Industry Ventures Partnership Holdings III C	2015	Venture Capital	15,000,000	3,000,000	-	12,000,000	3,171,456	5.4	1.1
Industry Ventures Partnership Holdings IV	2016	Venture Capital	10,000,000	1,050,000	-	8,950,000	1,086,171	6.5	1.0
Other funds in aggregate**	various		120,000,000	114,335,789	109,381,732	16,850,111	44,254,230		
<b>Total</b>			<b>\$ 1,470,147,535</b>	<b>\$ 1,300,196,033</b>	<b>\$ 1,321,435,409</b>	<b>\$ 346,501,278</b>	<b>\$ 566,821,414</b>		

\*IRR refers to the fund's Internal Rate of Return, or the annualized compounded yield on an investment. This calculation is typically applied in private equity where there are multiple points at which capital is invested (capital called) and at which it is distributed. A positive IRR means that the fund's current value plus any cash distributions are greater than the cash value contributed and management fees paid. Typically a fund will have a negative IRR during the first few years of its life, a period referred to as the "J-Curve", because cash is invested upfront and it takes time to generate value. It is important to consider a fund's start date (vintage year) when assessing IRRs. Multiple of investment is another indicator of returns, and is calculated by dividing the fund's cumulative distributions and current value, after fees, by the amount of capital paid in. Please note that performance calculations are specific to the ERSRI investment, and were not prepared, reviewed or approved by the General Partners.

\*\*Other funds in aggregate are the total commitments to and amounts drawn and distributed by funds whose confidentiality provisions do not permit the disclosure of their performance data. These funds include Braemar Energy Ventures III, Constellation Ventures III, Summit Partners Credit Fund, Summit Partners Credit Fund II, Thomas, McNeerney & Partners, Thomas McNeerney & Partners II and Wellspring Capital Partners III.

Section IX.

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## Real Estate Returns

## PORTFOLIO SUMMARY

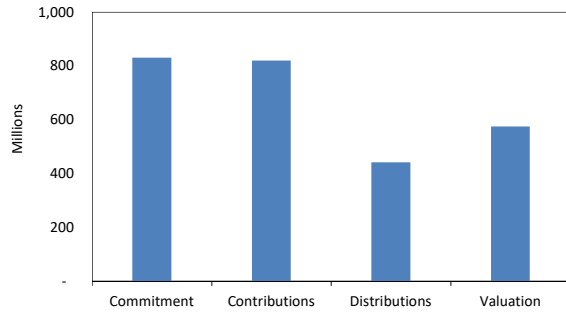
3/31/2017

All Portfolio Investments - Real Estate <sup>(1)</sup>

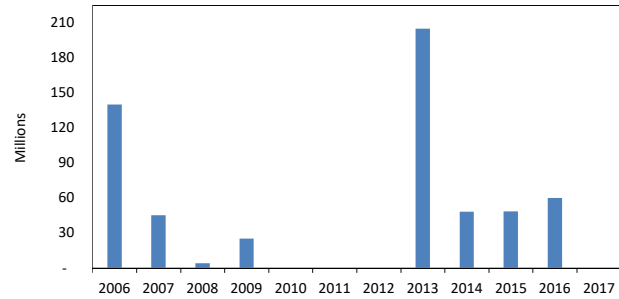
### Performance Summary

Asset Class	Investment Type	Number of Investments	Commitment	Contributions <sup>(2), (3)</sup>	Distributions <sup>(3)</sup>	Adjusted Valuation	Multiple of Cost	IRR	TWR
Real Estate Funds	Core	8	414,873,657	479,627,303	288,874,355	418,898,329	1.5x	5.4%	5.6%
	Non-Core	21	415,260,817	340,357,733	151,600,097	155,903,332	0.9x	-2.7%	1.4%
<b>Total: Real Estate Funds</b>		<b>29</b>	<b>830,134,474</b>	<b>819,985,036</b>	<b>440,474,452</b>	<b>574,801,661</b>	<b>1.2x</b>	<b>3.8%</b>	<b>4.7%</b>
<b>Total:</b>		<b>29</b>	<b>830,134,474</b>	<b>819,985,036</b>	<b>440,474,452</b>	<b>574,801,661</b>	<b>1.2x</b>	<b>3.8%</b>	<b>4.7%</b>

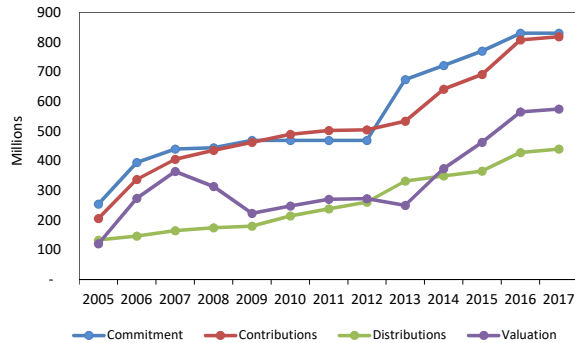
### Cash Flow and Valuation Summary



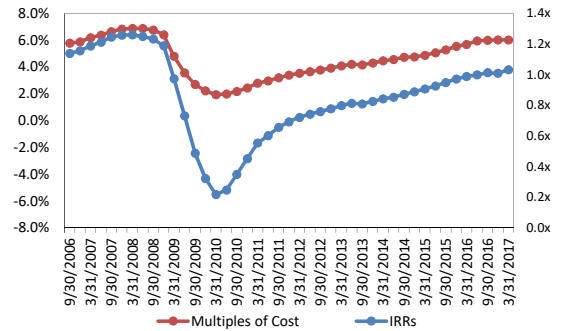
### Commitment by Vintage Year



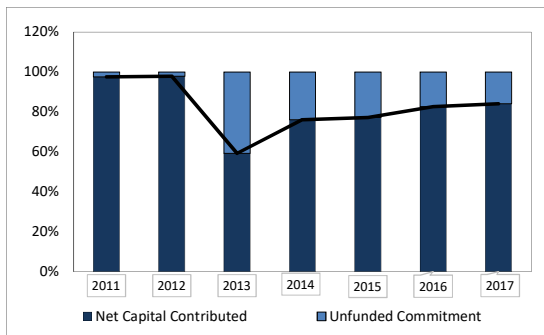
### Historical Cash Flows and Valuation



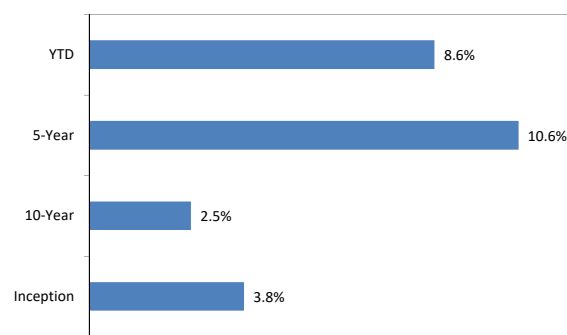
### Historical Performance



### Historical Percent Funded



### Period IRRs <sup>(4)</sup>



<sup>(1)</sup> Investment information listed as of March 31, 1989 through March 31, 2017 and includes those investments which have been liquidated.

<sup>(2)</sup> Contributions are based on cash activity and are higher than commitments primarily due to reinvestments and contributions for management fees in some of the core open-end funds.

<sup>(3)</sup> Contributions and Distributions each include activity in the amount of \$33.5 million related to a simultaneous sale and purchase of shares in a core open-end fund.

<sup>(4)</sup> The YTD IRR presented is an annualized percentage.

**Employees' Retirement System of Rhode Island Real Estate Performance**  
**3/31/2017**

Current Partnerships	Vintage Year/Initial Investment	Type	Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Cumulative Performance*		
				Amount Drawn	Amount Distributed	Amount Unfunded	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
AEW Core Property Trust	2010	Core	69,873,660	69,873,660	13,726,985	-	101,478,007	12.0%	1.4
Heitman America Real Estate Trust	2014	Core	60,000,000	60,000,000	7,178,116	-	77,456,041	11.7%	1.3
JP Morgan Strategic Property Fund	2006	Core	75,000,000	75,000,000	24,714,478	-	104,772,343	6.3%	1.6
Morgan Stanley Prime Property Fund	2005	Core	35,000,000	35,000,000	19,949,252	-	60,920,067	7.3%	2.0
Prudential (PRISA)	2005	Core	50,000,000	50,000,000	18,586,502	-	74,271,871	5.2%	1.7
Magna Hotel Fund III	2008	Value-Add	4,000,000	3,426,573	5,018,132	573,427	1,016,733	15.6%	1.8
IC Berkeley Partners III	2013	Value-Add	18,000,000	16,038,326	7,241,760	1,961,674	13,033,580	16.6%	1.3
Exeter Industrial Value Fund II	2014	Value-Add	30,000,000	29,099,454	2,453,157	900,546	32,557,485	17.8%	1.2
Waterton Fund XII	2014	Value-Add	35,000,000	26,933,454	2,382,414	8,066,546	33,007,335	19.6%	1.2
Crow Holdings Retail Fund	2015	Value-Add	24,000,000	18,281,125	935,594	5,718,875	18,753,779	11.4%	1.1
IC Berkeley Partners IV	2016	Value-Add	30,000,000	3,087,000	1,717,218	26,913,000	2,504,869	-13.5%	0.9
TriCon Capital Fund VII	2005	Opportunistic	15,000,000	14,571,533	3,953,566	428,467	1,042,023	-19.0%	0.3
JP Morgan Alternative Property Fund	2006	Opportunistic	20,000,000	20,000,000	14,750,429	-	175,462	-4.6%	0.7
GEM Realty Fund V	2013	Opportunistic	50,000,000	32,501,311	6,621,000	17,498,689	37,301,871	16.1%	1.2
Lone Star Real Estate Fund IV	2015	Opportunistic	24,260,817	17,614,959	3,251,372	6,645,858	16,510,195	19.3%	1.1
<b>Total</b>			<b>\$ 540,134,477</b>	<b>\$ 471,427,395</b>	<b>\$ 132,479,975</b>	<b>\$ 68,707,082</b>	<b>\$ 574,801,661</b>		

\*IRR refers to the fund's Internal Rate of Return, or the annualized compounded yield on an investment. This calculation is typically applied in private real estate where there are multiple points at which capital is invested (capital called) and at which it is distributed. A positive IRR means that the fund's current value plus any cash distributions are greater than the cash value contributed and management fees paid. Typically a fund will have a negative IRR during the first few years of its life, a period referred to as the "J-Curve", because cash is invested upfront and it takes time to generate value. It is important to consider a fund's start date (vintage year) when assessing IRRs. Multiple of investment is another indicator of returns, and is calculated by dividing the fund's cumulative distributions and current value, after fees, by the amount of capital paid in. Please note that performance calculations are specific to the ERSRI investment, and were not prepared, reviewed or approved by the General Partners.

Section X.

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## Infrastructure Returns

# Portfolio Summary

3/31/2017

All Private Infrastructure



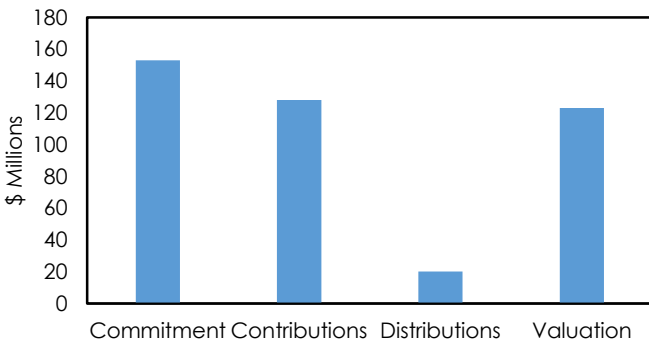
\$USD

Investment	Commitment	Contributions	Distributions	Adjusted Valuation	Multiple of Cost*	Since Inception IRR*	1-yr IRR*	QTD IRR*
IFM Global Infrastructure	50,000,000	50,000,000	1,595,547	56,518,645	1.16	8.2	9.2	5.8
ISQ Global Infrastructure Fund	50,000,000	50,104,045	14,803,826 <sup>1</sup>	39,614,793	1.09	15.0	23.0	2.8
Stonepeak Infrastructure Fund II	43,000,000	25,885,171	3,834,726 <sup>2</sup>	26,639,211	1.18	32.1	35.0	3.1
Stonepeak Infrastructure Fund II Master Co-Investment	10,000,000	1,874,560	0	NA	NA	NA	NA	NA
<b>Total</b>	<b>153,000,000</b>	<b>127,863,776</b>	<b>20,234,099</b>	<b>122,772,649</b>	<b>1.14</b>	<b>11.9</b>	<b>16.6</b>	<b>4.3</b>

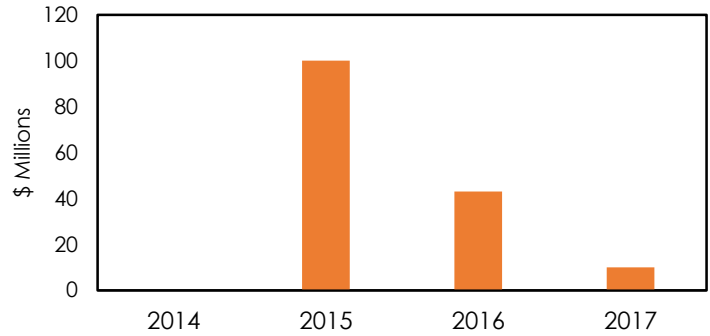
\*Net of Fees and Expenses

1. Recallable distributions
2. Partial distributions subject to recall total \$2,602,867

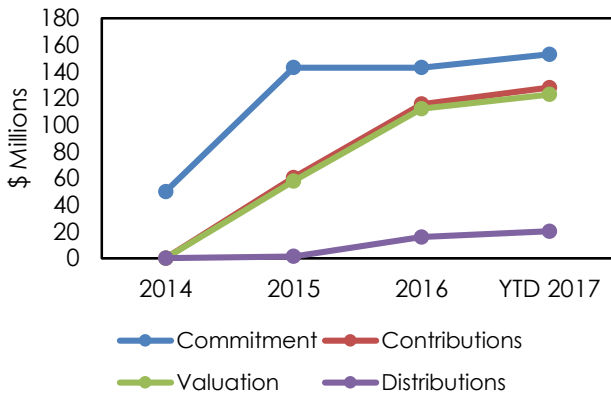
## Cash Flow and Valuation Summary



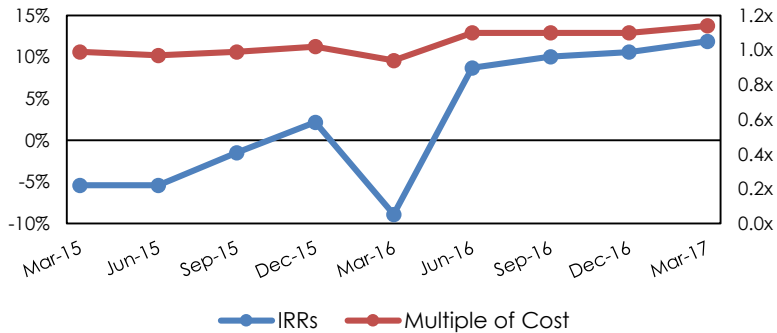
## Commitment by Vintage Year



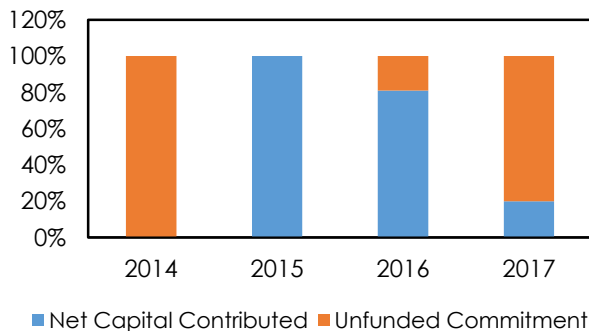
## Historical Cash Flows and Valuation



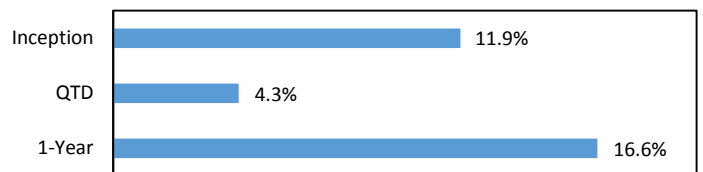
## Historical Performance



## Historical Percent Funded



## Period IRRs



**Employees' Retirement System of Rhode Island Private Infrastructure Performance  
3/31/2017**

Current Partnerships	Vintage Year/Initial Investment		Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance*	
				Amount Drawn	Amount Distributed	Amount Unfunded		Net IRR (%)	Net Multiple of Investment
IFM Global Infrastructure, L.P.	2015	Core	50,000,000	50,000,000	1,595,547	-	56,518,645	8.2	1.2
ISQ Global Infrastructure Fund, L.P.	2015	Value-Add	50,000,000	50,104,045	14,803,826	14,576,103	39,614,793	15.0	1.1
Stonepeak Infrastructure Fund II, L.P.	2016	Opportunistic	43,000,000	25,885,171	3,834,726	17,114,829	26,639,211	32.1	1.2
Stonepeak Infrastructure Fund II-C	2016	Opportunistic	10,000,000	1,874,560	-	8,125,440	1,869,637	n/a	1.0
<b>Total</b>			<b>\$ 153,000,000</b>	<b>\$ 127,863,776</b>	<b>\$ 20,234,099</b>	<b>\$ 39,816,372</b>	<b>\$ 124,642,286</b>		

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## Section XI.

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### Cash Flow



# Monthly Valuation Change

Period : 2017-07-01 - 2017-07-31

Category	Source Account Name	Closing Balance	Market Value Increase/(Decrease)	Transfer In/(Out)	Opening Balance
<b>Grand Total</b>		<b>8,158,527,547.16</b>	<b>136,945,132.75</b>	<b>(19,477,621.00)</b>	<b>8,041,060,035.41</b>
<b>Total Global Equity</b>		<b>4,158,433,852.03</b>	<b>106,884,181.88</b>	<b>(67,355,536.78)</b>	<b>4,118,905,206.93</b>
<b>Global Equity</b>		<b>3,805,730,905.58</b>	<b>102,211,103.93</b>	<b>0.00</b>	<b>3,703,519,801.65</b>
	SSGA R3000 INDEX	1,329,621,387.80	24,759,705.73	0.00	1,304,861,682.07
	SSGA MSCI EAFE	789,425,415.00	22,295,302.78	0.00	767,130,112.22
	SSGA MSCI CANADA	105,231,824.79	4,050,547.38	0.00	101,181,277.41
	SSGA MSCI EM	377,255,643.93	21,166,067.64	0.00	356,089,576.29
	QVM TILT	1,204,196,634.06	29,939,480.40	0.00	1,174,257,153.66
<b>Global Equity Hedge Funds</b>		<b>352,702,946.45</b>	<b>4,673,077.95</b>	<b>(67,355,536.78)</b>	<b>415,385,405.28</b>
	DAVIDSON KEMPNER	84,316,897.57	319,751.50	0.00	83,997,146.07
	ELLIOTT ASSOCIATES	100,652,413.97	1,391,050.14	0.00	99,261,363.83
	INDUS ASIA PACIFIC	352,044.77	2,002.14	0.00	350,042.63
	PFM DIVERSIFIED	3,925,246.43	0.00	0.00	3,925,246.43
	SAMLYN ON/OFFSHORE	48,858,501.33	639,862.81	(67,355,536.78)	115,574,175.30
	VIKING GLOBAL EQUITI	107,418,672.92	2,250,120.99	0.00	105,168,551.93
	LUXOR CAP PTNS LP	6,069,799.89	70,290.37	0.00	5,999,509.52
	ESG CBE FUND LP	1,109,369.57	0.00	0.00	1,109,369.57
<b>Private Equity</b>		<b>452,171,334.45</b>	<b>828,982.78</b>	<b>(95,832,733.04)</b>	<b>547,175,084.71</b>
<b>Private Equity</b>		<b>452,171,334.45</b>	<b>828,982.78</b>	<b>(95,832,733.04)</b>	<b>547,175,084.71</b>
	PRIVATE EQUITY	452,171,334.45	828,982.78	(95,832,733.04)	547,175,084.71
<b>Total Fixed Income</b>		<b>961,385,599.02</b>	<b>5,257,658.86</b>	<b>(3,656,796.78)</b>	<b>959,784,736.94</b>
<b>Fixed Income</b>		<b>961,385,599.02</b>	<b>5,257,658.86</b>	<b>(3,656,796.78)</b>	<b>959,784,736.94</b>
	MACKAY SHIELDS	477,778,865.32	2,439,837.11	0.00	475,339,028.21
	PYRAMIS GLOBAL ADV	483,606,733.70	2,817,821.75	(3,656,796.78)	484,445,708.73
<b>Total Real Return</b>		<b>1,254,372,249.20</b>	<b>14,700,350.90</b>	<b>(6,693,569.56)</b>	<b>1,246,365,467.86</b>
<b>Alternative Absolute Return</b>		<b>258,391,428.77</b>	<b>3,372,789.12</b>	<b>0.00</b>	<b>255,018,639.65</b>
	BREVAN HOWARD	57,516,115.56	816,579.17	0.00	56,699,536.39
	DE SHAW	101,154,162.47	1,189,160.87	0.00	99,965,001.60
	OZ DOMESTIC PTRS	5,537,981.00	0.00	0.00	5,537,981.00
	WINTON FUTURE FD	35,515,660.19	0.00	0.00	35,515,660.19
	GRAHAM ABS RETURN	58,667,509.55	1,367,049.08	0.00	57,300,460.47
<b>Alternative Fixed Income</b>		<b>79,808,141.23</b>	<b>199,476.86</b>	<b>0.00</b>	<b>79,608,664.37</b>
	BRIGADE LEV CAP	3,188,047.59	0.00	0.00	3,188,047.59
	CAPULA GLOBAL	69,676,444.40	171,171.53	0.00	69,505,272.87
	CLAREN ROAD CR. FUND	6,943,649.24	28,305.33	0.00	6,915,343.91
<b>Credit</b>		<b>386,954,830.20</b>	<b>5,365,094.59</b>	<b>(5,072,527.86)</b>	<b>386,662,263.47</b>
	PIMCO	200,773,041.04	2,005,293.55	(2,675,000.00)	201,442,747.49
	WAMCO	186,181,789.16	3,359,801.04	(2,397,527.86)	185,219,515.98
<b>GILBs</b>		<b>247,091,722.57</b>	<b>1,168,152.85</b>	<b>(25,363.70)</b>	<b>245,948,933.42</b>
	BROWN BROTHERS HARR	247,091,722.57	1,168,152.85	(25,363.70)	245,948,933.42
<b>Publicly Traded Infrastructure</b>		<b>282,126,126.43</b>	<b>4,594,837.48</b>	<b>(1,595,678.00)</b>	<b>279,126,966.95</b>
	PRIV INFRASTR AGGR	125,993,835.00	2,951,441.00	(1,595,678.00)	124,638,072.00
	HARVEST FUND ADVISOR	156,132,291.43	1,643,396.48	0.00	154,488,894.95
<b>Real Estate</b>		<b>0.00</b>	<b>0.00</b>	<b>(580,842,051.10)</b>	<b>580,842,051.10</b>
<b>Real Estate</b>		<b>0.00</b>	<b>0.00</b>	<b>(580,842,051.10)</b>	<b>580,842,051.10</b>
	REAL ESTATE	0.00	0.00	(580,842,051.10)	580,842,051.10
<b>Total Cash</b>		<b>206,218,048.74</b>	<b>(65,310.17)</b>	<b>32,839,009.99</b>	<b>173,444,348.92</b>



# Monthly Valuation Change

Period : 2017-07-01 - 2017-07-31

Category	Source Account Name	Closing Balance	Market Value Increase/(Decrease)	Transfer In/(Out)	Opening Balance
<b>Cash Accounts</b>		<b>206,218,048.74</b>	<b>(65,310.17)</b>	<b>32,839,009.99</b>	<b>173,444,348.92</b>
	ERSRI CASH	201,485,302.74	(65,310.17)	42,616,630.99	158,933,981.92
	CITIZENS CASH	4,732,746.00	0.00	(9,777,621.00)	14,510,367.00
<b>Total Other</b>		<b>17,452,293.30</b>	<b>(632,255.22)</b>	<b>0.00</b>	<b>18,084,548.52</b>
<b>Other</b>		<b>17,452,293.30</b>	<b>(632,255.22)</b>	<b>0.00</b>	<b>18,084,548.52</b>
	RUSSELL OVERLAY FD	17,452,293.30	(632,255.22)	0.00	18,084,548.52
<b>Total Miscellaneous</b>		<b>1,324,365.26</b>	<b>104,168.89</b>	<b>0.00</b>	<b>1,220,196.37</b>
<b>Miscellaneous Accounts</b>		<b>1,324,365.26</b>	<b>104,168.89</b>	<b>0.00</b>	<b>1,220,196.37</b>
	RI TRANS ACCT	5,404.36	200.38	0.00	5,203.98
	SHOTT CAPITAL	1,261,873.76	102,604.12	0.00	1,159,269.64
	DOM EQUITY TRANS	74.25	0.00	0.00	74.25
	NON-US EQUITY TRANS	55,508.46	1,380.57	0.00	54,127.89
	FIXED INC TRANS	1,504.43	(16.18)	0.00	1,520.61
<b>*unclassified</b>		<b>1,107,169,805.16</b>	<b>9,867,354.83</b>	<b>702,064,056.27</b>	<b>395,238,394.06</b>
<b>*Unclassified</b>		<b>1,107,169,805.16</b>	<b>9,867,354.83</b>	<b>702,064,056.27</b>	<b>395,238,394.06</b>
	ERSRI SMA CASH	268,645,059.86	358,753.20	29,500,000.00	238,786,306.66
	MACKAY LONG DURATION	39,299,250.06	(256,435.38)	0.00	39,555,685.44
	WAMCO LONG DURATION	39,270,447.14	(222,899.71)	0.00	39,493,346.85
	CPC CB LLC	39,569,023.86	1,171,452.54	0.00	38,397,571.32
	CPC QIS LLC	40,944,029.87	1,938,546.08	0.00	39,005,483.79
	PRIVATE CREDIT	63,112,382.00	200.00	63,112,182.00	0.00
	OPPORTUNISTIC PRV CR	30,567,993.00	1,569,970.00	28,998,023.00	0.00
	CORE REAL ESTATE	419,631,015.55	3,583,633.10	416,047,382.45	0.00
	NON CORE REAL ESTATE	166,130,603.82	1,724,135.00	164,406,468.82	0.00

Note: \$200 difference in Private Credit due to transfer amount that was captured in performance in July and will be reflected in accounting in August.

CASH FLOW ANALYSIS - INCOME & EXPENSES

Employees Retirement System

FISCAL YEAR 2018

	FY 2017-18												
	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2018	Projected December	Projected November	Projected October	Projected September	Projected August	Actual July 2017
MEMBER BENEFITS	821,750,336	68,500,000	68,500,000	68,500,000	68,500,000	68,500,000	68,500,000	68,500,000	68,500,000	68,500,000	68,500,000	68,500,000	68,250,336
ADMINISTRATIVE EXPENSES	9,233,725	1,169,348.10	1,005,428	738,845	892,566	768,264	484,162	1,428,567	415,373	625,257	642,177	670,460	393,280
INVESTMENT EXPENSES	9,036,841	145,711	1,035,970	874,882	1,134,860	528,297	329,085	(6,989)	1,354,605	637,021	1,260,447	1,476,800	266,153
TOTAL OUTFLOW	840,020,903	69,815,059	70,541,398	70,113,726	70,527,426	69,796,561	69,313,247	69,921,577	70,269,978	69,762,278	70,402,624	70,647,260	68,909,768
CONTRIBUTIONS	566,880,297	55,658,886	43,884,816	38,943,512	46,923,170	40,327,455	53,349,987	58,176,740	43,254,275	36,194,139	40,690,939	53,520,677	55,955,701
OTHER INCOME*	84,474,336	3,453,123	8,323,084	12,121,233	8,192,692	7,278,049	6,918,798	13,717,971	5,469,260	8,150,581	4,338,494	1,605,841	4,905,210
TOTAL INCOME	651,354,633	59,112,009	52,207,900	51,064,745	55,115,862	47,605,504	60,268,785	71,894,711	48,723,535	44,344,720	45,029,433	55,126,518	60,860,911
DIFFERENCE	(188,666,270)	(10,703,050)	(18,333,499)	(19,048,981)	(15,411,564)	(22,191,057)	(9,044,462)	1,973,134	(21,546,443)	(25,417,558)	(25,373,191)	(15,520,742)	(8,048,857)

Municipal Employees Retirement System

	FY 2017-18												
	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2018	Projected December	Projected November	Projected October	Projected September	Projected August	Actual July 2017
MEMBER BENEFITS	94,756,758	7,900,000	7,900,000	7,900,000	7,900,000	7,900,000	7,900,000	7,900,000	7,900,000	7,900,000	7,900,000	7,900,000	7,856,758
ADMINISTRATIVE EXPENSES	2,089,781	270,038	232,184	169,799	205,127	176,177	109,317	322,493	105,608	141,149	144,969	122,026	90,893
INVESTMENT EXPENSES	1,884,164	33,649	239,237	201,063	260,810	121,148	74,303	(1,578)	354,234	143,805	284,540	111,440	61,512
TOTAL OUTFLOW	98,730,703	8,203,687	8,371,421	8,270,862	8,365,937	8,197,326	8,083,620	8,220,915	8,359,843	8,184,954	8,329,509	8,133,466	8,009,164
CONTRIBUTIONS	70,990,887	6,717,800	5,334,349	4,706,224	6,148,074	4,495,807	6,943,950	6,219,708	5,806,255	6,763,262	5,550,861	7,700,000	4,604,597
OTHER INCOME*	18,507,239	797,431	1,922,052	2,785,667	1,882,821	1,668,993	1,562,174	3,096,771	476,838	1,839,957	979,396	361,465	1,133,676
TOTAL INCOME	89,498,126	7,515,231	7,256,401	7,491,891	8,030,895	6,164,800	8,506,124	9,316,479	6,283,093	8,603,219	6,530,257	8,061,465	5,738,273
DIFFERENCE	(9,232,576)	(688,456)	(1,115,020)	(778,971)	(335,043)	(2,032,525)	422,503	1,095,564	(2,076,750)	418,266	(1,799,252)	(72,001)	(2,270,891)

CASH FLOW ANALYSIS - INCOME & EXPENSES

State Police  
Retirement System

	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2018	Projected December	Projected November	Projected October	Projected September	Projected August	Actual July 2017
MEMBER BENEFITS	5,984,579	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	484,579
ADMINISTRATIVE EXPENSES	181,889	23,674	20,356	14,842	17,930	15,383	9,455	27,863	9,124	12,195	12,525	10,543	7,998
INVESTMENT EXPENSES	163,820	2,950	20,974	17,575	22,798	10,578	6,427	(136)	30,606	12,425	24,584	9,628	5,412
TOTAL OUTFLOW	6,330,288	526,624	541,329	532,417	540,728	525,960	515,882	527,727	539,730	524,620	537,109	520,171	497,989
CONTRIBUTIONS	7,159,296	564,377	505,403	628,202	577,192	621,162	669,574	681,141	577,084	587,967	640,662	682,068	424,464
OTHER INCOME*	1,610,664	69,911	168,506	243,498	164,579	145,725	135,118	267,558	41,198	158,971	84,619	31,230	99,750
TOTAL INCOME	8,769,960	634,288	673,909	871,700	741,771	766,887	804,692	948,699	618,282	746,938	725,281	713,298	524,215
DIFFERENCE	2,439,672	107,664	132,580	339,283	201,043	240,926	288,810	420,973	78,552	222,318	188,172	193,127	26,225

Judicial  
Retirement System

	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2018	Projected December	Projected November	Projected October	Projected September	Projected August	Actual July 2017
MEMBER BENEFITS	2,743,108	227,956	227,937	227,918	227,918	227,879	227,841	227,841	227,841	227,841	227,841	236,341	227,956
ADMINISTRATIVE EXPENSES	94,916	12,367	10,633	7,745	9,356	8,023	4,915	14,561	4,768	6,373	6,545	5,442	4,188
INVESTMENT EXPENSES	85,488	1,541	10,956	9,171	11,896	5,517	3,341	(71)	15,994	6,493	12,847	4,969	2,834
TOTAL OUTFLOW	2,923,512	241,865	249,527	244,833	249,170	241,419	236,096	242,330	248,603	240,706	247,233	246,752	234,978
CONTRIBUTIONS	7,032,507	775,599	645,108	632,110	625,931	612,878	602,903	590,610	454,249	443,861	436,053	431,866	781,341
OTHER INCOME*	840,717	36,520	88,025	127,059	85,878	76,001	70,235	139,821	21,529	83,075	44,220	16,119	52,233
TOTAL INCOME	7,873,224	812,120	733,133	759,168	711,809	688,879	673,138	730,430	475,778	526,936	480,273	447,984	833,575
DIFFERENCE	4,949,712	570,255	483,606	514,335	462,639	447,461	437,042	488,100	227,175	286,229	233,040	201,233	598,596

\*Includes income from Real Estate Investments, Private Equity, and Cash Accounts

FISCAL YEAR 2017

## DIRECT BILLED INVESTMENT MANAGER FEES, PROFESSIONAL FEES &amp; OPERATING EXPENSES

ERSRI &amp; MERSRI

ACCRUAL BASIS

	Actual Jul 16	Actual Aug	Actual Sept	Actual Oct	Actual Nov	Actual Dec	Actual Jan 17	Actual Feb	Projected Mar	Projected Apr	Projected May	Projected June	Projected TOTAL
<b>EQUITIES US</b>													
SSGA Russell 3000			37,971			39,653			42,421			42,000	162,045
Shott Capital/Hamilton Lane			8,259			1,142			699			1,000	11,101
SSGA QVM Tilt			<u>105,563</u>			<u>105,965</u>			<u>113,265</u>			<u>70,000</u>	<u>394,793</u>
			151,794			146,760			156,385			119,800	179,946
<b>FIXED INCOME</b>													
Pyramis			175,251			168,920			160,292			180,000	684,463
Mackay Shields			181,878			170,381			160,953			180,000	693,212
Brown Bros.TIPS/GILB			<u>82,477</u>			<u>77,685</u>			<u>74,329</u>			<u>84,000</u>	<u>318,491</u>
			439,607			416,985			395,574			444,000	1,696,166
<b>INT'L EQUITIES</b>													
SSGA MSCI EAFE			54,233			52,465			54,976			65,000	226,674
SSGA MSCI CAD			7,383			7,552			7,925			8,000	30,860
SSGA MSCI Emerg Mkts			<u>85,001</u>			<u>78,931</u>			<u>81,511</u>			<u>80,000</u>	<u>325,444</u>
			146,617			138,948			144,413			153,000	582,978
<b>CREDIT</b>													
WAMCO			129,958			130,824			124,892			100,000	485,674
PIMCO			<u>133,852</u>			<u>134,840</u>			<u>130,098</u>			<u>130,000</u>	<u>528,790</u>
			263,810			265,664			254,990			230,000	1,014,464
<b>Infrastructure</b>													
Harvest Partners			319,128			318,399			321,730			287,235	1,246,493
<b>REAL ESTATE</b>													
Direct Billed Real Estate	331,011	192,928	0	513,718	94,274	0	411,042	0	94,343	322,544	107,294	0	2,067,154
<b>ALTERNATIVE INVESTMENTS</b>													
Direct Billed Private Equity	267,199	428,254	1,586,067	287,868	1,880,276	(8,795)	3,044	667,372	1,339,709	782,990	1,202,765	184,262	8,621,010
<b>SUB TOTAL-INV MGMT FEES</b>	598,210	621,182	2,907,023	801,586	1,974,550	1,277,962	414,085	667,372	2,707,144	1,105,534	1,310,059	1,418,297	15,408,211
<b>PROFESSIONAL FEES</b>													
Legal	3,488	5,000	2,875	5,125	2,563	4,915	7,000	20,038	3,988	18,040	18,313	11,812	103,156
BNY Mellon - Custodial	60,277	40,948	39,717	37,222	37,182	37,196	38,928	38,054	39,000	39,000	39,000	39,000	485,524
Cliffwater	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	450,000
PCA/Russell/Aberdeen	14,583	14,583	210,233	14,583	33,333	72,831	14,583	14,583	78,809	14,583	14,583	107,852	605,141
PCA Real Estate	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>10,417</u>	<u>125,004</u>
	126,265	108,447	300,743	104,847	120,995	162,860	108,428	120,592	169,714	119,541	119,813	206,582	1,768,826
<b>OPERATING EXPENSE</b>													
Retirement Transfers	359,498	596,617	1,310,274	921,394	456,008	870,703	706,200	529,069	1,384,884	537,192	1,162,726	1,303,711	<u>10,138,275</u>
Other Expense	0	0	<u>4,375</u>	<u>13,270</u>	<u>10,000</u>	<u>23,820</u>	<u>750</u>	<u>9,523</u>	<u>39,903</u>	<u>1,795</u>	<u>23,073</u>	<u>45,001</u>	<u>171,510</u>
	359,498	596,617	1,314,649	934,664	466,008	894,523	706,950	538,592	1,424,787	538,987	1,185,799	1,348,712	10,309,785
<b>TOTAL:</b>	1,083,973	1,326,246	4,522,415	1,841,097	2,561,553	2,335,345	1,229,464	1,326,556	4,301,644	1,764,061	2,615,671	2,973,591	27,486,822

Note: Numbers in bold are actual.

## Section XII.

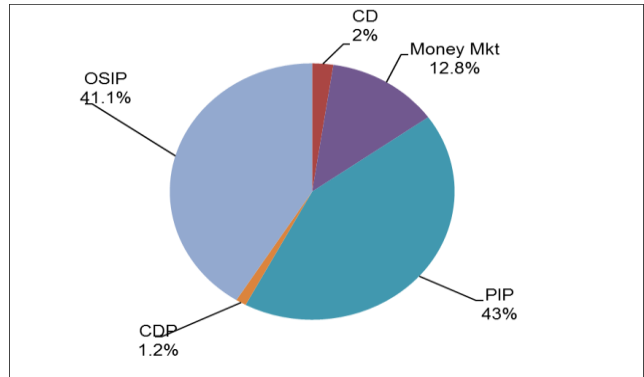
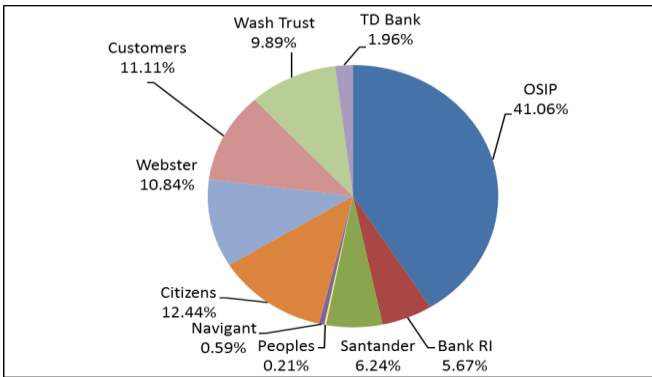
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### Short-Term Investments

**State of Rhode Island  
Office of the General Treasurer  
Short Term Investments**

**Issuer Credit Rating  
July 31, 2017**

Issuer	Type of Instrument*	Month End % Portfolio	Issuer Ratings			S-T Debt Rating			L-T Debt Rating		Credit Outlook
			Moody's	Moody's	S&P	Moody's	S&P	S&P			
Bank of America		0.0%	Baa1	P-2	A-2	Baa1	BBB+		Stable		
Bank RI	3,4	5.7%	N/R	N/R	N/R	N/R	N/R		N/R		
Citizens Bank	4	12.4%	Baa1	P-2	A-2	A1	A-		Stable		
Customers Bank	4	11.1%	N/R	N/R	N/R	N/R	N/R		N/R		
Webster Bank	4	10.8%	Baa1	P-1	A-2	A1	BBB+		Stable		
Washington Trust	4,7	9.9%	N/R	N/R	N/R	N/R	N/R		N/R		
Santander Bank	4	6.2%	Baa2	P-1	A-2	A2	BBB+		Stable		
TD Bank	4	2.0%	Aa1	P-1	A-1+	Aa1	AA-		Stable		
Ocean State Investment Pool	6	41.1%	N/R	N/R	N/R	N/R	N/R		N/R		
People's Credit Union	4	0.2%	N/R	N/R	N/R	N/R	N/R		N/R		
Navigant Credit Union	4	0.6%	N/R	N/R	N/R	N/R	N/R		N/R		



REPO = Repurchase Agreement	1*
CP = Commercial Paper	2*
CD = Certificate of Deposit	3*
CoD = Collateralized Deposit	4*
AG = US Government Agency Note	5*
MM = Government Money Market	6*
GID = Government Insured Deposit	7*

**Ratings Definitions**

**Moody's Short-Term Debt Ratings:**

**P-1** - Prime-1 have a superior ability for repayment of sr. S-T debt obligations  
**P-2** - Prime-1 have a strong ability for repayment of sr. S-T debt obligations  
**P-3** - Prime-1 have an acceptable ability for repayment of sr. S-T debt obligations  
**NP** - Not Prime

**Moody's Issuer Rating Symbols:**

**Aaa** - Offer exceptional financial security (high-grade)  
**Aa** - Offer excellent financial security (high-grade)  
**A** - Offer good financial security  
**Baa** - Offer adequate financial security  
**Ba** - Offer questionable financial security  
**B** - Offer poor financial security  
**Caa** - Offer very poor financial security  
**Ca** - Offer extremely poor financial security  
**C** - Lowest rated class, usually in default

**Moody's Long-Term Debt Ratings:**

**Aaa** - Best Quality  
**Aa** - High Quality  
**A** - Possess many favorable investment attributes  
**Baa** - Medium-grade obligations  
**Ba** - Possess speculative elements  
**B** - Generally lack characteristics of desirable investments  
**Caa** - Poor standing  
**Ca** - Speculative in a high degree  
**C** - Lowest rated class of bonds

**Modifiers:**

**1** - Higher end of letter rating category  
**2** - Mid-range of letter rating category  
**3** - Lower end of letter rating category

**S&P Short-Term Credit Ratings:**

**A-1** - Highest rated, strong capacity to meet obligations  
**A-2** - Somewhat more susceptible to adverse effects of changes in financial conditions; satisfactory  
**A-3** - Exhibits adequate protection parameters  
**B** - Significant speculative characteristics, faces major ongoing uncertainties  
**C** - Vulnerable to non-payment  
**D** - Payment default  
**Modifiers:**  
 + or - show relative standing within the category.

**S&P Outlook Definitions:**

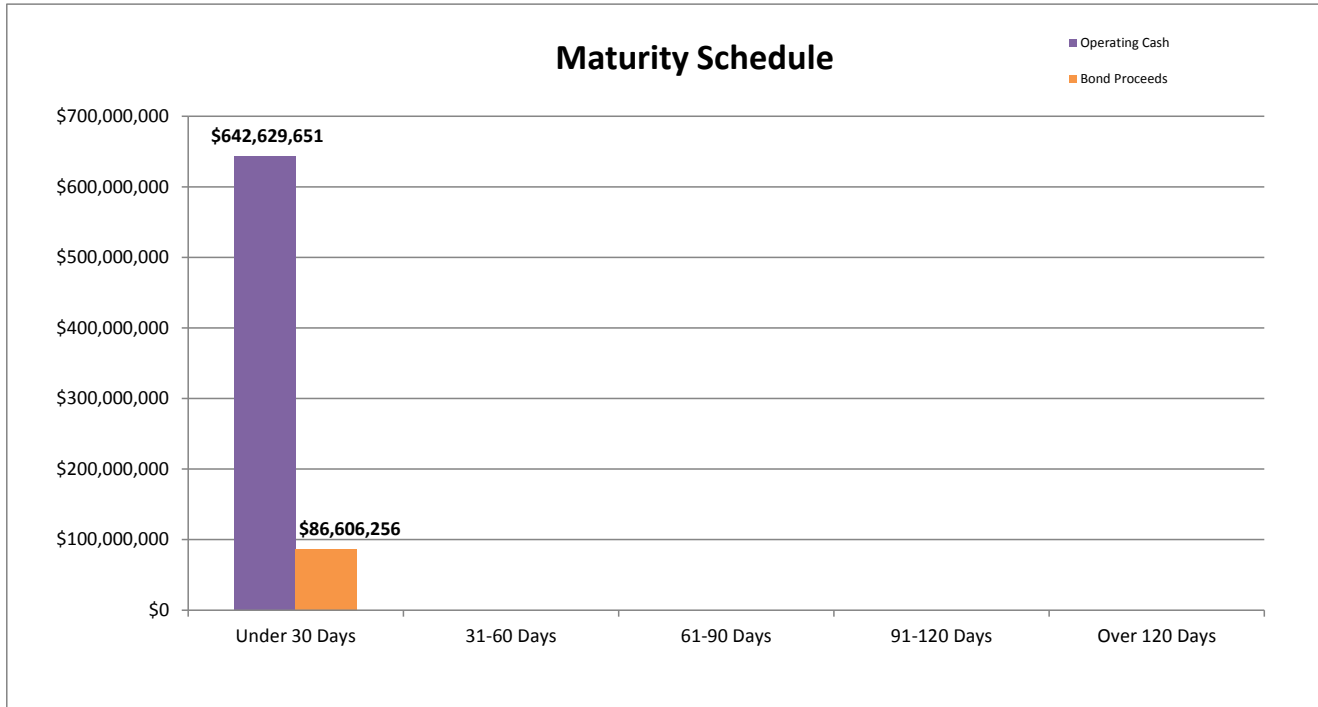
**Positive** - A rating may be raised  
**Negative** - A rating may be lowered  
**Stable** - A rating is not likely to change  
**Developing** - May be raised or lowered  
**NM** - Not meaningful

**S&P Long-Term Debt Ratings:**

**AAA** - Highest rating, extremely strong  
**AA** - Differs slightly from highest rating, very strong  
**A** - More susceptible to adverse effects of change in economic condition, strong  
**BBB** - Exhibits adequate protection parameters  
**BB, B,** - Have significant speculative characteristics. BB least speculative  
**CCC, CC, C** - C highest degree  
**D** - Payment default  
**Modifiers:**  
 + or - show relative standing within the category.



**Short-Term Investment Maturity Schedule & SIC Compliance Report at July 31, 2017**



Vendor	CP	CD	Agency	Money Mkt	PIP	Repo	CDP	OSIP	Total (\$)
Guidelines-Total/Vendor	25%/10%	50%/20%	75%/35%	75%/35%	75%/35%	100%/20%	75%/35%	50%/50%	
OSIP	0	0	0	0	0	0	0	263,832,864	263,832,864
	0%	0%	0%	0%	0%	0%	0%	41%	41.1%
Bank RI	0	15,336,026	0	21,124,182	0	0	0	0	36,460,208
	0%	2%	0%	3%	0%	0%	0%	0%	5.7%
Santander Bank	0	0	0	0	40,117,854	0	0	0	40,117,854
	0%	0%	0%	0%	6%	0%	0%	0%	6.2%
People's Credit Union	0	0	0	0	0	0	1,322,050	0	1,322,050
	0%	0%	0%	0%	0%	0%	0%	0%	0.2%
Navigant Credit Union	0	0	0	0	0	0	3,778,702	0	3,778,702
	0%	0%	0%	0%	0%	0%	1%	0%	0.59%
Citizens Bank	0	0	0	0	79,927,909	0	0	0	79,927,909
	0%	0%	0%	0%	12%	0%	0%	0%	12.4%
Webster Bank	0	0	0	0	69,648,961	0	0	0	69,648,961
	0%	0%	0%	0%	11%	0%	0%	0%	10.8%
Customers Bank	0	0	0	0	71,368,472	0	0	0	71,368,472
	0%	0%	0%	0%	11%	0%	0%	0%	11.1%
Washington Trust	0	0	0	60,952,924	0	0	2,599,286	0	63,552,210
	0%	0%	0%	9%	0%	0%	0%	0%	9.9%
TD Bank	0	0	0	0	12,620,421	0	0	0	12,620,421
	0%	0%	0%	0%	2%	0%	0%	0%	2.0%
<b>TOTALS</b>	-	15,336,026	-	82,077,106	273,683,618	-	7,700,037.79	263,832,864	642,629,652
<b>(%) PORTFOLIO</b>	<b>0.00%</b>	<b>2.39%</b>	<b>0.00%</b>	<b>12.77%</b>	<b>42.59%</b>	<b>0.00%</b>	<b>1.20%</b>	<b>41.06%</b>	<b>100.00%</b>

**State of Rhode Island**  
**Short Term Cash Monthly Performance**  
**Performance for**  
**July 01, 2017 to July 31, 2017**

<b>Fund Name</b>	<b>Beginning Balance</b>	<b>Ending Balance</b>	<b>Average Daily Balance</b>	<b>Earnings</b>	<b>Yield(Annual)</b>
GENERAL FUND	\$ 392,124,622.06	\$ 314,818,440.07	\$ 330,348,114.25	\$ 248,834.08	0.8869%
H.A.V.A	\$ 298.49	\$ 298.69	\$ 298.49	\$ 0.20	0.7889%
GENERAL FUND (HIST PRES)	\$ 544,478.73	\$ 545,016.82	\$ 544,478.73	\$ 538.09	1.1636%
HISTORIC TAX CREDITS	\$ 6,939,439.57	\$ 6,946,141.54	\$ 6,939,439.57	\$ 6,701.97	1.1371%
HIGHWAY FUND	\$ 89,751,342.20	\$ 82,224,101.99	\$ 85,864,245.43	\$ 72,759.79	0.9977%
T.D.I. RESERVE (DET)	\$ 104,614,330.82	\$ 93,063,729.10	\$ 98,043,806.39	\$ 52,382.21	0.6291%
RICAP GL FUND 21	\$ 60,375,224.77	\$ 45,911,204.32	\$ 53,004,257.03	\$ 35,979.55	0.7992%
BOND CAPITAL FUND	\$ 330,173.62	\$ 4,235,395.22	\$ 7,685,012.33	\$ 5,221.60	0.8000%
R.I. CLEAN WATER ACT	\$ 3,220,395.69	\$ 3,223,304.93	\$ 3,220,395.69	\$ 2,909.24	1.0637%
STATE LOTTERY FUND	\$ 21,123,357.20	\$ 53,055,683.48	\$ 38,555,615.26	\$ 32,326.28	0.9872%
ASSESSED FRINGE BEN ADM	\$ 4,417,984.44	\$ 3,422,187.01	\$ 4,288,952.18	\$ 4,202.57	1.1537%
AUTO EQUIPMENT SERVICE	\$ 1,258.82	\$ 1,259.68	\$ 1,258.82	\$ 0.86	0.8044%
HEALTH INSURANCE FUND	\$ 20,882,500.26	\$ 18,400,370.96	\$ 18,108,306.71	\$ 17,870.70	1.1620%
FLEET REVOLVING LOAN FUND	\$ 2,272,188.81	\$ 2,273,840.48	\$ 2,272,188.81	\$ 1,651.67	0.8559%
EMPLOYEES RETIREMENT	\$ 11,637,048.61	\$ 147,638.76	\$ 15,588,661.51	\$ 10,590.15	0.7999%
MUNICIPAL EMPLOYEES RET.	\$ 447,051.46	\$ 148,069.74	\$ 1,498,664.36	\$ 1,018.28	0.8000%
RETIREE HEALTH FUND	\$ 2,905,986.09	\$ 1,707,765.54	\$ 2,618,889.32	\$ 1,779.45	0.8000%
BOG RETIREE FUND	\$ 955.86	\$ 956.74	\$ 955.86	\$ 0.88	1.0840%
RIPTA HEALTH FUND	\$ 1,039,418.41	\$ 1,040,135.82	\$ 1,039,418.41	\$ 717.41	0.8127%
PERMANENT SCHOOL FUND	\$ 1,959,351.99	\$ 1,961,288.15	\$ 1,959,351.99	\$ 1,936.16	1.1635%
TEACHER RETIREE HEALTH FUND	\$ 582,483.17	\$ 582,922.03	\$ 582,483.17	\$ 438.86	0.8871%
RI ST POL RETIREE HEALTH	\$ 124,435.54	\$ 124,521.05	\$ 124,435.54	\$ 85.51	0.8091%
RI LEG RETIREE HEALTH	\$ 832.06	\$ 832.63	\$ 832.06	\$ 0.57	0.8066%
RI JUDICIAL RETIREE HEALTH	\$ 40,643.07	\$ 40,670.68	\$ 40,643.07	\$ 27.61	0.7999%
UNIVERSITY COLLEGE	\$ 8,518,460.25	\$ 7,525,950.76	\$ 7,582,976.38	\$ 7,490.51	1.1631%
INDUS. BLDG. & MTG. INS.	\$ 1,226,712.07	\$ 1,227,924.38	\$ 1,226,712.07	\$ 1,212.31	1.1636%
<b>Operating Funds Totals</b>	<b>\$ 735,080,974.06</b>	<b>\$ 642,629,650.57</b>	<b>\$ 681,140,393.43</b>	<b>\$ 506,676.51</b>	<b>0.876%</b>
CCDL 2004 SERIES A	\$ -	\$ -	\$ -	\$ -	
BOND CCDL 2006 SERIES C	\$ 742,210.03	\$ 742,303.54	\$ 741,611.88	\$ 732.91	1.1636%
GO BND-NTAX 2007 SERIES A	\$ 373,066.13	\$ 373,113.13	\$ 372,765.47	\$ 368.39	1.1636%
CCDL10B BOND CAPITAL COMPONENT	\$ 950,819.11	\$ 950,938.91	\$ 950,052.85	\$ 938.91	1.1636%
CCDL10C	\$ 161,153.71	\$ 161,312.97	\$ 161,153.71	\$ 159.26	1.1636%
CCDL2011A	\$ 5,335,912.87	\$ 5,336,339.65	\$ 5,331,383.21	\$ 5,268.83	1.1636%
CCDL2012B	\$ 6,167,501.71	\$ 6,168,278.79	\$ 6,162,531.33	\$ 6,090.25	1.1636%
GO CCDL 2013A	\$ 2,702,328.00	\$ 2,702,668.48	\$ 2,700,150.19	\$ 2,668.48	1.1636%
GO CCDL 2013B	\$ 3,127,694.44	\$ 3,128,088.52	\$ 3,125,173.83	\$ 3,088.52	1.1636%
GO CCDL 2014A	\$ 2,009,936.27	\$ 2,008,848.74	\$ 2,007,063.43	\$ 1,983.44	1.1636%
GO CCDL 2014B	\$ 40,699.33	\$ 40,704.46	\$ 40,666.53	\$ 40.19	1.1636%
GO CCDL 2016A	\$ 31,058,201.88	\$ 31,068,844.64	\$ 31,039,461.29	\$ 30,675.80	1.1636%
GO CCDL 2016B	\$ 4,247,671.31	\$ 4,248,141.46	\$ 4,244,187.33	\$ 4,194.40	1.1636%
GO CCDL 2017	\$ 27,822,315.96	\$ 27,817,161.79	\$ 27,791,801.02	\$ 27,465.25	1.1636%
CLEAN WATER 2004 SERIES A	\$ 131,979.77	\$ 131,984.02	\$ 131,861.84	\$ 130.31	1.1636%
CCDL99A 1999A	\$ 206,747.50	\$ 206,773.55	\$ 206,580.88	\$ 204.16	1.1636%
CLEAN WATER 2007 SERIES A	\$ 283,496.29	\$ 283,531.90	\$ 283,267.82	\$ 279.84	1.1632%
CCDL2011A CLEAN WATER COMPONENT	\$ 1,237,065.71	\$ 1,237,221.57	\$ 1,236,068.76	\$ 1,221.57	1.1636%
<b>Bond Proceeds Fund Totals</b>	<b>\$ 86,598,800.02</b>	<b>\$ 86,606,256.12</b>	<b>\$ 86,525,781.37</b>	<b>\$ 85,510.51</b>	<b>1.164%</b>
<b>Grand Totals</b>	<b>\$ 821,679,774.08</b>	<b>\$ 729,235,906.69</b>	<b>\$ 767,666,174.80</b>	<b>\$ 592,187.02</b>	<b>0.908%</b>

## Section XIII.

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### Defined Contribution Plan



# 2017 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(S)		
As of 7/31/2017	Mgr.	AUM	Gross	Net	Net	Rev	Recent Returns		Annualized Total Returns as of 6/30/2017							Since	Incep.				
Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date			
TIAA Stable Value****	Current crediting rate = 2.00							0.17	1.16	1.95		2.05						2.11	3/31/2012		
<b>FIXED INCOME</b>																					
<b>Intermediate-Term Bond</b>																					
Vanguard Total Bond Market Index Adm	VBTIX	4.42	183,445.38	0.05	0.05	2	0.00	0.40	2.80	(0.44)	83	2.43	37	2.13	65	4.45	49	4.26	11/12/01		
<i>BBgBarc US Agg Float Adj TR USD</i>								0.43	2.79	(0.33)		2.49		2.23		4.50					
<i>Intermediate-Term Bond Median</i>								0.48	3.01	0.78		2.24		2.46		4.53					
<i>Intermediate-Term Bond Number of Funds</i>								1022	1022		993		940		905		795				
<b>Inflation-Linked Bond</b>																					
PIMCO Real Return Instl	PRRIX	9.58	11,551.00	0.58	0.45	26	0.00	0.48	2.07	0.58	24	0.25	34	0.22	19	4.65	3	5.94	01/29/97		
<i>BBgBarc US Treasury US TIPS TR USD</i>								0.45	1.30	(0.63)		0.63		0.27		4.27					
<i>Inflation-Protected Bond Median</i>								0.82	0.63	0.51	1.20	(0.32)		0.01		(0.13)		3.65			
<i>Inflation-Protected Bond Number of Funds</i>								243	243		241		234		197		153				
<b>Equity</b>																					
<b>Large Cap Blend</b>																					
Vanguard Institutional Index I	VINIX	16.58	228,905.67	0.04	0.04	2	0.00	2.05	11.56	17.86	42	9.59	9	14.60	18	7.18	18	9.68	07/31/90		
<i>S&amp;P 500 TR USD</i>								2.06	11.59	17.90		9.61		14.63		7.18					
TIAA-CREF Social Choice Eq Instl	TISCX	11.58	2,615.07	0.19	0.19	6	0.00	2.00	11.27	18.85	29	7.85	53	14.14	37	7.04	24	5.41	07/01/99		
<i>Russell 3000 TR USD</i>								1.89	10.99	18.51		9.10		14.58		7.26					
<i>Large Blend Median</i>								1.92	10.85	17.49		7.94		13.78		6.40					
<i>Large Blend Number of Funds</i>								1427	1427		1359		1287		1209		1059				
<b>Mid Cap Blend</b>																					
Vanguard Mid Cap Index I	VMCIX	19.17	86,739.60	0.05	0.05	1	0.00	1.74	11.05	17.25	48	8.09	13	14.79	11	7.51	29	9.91	05/21/98		
<i>Spliced Mid Cap Index *</i>								1.72	11.05	17.31		8.12		14.83		7.52					
<i>CRSP US Mid Cap TR USD</i>								1.72	11.05	17.31		8.12		14.79		7.47					
<i>Mid-Cap Blend Median</i>								1.17	1.04	0.99	7.08	16.95		6.03		13.52		6.36			
<i>Mid-Cap Blend Number of Funds</i>								450	450		429		395		369		312				
<b>Small Cap Blend</b>																					
Vanguard Small Cap Index Institutional	VSCIX	1.25	76,879.83	0.05	0.05	1	0.00	1.11	6.92	19.13	74	6.78	40	14.14	27	7.86	13	8.89	07/07/97		
<i>Spliced Small Cap Index **</i>								1.11	6.93	19.09		6.75		14.10		7.76					
<i>CRSP US Small Cap TR USD</i>								1.11	6.93	19.09		6.75		14.34		8.19					
<i>Small Blend Median</i>								1.32	1.17	0.74	3.78	21.04		6.30		13.25		6.14			
<i>Small Blend Number of Funds</i>								804	804		786		716		654		566				



# 2017 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(S)		
As of 7/31/2017	Mgr.	AUM	Gross	Net	Net	Rev	Recent Returns	Annualized Total Returns as of 6/30/2017										Since	Incep.		
Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Incep.	Date		
<b>Foreign Large Blend</b>																					
TIAA-CREF International Eq Idx Instl	TCIEX	11.92	10,336.61	0.06	0.06	2	0.00	2.74	17.95	20.06	37	1.39	42	8.82	24	1.25	35	8.07	10/01/02		
								MSCI EAFE NR USD	2.88	17.09	20.27		1.15		8.69		1.03				
								Foreign Large Blend Median	1.24	1.05			3.07	17.92	19.26		1.15		7.90		0.78
								Foreign Large Blend Number of Funds	760	760			724		646		621		478		
<b>Diversified Emerging Markets</b>																					
Vanguard Emerging Mkts Stock Idx Adm	VEMAX	8.92	76,766.51	0.14	0.14	1	0.00	5.37	20.85	18.86	65	0.64	52	3.36	62	1.58	47	5.44	06/23/06		
								Spliced Emerging Markets Index ***	5.44	20.41	19.39		0.60		3.55		1.71				
								FTSE EMs AC China A Inclusion NR USD	5.43	20.38	19.29		1.33		4.19		2.03				
								FTSE Emerging NR USD	5.79	21.22	20.19		1.07		3.94		2.02				
								MSCI EM NR USD	5.96	25.49	23.75		1.07		3.96		1.91				
								Diversified Emerging Mkts Median	1.72	1.40			5.32	25.21	21.66		0.82		4.16		1.63
								Diversified Emerging Mkts Number of Funds	812	812			785		663		518		268		
<b>Miscellaneous Sector</b>																					
TIAA Real Estate Account	QREARX	1.92	24,803.00	0.85	0.85		0.24	0.34	2.28	3.93		7.18		8.21		2.84		6.39	10/02/95		
<b>Lifecycle</b>																					
Vanguard Target Retirement Income Trust I				0.07	0.07		0.00	0.97	5.34	5.26		3.54		4.99		5.05		5.07	06/22/07		
								Vanguard Target Retirement Income Composite	1.00	5.32	5.38		3.63		5.10		5.02				
								Retirement Income Median	1.10	0.76			1.10	5.73	5.81		2.80		4.44		3.91
								Retirement Income Number of Funds	187	187			180		156		138		93		
Vanguard Target Retirement 2010 Trust I*				0.07	0.07		0.00	0.08	4.36	5.46		3.55		5.89		4.64		4.66	06/22/07		
								Vanguard Target Retirement 2010 Composite	0.03	4.31	5.58		3.66		6.01		4.59				
								Target Date 2000-2010 Median	0.97	0.70			1.28	6.68	7.45		3.49		6.05		4.11
								Target Date 2000-2010 Number of Funds	127	127			117		105		90		75		
Vanguard Target Retirement 2015 Trust I				0.07	0.07		0.00	1.27	7.17	8.17		4.30		7.37		4.96		4.96	06/28/07		
								Vanguard Target Retirement 2015 Composite	1.30	7.10	8.31		4.38		7.47		4.90				
								Target Date 2011-2015 Median	0.99	0.74			1.41	7.30	8.60		3.76		6.84		4.14
								Target Date 2011-2015 Number of Funds	141	141			131		106		93		51		



# 2017 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(S)
As of 7/31/2017	Mgr. Ticker	Tenure	AUM \$ Millions	Gross ER	Net ER	Net %ile	Rev Share	Recent Returns		Annualized Total Returns as of 6/30/2017								Since Incep.	Incep. Date
								1mo.	YTD	1 Year	%ile	3 Year	%ile	5 Year	%ile	10 Year	%ile		
<b>Vanguard Target Retirement 2020 Trust I</b>				0.07	0.07		0.00	1.55	8.70	10.34		4.94		8.50		5.16		5.17	06/22/07
<i>Vanguard Target Retirement 2020 Composite</i>								1.57	8.59	10.51		5.03		8.64		5.19			
<i>Target Date 2016-2020 Median</i>				1.04	0.80			1.45	7.87	9.06		3.79		7.01		4.01			
<i>Target Date 2016-2020 Number of Funds</i>				259	259						247		212		182		122		
<b>Vanguard Target Retirement 2025 Trust I</b>				0.07	0.07		0.00	1.73	9.74	11.98		5.28		9.28		5.16		5.16	06/28/07
<i>Vanguard Target Retirement 2025 Composite</i>								1.76	9.64	12.17		5.36		9.41		5.24			
<i>Target Date 2021-2025 Median</i>				1.06	0.79			1.70	9.29	11.22		4.27		8.15		4.36			
<i>Target Date 2021-2025 Number of Funds</i>				228	228						211		183		151		72		
<b>Vanguard Target Retirement 2030 Trust I</b>				0.07	0.07		0.00	1.87	10.65	13.51		5.53		10.01		5.17		5.17	06/28/07
<i>Vanguard Target Retirement 2030 Composite</i>								1.92	10.53	13.69		5.61		10.15		5.24			
<i>Target Date 2026-2030 Median</i>				1.09	0.83			1.86	10.34	12.84		4.70		8.79		4.18			
<i>Target Date 2026-2030 Number of Funds</i>				258	258						247		212		182		122		
<b>Vanguard Target Retirement 2035 Trust I</b>				0.07	0.07		0.00	2.05	11.57	15.03		5.76		10.73		5.31		5.31	06/28/07
<i>Vanguard Target Retirement 2035 Composite</i>								2.08	11.42	15.23		5.85		10.88		5.39			
<i>Target Date 2031-2035 Median</i>				1.09	0.80			2.06	11.37	14.64		5.03		9.52		4.54			
<i>Target Date 2031-2035 Number of Funds</i>				228	228						211		183		151		72		
<b>Vanguard Target Retirement 2040 Trust I</b>				0.07	0.07		0.00	2.21	12.48	16.59		5.96		11.22		5.57		5.57	06/28/07
<i>Vanguard Target Retirement 2040 Composite</i>								2.24	12.31	16.79		6.09		11.38		5.62			
<i>Target Date 2036-2040 Median</i>				1.12	0.87			2.13	11.96	15.56		5.18		9.94		4.43			
<i>Target Date 2036-2040 Number of Funds</i>				258	258						247		212		182		122		
<b>Vanguard Target Retirement 2045 Trust I</b>				0.07	0.07		0.00	2.29	12.84	17.08		6.08		11.30		5.58		5.57	06/28/07
<i>Vanguard Target Retirement 2045 Composite</i>								2.32	12.66	17.29		6.23		11.46		5.66			
<i>Target Date 2041-2045 Median</i>				1.15	0.81			2.22	12.36	16.23		5.40		10.28		4.69			
<i>Target Date 2041-2045 Number of Funds</i>				228	228						211		183		150		68		
<b>Vanguard Target Retirement 2050 Trust I</b>				0.07	0.07		0.00	2.27	12.81	17.07		6.07		11.31		5.63		5.63	02/29/08
<i>Vanguard Target Retirement 2050 Composite</i>								2.32	12.66	17.29		6.23		11.46		5.66			
<i>Target Date 2046-2050 Median</i>				1.25	0.88			2.26	12.45	16.36		5.41		10.46		4.50			
<i>Target Date 2046-2050 Number of Funds</i>				251	251						240		205		174		65		



# 2017 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(S)
As of 7/31/2017	Mgr. Ticker	Tenure	AUM \$ Millions	Gross ER	Net ER	Net %-ile	Rev Share	Recent Returns			Annualized Total Returns as of 6/30/2017						Since Incep.	Incep. Date	
								1mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile		
Vanguard Target Retirement 2055 Trust I				0.07	0.07		0.00	2.27	12.81	17.07		6.03		11.25				10.23	10/05/10
Vanguard Target Retirement 2055 Composite								2.32	12.66	17.29		6.23		11.46					
Target Date 2051-2055 Median				1.37	0.81			2.27	12.59	16.57		5.50		10.66					
Target Date 2051-2055 Number of Funds				226	226						209		170						
Vanguard Target Retirement 2060 Trust I				0.07	0.07		0.00	2.29	12.85	17.09		6.04		11.24				10.00	03/01/12
Vanguard Target Retirement 2060 Composite								2.32	12.66	17.29		6.23		11.46					
Target Date 2060+ Median				1.98	0.79			2.29	12.68	16.74		5.41		11.17					
Target Date 2060+ Number of Funds				183	183						139		16						

Source: Morningstar & TIAA-CREF

"Morningstar Analyst Assigned Benchmark"

Data for 1-month and YTD return as of 7/31/2017. All other data as of 6/30/2017.

**VA = Variable Annuity**

Since Incep. = Since Inception Incep. Date = Inception Date

Vanguard Index Information from available at <http://www.vanguard.com>

\* = S&P MidCap 400 Index through May 16, 2003; the MSCI US Mid Cap 450 Index through January 30, 2013; and the CRSP US Mid Cap Index thereafter

\*\* = Russell 2000 Index through May 16, 2003; the MSCI US Small Cap 1750 Index through January 30, 2013; and the CRSP US Small Cap Index thereafter

\*\*\* = Spliced Emerging Markets Index reflects performance of the Select Emerging Markets Index through August 23, 2006; the MSCI Emerging Markets Index through January 9, 2013; FTSE Emerging Transition Index through June 27, 2013; FTSE Emerging Index through November 1, 2015; FTSE Emerging Markets All Cap China A Transition Index through September 18, 2016; and FTSE Emerging Markets All Cap China A Inclusion Index thereafter.

\*\*\*\* = The TIAA Stable Value Inception Date represents the date that the plan's TIAA Stable Value record was initiated on TIAA-CREF's recordkeeping system which may be earlier than the date of first deposit to the contract.

"Since Inception" performance is calculated from this date.

\*\*\*\*\* = For definitions please visit [www.tiaa-cref.org/public/assetmanagement](http://www.tiaa-cref.org/public/assetmanagement)

Note: Rankings shown for returns are calculated by Morningstar. Rankings for expense ratio, Sharpe ratio and standard deviation are calculated by TIAA-CREF and may differ based on calculation methods

**Fee Disclosures: 1 The net expense ratio reflects total annual fund operating expenses excluding interest expense. If interest expense was included, returns would have been lower.**

2 Accumulations in mutual funds not managed by TIAA-CREF may be subject to administrative charges. These charges are subject to change. Please review current documents related to your plan.

\*\*\*\*Adjusted Total Return is based on the Account's Total Return published in the Account's historical financial statements dating back to inception. The components of the Account's financial statements upon which the Adjusted Total Return is based excludes certain cash and short term securities and expenses associated with the liquidity guarantee because the constituents of the NFI-ODCE do not have this unique product feature. See Appendix A for a full reconciliation of the historical calculation.

\*\*\*\*\*The returns from the equal-weighted NFI-ODCE are calculated by the National Council of Real Estate Investment Fiduciaries, net of fees.

\*\*\*\*\*The unlevered property level returns for the Account and the NPI are both calculated by the National Council of Real Estate Investment Fiduciaries. Only NPI properties held by open end funds are included in the comparison index.

Source: Vanguard Vanguard merged Vanguard Target Retirement 2010 Fund, Vanguard Institutional Target Retirement 2010 Fund, and each sleeve of the Vanguard Target Retirement 2010 Trusts into the Vanguard Target Retirement Income Fund, the Vanguard Institutional Target Retirement Income Fund, and each sleeve of the Vanguard Target Retirement Income Trusts, respectively.

. %-ile --> Percentile Ranking in Morningstar Category.

**The performance data quoted represents past performance and is no guarantee of future results. Your returns and the principal value of your investments will fluctuate so that your shares or accumulation units, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance quoted below. For performance current to the most recent month-end, visit the TIAACREF Website at [www.tiaa-cref.org](http://www.tiaa-cref.org), or call 877 518-9161.**

Annuity account options are available through annuity contracts issued by TIAA or CREF. These contracts are designed for retirement or other long-term goals, and offer a variety of income options, including lifetime income. Payments from the variable annuity accounts are not guaranteed and will rise or fall based on investment performance.

For the variable annuity accounts, we estimate expenses for the plan year based on projected expense and asset levels. Differences between estimated and actual expenses are adjusted quarterly and reflected in current investment results. Historically, the adjusting payments have resulted in both upward and downward adjustments.

Investing in non-investment grade securities presents special risks, including significantly higher interest-rate and credit risk.

Small-cap and mid-cap stocks may have limited marketability and may be subject to more abrupt or erratic market movements than large-cap stocks.

The risks associated with foreign investments are often magnified in emerging markets where there is greater potential for political, currency, and economic volatility.

Funds that invest in fixed-income securities are not guaranteed and are subject to interest-rate, inflation and credit risks.

Funds that invest in foreign securities are subject to special risks, including currency fluctuation and political and economic instability.

Real estate securities are subject to various risks, including fluctuations in property values, higher expenses or lower income than expected, and potential environmental problems and liability.



Any guarantees under annuities issued by TIAA are subject to TIAA's claims-paying ability. TIAA Stable Value is guaranteed insurance contract and not an investment for Federal Securities Law purposes.

Target Date Funds share the risks associated with the types of securities held by each of the underlying funds in which they invest. In addition to the fees and expenses associated with the Target Date Funds, there is exposure to the fees and expenses associated with the underlying mutual funds as well.

TIAA-CREF Individual & Institutional Services, LLC, Teachers Personal Investors Services, Inc., and Nuveen Securities, LLC, Members FINRA and SIPC, distribute securities products. Annuity contracts and certificates are issued by Teachers Insurance and Annuity Association of America (TIAA) and College Retirement Equities Fund (CREF), New York, NY. Each is solely responsible for its own financial condition and contractual obligations.

**Investment, insurance and annuity products are not FDIC insured, are not bank guaranteed, are not deposits, are not insured by any federal government agency, are not a condition to any banking service or activity, and may lose value.**

**You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877 518-9161 or log on to [tiaacref.org](http://tiaacref.org) for product and fund prospectuses that contains this and other information. Please read the prospectuses carefully before investing.**

Morningstar is an independent service that rates mutual funds and variable annuities, based on risk-adjusted returns. Although Morningstar data is gathered from reliable sources, neither Morningstar nor TIAA-CREF can guarantee its completeness and accuracy. Morningstar does not rate money market accounts, and the other TIAA-CREF mutual fund accounts are too new to be rated. Past performance does not guarantee future results. Accumulation net asset values and returns will vary.

For each fund/account with at least a three-year history, Morningstar calculates a Morningstar Rating™ based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a fund's/account's monthly performance (including the effects of sales charges, loads, and redemption fees), placing more emphasis on downward variations and rewarding consistent performance. Where applicable, Morningstar's performance rankings are based on linked performance that considers the differences in expense ratios, while actual performance data shown does not reflect such differences. The top 10 percent of funds/accounts in a category receive five stars, the next 22.5 percent receive four stars, and the next 35 percent receive three stars, the next 22.5 percent receive two stars and the bottom 10 percent receive one star. (Each share class is counted as a fraction of one fund/account within this scale and rated separately, which may cause slight variations in the distribution percentages.) Morningstar proprietary ratings on U.S.-domiciled funds/accounts reflect historical risk-adjusted performance, are subject to change every month. They are derived from a weighted average of the performance figures associated with its three-, five- and ten-year (if applicable) Morningstar Rating metrics. Please note, Morningstar now rates group variable annuities within the open-end mutual fund universe.

## **Prospectus Gross Expense Ratio**

The percentage of fund assets used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.

--The expense ratio for fund of funds is the aggregate expense ratio as defined as the sum of the wrap or sponsor fees plus the estimated weighted average of the underlying fund fees.

--Often referred to as the Annual Operating Expense, the Prospectus Gross Expense Ratio is collected annually from a fund's prospectus.

## **Prospectus Net Expense Ratio**

The percentage of fund assets, net of reimbursements, used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.

--The expense ratio for fund of funds is the aggregate expense ratio as defined as the sum of the wrap or sponsor fees plus the estimated weighted average of the underlying fund fees.

--Net reimbursements, the Prospectus Net Expense Ratio is collected annually from a fund's prospectus.

--TIAA-CREF, unless noted, does not charge additional fees for record keeping a fund. 12b-1, revenue share and admin fees are all included in the Prospectus fees.

-- Prospectus Net Expense Ratio % - ile rank is the percentile rank for the fund. The better the expense ratio (lower) the lower the ranking out of 100.

TIAA-CREF reported performance may differ from Morningstar source returns for the same option over the same time period. We would expect an occasional one to two basis point difference. Morningstar Direct calculates returns by one share owned by a hypothetical investor over the requested time period. So the return for one year is calculated using the same formula as one month. TIAA-CREF calculates returns by \$1,000 owned by hypothetical investor for one month then links returns for requested time period. Both set of returns include dividends and capital gains.

By communicating the information contained in this material, TIAA is not providing impartial investment advice or giving advice in a fiduciary capacity regarding any investment by, or other transaction of, the plan(s). TIAA is acting solely in a sales capacity with respect to an arms-length sale, purchase, loan, exchange or other transaction related to the investment of securities or other investment property.

Section XV.

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OPEB Trust



# Total Performance Summary

Report ID: IPM0005

Reporting Currency: USD

## TOTAL NET OF FEES

7/31/2017

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	1 Year	Annualized				ITD	Inception Date
							3 Years	5 Years	10 Years	ITD		
Mackay Shields OPEB	79,868,658.2	35.0	0.51	2.87	0.51	-0.39	2.61			2.02	5/1/2013	
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			<i>0.43</i>	<i>2.71</i>	<i>0.43</i>	<i>-0.51</i>	<i>2.71</i>			<i>2.07</i>	<i>5/1/2013</i>	
SSGA S&P 500 INDX	148,499,099.2	65.0	2.05	11.55	2.05	16.02	10.90	14.73		13.08	5/1/2011	
<i>S&amp;P 500 - Total Return Index</i>			<i>2.06</i>	<i>11.59</i>	<i>2.06</i>	<i>16.04</i>	<i>10.87</i>	<i>14.78</i>		<i>12.35</i>	<i>5/1/2011</i>	
<b>Total OPEB</b>	<b>228,367,757.4</b>	<b>100.0</b>	<b>1.51</b>	<b>8.53</b>	<b>1.51</b>	<b>10.14</b>	<b>8.05</b>	<b>9.44</b>		<b>9.13</b>	<b>5/1/2011</b>	
<i>OPEB Custom Blend</i>			<i>1.49</i>	<i>8.42</i>	<i>1.49</i>	<i>10.03</i>	<i>8.09</i>	<i>9.35</i>		<i>8.30</i>	<i>5/1/2011</i>	

END NOTES

7/31/2017

1 RI7GX0903OPE OPEB Custom Blend

35% Barclays Aggregate and 65% S&P 500



Total Performance Summary

Report ID: IPM0005

Reporting Currency: USD

TOTAL NET OF FEES

7/31/2017

Account Name Benchmark Name	Market Value	% of Total	YTD	Month	Cumulative			2016	2015	2014	Inception Date
					6/1/2017 - 6/30/2017	5/1/2017 - 5/31/2017					
Mackay Shields OPEB	79,868,658.2	35.0	2.87	0.51	-0.05	0.77	2.28	0.46	6.03	5/1/2013	
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			2.71	0.43	-0.10	0.77	2.65	0.55	5.97	5/1/2013	
SSGA S&P 500 INDX	148,499,099.2	65.0	11.55	2.05	0.62	1.40	11.99	1.46	13.63	5/1/2011	
<i>S&amp;P 500 - Total Return Index</i>			11.59	2.06	0.62	1.41	11.96	1.38	13.69	5/1/2011	
<b>Total OPEB</b>	<b>228,367,757.4</b>	<b>100.0</b>	<b>8.53</b>	<b>1.51</b>	<b>0.39</b>	<b>1.19</b>	<b>8.69</b>	<b>1.16</b>	<b>11.00</b>	<b>5/1/2011</b>	
<i>OPEB Custom Blend</i>			8.42	1.49	0.37	1.18	8.77	1.31	11.00	5/1/2011	

## END NOTES

7/31/2017

1	RI7G10000000	Total OPEB	YTD - Calendar Year to Date Month - Current Month Cumulative Months - Prior Month and Second Prior Month
2	RI7GX0903OPE	OPEB Custom Blend	2013, 2012, 2011 - Calendar Year 65% S&P 500 and 35% Barclays Aggregate