

**STATE OF RHODE ISLAND
INVESTMENT COMMISSION MEETING**

**DATA AT
December 31st, 2018**

**January 23rd, 2019
MEETING**

MEMBERS OF THE STATE INVESTMENT COMMISSION

Honorable Seth Magaziner, Chair

**Mr. Robert K. Benson
Mr. Erik Carleton
Mr. J. Michael Costello
Mr. Thomas P. Fay
Ms. Karen Hammond**

**Mr. Frank J. Karpinski
Ms. Sylvia Maxfield
Mr. Thomas Mullaney
Ms. Marcia Reback**

Section I.

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, January 23rd, 2019 at 9:00 a.m. **in the Executive Conference Room, Department of Administration, 1 Capitol Hill, Providence.**

AGENDA

- Chairperson Call to Order
- Membership Roll Call
- Approval of Minutes ¹
 - State Investment Commission Meeting held December 12th, 2018
- Private Credit Co-Investment Recommendation, Zephyrus Aviation Partnership ¹
 - Mark Perez & Jesse Watson, Virgo Investment Group
 - Tom Lynch, Cliffwater
- 2019 Investment Outlook – Themes and Opportunities, NEPC
 - Doug Moseley & Will Forde, NEPC
- 529 Investment Consultant Recommendation ¹
 - Lisa Churchville, 529 RFP Search Committee
- Legal Counsel Report
- Chief Investment Officer Report
- Treasurer's General Comments

¹ Commission members may be asked to vote on this item.

POSTED ON January 17, 2019

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter, please contact Justin Maistrow at (401) 574-9246 twenty-four hours in advance of the scheduled meeting.

Section II.

Approval of Minutes



State Investment Commission

Monthly Meeting Minutes

Wednesday, December 12th, 2018

9:00 a.m.

Executive Conference Room, Department of Administration

The Monthly Meeting of the State Investment Commission (SIC) was called to order at 9:07 AM, Wednesday, December 12th, 2018 in the Executive Conference Room, Department of Administration.

I. Roll Call of Members

The following members were present: Mr. Michael Costello, Mr. Thomas Fay, Ms. Sylvia Maxfield, Mr. Thomas Mullaney, Ms. Marcia Reback, Ms. Karen Hammond, Mr. Frank Karpinski, Mr. Erik Carleton and Treasurer Seth Magaziner.

Also in attendance: Allan Peterson, Bernard Buonanno & Chris Pierce, Nautic Partners; Thomas Lynch, Cliffwater; Bill Nelson & Nelson Hioe, Raith Real Estate; David Glickman & Samantha Spencer, PCA; Tiffany Spudich & Peter Harvey, Capital Cities; Jacob Borbidge, Invesco; Kim Shockley, Treasury; Doug Moseley, NEPC; Mr. Alec Stais, Chief Investment Officer; Ms. Sally Dowling & Ms. Nicole Verdi, Adler, Pollock & Sheehan, legal counsel; and other members of the Treasurer's staff.

Treasurer Magaziner called the meeting to order at 9:07 AM.

II. Approval of Minutes

On a motion by Ms. Karen Hammond and seconded by Mr. Thomas Fay, it was unanimously **VOTED: to approve the draft minutes of the October 24th, 2018 meeting of the State Investment Commission.**

III. Nautic Partners IX & Recommendation

Mr. Bernard Buonanno, Mr. Allan Peterson, and Mr. Chris Pierce, Nautic Partners, gave an overview of the firm. They explained that Nautic seeks opportunities to improve businesses in the Healthcare, Industrial, and Service sectors. The group remarked on Nautic's 30-year track record as a firm as well as the performance of funds in which the State of Rhode Island has previously invested. They discussed Nautic's staff resources, internal infrastructure, and their approach to the healthcare space.

The Board asked questions.

Mr. Thomas Lynch stated that he has observed both consistency and positive development during his interactions with the firm.

On a motion by Mr. Thomas Fay which was seconded by Ms. Karen Hammond, it was unanimously **VOTED: that the Rhode Island Employees Retirement Systems Pooled Trust make a commitment up to \$50 million in Nautic Partners IX, subject to legal and investment staff review.**

IV. Raith Real Estate II Investment Recommendation

Mr. Bill Nelson and Mr. Nelson Hioe, outlined Raith Real Estate's approach to investing in commercial real estate. They outlined the team's experience and discussed Raith's approach to deploying capital and offered examples of the firm's previous investments. Mr. David Glickman and Ms. Samantha Spencer, PCA, further discussed the firm's capabilities.

The Board asked questions.

On a motion by Ms. Marcia Reback which was seconded by Mr. Michael Costello, it was unanimously **VOTED: that the Rhode Island Employees Retirement Systems Pooled Trust make a commitment up to \$35 million in Raith Real Estate Partners II, subject to legal and investment staff review.**

V. CollegeBound 529 Update & Recommendation

Ms. Tiffany Spudich, Capital Cities, proceeded to give an update on the performance of the CollegeBound 529 portfolio. Ms. Spudich noted it is one of Capital Cities's objectives to improve risk/return ratios of the age-based portfolios; strengthen capital preservation vehicles; and outpace college inflation costs. She recommended the SIC reduce exposure to active management within equities in favor of factor-weighted index funds.

Mr. Jacob Borbidge, portfolio manager at Invesco, explained the recommendation to rebalance and adjust the 529 plan to reflect recent capital market assumptions, offer lower fees to account owners, reduce manager concentration, and more closely track market performance.

Ms. Spudich and Mr. Borbidge recommended the SIC reduce by half the exposure to Invesco Diversified Dividend Fund and Invesco Global Growth Fund in the Age-Based and Target Risk Portfolios; introduce Invesco S&P 500 Pure Growth ETF, Invesco S&P 500 Low Volatility ETF, Invesco S&P Midcap Low Volatility ETF, and Invesco S&P International Developed Low Volatility ETF to the Age-Based and Target Risk Portfolios; and rebalance the aforementioned portfolios to utilize the changes to the investment lineup and incorporate updated capital market assumptions.

The Board asked questions.

On a motion by Ms. Sylvia Maxfield which was seconded by Ms. Marcia Reback, it was unanimously **VOTED: that the Rhode Island Employees Retirement Systems Pooled Trust adopt the recommended changes to rebalance the CollegeBound 529 portfolio, subject to legal and investment staff review.**

VI. Voya 457 Target Date Adjustment

Ms. Kim Shockley, noted that the current target-date fund offered by Voya utilizes 10-year increments, while the State's other 457 plans offer target-date funds with 5-year intervals. Ms. Shockley recommended that Voya offer 5-year target date increments, giving all 457 plan participants the same options for a smooth glidepath as they save.

The Board asked questions.

On a motion by Mr. Michael Costello which was seconded by Ms. Marcia Reback, it was unanimously **VOTED: that the Rhode Island Employees Retirement Systems Pooled Trust adopt the recommended changes to incorporate the 5-year incremented Voya Target Date Funds, subject to legal and investment staff review.**

VII. REIT Asset Class Overview

Mr. Doug Moseley, NEPC, discussed the history and structure of Real Estate Investment Trusts. Mr. Moseley explained the role of REITs in the Total Plan's Income Class. Mr. Moseley explained that REITs can provide strong risk-adjusted returns and income to help manage the Total Plan's cashflows.

The Board asked questions.

VIII. Legal Counsel Report

There was no legal counsel report.

IX. Chief Investment Officer Report

Mr. Alec Stais discussed the Plan's FYTD returns, highlighting challenges faced in public markets. Mr. Stais noted strong long-term performance relative to benchmarks. Mr. Stais also noted the Total Plan portfolio is well diversified and performing as expected. Furthermore, Mr. Stais noted the Plan's improving rank relative to its peers.

The Board asked questions.

X. Treasurer's General Comments

Treasurer Magaziner noted the Total Plan's CYTD performance outperformed most of its peers. Treasurer Magaziner asked if there were any further comments or questions and thanked the Board and Staff.

On a motion by Ms. Sylvia Maxfield and seconded by Mr. Thomas Fay, it was unanimously **VOTED: to adjourn the meeting at 11:52 AM.**

Respectfully submitted,

**Seth Magaziner,
General Treasurer**

Section III.

Staff Summary



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

Seth Magaziner

General Treasurer

January 16, 2019

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 December 31, 2018.

Employees' Retirement System of Rhode Island
Composite Reporting Investment Valuation
December 31, 2018

Asset Class	Base Market Value
Grand Total	7,810,624,718
CASH EQUIVALENT*	439,637,352
EQUITY HEDGE FUNDS**	257,891,606
GLOBAL PUBLIC EQUITY	3,360,284,009
CREDIT	278,877,590
INFLATION-LINKED BDS	188,827,479
PRIVATE EQUITY**	676,634,358
REAL ESTATE**	517,265,321
REAL RET HEDGE FUNDS**	289,572,313
INFRASTRUCTURE**	277,622,761
US TRADITIONAL FIXED	908,002,412
CPC PROGRAM	616,009,517

Plan Allocations	%	Base Market Value
Grand Total	100.00%	7,810,624,718
STATE EMP RET PLAN	74.39%	5,810,032,828
MUNI EMP RET PLAN	18.93%	1,478,442,127
TEACHER'S SURVIVOR BENEFIT	3.98%	310,482,787
STATE POLICE RET PL	1.70%	133,045,947
JUDICIAL RET PLAN	0.90%	70,277,228
NON-CONTRIB JUD RET	0.01%	810,695
NON-CONT ST POL RET	0.10%	7,533,106

* 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 Pizzo
Investment Accounting Manager

Portfolio Highlights

December 2018

The Plan returned -2.88% during the month of December, outperforming the 60/40 benchmark's return of -3.49%. The Total Plan benchmark returned -2.06%. The Plan's Total Growth allocation return declined 5.84% on the month due to equities selling off. The total portfolio decreased by approximately \$283.7 million as the investment portfolio decreased by \$241.0 million and \$42.7 million of transfers were made to meet pension payroll in excess of pension contributions.

Fiscal year-to-date through December, the portfolio decreased 3.40% net of fees, beating the 60% global equity/40% fixed income benchmark return of -4.73%. Over this period, the total portfolio value has decreased by \$488.5 million, with net investment losses of \$275.3 million and \$213.2 million worth of transfers to meet pension payroll.

Calendar year-to-date the portfolio's -2.69% net return outperformed the 60/40 return of -5.52%. Over this period, the total portfolio value has decreased by \$610.3 million, with net investment losses of \$214.9 million and \$395.4 million worth of transfers to meet pension payroll.

Over a 3-year time frame, the ERSRI portfolio outperformed, earning an annualized return of 6.14% net of fees versus the plan benchmark of 6.12% and the 60/40 portfolio which earned 4.92%. Over a 5-year time frame, the ERSRI portfolio earned an annualized return of 4.50% net of fees, outperforming the 60/40 benchmark return of 3.72%.

Section IV.

Asset Allocation

Asset Summary

Balance Date: 12/31/2018



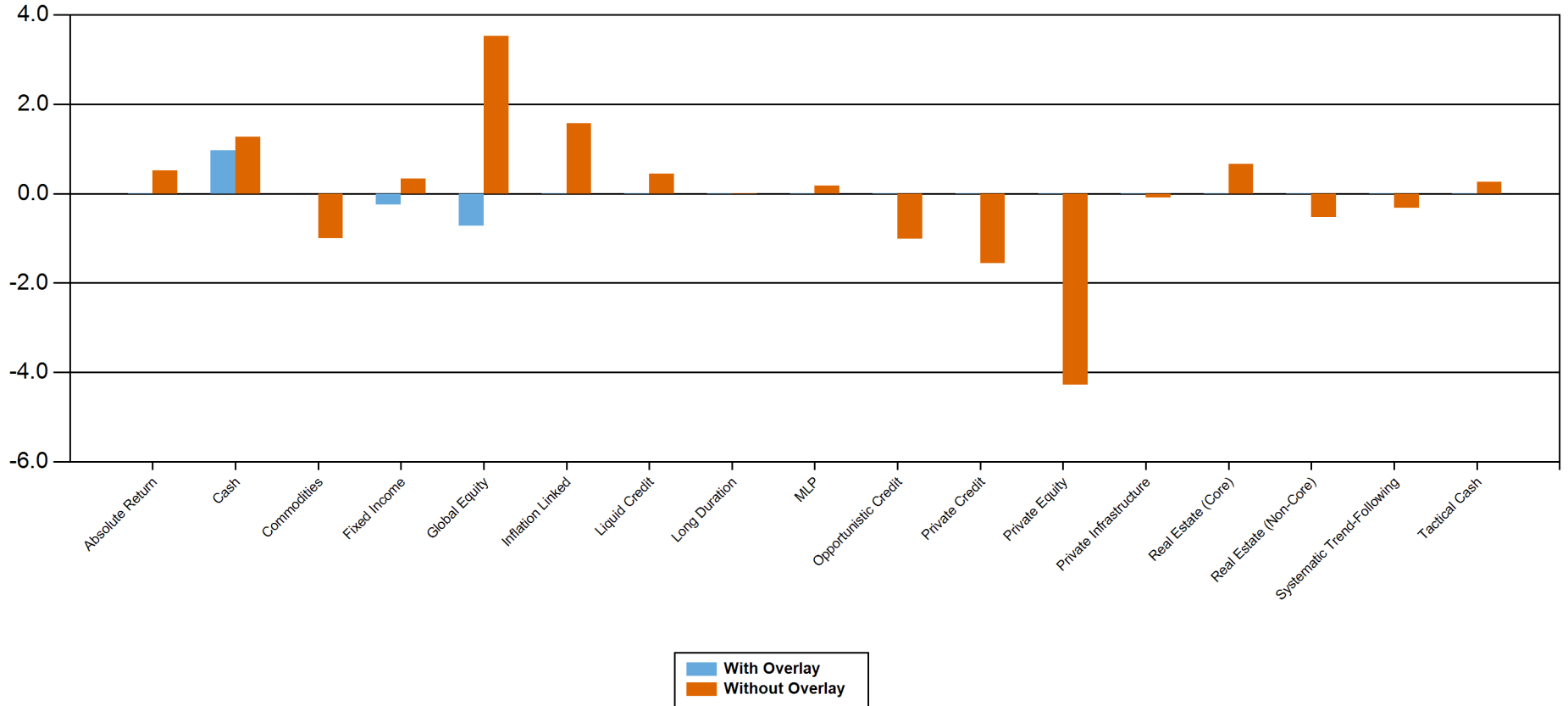
<u>Asset Class</u>	<u>Physical Exposure</u>		<u>Synthetic Exposure</u>		<u>Net Position</u>		<u>Overlay Target</u>		<u>Policy Target</u>	
Total Market Value	7,782.8	100.0 %	0.0	0.0 %	7,782.8	100.0 %	7,782.9	100.0 %	7,782.9	100.00 %
Cash	98.5	1.3 %	-20.9	-0.3 %	77.6	1.0 %	2.5	0.0 %	0.0	0.00 %
Cash	98.5	1.3 %	-20.9	-0.3 %	77.6	1.0 %	2.5	0.0 %	0.0	0.00 %
Equity	3,911.1	50.3 %	70.7	0.9 %	3,981.9	51.2 %	4,038.2	51.9 %	3,969.3	51.00 %
Global Equity	3,388.0	43.5 %	70.7	0.9 %	3,458.7	44.4 %	3,515.1	45.2 %	3,113.2	40.00 %
Private Equity	523.1	6.7 %	0.0	0.0 %	523.1	6.7 %	523.1	6.7 %	856.1	11.00 %
Fixed	1,852.1	23.8 %	-49.8	-0.6 %	1,802.3	23.2 %	1,821.1	23.4 %	1,790.1	23.00 %
Fixed Income	920.8	11.8 %	-49.8	-0.6 %	871.1	11.2 %	889.9	11.4 %	895.0	11.50 %
Inflation Linked	200.4	2.6 %	0.0	0.0 %	200.4	2.6 %	200.4	2.6 %	77.8	1.00 %
Liquid Credit	307.0	3.9 %	0.0	0.0 %	307.0	3.9 %	307.0	3.9 %	272.4	3.50 %
Long Duration	311.7	4.0 %	0.0	0.0 %	311.7	4.0 %	311.7	4.0 %	311.3	4.00 %
Private Credit	112.2	1.4 %	0.0	0.0 %	112.2	1.4 %	112.2	1.4 %	233.5	3.00 %
Other	1,921.1	24.7 %	0.0	0.0 %	1,921.1	24.7 %	1,921.1	24.7 %	2,023.6	26.00 %
Absolute Return	546.1	7.0 %	0.0	0.0 %	546.1	7.0 %	546.1	7.0 %	505.9	6.50 %
Commodities	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	77.8	1.00 %
MLP	130.7	1.7 %	0.0	0.0 %	130.7	1.7 %	130.7	1.7 %	116.7	1.50 %
Opportunistic Credit	38.2	0.5 %	0.0	0.0 %	38.2	0.5 %	38.2	0.5 %	116.7	1.50 %
Private Infrastructure	148.8	1.9 %	0.0	0.0 %	148.8	1.9 %	148.8	1.9 %	155.7	2.00 %
Real Estate (Core)	363.3	4.7 %	0.0	0.0 %	363.3	4.7 %	363.3	4.7 %	311.3	4.00 %
Real Estate (Non-Core)	154.0	2.0 %	0.0	0.0 %	154.0	2.0 %	154.0	2.0 %	194.6	2.50 %
Systematic Trend-Following	286.4	3.7 %	0.0	0.0 %	286.4	3.7 %	286.4	3.7 %	311.3	4.00 %
Tactical Cash	253.6	3.3 %	0.0	0.0 %	253.6	3.3 %	253.6	3.3 %	233.5	3.00 %

Asset Summary

Balance Date: 12/31/2018



Percent Deviation from Overlay Target



Total Absolute Notional Value: 120.5 (USD)

Asset Summary

Balance Date: 12/31/2018



<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>	
Total Assets	7,782.9	100.0 %	3,911.1	50.3 %	1,852.1	23.8 %	1,921.1	24.7 %	98.5	1.3 %
Cash	98.6	1.3 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	98.5	1.3 %
Cash Acct (Pooled Trust)	88.1	1.1 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	88.0	1.1 %
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	10.4	0.1 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	10.4	0.1 %
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 %
Equity	3,911.2	50.3 %	3,911.1	50.3 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Global Equity	3,388.1	43.5 %	3,388.0	43.5 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Global Equity Transition	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
QVM Tilt	1,120.5	14.4 %	1,120.5	14.4 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Rhode Island Transition Acct	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Shott Capital	0.3	0.0 %	0.3	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA Emerging Mkts	397.7	5.1 %	397.7	5.1 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA MSCI Canada	56.3	0.7 %	56.3	0.7 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA MSCI EAFE	627.4	8.1 %	627.4	8.1 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA Russell 3000	1,185.6	15.2 %	1,185.6	15.2 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Private Equity	523.1	6.7 %	523.1	6.7 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Private Equity	523.1	6.7 %	523.1	6.7 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Fixed	1,852.1	23.8 %	0.0	0.0 %	1,852.1	23.8 %	0.0	0.0 %	0.0	0.0 %
Fixed Income	920.8	11.8 %	0.0	0.0 %	920.8	11.8 %	0.0	0.0 %	0.0	0.0 %
MacKay Shields Core	452.0	5.8 %	0.0	0.0 %	452.0	5.8 %	0.0	0.0 %	0.0	0.0 %
Pyramis Core	468.9	6.0 %	0.0	0.0 %	468.9	6.0 %	0.0	0.0 %	0.0	0.0 %
Inflation Linked	200.4	2.6 %	0.0	0.0 %	200.4	2.6 %	0.0	0.0 %	0.0	0.0 %
Brown Brothers Harriman-GILBS	200.4	2.6 %	0.0	0.0 %	200.4	2.6 %	0.0	0.0 %	0.0	0.0 %
Liquid Credit	307.0	3.9 %	0.0	0.0 %	307.0	3.9 %	0.0	0.0 %	0.0	0.0 %
Loomis	150.7	1.9 %	0.0	0.0 %	150.7	1.9 %	0.0	0.0 %	0.0	0.0 %
PIMCO	150.7	1.9 %	0.0	0.0 %	150.7	1.9 %	0.0	0.0 %	0.0	0.0 %
WAMCO	5.6	0.1 %	0.0	0.0 %	5.6	0.1 %	0.0	0.0 %	0.0	0.0 %
Long Duration	311.7	4.0 %	0.0	0.0 %	311.7	4.0 %	0.0	0.0 %	0.0	0.0 %
Mackay Long Duration	155.8	2.0 %	0.0	0.0 %	155.8	2.0 %	0.0	0.0 %	0.0	0.0 %
WAMCO Long Duration	155.9	2.0 %	0.0	0.0 %	155.9	2.0 %	0.0	0.0 %	0.0	0.0 %
Private Credit	112.2	1.4 %	0.0	0.0 %	112.2	1.4 %	0.0	0.0 %	0.0	0.0 %
Private Credit	112.2	1.4 %	0.0	0.0 %	112.2	1.4 %	0.0	0.0 %	0.0	0.0 %
Other	1,921.1	24.7 %	0.0	0.0 %	0.0	0.0 %	1,921.1	24.7 %	0.0	0.0 %
Tactical Cash	253.6	3.3 %	0.0	0.0 %	0.0	0.0 %	253.6	3.3 %	0.0	0.0 %
ERSRI SMA CASH	253.6	3.3 %	0.0	0.0 %	0.0	0.0 %	253.6	3.3 %	0.0	0.0 %
Absolute Return	546.1	7.0 %	0.0	0.0 %	0.0	0.0 %	546.1	7.0 %	0.0	0.0 %
Capula Global Relative Value	73.7	0.9 %	0.0	0.0 %	0.0	0.0 %	73.7	0.9 %	0.0	0.0 %
Claren Road Cr Fund	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
D.E. Shaw Composite Fund	113.7	1.5 %	0.0	0.0 %	0.0	0.0 %	113.7	1.5 %	0.0	0.0 %
Davidson Kempner	88.5	1.1 %	0.0	0.0 %	0.0	0.0 %	88.5	1.1 %	0.0	0.0 %

Asset Summary

Balance Date: 12/31/2018

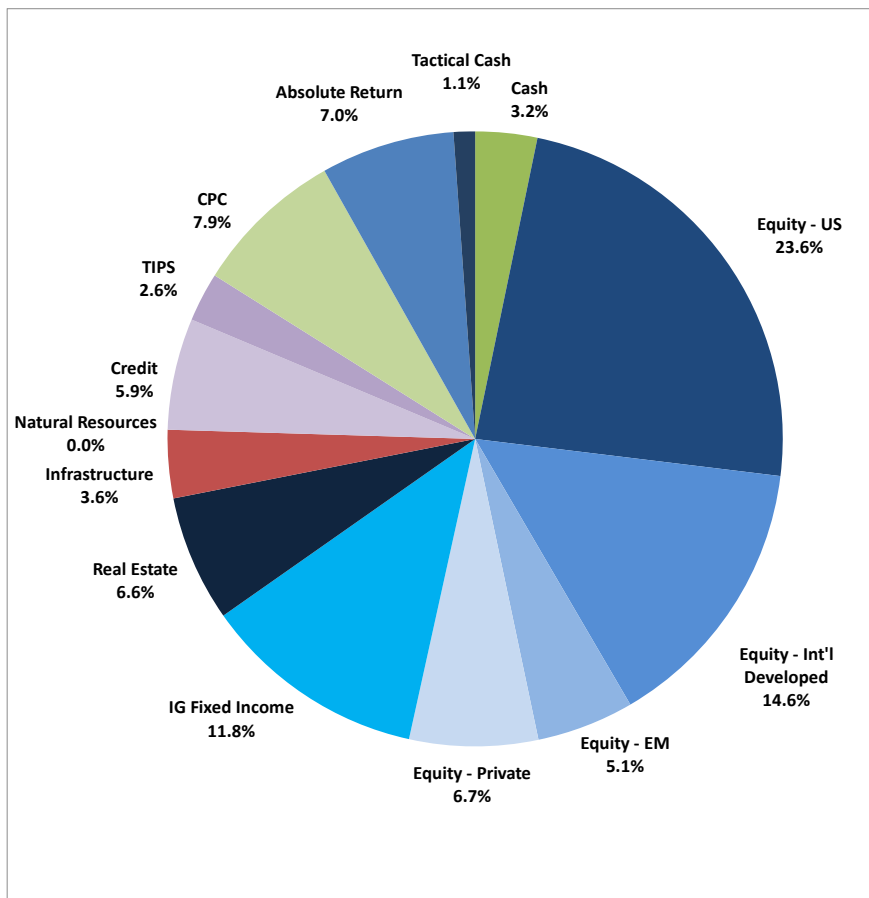


<u>Manager</u>	<u>Total Market Value</u>		<u>Equity Market Value</u>		<u>Fixed Market Value</u>		<u>Other Market Value</u>		<u>Cash Balance</u>	
Elliot Associates, LP	108.1	1.4 %	0.0	0.0 %	0.0	0.0 %	108.1	1.4 %	0.0	0.0 %
Graham Global	60.8	0.8 %	0.0	0.0 %	0.0	0.0 %	60.8	0.8 %	0.0	0.0 %
Indus Asia Pacific Fund	0.3	0.0 %	0.0	0.0 %	0.0	0.0 %	0.3	0.0 %	0.0	0.0 %
Luxor Capital Partners	1.0	0.0 %	0.0	0.0 %	0.0	0.0 %	1.0	0.0 %	0.0	0.0 %
Viking Global Equities	61.6	0.8 %	0.0	0.0 %	0.0	0.0 %	61.6	0.8 %	0.0	0.0 %
Winton Futures Ltd Fund	38.4	0.5 %	0.0	0.0 %	0.0	0.0 %	38.4	0.5 %	0.0	0.0 %
MLP	130.7	1.7 %	0.0	0.0 %	0.0	0.0 %	130.7	1.7 %	0.0	0.0 %
Harvest Fund Advisor	130.7	1.7 %	0.0	0.0 %	0.0	0.0 %	130.7	1.7 %	0.0	0.0 %
Opportunistic Credit	38.2	0.5 %	0.0	0.0 %	0.0	0.0 %	38.2	0.5 %	0.0	0.0 %
Opportunistic Private Credit	38.2	0.5 %	0.0	0.0 %	0.0	0.0 %	38.2	0.5 %	0.0	0.0 %
Private Infrastructure	148.8	1.9 %	0.0	0.0 %	0.0	0.0 %	148.8	1.9 %	0.0	0.0 %
Priv Listed Infrastructure	148.8	1.9 %	0.0	0.0 %	0.0	0.0 %	148.8	1.9 %	0.0	0.0 %
Real Estate (Core)	363.3	4.7 %	0.0	0.0 %	0.0	0.0 %	363.3	4.7 %	0.0	0.0 %
Core Real Estate	363.3	4.7 %	0.0	0.0 %	0.0	0.0 %	363.3	4.7 %	0.0	0.0 %
Real Estate (Non-Core)	154.0	2.0 %	0.0	0.0 %	0.0	0.0 %	154.0	2.0 %	0.0	0.0 %
Non-Core Real Estate	154.0	2.0 %	0.0	0.0 %	0.0	0.0 %	154.0	2.0 %	0.0	0.0 %
Systematic Trend-Following	286.4	3.7 %	0.0	0.0 %	0.0	0.0 %	286.4	3.7 %	0.0	0.0 %
CPC AP LLC	93.2	1.2 %	0.0	0.0 %	0.0	0.0 %	93.2	1.2 %	0.0	0.0 %
CPC CB LLC	94.3	1.2 %	0.0	0.0 %	0.0	0.0 %	94.3	1.2 %	0.0	0.0 %
CPC QIS LLC	98.9	1.3 %	0.0	0.0 %	0.0	0.0 %	98.9	1.3 %	0.0	0.0 %

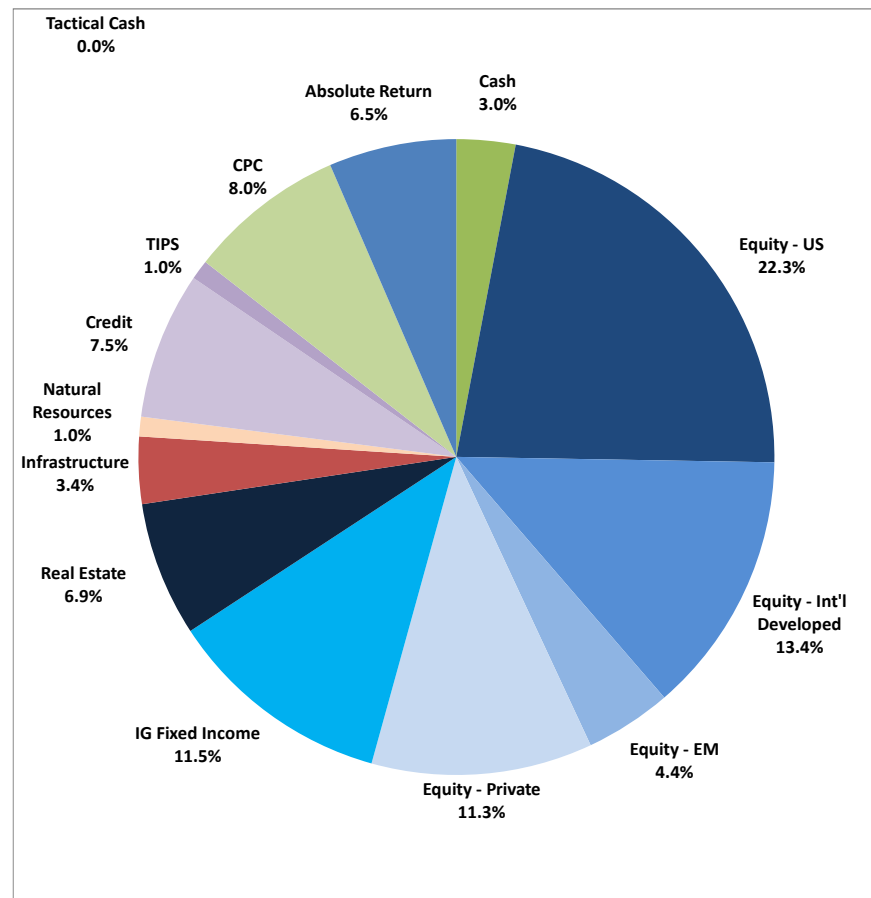
ERSRI Portfolio

%% - as of December 31, 2018

Actual Allocation

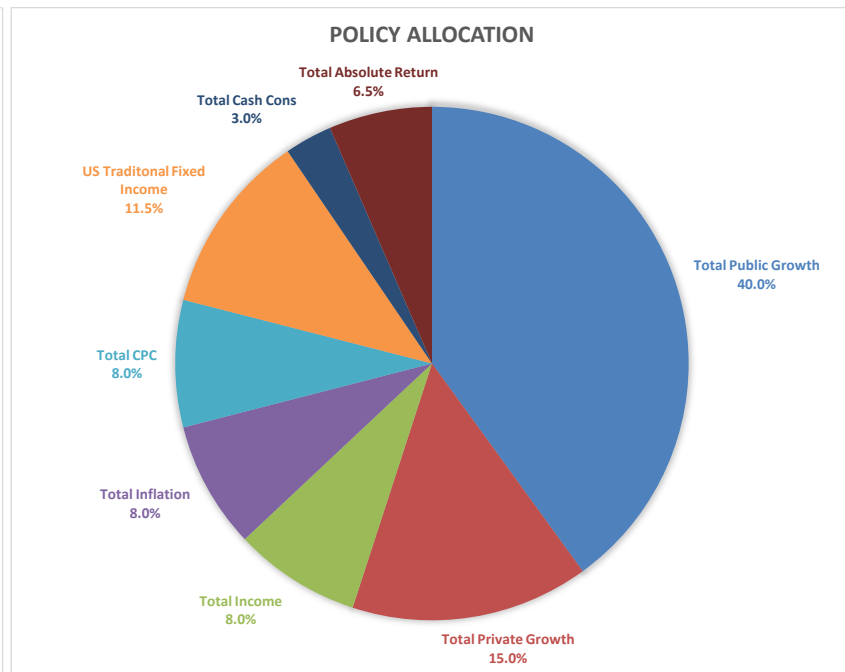
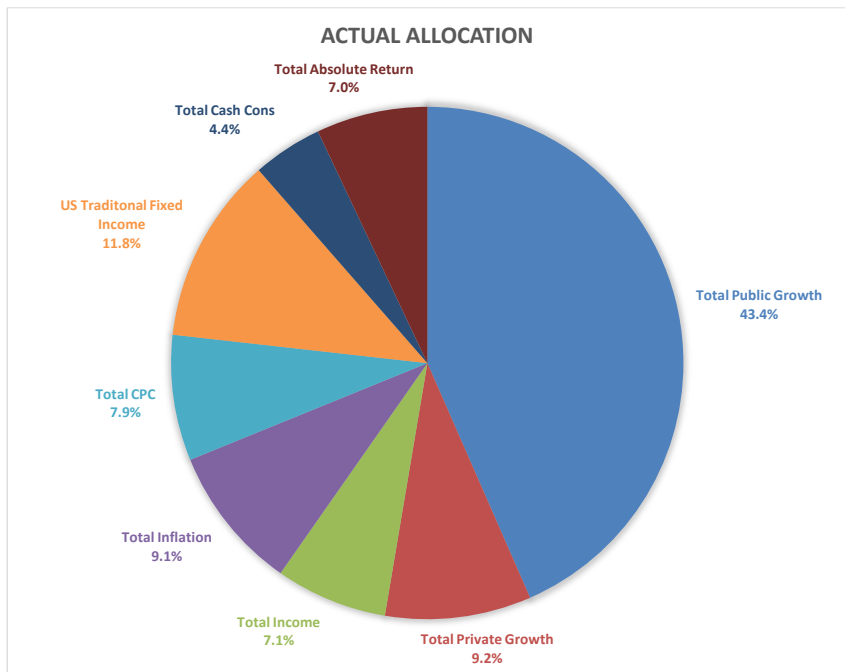


Policy Allocation



ERSRI Portfolio

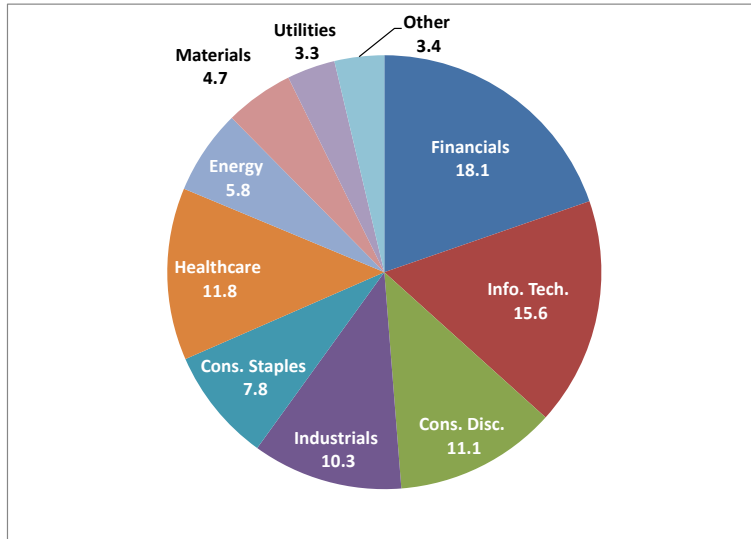
%% - as of December 31, 2018



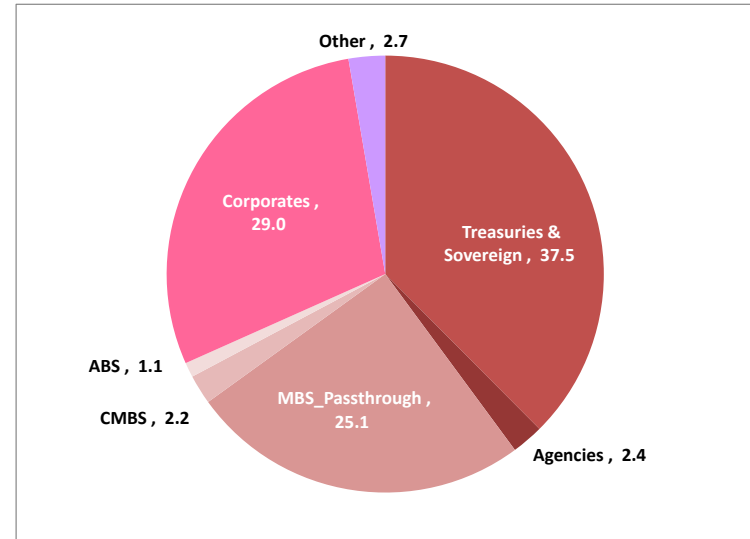
ERSRI Asset Allocation Public-Asset Portfolios

%%% - as of December 31, 2018

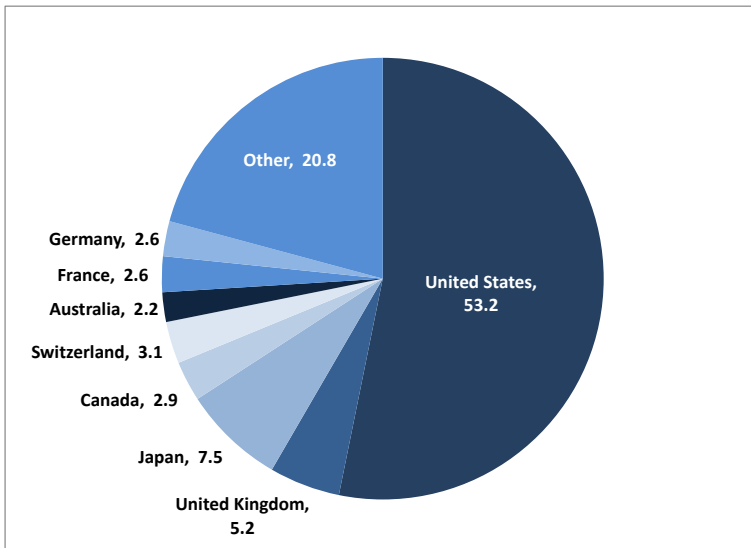
Global Public Equity - by Industry Sector



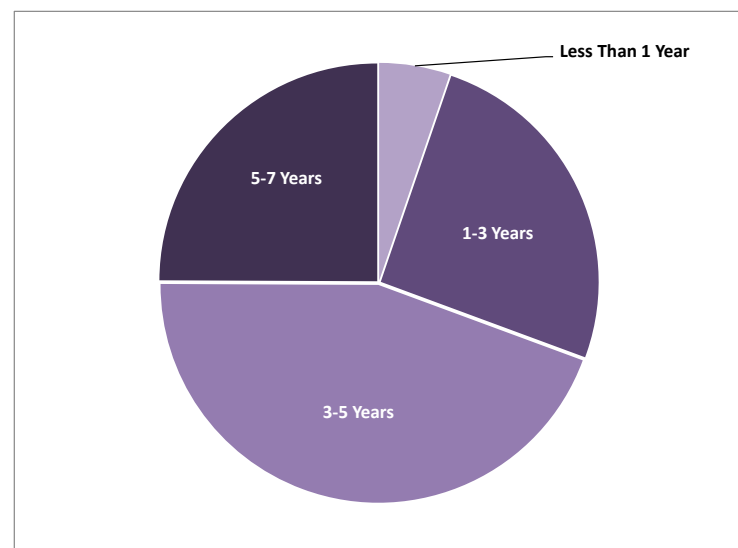
Core Fixed Income - by Type



Global Public Equity - by Geography



Inflation-Linked Bonds - by Duration



ERSRI Asset Allocation Tracking

Functional Bucket	Aggregate Asset Class	Aggregate Allocation Weight	Asset Class	(a) Asset Allocation	(b) Actual exposure as of 12/31/18	(b) - (a)
GROWTH	Global Equity	40.0%	US Equity	21.8%	23.6%	1.9%
			International Developed Equity	13.5%	14.6%	1.1%
			EM Equity	4.7%	5.1%	0.4%
	Private Growth	15.0%	PE	11.25%	6.7%	-4.5%
			Non-core RE	2.25%	2.0%	-0.3%
			Opp Private Credit	1.5%	0.5%	-1.0%
INCOME	Income	8.0%	HY Infra	1.0%	1.7%	0.7%
			REITs	1.0%	0.0%	-1.0%
			Liquid Credit	2.8%	3.9%	1.1%
			Private Credit	3.2%	1.4%	-1.8%
STABILITY	CPC	8.0%	Treasury Duration	4.0%	4.0%	0.0%
			Systematic Trend	4.0%	3.9%	-0.1%
	Inflation Protection	8.0%	Core RE	3.6%	4.7%	1.1%
			Private Infra	2.4%	1.9%	-0.5%
			TIPS	1.0%	2.6%	1.6%
			Nat' Resources	1.0%	0.0%	-1.0%
	Volatility Protection	21.0%	IG Fixed Income	11.5%	11.8%	0.3%
			Absolute Return	6.5%	7.0%	0.5%
			Cash	3.0%	3.2%	0.2%
OTHER	Short-term Tactical	n/a	ST Tactical Cash	0.0%	1.1%	1.1%
		n/a	Russell Overlay	0.0%	0.1%	0.1%
TOTAL	Total	100.0%		100.0%	100.0%	0.0%

Section V.

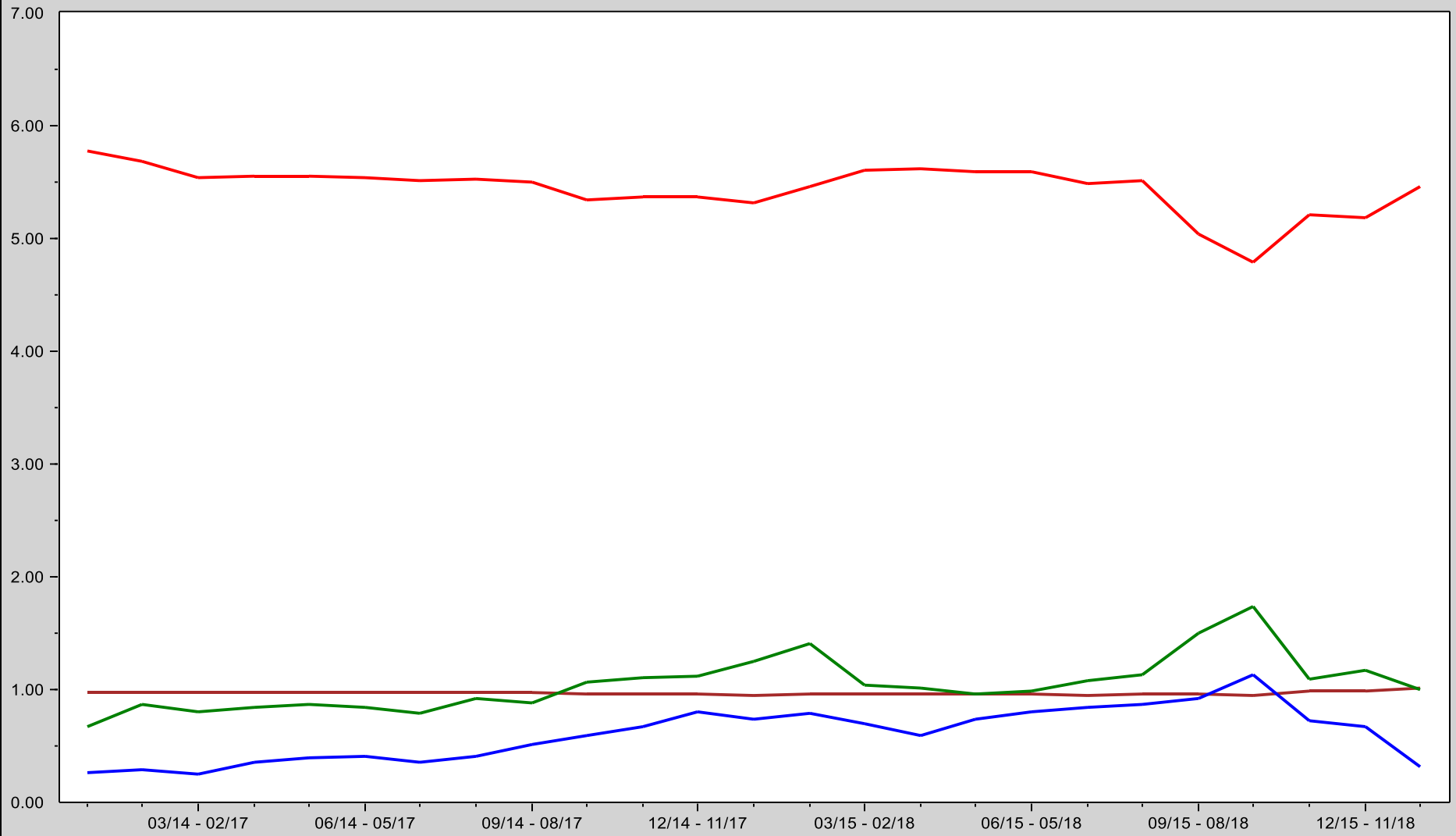
Risk Overview

Historical Risk - Three Year Rolling Periods

TOTAL PLAN

5 Years Ending December 31, 2018

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 December 31, 2018

	Annualized Return	Ann Std Dev	Beta (ACWI)	Beta (BC AGG)	Beta (GSCI)	Beta (CPI)
US Public Equity	9.03	11.15	0.99	-0.65	0.29	2.46
Non-US Public Equity	4.94	11.36	1.01	0.23	0.24	2.16
Equity Hedge Funds	3.66	3.52	0.16	-0.41	0.07	0.71
TOTAL PRIVATE EQUITY	14.27	3.64	0.08	0.23	-0.02	-0.31
Traditional Fixed Income	2.19	2.76	0.00	0.97	-0.03	-0.11
TOTAL REAL ESTATE	10.05	2.31	0.02	0.09	-0.01	0.25
Real Return Hedge Funds	5.71	2.36	-0.01	-0.31	0.04	0.67
Inflation-Linked Bonds	1.79	2.30	0.01	0.67	-0.00	0.37
Cash	1.35	0.24	0.01	0.01	0.01	0.10
Russell Overlay Fd	0.01	0.07	0.00	-0.00	0.00	0.09
TOTAL PLAN	6.14	5.48	0.52	0.03	0.15	1.20

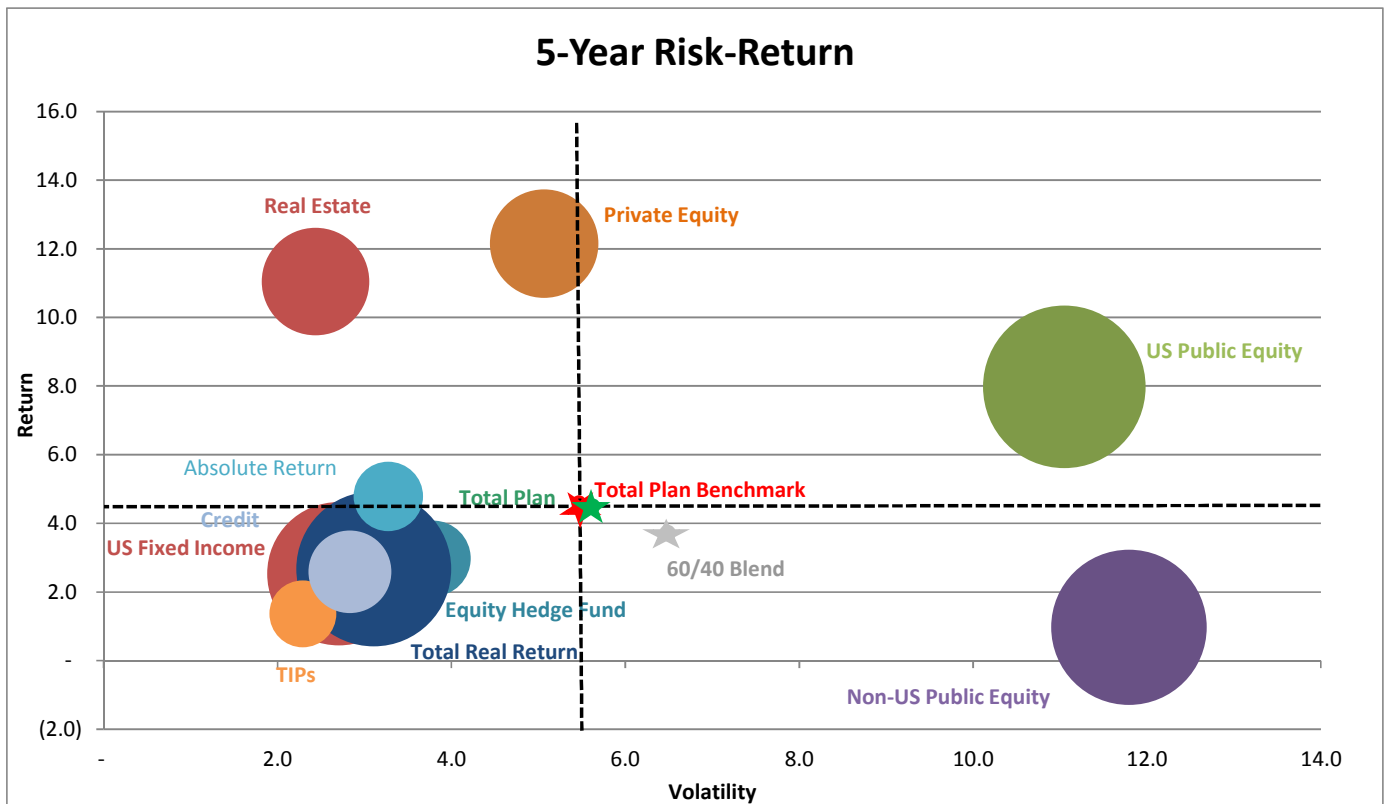
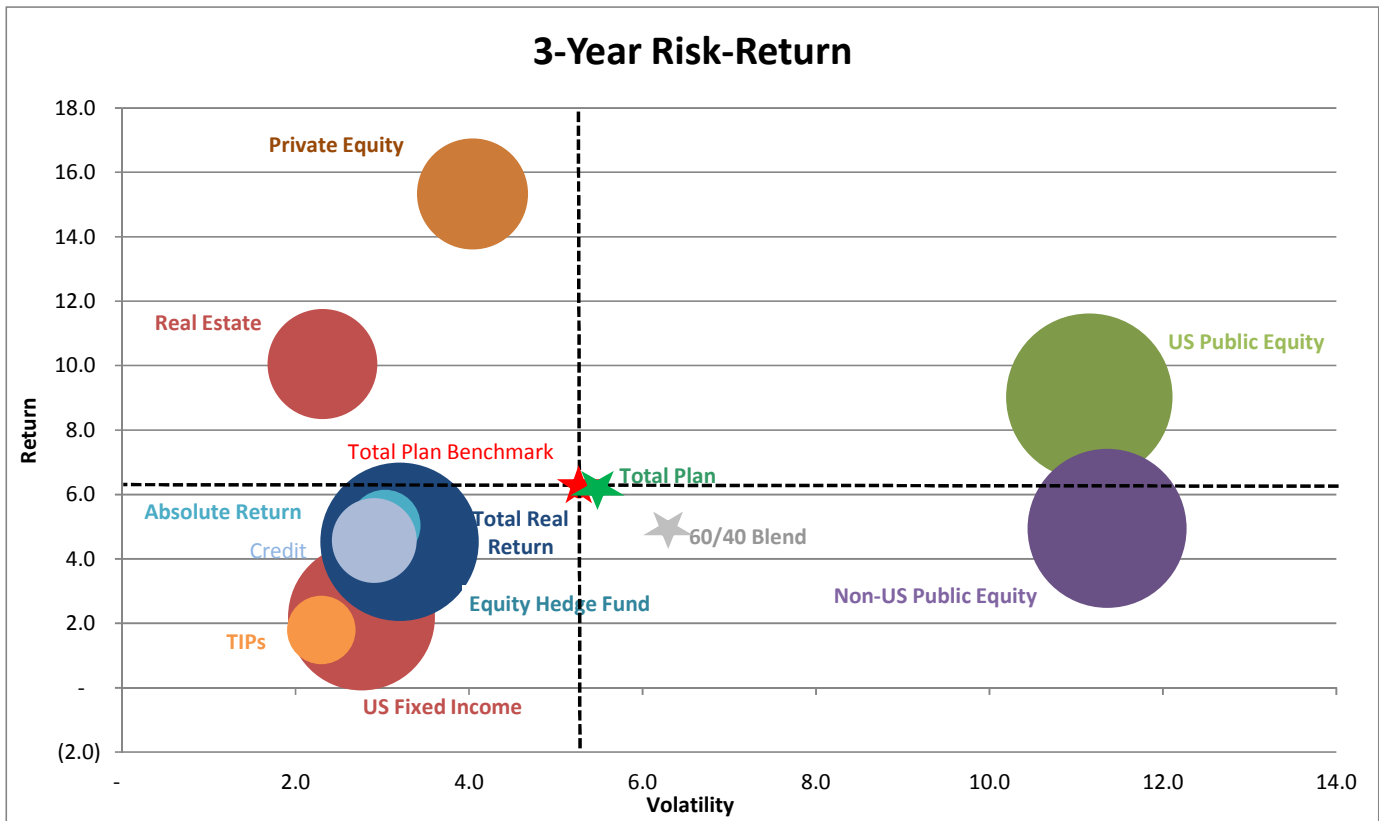
5 Years Ending December 31, 2018 Comparison

	TOTAL PLAN	Total Plan Benchmark	60/40 Blend
Ann Return	4.50	4.60	3.72
Ann Ex Ret vs Mkt	-0.09		
Ann Tracking Error	1.02		
Ann Std Dev	5.63	5.47	6.49
Beta	1.01		
R-Squared	0.97		
Ann Alpha	-0.14		
Ann Sharpe Ratio	0.70	0.74	0.50

ERSRI Portfolio

%%% - as of December 31, 2018

Bubble-Size Scaled based on Current Allocations



**3 Years Ending December 31, 2018
Correlation**

Ann Return

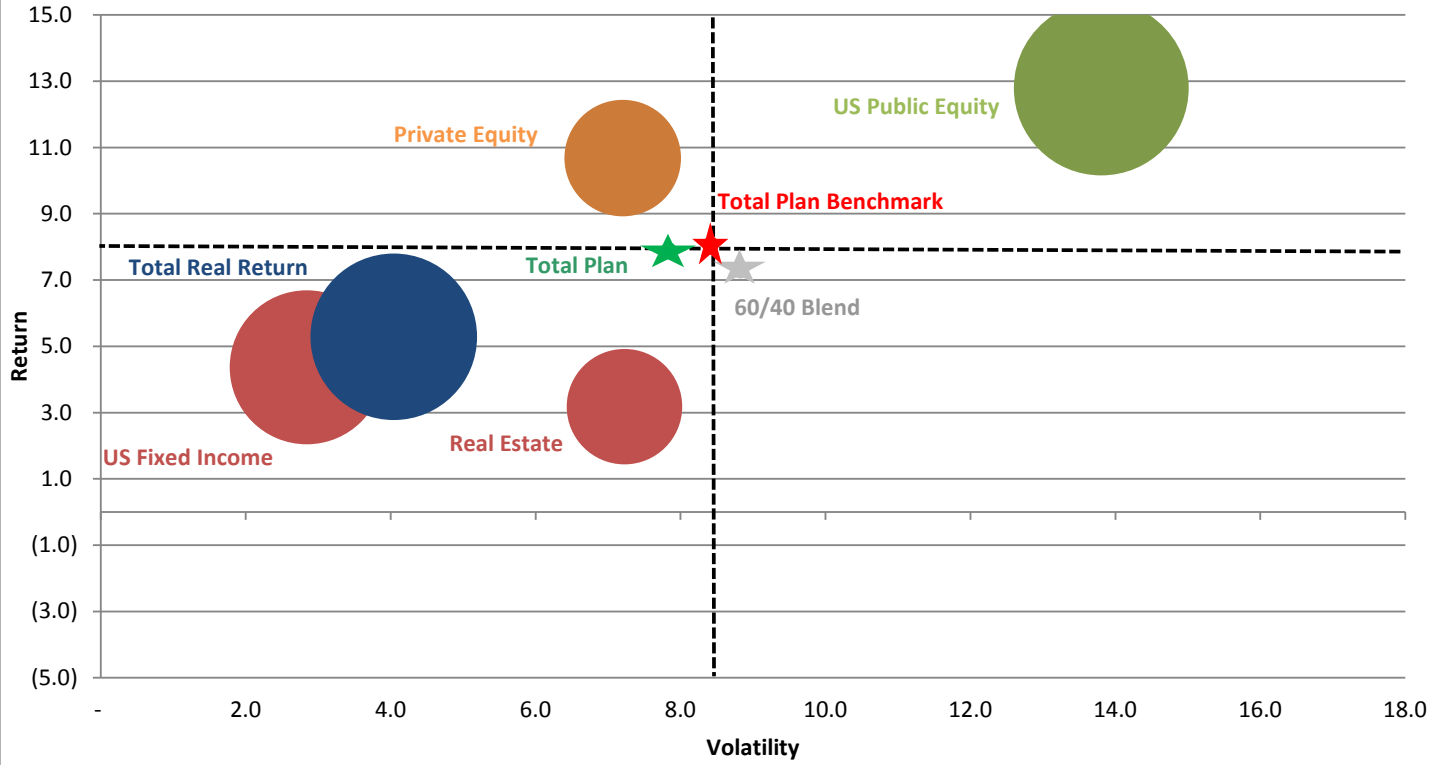
	US Pub EQ	Non-US Pub EQ	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
US Pub E	1.00										
Non-US P	0.74	1.00									
Eq HF	0.43	0.45	1.00								
PE	0.23	0.18	0.09	1.00							
FI	-0.11	0.13	-0.29	0.18	1.00						
RE	0.15	-0.01	0.13	0.38	0.09	1.00					
RR HF	0.00	-0.10	0.16	-0.09	-0.37	-0.12	1.00				
TIPS	-0.07	0.10	-0.42	0.16	0.82	0.19	-0.34	1.00			
Cash	0.07	0.11	0.25	0.09	0.07	0.06	0.02	-0.08	1.00		
Overlay	0.00	-0.14	-0.03	0.20	-0.21	0.19	0.13	-0.16	0.21	1.00	
Total	0.93	0.92	0.47	0.25	0.08	0.10	-0.04	0.07	0.14	-0.09	1.00
Tot BM	0.88	0.94	0.43	0.21	0.13	0.03	-0.10	0.10	0.12	-0.12	0.98

**5 Years Ending December 31, 2018
Correlation**

Ann Return

	US Pub Eq	Non-US Pub Eq	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
US Pub E	1.00										
Non-US P	0.78	1.00									
Eq HF	0.52	0.49	1.00								
PE	0.04	0.02	0.05	1.00							
FI	-0.05	0.11	-0.15	-0.04	1.00						
RE	0.14	0.09	0.10	-0.02	0.24	1.00					
RR HF	0.17	0.12	0.45	-0.07	-0.10	-0.12	1.00				
TIPS	-0.01	0.21	-0.17	-0.02	0.81	0.28	-0.07	1.00			
Cash	0.09	0.05	0.13	0.03	-0.09	-0.16	0.15	-0.22	1.00		
Overlay	-0.27	-0.26	-0.34	0.00	-0.08	0.12	-0.12	-0.06	0.02	1.00	
Total	0.93	0.94	0.55	0.08	0.10	0.14	0.20	0.17	0.09	-0.30	1.00
Tot BM	0.90	0.95	0.51	0.02	0.12	0.10	0.15	0.17	0.08	-0.30	0.98

10-Year Risk-Return



**10 Years Ending December 31, 2018
Correlation**

Ann Return

	US Pub Eq	Non-US Pub Eq	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
US Pub E	1.00										
Non-US P	---	---									
Eq HF	---	---	---								
PE	0.07	---	---	1.00							
FI	0.12	---	---	-0.18	1.00						
RE	-0.02	---	---	0.23	-0.22	1.00					
RR HF	---	---	---	---	---	---	---				
TIPS	---	---	---	---	---	---	---	---			
Cash	-0.02	---	---	-0.01	-0.11	0.04	---	---	1.00		
Overlay	0.23	---	---	-0.09	0.18	-0.18	---	---	-0.02	1.00	
Total	0.95	---	---	0.12	0.27	-0.01	---	---	-0.04	0.28	1.00
Tot BM	0.94	---	---	0.03	0.28	-0.04	---	---	-0.04	0.31	0.99

Section VI.

Performance Overview

TOTAL NET OF FEES

12/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	Annualized				ITD	Inception Date
						1 Year	3 Years	5 Years	10 Years		
US Public Equity <i>Russell 3000 Index</i>	1,185,675,389	15	-9.26 -9.31	-5.17 -5.24	-8.11 -8.20	-5.17 -5.24	9.03 8.97	7.98 7.91	12.79 13.18	7.15 7.14	8/1/2007 8/1/2007
Non-US Public Equity <i>Total International Equity BM</i>	1,081,523,626	14	-4.24 -4.53	-13.85 -14.20	-10.35 -10.84	-13.85 -14.20	4.94 4.48	0.97 0.68		6.92 6.18	5/1/2009 5/1/2009
QVM Tilt <i>MSCI World Net Dividend Index</i>	1,120,304,056	14	-7.50 -7.60	-7.96 -8.71	-8.40 -9.10	-7.96 -8.71	6.90 6.30			8.22 7.56	10/1/2015 10/1/2015
Total Public Growth <i>MSCI All Country World Net Index</i>	3,387,503,071	43	-7.12 -7.04	-9.20 -9.42	-9.02 -9.02	-9.20 -9.42	7.02 6.60	4.52 4.26	10.05 9.46	4.16	7/1/2000 7/1/2000
Private Equity <i>ILPA All Fds BM 1Q Lag 2</i>	526,956,435	7	0.88 0.88	17.38 17.00	9.32 8.51	17.38 17.00	15.33 13.49	12.15 12.78	10.68 16.03	9.68	2/1/1989 2/1/1989
Non Core Real Estate	153,955,266	2	0.21	25.66	7.08	25.66				22.75	7/1/2017
Opportunistic Private Credit <i>ILPA Distressed BM 1Q Lag</i>	38,230,622	0	0.01 0.01	11.81 12.02	4.53 7.83	11.81 12.02				15.70 12.24	7/1/2017 7/1/2017
Total Private Growth <i>Private Growth Benchmark</i>	719,142,323	9	0.69 0.99	18.83 15.38	8.59 7.87	18.83 15.38				19.19	7/1/2017 7/1/2017
TOTAL GROWTH COMPOSITE <i>Total Growth Composite BM</i>	4,106,645,395	53	-5.84 -4.85	-5.23 -2.99	-6.37 -4.54	-5.23 -2.99				3.66	7/1/2017 7/1/2017
Harvest Fund Advisor <i>Alerian MLP Index</i>	130,677,209	2	-10.63 -9.36	-13.27 -12.42	-15.53 -11.86	-13.27 -12.42	-0.29 -1.06			-9.06 -10.11	1/1/2015 1/1/2015
Liquid Credit <i>Liquid Credit BM (50% BoA US HY/50% CS LL)</i>	307,050,814	4	-2.31 -2.24	0.78 -0.57	-1.35 -1.77	0.78 -0.57	4.57 4.47	2.59 3.19		2.74 3.37	5/1/2013 5/1/2013
Private Credit <i>S&P LSTA Lev Loans + 3%</i>	112,380,975	1	0.40 0.96	3.71 8.19	1.94 3.80	3.71 8.19				4.84 7.54	7/1/2017 7/1/2017
TOTAL INCOME COMPOSITE <i>Income Aggregate BM</i>	550,108,998	7	-3.89 -2.38	-2.47 0.57	-4.53 -1.58	-2.47 0.57				-0.93 1.35	7/1/2017 7/1/2017
CPC Long Duration <i>Barclays US Treasury LT Index</i>	311,677,083	4	5.57 5.47	-1.89 -1.84	1.27 1.19	-1.89 -1.84				-0.30 0.00	6/1/2017 6/1/2017
CPC Trend Following <i>Credit Suisse Liquid Alt Beta</i>	307,305,264	4	3.97 10.75	-15.11 -10.01	-4.19 5.70	-15.11 -10.01				-3.46 -2.01	6/1/2017 6/1/2017
Total Crisis Protection <i>50/50 CPC Custom BM</i>	618,982,346	8	4.86 8.11	-7.99 -5.45	-1.32 3.47	-7.99 -5.45				-1.36 -0.61	6/1/2017 6/1/2017

TOTAL NET OF FEES

12/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	Annualized				ITD	Inception Date
						1 Year	3 Years	5 Years	10 Years		
Priv Listed Infrastructure <i>CPI + 4% 1 Mo Lag</i>	148,836,779	2	0.14 0.00	13.32 6.18	4.17 2.15	13.32 6.18	13.04 6.02			9.07	3/1/2015 3/1/2015
Core Real Estate <i>NFI-ODCE BM 2</i>	363,310,055	5	0.00 1.87	7.22 7.71	2.79 3.71	7.22 7.71				6.95 7.26	7/1/2017 7/1/2017
Inflation-Linked Bonds <i>Total Inflation Linked Custom</i>	200,377,269	3	0.45 0.41	-0.23 -0.25	-0.50 -0.47	-0.23 -0.25	1.79 1.87	1.36 1.50		3.30 3.30	11/1/2009 11/1/2009
Total Inflation Protection <i>Inflation Protection Custom BM</i>	712,524,103	9	0.15 0.12	6.30 3.84	2.20 0.86	6.30 3.84				6.10 4.65	7/1/2017 7/1/2017
Absolute Return <i>HFRI Fund of Funds Composite Index</i>	547,469,422	7	0.09 -1.16	4.48 -3.48	0.94 -4.18	4.48 -3.48				5.53 0.52	7/1/2017 7/1/2017
Traditional Fixed Income <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	920,869,716	12	1.64 1.84	-0.50 0.01	1.28 1.66	-0.50 0.01	2.19 2.06	2.53 2.52	4.37 3.48	4.86 4.75	7/1/2000 7/1/2000
Total Cash and Other Funds	353,686,310	5	-0.20	3.25	1.29	3.25	1.62	1.29		1.68	11/1/2012
Russell Overlay Fd	10,463,392	0	-0.01	0.06	0.02	0.06	0.01	0.00	0.04	-0.05	9/1/2008
Total Volatility Protection <i>Total Volatility Protection BM</i>	1,822,025,449	23	0.82 0.68	1.66 -0.78	1.15 -0.25	1.66 -0.78				2.33 7/1/2017	7/1/2017 7/1/2017
TOTAL STABILITY COMPOSITE <i>Total Stability Composite BM</i>	3,153,531,898	40	1.42 2.17	0.73 -0.70	0.92 0.85	0.73 -0.70				2.30 7/1/2017	7/1/2017 7/1/2017
TOTAL PLAN <i>Total Plan Benchmark</i> <i>60/40 Blend</i>	7,810,624,719	100	-2.88 -2.06 -3.49	-2.69 -1.76 -5.52	-3.40 -2.26 -4.73	-2.69 -1.76 -5.52	6.14 6.12 4.92	4.50 4.60 3.72	7.89 8.07 7.31	4.73	7/1/2000 7/1/2000 7/1/2000
Total Plan ex PE,RE & Priv Inf <i>Total Plan BM ex PE RE</i>	6,466,954,586	83	-3.57 -3.94	-5.64 -5.76	-5.20 -5.60	-5.64 -5.76	4.99 4.61	3.42 3.19	7.77 7.41	5.94	4/1/1996 4/1/1996

END NOTES

12/31/2018

1 RI6G23000000 TOTAL PLAN

The current composition of the Total Plan Benchmark is as follows:

GROWTH

Total Public Growth

40% MSCI ACWI Net

Total Private Growth

11% ILPA All Funds Index

2.5% ODCE + 2.5%

1.5% ILPA/Cambridge Distressed Securities Index

INCOME

1.5% Alerian MLP Total Return

3.5% Liquid Credit Custom (50% BoA HY/50% CS LL)

3% S&P LSTA Lev Loans + 3%

STABILITY

Crisis Protection Class

4% CS Managed Futures 18% Vol Index

4% Barclays Long Duration US Treasury Index

Inflation Protection

2% CPI + 4%

4% NFI-ODCE Index

1% Barclays 1-10 Year TIPs Index

1% BB Commodity Index

Volatility Protection

11.5% Barclays Agg

6.5% HFRI FOF Composite

3.0% BofA Merrill Lynch US T-Notes 0-1 Yr

TOTAL NET OF FEES

12/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	Cumulative		YTD	2017	2016	2015	Inception Date
				11/1/2018 - 11/30/2018	10/1/2018 - 10/31/2018					
US Public Equity <i>Russell 3000 Index</i>	1,185,675,389	15	-9.26 -9.31	2.00 2.00	-7.33 -7.36	-5.17 -5.24	21.14 21.13	12.84 12.74	0.60 0.48	8/1/2007 8/1/2007
Non-US Public Equity <i>Total International Equity BM</i>	1,081,523,626	14	-4.24 -4.53	1.38 0.95	-8.14 -8.13	-13.85 -14.20	27.76 27.19	5.01 4.50	-5.77 -5.66	5/1/2009 5/1/2009
QVM Tilt <i>MSCI World Net Dividend Index</i>	1,120,304,056	14	-7.50 -7.60	0.29 1.14	-6.82 -7.34	-7.96 -8.71	23.36 22.40	7.58 7.51		10/1/2015 10/1/2015
Total Public Growth <i>MSCI All Country World Net Index</i>	3,387,503,071	43	-7.12 -7.04	1.24 1.46	-7.42 -7.49	-9.20 -9.42	24.11 23.97	8.78 7.86	-2.48 -2.36	7/1/2000 7/1/2000
Private Equity <i>ILPA All Fds BM 1Q Lag 2</i>	526,956,435	7	0.88 0.88	3.04 3.04	0.08 0.08	17.38 17.00	19.69 15.69	9.19 7.99	7.08 7.22	2/1/1989 2/1/1989
Non Core Real Estate	153,955,266	2	0.21	2.70	0.00	25.66				7/1/2017
Opportunistic Private Credit <i>ILPA Distressed BM 1Q Lag</i>	38,230,622	0	0.01 0.01	0.00 0.00	5.17 5.17	11.81 12.02				7/1/2017 7/1/2017
Total Private Growth <i>Private Growth Benchmark</i>	719,142,323	9	0.69 0.99	2.80 2.26	0.32 0.61	18.83 15.38				7/1/2017 7/1/2017
TOTAL GROWTH COMPOSITE <i>Total Growth Composite BM</i>	4,106,645,395	53	-5.84 -4.85	1.49 1.68	-6.25 -5.29	-5.23 -2.99				7/1/2017 7/1/2017
Harvest Fund Advisor <i>Alerian MLP Index</i>	130,677,209	2	-10.63 -9.36	-1.69 -0.83	-9.32 -7.99	-13.27 -12.42	-5.26 -6.52	20.64 18.31	-31.01 -32.59	1/1/2015 1/1/2015
Liquid Credit <i>Liquid Credit BM (50% BoA US HY/50% CS LL)</i>	307,050,814	4	-2.31 -2.24	-0.53 -0.86	-0.13 -0.82	0.78 -0.57	3.54 4.60	9.59 9.63	-1.29 0.49	5/1/2013 5/1/2013
Private Credit <i>S&P LSTA Lev Loans + 3%</i>	112,380,975	1	0.40 0.96	-0.25 0.64	0.00 0.96	3.71 8.19				7/1/2017 7/1/2017
TOTAL INCOME COMPOSITE <i>Income Aggregate BM</i>	550,108,998	7	-3.89 -2.38	-0.89 -0.29	-2.48 -1.50	-2.47 0.57				7/1/2017 7/1/2017
CPC Long Duration <i>Barclays US Treasury LT Index</i>	311,677,083	4	5.57 5.47	1.89 1.89	-2.98 -3.05	-1.89 -1.84				6/1/2017 6/1/2017
CPC Trend Following <i>Credit Suisse Liquid Alt Beta</i>	307,305,264	4	3.97 10.75	-2.84 -1.75	-5.86 -2.82	-15.11 -10.01				6/1/2017 6/1/2017
Total Crisis Protection <i>50/50 CPC Custom BM</i>	618,982,346	8	4.86 8.11	-0.39 0.07	-4.39 -2.93	-7.99 -5.45				6/1/2017 6/1/2017

TOTAL NET OF FEES

12/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	Cumulative			YTD	2017	2016	2015	Inception Date
				11/1/2018 - 11/30/2018	10/1/2018 - 10/31/2018						
Priv Listed Infrastructure <i>CPI + 4% 1 Mo Lag</i>	148,836,779	2	0.14 0.00	0.73 0.50	0.01 0.43	13.32 6.18	12.45 6.20	13.35 5.69			3/1/2015 3/1/2015
Core Real Estate <i>NFI-ODCE BM 2</i>	363,310,055	5	0.00 1.87	1.82 0.00	0.00 0.00	7.22 7.71					7/1/2017 7/1/2017
Inflation-Linked Bonds <i>Total Inflation Linked Custom</i>	200,377,269	3	0.45 0.41	0.24 0.32	-0.73 -0.78	-0.23 -0.25	1.73 1.90	3.91 4.01	-0.26 -0.15		11/1/2009 11/1/2009
Total Inflation Protection <i>Inflation Protection Custom BM</i>	712,524,103	9	0.15 0.12	1.21 0.09	-0.19 -0.26	6.30 3.84					7/1/2017 7/1/2017
Absolute Return <i>HFRI Fund of Funds Composite Index</i>	547,469,422	7	0.09 -1.60	-0.91 -0.43	0.10 -2.88	4.48 -3.92					7/1/2017 7/1/2017
Traditional Fixed Income <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	920,869,716	12	1.64 1.84	0.43 0.60	-0.87 -0.79	-0.50 0.01	3.99 3.54	3.15 2.65	0.25 0.55		7/1/2000 7/1/2000
Total Cash and Other Funds	353,686,310	5	-0.20	0.53	0.94	3.25	-1.64	3.33	0.03		11/1/2012
Russell Overlay Fd	10,463,392	0	-0.01	0.02	0.03	0.06	-0.09	0.06	0.00		9/1/2008
Total Volatility Protection <i>Total Volatility Protection BM</i>	1,822,025,449	23	0.82 0.55	0.03 0.22	-0.28 -1.30	1.66 -0.92					7/1/2017 7/1/2017
TOTAL STABILITY COMPOSITE <i>Total Stability Composite BM</i>	3,153,531,898	40	1.42 2.09	0.25 0.16	-1.06 -1.43	0.73 -0.77					7/1/2017 7/1/2017
TOTAL PLAN <i>Total Plan Benchmark</i> <i>60/40 Blend</i>	7,810,624,719	100	-2.88 -2.09 -3.49	0.82 0.96 1.12	-4.03 -3.55 -4.81	-2.69 -1.79 -5.52	14.48 14.30 15.41	7.35 6.42 5.92	-0.28 -0.25 -0.98		7/1/2000 7/1/2000 7/1/2000
Total Plan ex PE,RE & Priv Inf <i>Total Plan BM ex PE RE</i>	6,466,954,586	83	-3.57 -3.98	0.57 0.75	-4.86 -4.79	-5.64 -5.79	14.66 14.46	6.97 6.13	-1.68 -1.64		4/1/1996 4/1/1996

END NOTES

12/31/2018

1 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:

GROWTH

Total Public Growth

40% MSCI ACWI Net

Total Private Growth

11% ILPA All Funds Index

2.5% ODCE + 2.5%

1.5% ILPA/Cambridge Distressed Securities Index

INCOME

1.5% Alerian MLP Total Return

3.5% Liquid Credit Custom (50% BoA HY/50% CS LL)

3% S&P LSTA Lev Loans + 3%

STABILITY

Crisis Protection Class

4% CS Managed Futures 18% Vol Index

4% Barclays Long Duration US Treasury Index

Inflation Protection

2% CPI + 4%

4% NFI-ODCE Index

1% Barclays 1-10 Year TIPs Index

1% BB Commodity Index

Volatility Protection

11.5% Barclays Agg

6.5% HFRI FOF Composite

3.0% BofA Merrill Lynch US T-Notes 0-1 Yr

Section VII.

Crisis Protection Class

CPC Returns				
CPC Program, December 31, 2018, %				
Account Name	MTD Return	Annualized Return (Since Inception)	Annualized Std. Dev (December '18)	Annualized Std. Dev (Since Inception)
Total CPC Program	4.86	-1.36	10.46	8.65
CPC Trend	3.97	-3.46	17.92	16.00
CPC Long Duration	5.57	-0.30	8.54	8.88

Portfolio Beta						
CPC Program, 12/31/2018, USD, Monte Carlo 1 Day - .94 Decay						
Account Name	Market Monitor:		Market Monitor:		Market Monitor:	
	Barclays Long term bond Index Beta	Dollar Index Beta	Market Monitor: Gold Beta	GSCI Non-Energy Beta	IBOXHY Beta	Market Monitor: S&P 500 INDEX Beta
Total CPC Program	0.79	-0.79	0.78	-0.84	-1.15	-0.37
CPC Trend	0.69	-0.71	1.00	-1.38	-1.70	-0.51
CPC Long Duration	0.89	-0.86	0.56	-0.30	-0.61	-0.22

Portfolio Beta						
CPC Program, 12/31/2018, USD, Monte Carlo 1 Day - .94 Decay						
Account Name	Market Monitor:	Market Monitor:	Market Monitor:	Market Monitor:	Market Monitor:	
	SG Trend Index Beta	US 10YR NOTE (CBT) Beta	WTI Crude Oil Beta	90 Day T-Bill Beta	Bench Global Equity D Beta	Russell 3000 Index Beta
Total CPC Program	-19.00	2.97	-0.21	1340.93	-0.49	-0.36
CPC Trend	-36.46	3.70	-0.31	1588.35	-0.69	-0.50
CPC Long Duration	-1.79	2.25	-0.12	1097.10	-0.29	-0.22

Return Correlation (Since Inception)			
	Total CPC Program	CPC Trend	CPC Long Duration
Total CPC Program	1.00	0.86	0.43
CPC Trend	0.86	1.00	-0.10
CPC Long Duration	0.43	-0.10	1.00

Return Correlation (DEC'18)			
	Total CPC Program	CPC Trend	CPC Long Duration
Total CPC Program	1.00	0.91	0.58
CPC Trend	0.91	1.00	0.19
CPC Long Duration	0.58	0.19	1.00

Section VIII.

Absolute Returns

Employees' Retirement System of the State of Rhode Island

Absolute Return Portfolio
 Portfolio Performance Summary
 Estimated as of December 31, 2018

Fund	Market Value	Actual %	Returns								Std Dev	Sharpe Ratio	Incep Date
			Dec	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep			
Absolute Return Portfolio													
Capula Global Relative Value Fund Ltd.	73,811,778	13.5%		0.78%	4.67%	2.29%	4.67%	5.58%	6.48%	5.65%	1.79%	2.58	Dec-11
Davidson Kempner Institutional Partners, L.P.	87,717,312	16.1%	-0.79%	-1.69%	2.06%	-0.10%	2.06%	5.15%	4.28%	5.44%	2.03%	2.17	Nov-11
DE Shaw Composite Fund LLC	117,667,808	21.5%		2.21%	11.60%	5.88%	11.60%	9.60%	11.93%	12.68%	4.32%	2.60	Nov-11
Elliott Associates, L.P.	108,361,801	19.8%	0.20%	-0.20%	3.20%	-1.09%	3.20%	8.51%	7.42%	8.60%	3.53%	2.11	Nov-11
Graham Absolute Return Trading Ltd.	59,158,967	10.8%	-2.76%	-2.80%	2.47%	-3.33%	2.47%	2.16%	1.87%	2.40%	5.62%	0.31	Jan-12
Viking Global Equities, LP	59,690,673	10.9%	-3.10%	-5.66%	1.06%	-3.58%	1.06%	2.87%	6.03%	9.13%	7.11%	1.15	Dec-11
Winton Fund Limited	38,383,521	7.0%	-1.50%	-2.66%	-0.52%	-1.86%	-0.52%	1.36%	3.66%	3.54%	8.42%	0.36	Dec-11
Absolute Return Portfolio - Total	544,791,859	99.8%	-0.10%	-0.90%	4.24%	0.35%	4.24%	4.95%	4.22%	5.73%	3.07%	1.56	Nov-11
HFRI Fund of Funds Composite Index			-1.16%	-4.41%	-3.48%	-4.18%	-3.48%	1.50%	1.51%	2.72%	3.49%	0.55	Nov-11
MSCI AC World Index Free - Net			-7.04%	-12.75%	-9.42%	-9.02%	-9.42%	6.60%	4.26%	7.69%	11.06%	0.65	Nov-11
ML 3-month T-Bills			0.18%	0.56%	1.87%	1.05%	1.87%	1.02%	0.63%	0.46%	0.19%	-	Nov-11
25% MSCI ACWI/75% Barclays Aggregate			-0.38%	-2.05%	-2.24%	-0.99%	-2.24%	3.30%	3.08%	3.67%	3.42%	0.83	Nov-11
Liquidating Portfolio													
Indus Asia Pacific Distribution Holding Company II, 06.30.14 Series (liquidating trust)	327,364	0.1%	0.67%	2.36%	-11.10%	-4.20%	-11.10%	-10.30%	-16.53%	-10.71%	18.65%	-0.55	Jan-12
Luxor Capital Partners, LP - Liquidating SPV	973,916	0.2%	0.05%	3.39%	1.19%	1.98%	1.19%	-	-	11.69%	16.38%	0.66	Jul-16
Liquidating/Redeeming - Total	1,301,281	0.2%	0.21%	3.37%	5.63%	2.74%	5.63%	1.78%	-0.70%	0.81%	5.08%	0.03	Nov-11
Total Absolute Return Portfolio	546,093,140	100.0%	-0.10%	-0.89%	4.13%	0.36%	4.13%	4.52%	3.58%	5.09%	2.91%	1.44	Nov-11
HFRI Fund of Funds Composite Index			-1.16%	-4.41%	-3.48%	-4.18%	-3.48%	1.50%	1.51%	2.72%	3.49%	-	Nov-11
Market Indices													
Libor3Month			0.24%	0.67%	2.36%	1.27%	2.36%	1.47%	0.99%	0.80%	0.21%	-	Nov-11
Bloomberg Barclays US Aggregate Bond Index			1.84%	1.64%	0.02%	1.66%	0.02%	2.06%	2.52%	2.20%	2.76%	0.51	Nov-11
Bloomberg Barclays US High Yield Bond Index			-2.14%	-4.53%	-2.08%	-2.23%	-2.08%	7.24%	3.84%	5.91%	5.09%	0.99	Nov-11
S&P 500 TR			-9.03%	-13.52%	-4.38%	-6.85%	-4.38%	9.26%	8.50%	12.51%	10.54%	1.10	Nov-11
MSCI EAFE - Net			-4.85%	-12.54%	-13.79%	-11.35%	-13.79%	2.87%	0.53%	4.74%	12.70%	0.37	Nov-11
MSCI EMF (Emerging Markets Free) - Net			-2.66%	-7.48%	-14.58%	-8.49%	-14.58%	9.25%	1.65%	2.00%	15.45%	0.15	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

Absolute Return Portfolio

Fund Level Performance Report

Estimated as of December 31, 2018

Fund	Trailing Returns					Calendar Year Returns					5 Yr Std Dev	Sharpe Ratio			Start Date			
	QTD	YTD	Dec	Nov	Oct	1 Year	3 Year	5 Year	2017	2016		2015	2014	2013		3 yr	5 yr	Incep.
Absolute Return																		
Capula Global Relative Value Fund Ltd.	0.73%	4.63%				4.63%	5.58%	6.48%	3.79%	8.37%	7.54%	8.14%	7.60%	1.58%	2.41	3.20	1.81	Oct-05
Davidson Kempner Institutional Partners, L.P.	-1.72%	1.81%	-0.79%	-0.12%	-0.82%	1.81%	4.85%	4.10%	6.11%	6.71%	1.51%	4.45%	9.52%	2.08%	1.68	1.44	1.52	Mar-96
DE Shaw Composite Fund LLC	2.24%	10.97%				10.97%	9.15%	11.30%	10.41%	6.12%	13.68%	15.57%	11.51%	4.35%	1.82	2.25	1.58	Mar-01
Elliott Associates, L.P.	-0.20%	2.91%	0.20%	-0.30%	-0.10%	2.91%	8.15%	7.02%	8.80%	12.98%	2.51%	8.24%	12.44%	3.51%	1.65	1.66	1.89	Jan-90
Graham Absolute Return Trading Ltd.	-2.84%	2.33%	-2.76%	-1.07%	1.00%	2.33%	2.08%	3.58%	-7.01%	11.78%	1.50%	10.42%	10.50%	7.88%	0.12	0.36	0.88	Jan-05
Viking Global Equities, LP	-2.52%	4.64%	-3.10%	0.30%	0.30%	4.64%	4.35%	6.90%	13.01%	-3.92%	8.27%	13.47%	22.65%	7.68%	0.40	0.78	1.39	Oct-99
Winton Fund Limited	-2.67%	-0.56%	-1.50%	1.40%	-2.55%	-0.56%	1.33%	3.65%	7.88%	-3.01%	0.95%	13.88%	9.43%	8.72%	0.02	0.34	0.65	Oct-97
Liquidating Portfolio																		
Indus Asia Pacific Fund, LP	2.36%	-11.10%	0.67%	6.32%	-4.37%	-11.10%	-10.30%	-16.47%	9.70%	-26.00%	-33.23%	-15.60%	4.97%	21.58%	-0.42	-0.76	0.01	Dec-00
Luxor Capital Partners, LP	3.39%	1.19%	0.05%	-0.12%	3.46%	1.19%	18.97%	4.22%	54.38%	7.80%	-19.05%	-9.83%	19.53%	14.53%	1.09	0.29	0.85	Apr-02
Benchmark																		
HFRI Fund of Funds Composite Index	-4.41%	-3.48%	-1.16%	-0.43%	-2.88%	-3.48%	1.50%	1.51%	7.77%	0.51%	-0.27%	3.37%	8.96%	3.50%				Jan-90
HFRI Fund Weighted Composite Index	-5.35%	-4.07%	-1.97%	-0.30%	-3.15%	-4.07%	3.18%	2.26%	8.59%	5.44%	-1.12%	2.98%	9.13%	3.95%				Jan-90
Market Indices																		
3 Month Libor - BOM	0.67%	2.36%	0.24%	0.22%	0.21%	2.36%	1.47%	0.99%	1.29%	0.76%	0.33%	0.23%	0.27%	0.23%				Jan-87
Barclays Aggregate Bond Index	1.64%	0.02%	1.84%	0.60%	-0.79%	0.02%	2.06%	2.52%	3.55%	2.66%	0.57%	5.94%	-2.02%	2.79%				Jan-76
Barclays High Yield Credit Bond Index	-4.53%	-2.08%	-2.14%	-0.86%	-1.60%	-2.08%	7.24%	3.84%	7.50%	17.14%	-4.46%	2.46%	7.46%	5.10%				Jul-83
S&P 500 (TR)	-13.52%	-4.38%	-9.03%	2.04%	-6.84%	-4.38%	9.26%	8.49%	21.83%	11.96%	1.38%	13.69%	32.39%	10.94%				Jun-88
MSCI EAFE - Net - USD	-12.54%	-13.79%	-4.85%	-0.13%	-7.96%	-13.79%	2.87%	0.53%	25.03%	1.00%	-0.81%	-4.90%	22.78%	11.78%				Dec-69
MSCI EMF (EMERGING MARKETS FREE) - Net - USD	-7.48%	-14.58%	-2.66%	4.12%	-8.71%	-14.58%	9.25%	1.65%	37.28%	11.19%	-14.92%	-2.19%	-2.60%	15.19%				Dec-87

Note: The above is manager composite history.

Section IX.

Private Equity Returns

Portfolio Summary

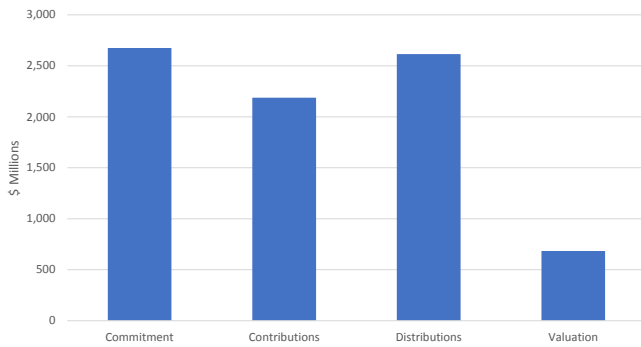
9/30/2018

All Investments

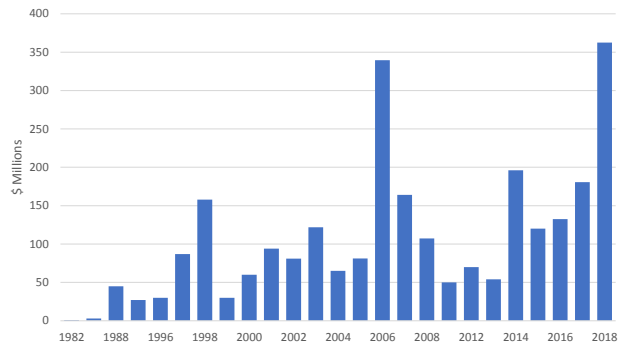
Performance Summary

Asset Class	Investment Type	Number of Investments	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR	TWR
Private Equity Funds									
	Agriculture Total	1	25,000,000	-	-	-	-	-	-
	Buyout Total	87	1,609,858,254	1,310,048,898	1,687,096,642	366,806,381	1.57	13.29%	12.90%
	Direct Lending Total	4	125,000,000	87,157,045	43,666,742	56,284,211	1.15	9.39%	8.27%
	Distressed Debt Total	14	263,000,000	238,106,103	251,558,730	80,715,379	1.40	10.27%	9.98%
	Energy Total	9	198,000,000	156,888,111	194,179,846	38,566,211	1.48	23.69%	7.86%
	Fund of Funds Total	1	45,000,000	45,000,000	106,748,821	-	2.37	19.94%	-
	Opportunistic Credit Total	1	50,000,000	24,623,462	-	23,690,620	0.96	-4.41%	-5.09%
	Secondary Total	4	60,000,000	55,009,798	64,537,766	3,000,267	1.23	5.86%	3.15%
	Venture Capital Total	23	298,750,000	270,087,974	266,814,963	113,855,877	1.41	6.30%	4.30%
Total: Private Equity Funds		144	2,674,608,254	2,186,921,390	2,614,603,512	682,918,946	1.51	13.52%	11.45%

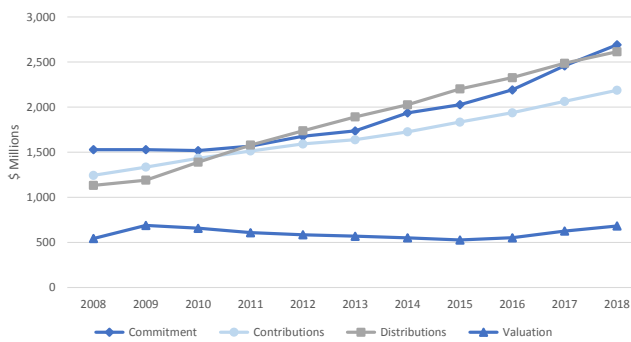
Cash Flow and Valuation Summary



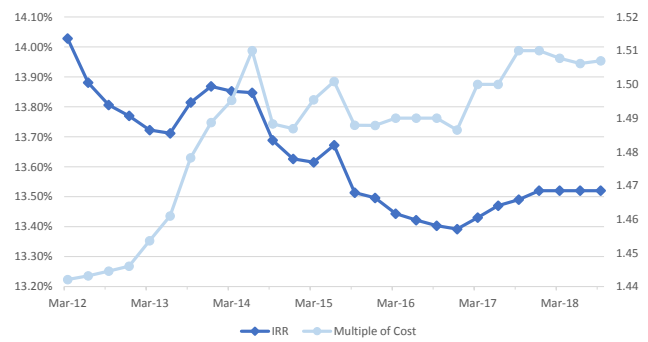
Commitment by Vintage Year



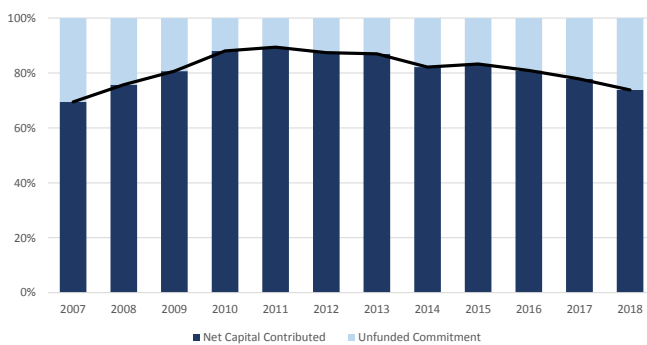
Historical Cash Flows and Valuation



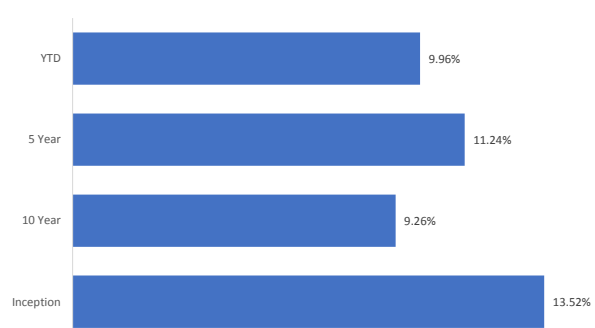
Historical Performance



Historical Percent Funded



Period IRRs



Employees' Retirement System of Rhode Island Private Equity Performance
9/30/2018

Current Partnerships	Vintage Year	Type	Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance*	
				Amount Drawn	Amount Distributed	Amount Unfunded		Net IRR (%)	Net Multiple of Investment
Nautic Partners V	2000	Buyout	20,000,000	20,331,229	40,426,893	636,249	1,557,340	17.12	2.07
CVC European Equity Partners III	2001	Buyout	20,000,000	23,760,732	59,551,716	297,277	1,430,600	41.04	2.57
Parthenon Investors II	2001	Buyout	23,960,000	23,409,381	37,415,960	1,804,074	587,273	12.31	1.62
Nordic Capital Fund V	2003	Buyout	€ 14,615,550	19,373,940	51,083,672		335,629	20.21	2.65
TPG Partners IV	2003	Buyout	15,000,000	16,672,684	31,613,879	64,421	705,772	15.51	1.94
Birch Hill Equity Partners III	2005	Buyout	CAD 18,000,000.00	15,783,090	28,335,757	155,709	3,920,361	13.30	2.04
CVC European Equity Partners IV	2005	Buyout	€ 16,500,000	18,834,904	36,829,595	2,614,095	20,578	16.64	1.96
Providence Equity Partners V	2005	Buyout	25,000,000	31,142,133	36,171,706	2,200,670	781,319	3.24	1.19
Centerbridge Capital Partners	2006	Buyout	15,000,000	23,736,956	39,488,411	984,852	4,131,772	19.87	1.84
Fenway Partners Capital Fund III	2006	Buyout	15,000,000	17,230,534	14,495,125	1,011,798	6,477,011	3.53	1.22
Nordic Capital Fund VI	2006	Buyout	€ 15,000,000	18,896,706	32,407,442	-	325,629	8.65	1.73
TPG Partners V	2006	Buyout	20,000,000	20,697,887	25,463,841	390,088	3,190,659	5.05	1.38
Green Equity V	2007	Buyout	20,000,000	20,422,420	32,692,075	1,701,129	14,465,967	19.03	2.31
Nautic Partners VI	2007	Buyout	20,000,000	24,233,473	49,504,788	522,440	5,965,598	17.56	2.29
Providence Equity Partners VI	2007	Buyout	25,000,000	29,484,941	30,732,045	1,239,714	7,745,816	5.34	1.31
Trilantic Capital Partners IV	2007	Buyout	11,098,351	11,606,535	17,222,868	1,418,621	1,544,146	14.00	1.62
Bain Capital Fund X	2008	Buyout	25,000,000	24,300,000	31,702,360	762,500	10,260,659	10.53	1.73
CVC V	2008	Buyout	€ 20,000,000	25,396,044	44,976,512	391,890	9,638,325	20.05	2.15
Nordic Capital Fund VII	2008	Buyout	€ 15,000,000	17,940,327	26,988,186	1,070,024	1,502,818	8.23	1.59
TPG VI	2008	Buyout	10,000,000	13,924,603	15,060,114	435,583	4,236,686	9.08	1.39
Advent International GPE VII-C, L.P.	2012	Buyout	20,000,000	18,800,000	13,985,218	1,200,000	21,994,310	20.05	1.91
Providence Equity Partners VII	2012	Buyout	25,000,000	30,475,715	22,642,654	5,095,040	23,763,535	21.71	1.52
Nordic Capital Fund VIII	2013	Buyout	€ 15,000,000	18,019,759	6,101,542	6,273,283	19,712,631	16.10	1.43
Riverside Capital Appreciation Fund VI	2013	Buyout	20,000,000	17,516,842	8,384,842	3,184,190	17,072,134	15.03	1.45
Carlyle Asia Partners IV	2014	Buyout	30,000,000	32,841,753	6,373,089	1,828,070	32,588,295	9.01	1.19
CVC Capital Partners VI	2014	Buyout	€ 15,000,000	17,783,138	4,728,097	2,482,770	14,974,573	6.04	1.11
Nautic Partners VIII	2014	Buyout	20,000,000	16,565,272	20,637,893	4,722,789	11,938,947	45.12	1.97
Riverside Micro-Cap Fund III	2014	Buyout	20,000,000	17,758,317	12,746,615	2,241,683	30,282,659	27.45	2.42
Sorenson Capital Partners III	2014	Buyout	30,000,000	24,770,931	7,769	6,946,184	27,107,627	4.29	1.09
Paine & Partners Capital Fund IV	2015	Buyout	30,000,000	21,049,724	6,305,447	4,479,193	19,675,816	11.57	1.23
Baring Asia Private Equity Fund VI	2015	Buyout	15,000,000	12,713,267	2,868,159	15,098,528	13,208,398	16.44	1.26
Centerbridge Capital Partners III	2015	Buyout	25,000,000	13,614,788	4,335,842	9,755,480	13,663,467	13.73	1.32
Advent International GPE VIII	2016	Buyout	20,000,000	12,980,000	-	7,020,000	15,055,177	16.13	1.16
Nautic Partners VII	2016	Buyout	20,000,000	8,406,893	7,202,847	12,544,678	5,791,032	85.66	1.55
Southwest Partners VII	2016	Buyout	37,500,000	6,016,737	1,266,339	32,063,583	2,229,575	-54.78	0.58
CVC Capital Partners VII	2017	Buyout	€ 35,000,000	-	-	-	509,334	N/M	-
RLH IV	2017	Buyout	40,000,000	1,539,630	-	38,459,707	725,108	N/M	0.47
Altaris Constellation Partners IV, L.P.	2018	Buyout	6,000,000	1,848,514	-	4,151,486	1,987,390	N/M	1.08
Altaris IV	2018	Buyout	24,000,000	5,048,912	-	18,951,088	5,370,131	N/M	1.06
MHR Institutional Partners III	2006	Debt	20,000,000	20,800,000	21,109,097	6,974,396	8,908,971	6.92	1.44
WLR Recovery Fund IV	2007	Debt	8,000,000	7,277,318	9,307,061	275,492	649,051	7.77	1.37
Oaktree European Principal Fund III	2011	Debt	20,000,000	17,150,000	12,569,330	5,783,415	15,467,600	11.64	1.63
Centerbridge Special Credit Partners II	2012	Debt	25,000,000	22,500,000	16,952,135	2,500,000	7,918,483	2.63	1.11
Garrison Opportunity Fund IV	2014	Debt	30,000,000	28,373,532	1,304,695	1,571,514	29,743,480	3.89	1.09
CSIP V	2016	Debt	30,000,000	15,331,690	2,910,670	16,207,068	14,109,057	7.37	1.11
Tenex Capital Partners II	2016	Debt	25,000,000	14,270,108	803,048	11,353,060	14,734,545	8.03	1.09
Virgo Societas Partnership IV (Offshore), L.P.	2017	Debt	50,000,000	24,623,462	-	25,954,676	23,690,620	N/M	0.96
Davidson Kempner L-T Opps. IV	2018	Debt	50,000,000	13,000,000	-	37,000,000	13,896,022	N/M	1.07
Owl Rock Capital Corporation	2018	Debt	50,000,000	24,124,106	609,106	25,875,894	23,935,177	N/M	1.02
First Reserve Fund XI	2006	Energy	20,000,000	22,125,580	14,833,318	-	1,622,244	-7.05	0.74
Kayne Anderson Energy Fund IV	2007	Energy	15,000,000	16,605,519	17,447,153	-	470,563	2.56	1.08
EnCap Energy Capital Fund IX	2013	Energy	18,000,000	19,743,168	13,678,972	1,466,311	13,707,316	15.82	1.39
EnCap Energy Capital Fund X	2015	Energy	25,000,000	20,016,047	3,808,078	6,546,432	19,085,998	10.40	1.14
EnCap Energy Capital Fund XI	2017	Energy	50,000,000	4,623,011	-	45,376,989	3,610,660	N/M	0.78
Collier V	2006	Secondaries	15,000,000	12,620,912	16,381,596	3,270,000	1,690,469	8.18	1.43
W Capital II	2007	Secondaries	15,000,000	14,896,718	19,748,146	1,596,691	1,176,480	10.51	1.40
Granite Global Ventures II	2004	Venture Capital	15,000,000	14,333,510	22,180,375	675,000	1,678,554	6.50	1.66
Leapfrog Ventures II	2005	Venture Capital	10,000,000	9,640,000	6,811,564	360,000	4,565,232	2.67	1.18
Alta Partners VIII	2006	Venture Capital	15,000,000	15,000,000	26,769,196	-	11,811,978	17.95	2.57
Castle Ventures III	2006	Venture Capital	5,000,000	5,009,730	1,396,371	-	648,674	-16.48	0.41
Focus Ventures III	2006	Venture Capital	15,000,000	15,000,000	6,480,361	-	2,202,699	-8.85	0.58
GGV III	2006	Venture Capital	15,000,000	14,625,748	41,370,739	375,000	1,260,810	18.53	2.91
Point 406 Ventures I	2006	Venture Capital	10,000,000	10,950,534	8,474,403	370,000	11,019,835	9.4	1.78
Point Judith Venture Fund II	2006	Venture Capital	5,000,000	6,226,675	6,431,896	106,571	2,527,910	5.65	1.44
Lighthouse Capital Partners VI	2007	Venture Capital	14,250,000	14,250,000	19,719,297	750,000	507,154	6.79	1.42
Paladin III	2008	Venture Capital	10,000,000	13,117,163	9,101,086	305,813	9,994,480	8.12	1.46
Industry Ventures Partnership Holdings III	2014	Venture Capital	25,000,000	22,941,775	4,032,277	2,875,000	31,248,024	18.61	1.54
Industry Ventures Partnership Holdings III C	2015	Venture Capital	15,000,000	9,750,643	181,258	5,249,357	13,162,213	22.98	1.37
Industry Ventures Partnership Holdings IV	2015	Venture Capital	10,000,000	3,450,000	40,923	6,550,000	4,163,090	14.67	1.22
Other funds in aggregate**	various	Buyout	\$100,000,000	\$104,313,545	\$87,177,780	\$23,846,508	\$36,792,758		
Total			\$ 1,562,070,789	\$ 1,355,932,749	\$ 1,278,557,010	\$ 451,260,581	\$ 719,287,003		

*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 X.

Real Estate Returns

PORTFOLIO SUMMARY

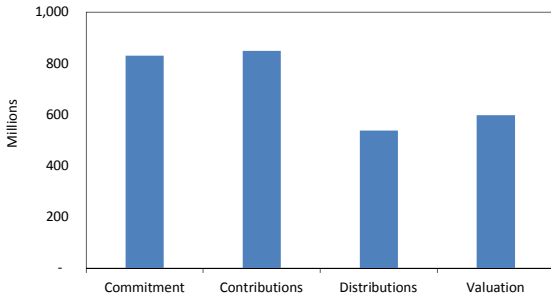
9/30/2018

All Portfolio Investments - Real Estate ⁽¹⁾

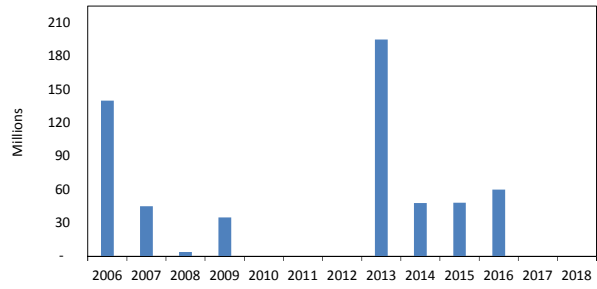
Performance Summary

Asset Class	Investment Type	Number of Investments ⁽⁴⁾	Commitment	Contributions ^{(2), (3)}	Distributions ⁽³⁾	Adjusted Valuation	Multiple of Cost	IRR	TWR
Real Estate Funds	Core	8	414,873,657	482,135,475	314,731,684	441,013,097	1.6x	5.5%	5.7%
	Non-Core	21	415,260,817	366,938,494	223,014,123	156,919,683	1.0x	0.8%	3.3%
Total: Real Estate Funds		29	830,134,474	849,073,969	537,745,807	597,932,780	1.3x	4.5%	5.0%
Total:		29	830,134,474	849,073,969	537,745,807	597,932,780	1.3x	4.5%	5.0%

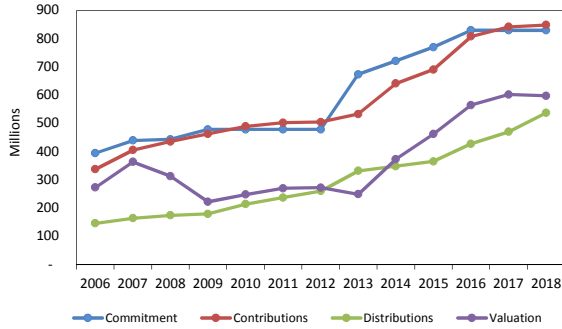
Cash Flow and Valuation Summary



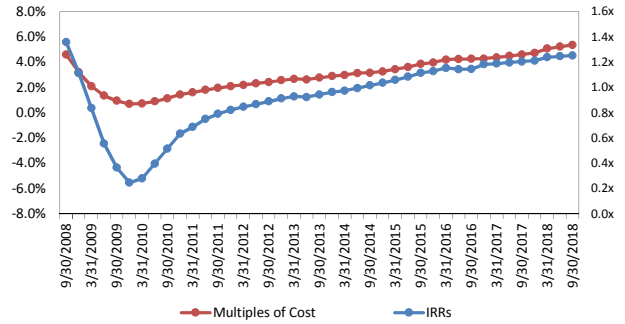
Commitment by Vintage Year



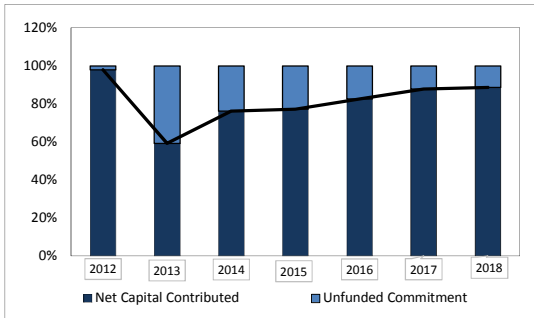
Historical Cash Flows and Valuation



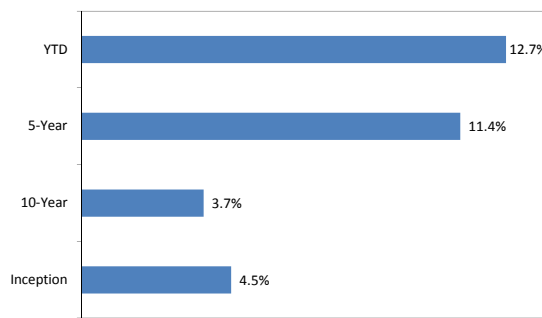
Historical Performance



Historical Percent Funded



Period IRRs ⁽⁵⁾



⁽¹⁾ Investment information listed as of March 31, 1989 through September 30, 2018 and includes those investments which have been liquidated.

⁽²⁾ 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.

⁽³⁾ 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.

⁽⁴⁾ As of September 30, 2018 there are five core funds and eleven non-core funds.

⁽⁵⁾ The YTD IRR presented is an annualized percentage. The IRR on an unannualized basis for 3Q18 is 9.6%.

Employees' Retirement System of Rhode Island Real Estate Performance
9/30/2018

Current Partnerships	Vintage Year/Initial Investment	Type	Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance*	
				Amount Drawn	Amount Distributed	Amount Unfunded		Net IRR (%)	Net Multiple of Investment
AEW Core Property Trust	2010	Core	69,873,660	69,873,660	20,452,705	-	105,522,003	10.9	1.5
Heitman America Real Estate Trust	2014	Core	60,000,000	60,000,000	11,932,637	-	82,112,878	9.9	1.4
JP Morgan Strategic Property Fund	2006	Core	75,000,000	75,000,000	31,120,345	-	110,615,941	6.3	1.7
Morgan Stanley Prime Property Fund	2005	Core	35,000,000	35,000,000	23,660,069	-	64,927,784	7.4	2.1
Prudential (PRISA)	2005	Core	50,000,000	50,000,000	22,846,906	-	78,335,380	5.5	1.8
Magna Hotel Fund III	2008	Value-Add	4,000,000	3,426,573	5,668,115	573,427	126,466	14.4	1.7
IC Berkeley Partners III	2013	Value-Add	18,000,000	18,038,326	22,639,173	1,961,674	2,166,865	20.4	1.5
Exeter Industrial Value Fund III	2014	Value-Add	30,000,000	29,099,454	38,743,396	900,546	15,044,128	29.8	1.8
Waterton Fund XII	2014	Value-Add	35,000,000	34,265,141	8,964,921	734,859	40,486,569	15.2	1.4
Crow Holdings Retail Fund	2015	Value-Add	24,000,000	20,935,313	2,844,478	3,064,687	23,212,209	11.7	1.2
IC Berkeley Partners IV	2016	Value-Add	30,000,000	8,814,545	1,783,071	21,185,455	9,590,157	6.2	1.1
TriCon Capital Fund VII	2005	Opportunistic	15,000,000	14,571,533	4,720,253	428,467	519,667	-16.5	0.3
JP Morgan Alternative Property Fund	2006	Opportunistic	20,000,000	20,000,000	14,750,429	-	216,292	-4.3	0.7
GEM Realty Fund V	2013	Opportunistic	50,000,000	39,874,323	9,922,250	10,125,677	47,538,086	13.0	1.3
Lone Star Real Estate Fund IV	2015	Opportunistic	24,260,817	18,230,068	8,502,582	6,030,749	15,592,770	21.1	1.4
GEM Realty Fund VI	2017	Opportunistic	20,000,000	1,604,599	1,200,000	18,395,401	1,179,969	9.3	1.0
Total			\$ 560,134,477	\$ 496,733,535	\$ 229,751,330	\$ 63,400,942	\$ 597,187,163		

*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 XI.

Infrastructure Returns

Portfolio Summary

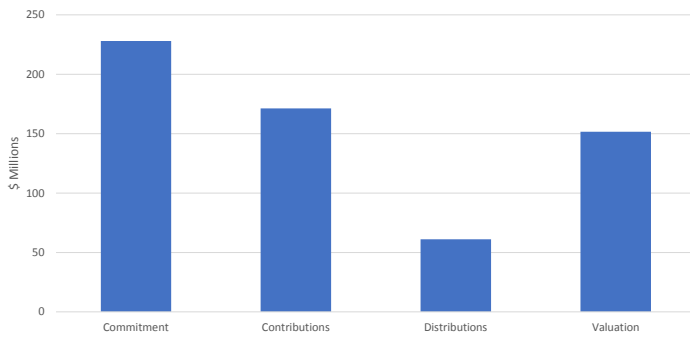
9/30/2018

All Investments

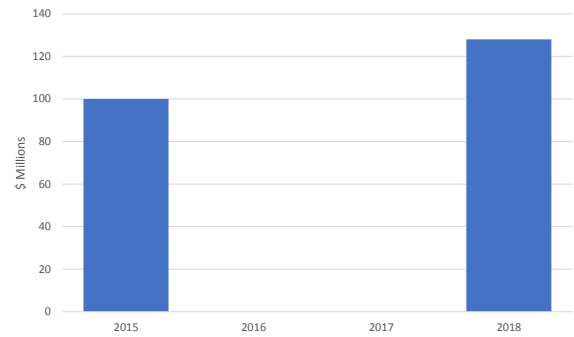
Performance Summary

Asset Class	Investment Type	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR
Infrastructure Funds							
	IFM Global Infrastructure Fund	50,000,000	50,000,000	15,076,637	56,301,278	1.43	11.70%
	ISQ Global Infrastructure Fund (UST), L.P.	50,000,000	60,226,194	23,926,812	48,688,045	1.21	14.18%
	ISQ Global Infrastructure Fund II (UST), L.P.	40,000,000	2,648,872	-	2,358,637	0.89	-24.08%
	Stonepeak Infrastructure Fund II - Master Co- Investment Partners LP	10,000,000	8,478,420	571,642	8,348,673	1.05	5.80%
	Stonepeak Infrastructure Fund II Cayman (G AIV) LP	43,000,000	45,836,795	20,603,553	32,980,349	1.17	14.53%
	Stonepeak Infrastructure Fund III LP	35,000,000	4,024,340	826,040	2,953,106	N/A	N/A
Total: Infrastructure Funds		228,000,000	171,214,621	61,004,684	151,630,088	1.24	12.42%

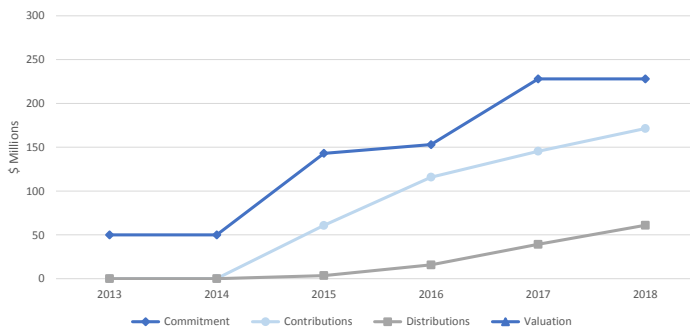
Cash Flow and Valuation Summary



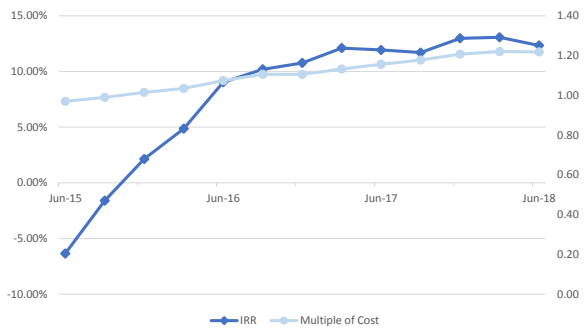
Commitment by Vintage Year



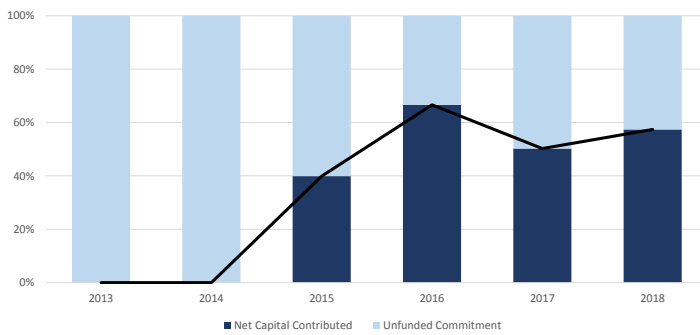
Historical Cash Flows and Valuation



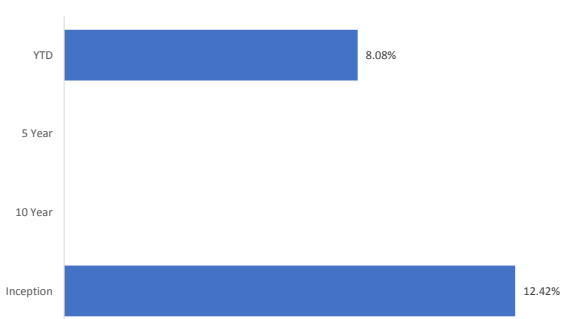
Historical Performance



Historical Percent Funded



Period IRRs



Employees' Retirement System of Rhode Island Private Infrastructure Performance
9/30/2018

Current Partnerships	Vintage Year/Initial Investment		Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Cumulative Performance*	
				Amount Drawn	Amount Distributed	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
IFM Global Infrastructure, L.P.	2015	Core	50,000,000	50,000,000	15,076,637	56,301,278	11.7	1.4
ISQ Global Infrastructure Fund, L.P.	2015	Value-Add	50,000,000	60,226,194	23,926,812	48,688,045	14.2	1.2
ISQ Global Infrastructure Fund II, L.P.	2017	Value-Add	40,000,000	2,648,872	-	2,358,637	-24.1	0.9
Stonepeak Infrastructure Fund I, L.P.	2016	Opportunistic	43,000,000	45,836,795	20,603,553	32,980,349	14.5	1.2
Stonepeak Infrastructure Fund II-C	2016	Opportunistic	10,000,000	8,478,420	571,642	8,348,673	5.8	1.1
Stonepeak Infrastructure Fund III	2018	Opportunistic	35,000,000	4,024,340	826,040	2,853,106	N/A	N/A
Total			\$ 228,000,000	\$ 171,214,621	\$ 61,004,684	\$ 151,530,088		

*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 XII.

Cash Flow



Monthly Valuation Change

Period : 2018-12-01 - 2018-12-31

Category	Source Account Name	Closing Balance	Market Value Increase/(Decrease)	Transfer In/(Out)	Opening Balance
Grand Total		7,810,624,719.29	(241,040,621.49)	(42,695,433.00)	8,094,360,773.78
Total Global Equity		3,645,351,767.25	(262,238,660.74)	0.00	3,907,590,427.99
Global Equity		3,387,459,196.76	(259,704,386.65)	0.00	3,647,163,583.41
	SSGA R3000 INDEX	1,185,675,388.67	(121,044,536.35)	0.00	1,306,719,925.02
	SSGA MSCI EAFE	627,422,941.19	(31,935,004.00)	0.00	659,357,945.19
	SSGA MSCI CANADA	56,333,530.88	(5,099,578.69)	0.00	61,433,109.57
	SSGA MSCI EM	397,723,279.61	(10,798,258.18)	0.00	408,521,537.79
	QVM TILT	1,120,304,056.41	(90,827,009.43)	0.00	1,211,131,065.84
Global Equity Hedge Funds		257,892,570.49	(2,534,274.09)	0.00	260,426,844.58
	DAVIDSON KEMPNER	88,689,885.97	183,449.97	0.00	88,506,436.00
	ELLIOTT ASSOCIATES	108,209,766.08	(802,311.33)	0.00	109,012,077.41
	INDUS ASIA PACIFIC	327,364.25	21,514.00	0.00	305,850.25
	PFM DIVERSIFIED	174.44	0.00	0.00	174.44
	SAMLYN ON/OFFSHORE	579.61	0.31	0.00	579.30
	VIKING GLOBAL EQUITI	59,690,673.22	(1,937,446.67)	0.00	61,628,119.89
	LUXOR CAP PTNS LP	973,919.90	519.63	0.00	973,400.27
	ESG CBE FUND LP	207.02	0.00	0.00	207.02
Private Equity		526,956,435.31	4,604,659.62	2,493,663.73	519,858,111.96
Private Equity		526,956,435.31	4,604,659.62	2,493,663.73	519,858,111.96
	PRIVATE EQUITY	526,956,435.31	4,604,659.62	2,493,663.73	519,858,111.96
Total Fixed Income		920,861,591.86	14,890,852.70	0.00	905,970,739.16
Fixed Income		920,861,591.86	14,890,852.70	0.00	905,970,739.16
	MACKAY SHIELDS	451,997,468.89	7,558,086.71	0.00	444,439,382.18
	PYRAMIS GLOBAL ADV	468,864,122.97	7,332,765.99	0.00	461,531,356.98
Total Real Return		1,076,518,922.49	(18,671,663.25)	1,953,874.00	1,093,236,711.74
Alternative Absolute Return		215,799,114.61	2,881,272.00	0.00	212,917,842.61
	BREVAN HOWARD	4,340.96	2.70	0.00	4,338.26
	DE SHAW	117,667,807.60	4,016,422.22	0.00	113,651,385.38
	OZ DOMESTIC PTRS	186.78	0.00	0.00	186.78
	WINTON FUTURE FD	38,967,812.03	540,093.67	0.00	38,427,718.36
	GRAHAM ABS RETURN	59,158,967.24	(1,675,246.59)	0.00	60,834,213.83
Alternative Fixed Income		73,777,737.23	122,195.98	0.00	73,655,541.25
	CAPULA GLOBAL	73,777,726.17	122,195.98	0.00	73,655,530.19
	CLAREN ROAD CR. FUND	11.06	0.00	0.00	11.06
Credit		307,050,813.89	(7,247,871.79)	0.00	314,298,685.68
	LOOMIS SAYLES1	150,522,443.76	(3,842,857.55)	4,000,000.00	150,365,301.31
	PIMCO	150,428,622.10	(3,898,806.96)	0.00	154,327,429.06
	WAMCO	6,099,748.03	493,792.72	(4,000,000.00)	9,605,955.31
GILBs		200,377,268.54	895,765.31	0.00	199,481,503.23
	BROWN BROTHERS HARR	200,377,268.54	895,765.31	0.00	199,481,503.23
Publicly Traded Infrastructure		279,513,988.22	(15,323,024.75)	1,953,874.00	292,883,138.97
	PRIV INFRASTR AGGR	148,836,779.36	213,322.00	1,953,874.00	146,669,583.36
	HARVEST FUND ADVISOR	130,677,208.86	(15,536,346.75)	0.00	146,213,555.61
Total Cash		89,628,664.86	(126,097.07)	20,536,909.38	69,217,852.55
Cash Accounts		89,628,664.86	(126,097.07)	20,536,909.38	69,217,852.55
	ERSRI CASH	88,103,896.86	(126,097.07)	26,207,342.38	62,022,651.55
	CITIZENS CASH	1,524,768.00	0.00	(5,670,433.00)	7,195,201.00

Monthly Valuation Change

Period : 2018-12-01 - 2018-12-31

Category	Source Account Name	Closing Balance	Market Value Increase/(Decrease)	Transfer In/(Out)	Opening Balance
Total Other		10,463,392.21	(1,036,181.06)	0.00	11,499,573.27
Other		10,463,392.21	(1,036,181.06)	0.00	11,499,573.27
	RUSSELL OVERLAY FD	10,463,392.21	(1,036,181.06)	0.00	11,499,573.27
Total Miscellaneous		395,375.55	(51,715.93)	0.00	447,091.48
Miscellaneous Accounts		395,375.55	(51,715.93)	0.00	447,091.48
	RI TRANS ACCT	4,948.31	(136.63)	0.00	5,084.94
	SHOTT CAPITAL	338,428.63	(51,496.06)	0.00	389,924.69
	NON-US EQUITY TRANS	43,874.59	852.26	0.00	43,022.33
	FIXED INC TRANS	8,124.02	(935.50)	0.00	9,059.52
*unclassified		1,540,448,569.76	21,588,184.24	(67,679,880.11)	1,586,540,265.63
*Unclassified		1,540,448,569.76	21,588,184.24	(67,679,880.11)	1,586,540,265.63
	ERSRI SMA CASH	253,589,305.07	275,564.71	8,800,000.00	244,513,740.36
	MACKAY LONG DURATION	155,750,334.69	8,180,639.48	(8,400,000.00)	155,969,695.21
	WAMCO LONG DURATION	155,926,747.83	8,374,739.77	(8,500,000.00)	156,052,008.06
	CPC CB LLC	99,906,478.84	(923,895.35)	6,500,000.00	94,330,374.19
	CPC QIS LLC	109,210,448.21	9,080,909.92	1,200,000.00	98,929,538.29
	CPC AP LLC	98,188,336.92	(4,176,524.29)	9,200,000.00	93,164,861.21
	PRIVATE CREDIT	112,380,975.18	456,829.00	(847,788.73)	112,771,934.91
	OPPORTUNISTIC PRV CR	38,230,622.00	4,643.00	(1,882,584.00)	40,108,563.00
	CORE REAL ESTATE	363,310,054.93	0.00	(75,714,455.59)	439,024,510.52
	NON CORE REAL ESTATE	153,955,266.09	315,278.00	1,964,948.21	151,675,039.88

CASH FLOW ANALYSIS - INCOME & EXPENSES

Employees Retirement System

FISCAL YEAR 2019	FY 2018-19												
	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Actual December	Actual November	Actual October	Actual September	Actual August	Actual July 2018
MEMBER BENEFITS	834,752,260	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,501,214	69,654,074	69,729,526	69,703,524	69,681,837	69,482,084
ADMINISTRATIVE EXPENSES	9,245,755	1,255,280.98	1,021,300	529,120	1,264,456	523,667	661,953	912,931	777,303	684,123	733,118	483,861	398,643
INVESTMENT EXPENSES	46,613,687	270,376	10,424,015	3,807,683	2,045,442	2,252,368	708,685	13,124,115	19,955	18,146	13,138,426	0	804,475
TOTAL OUTFLOW	890,611,702	71,025,657	80,945,315	73,836,803	72,809,898	72,276,035	70,870,638	83,538,260	70,451,332	70,431,795	83,575,068	70,165,698	70,685,202
CONTRIBUTIONS	516,471,248	54,595,381	44,734,514	41,272,504	42,480,747	40,865,166	47,531,440	34,863,860	55,191,655	43,359,980	27,337,674	31,357,169	52,881,158
OTHER INCOME*	106,300,986	3,138,460	13,807,256	14,038,691	2,870,790	14,041,528	(10,388,798)	1,540,773	19,157,026	(2,560,631)	30,034,164	18,350,593	2,271,136
TOTAL INCOME	622,772,234	57,733,841	58,541,770	55,311,195	45,351,537	54,906,694	37,142,642	36,404,633	74,348,681	40,799,349	57,371,838	49,707,762	55,152,294
DIFFERENCE	(267,839,469)	(13,291,816)	(22,403,546)	(18,525,608)	(27,458,361)	(17,369,341)	(33,727,996)	(47,133,628)	3,897,349	(29,632,446)	(26,203,230)	(20,457,936)	(15,532,908)

Municipal Employees Retirement System

FISCAL YEAR 2019	FY 2018-19												
	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Actual December	Actual November	Actual October	Actual September	Actual August	Actual July 2018
MEMBER BENEFITS	98,779,847	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,351,832	8,338,550	8,310,615	8,246,506	8,185,416	8,146,928
ADMINISTRATIVE EXPENSES	2,203,379	298,439	242,816	125,497	299,070	123,576	155,785	220,523	186,896	164,492	175,891	115,551	94,842
INVESTMENT EXPENSES	11,150,760	64,281	2,478,330	903,107	483,790	531,519	166,784	3,170,198	4,798	4,363	3,152,198	0	191,394
TOTAL OUTFLOW	112,133,986	8,562,720	10,921,146	9,228,603	8,982,860	8,855,095	8,522,569	11,742,553	8,530,245	8,479,470	11,574,595	8,300,967	8,433,164
CONTRIBUTIONS	67,528,388	5,597,269	5,857,272	5,099,829	6,369,814	5,329,289	5,854,840	6,054,796	6,104,213	5,723,536	5,286,222	4,903,739	5,347,569
OTHER INCOME*	25,397,348	746,159	3,282,702	3,329,698	679,002	3,313,551	(2,444,924)	372,182	4,606,150	(615,683)	7,205,857	4,382,324	540,330
TOTAL INCOME	92,925,736	6,343,428	9,139,974	8,429,527	7,048,816	8,642,840	3,409,916	6,426,978	10,710,363	5,107,853	12,492,079	9,286,063	5,887,899
DIFFERENCE	(19,208,251)	(2,219,292)	(1,781,172)	(799,077)	(1,934,044)	(212,255)	(5,112,653)	(5,315,576)	2,180,119	(3,371,616)	917,484	985,097	(2,545,265)

CASH FLOW ANALYSIS - INCOME & EXPENSES

CASH FLOW ANALYSIS - INCOME & EXPENSES

State Police
Retirement System

	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Actual December	Actual November	Actual October	Actual September	Actual August	Actual July 2018
MEMBER BENEFITS	5,995,575	500,000	500,000	500,000	500,000	500,000	500,000	499,263	499,263	499,263	499,263	499,263	499,263
ADMINISTRATIVE EXPENSES	196,460	26,577	21,565	11,140	26,530	10,986	13,802	19,845	16,748	14,740	15,742	10,327	8,458
INVESTMENT EXPENSES	996,232	5,724	220,101	80,165	42,917	47,252	14,777	285,288	430	391	282,118	0	17,069
TOTAL OUTFLOW	7,188,267	532,302	741,665	591,305	569,447	558,238	528,579	804,396	516,440	514,393	797,122	509,589	524,790
CONTRIBUTIONS	5,235,823	527,408	316,594	332,007	290,687	447,000	417,169	381,166	668,195	473,748	511,035	444,510	426,307
OTHER INCOME*	2,319,138	66,448	291,537	295,564	60,234	294,578	(216,615)	33,493	412,753	(55,171)	644,915	391,653	99,750
TOTAL INCOME	7,554,962	593,856	608,131	627,571	350,921	741,578	200,554	414,658	1,080,947	418,577	1,155,949	836,162	526,057
DIFFERENCE	366,695	61,555	(133,534)	36,266	(218,526)	183,339	(328,024)	(389,737)	564,507	(95,817)	358,827	326,573	1,267

Judicial
Retirement System

	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Actual December	Actual November	Actual October	Actual September	Actual August	Actual July 2018
MEMBER BENEFITS	3,393,076	275,000	275,000	275,000	275,000	275,000	275,000	303,781	303,781	288,071	288,071	288,071	271,301
ADMINISTRATIVE EXPENSES	103,646	14,070	11,402	5,885	13,828	5,793	7,265	10,482	8,859	7,797	8,326	5,463	4,476
INVESTMENT EXPENSES	526,183	3,031	116,375	42,351	22,369	24,915	7,778	150,694	227	207	149,204	0	9,033
TOTAL OUTFLOW	4,022,905	292,100	402,777	323,236	311,197	305,708	290,042	464,958	312,868	296,075	445,601	293,534	284,810
CONTRIBUTIONS	3,102,540	380,045	236,017	260,088	267,842	271,001	270,000	212,730	310,382	219,155	218,491	240,520	216,269
OTHER INCOME*	1,225,534	35,178	154,145	156,146	31,395	155,323	(114,013)	17,692	218,340	(29,185)	341,078	207,202	52,233
TOTAL INCOME	4,328,073	415,223	390,162	416,234	299,237	426,324	155,987	230,421	528,722	189,971	559,569	447,722	268,502
DIFFERENCE	305,168	123,122	(12,614)	92,998	(11,960)	120,616	(134,055)	(234,536)	215,854	(106,105)	113,968	154,188	(16,308)

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

FISCAL YEAR 2019

INVESTMENT MANAGER FEES, PROFESSIONAL FEES & OPERATING EXPENSES

ERSRI Pooled Trust

ACCRUAL BASIS

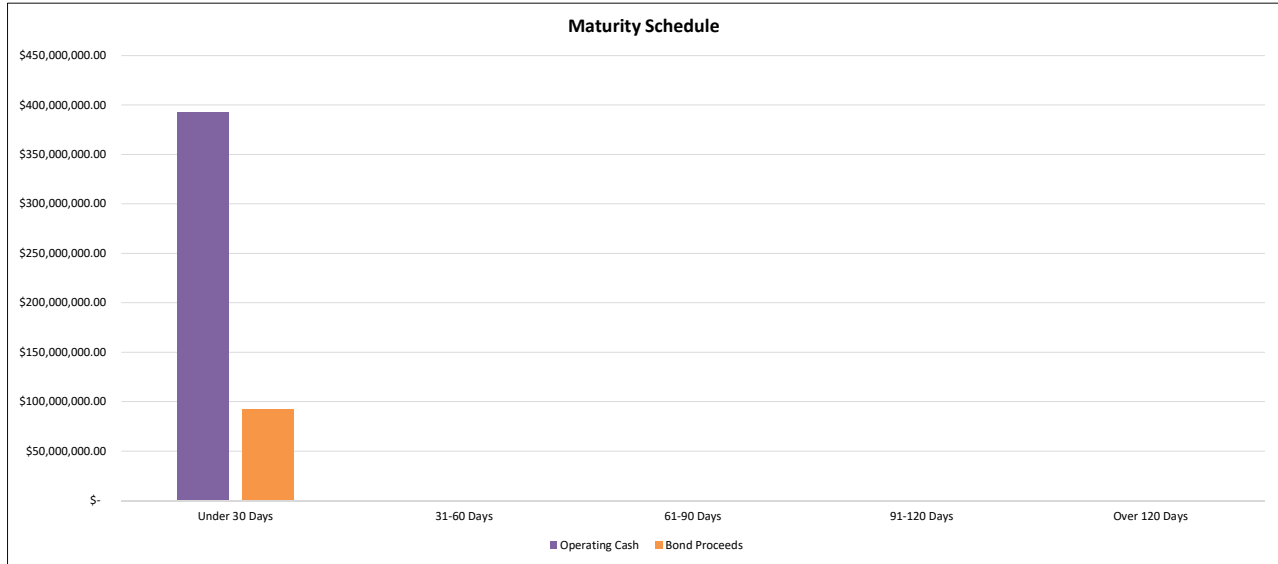
	Actual Jul 18	Actual Aug	Projected Sept	Projected Oct	Projected Nov	Projected Dec	Projected Jan 19	Projected Feb	Projected Mar	Projected Apr	Projected May	Projected June	Projected TOTAL
EQUITIES US													
SSGA Russell 3000			43,255			41,602			37,937			39,443	162,238
Shott Capital/Hamilton Lane			415			1,364			1,087			539	3,406
SSGA QVM Tilt			121,825			124,353			124,256			123,000	493,434
			165,496			167,319			163,281			169,782	172,444
FIXED INCOME													
Fidelity			154,815			159,089			157,734			156,000	627,638
Mackay Shields			142,952			149,208			170,000			156,000	618,160
Brown Bros.TIPS/GILB			62,949			68,794			63,102			65,000	259,845
			360,716			377,091			390,836			377,000	1,505,642
INT'L EQUITIES													
SSGA MSCI EAFE			57,473			61,940			71,248			62,489	253,150
SSGA MSCI CAD			7,206			8,333			8,206			7,443	31,188
SSGA MSCI Emerg Mkts			108,247			90,521			96,777			104,950	400,496
			172,925			160,794			176,232			174,883	684,834
CREDIT													
WAMCO			108,676			111,879			108,385			108,461	437,401
PIMCO			117,474			122,220			118,394			117,000	475,088
			226,150			234,099			226,779			225,461	912,489
Infrastructure													
Harvest Partners			302,413			268,080			269,214			275,283	1,114,990
Systematic Trend Followers	202,916	210,203	203,143	205,889	186,893	209,195	200,000	200,000	200,000	200,000	200,000	200,000	2,418,238
Long Duration													
WAMCO			30,519			31,000			31,000			31,000	123,519
Mackay Shields			30,563			32,000			32,000			32,000	126,563
			61,081			63,000			63,000			63,000	250,081
REAL ESTATE	0	0	2,268,181	0	0	3,900,000	0	0	3,900,000	0	0	3,900,000	13,968,181
ALTERNATIVE INVESTMENTS													
Private Infrastructure			1,538,277			2,250,000			2,250,000			2,250,000	8,288,277
Hedge Funds			4,907,979			5,500,000			5,500,000			5,500,000	21,407,979
Private Equity			5,786,256			5,000,000			5,000,000			5,000,000	20,786,256
	0	0	12,232,512	0	0	12,750,000	0	0	12,750,000	0	0	12,750,000	50,482,512
Other													
Russell Overlay			48,690			75,000			75,000			75,000	273,690
Payden & Rygel	22,355	21,954	19,940	19,222	20,880	23,187	23,186	26,124	23,988	23,600	22,583	23,400	270,419
	22,355	21,954	68,630	19,222	20,880	98,187	23,186	26,124	98,988	23,600	22,583	98,400	544,109
SUB TOTAL-INV MGMT FEES	225,271	232,157	16,061,248	225,111	207,773	18,227,765	223,186	226,124	18,238,329	223,600	222,583	18,233,809	72,053,521
PROFESSIONAL FEES													
Legal	8,276	11,982	10,063	12,274	4,470	6,514	2,588	4,663	11,832	10,327	7,892	15,569	106,448
BNY Mellon - Custodial	52,464	41,456	52,175	45,409	40,140	46,222	44,254	38,731	41,190	38,931	39,126	39,492	519,590
Cliffwater	33,333	33,333	33,334	33,333	33,333	33,334	33,333	33,333	33,334	33,333	33,333	33,333	400,000
PCA General & Infrastructure	6,250	6,250	6,250	6,250	6,250	25,000	6,250	6,250	25,000	6,250	6,250	25,000	131,250
NEPC	0	0	91,250	0	0	91,250	0	0	91,250	0	0	91,250	365,000
Aberdeen	26,494	26,564	25,723	25,746	24,308	27,000	27,000	27,000	27,000	27,000	27,000	27,000	317,835
PCA Real Estate	10,417	10,417	10,417	10,417	10,417	10,417	10,417	10,417	10,417	10,417	10,417	10,417	125,004
	137,234	130,001	229,211	133,429	118,918	239,737	123,841	120,393	240,024	126,258	124,018	242,062	1,965,126
OPERATING EXPENSE													
Retirement Transfers	319,579	913,890	551,642	720,898	1,057,736	896,040	648,915	901,064	834,367	696,560	650,150	1,361,470	9,552,310
Other Expense	0	0	19,000	0	0	29,250	0	2,500	7,020	0	2,976	25,244	85,990
	319,579	913,890	570,642	720,898	1,057,736	925,290	648,915	903,564	841,387	696,560	653,126	1,386,714	9,638,300
TOTAL:	682,084	1,276,048	16,861,101	1,079,438	1,384,427	19,392,792	995,942	1,250,081	19,319,740	1,046,418	999,727	19,862,585	83,656,947

Note: Numbers in bold are actual.

Section XIII.

Short-Term Investments

Short-Term Investment Maturity Schedule & SIC Compliance Report at December 31, 2018



SHORT-TERM INVESTMENT OPERATING PORTFOLIO BALANCES						
Vendor	CD	CDARS	Money Mkt	CoD	OSIP	Total (\$)
Guidelines-Total/Vendor	50%/20%	50%/20%	75%/35%	75%/35%	50%/50%	
OSIP	-	-	-	-	169,428,282	\$ 169,428,281.99
	0%	0%	0%	0%	43%	43.1%
Bank RI	-	-	10,186,622	-	-	\$ 10,186,621.91
	0%	0%	3%	0%	0%	2.6%
Santander Bank	-	-	-	34,033,433	-	\$ 34,033,432.64
	0%	0%	0%	9%	0%	8.7%
People's Credit Union Comm Dep.	-	2,697,746	-	-	-	\$ 2,697,746.31
	0%	1%	0%	0%	0%	0.69%
Navigant Credit Union Comm Dep	-	5,483,489	-	-	-	\$ 5,483,489.04
	0%	1%	0%	0%	0%	1.40%
Fidelity	-	-	-	-	-	-
	0%	0%	0%	0%	0%	0.00%
Bristol County Savings Bk Comm Dep	-	-	-	4,097,933	-	\$ 4,097,932.84
	0%	0%	0%	1%	0%	1.04%
Centreville Bank	-	5,119,935	-	-	-	\$ 5,119,934.65
Community Deposit	-	7,546,302	-	-	-	\$ 7,546,302.46
	0%	2%	0%	0%	0%	3.22%
Citizens Bank	-	-	-	63,606,207	-	\$ 63,606,206.73
	0%	0%	0%	16%	0%	16.2%
Webster Bank	-	-	-	36,016,826	-	\$ 36,016,826.15
	0%	0%	0%	9%	0%	9.2%
Customers Bank	-	-	-	17,634,612	-	\$ 17,634,611.60
	0%	0%	0%	4%	0%	4.5%
Washington Trust	-	21,411,468	-	-	-	\$ 21,411,468.37
Community Deposit	-	2,886,020	-	-	-	\$ 2,886,020.48
	0%	5%	0%	0%	0%	6.2%
Freedom National Community Dep.	-	-	-	-	-	\$ -
	0%	0%	0%	0%	0%	0.0%
TD Bank	-	-	-	12,792,210	-	\$ 12,792,210.09
	0%	0%	0%	3%	0%	3.3%
BankNewport Community Deposit	-	-	-	-	-	\$ -
	0%	0%	0%	0%	0%	0.0%
TOTALS	\$ -	\$ 37,139,006.18	\$ 10,186,621.91	\$ 168,181,220.05	\$ 169,428,281.99	\$ 392,941,085.26
(%) PORTFOLIO	0.0%	9.5%	2.6%	42.8%	43.1%	100.0%

BOND PROCEED BALANCE						
Vendor	CD	CDARS	Money Mkt	CoD	OSIP	Total (\$)
Guidelines-Total/Vendor	50%/20%	50%/20%	75%/35%	75%/35%	50%/50%	
OSIP - BOND PROCEEDS	-	-	-	-	92,264,296	\$ 92,264,296.16
	0.0%	0.0%	0.0%	0.0%	19.0%	19.0%
TOTALS WITH BONDS	\$ -	\$ 37,139,006.18	\$ 10,186,621.91	\$ 168,181,220.05	\$ 261,692,578.15	\$ 485,205,381.42

CD	= Certificate of Deposit
CDARS	= Cert.of Dep.Acct Registry Svc
MMKT	= Money Market
CoD	= Collateralized Deposit
OSIP	= Ocean State Investment Pool

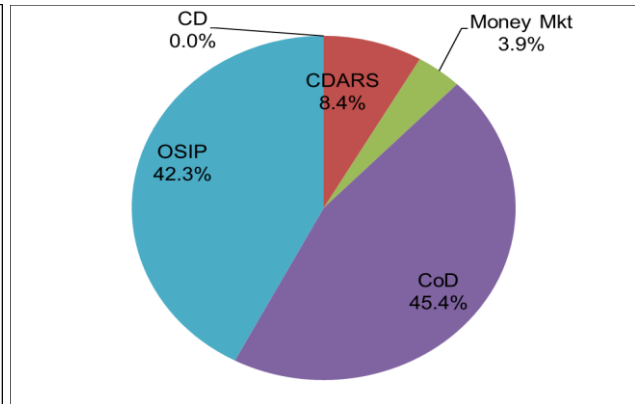
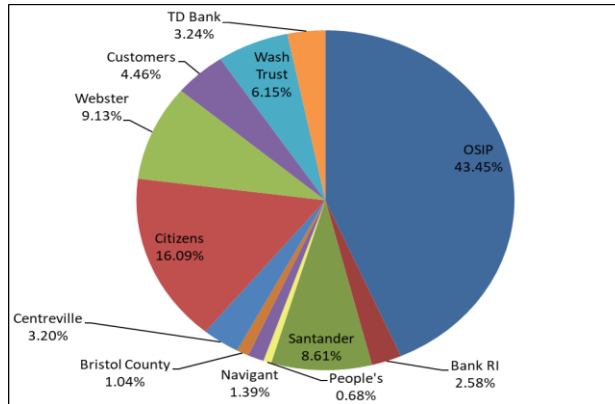
State of Rhode Island
Short Term Cash Monthly Performance
Performance for
December 01, 2018 to December 31, 2018

Fund Name	Beginning Balance	Ending Balance	Average Daily Balance	Earnings	Yield(Annual)
GENERAL FUND	\$ 82,972,106.71	\$ 162,016,088.00	\$ 169,864,576.21	\$ 296,865.46	2.0577%
H.A.V.A	\$ 303.11	\$ 303.60	\$ 303.58	\$ 0.52	2.0168%
GENERAL FUND (HIST PRES)	\$ 556,361.28	\$ 557,418.49	\$ 557,381.85	\$ 1,135.92	2.3995%
HISTORIC TAX CREDITS	\$ 10,817,239.69	\$ 10,837,794.92	\$ 10,837,082.48	\$ 22,085.57	2.3995%
HIGHWAY FUND	\$ 62,605,327.74	\$ 57,427,352.55	\$ 52,762,656.78	\$ 105,568.81	2.3558%
T.D.I. RESERVE (DET)	\$ 113,159,252.64	\$ 97,504,526.50	\$ 105,454,746.91	\$ 143,167.58	1.5985%
RICAP GL FUND 21	\$ 558,365.55	\$ 563,538.57	\$ 563,512.54	\$ 806.95	1.6861%
BOND CAPITAL FUND	\$ 1,072,100.44	\$ 4,385,420.91	\$ 2,904,583.82	\$ 5,949.66	2.4118%
R.I. CLEAN WATER ACT	\$ 3,286,573.75	\$ 3,291,107.87	\$ 3,290,901.38	\$ 6,401.27	2.2902%
STATE LOTTERY FUND	\$ 21,915,165.18	\$ 28,157,514.70	\$ 26,372,046.84	\$ 49,503.93	2.2102%
ASSESSED FRINGE BEN ADM	\$ 1,506,545.37	\$ 1,509,914.26	\$ 1,509,820.51	\$ 2,906.19	2.2664%
AUTO EQUIPMENT SERVICE	\$ 2,198.73	\$ 2,202.31	\$ 2,202.19	\$ 3.74	1.9996%
HEALTH INSURANCE FUND	\$ 21,889,998.60	\$ 10,547,118.60	\$ 14,652,622.31	\$ 29,384.89	2.3612%
FLEET REVOLVING LOAN FUND	\$ 2,905,486.16	\$ 2,910,023.49	\$ 2,909,872.01	\$ 4,695.90	1.9001%
EMPLOYEES RETIREMENT	\$ 5,600,978.14	\$ 213,150.98	\$ 12,883,346.21	\$ 23,947.96	2.1886%
MUNICIPAL EMPLOYEES RET.	\$ 216,550.27	\$ 119,602.36	\$ 2,654,925.17	\$ 4,992.76	2.2142%
RETIREE HEALTH FUND	\$ 2,040,442.79	\$ 3,043,233.96	\$ 1,268,960.23	\$ 2,485.66	2.3063%
BOG RETIREE FUND	\$ 1,609.92	\$ 1,612.54	\$ 1,612.45	\$ 2.74	2.0008%
RIPTA HEALTH FUND	\$ 2,772,806.21	\$ 3,278,109.45	\$ 3,294,057.98	\$ 5,595.69	2.0001%
PERMANENT SCHOOL FUND	\$ 1,800,982.61	\$ 1,804,404.89	\$ 1,804,286.27	\$ 3,677.07	2.3995%
TEACHER RETIREE HEALTH FUND	\$ 3,985,218.58	\$ 3,992,549.74	\$ 3,992,306.46	\$ 7,541.72	2.2242%
RI ST POL RETIREE HEALTH	\$ 227,735.24	\$ 228,106.17	\$ 228,093.67	\$ 387.47	2.0001%
RI LEG RETIREE HEALTH	\$ 845.01	\$ 846.39	\$ 846.34	\$ 1.44	2.0033%
RI JUDICIAL RETIREE HEALTH	\$ 41,274.44	\$ 41,341.67	\$ 41,339.40	\$ 70.22	2.0000%
UNIVERSITY COLLEGE	\$ 15,575.51	\$ 2,215,602.73	\$ 1,428,410.78	\$ 2,950.52	2.4321%
INDUS. BLDG. & MTG. INS.	\$ 745,269.41	\$ 746,685.59	\$	\$ -	
Operating Funds Totals	\$ 340,696,313.08	\$ 395,395,571.24	\$ 419,280,494.37	\$ 720,129.64	2.02%
BOND CCDL 2006 SERIES C	\$ 492,149.70	\$ 492,149.70	\$ 492,177.68	\$ 1,003.04	2.3995%
GO BND-NTAX 2007 SERIES A	\$ 124,237.53	\$ 124,237.53	\$ 124,244.59	\$ 253.21	2.3996%
CCDL10B BOND CAPITAL COMPONENT	\$ 950,000.00	\$ 950,000.00	\$ 950,054.01	\$ 1,936.17	2.3995%
CCDL10C	\$ 164,670.68	\$ 164,983.59	\$ 164,972.74	\$ 336.21	2.3995%
CCDL2011A	\$ 3,772,023.46	\$ 3,769,723.46	\$ 3,770,903.22	\$ 7,684.89	2.3995%
CCDL2012B	\$ 6,092,902.03	\$ 6,092,824.76	\$ 6,093,176.13	\$ 12,417.77	2.3996%
GO CCDL 2013A	\$ 2,700,000.00	\$ 2,700,000.00	\$ 2,700,153.50	\$ 5,502.79	2.3995%
GO CCDL 2014A	\$ 94,193.10	\$ 94,193.10	\$ 94,198.46	\$ 191.97	2.3995%
GO CCDL 2014B	\$ 40,664.27	\$ 40,741.54	\$ 40,738.87	\$ 82.88	2.3954%
GO CCDL 2016A	\$ 5,492,320.65	\$ 4,653,458.06	\$ 5,005,591.58	\$ 10,185.91	2.3959%
GO CCDL 2016B	\$ 3,230,398.20	\$ 3,229,934.45	\$ 3,230,312.60	\$ 6,583.23	2.3995%
GO CCDL 2017	\$ 4,221,296.09	\$ 4,975,004.81	\$ 4,659,154.50	\$ 9,508.84	2.4030%
CCDL99A 1999A	\$ 206,569.39	\$ 206,569.39	\$	\$ -	0.0000%
CLEAN WATER 2007 SERIES A	\$ 198,130.34	\$ 198,130.34	\$ 198,141.60	\$ 403.80	2.3995%
CCDL2011A CLEAN WATER COMPONENT	\$ 1,236,000.00	\$ 1,236,000.00	\$ 1,236,070.27	\$ 2,519.06	2.3995%
GO CCDL 2018A	\$ 48,414,111.38	\$ 35,571,609.85	\$ 40,960,449.61	\$ 83,242.01	2.3928%
GO CCDL 2018B	\$ 25,374,109.49	\$ 25,374,109.49	\$ 25,375,661.73	\$ 51,174.26	2.3745%
Bond Proceeds Fund Totals	\$ 102,803,776.31	\$ 89,873,670.07	\$ 95,096,001.09	\$ 193,026.04	2.390%
TANS PROCEEDS	\$ -	\$ -	\$ -	\$ -	
Grand Totals	\$ 443,500,089.39	\$ 485,269,241.31	\$ 514,376,495.46	\$ 913,155.68	2.089%

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

**Issuer Credit Rating
December 31, 2018**

Issuer	Type of Instrument*	M/E % Portfolio	Issuer Ratings			S-T Debt Rating		L-T Debt Rating		Credit Outlook	Rating
			Moody's	Moody's	S&P	Moody's	S&P	S&P	Veribanc		
Bank of America	-	0.0%	Baa1	P-2	A-2	A3	A-	Stable	GREEN/*		
Bank RI	3,4	2.6%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Bristol County Sav. Bank	4	1.0%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**/BB		
Centreville Bank	4	3.2%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**/BB		
Citizens Bank	4	16.1%	Baa1	P-2	A-2	A1	BBB+	Stable	GREEN/*		
Customers Bank	4	4.5%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/*		
Home Loan Inv. Bank	-	0.0%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Navigant Credit Union	4	1.4%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Ocean State Inv. Pool	6	43.5%	N/R	N/R	N/R	N/R	N/R	N/R	N/R		
People's Credit Union	4	0.7%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Santander Bank	4	8.6%	A3	P-2	A-2	A3	A-	Stable	GREEN/*		
TD Bank	4	3.2%	Aa2	P-1	A-1+	Aa2	AA-	Stable	GREEN/**		
Washington Trust	4,7	6.2%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Webster Bank	4	9.1%	Baa1	P-1	A-2	A1	BBB+	Stable	GREEN/**		



CD = Certificate of Deposit	1*
CDARS = Cert.of Dep.Acct Registry Svc	2*
MMKT = Money Market	3*
CoD = Collateralized Deposit	4*
OSIP = Ocean State Investment Pool	5*

Ratings Definitions

Moody's Short-Term Debt Ratings:
P-1 - Prime-1 have a superior ability for repayment of sr. S-T debt
P-2 - Prime-1 have a strong ability for repayment of sr. S-T debt
P-3 - Prime-1 have acceptable ability for repayment of sr. S-T debt
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.

VERIBANC Ratings:
GREEN - The institution's equity exceeds a modest percentage of its assets and had positive net income during the most recent reporting period.
YELLOW - The institution's equity is at a minimal percentage of its assets or it incurred a net loss during the most recent reporting period.
RED - The institution's equity is less than a minimal percentage of its assets or it incurred a significant net loss during the most recent reporting period (or both).
BB - Blue Ribbon Bank
 Modifiers: ***-Very Strong, **-Strong, *-Moderate, No Stars-Poor

State of Rhode Island

OSIP Performance FY19 Q2

October 1, 2018 through December 31, 2018

Fund Name	Beginning Balance	Ending Balance	Average Daily Balance	Earnings	Yield
GENERAL FUND	\$ 73,831,807	\$ 66,883,667	\$ -	\$ 246,251	2.30%
GENERAL FUND (HIST PRES)	\$ 554,371	\$ 557,418	\$ 555,278	\$ 3,241	2.32%
HISTORIC TAX CREDITS	\$ 10,778,552	\$ 10,837,795	\$ 10,796,183	\$ 63,013	2.32%
HIGHWAY FUND	\$ 66,028,634	\$ 45,775,557	\$ 56,901,364	\$ 330,876	2.31%
T.D.I. RESERVE (DET)	\$ 24,186,419	\$ 16,811,185	\$ 21,465,290	\$ 124,985	2.31%
RICAP GL FUND 21	\$ 8,524,399	\$ 59,607	\$ 3,620,524	\$ 20,503	2.25%
BOND CAPITAL FUND	\$ -	\$ 4,300,318	\$ 1,004,281	\$ 6,129	2.42%
R.I. CLEAN WATER ACT	\$ 2,377,558	\$ 2,390,626	\$ 2,381,447	\$ 13,900	2.32%
STATE LOTTERY FUND	\$ 12,407,192	\$ 6,475,385	\$ 12,166,633	\$ 70,896	2.31%
ASSESSED FRINGE BEN ADM	\$ 14,582	\$ 1,006,462	\$ 656,846	\$ 3,907	2.36%
HEALTH INSURANCE FUND	\$ 26,391,500	\$ 8,539,295	\$ 22,646,877	\$ 131,045	2.30%
EMPLOYEES RETIREMENT	\$ -	\$ 795	\$ 1,814,010	\$ 11,050	2.42%
MUNICIPAL EMPLOYEES RET.	\$ -	\$ 100,349	\$ 489,098	\$ 2,997	2.43%
RETIREE HEALTH FUND	\$ -	\$ 1,002,791	\$ 804,296	\$ 4,770	2.35%
PERMANENT SCHOOL FUND	\$ 1,794,542	\$ 1,804,405	\$ 1,797,477	\$ 10,491	2.32%
TEACHER RETIREE HEALTH FUND	\$ 2,307,052	\$ 2,319,732	\$ 2,310,826	\$ 13,487	2.32%
UNIVERSITY COLLEGE	\$ 1,502,988	\$ 2,206,834	\$ 801,719	\$ 4,739	2.35%
INDUS. BLDG. & MTG. INS.	\$ 742,604	\$ 746,686	\$ 743,819	\$ 4,341	2.32%
Operating Funds Totals	\$ 231,442,201	\$ 171,818,908	\$ 140,955,968	\$ 1,066,621	2.33%
BOND CCDL 2006 SERIES C	\$ 492,150	\$ 492,150	\$ 491,208	\$ 2,867	2.32%
GO BND-NTAX 2007 SERIES A	\$ 124,238	\$ 124,238	\$ 124,000	\$ 724	2.32%
CCDL10B BOND CAPITAL COMPONENT	\$ 950,000	\$ 950,000	\$ 948,182	\$ 5,534	2.32%
CCDL10C	\$ 164,082	\$ 164,984	\$ 164,350	\$ 959	2.32%
CCDL2011A	\$ 4,369,029	\$ 3,769,723	\$ 3,886,721	\$ 22,651	2.31%
CCDL2012B	\$ 6,092,902	\$ 6,092,825	\$ 6,081,220	\$ 35,492	2.32%
GO CCDL 2013A	\$ 2,700,000	\$ 2,700,000	\$ 2,694,834	\$ 15,728	2.32%
GO CCDL 2014A	\$ 94,193	\$ 94,193	\$ 94,013	\$ 549	2.32%
GO CCDL 2014B	\$ 40,664	\$ 40,742	\$ 40,611	\$ 237	2.31%
GO CCDL 2016A	\$ 9,715,923	\$ 4,653,458	\$ 6,205,967	\$ 35,935	2.30%
GO CCDL 2016B	\$ 3,231,498	\$ 3,229,934	\$ 3,224,400	\$ 18,818	2.32%
GO CCDL 2017	\$ 8,831,052	\$ 4,975,005	\$ 5,346,510	\$ 30,991	2.30%
CCDL99A 1999A	\$ 206,569	\$ 206,569	\$ 206,179	\$ 782	1.51%
CLEAN WATER 2007 SERIES A	\$ 198,130	\$ 198,130	\$ 197,751	\$ 1,154	2.32%
CCDL2011A CLEAN WATER COMPONENT	\$ 1,236,000	\$ 1,236,000	\$ 1,233,635	\$ 7,200	2.32%
GO CCDL 2018A	\$ 67,955,082	\$ 35,571,610	\$ 49,825,139	\$ 288,952	2.30%
GO CCDL 2018B	\$ 31,227,431	\$ 25,374,109	\$ 27,247,552	\$ 158,088	2.30%
Bond Proceeds Fund Totals	\$ 137,628,944	\$ 89,873,670	\$ 108,012,271	\$ 626,661	2.26%
Grand Totals	\$ 369,071,145	\$ 261,692,578	\$ 248,968,239	\$ 1,693,282	2.30%

Section XIV.

Defined Contribution Plan



2018 401(a) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(I)	(I)	(I)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
As of 12/31/2018	Ticker	Mgr Tenure	AUM \$M	Net ER	%ile ER	Rev Share	Recent Returns		Annualized Total Returns as of 12/31/18								Incep Date	
							3 Mo	YTD	1 Yr	%ile	3 Yr	%ile	5 Yr	%ile	10 Yr	%ile		SI
TIAA Stable Value							0.53	2.05	2.05		1.98		1.95				1.92	3/31/2012
Current crediting rate = 2.10																		
FIXED INCOME																		
Intermediate-Term Bond																		
Vanguard Total Bond Market Index Adm	VBTIX	5.92	203,989	0.05	3	0.00	1.61	(0.03)	(0.03)	31	2.03	54	2.46	39	3.42	77	3.95	11/12/2001
BBgBarc US Agg Float Adj TR USD							1.58	(0.08)	(0.08)		2.09		2.50					
Intermediate-Term Bond Median						0.67	0.97	(0.59)	(0.59)		2.09		2.30		4.47			
Intermediate-Term Bond Number of Funds					1061	1061	1047	1018	1018	1018	952	952	909	909	803	803		
Inflation-Protected Bond																		
PIMCO Real Return Instl	PRRIX	11.08	65,631	0.88	67	0.00	(0.93)	(1.97)	(1.97)	68	2.28	16	1.48	28	4.35	4	5.53	1/29/1997
BBgBarc US Treasury US TIPS TR USD							(0.42)	(1.26)	(1.26)		2.11		1.69		3.64			
Inflation-Protected Bond Median						0.66	(0.86)	(1.62)	(1.62)		1.73		1.06		3.01			
Inflation-Protected Bond Number of Funds					232	232	230	224	224	224	218	218	206	206	149	149		
Large Cap Blend - Index																		
Vanguard Institutional Index I	VINIX	18.08	200,004	0.04	2	0.00	(13.53)	(4.42)	(4.42)	27	9.22	15	8.46	10	13.11	19	9.39	7/31/1990
S&P 500 TR USD							(13.52)	(4.38)	(4.38)		9.26		8.49		13.12			
Vanguard FTSE Social Index Inv	VFTSX	3.08	4,351	0.18	6	0.00	(13.11)	(3.45)	(3.45)	17	9.73	8	9.12	4	14.36	5	4.13	5/31/2000
Spliced Social Index*****							(13.11)	(3.32)	(3.32)		9.90		9.33		14.61			
Russell 3000 TR USD							(14.30)	(5.24)	(5.24)		8.97		7.91		13.18			
Large Blend Median						0.88	(13.78)	(6.02)	(6.02)		7.88		6.93		12.07			
Large Blend Number of Funds					1347	1347	1334	1319	1319	1319	1241	1240	1177	1177	1042	1035		
Mid-Cap Blend																		
Vanguard Mid Cap Index Institutional	VMCIX	20.67	86,953	0.04	2	0.00	(15.47)	(9.24)	(9.24)	32	6.39	50	6.22	14	13.89	10	9.11	5/21/1998
Spliced Mid Cap Index*							(15.46)	(9.22)	(9.22)		6.40		6.24		13.91			
CRSP US Mid Cap TR USD							(15.46)	(9.22)	(9.22)		6.40		6.24		13.74			
Mid-Cap Blend Median						1.00	(16.76)	(11.56)	(11.56)		4.89		4.01		12.14			
Mid-Cap Blend Number of Funds					437	437	435	433	433	433	394	394	371	371	318	318		
Small Blend																		
Vanguard Small Cap Index I	VSCIX	2.75	77,891	0.04	2	0.00	(18.34)	(9.32)	(9.32)	20	7.64	23	5.26	13	13.60	8	8.23	7/7/1997
Spliced Small Cap Index**							(18.33)	(9.33)	(9.33)		7.62		5.24		13.53			
CRSP US Small Cap TR USD							(18.33)	(9.33)	(9.33)		7.62		5.24		14.07			
Small Blend Median						1.13	(19.73)	(12.53)	(12.53)		5.84		3.48		11.68			
Small Blend Number of Funds					748	748	746	743	743	743	713	713	649	649	544	544		
Foreign Large Blend																		
Schwab International Index	SWISX	1.75	4,353	0.06	3	0.00	(12.37)	(13.33)	(13.33)	27	3.15	42	0.50	39	6.08	44	3.81	5/19/1997
MSCI EAFE NR USD							(12.54)	(13.79)	(13.79)		2.87		0.53		6.32			
Foreign Large Blend Median						0.99	(13.04)	(15.20)	(15.20)		2.44		(0.07)		5.90			
Foreign Large Blend Number of Funds					728	728	720	705	705	705	674	674	604	604	516	516		



2018 401(a) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(I)	(I)	(I)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)		
As of 12/31/2018	Ticker	Mgr Tenure	AUM \$M	Net ER	%ile ER	Rev Share	Recent Returns		Annualized Total Returns as of 12/31/18								Incep Date			
							3 Mo	YTD	1 Yr	%ile	3 Yr	%ile	5 Yr	%ile	10 Yr	%ile		SI		
Diversified Emerging Mkts																				
Vanguard Emerging Mkts Stock Idx Adm	VEMAX	10.42	75,602	0.14	1	0.00	(6.29)	(14.58)	(14.58)	34	7.84	40	1.32	34	7.47	51	4.59	6/23/2006		
<i>Spliced Emerging Markets Index***</i>							(6.42)	(14.76)	(14.76)		7.68		1.35		7.68					
FTSE EMs AC China A Inclusion NR USD							(6.44)	(14.80)	(14.80)		7.18		1.78		8.29					
FTSE Emerging NR USD							(6.16)	(13.35)	(13.35)		9.00		2.06		8.23					
MSCI EM NR USD							(7.47)	(14.58)	(14.58)		9.25		1.65		8.02					
<i>Diversified Emerging Mkts Median</i>							1.29	(7.69)	(16.62)	(16.62)	6.96		0.91		7.65					
<i>Diversified Emerging Mkts Number of Funds</i>							828	828			811	789	789	789	738	738	608	608	341	340
Lifecycle																				
Vanguard Target Retire Inc Trust I					0.07		(3.20)	(1.99)	(1.99)		3.86		3.43		6.01		4.58	6/22/2007		
<i>Vanguard Target Retirement Income Composite</i>							(3.24)	(1.98)	(1.98)		3.92		3.51		6.05					
<i>Target-Date Retirement Median</i>							0.68	(3.98)	(3.40)	(3.40)	3.38		2.59		5.71					
<i>Target-Date Retirement Number of Funds</i>							201	201			201	192	192	192	179	179	156	156	127	127
Vanguard Target Retire 2015 Trust I					0.07		(4.69)	(2.94)	(2.94)		4.79		4.10		7.93		4.51	6/28/2007		
<i>Vanguard Target Retirement 2015 Composite</i>							(4.66)	(2.88)	(2.88)		4.87		4.21		7.95					
<i>Target-Date 2015 Median</i>							0.65	(5.63)	(3.92)	(3.92)	4.46		3.51		7.86					
<i>Target-Date 2015 Number of Funds</i>							157	157			157	144	144	144	129	129	107	107	70	70
Vanguard Target Retire 2020 Trust I					0.07		(6.49)	(4.18)	(4.18)		5.40		4.54		8.62		4.68	6/22/2007		
<i>Vanguard Target Retirement 2020 Composite</i>							(6.47)	(4.13)	(4.13)		5.48		4.65		8.75					
<i>Target-Date 2020 Median</i>							0.71	(6.23)	(4.51)	(4.51)	4.53		3.44		7.93					
<i>Target-Date 2020 Number of Funds</i>							267	267			267	254	254	254	228	228	203	203	150	150
Vanguard Target Retire 2025 Trust I					0.07		(7.74)	(5.06)	(5.06)		5.81		4.76		9.16		4.66	6/28/2007		
<i>Vanguard Target Retirement 2025 Composite</i>							(7.73)	(5.01)	(5.01)		5.89		4.87		9.28					
<i>Target-Date 2025 Median</i>							0.68	(7.55)	(5.40)	(5.40)	5.07		3.78		8.60					
<i>Target-Date 2025 Number of Funds</i>							245	245			245	230	230	230	208	208	183	183	105	105
Vanguard Target Retire 2030 Trust I					0.07		(8.82)	(5.77)	(5.77)		6.15		4.92		9.67		4.66	6/28/2007		
<i>Vanguard Target Retirement 2030 Composite</i>							(8.82)	(5.74)	(5.74)		6.24		5.04		9.81					
<i>Target-Date 2030 Median</i>							0.73	(9.10)	(6.50)	(6.50)	5.37		3.98		8.98					
<i>Target-Date 2030 Number of Funds</i>							256	256			256	243	243	243	218	218	193	193	140	140
Vanguard Target Retire 2035 Trust I					0.07		(9.92)	(6.52)	(6.52)		6.49		5.08		10.14		4.78	6/28/2007		
<i>Vanguard Target Retirement 2035 Composite</i>							(9.91)	(6.48)	(6.48)		6.58		5.21		10.29					
<i>Target-Date 2035 Median</i>							0.70	(10.29)	(7.28)	(7.28)	5.82		4.22		9.44					
<i>Target-Date 2035 Number of Funds</i>							240	240			240	225	225	225	203	203	178	178	100	100
Vanguard Target Retire 2040 Trust I					0.07		(11.01)	(7.27)	(7.27)		6.82		5.21		10.36		4.99	6/28/2007		
<i>Vanguard Target Retirement 2040 Composite</i>							(10.98)	(7.23)	(7.23)		6.91		5.36		10.53					
<i>Target-Date 2040 Median</i>							0.75	(11.10)	(7.98)	(7.98)	5.83		4.30		9.57					
<i>Target-Date 2040 Number of Funds</i>							256	256			256	243	243	243	218	218	193	193	140	140



2018 401(a) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(I)	(I)	(I)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
As of 12/31/2018	Ticker	Mgr Tenure	AUM \$M	Net ER	%ile ER	Rev Share	Recent Returns		Annualized Total Returns as of 12/31/18								SI	Incep Date
							3 Mo	YTD	1 Yr	%ile	3 Yr	%ile	5 Yr	%ile	10 Yr	%ile		
Vanguard Target Retire 2045 Trust I				0.07			(11.77)	(7.86)	(7.86)		6.85		5.22		10.38		4.96	6/28/2007
<i>Vanguard Target Retirement 2045 Composite</i>							(11.73)	(7.77)	(7.77)		6.95		5.39		10.54			
<i>Target-Date 2045 Median</i>				0.72			(11.86)	(8.27)	(8.27)		6.17		4.36		9.88			
<i>Target-Date 2045 Number of Funds</i>				240	240		240	225	225	225	203	203	178	178	99	99		
Vanguard Target Retire 2050 Trust I				0.07			(11.75)	(7.82)	(7.82)		6.86		5.21		10.40		5.02	6/28/2007
<i>Vanguard Target Retirement 2050 Composite</i>							(11.73)	(7.77)	(7.77)		6.95		5.39		10.54			
<i>Target-Date 2050 Median</i>				0.76			(11.89)	(8.62)	(8.62)		6.08		4.33		9.83			
<i>Target-Date 2050 Number of Funds</i>				256	256		256	243	243	243	218	218	193	193	115	115		
Vanguard Target Retire 2055 Trust I				0.07			(11.77)	(7.83)	(7.83)		6.86		5.19				8.49	10/5/2010
<i>Vanguard Target Retirement 2055 Composite</i>							(11.73)	(7.77)	(7.77)		6.95		5.39					
<i>Target-Date 2055 Median</i>				0.73			(12.00)	(8.59)	(8.59)		6.23		4.43		9.72			
<i>Target-Date 2055 Number of Funds</i>				240	240		240	225	225	225	201	201	150	150	9	9		
Vanguard Target Retirement 2060 Trust I				0.07			(11.77)	(7.81)	(7.81)		6.87		5.20				7.95	3/1/2012
<i>Vanguard Target Retirement 2060 Composite</i>							(11.73)	(7.77)	(7.77)		6.95		5.39					
<i>Target-Date 2060+ Median</i>				0.72			(12.28)	(8.70)	(8.70)		6.33		4.02					
<i>Target-Date 2060+ Number of Funds</i>				225	225		225	206	206	206	109	109	9	9	0	0		
Vanguard Target Retirement 2065 Trust I				0.07			(11.70)	(7.69)	(7.69)								2.47	7/7/2017
<i>Vanguard Target Retirement 2060 Composite</i>							(11.73)	(7.77)	(7.77)									
<i>Target-Date 2060+ Median</i>				0.72			(12.28)	(8.70)	(8.70)		6.33		4.02					
<i>Target-Date 2060+ Number of Funds</i>				225	225		225	206	206	206	109	109	9	9	0	0		

Source: Morningstar & TIAA-CREF

'Morningstar Analyst Assigned Benchmark'

VA = Variable Annuity

Since Incep. = Since 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

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

***** Calvert Social Index through December 16, 2005; FTSE4Good US Select Index thereafter

. %-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, 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 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.

State of Rhode Island
Market Value as of 12/31/2018
Plan Balance Summary

401(a)/414(h)(2) - 405868 STATE OF RHODE ISLAND DEFINED CONTRIBUTION RETIREMENT PLAN

Ticker	Investment Name	Asset Class Description	Current Account Balance Amount
PRRIX	PIMCO Real Return Inst Class	Fixed Income	\$5,753,029.10
SWISX	Schwab International Index Fd	Equities	\$6,130,106.60
TSVX#	TIAA STABLE VALUE	Guaranteed	\$12,756,677.11
VBTIX	Vanguard Ttl Bd Mkt Idx Inst	Fixed Income	\$6,497,264.77
VEMAX	Vanguard Emr Mkts Stk Idx Adm	Equities	\$4,609,184.08
VFTSX	Vanguard FTSE Social Index Inv	Equities	\$2,328,503.55
VINIX	Vanguard Inst Idx Inst	Equities	\$25,212,706.63
VMCIX	Vanguard Mid-Cap Idx Inst	Equities	\$9,490,850.34
VSCIX	Vanguard Small-Cap Idx Inst	Equities	\$9,755,513.52
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	\$37,724,254.26
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	\$92,201,906.00
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	\$114,681,515.99
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	\$121,490,168.56
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	\$132,516,329.94
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	\$106,019,222.15
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	\$79,599,877.50
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	\$47,264,974.96
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	\$19,052,631.13
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	\$2,863,172.33
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	\$204,498.53
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	\$10,653,903.06
			\$846,806,290.11

State of Rhode Island
Market Value as of 12/31/2018
Plan Balance Summary

401(a) - Rhode Island FICA 406403 Alternative RET Income Security Program

Ticker	Investment Name	Asset Class Description	Current Account Balance Amount
TSVX#	TIAA STABLE VALUE	Guaranteed	\$4,293.17
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	\$12,313.15
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	\$1,291,304.79
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	\$142,252.71
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	\$158,520.23
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	\$88,602.64
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	\$66,419.46
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	\$93,713.73
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	\$98,584.64
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	\$203,948.71
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	\$521,392.43
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	\$65,124.48
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	\$12,685.19
			\$2,759,155.33



Disclosures

TIAA-CREF is providing educational services concerning plan menu construction and the plan sponsor's fiduciary duties under its plan. It is not providing investment advice and is not a plan fiduciary with respect to the education and information presented herein. Note also that TIAA cannot and does not provide legal advice and that we recommend that you seek such advice from your own legal advisors.

This material is approved for a private presentation by authorized individuals only and, accordingly, this material is not to be reproduced in whole or in part or used for any purpose except as authorized by TIAA CREF Institutional Sales and Services. This material is to be treated as strictly confidential and not disclosed directly or indirectly to any party other than the recipient. This material is not approved for public use or distribution. The material is for informational purposes only and should not be regarded as a recommendation or an offer to buy or sell any product or service to which this information may relate. Certain products and services may not be available to all entities or persons.

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.

TIAA-CREF products may be subject to market and other risk factors. See the applicable product literature or visit TIAA-CREF.org for details. You should consider the investment objectives, risks, charges and expenses carefully before investing. Go to TIAA-CREF.org or call 877 518-9161 for product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.

You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877- 518-9161 for a prospectus that contains this and other information. Please read the prospectus carefully before investing.

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 (TIAA) of America and College Retirement Equities Fund (CREF), New York, NY.

ttaa.org

© 2019 Teachers Insurance and Annuity Association-College Retirement Equities Fund (TIAA-CREF), 730 Third Avenue, New York, NY 10017

BUILT TO PERFORM.

CREATED TO SERVE.

Section XV.

457 Plans

State of Rhode Island Total Assets 457 Plans

Plan Provider	3/31/2018	6/30/2018	9/30/2018	12/31/2018
Valic	\$ 9,498,941.79	\$ 9,274,764.50	\$ 9,057,836.05	\$ 6,619,287.24
Fidelity	\$ 147,947,602.08	\$ 151,293,425.61	\$ 157,548,610.58	\$ 139,484,527.38
ING/Voya	\$ 181,259,349.12	\$ 181,920,232.81	\$ 179,625,992.32	\$ 173,046,856.22
TIAA	\$ 24,739,055.42	\$ 25,618,861.39	\$ 27,381,104.70	\$ 27,046,360.35
Total	\$ 363,444,948.41	\$ 368,107,284.31	\$ 373,613,543.65	\$ 346,197,031.19

2018 457(b) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(I)	(I)	(I)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
As of 12/31/2018	Ticker	Mgr Tenure	AUM \$M	Net ER	%ile ER	Rev Share	Recent Returns		Annualized Total Returns as of 12/31/18								SI	Incep Date
							3 Mo	YTD	1 Yr	%ile	3 Yr	%ile	5 Yr	%ile	10 Yr	%ile		
TIAA Traditional RCP	Current crediting rate = 3.50						0.84	3.37	3.37		3.44		3.49		3.49		3.71	
FIXED INCOME																		
Intermediate-Term Bond																		
PIMCO Total Return Instl	PTTRX	4.33	65,631	0.55	39	0.00	1.39	(0.26)	(0.26)	39	2.47	32	2.56	31	4.71	36	7.08	5/11/1987
<i>BBgBarc US Agg Bond TR USD</i>							1.64	0.01	0.01		2.06		2.52		3.48			
Vanguard Total Bond Market Index Adm	VBTLX	5.92	203,989	0.05	3	0.00	1.61	(0.03)	(0.03)	31	2.03	54	2.46	39	3.42	77	3.95	11/12/2001
<i>BBgBarc US Agg Float Adj TR USD</i>							1.58	(0.08)	(0.08)		2.09		2.50					
<i>Intermediate-Term Bond Median</i>					0.67		0.97	(0.59)	(0.59)		2.09		2.30		4.47			
<i>Intermediate-Term Bond Number of Funds</i>					1061		1047	1018	1018	1018	1018	952	952	909	909	803	803	
Inflation-Protected Bond																		
American Century Inflation-Adjs Bond R6	AIADX	17.17	2,561	0.22	9	0.00	(1.05)	(2.27)	(2.27)	81	1.82	50	1.18	41	3.09	52	(0.43)	7/28/2017
<i>BBgBarc US Treasury US TIPS TR USD</i>							(0.42)	(1.26)	(1.26)		2.11		1.69		3.64			
<i>Inflation-Protected Bond Median</i>					0.66		(0.86)	(1.62)	(1.62)		1.73		1.06		3.01			
<i>Inflation-Protected Bond Number of Funds</i>					232		230	224	224	224	218	218	206	206	149	149		
Large Cap Blend - Index																		
Vanguard Institutional Index I	VINIX	18.08	200,004	0.04	2	0.00	(13.53)	(4.42)	(4.42)	27	9.22	15	8.46	10	13.11	19	9.39	7/31/1990
<i>S&P 500 TR USD</i>							(13.52)	(4.38)	(4.38)		9.26		8.49		13.12			
Vanguard FTSE Social Index Inv	VFTSX	3.08	4,351	0.18	6	0.00	(13.11)	(3.45)	(3.45)	17	9.73	8	9.12	4	14.36	5	4.13	5/31/2000
<i>Spliced Social Index*****</i>							(13.11)	(3.32)	(3.32)		9.90		9.33		14.61			
<i>Russell 3000 TR USD</i>							(14.30)	(5.24)	(5.24)		8.97		7.91		13.18			
<i>Large Blend Median</i>					0.88		(13.78)	(6.02)	(6.02)		7.88		6.93		12.07			
<i>Large Blend Number of Funds</i>					1347		1334	1319	1319	1319	1241	1240	1177	1177	1042	1035		
Mid-Cap Blend																		
Vanguard Mid Cap Index Institutional	VMCIX	20.67	86,953	0.04	2	0.00	(15.47)	(9.24)	(9.24)	32	6.39	50	6.22	14	13.89	10	9.11	5/21/1998
<i>Spliced Mid Cap Index*</i>							(15.46)	(9.22)	(9.22)		6.40		6.24		13.91			
CRSP US Mid Cap TR USD							(15.46)	(9.22)	(9.22)		6.40		6.24		13.74		7.84	4/1/2011
<i>Mid-Cap Blend Median</i>					1.00		(16.76)	(11.56)	(11.56)		4.89		4.01		12.14			
<i>Mid-Cap Blend Number of Funds</i>					437		435	433	433	433	394	394	371	371	318	318		
Small Blend																		
Vanguard Small Cap Index I	VSCIX	2.75	77,891	0.04	2	0.00	(18.34)	(9.32)	(9.32)	20	7.64	23	5.26	13	13.60	8	8.23	7/7/1997
<i>Spliced Small Cap Index**</i>							(18.33)	(9.33)	(9.33)		7.62		5.24		13.53			
CRSP US Small Cap TR USD							(18.33)	(9.33)	(9.33)		7.62		5.24		14.07			
<i>Small Blend Median</i>					1.13		(19.73)	(12.53)	(12.53)		5.84		3.48		11.68			
<i>Small Blend Number of Funds</i>					748		746	743	743	743	713	713	649	649	544	544		

2018 457(b) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(I)	(I)	(I)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)		
As of 12/31/2018	Ticker	Mgr Tenure	AUM \$M	Net ER	%ile ER	Rev Share	Recent Returns		Annualized Total Returns as of 12/31/18								SI	Incep Date		
							3 Mo	YTD	1 Yr	%ile	3 Yr	%ile	5 Yr	%ile	10 Yr	%ile				
Foreign Large Blend																				
Schwab International Index	SWISX	1.75	4,353	0.06	3	0.00	(12.37)	(13.33)	(13.33)	27	3.15	42	0.50	39	6.08	44	3.81	5/19/1997		
<i>MSCI EAFE NR USD</i>							(12.54)	(13.79)	(13.79)		2.87		0.53		6.32					
<i>Foreign Large Blend Median</i>							0.99				2.44		(0.07)		5.90					
<i>Foreign Large Blend Number of Funds</i>							728	728			720	705	705	705	674	674	604	604	516	516
Foreign Large Growth																				
American Funds Europacific Growth R6	REGRX	27.08	138,711	0.49	3	0.00	(12.59)	(14.91)	(14.91)	58	4.08	33	1.86	36	7.69	42	7.72	5/1/2009		
<i>MSCI ACWI Ex USA NR USD</i>							(11.46)	(14.20)	(14.20)		4.48		0.68		6.57					
<i>Foreign Large Growth Median</i>							1.06				3.08		1.15		7.38					
<i>Foreign Large Growth Number of Funds</i>							448	448	254	445	443	443	406	406	382	382	322	312		
Lifecycle																				
Vanguard Target Retire Inc Trust I				0.07			(3.20)	(1.99)	(1.99)		3.86		3.43		6.01		4.58	6/22/2007		
<i>Vanguard Target Retirement Income Composite</i>							(3.24)	(1.98)	(1.98)		3.92		3.51		6.05					
<i>Target-Date Retirement Median</i>							0.68				3.38		2.59		5.71					
<i>Target-Date Retirement Number of Funds</i>							201	201			201	192	192	192	179	179	156	156	127	127
Vanguard Target Retire 2015 Trust I				0.07			(4.69)	(2.94)	(2.94)		4.79		4.10		7.93		4.51	6/28/2007		
<i>Vanguard Target Retirement 2015 Composite</i>							(4.66)	(2.88)	(2.88)		4.87		4.21		7.95					
<i>Target-Date 2015 Median</i>							0.65				4.46		3.51		7.86					
<i>Target-Date 2015 Number of Funds</i>							157	157			157	144	144	144	129	129	107	107	70	70
Vanguard Target Retire 2020 Trust I				0.07			(6.49)	(4.18)	(4.18)		5.40		4.54		8.62		4.68	6/22/2007		
<i>Vanguard Target Retirement 2020 Composite</i>							(6.47)	(4.13)	(4.13)		5.48		4.65		8.75					
<i>Target-Date 2020 Median</i>							0.71				4.53		3.44		7.93					
<i>Target-Date 2020 Number of Funds</i>							267	267			267	254	254	254	228	228	203	203	150	150
Vanguard Target Retire 2025 Trust I				0.07			(7.74)	(5.06)	(5.06)		5.81		4.76		9.16		4.66	6/28/2007		
<i>Vanguard Target Retirement 2025 Composite</i>							(7.73)	(5.01)	(5.01)		5.89		4.87		9.28					
<i>Target-Date 2025 Median</i>							0.68				5.07		3.78		8.60					
<i>Target-Date 2025 Number of Funds</i>							245	245			245	230	230	230	208	208	183	183	105	105
Vanguard Target Retire 2030 Trust I				0.07			(8.82)	(5.77)	(5.77)		6.15		4.92		9.67		4.66	6/28/2007		
<i>Vanguard Target Retirement 2030 Composite</i>							(8.82)	(5.74)	(5.74)		6.24		5.04		9.81					
<i>Target-Date 2030 Median</i>							0.73				5.37		3.98		8.98					
<i>Target-Date 2030 Number of Funds</i>							256	256			256	243	243	243	218	218	193	193	140	140
Vanguard Target Retire 2035 Trust I				0.07			(9.92)	(6.52)	(6.52)		6.49		5.08		10.14		4.78	6/28/2007		
<i>Vanguard Target Retirement 2035 Composite</i>							(9.91)	(6.48)	(6.48)		6.58		5.21		10.29					
<i>Target-Date 2035 Median</i>							0.70				5.82		4.22		9.44					
<i>Target-Date 2035 Number of Funds</i>							240	240			240	225	225	225	203	203	178	178	100	100
Vanguard Target Retire 2040 Trust I				0.07			(11.01)	(7.27)	(7.27)		6.82		5.21		10.36		4.99	6/28/2007		
<i>Vanguard Target Retirement 2040 Composite</i>							(10.98)	(7.23)	(7.23)		6.91		5.36		10.53					
<i>Target-Date 2040 Median</i>							0.75				5.83		4.30		9.57					
<i>Target-Date 2040 Number of Funds</i>							256	256			256	243	243	243	218	218	193	193	140	140
Vanguard Target Retire 2045 Trust I				0.07			(11.77)	(7.86)	(7.86)		6.85		5.22		10.38		4.96	6/28/2007		

2018 457(b) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(I)	(I)	(I)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
As of 12/31/2018	Ticker	Mgr Tenure	AUM \$M	Net ER	%ile ER	Rev Share	Recent Returns		Annualized Total Returns as of 12/31/18						SI	Incep Date		
							3 Mo	YTD	1 Yr	%ile	3 Yr	%ile	5 Yr	%ile			10 Yr	%ile
Vanguard Target Retirement 2045 Composite							(11.73)	(7.77)	(7.77)		6.95		5.39		10.54			
Target-Date 2045 Median				0.72			(11.86)	(8.27)	(8.27)		6.17		4.36		9.88			
Target-Date 2045 Number of Funds				240	240		240	225	225	225	203	203	178	178	99	99		
Vanguard Target Retire 2050 Trust I				0.07			(11.75)	(7.82)	(7.82)		6.86		5.21		10.40		5.02	6/28/2007
Vanguard Target Retirement 2050 Composite							(11.73)	(7.77)	(7.77)		6.95		5.39		10.54			
Target-Date 2050 Median				0.76			(11.89)	(8.62)	(8.62)		6.08		4.33		9.83			
Target-Date 2050 Number of Funds				256	256		256	243	243	243	218	218	193	193	115	115		
Vanguard Target Retire 2055 Trust I				0.07			(11.77)	(7.83)	(7.83)		6.86		5.19				8.49	10/5/2010
Vanguard Target Retirement 2055 Composite							(11.73)	(7.77)	(7.77)		6.95		5.39					
Target-Date 2055 Median				0.73			(12.00)	(8.59)	(8.59)		6.23		4.43		9.72			
Target-Date 2055 Number of Funds				240	240		240	225	225	225	201	201	150	150	9	9		
Vanguard Target Retirement 2060 Trust I				0.07			(11.77)	(7.81)	(7.81)		6.87		5.20				7.95	3/1/2012
Vanguard Target Retirement 2060 Composite							(11.73)	(7.77)	(7.77)		6.95		5.39					
Target-Date 2060+ Median				0.72			(12.28)	(8.70)	(8.70)		6.33		4.02					
Target-Date 2060+ Number of Funds				225	225		225	206	206	206	109	109	9	9	0	0		
Vanguard Target Retirement 2065 Trust I				0.07			(11.70)	(7.69)	(7.69)								2.47	7/7/2017
Vanguard Target Retirement 2060 Composite							(11.73)	(7.77)	(7.77)									
Target-Date 2060+ Median				0.72			(12.28)	(8.70)	(8.70)		6.33		4.02					
Target-Date 2060+ Number of Funds				225	225		225	206	206	206	109	109	9	9	0	0		

Source: Morningstar & TIAA-CREF

| "Morningstar Analyst Assigned Benchmark"

VA = Variable Annuity

Since Incep. = Since 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

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.

***** Calvert Social Index through December 16, 2005; FTSE4Good US Select Index thereafter

. %-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, 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 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.

State of Rhode Island
Market Value as of 12/31/2018
Plan Balance Summary

457(b) - Plan 407359

State of Rhode Island 457(b) Deferred Compensation Plan

Ticker	Investment Name	Asset Class Description	Current Account Balance Amount
AIADX	American Century Inf Adj Bd R6	Fixed Income	\$548,208.71
PTRX	PIMCO Total Return Instl	Fixed Income	\$520,070.77
RERGX	American EuroPac Growth R6	Equities	\$1,397,222.43
SWISX	Schwab International Index Fd	Equities	\$244,640.59
TIAA#	TIAA Traditional Benefit Responsive 2	Guaranteed	\$6,373,231.96
VBPIX	Vanguard Ttl Bd Mkt Idx Inst	Fixed Income	\$191,731.13
VFTSX	Vanguard FTSE Social Index Inv	Equities	\$254,636.51
VINIX	Vanguard Inst Idx Inst	Equities	\$8,742,081.66
VLC1#	VALIC Fixed-Interest Opt 3%	Guaranteed	\$6,581,759.54
VLC2#	VALIC Fixed-Interest Opt 1.5%	Guaranteed	\$37,527.70
VMCIX	Vanguard Mid-Cap Idx Inst	Equities	\$4,413,146.86
VSCIX	Vanguard Small-Cap Idx Inst	Equities	\$2,695,432.44
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	\$16,327.27
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	\$566,299.14
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	\$99,711.08
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	\$541,061.67
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	\$218,839.55
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	\$29,607.03
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	\$63,700.12
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	\$65,697.40
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	\$6,295.79
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	\$3,254.33
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	\$840.49
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	\$54,323.42
			\$33,665,647.59



Disclosures

TIAA-CREF is providing educational services concerning plan menu construction and the plan sponsor's fiduciary duties under its plan. It is not providing investment advice and is not a plan fiduciary with respect to the education and information presented herein. Note also that TIAA cannot and does not provide legal advice and that we recommend that you seek such advice from your own legal advisors.

This material is approved for a private presentation by authorized individuals only and, accordingly, this material is not to be reproduced in whole or in part or used for any purpose except as authorized by TIAA CREF Institutional Sales and Services. This material is to be treated as strictly confidential and not disclosed directly or indirectly to any party other than the recipient. This material is not approved for public use or distribution. The material is for informational purposes only and should not be regarded as a recommendation or an offer to buy or sell any product or service to which this information may relate. Certain products and services may not be available to all entities or persons.

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.

TIAA-CREF products may be subject to market and other risk factors. See the applicable product literature or visit TIAA-CREF.org for details. You should consider the investment objectives, risks, charges and expenses carefully before investing. Go to TIAA-CREF.org or call 877 518-9161 for product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.

You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877- 518-9161 for a prospectus that contains this and other information. Please read the prospectus carefully before investing.

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 (TIAA) of America and College Retirement Equities Fund (CREF), New York, NY.

ttaa.org

© 2019 Teachers Insurance and Annuity Association-College Retirement Equities Fund (TIAA-CREF), 730 Third Avenue, New York, NY 10017

BUILT TO PERFORM.

CREATED TO SERVE.

Monthly Plan Performance Update

STATE OF RHODE ISLAND - STATE OF RI (35835)

Performance data shown represents past performance and is no guarantee of future results. Investment return and principal value will fluctuate, so you may have a gain or loss when shares are sold. Current performance may be higher or lower than that quoted. Visit your Fidelity website for the most recent month-end performance.

Name	Cumulative Total Returns				Average Annual Total Returns				
	As of	1 mo	3 mo	YTD	As of	1 yr	3 yr	5 yr	10 yr
DOW JONES INDUSTRIAL AVERAGE	12/31/2018	-8.59	-11.31	-3.48	09/30/2018	20.76	20.49	14.57	12.22
BLOOMBERG BARCLAYS U.S. AGGREGATE BOND INDEX	12/31/2018	1.84	1.64	0.01	09/30/2018	-1.22	1.31	2.16	3.77
NASDAQ COMPOSITE INDEX	12/31/2018	-9.40	-17.29	-2.84	09/30/2018	25.17	21.70	17.72	15.72
RUSSELL 2000 INDEX	12/31/2018	-11.88	-20.20	-11.01	09/30/2018	15.24	17.12	11.07	11.11
S&P 500 INDEX	12/31/2018	-9.03	-13.52	-4.38	09/30/2018	17.91	17.31	13.95	11.97

Investment Name	Cumulative Total Returns				Average Annual Total Returns					Fees			
	As of	1 mo	3 mo	YTD	As of	1 yr	3 yr	5 yr	10 yr	Life	Short Term Trading	Expense Ratio	Inception Date
Stock Investments													
Large Cap													
FID 500 INDEX	12/31/2018	-9.03	-13.53	-4.40	12/31/2018	-4.40	9.25	8.48	13.11	9.88	--	0.01% on 04/28/2018	02/17/1988
FID CONTRAFUND K	12/31/2018	-7.87	-16.24	-2.07	12/31/2018	-2.07	10.28	9.40	14.02	12.29	--	0.65% on 03/01/2018	05/17/1967
FID LARGE CAP STOCK	12/31/2018	-10.81	-16.29	-9.15	12/31/2018	-9.15	7.80	5.96	14.66	7.98	--	0.67% on 06/29/2018	06/22/1995
INVESCO DIVRS DIV R6	11/30/2018	2.30	-2.03	0.00	09/30/2018	4.79	9.19	9.65	9.67	7.67	--	0.44% on 02/28/2018	12/31/2001
VANG FTSE SOCIAL IDX	11/30/2018	1.89	-4.57	5.92	09/30/2018	18.71	17.38	14.49	12.38	4.99	--	0.18% on 12/21/2017	05/31/2000
Mid-Cap													
FID LOW PRICED STK K	12/31/2018	-8.20	-13.52	-10.68	12/31/2018	-10.68	5.51	4.73	12.97	12.99	--	0.53% on 09/29/2018	12/27/1989
FID MID CAP IDX	12/31/2018	-9.88	-15.32	-9.05	12/31/2018	-9.05	7.05	6.25	--	11.61	--	0.03% on 08/01/2018	09/08/2011
Small Cap													
FID SM CAP IDX	12/31/2018	-11.85	-20.17	-10.88	12/31/2018	-10.88	7.58	4.63	--	11.18	--	0.03% on 08/01/2018	09/08/2011
International													
FID INTL INDEX	12/31/2018	-4.94	-12.41	-13.52	12/31/2018	-13.52	3.19	0.65	6.17	4.32	--	0.04% on 04/28/2018	11/05/1997
HARBOR INTL INST	11/30/2018	-0.74	-10.61	-14.29	09/30/2018	-3.02	6.35	1.89	4.79	10.34	--	0.81% on 03/01/2018	12/29/1987

Investment Name	Cumulative Total Returns				Average Annual Total Returns					Fees			Inception Date
	As of	1 mo	3 mo	YTD	As of	1 yr	3 yr	5 yr	10 yr	Life	Short Term Trading	Expense Ratio	
Blended Investments*													
Others													
FID FREEDOM 2005 K	12/31/2018	-1.09	-3.24	-2.46	12/31/2018	-2.46	4.50	3.51	6.68	4.56	--	0.43% on 05/30/2018	11/06/2003
FID FREEDOM 2010 K	12/31/2018	-1.89	-4.74	-3.52	12/31/2018	-3.52	4.93	3.85	7.49	6.15	--	0.46% on 05/30/2018	10/17/1996
FID FREEDOM 2015 K	12/31/2018	-2.68	-6.06	-4.38	12/31/2018	-4.38	5.37	4.16	7.82	5.39	--	0.50% on 05/30/2018	11/06/2003
FID FREEDOM 2020 K	12/31/2018	-3.27	-7.20	-5.16	12/31/2018	-5.16	5.58	4.34	8.43	6.39	--	0.54% on 05/30/2018	10/17/1996
FID FREEDOM 2025 K	12/31/2018	-3.80	-8.14	-5.81	12/31/2018	-5.81	5.76	4.52	9.01	5.86	--	0.57% on 05/30/2018	11/06/2003
FID FREEDOM 2030 K	12/31/2018	-4.80	-9.84	-6.92	12/31/2018	-6.92	6.45	4.94	9.42	6.47	--	0.61% on 05/30/2018	10/17/1996
FID FREEDOM 2035 K	12/31/2018	-6.00	-11.91	-8.29	12/31/2018	-8.29	6.72	5.11	9.77	6.15	--	0.64% on 05/30/2018	11/06/2003
FID FREEDOM 2040 K	12/31/2018	-6.53	-12.65	-8.89	12/31/2018	-8.89	6.59	5.03	9.81	3.52	--	0.65% on 05/30/2018	09/06/2000
FID FREEDOM 2045 K	12/31/2018	-6.57	-12.65	-8.90	12/31/2018	-8.90	6.57	5.03	9.88	5.07	--	0.65% on 05/30/2018	06/01/2006
FID FREEDOM 2050 K	12/31/2018	-6.50	-12.62	-8.85	12/31/2018	-8.85	6.60	5.03	9.92	4.92	--	0.65% on 05/30/2018	06/01/2006
FID FREEDOM 2055 K	12/31/2018	-6.57	-12.65	-8.86	12/31/2018	-8.86	6.58	5.03	--	6.61	--	0.65% on 05/30/2018	06/01/2011
FID FREEDOM 2060 K	12/31/2018	-6.47	-12.61	-8.83	12/31/2018	-8.83	6.56	--	--	5.07	--	0.65% on 05/30/2018	08/05/2014
FID FREEDOM INC K	12/31/2018	-0.41	-2.00	-1.74	12/31/2018	-1.74	3.77	2.95	5.07	4.59	--	0.42% on 05/30/2018	10/17/1996
Bond Investments													
Stable Value													
TRP STABLE VALUE A	11/30/2018	0.19	0.53	1.91	09/30/2018	2.01	1.89	1.92	2.59	4.82	--	0.30% on 12/31/2015	09/12/1988
Income													
FID US BOND IDX	12/31/2018	1.87	1.71	0.03	12/31/2018	0.03	2.00	2.51	3.48	5.81	--	0.03% on 11/29/2018	03/08/1990
PIM TOTAL RT INST	11/30/2018	0.49	-0.38	-1.41	09/30/2018	-1.52	2.16	2.27	5.08	7.09	--	0.55% on 08/24/2018	05/11/1987
Other Investments													
Others													
BROKERAGELINK	--	--	--	--	--	--	--	--	--	--	--	--	--

Expense Ratio is the total annual fund operating expense ratio from the fund's most recent prospectus. For non-Fidelity fund of funds listed, the ratio shown may solely reflect the total operating expense ratio of the fund, or may be a combined ratio reflecting both the total operating expense ratio of the fund and the total operating expense ratios of the underlying funds in which it was invested. Please consult the fund's prospectus for more detail on a particular fund's expense ratio.

Total returns are historical and include change in share value and reinvestment of dividends and capital gains, if any. Cumulative total returns are reported as of the period indicated. Life of Fund figures are reported as of the inception date to the period indicated.

The management company may be temporarily reimbursing a portion of the fund's expenses. Absent such reimbursement, returns and yields would have been lower. A fund's expense limitation may be terminated at any time.

For any Government or U.S. Treasury Money Market funds listed: *You could lose money by investing in a money market fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to money market funds and you should not expect that the sponsor will provide financial support to the fund at any time.* Fidelity's government and U.S. Treasury money market funds will not impose a fee upon the sale of your shares, nor temporarily suspend your ability to sell shares if the fund's weekly liquid assets fall below 30% of its total assets because of market conditions or other factors.

For any Retail (Non Government or U.S. Treasury) Money Market Funds listed: *You could lose money by investing in a money market fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. The Fund may impose a fee upon the sale of your shares or may temporarily suspend your ability to sell shares if the Fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to money market funds and you should not expect that the sponsor will provide financial support to the fund at any time.*

For any Institutional Money Market Funds listed: *You could lose money by investing in a money market fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The Fund may impose a fee upon the sale of your shares or may temporarily suspend your ability to sell shares if the Fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to money market funds and you should not expect that the sponsor will provide financial support to the fund at any time.*

A money market fund's current yield reflects the current earnings of the fund, while the total return refers to a specific past holding period.

Performance of an index is not illustrative of any particular investment and an investment cannot be made directly in an index.

Generally, among asset classes stocks are more volatile than bonds or short-term instruments and can decline significantly in response to adverse issuer, political, regulatory, market, or economic developments. Although the bond market is also volatile, lower-quality debt securities including leveraged loans generally offer higher yields compared to investment grade securities, but also involve greater risk of default or price changes. Foreign markets can be more volatile than U.S. markets due to increased risks of adverse issuer, political, market or economic developments, all of which are magnified in emerging markets.

Before investing, consider the funds' investment objectives, risks, charges, and expenses. Contact Fidelity for a prospectus or, if available, a summary prospectus containing this information. Read it carefully.

For Investment Professional or Plan Sponsor use only.

Fidelity Brokerage Services LLC, Member NYSE, SIPC, 900 Salem Street, Smithfield, RI 02917

© 2016 FMR LLC. All rights reserved. The trademarks and service marks appearing herein are the property of their respective owners



STATE OF RHODE ISLAND

Balance by Fund

Data As Of: 12/31/2018

DC Plan Number	DC Plan Short Name	Fund Code	Fund Name	Fund Ticker Symbol	Fund Type	Fund Distinct Count By Participant	Market Value	Asset Percentage
35835	STATE OF RI	338	FID LARGE CAP STOCK	FLCSX	DOMESTIC EQUITY	340	\$7,510,978.58	5.38%
35835	STATE OF RI	2080	FID CONTRAFUND K	FCNKX	DOMESTIC EQUITY	706	\$31,639,315.77	22.68%
35835	STATE OF RI	2095	FID LOW PRICED STK K	FLPKX	DOMESTIC EQUITY	400	\$9,394,365.31	6.74%
35835	STATE OF RI	2326	FID US BOND IDX	FXNAX	BOND	126	\$1,432,653.64	1.03%
35835	STATE OF RI	2328	FID 500 INDEX	FXAIX	DOMESTIC EQUITY	387	\$10,743,375.28	7.70%
35835	STATE OF RI	2352	FID MID CAP IDX	FSMDX	DOMESTIC EQUITY	175	\$1,672,801.99	1.20%
35835	STATE OF RI	2358	FID SM CAP IDX	FSSNX	DOMESTIC EQUITY	207	\$1,456,404.43	1.04%
35835	STATE OF RI	2363	FID INTL INDEX	FSPSX	INTERNATIONAL EQUITY	167	\$2,275,733.77	1.63%
35835	STATE OF RI	3019	FID FREEDOM INC K	FNSHX	LIFECYCLE	48	\$1,552,606.85	1.11%
35835	STATE OF RI	3020	FID FREEDOM 2005 K	FSNJX	LIFECYCLE	10	\$338,588.29	0.24%
35835	STATE OF RI	3021	FID FREEDOM 2010 K	FSNKX	LIFECYCLE	74	\$3,418,694.04	2.45%
35835	STATE OF RI	3022	FID FREEDOM 2015 K	FSNLX	LIFECYCLE	52	\$2,083,350.61	1.49%
35835	STATE OF RI	3023	FID FREEDOM 2020 K	FSNOX	LIFECYCLE	242	\$14,677,980.74	10.52%
35835	STATE OF RI	3024	FID FREEDOM 2025 K	FSNPX	LIFECYCLE	100	\$3,492,489.69	2.50%
35835	STATE OF RI	3025	FID FREEDOM 2030 K	FSNQX	LIFECYCLE	262	\$11,750,717.45	8.42%
35835	STATE OF RI	3026	FID FREEDOM 2035 K	FSNUX	LIFECYCLE	68	\$2,480,445.46	1.78%
35835	STATE OF RI	3027	FID FREEDOM 2040 K	FSNVX	LIFECYCLE	56	\$1,241,139.46	0.89%
35835	STATE OF RI	3028	FID FREEDOM 2045 K	FSNZX	LIFECYCLE	58	\$946,158.77	0.68%
35835	STATE OF RI	3029	FID FREEDOM 2050 K	FNSBX	LIFECYCLE	44	\$267,648.91	0.19%
35835	STATE OF RI	3030	FID FREEDOM 2055 K	FNSDX	LIFECYCLE	38	\$543,400.14	0.39%
35835	STATE OF RI	3031	FID FREEDOM 2060 K	FNSFX	LIFECYCLE	16	\$45,407.34	0.03%
35835	STATE OF RI	BLNK	BROKERAGELINK		OTHER	111	\$11,420,156.07	8.19%
35835	STATE OF RI	OF1P	PIM TOTAL RT INST	PTTRX	BOND	261	\$6,907,238.41	4.95%
35835	STATE OF RI	OFHL	HARBOR INTL INST	HAINX	INTERNATIONAL EQUITY	303	\$3,440,894.95	2.47%
35835	STATE OF RI	OGMU	TRP STABLE VALUE A		STABLE VALUE	322	\$6,513,666.36	4.67%
35835	STATE OF RI	OK26	INVESCO DIVRS DIV R6	LCEFX	DOMESTIC EQUITY	163	\$2,018,640.12	1.45%
35835	STATE OF RI	OQPN	VANG FTSE SOCIAL IDX	VFTSX	DOMESTIC EQUITY	73	\$219,674.94	0.16%

\$139,484,527.38

PERFORMANCE UPDATE

Voya Retirement Insurance and Annuity Company

STATE OF RHODE ISLAND VK0450

Average Annual Total Returns as of: 12/31/2018 (shown in percentages)

Variable annuities and mutual funds offered through a retirement plan are intended as long-term investments designed for retirement purposes. Money distributed from a 403(b) plan, 401(a)/(k) plan, or a 457 plan will be taxed as ordinary income in the year the money is distributed. Early withdrawals from a 403(b) plan and a 401(a)/(k) plan, if taken prior to age 59 1/2, will be subject to the IRS 10% premature distribution penalty tax, unless an exception applies. This IRS premature distribution penalty tax does not apply to 457 plans. Account values fluctuate with market conditions, and when surrendered the principal may be worth more or less than the original amount invested.

The performance data quoted represents past performance. Past performance does not guarantee future results. For month-end performance which may be lower or higher than the performance data shown please call 800-232-5422. Investment return and principal value of an investment will fluctuate so that, when sold, an investment may be worth more or less than the original cost.

The below investment options are in Separate Account D. Please note that the figures do not include an adjustment for the Voya Administrative Fund Fee (where applicable) and the deduction of the Daily Asset Charge from the Separate Account (if applicable), or other applicable contract charges. If these fees and charges were included, performance would be less favorable.

The returns assume reinvestment of all dividends (ordinary income and capital gains) and are net of management fees and other fund operating expenses.

You should consider the investment objectives, risks and charges, and expenses of the funds carefully before investing. The prospectus contains this and other information. Anyone who wishes to obtain a free copy of the fund prospectuses may call their Voya representative or the number above. Please read the prospectus carefully before investing.

Returns less than one year are not annualized. Fund Inception Date is the date of inception for the underlying fund, and is the date used in calculating the periodic returns. This date may also precede the portfolio's inclusion in the product.

Investment Options	Fund Benchmark ID (BM)	1-Mo Fund	1-Mo BM	3-Mo Fund	3-Mo BM	YTD Fund	YTD BM	1-Yr Fund	1-Yr BM	3-Yr Fund	3-Yr BM	5-Yr Fund	5-Yr BM	10-Yr Fund	10-Yr BM	Incept	Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
Stability of Principal																			
<i>Stability of Principal</i>																			
Voya Fixed Account - 457/401 II A - 4573 (22)(23)	MFR	0.15	0.17	0.44	0.47	1.75		1.75		1.86		1.96		2.35					
Bonds																			
<i>High Yield Bond</i>																			
PGIM High Yield Fund - Class Z - 2482	BCUSH1IC	-1.95	-2.16	-4.17	-4.61	-1.30	-2.21	-1.30	-2.21	7.06	7.21	4.21	3.80	10.40	11.14		03/01/1996	0.55	0.55
<i>Inflation-Protected Bond</i>																			



See Performance Introduction Page for Important Information

Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Incept	Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM				
PIMCO VIT Real Return Portfolio - Administrative Class - 833	LBUSTIPS	0.25	0.55	-1.13	-0.42	-2.20	-1.26	-2.20	-1.26	2.17	2.11	1.36	1.69	4.21	3.64	09/30/1999	1.04	1.04	
Intermediate-Term Bond																			
Voya Intermediate Bond Portfolio - Class I - 004 (1)	LEHM	1.41	1.84	0.98	1.64	-0.54	0.44	-0.54	0.44	2.91	2.08	3.18	2.52	5.35	3.76	05/23/1973	0.55	0.55	
Voya U.S. Bond Index Portfolio - Class I - 1554 (2)	LEHM	1.78	1.84	1.58	1.64	-0.32	0.44	-0.32	0.44	1.72	2.08	2.21	2.52	3.12	3.76	03/07/2008	0.41	0.40	
Asset Allocation																			
Lifecycle																			
Voya Solution 2020 Portfolio - Initial Class - 6750 (3)(4)	SPT2020	-2.88	-3.45	-5.53	-6.49	-4.02	-4.16	-4.02	-4.16	4.67	5.27	4.35	4.10			7.74	10/03/2011	0.91	0.72
Voya Solution 2025 Portfolio - Initial Class - 790 (4)(5)	SPT2025	-3.92	-4.27	-7.31	-7.81	-5.48	-5.02	-5.48	-5.02	5.07	5.71	4.22	4.31	8.59	8.46		04/29/2005	0.85	0.78
Voya Solution 2030 Portfolio - Initial Class - 6753 (4)(6)	SPT2030	-4.96	-5.17	-9.10	-9.26	-6.98	-5.99	-6.98	-5.99	5.32	6.05	4.69	4.50			9.21	10/03/2011	0.97	0.79
Voya Solution 2035 Portfolio - Initial Class - 761 (4)(7)	SP2035	-5.88	-5.97	-10.52	-10.55	-8.09	-6.88	-8.09	-6.88	5.46	6.37	4.37	4.69	9.31	9.38		04/29/2005	0.90	0.83
Voya Solution 2040 Portfolio - Initial Class - 6756 (4)(8)	SPT2040	-6.39	-6.46	-11.37	-11.33	-8.95	-7.41	-8.95	-7.41	5.61	6.47	4.79	4.82			10.15	10/03/2011	1.05	0.83
Voya Solution 2045 Portfolio - Initial Class - 764 (4)(9)	SP2045	-6.94	-6.71	-12.34	-11.75	-10.08	-7.74	-10.08	-7.74	5.23	6.83	4.26	4.91	9.69	9.88		04/29/2005	0.93	0.86
Voya Solution 2050 Portfolio - Initial Class - 6759 (4)(10)	SPT2050	-6.99	-6.90	-12.51	-12.05	-10.37	-7.94	-10.37	-7.94	5.29	7.19	4.63	5.01			10.15	10/03/2011	1.12	0.86
Voya Solution 2055 Portfolio - Initial Class - 1166 (4)(11)	SPT2055	-6.94	-6.93	-12.43	-12.10	-10.29	-7.97	-10.29	-7.97	5.29	6.82	4.32	5.07			7.63	03/08/2010	0.94	0.86
Voya Solution 2060 Portfolio - Initial Class - 3290 (4)(12)	SPT2060	-7.02	-7.03	-12.47	-12.22	-10.35	-7.95	-10.35	-7.95	5.33	6.95					3.87	02/09/2015	1.29	0.87
Voya Solution Income Portfolio - Initial Class - 767 (4)(13)	SPTREIN	-1.76	-1.85	-3.70	-3.92	-2.80	-2.54	-2.80	-2.54	3.75	3.69	3.48	3.06	6.18	5.31		04/29/2005	0.81	0.68
Balanced																			
Allocation--50% to 70% Equity																			
VY@ T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	SPXLBGC	-4.58	-4.67	-6.31	-7.63	0.74	-3.02	0.74	-3.02	7.98	6.37	8.35	6.13	12.71	9.36		01/24/1989	0.64	0.64
Large Cap Value																			
Large Blend																			
Voya Growth and Income Portfolio - Class I - 001 (14)	SPXRE	-7.70	-8.27	-11.73	-13.52	-4.45	-4.92	-4.45	-4.92	8.07	9.26	6.61	8.49	11.94	13.12		12/31/1979	0.63	0.58
Voya U.S. Stock Index Portfolio - Institutional Class - 829	SPXRE	-9.04	-8.27	-13.55	-13.52	-4.62	-4.92	-4.62	-4.92	8.96	9.26	8.19	8.49	12.82	13.12		05/03/2004	0.27	0.27
Large Value																			
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (15)	RS1000V	-8.60	-9.60	-12.23	-11.72	-7.17	-8.02	-7.17	-8.02	8.00	6.95	6.59	5.95	10.93	11.18		11/29/1988	0.73	0.73
Large Cap Growth																			
Large Growth																			
Voya Large Cap Growth Portfolio - Institutional Class - 742 (16)	RS1000G	-8.49	-2.24	-14.48	-9.08	-1.48	5.33	-1.48	5.33	9.94	13.67	9.94	11.90	15.33	16.06		05/03/2004	0.67	0.67
Small/Mid/Specialty																			
Mid-Cap Blend																			
Voya Russell™ Mid Cap Index Portfolio - Class I - 1560 (17)	RSMID	-9.87	-9.92	-15.40	-15.37	-9.31	-8.72	-9.31	-8.72	6.66	7.04	5.85	6.26	13.65	14.03		03/04/2008	0.44	0.40
Mid-Cap Growth																			

See Performance Introduction Page for Important Information

Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*	
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM				
Investment Options																			
Principal MidCap Fund - Class R-5 - 3412	RSMID	-8.65	-9.92	-13.32	-15.37	-6.83	-8.72	-6.83	-8.72	8.66	7.04	7.89	6.26	15.14	14.03	12/06/2000	0.85	0.85	
<i>Small Blend</i>																			
Voya Russell™ Small Cap Index Portfolio - Class I - 1563 (18)	RS2000	-11.94	-11.88	-20.27	-20.20	-11.27	-11.01	-11.27	-11.01	7.08	7.36	4.22	4.41	11.78	11.97	03/04/2008	0.46	0.45	
Voya Small Company Portfolio - Class I - 042 (19)	RS2000	-12.65	-11.88	-18.98	-20.20	-15.84	-11.01	-15.84	-11.01	5.25	7.36	4.27	4.41	11.64	11.97	12/27/1996	0.89	0.89	
Global / International																			
<i>Foreign Large Blend</i>																			
Voya International Index Portfolio - Class I - 1551 (20)	MSEAFANET	-5.15	-4.85	-12.51	-12.54	-13.73	-13.79	-13.73	-13.79	2.80	2.87	0.25	0.53	5.88	6.32	03/04/2008	0.53	0.45	
<i>Foreign Large Growth</i>																			
American Funds EuroPacific Growth Fund - Class R-4 - 573	MSCIXUS	-5.16	-4.53	-12.67	-10.69	-15.22	-14.20	-15.22	-14.20	3.72	4.48	1.50	0.67	7.33	7.21	04/16/1984	0.83	0.83	
<i>World Large Stock</i>																			
VY® Oppenheimer Global Portfolio - Initial Class - 432 (21)	MSCIACN	-7.75	-7.04	-15.95	-12.75	-13.19	-9.42	-13.19	-9.42	5.89	6.60	4.82	4.26	11.30	9.46	05/01/2002	0.75	0.75	

The risks of investing in small company stocks may include relatively low trading volumes, a greater degree of change in earnings and greater short-term volatility.

Foreign investing involves special risks such as currency fluctuation and public disclosure, as well as economic and political risks.

Some of the Funds invest in securities guaranteed by the U.S. Government as to the timely payment of principal and interest; however, shares of the Funds are not insured nor guaranteed.

High yielding fixed-income securities generally are subject to greater market fluctuations and risks of loss of income and principal than are investments in lower yielding fixed-income securities.

Sector funds may involve greater-than average risk and are often more volatile than funds holding a diversified portfolio of stocks in many industries. Examples include: banking, biotechnology, chemicals, energy, environmental services, natural resources, precious metals, technology, telecommunications, and utilities.

*The Gross Expense Ratios shown do not reflect any temporary fee or expense waivers that may be in effect for a fund. The performance of a fund with a temporary fee or expense waiver would have been lower if the gross fund fees / expenses listed had been reflected.

PERFORMANCE UPDATE

Voya Retirement Insurance and Annuity Company

STATE OF RHODE ISLAND VK0450

Separate Account D

Average Annual Total Returns as of: 12/31/2018 (shown in percentages)

Variable annuities and funding agreements are long-term investment vehicles designed for retirement purposes which allow you to allocate contributions among variable investment options that have the potential to grow tax-deferred with an option to receive a stream of income at a later date.

The performance data quoted represents past performance. Past performance does not guarantee future results. For month-end performance which may be lower or higher than the performance data shown please call 800-232-5422. Investment return and principal value of an investment will fluctuate so that, when sold, an investment may be worth more or less than the original cost.

These numbers reflect total Separate Account charges of 0.15% on an annual basis. They also assume reinvestment of all dividends (ordinary income and capital gains) and are net of management fees and other fund operating expenses.

Depending upon the type of contract in which you participate, you have either received disclosure booklets for the separate account and/or fund prospectuses. You should consider the investment objectives, risks and charges, and expenses of the variable product and its underlying fund options carefully before investing. The disclosure booklet contains this and other information. Anyone who wishes to obtain a free copy of the separate account disclosure booklet and/or fund prospectuses may call their Voya representative or the number above. Please read the separate account disclosure booklet and/or the fund prospectuses carefully before investing.

Returns less than one year are not annualized. Fund Inception Date is the date of inception for the underlying fund, and is the date used in calculating the periodic returns. This date may also precede the portfolio's inclusion in the product.

Investment Options	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
Stability of Principal									
<i>Stability of Principal</i>									
Voya Fixed Account - 457/401 II A - 4573 (22)(23) <i>This fund is not part of the product's separate account.</i>	0.15	0.44	1.75	1.75	1.86	1.96	2.35		
Bonds									
<i>High Yield Bond</i>									
PGIM High Yield Fund - Class Z - 2482	-1.96	-4.20	-1.44	-1.44	6.88	4.04	10.22		03/01/1996
<i>Inflation-Protected Bond</i>									
PIMCO VIT Real Return Portfolio - Administrative Class - 833	0.24	-1.17	-2.36	-2.36	2.01	1.20	4.04		09/30/1999
<i>Intermediate-Term Bond</i>									

See Performance Introduction Page for Important Information

	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
Investment Options									
Voya Intermediate Bond Portfolio - Class I - 004 (1)	1.40	0.94	-0.69	-0.69	2.76	3.03	5.19		05/23/1973
Voya U.S. Bond Index Portfolio - Class I - 1554 (2)	1.76	1.54	-0.48	-0.48	1.57	2.05	2.97		03/07/2008
Asset Allocation									
<i>Lifecycle</i>									
Voya Solution 2020 Portfolio - Initial Class - 6750 (3)(4)	-2.89	-5.57	-4.17	-4.17	4.51	4.19		7.58	10/03/2011
Voya Solution 2025 Portfolio - Initial Class - 790 (4)(5)	-3.93	-7.34	-5.62	-5.62	4.91	4.07	8.42		04/29/2005
Voya Solution 2030 Portfolio - Initial Class - 6753 (4)(6)	-4.97	-9.14	-7.12	-7.12	5.16	4.53		9.05	10/03/2011
Voya Solution 2035 Portfolio - Initial Class - 761 (4)(7)	-5.89	-10.55	-8.23	-8.23	5.30	4.22	9.14		04/29/2005
Voya Solution 2040 Portfolio - Initial Class - 6756 (4)(8)	-6.40	-11.40	-9.09	-9.09	5.46	4.64		9.99	10/03/2011
Voya Solution 2045 Portfolio - Initial Class - 764 (4)(9)	-6.95	-12.37	-10.21	-10.21	5.07	4.10	9.52		04/29/2005
Voya Solution 2050 Portfolio - Initial Class - 6759 (4)(10)	-7.00	-12.54	-10.51	-10.51	5.13	4.48		9.99	10/03/2011
Voya Solution 2055 Portfolio - Initial Class - 1166 (4)(11)	-6.95	-12.47	-10.42	-10.42	5.14	4.17		7.47	03/08/2010
Voya Solution 2060 Portfolio - Initial Class - 3290 (4)(12)	-7.03	-12.50	-10.49	-10.49	5.18			3.72	02/09/2015
Voya Solution Income Portfolio - Initial Class - 767 (4)(13)	-1.77	-3.74	-2.95	-2.95	3.59	3.32	6.02		04/29/2005
Balanced									
<i>Allocation--50% to 70% Equity</i>									
VY® T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	-4.59	-6.34	0.59	0.59	7.82	8.19	12.54		01/24/1989
Large Cap Value									
<i>Large Blend</i>									
Voya Growth and Income Portfolio - Class I - 001 (14)	-7.71	-11.76	-4.60	-4.60	7.91	6.45	11.77		12/31/1979
Voya U.S. Stock Index Portfolio - Institutional Class - 829	-9.06	-13.58	-4.77	-4.77	8.79	8.03	12.65		05/03/2004
<i>Large Value</i>									
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (15)	-8.61	-12.26	-7.31	-7.31	7.83	6.43	10.76		11/29/1988
Large Cap Growth									
<i>Large Growth</i>									
Voya Large Cap Growth Portfolio - Institutional Class - 742 (16)	-8.50	-14.51	-1.63	-1.63	9.78	9.78	15.16		05/03/2004
Small/Mid/Specialty									
<i>Mid-Cap Blend</i>									
Voya Russell™ Mid Cap Index Portfolio - Class I - 1560 (17)	-9.89	-15.44	-9.44	-9.44	6.50	5.69	13.48		03/04/2008
<i>Mid-Cap Growth</i>									
Principal MidCap Fund - Class R-5 - 3412	-8.66	-13.35	-6.97	-6.97	8.50	7.73	14.96		12/06/2000
<i>Small Blend</i>									
Voya Russell™ Small Cap Index Portfolio - Class I - 1563 (18)	-11.95	-20.30	-11.41	-11.41	6.92	4.07	11.61		03/04/2008
Voya Small Company Portfolio - Class I - 042 (19)	-12.66	-19.01	-15.97	-15.97	5.09	4.11	11.47		12/27/1996
Global / International									
<i>Foreign Large Blend</i>									

See Performance Introduction Page for Important Information

Investment Options	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
Voya International Index Portfolio - Class I - 1551 (20)	-5.16	-12.55	-13.86	-13.86	2.64	0.10	5.73		03/04/2008
Foreign Large Growth									
American Funds EuroPacific Growth Fund - Class R-4 - 573	-5.18	-12.70	-15.35	-15.35	3.56	1.35	7.17		04/16/1984
World Large Stock									
VY® Oppenheimer Global Portfolio - Initial Class - 432 (21)	-7.76	-15.99	-13.33	-13.33	5.73	4.66	11.13		05/01/2002

The risks of investing in small company stocks may include relatively low trading volumes, a greater degree of change in earnings and greater short-term volatility.

Foreign investing involves special risks such as currency fluctuation and public disclosure, as well as economic and political risks.

Some of the Funds invest in securities guaranteed by the U.S. Government as to the timely payment of principal and interest; however, shares of the Funds are not insured nor guaranteed.

High yielding fixed-income securities generally are subject to greater market fluctuations and risks of loss of income and principal than are investments in lower yielding fixed-income securities.

Sector funds may involve greater-than average risk and are often more volatile than funds holding a diversified portfolio of stocks in many industries. Examples include: banking, biotechnology, chemicals, energy, environmental services, natural resources, precious metals, technology, telecommunications, and utilities.

Additional Notes

Insurance products, annuities and funding agreements issued by Voya Retirement Insurance and Annuity Company, One Orange Way Windsor, CT 06095, (VRIAC), which is solely responsible for meeting its obligations. Plan administrative services provided by VRIAC or Voya Institutional Plan Services, LLC. All companies are members of the Voya family of companies. Securities are distributed by or offered through Voya Financial Partners, LLC (member SIPC) or other broker-dealers with which it has a selling agreement.

For a performance report reflecting the charges or more information regarding product expenses, please contact your Voya Representative.

(1)Voya Intermediate Bond Portfolio - Class I: The adviser is contractually obligated to limit expenses to 0.53% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(2)Voya U.S. Bond Index Portfolio - Class I: The adviser is contractually obligated to limit expenses to 0.40% through May 1, 2019. The limitation does not extend to interest, taxes, interest-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(3)Voya Solution 2020 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.72% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(4)There is no guarantee that any investment option will achieve its stated objective. Principal value fluctuates and there is no guarantee of value at any time, including the target date. The "target date" is the approximate date when you plan to start withdrawing your money. When your target date is reached, you may have more or less than the original amount invested. For each target date Portfolio, until the day prior to its Target Date, the Portfolio will seek to provide total returns consistent with an asset allocation targeted for an investor who is retiring in approximately each Portfolio's designation Target Year. Prior to choosing a Target Date Portfolio, investors are strongly encouraged to review and understand the Portfolio's objectives and its composition of stocks and bonds, and how the asset allocation will change over time as the target date nears. No two investors are alike and one should not assume that just because they intend to retire in the year corresponding to the Target Date that that specific Portfolio is appropriate and suitable to their risk tolerance. It is recommended that an investor consider carefully the possibility of capital loss in each of the target date Portfolios, the likelihood and magnitude of which will be dependent upon the Portfolio's asset allocation. On the Target Date, the portfolio will seek to provide a combination of total return and stability of principal.

See Performance Introduction Page for Important Information

Additional Notes

Stocks are more volatile than bonds, and portfolios with a higher concentration of stocks are more likely to experience greater fluctuations in value than portfolios with a higher concentration in bonds. Foreign stocks and small and midcap stocks may be more volatile than large cap stocks. Investing in bonds also entails credit risk and interest rate risk. Generally investors with longer timeframes can consider assuming more risk in their investment portfolio.

The Voya Solution PortfoliosSM are actively managed and the asset allocation adjusted over time. The portfolios may merge with or change to other portfolios over time. Refer to the prospectus for more information about the specific risks of investing in the various asset classes included in the Voya Solution Portfolios.

(5)Voya Solution 2025 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.78% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(6)Voya Solution 2030 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.79% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(7)Voya Solution 2035 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.83% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(8)Voya Solution 2040 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 1.08% through May 1, 2019. The limitation does not extend to interest, taxes, brokerage investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(9)Voya Solution 2045 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.86% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(10)Voya Solution 2050 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.86% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(11)Voya Solution 2055 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.86% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(12)Voya Solution 2060 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.87% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(13)Voya Solution Income Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.68% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(14)Voya Growth and Income Portfolio - Class I: The adviser is contractually obligated to limit expenses to 0.70% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses and Acquired Fund Fees and Expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. The adviser is contractually obligated to waive 0.045% of the management fee through May 1, 2019. Termination or modification of these obligations requires approval by the Portfolio's board.

See Performance Introduction Page for Important Information

Additional Notes

(15)BlackRock Equity Dividend Fund - Institutional Shares: As described in the "Management of the Fund" section of the Fund's prospectus beginning on page 39, BlackRock has contractually agreed to waive the management fee with respect to any portion of the Fund's assets estimated to be attributable to investments in other equity and fixed-income mutual funds and exchange-traded funds managed by BlackRock or its affiliates that have a contractual management fee, through November 30, 2018. The contractual agreement may be terminated upon 90 days' notice by a majority of the non-interested trustees of the Fund or by a vote of a majority of the outstanding voting securities of the Fund. The Total Annual Fund Operating Expenses do not correlate to the ratio of expenses to average net assets given in the Fund's most recent annual report which does not include Acquired Fund Fees and Expenses.

(16)Voya Large Cap Growth Portfolio - Institutional Class: The adviser is contractually obligated to limit expenses to 0.67% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. Termination or modification of this obligation requires approval by the Portfolio's board.

(17)Voya Russell (TM) Mid Cap Index Portfolio - Class I: The adviser is contractually obligated to limit expenses to 0.40% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. Termination or modification of this obligation requires approval by the Portfolio's board.

(18)Voya Russell (TM) Small Cap Index Portfolio - Class I: The adviser is contractually obligated to limit expenses to 0.45% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(19)Voya Small Company Portfolio - Class I: The adviser is contractually obligated to limit expenses to 0.93% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(20)Voya International Index Portfolio - Class I: The adviser is contractually obligated to limit expenses to 0.50% through May 1, 2019. In addition, the adviser is contractually obligated to further limit expenses to 0.45% through May 1, 2019. These limitations do not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. These limitations are subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of these obligations requires approval by the Portfolio's board.

(21)VY Oppenheimer Global Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.80% through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

(22)The current rate for the Voya Fixed Account - 457/401 II A MC 901, Fund 4573 is 1.75%, expressed as an annual effective yield. The current rate may change and be higher or lower than the previously identified rate but is guaranteed not to be less than 1.00%. VRIAC will not apply a decrease to the current rate following a rate change initiated solely by us prior to the last day of the three-month period measured from the first day of the month in which such change was effective. Note: The current rate for an initial investment in the fixed account previously identified may be in effect for less than a full three-month period.

(23)The Investment Option is neither a mutual fund nor part of a Separate Account. The returns listed do not include the impact of contract charges. Please refer to the contract or disclosure book to determine which Fixed Interest Options are available for your specific plan. The Investment Option is offered through Voya Retirement Insurance and Annuity Company.

The returns do not reflect the impact of a Deferred Surrender Charge. If included, performance would be less favorable.

Not all investments options are available under all contracts; please check your disclosure booklet for options available under your plan.

Benchmark ID	Benchmark Description
BCUSH1IC	Barclays US HY 1% Issuer Cap TR USD
LBUSTIPS	Barclays Capital U.S. Treasury U.S. TIPS Index measures the performance of rulesbased, market value-weighted inflation-protected securities issued by the U.S. Treasury. It is a subset of the Global Inflation-Linked Index (Series-L).

See Performance Introduction Page for Important Information

Benchmark ID	Benchmark Description
LEHM	Barclays Capital U.S. Aggregate Bond Index measures the performance of investment grade, U.S. dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS. It rolls up into other Barclays flagship indices, such as the multi-currency Global Aggregate Index and the U.S. Universal Index, which includes high yield and emerging markets debt.
MFR	MFR Money Market Index is comprised of returns which are based upon historical average 30-day compound yields on a universe of taxable money market funds. The data for the universe, which includes approximately 980 funds, is compiled by iMoneynet, Inc. Goal of ING Fixed Account - 457/401 is to outperform the MFR by 150 - 200 basis points over 3 - 5 year time periods.
MSCIACN	MSCI ACWI (All Country World Index) measures the performance of the large and mid-cap segment of the particular regions equity securities, including developed and emerging market. It is free float-adjusted market-capitalization weighted.
MSCIXUS	MSCI ACWI (All Country World Index) ex USA Index measures the performance of the large and mid-cap segment of the particular regions, excluding USA equity securities, including developed and emerging market. It is free float-adjusted market-capitalization weighted.
MSEAFANET	MSCI EAFE Index measures the performance of the large and mid-cap segment of developed markets, excluding the U.S. & Canada equity securities. It is free float-adjusted market-capitalization weighted.
RS1000G	Russell 1000 Growth Index measures the performance of the large-cap growth segment of the U.S. equity securities. It includes the Russell 1000 index companies with higher price-to-book ratios and higher forecasted growth values. It is market-capitalization weighted.
RS1000V	Russell 1000 Value Index measures the performance of the large-cap value segment of the U.S. equity securities. It includes the Russell 1000 index companies with lower price-to-book ratios and lower expected growth values. It is market-capitalization weighted.
RS2000	Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 and includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.
RSMID	Russell Mid-Cap Index measures the performance of the mid-cap segment of the U.S. equity universe. It is a subset of Russell 1000 index and includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership. The index represents approximately 31% of the total market capitalization of the Russell 1000 companies.
SP2035	S&P Target Date 2035 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2035, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SP2045	S&P Target Date 2045 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2045, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2020	S&P Target Date 2020 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2020, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2025	S&P Target Date 2025 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2025, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2030	S&P Target Date 2030 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2030, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2040	S&P Target Date 2040 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2040, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management

See Performance Introduction Page for Important Information

Benchmark ID

Benchmark Description

companies that offer target date products.

SPT2050

S&P Target Date 2050 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2050, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.

SPT2055

S&P Target Date 2055+ Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2055, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.

SPT2060

S&P Target Date 2060+ TR USD - description is not available.

SPTREIN

S&P Target Date Retirement Income Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.

SPXLBGC

S&P 500 60% / Barclays Capital Corp/Gov Bond Index 40% consists of a mix of 60% of an unmanaged stock index (The Standard & Poor's 500) and 40% of an unmanaged bond index (Barclays Capital Gov't Corp. Bond Index).

SPXRE

S&P 500 Index measures the performance of 500 widely held stocks in U.S. equity market. Standard and Poor's chooses member companies for the index based on market size, liquidity and industry group representation. Included are the stocks of industrial, financial, utility, and transportation companies. Since mid 1989, this composition has been more flexible and the number of issues in each sector has varied. The index is market capitalization-weighted.



Plan Balance By Investment

Fund Name	Fund Number	Asset Class	Balance	YTD Contributions	Percent
American Funds EuroPacific R4	0573	Global / International	\$5,249,675.23	\$436,342.07	3.03%
BlackRock Equity Dividend Fund Inst	8518	Large Cap Value	\$3,618,796.60	\$251,453.66	2.09%
PGIM High Yield Fund Z	2482	Bonds	\$547,507.50	\$50,869.72	0.32%
PIMCO VIT Real Return Portfolio Adm	0833	Bonds	\$363,290.51	\$46,547.14	0.21%
Principal MidCap Fund R5	3412	Small/Mid/Specialty	\$9,012,498.39	\$445,304.77	5.21%
Voya Fixed Account - 457/401	0043	Stability of Principal	\$72,628,562.61	\$273,245.49	41.97%
Voya Fixed Account 457401 II A	4573	Stability of Principal	\$5,528,820.06	\$3,015,211.05	3.19%
Voya Growth and Income Port I	0001	Other (Unknown)	\$23,977,749.97	\$999,212.63	13.86%
Voya Intermediate Bond Port I	0004	Bonds	\$6,913,065.16	\$735,749.00	3.99%
Voya International Index Port I	1551	Global / International	\$342,641.11	\$42,526.19	0.2%
Voya Large Cap Growth Port Inst	0742	Large Cap Growth	\$10,226,293.52	\$743,373.64	5.91%
Voya Long-Term GAA (4560)	4560	Stability of Principal	\$25,480.63	\$0.00	0.02%
Voya Russell Mid Cap Index Port I	1560	Small/Mid/Specialty	\$1,175,803.32	\$161,195.11	0.68%
Voya Russell Sm Cp Index Port I	1563	Small/Mid/Specialty	\$1,156,738.06	\$160,649.76	0.67%
Voya Small Company Portfolio I	0042	Small/Mid/Specialty	\$6,657,852.18	\$388,078.98	3.85%
Voya Solution 2025 Portfolio I	0790	Asset Allocation	\$767,333.34	\$109,847.82	0.44%
Voya Solution 2035 Portfolio I	0761	Asset Allocation	\$833,252.06	\$153,094.70	0.48%
Voya Solution 2045 Portfolio I	0764	Asset Allocation	\$798,218.51	\$170,033.10	0.46%
Voya Solution 2055 Portfolio I	1166	Asset Allocation	\$386,432.63	\$98,079.25	0.22%
Voya Solution Income Prt I	0767	Asset Allocation	\$479,545.41	\$56,509.00	0.28%
Voya U.S. Bond Index Portfolio I	1554	Bonds	\$609,746.63	\$51,411.71	0.35%
Voya U.S. Stock Index Port Inst	0829	Large Cap Value	\$7,923,124.44	\$502,320.38	4.58%
VY Oppenhr Global Port I	0432	Global / International	\$6,166,220.36	\$444,626.34	3.56%
VY TRowePrice Captl Apprec Pt Inst	1257	Balanced	\$7,658,207.99	\$443,970.10	4.43%
		TOTAL	\$173,046,856.22	\$9,779,651.61	

Section XVI.

OPEB Trust



Total Performance Summary

Report ID: IPM0005

Reporting Currency: USD

TOTAL NET OF FEES

12/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	Annualized				ITD	Inception Date
						1 Year	3 Years	5 Years	10 Years		
Mackay Shields OPEB	103,011,271.0	37.2	1.76	-0.54	1.40	-0.54	1.83	2.38		1.58	5/1/2013
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			1.84	0.01	1.66	0.01	2.06	2.52		1.69	5/1/2013
SSGA S&P 500 INDX	173,690,963.7	62.8	-9.04	-4.42	-6.87	-4.42	9.24	8.49		11.15	5/1/2011
<i>S&P 500 - Total Return Index</i>			-9.03	-4.38	-6.85	-4.38	9.26	8.49		10.58	5/1/2011
Total OPEB	276,702,234.7	100.0	-5.27	-2.85	-3.87	-2.85	6.78	6.46		7.82	5/1/2011
<i>OPEB Custom Blend</i>			-5.23	-2.58	-3.75	-2.58	6.85	6.53		7.19	5/1/2011

END NOTES

12/31/2018

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

12/31/2018

Account Name Benchmark Name	Market Value	% of Total	YTD	Month	Cumulative			2018	2017	2016	Inception Date
					11/1/2018 - 11/30/2018	10/1/2018 - 10/31/2018					
Mackay Shields OPEB	103,011,271.0	37.2	-0.54	1.76	0.44	-0.82	-0.54	3.78	2.28	5/1/2013	
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			<i>0.01</i>	<i>1.84</i>	<i>0.60</i>	<i>-0.79</i>	<i>0.01</i>	<i>3.54</i>	<i>2.65</i>	<i>5/1/2013</i>	
SSGA S&P 500 INDX	173,690,963.7	62.8	-4.42	-9.04	2.05	-6.83	-4.42	21.80	11.99	5/1/2011	
<i>S&P 500 - Total Return Index</i>			<i>-4.38</i>	<i>-9.03</i>	<i>2.04</i>	<i>-6.84</i>	<i>-4.38</i>	<i>21.83</i>	<i>11.96</i>	<i>5/1/2011</i>	
Total OPEB	276,702,234.7	100.0	-2.85	-5.27	1.49	-4.75	-2.85	15.32	8.69	5/1/2011	
<i>OPEB Custom Blend</i>			<i>-2.58</i>	<i>-5.23</i>	<i>1.53</i>	<i>-4.72</i>	<i>-2.58</i>	<i>15.14</i>	<i>8.77</i>	<i>5/1/2011</i>	

END NOTES

12/31/2018

- | | | | |
|---|--------------|-------------------|--|
| 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 |