# STATE OF RHODE ISLAND INVESTMENT COMMISSION MEETING

DATA AT September 30st, 2018

October 24th, 2018 MEETING

### MEMBERS OF THE STATE INVESTMENT COMMISSION

### Honorable Seth Magaziner, Chair

Mr. Robert K. Benson
Mr. Frank J. Karpinski
Mr. Erik Carleton
Ms. Sylvia Maxfield
Mr. J. Michael Costello
Mr. Thomas Mullaney
Mr. Thomas P. Fay
Ms. Marcia Reback
Ms. Karen Hammond



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, October 24<sup>th</sup>, 2018 at 9:00 a.m. in the Executive Conference Room, Department of Administration, 1 Capitol Hill, Providence.

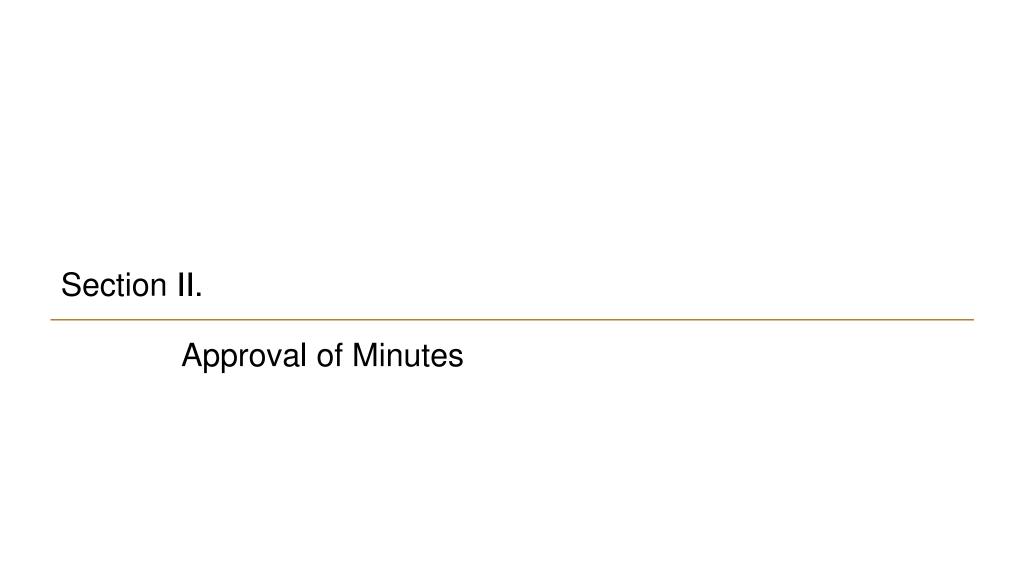
#### **AGENDA**

- Chairperson Call to Order
- Membership Roll Call
- Approval of Minutes <sup>1</sup>
  - State Investment Commission Meeting held September 26<sup>th</sup>, 2018
- Investment Recommendation, Siris Partners IV <sup>1</sup>
  - Frank Baker, Siris Capital Group, LLC
  - Tom Lynch, Cliffwater
- Ocean State Investment Pool Management Recommendation <sup>1</sup>
  - Michael Morin & Jim Scalisi, Fidelity
  - Vincent Izzo
- Investment Advisor Update
  - Allan Emkin, PCA
- 457 Plan Review, Voya
  - Greg Miller, Deltra Hayes & Frederick Blue, Voya
- Legal Counsel Report
- Chief Investment Officer Report
- Treasurer's General Comments

#### POSTED ON October 19, 2018

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.

<sup>&</sup>lt;sup>1</sup> Commission members may be asked to vote on this item.





### **State Investment Commission**

Monthly Meeting Minutes Wednesday, September 26th, 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 9:05 AM, Wednesday, September 26<sup>th</sup>, 2018 in the Executive Conference Room, Department of Administration.

### I. Roll Call of Members

The following members were present: Mr. Thomas Fay, Ms. Sylvia Maxfield, Mr. Thomas Mullaney, Ms. Marcia Reback, Mr. Robert Benson, and Treasurer Seth Magaziner.

Also in attendance: Kevin Leonard & Will Forde, NEPC; Andrea DiCenso, Kevin Kearns & John Meyer, Loomis Sayles; David Glickman, PCA; Kelly Rogers, Treasury; 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 9:05 AM.

### II. Approval of Minutes

On a motion by Mr. Karpinski and seconded by Ms. Reback, it was unanimously VOTED: to approve the draft minutes of the August 22<sup>nd</sup>, 2018 meeting of the State Investment Commission.

### III. Western Asset Management Review & Recommendation

Mr. Will Forde gave a brief overview of the Plan's liquid credit position within its Income Class. He identified an opportunity to strengthen the portfolio, recommending the Plan redeem its position with Western Asset Management. Mr. Ford introduced Loomis Sayles, a liquid credit manager with whom NEPC has worked with to implement similar mandates for other clients.

The Board asked questions.

On a motion by Mr. Fay which was seconded by Mr. Mullaney, it was unanimously VOTED: that the Employees' Retirement System of the State of Rhode Island redeem its Liquid Credit Investment Management Agreement with Western Asset Management Company, LLC, subject to legal and investment staff review.

### IV. Investment Recommendation, Loomis Sayles

Mr. John Meyer provided an overview of the firm. Mr. Kevin Kearns discussed the firm's experience managing a high yield and bank loan portfolio and potential investment guidelines for a commitment from the Plan. Ms. Andrea DiCenso discussed Loomis Sayles' approach to portfolio construction and optimization.

The Board asked questions.

On a motion by Ms. Maxfield which was seconded by Mr. Fay and opposed by Ms. Reback, it was **VOTED:** that the Employees' Retirement System of the State of Rhode Island to invest liquid credit redemption proceeds with Loomis Sayles, subject to legal and investment staff review.

### V. Real Estate Portfolio Review and PRISA Recommendation

Mr. David Glickman provided an update on the Plan's real estate allocation and commented on the current real estate market landscape. He highlighted the Plan's positive core real estate performance and recapped the portfolio's capital activity within the asset class. He discussed the core portfolio's diversification relative to its benchmark and he reviewed the status of the allocation's pacing plan. He overviewed the composition and performance of the Plan's non-core real estate portfolio and discussed potential opportunities within the asset class.

The Board asked questions.

Mr. Glickman proposed withdrawing from PRISA Fund. Mr. Glickman explained that the Plan is currently positioned to meet its target allocation to core real estate with the four remaining managers and thus a concurrent new real estate investment opportunity was not necessary. He explained that eliminating this manager will not take away from portfolio diversification, but instead enhance oversight of the current core real estate managers and bring the plan's position in core real estate closer to its target allocation.

The Board asked questions.

On a motion by Ms. Maxfield which was seconded by Ms. Reback, it was unanimously **VOTED: that the Employees' Retirement System of the State of Rhode Island redeem its investment from PRISA Fund.** 

### VI. Corporate Governance Update and Recommendation

Ms. Kelly Rogers explained how proxy voting allows shareholders to have an active voice in aligning management with the long-term financial interests of ERSRI participants and their beneficiaries. Ms. Rogers cited examples to highlight the effectiveness of ERSRI proxy voting. Ms. Rogers proposed to strengthen ERSRI's voting policy on executive compensation to allow the Plan to vote "no" on executive pay packages when compensation is not tied to company performance.

The Board asked questions.

On a motion by Ms. Reback which was seconded by Ms. Maxfield, it was unanimously **VOTED: that the Employees' Retirement System of the State of Rhode Island amend its proxy voting policy guidelines on executive compensation, subject to legal and investment staff review.** 

### VII. Legal Counsel Report

There was no legal counsel report.

### **VIII.Chief Investment Officer Report**

Mr. Alec Stais discussed the Plan's Fiscal 2018 returns, highlighting strong performance versus the benchmark. He noted several contributors to the Plan's Fiscal Year performance. Mr. Stais also stated that the Plan has outperformed its actuarial target return of 7% over 1-year, 3-year and 5-year annualized periods.

The Board asked questions.

### IX. Treasurer's General Comments

Treasurer Magaziner asked if there were any further comments or questions and thanked the Board and Staff.

On a motion by Ms. Maxfield and seconded by Ms. Maxfield, it was unanimously **VOTED: to adjourn** the meeting at 11:00 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 October 17, 2018

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 September 30, 2018.

# Employees' Retirement System of Rhode Island Composite Reporting Investment Valuation September 30, 2018

Asset Class	Base Market Value
Grand Total	8,412,283,689
CASH EQUIVALENT*	318,820,121
<b>EQUITY HEDGE FUNDS**</b>	263,018,971
GLOBAL PUBLIC EQUTIY	3,935,993,592
CREDIT	346,925,147
INFLATION-LINKED BDS	199,379,279
PRIVATE EQUITY**	659,560,484
REAL ESTATE**	586,257,257
REAL RET HEDGE FUNDS**	288,591,132
INFRASTRUCTURE**	313,830,716
US TRADITIONAL FIXED	887,404,449
CPC PROGRAM	612,502,541

Plan Allocations	%	Base Market Value
Grand Total	100.00%	8,412,283,689
STATE EMP RET PLAN	74.50%	6,267,346,684
MUNI EMP RET PLAN	18.82%	1,583,293,899
TEACHER'S SURVIVOR BENEFIT	3.94%	331,855,432
STATE POLICE RET PL	1.68%	141,702,714
JUDICIAL RET PLAN	0.89%	74,942,637
NON-CONTRIB JUD RET	0.01%	815,260
NON-CONT ST POL RET	0.15%	12,327,063

<sup>\*</sup> 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.

Investment Accounting Manager

<sup>\*\*</sup> 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.

# **Portfolio Highlights**

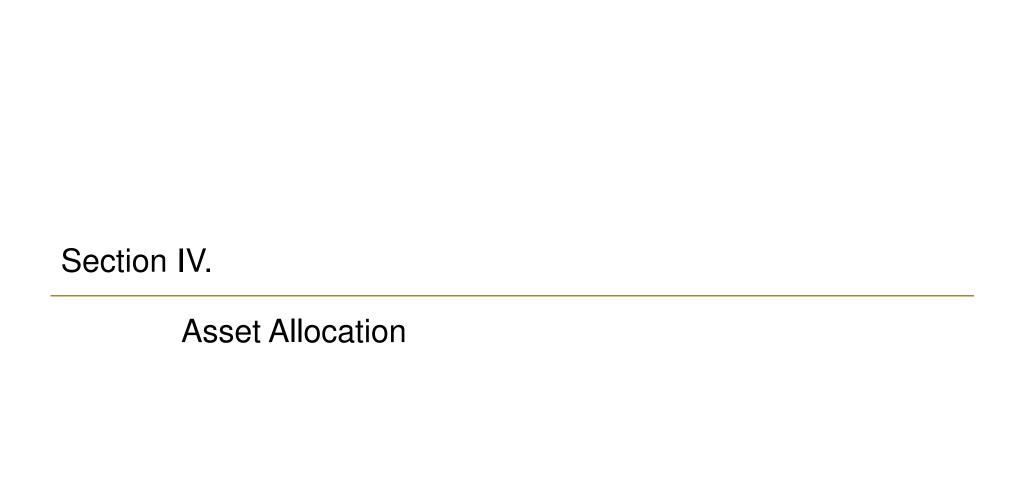
#### September 2018

The Plan returned 0.27%, net of fees, during the month of September, compared to the Total Plan benchmark return of 0.34%. The Plan outperformed the 60/40 benchmark, which returned 0.00% in September. The Public Growth aggregate asset class returned 0.38% compared to the MSCI ACWI Index, which returned 0.44%. This underperformance was due largely in part to the portfolio's allocation to Non-US Public Equities, which returned 0.37% and underperformed its benchmark by 9 basis points. The Total Stability Composite was the main detractor in the portfolio underperforming its Total Stability Composite Benchmark by 8 basis points. The total portfolio value decreased by approximately \$22.4 million as the investment portfolio returned \$26.6 million and \$48.9 million of transfers were made to meet pension payroll in excess of pension contributions.

Fiscal year-to-date the portfolio has returned 2.79%, outperforming both the 60/40 and Plan benchmark, which returned 2.53% and 2.56%, respectively. Over this period, the total portfolio value has increased by \$113.2 million, with net investments gains of \$230.9 million and \$117.7 million worth of transfers to meet pension payroll.

Calendar year-to-date the portfolio's % net return the 60/40 return of %, as well as the strategic benchmark return of %. Over this period, the total portfolio value has by \$ million, with net investment gains of \$2 million and \$2 million of transfers to meet pension payroll.

Over a 3-year time frame, the ERSRI portfolio outperformed, earning an annualized return of 9.06% net of fees versus the plan benchmark of 8.64% and the 60/40 portfolio which earned 8.53%. Over a 5-year time frame, the ERSRI portfolio earned an annualized return of 6.79% net of fees, outperforming the plan benchmark return of 6.53% and 60/40 benchmark, which posted 6.15%.



# **Asset Summary**

Balance Date: 9/28/2018



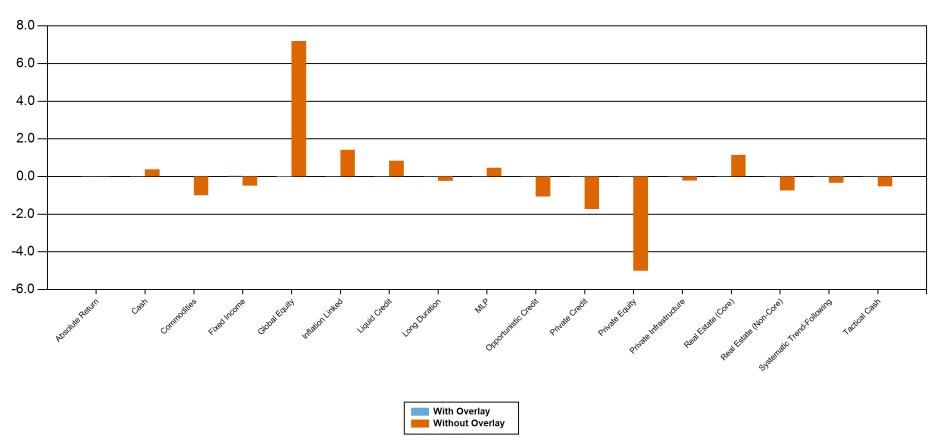
Asset Class	Physical E	xposure	Synthetic Ex	<u>kposure</u>	Net Po	sition	Overlay	<u>Target</u>	Policy Ta	arget_
Total Market Value	8,381.9	100.0 %	0.0	0.0 %	8,381.9	100.0 %	8,382.0	100.0 %	8,382.0	100.00 %
Cash	30.8	0.4 %	-29.7	-0.4 %	1.1	0.0 %	0.8	0.0 %	0.0	0.00 %
Cash	30.8	0.4 %	-29.7	-0.4 %	1.1	0.0 %	0.8	0.0 %	0.0	0.00 %
Equity	4,456.3	53.2 %	-52.9	-0.6 %	4,403.4	52.5 %	4,406.6	52.6 %	4,274.8	51.00 %
Global Equity	3,955.1	47.2 %	-52.9	-0.6 %	3,902.2	46.6 %	3,905.5	46.6 %	3,352.8	40.00 %
Private Equity	501.2	6.0 %	0.0	0.0 %	501.2	6.0 %	501.2	6.0 %	922.0	11.00 %
Fixed	1,907.5	22.8 %	82.6	1.0 %	1,990.1	23.7 %	1,987.3	23.7 %	1,927.9	23.00 %
Fixed Income	921.9	11.0 %	82.6	1.0 %	1,004.5	12.0 %	1,001.7	12.0 %	963.9	11.50 %
Inflation Linked	201.3	2.4 %	0.0	0.0 %	201.3	2.4 %	201.3	2.4 %	83.8	1.00 %
Liquid Credit	363.3	4.3 %	0.0	0.0 %	363.3	4.3 %	363.3	4.3 %	293.4	3.50 %
Long Duration	315.6	3.8 %	0.0	0.0 %	315.6	3.8 %	315.6	3.8 %	335.3	4.00 %
Private Credit	105.3	1.3 %	0.0	0.0 %	105.3	1.3 %	105.3	1.3 %	251.5	3.00 %
Other	1,987.3	23.7 %	0.0	0.0 %	1,987.3	23.7 %	1,987.3	23.7 %	2,179.3	26.00 %
Absolute Return	546.2	6.5 %	0.0	0.0 %	546.2	6.5 %	546.2	6.5 %	544.8	6.50 %
Commodities	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	83.8	1.00 %
MLP	164.0	2.0 %	0.0	0.0 %	164.0	2.0 %	164.0	2.0 %	125.7	1.50 %
Opportunistic Credit	36.5	0.4 %	0.0	0.0 %	36.5	0.4 %	36.5	0.4 %	125.7	1.50 %
Private Infrastructure	148.6	1.8 %	0.0	0.0 %	148.6	1.8 %	148.6	1.8 %	167.6	2.00 %
Real Estate (Core)	431.0	5.1 %	0.0	0.0 %	431.0	5.1 %	431.0	5.1 %	335.3	4.00 %
Real Estate (Non-Core)	146.7	1.7 %	0.0	0.0 %	146.7	1.7 %	146.7	1.7 %	209.6	2.50 %
Systematic Trend-Following	306.6	3.7 %	0.0	0.0 %	306.6	3.7 %	306.6	3.7 %	335.3	4.00 %
Tactical Cash	207.7	2.5 %	0.0	0.0 %	207.7	2.5 %	207.7	2.5 %	251.5	3.00 %

# **Asset Summary**

Balance Date: 9/28/2018



### **Percent Deviation from Overlay Target**



**Total Absolute Notional Value: 135.4 (USD)** 

# **Asset Summary**

Balance Date: 9/28/2018



									Cook Polones	
<u>Manager</u>	<u>Total Market</u>	<u>Value</u>	Equity Market	<u>Value</u>	Fixed Market	<u>Value</u>	Other Market	<u>Value</u>	Cash Balance	
Total Assets	8,382.0	100.0 %	4,456.3	53.2 %	1,907.5	22.8 %	1,987.3	23.7 %	30.8	0.4 %
Cash	30.9	0.4 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	30.8	0.4 %
Cash Acct (Pooled Trust)	23.0	0.3 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	22.9	0.3 %
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	7.9	0.1 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	7.9	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	4,456.3	53.2 %	4,456.3	53.2 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Global Equity	3,955.2	47.2 %	3,955.1	47.2 %	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	1,296.0	15.5 %	1,296.0	15.5 %	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	429.7	5.1 %	429.7	5.1 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA MSCI Canada	95.6	1.1 %	95.6	1.1 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA MSCI EAFE	732.6	8.7 %	732.6	8.7 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA Russell 3000	1,400.8	16.7 %	1,400.8	16.7 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Private Equity	501.2	6.0 %	501.2	6.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Private Equity	501.2	6.0 %	501.2	6.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Fixed	1,907.5	22.8 %	0.0	0.0 %	1,907.5	22.8 %	0.0	0.0 %	0.0	0.0 %
Fixed Income	921.9	11.0 %	0.0	0.0 %	921.9	11.0 %	0.0	0.0 %	0.0	0.0 %
MacKay Shields Core	454.7	5.4 %	0.0	0.0 %	454.7	5.4 %	0.0	0.0 %	0.0	0.0 %
Pyramis Core	467.2	5.6 %	0.0	0.0 %	467.2	5.6 %	0.0	0.0 %	0.0	0.0 %
Inflation Linked	201.3	2.4 %	0.0	0.0 %	201.3	2.4 %	0.0	0.0 %	0.0	0.0 %
Brown Brothers Harriman-GILBS	201.3	2.4 %	0.0	0.0 %	201.3	2.4 %	0.0	0.0 %	0.0	0.0 %
Liquid Credit	363.3	4.3 %	0.0	0.0 %	363.3	4.3 %	0.0	0.0 %	0.0	0.0 %
PIMCO	188.9	2.3 %	0.0	0.0 %	188.9	2.3 %	0.0	0.0 %	0.0	0.0 %
WAMCO	174.5	2.1 %	0.0	0.0 %	174.5	2.1 %	0.0	0.0 %	0.0	0.0 %
Long Duration	315.6	3.8 %	0.0	0.0 %	315.6	3.8 %	0.0	0.0 %	0.0	0.0 %
Mackay Long Duration	157.9	1.9 %	0.0	0.0 %	157.9	1.9 %	0.0	0.0 %	0.0	0.0 %
WAMCO Long Duration	157.7	1.9 %	0.0	0.0 %	157.7	1.9 %	0.0	0.0 %	0.0	0.0 %
Private Credit	105.3	1.3 %	0.0	0.0 %	105.3	1.3 %	0.0	0.0 %	0.0	0.0 %
Private Credit	105.3	1.3 %	0.0	0.0 %	105.3	1.3 %	0.0	0.0 %	0.0	0.0 %
Other	1,987.3	23.7 %	0.0	0.0 %	0.0	0.0 %	1,987.3	23.7 %	0.0	0.0 %
Tactical Cash	207.7	2.5 %	0.0	0.0 %	0.0	0.0 %	207.7	2.5 %	0.0	0.0 %
ERSRI SMA CASH	207.7	2.5 %	0.0	0.0 %	0.0	0.0 %	207.7	2.5 %	0.0	0.0 %
Absolute Return	546.2	6.5 %	0.0	0.0 %	0.0	0.0 %	546.2	6.5 %	0.0	0.0 %
Capula Global Relative Value	72.9	0.9 %	0.0	0.0 %	0.0	0.0 %	72.9	0.9 %	0.0	0.0 %
Claren Road Cr Fund	0.0	0.9 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
D.E. Shaw Composite Fund	113.5	1.4 %	0.0	0.0 %	0.0	0.0 %	113.5	1.4 %	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 %
Elliot Associates, LP	106.5	1.3 %	0.0	0.0 %	0.0	0.0 %	106.5	1.3 %	0.0	0.0 %
Lillot / 133001atC3, LI	100.5	1.5 /0	0.0	0.0 /0	0.0	0.0 /0	100.5	1.0 /0	0.0	0.0 /0

<sup>3</sup> Copyright © 2018 Russell Investments.
All rights reserved. All market values in millions. Numbers may not add due to rounding. Daily values are provided by custodian and are unaudited. Balances and exposures include Russell Overlay accruals and pending trades.

#### Rhode Island - Rhode Island

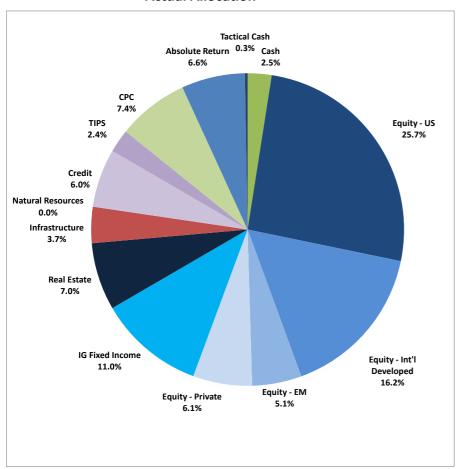
# **Asset Summary**

Balance Date: 9/28/2018

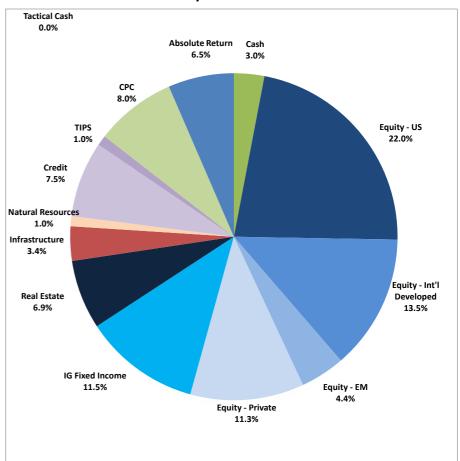


<u>Manager</u>	Total Market V	'alue	Equity Market \	/alue	Fixed Market V	/alue	Other Market \	/alue	Cash Baland	<u>:e</u>
Graham Global	60.4	0.7 %	0.0	0.0 %	0.0	0.0 %	60.4	0.7 %	0.0	0.0 %
Indus Asia Pacific Fund	0.3	0.0 %	0.0	0.0 %	0.0	0.0 %	0.3	0.0 %	0.0	0.0 %
Luxor Capital Partners	1.1	0.0 %	0.0	0.0 %	0.0	0.0 %	1.1	0.0 %	0.0	0.0 %
Viking Global Equities	63.3	0.8 %	0.0	0.0 %	0.0	0.0 %	63.3	0.8 %	0.0	0.0 %
Winton Futures Ltd Fund	39.5	0.5 %	0.0	0.0 %	0.0	0.0 %	39.5	0.5 %	0.0	0.0 %
MLP	164.0	2.0 %	0.0	0.0 %	0.0	0.0 %	164.0	2.0 %	0.0	0.0 %
Harvest Fund Advisor	164.0	2.0 %	0.0	0.0 %	0.0	0.0 %	164.0	2.0 %	0.0	0.0 %
Opportunistic Credit	36.5	0.4 %	0.0	0.0 %	0.0	0.0 %	36.5	0.4 %	0.0	0.0 %
Opportunistic Private Credit	36.5	0.4 %	0.0	0.0 %	0.0	0.0 %	36.5	0.4 %	0.0	0.0 %
Private Infrastructure	148.6	1.8 %	0.0	0.0 %	0.0	0.0 %	148.6	1.8 %	0.0	0.0 %
Priv Listed Infrastructure	148.6	1.8 %	0.0	0.0 %	0.0	0.0 %	148.6	1.8 %	0.0	0.0 %
Real Estate (Core)	431.0	5.1 %	0.0	0.0 %	0.0	0.0 %	431.0	5.1 %	0.0	0.0 %
Core Real Estate	431.0	5.1 %	0.0	0.0 %	0.0	0.0 %	431.0	5.1 %	0.0	0.0 %
Real Estate (Non-Core)	146.7	1.7 %	0.0	0.0 %	0.0	0.0 %	146.7	1.7 %	0.0	0.0 %
Non-Core Real Estate	146.7	1.7 %	0.0	0.0 %	0.0	0.0 %	146.7	1.7 %	0.0	0.0 %
Systematic Trend-Following	306.6	3.7 %	0.0	0.0 %	0.0	0.0 %	306.6	3.7 %	0.0	0.0 %
CPC AP LLC	104.2	1.2 %	0.0	0.0 %	0.0	0.0 %	104.2	1.2 %	0.0	0.0 %
CPC CB LLC	100.1	1.2 %	0.0	0.0 %	0.0	0.0 %	100.1	1.2 %	0.0	0.0 %
CPC QIS LLC	102.3	1.2 %	0.0	0.0 %	0.0	0.0 %	102.3	1.2 %	0.0	0.0 %

### **Actual Allocation**

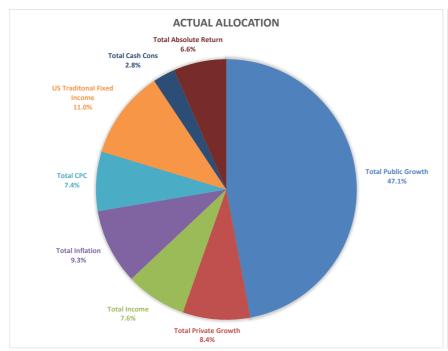


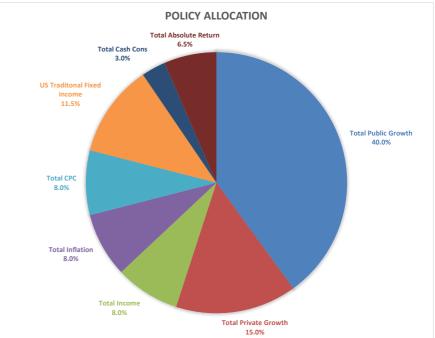
### **Policy Allocation**



#### **ERSRI Portfolio**

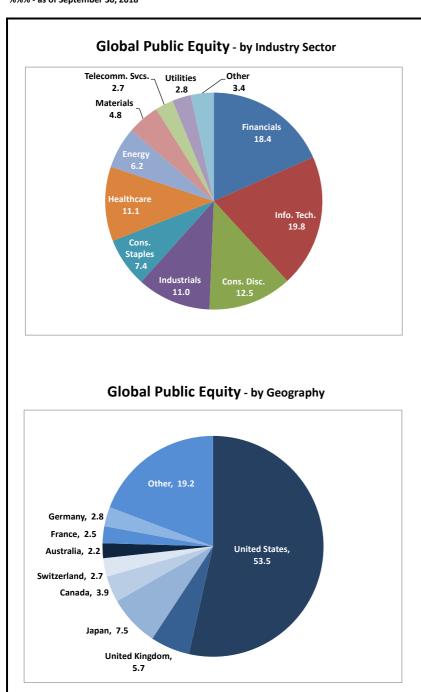
%%% - as of September 30, 2018

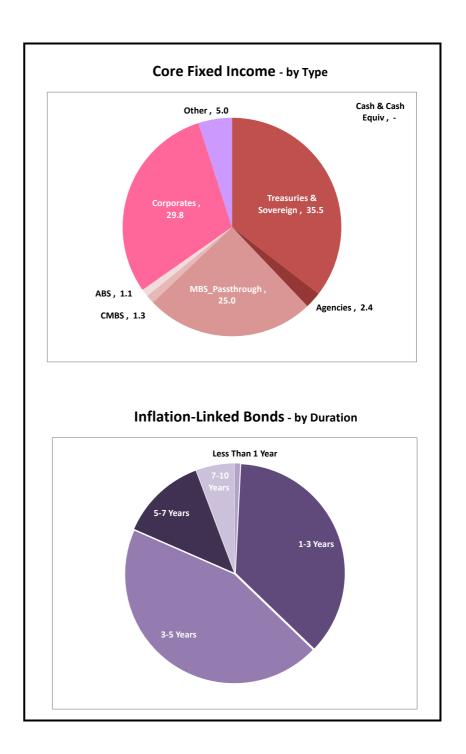




# ERSRI Asset Allocation Public-Asset Portfolios

%%% - as of September 30, 2018



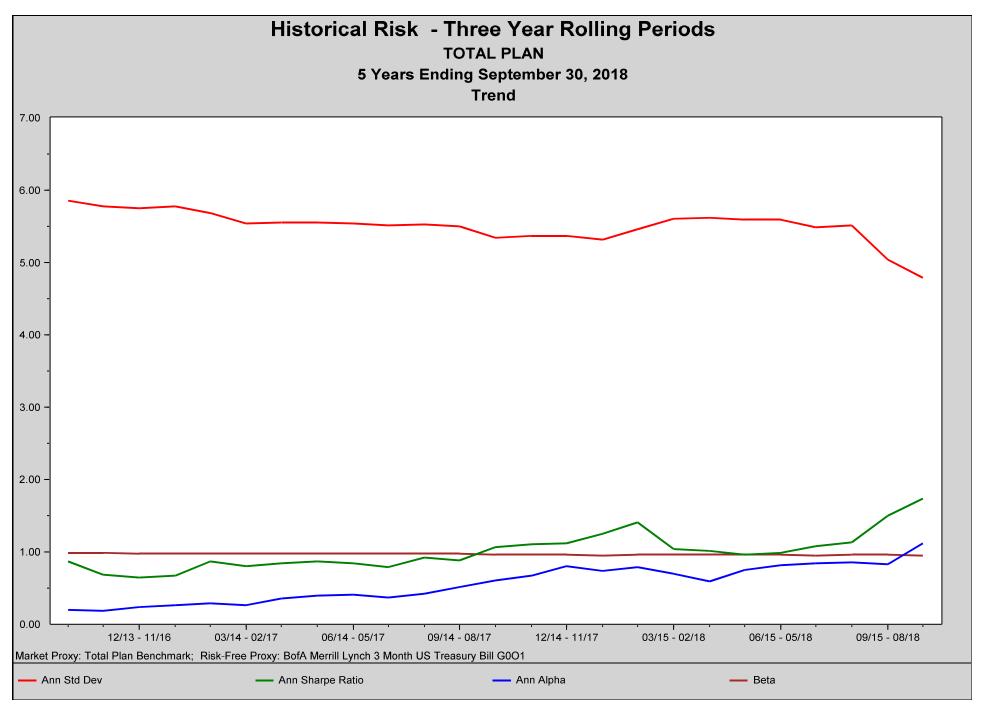


**ERSRI Asset Allocation Tracking** 

Functional Bucket	Aggregate Asset Class	Aggregate Allocation Weight	Asset Class	(a) Asset Allocation	(b) Actual exposure as of 09/30/18	(b) - (a)
	Global	40.0%	US Equity	22.0%	25.7%	3.7%
GROWTH	Equity	40.0%	International Developed Equity	13.5%	16.2%	2.6%
			EM Equity	4.4%	5.1%	0.7%
	Private Growth	15.0%	PE	11.3%	6.1%	-5.1%
			Non-core RE Opp Private Credit	2.3% 1.5%	1.8% 0.4%	-0.4% -1.1%
			HY Infra	1.0%	1.9%	0.9%
		0.00/	REITs	1.0%	0.0%	-1.0%
INCOME	Income	8.0%	Liquid Credit  Private Credit	3.2%	1.3%	-1.9%
			Treasury Duration	4.0%	3.8%	-0.2%
	СРС	8.0%	Systematic Trend	4.0%	3.6%	-0.4%
	Inflation		Core RE	3.6%	5.2%	1.6%
	Protection	8.0%	Private Infra	2.4%	1.8%	-0.6%
			TIPs Nat' Resources	1.0% 1.0%	2.4% 0.0%	1.4% -1.0%
STABILITY	Volatility Protection	21.0%	IG Fixed Income	11.5%	11.0%	-0.5%
			Absolute Return	6.5%	6.6%	0.1%
			Cash	3.0%	2.5%	-0.5%
OTHER	Short-term	n/a	ST Tactical Cash	0.0%	0.3%	0.3%
OTHER	Tactical	n/a	Russell Overlay	0.0%	0.1%	0.1%
TOTAL	Total	100.0%		100.0%	100.0%	0.0%



Risk Overview



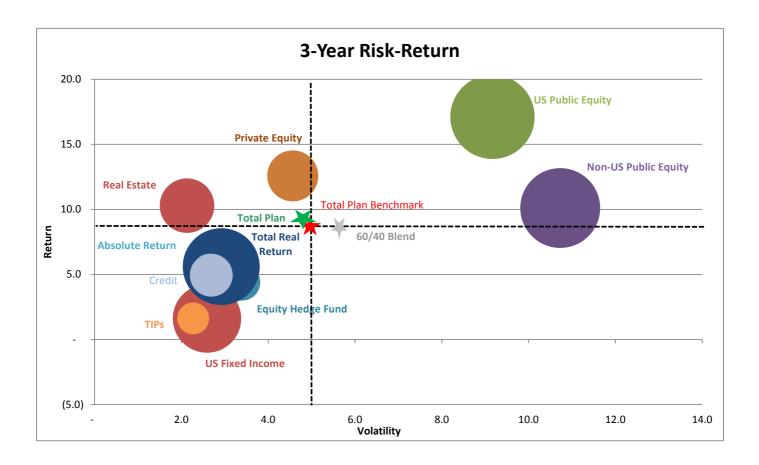
# Risk Exposures 3 Years Ending September 30, 2018

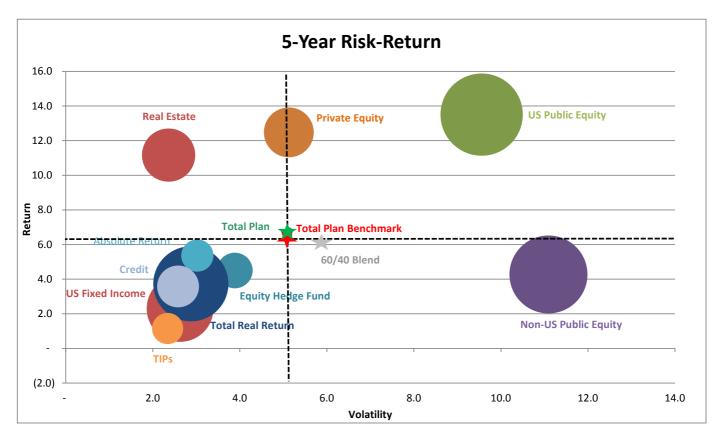
	Annualized Return	Ann Std Dev	Beta (ACWI)	Beta (BC AGG)	Beta (GSCI)	Beta (CPI)
US Public Equity	17.11	9.17	0.9	1 -0.34	0.17	-0.07
Non-US Public Equity	10.11	10.73	1.0	9 0.29	0.21	1.48
Equity Hedge Funds	4.40	3.40	0.1	4 -0.41	0.05	0.40
TOTAL PRIVATE EQUITY	11.76	4.28	-0.0	2 0.30	0.03	0.59
Traditional Fixed Income	1.61	2.59	0.0	2 0.98	-0.01	0.50
TOTAL REAL ESTATE	10.29	2.13	-0.0	2 0.11	-0.01	0.35
Real Return Hedge Funds	5.60	2.11	0.0	3 -0.32	0.03	0.48
Inflation-Linked Bonds	1.63	2.27	-0.0	1 0.73	-0.00	0.65
Cash	1.25	0.24	0.0	1 0.01	0.00	0.06
Russell Overlay Fd	0.00	0.06	0.0	0.00	-0.00	-0.00
TOTAL PLAN	9.06	4.80	0.5	1 0.12	0.12	0.52

# 5 Years Ending September 30, 2018 Comparison

	TOTAL PLAN	Total Plan Benchmark	60/40 Blend
Ann Return	6.79	6.53	6.15
Ann Ex Ret vs Mkt	0.24		
Ann Tracking Error	0.93		
Ann Std Dev	5.13	5.12	5.88
Beta	0.98		
R-Squared	0.97		
Ann Alpha	0.34		
Ann Sharpe Ratio	1.21	1.16	0.96

### % - as of September 30, 2018





### 3 Years Ending September 30, 2018 Correlation

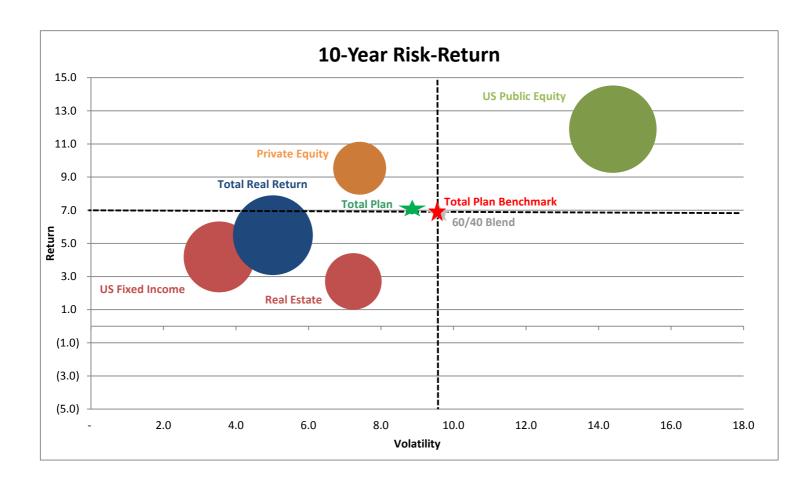
### Ann Return

	US Pub EQ	Non-US Pub EQ	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
US Pub	1.00										
Non-US P	0.72	1.00									
Eq HF	0.33	0.36	1.00								
PE	-0.02	-0.02	0.07	1.00							
FI	-0.02	0.16	-0.26	0.18	1.00						
RE	-0.01	-0.15	0.09	0.21	0.11	1.00					
RR HF	0.24	0.02	0.28	0.11	-0.37	0.15	1.00				
TIPS	-0.13	0.05	-0.44	0.15	0.83	0.18	-0.29	1.00			
Cash	0.15	0.17	0.33	0.22	0.13	0.09	0.09	0.00	1.00		
Overlay	0.14	-0.01	0.03	0.08	-0.15	0.24	0.23	-0.10	0.14	1.00	
Total	0.92	0.91	0.38	0.05	0.16	-0.05	0.15	0.03	0.25	0.05	1.00
Tot BM	0.89	0.93	0.34	-0.02	0.19	-0.11	0.05	0.06	0.20	0.02	0.98

### 5 Years Ending September 30, 2018 Correlation

### **Ann Return**

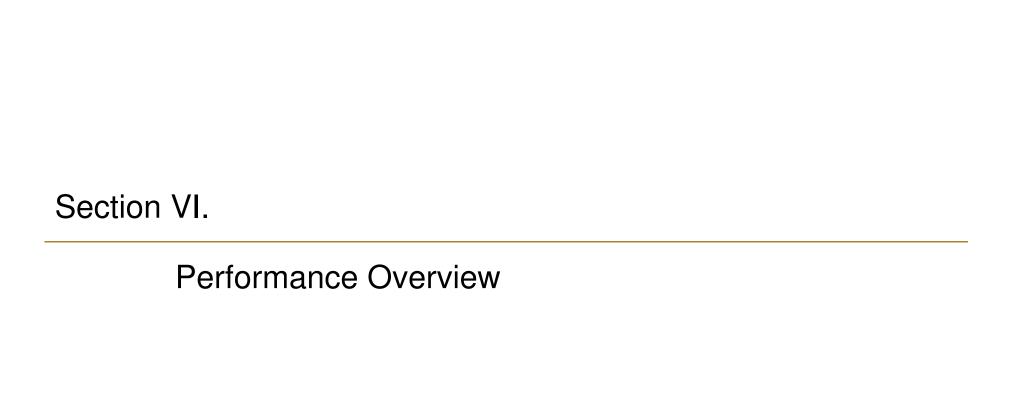
	US Pub Eq	Non-US Pub Eq	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
US Pub	1.00										
Non-US P	0.76	1.00									
Eq HF	0.52	0.46	1.00								
PE	0.04	0.00	0.09	1.00							
FI	-0.02	0.11	-0.15	-0.06	1.00						
RE	0.03	0.02	0.06	-0.06	0.29	1.00					
RR HF	0.35	0.22	0.53	0.01	-0.12	-0.01	1.00				
TIPS	-0.06	0.18	-0.22	-0.04	0.82	0.30	-0.07	1.00			
Cash	0.15	0.09	0.11	0.01	-0.08	-0.15	0.14	-0.18	1.00		
Overlay	-0.31	-0.25	-0.36	-0.05	-0.05	0.12	-0.13	-0.01	0.01	1.00	
Total	0.93	0.93	0.54	0.08	0.12	0.06	0.34	0.14	0.13	-0.31	1.00
Tot BM	0.91	0.94	0.50	0.00	0.13	0.02	0.27	0.14	0.12	-0.30	0.98



## 10 Years Ending September 30, 2018 Correlation

### **Ann Return**

	US Pub Eq	Non-US Pub Eq	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
US Pub	1.00										
Non-US P											
Eq HF											
PE	0.16			1.00							
FI	0.28			-0.07	1.00						
RE	-0.01			0.23	-0.19	1.00					
RR HF											
TIPS											
Cash	-0.03			-0.05	-0.14	0.02			1.00		
Overlay	0.35			0.00	0.30	-0.16			-0.07	1.00	
Total	0.95			0.21	0.44	0.00			-0.07	0.41	1.00
Tot BM	0.95			0.14	0.45	-0.02			-0.08	0.43	0.99



Report ID: IPM0005 **Reporting Currency: USD** 

# **TOTAL NET OF FEES**

# 9/30/2018

								Annualized			
Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	ITD	Inception Date
US Public Equity Russell 3000 Index	1,400,831,356	17	0.17 <i>0.17</i>	10.56 10.57	7.13 7.12	17.58 <i>17.58</i>	17.11 17.07	13.50 13.46	11.89 <i>12.01</i>	8.80 8.80	8/1/2007 8/1/2007
Non-US Public Equity  Total International Equity BM	1,257,977,235	15	0.37 0.46	-3.40 -3.09	0.53 0.71	1.52 1.76	10.11 9.97	4.27 4.12		8.42 7.73	5/1/2009 5/1/2009
QVM Tilt  MSCI World Net Dividend Index	1,295,905,855	15	0.62 0.56	6.47 5.43	5.96 <i>4</i> .98	12.73 11.24	14.35 13.54			14.35 13.54	10/1/2015 10/1/2015
Total Public Growth  MSCI All Country World Net Index	3,954,714,447	47	0.38 <i>0.44</i>	4.30 3.83	4.52 4.28	10.45 9.77	13.86 <i>13.40</i>	9.00 8.67	9.02 8.19	5.01	7/1/2000 7/1/2000
Private Equity  ILPA All Fds BM 1Q Lag 2	513,202,752	6	2.39 2.39	12.84 13.25	5.09 5.09	18.20 17.82	12.58 11.68	12.48 13.08	9.53 12.90	9.62	2/1/1989 2/1/1989
Non Core Real Estate	152,609,282	2	4.06	22.11	4.06	25.81				24.99	7/1/2017
Opportunistic Private Credit  ILPA Distressed BM 1Q Lag	36,399,106	0	-0.31 <i>-0.31</i>	6.30 3.39	-0.62 -0.62	12.42 5.96				14.41 7.79	7/1/2017 7/1/2017
Total Private Growth Private Growth Benchmark	702,211,140	8	2.61 2.06	14.44 11.28	4.58 4.06	19.44 15.27				19.79	7/1/2017 7/1/2017
TOTAL GROWTH COMPOSITE  Total Growth Composite BM	4,656,925,587	55	0.71 <i>0.88</i>	5.78 5.92	4.52 4.23	11.76 <i>11.</i> 38				14.01	7/1/2017 7/1/2017
Harvest Fund Advisor Alerian MLP Index	164,010,680	2	-1.76 -1.57	8.86 5.90	6.02 6.57	8.67 4.89	6.00 4.43			-3.99 -6.11	1/1/2015 1/1/2015
Liquid Credit Liquid Credit BM (50% BoA US HY/50% CS LL)	362,555,605	4	0.67 0.63	3.84 3.44	1.64 2.19	4.92 4.25	4.94 5.43	3.58 <i>4.</i> 39		3.43 4.29	5/1/2013 5/1/2013
Private Credit S&P LSTA Lev Loans + 3%	109,542,603	1	0.33 0.36	3.55 5.50	1.79 1.44	4.12 7.37				5.71 7.12	7/1/2017 7/1/2017
TOTAL INCOME COMPOSITE  Income Aggregate BM	636,108,888	8	-0.03 <i>0.12</i>	4.99 <i>4.</i> 90	2.77 2.74	5.73 5.80				4.89 5.18	7/1/2017 7/1/2017
CPC Long Duration Barclays US Treasury LT Index	315,627,355	4	-2.99 -2.96	-5.99 <i>-5.7</i> 9	-2.96 -2.88	-4.15 -3.56				-3.50 -3.04	6/1/2017 6/1/2017
CPC Trend Following Credit Suisse Liquid Alt Beta	304,251,685	4	-0.77 -1.02	-10.74 <i>-14</i> .89	0.74 -0.04	-1.73 -9.69				-0.42 -6.39	6/1/2017 6/1/2017
Total Crisis Protection 50/50 CPC Custom BM	619,879,040	7	-1.92 <i>-1.</i> 99	-7.86 -9.96	-1.18 <i>-1.47</i>	-2.37 -6.15				-1.50 <i>-4.2</i> 9	6/1/2017 6/1/2017

Report ID: IPM0005 **Reporting Currency: USD** 

### **TOTAL NET OF FEES**

# 9/30/2018

						-		Annua	alized		
Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	ITD	Inception Date
Priv Listed Infrastructure  CPI + 4% 1 Mo Lag	150,149,747	2	1.05 0.39	12.33 <i>5.18</i>	3.27 1.21	15.15 <i>6.70</i>	13.35			9.46	3/1/2015 3/1/2015
Core Real Estate NFI-ODCE BM 2	433,647,975	5	0.61 1.81	5.30 5.73	0.95 1.81	6.98 7.47				6.84 7.18	7/1/2017 7/1/2017
Inflation-Linked Bonds  Total Inflation Linked Custom	201,329,916	2	-0.67 -0.70	-0.18 -0.20	-0.45 -0.42	0.42 0.33	1.63 1.65	1.15 1.30		3.40 3.40	11/1/2009 11/1/2009
Total Inflation Protection Inflation Protection Custom BM	785,127,639	9	0.36 1.15	5.07 3.88	1.02 <i>0.90</i>	6.57 5.79				6.37 5.64	7/1/2017 7/1/2017
Absolute Return  HFRI Fund of Funds Composite Index	551,615,594	7	0.99 -0.18	5.23 0.99	1.67 0.27	6.44 3.08				7.29 4.34	7/1/2017 7/1/2017
Traditional Fixed Income  Bloomberg Barclays U.S. Aggregate Bond Index	921,912,420	11	-0.58 -0.64	-1.67 -1.60	0.09 0.02	-1.20 -1.22	1.61 1.31	2.31 2.16	4.18 3.77	4.86 4.73	7/1/2000 7/1/2000
Total Cash and Other Funds	240,387,212	3	-0.31	1.95	0.01	1.79	2.23	0.75		1.53	11/1/2012
Russell Overlay Fd	7,905,597	0	-0.01	0.02	-0.02	-0.01	0.00	-0.02	-0.03	-0.06	9/1/2008
Total Volatility Protection  Total Volitility Protection BM	1,713,915,225	20	-0.04 -0.39	1.08 <i>-0.38</i>	0.57 <i>0.17</i>	1.64 <i>0.50</i>				2.33	7/1/2017 7/1/2017
TOTAL STABILITY COMPOSITE  Total Stability Composite BM	3,118,921,903	37	-0.32 -0.40	0.14 <i>-1.55</i>	0.33 -0.02	1.60 <i>0.22</i>				2.28	7/1/2017 7/1/2017
TOTAL PLAN  Total Plan Benchmark  60/40 Blend	8,412,283,689	100	<b>0.27</b> 0.34 0.00	<b>3.54</b> 3.04 1.71	<b>2.79</b> 2.53 2.56	<b>7.35</b> 6.71 5.35	<b>9.06</b> 8.64 8.53	<b>6.79</b> 6.53 6.15	<b>6.97</b> 6.84 6.73	5.15	<b>7/1/2000</b> 7/1/2000 7/1/2000
Total Plan ex PE,RE & Priv Inf Total Plan BM ex PE RE	7,016,732,223	83	<b>0.01</b> 0.03	<b>2.26</b> 2.29	<b>2.74</b> 2.46	<b>6.14</b> 5.86	<b>8.68</b> 8.41	<b>6.08</b> 5.88	<b>6.86</b> 6.52	6.39	<b>4/1/1996</b> 4/1/1996



Report ID: IPM0005

Reporting Currency: USD

#### **END NOTES**

#### 9/30/2018

1	RI6G23000000	TOTAL PLAN	The current composition of the Total Plan Benchmark is as follows:
			40% MSCI ACWI Net
			11% ILPA All Funds Index
			11.5% Barclays Agg
			1% Barclays 1-10 Year TIPs Index
			4% Barclays Long Duration US Treasury Index
			3.5% Liquid Credit Custom (50% BoA HY/50% CS LL)
			3% S&P LSTA Lev Loans + 3%

6.5% HFRI FOF Composite

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

4% NFI-ODCE Index

2.5% ODCE + 2.5%

2% CPI + 4%

1.5% Alerian MLP Total Return

4% CS Managed Futures 18% Vol Index

1% BB Commodities Index

Report ID: IPM0005

**Reporting Currency: USD** 

### **TOTAL NET OF FEES** 9/30/2018

				Cumu	lative					
Account Name Benchmark Name	Market Value	% of Total	Month	8/1/2018 - 8/31/2018	7/1/2018 - 7/31/2018	YTD	2017	2016	2015	Inception Date
US Public Equity Russell 3000 Index	1,400,831,356	17	0.17 <i>0.17</i>	3.50 3.51	3.33 3.32	10.56 10.57	21.14 21.13	12.84 12.74	0.60 <i>0.48</i>	8/1/2007 8/1/2007
Non-US Public Equity  Total International Equity BM	1,257,977,235	15	0.37 0.46	-2.15 -2.09	2.36 2.39	-3.40 -3.09	27.76 27.19	5.01 <i>4.50</i>	-5.77 -5.66	5/1/2009 5/1/2009
QVM Tilt  MSCI World Net Dividend Index	1,295,905,855	15	0.62 <i>0.5</i> 6	1.76 1.24	3.48 3.12	6.47 5.43	23.36 22.40	7.58 7.51		10/1/2015 10/1/2015
Total Public Growth  MSCI All Country World Net Index	3,954,714,447	47	0.38 <i>0.44</i>	1.04 <i>0</i> .79	3.05 3.02	4.30 3.83	24.11 23.97	8.78 7.86	-2.48 -2.36	7/1/2000 7/1/2000
Private Equity  ILPA All Fds BM 1Q Lag 2	513,202,752	6	2.39 2.39	2.06 2.06	0.56 <i>0.5</i> 6	12.84 13.25	19.69 <i>15.60</i>	9.19 7.99	7.08 7.18	2/1/1989 2/1/1989
Non Core Real Estate	152,609,282	2	4.06	0.00	0.00	22.11				7/1/2017
Opportunistic Private Credit  ILPA Distressed BM 1Q Lag	36,399,106	0	-0.31 -0.31	0.00 <i>0.00</i>	-0.31 -0.31	6.30 3.39				7/1/2017 7/1/2017
Total Private Growth  Private Growth Benchmark	702,211,140	8	2.61 2.06	1.51 <i>1.55</i>	0.40 <i>0.41</i>	14.44 11.28				7/1/2017 7/1/2017
TOTAL GROWTH COMPOSITE  Total Growth Composite BM	4,656,925,587	55	0.71 <i>0.88</i>	1.11 <i>0.9</i> 9	2.65 2.31	5.78 5.92				7/1/2017 7/1/2017
Harvest Fund Advisor Alerian MLP Index	164,010,680	2	-1.76 -1.57	1.23 1.58	6.60 6.58	8.86 5.90	-5.26 -6.52	20.64 18.31	-31.01 -32.59	1/1/2015 1/1/2015
Liquid Credit  Liquid Credit BM (50% BoA US HY/50% CS LL)	362,555,605	4	0.67 0.63	0.27 0.57	0.69 <i>0.</i> 97	3.84 3.44	3.54 <i>4.60</i>	9.59 9.63	-1.29 <i>0.4</i> 9	5/1/2013 5/1/2013
Private Credit S&P LSTA Lev Loans + 3%	109,542,603	1	0.33 <i>0.</i> 36	1.45 0.42	0.00 <i>0.66</i>	3.55 5.50				7/1/2017 7/1/2017
TOTAL INCOME COMPOSITE  Income Aggregate BM	636,108,888	8	-0.03 <i>0.12</i>	0.72 <i>0.70</i>	2.07 1.91	4.99 <i>4.</i> 90				7/1/2017 7/1/2017
CPC Long Duration  Barclays US Treasury LT Index	315,627,355	4	-2.99 -2.96	1.60 1.58	-1.54 -1.47	-5.99 -5.79				6/1/2017 6/1/2017
CPC Trend Following Credit Suisse Liquid Alt Beta	304,251,685	4	-0.77 -1.02	2.60 2.31	-1.05 -1.30	-10.74 -14.89				6/1/2017 6/1/2017
Total Crisis Protection 50/50 CPC Custom BM	619,879,040	7	-1.92 <i>-1.</i> 99	2.08 1.95	-1.30 <i>-1.</i> 39	-7.86 -9.96				6/1/2017 6/1/2017

Report ID: IPM0005
Reporting Currency: USD

### TOTAL NET OF FEES 9/30/2018

				Cumul	ative					
Account Name  Benchmark Name	Market Value	% of Total	Month	8/1/2018 - 8/31/2018	7/1/2018 - 7/31/2018	YTD	2017	2016	2015	Inception Date
Priv Listed Infrastructure  CPI + 4% 1 Mo Lag	150,149,747	2	1.05 <i>0</i> .39	1.84 0.33	0.35 0.48	12.33 <i>5.18</i>	12.45	13.35		3/1/2015 3/1/2015
Core Real Estate NFI-ODCE BM 2	433,647,975	5	0.61 1.81	0.34 0.00	0.00 <i>0.00</i>	5.30 5.73				7/1/2017 7/1/2017
Inflation-Linked Bonds  Total Inflation Linked Custom	201,329,916	2	-0.67 -0.70	0.62 0.67	-0.40 -0.39	-0.18 -0.20	1.73 1.90	3.91 <i>4.01</i>	-0.26 -0.15	11/1/2009 11/1/2009
Total Inflation Protection Inflation Protection Custom BM	785,127,639	9	0.36 1.15	0.69 <i>-0.05</i>	-0.04 <i>-0.1</i> 9	5.07 3.88				7/1/2017 7/1/2017
Absolute Return  HFRI Fund of Funds Composite Index	551,615,594	7	0.99 -0.18	0.46 0.24	0.21 <i>0.21</i>	5.23 0.99				7/1/2017 7/1/2017
Traditional Fixed Income  Bloomberg Barclays U.S. Aggregate Bond Index	921,912,420	11	-0.58 -0.64	0.61 <i>0.64</i>	0.07 0.02	-1.67 -1.60	3.99 3.54	3.15 2.65	0.25 0.55	7/1/2000 7/1/2000
Total Cash and Other Funds	240,387,212	3	-0.31	0.36	-0.04	1.95	-1.64	3.33	0.03	11/1/2012
Russell Overlay Fd	7,905,597	0	-0.01	0.00	-0.01	0.02	-0.09	0.06	0.00	9/1/2008
Total Volatility Protection  Total Volitility Protection BM	1,713,915,225	20	-0.04 -0.39	0.52 <i>0.45</i>	0.09 <i>0.10</i>	1.08 <i>-0.38</i>				7/1/2017 7/1/2017
TOTAL STABILITY COMPOSITE  Total Stability Composite BM	3,118,921,903	37	-0.32 -0.40	0.87 <i>0.67</i>	-0.21 -0.28	0.14 <i>-1.55</i>				7/1/2017 7/1/2017
TOTAL PLAN  Total Plan Benchmark  60/40 Blend	8,412,283,689	100	<b>0.27</b> 0.34 0.00	<b>0.99</b> 0.85 0.73	<b>1.51</b> 1.32 1.82	<b>3.54</b> 3.04 1.71	<b>14.48</b> 14.29 15.41	<b>7.35</b> 6.42 5.92	<b>-0.28</b> -0.25 -0.98	<b>7/1/2000</b> 7/1/2000 7/1/2000
Total Plan ex PE,RE & Priv Inf Total Plan BM ex PE RE	7,016,732,223	83	<b>0.01</b> 0.03	<b>0.96</b> <i>0.66</i>	<b>1.76</b> 1.75	<b>2.26</b> 2.29	<b>14.66</b> 14.46	<b>6.97</b> 6.13	<b>-1.68</b> -1.64	<b>4/1/1996</b> 4/1/1996



Report ID: IPM0005

Reporting Currency: USD

### **END NOTES**

### 9/30/2018

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:
		40% MSCI ACWI Net
		11% ILPA All Funds Index
		11.5% Barclays Agg
		1% Barclays 1-10 Year TIPs Index
		4% Barclays Long Duration US Treasury Index
		3.5% Liquid Credit Custom (50% BoA HY/50% CS LL)
		3% S&P LSTA Lev Loans + 3%
		2.5% ODCE + 2.5%
		1.5% ILPA/Cambridge Distressed Securities Index
		6.5% HFRI FOF Composite
		3.0% BofA Merrill Lynch US T-Notes 0-1 Yr
		4% NFI-ODCE Index
		2% CPI + 4%
		1.5% Alerian MLP Total Return
		4% CS Managed Futures 18% Vol Index
		1% BB Commodities Index



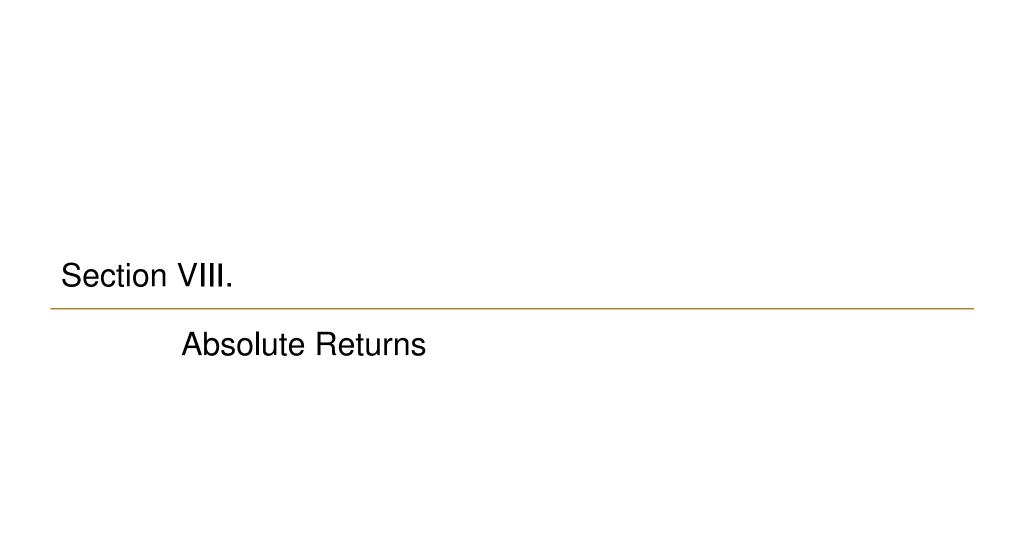
CPC Returns CPC Program, September 30, 2018, %								
Annualized Dev Annualized States of the Stat								
Total CPC Program	-1.92	-1.50	5.33	8.56				
CPC Trend	-0.77	-0.42	13.23	15.60				
CPC Long Duration	-2.99	-3.50	7.64	8.89				

Portfolio Beta CPC Program, 09/28/2018, USD, Monte Carlo 1 Day94 Decay								
Account Name	Market Monitor: Barclays Long term bond Index Beta	Market Monitor: Dollar Index Beta	Market Monitor: Gold Beta	Market Monitor: GSCI Non- Energy Beta	Market Monitor: IBOXHY  Beta	Market Monitor: S&P 500 INDEX Beta		
Total CPC Program	0.48	-0.18	-0.27	-0.13	1.93	0.56		
CPC Trend	-0.46	-0.85	-0.46	0.11	5.56	1.32		
CPC Long Duration	1.38	0.46	-0.08	-0.36	-1.58	-0.17		

	Portfolio Beta								
	CPC Program, 09/28/2018, USD, Monte Carlo 1 Day94 Decay								
Market Monitor: Market Monitor: Market Monitor: Market Monitor: Market Monitor:									
	SG Trend	US 10YR NOTE	WTI Crude	90 Day T-	Bench Global	Russell 3000			
Account Name	Index   Beta	(CBT) Beta	Oil Beta	Bill   Beta	Equity D Beta	Index   Beta			
Total CPC Program	-9.98	-0.34	0.22	58.30	0.45	0.59			
CPC Trend	-21.98	-2.61	0.54	97.84	1.18	1.45			
CPC Long Duration	1.60	1.86	-0.09	20.12	-0.26	-0.25			

Return Correlation (Since Inception)								
	Total CPC	CPC Long						
	Program	CPC Trend	Duration					
Total CPC Program	1.00	0.85	0.45					
CPC Trend	0.85	1.00	-0.08					
<b>CPC Long Duration</b>	0.45	-0.08	1.00					

Return Correlation (SEP '18)								
	Total CPC CPC Long							
	Program	CPC Trend	Duration					
Total CPC Program	1.00	0.79	0.05					
CPC Trend	0.79	1.00	-0.57					
CPC Long Duration	0.05	-0.57	1.00					





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

Absolute Return Portfolio Portfolio Performance Summary Estimated as of September 30, 2018

					Ret	urns					Sharpe	Incep
Market Value	Actual %	Sep	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep	Std Dev	Ratio	Date
73,217,849	13.3%		1.47%	3.82%	1.47%	4.03%	5.71%	6.47%	5.74%	1.81%	2.65	Dec-11
89,188,531	16.2%	0.71%	1.58%	3.77%	1.58%	4.62%	5.82%	5.00%	5.90%	1.94%	2.57	Nov-11
115,085,091	20.9%		3.56%	9.15%	3.56%	8.64%	10.28%	12.05%	12.81%	4.02%	2.83	Nov-11
108,466,360	19.7%	-0.30%	-1.00%	3.30%	-1.00%	5.22%	8.49%	8.06%	8.94%	3.56%	2.21	Nov-11
60,854,987	11.0%	0.59%	-0.56%	5.40%	-0.56%	4.06%	3.12%	3.23%	2.92%	5.57%	0.41	Jan-12
63,273,371	11.5%	-0.10%	2.20%	7.13%	2.20%	8.69%	6.30%	8.99%	10.41%	6.93%	1.36	Dec-11
39,433,204	7.2%	-0.11%	0.82%	2.20%	0.82%	10.06%	1.99%	5.41%	4.08%	8.46%	0.43	Dec-11
549,519,394	99.7%	0.44%	1.22%	5.14%	1.22%	6.30%	5.37%	5.37%	6.08%	3.08%	1.70	Nov-11
		-0.18%	0.27%	0.99%	0.27%	3.08%	3.29%	3.18%	3.49%	3.29%	0.84	Nov-11
		0.44%	4.28%	3.83%	4.28%	9.77%	13.40%	8.67%	10.13%	10.38%	0.91	Nov-11
		0.15%	0.49%	1.30%	0.49%	1.59%	0.84%	0.52%	0.40%	0.16%	-	Nov-11
		-0.37%	1.07%	-0.20%	1.07%	1.51%	4.31%	3.85%	4.12%	3.30%	1.02	Nov-11
329,659	0.1%	0.00%	-3.53%	-10.47%	-3.53%	-4.52%	-12.27%	-16.00%	-10.99%	18.72%	-0.56	Jan-12
1,117,093	0.2%	-1.61%	-1.37%	-2.13%	-1.37%	-2.06%	-	-	11.41%	17.19%	0.63	Jul-16
1,446,752	0.3%	-1.24%	0.06%	2.88%	0.06%	1.45%	0.18%	-0.93%	0.45%	5.07%	-0.03	Nov-11
550,966,146	100.0%										1.57	Nov-11
		-0.18%	0.27%	0.99%	0.27%	3.08%	3.29%	3.18%	3.49%	3.29%	-	Nov-11
												Nov-11
												Nov-11
												Nov-11
												Nov-11
												Nov-11
		-0.53%	-1.09%	-7.68%	-1.09%	-0.81%	12.36%	3.61%	3.22%	15.23%	0.24	Nov-11
	73,217,849 89,188,531 115,085,091 108,466,360 60,854,987 63,273,371 39,433,204 549,519,394	73,217,849 89,188,531 115,085,091 20.9% 108,466,360 19.7% 60,854,987 63,273,371 39,433,204 549,519,394 99.7%  329,659 1,117,093 0.2% 1,446,752 0.3%	73,217,849 89,188,531 16.2% 0.71% 115,085,091 20.9% 108,466,360 19.7% 63,273,371 11.5% -0.10% 39,433,204 7.2% -0.11% 549,519,394 99.7% 0.44% 0.15% -0.37%  329,659 1,117,093 0.2% 1,1446,752 0.3% -1.24%	73,217,849 13.3% 1.47% 89,188,531 16.2% 0.71% 1.58% 115,085,091 20.9% 3.56% 108,466,360 19.7% -0.30% -1.00% 60,854,987 11.0% 0.59% -0.56% 63,273,371 11.5% -0.10% 2.20% 39,433,204 7.2% -0.11% 0.82% 549,519,394 99.7% 0.44% 1.22% -0.18% 0.27% 0.44% 4.28% 0.15% 0.49% -0.37% 1.07%  329,659 0.1% 0.00% -3.53% 1,117,093 0.2% -1.61% -1.37% 1,446,752 0.3% -1.24% 0.06%  550,966,146 100.0% 0.44% 1.22% -0.18% 0.27%  0.19% 0.59% -0.64% 0.02% 0.56% 2.41% 0.57% 7.71% 0.87% 1.35%	73,217,849 13.3% 1.47% 3.82% 89,188,531 16.2% 0.71% 1.58% 3.77% 115,085,091 20.9% 3.56% 9.15% 108,466,360 19.7% -0.30% -1.00% 3.30% 60,854,987 11.0% 0.59% -0.56% 5.40% 63,273,371 11.5% -0.10% 2.20% 7.13% 39,433,204 7.2% -0.11% 0.82% 2.20% 549,519,394 99.7% 0.44% 1.22% 5.14% -0.18% 0.27% 0.99% 0.44% 4.28% 3.83% 0.15% 0.49% 1.30% -0.37% 1.07% -0.20% 1.30% -0.37% 1.07% -0.20% 1.446,752 0.3% -1.61% -1.37% -2.13% 1,446,752 0.3% -1.24% 0.06% 2.88% 550,966,146 100.0% 0.44% 1.22% 5.03% -0.18% 0.27% 0.99% 0.19% 0.56% 2.41% 2.57% 0.56% 2.41% 2.57% 0.56% 2.41% 2.57% 0.57% 7.71% 10.56% 0.87% 1.35% -1.43%	Market Value         Actual %         Sep         QTD         YTD         FYTD           73,217,849         13.3%         1.47%         3.82%         1.47%           89,188,531         16.2%         0.71%         1.58%         3.77%         1.58%           115,085,091         20.9%         3.56%         9.15%         3.56%           108,466,360         19.7%         -0.30%         -1.00%         3.30%         -1.00%           63,273,371         11.5%         -0.10%         2.20%         7.13%         2.20%           63,273,371         11.5%         -0.11%         0.82%         2.20%         0.82%           549,519,394         99.7%         0.44%         1.22%         5.14%         1.22%           -0.18%         0.27%         0.99%         0.27%         0.44%         4.28%         3.83%         4.28%           0.15%         0.49%         1.30%         0.49%         -0.37%         1.07%         -0.20%         1.07%           329,659         0.1%         0.00%         -3.53%         -10.47%         -3.53%           1,117,093         0.2%         -1.61%         -1.37%         -2.13%         -1.37%           1,446,752         0.3%<	73,217,849 13.3% 1.47% 3.82% 1.47% 4.03% 89,188,531 16.2% 0.71% 1.58% 3.77% 1.58% 4.62% 115,085,091 20.9% 3.56% 9.15% 3.56% 8.64% 108,466,360 19.7% -0.30% -1.00% 3.30% -1.00% 5.22% 60,854,987 11.0% 0.59% -0.56% 5.40% -0.56% 4.06% 63,273,371 11.5% -0.10% 2.20% 7.13% 2.20% 8.69% 39,433,204 7.2% -0.11% 0.82% 2.20% 0.82% 10.06% 549,519,394 99.7% 0.44% 1.22% 5.14% 1.22% 6.30% -0.18% 0.27% 0.99% 0.27% 3.08% 0.44% 4.28% 3.83% 4.28% 9.77% 0.15% 0.49% 1.30% 0.49% 1.59% -0.37% 1.07% -0.20% 1.07% 1.51% 1.51% 1.51% 1.550,966,146 100.0% 0.44% 1.22% 5.03% 1.22% 6.01% -0.18% 0.27% 0.99% 0.27% 3.08% 0.49% 1.59% 1.07% -0.20% 1.07% 1.51% 1.51% 1.550,966,146 100.0% 0.44% 1.22% 5.03% 1.22% 6.01% -0.18% 0.27% 0.99% 0.27% 3.08% 0.49% 1.59% 1.446,752 0.3% -1.24% 0.06% 2.88% 0.06% 1.45% 1.45% 1.20% 0.50% 0.20% -1.60% 0.22% -1.22% 0.56% 2.41% 2.57% 2.41% 3.04% 0.57% 7.71% 10.56% 7.71% 17.91% 0.87% 1.35% -1.43% 1.35% 2.74%	Market Value         Actual %         Sep         QTD         YTD         FYTD         1 Year         3 Year           73,217,849         13.3%         1.47%         3.82%         1.47%         4.03%         5.71%           89,188,531         16.2%         0.71%         1.58%         3.77%         1.58%         4.62%         5.82%           115,085,091         20.9%         3.56%         9.15%         3.56%         8.64%         10.28%           108,466,360         19.7%         -0.30%         -1.00%         3.30%         -1.00%         5.22%         8.49%           60,854,987         11.0%         0.59%         -0.56%         5.40%         -0.56%         4.06%         3.12%           63,273,371         11.5%         -0.10%         2.20%         7.13%         2.20%         8.69%         6.30%           39,433,204         7.2%         -0.11%         0.82%         2.20%         0.82%         10.06%         1.99%           549,519,394         99.7%         0.44%         1.22%         5.14%         1.22%         6.30%         3.29%           0.44%         4.28%         3.83%         4.28%         3.83%         4.28%         9.77%         13.40%	Market Value         Actual %         Sep         QTD         YTD         FYTD         1 Year         3 Year         5 Year           73,217,849         13.3%         1.47%         3.82%         1.47%         4.03%         5.71%         6.47%           89,188,531         16.2%         0.71%         1.58%         3.77%         1.58%         4.62%         5.82%         5.00%           115,085,091         20.9%         3.56%         9.15%         3.56%         8.64%         10.28%         12.05%           108,466,360         19.7%         -0.30%         -1.00%         3.30%         -1.00%         5.22%         8.49%         8.06%           63,273,371         11.5%         -0.10%         2.20%         7.13%         2.20%         8.69%         6.30%         8.99%           549,519,394         99.7%         0.44%         1.22%         5.14%         1.22%         6.30%         5.37%         5.37%           -0.18%         0.27%         0.99%         0.27%         3.08%         3.29%         3.18%           549,519,394         99.7%         0.44%         1.22%         5.14%         1.22%         6.30%         5.37%         5.37%           -0.18%         0.27%	Market Value         Actual %         Sep         QTD         YTD         FYTD         1 Year         3 Year         5 Year         Incep           73,217,849         13.3%         1.47%         3.82%         1.47%         4.03%         5.71%         6.47%         5.74%           89,188,531         16.2%         0.71%         1.58%         3.77%         1.58%         4.62%         5.82%         5.00%         5.90%           115,085,091         20.9%         3.56%         9.15%         3.56%         8.64%         10.28%         12.05%         12.81%           108,466,360         19.7%         -0.30%         -1.00%         3.30%         -1.00%         5.22%         8.49%         8.06%         8.94%           60,854,987         11.0%         0.59%         -0.10%         5.20%         7.13%         2.20%         6.06%         3.12%         2.29%           63,273,371         11.5%         -0.10%         2.20%         7.13%         2.20%         8.69%         6.30%         8.99%         10.41%           39,433,204         7.2%         -0.11%         0.82%         2.20%         0.82%         10.06%         1.99%         5.41%         4.08%           549,519,394	Market Value         Actual %         Sep         QTD         YTD         FYTD         1 Year         3 Year         5 Year         Incep         Std Dev           73,217,849         13.3%         1.47%         3.82%         1.47%         4.03%         5.71%         6.47%         5.74%         1.81%           89,188,531         16.2%         0.71%         1.58%         3.77%         1.58%         4.62%         5.82%         5.00%         5.90%         1.94%           115,085,091         20.9%         3.56%         9.15%         3.56%         8.64%         10.28%         12.05%         12.81%         4.02%           108,466,360         19.7%         -0.30%         -1.00%         3.30%         -1.00%         5.22%         8.49%         8.06%         8.94%         3.56%         60,854,987         11.0%         0.59%         -0.56%         5.40%         -0.56%         3.08         8.69%         6.30%         8.99%         10.41%         6.93%           39,433,204         7.2%         -0.11%         0.82%         2.20%         0.82%         10.06%         1.99%         5.41%         4.08%         8.46%           549,519,394         9.7%         0.44%         1.22%         5.14%	Market Value

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 them 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.

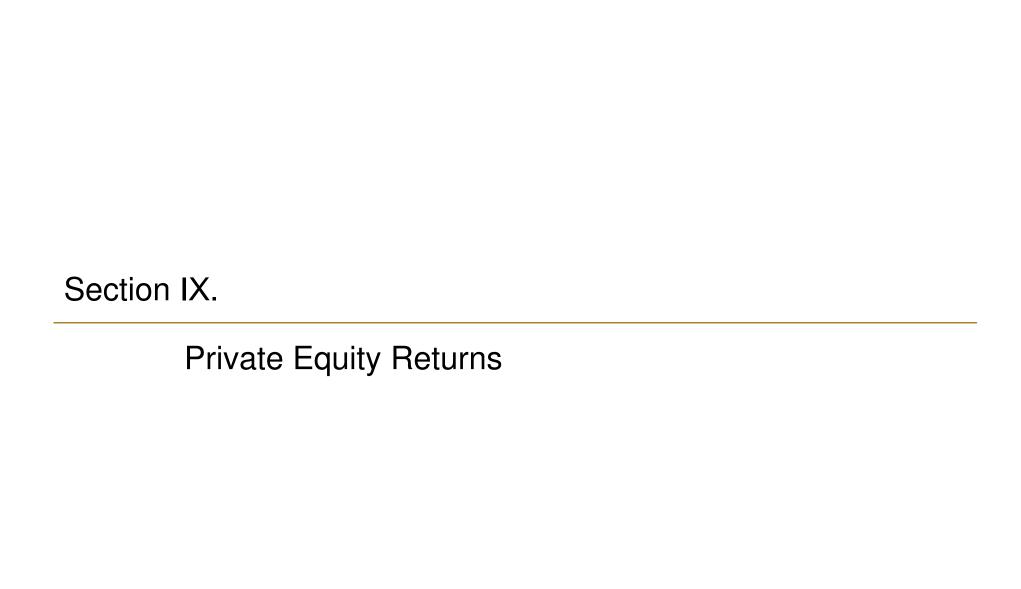


#### Employees' Retirement System of the State of Rhode Island

Absolute Return Portfolio Fund Level Performance Report Estimated as of September 30, 2018

						Tra	ailing Retu	rns		Calen	dar Year Re	eturns		5 Yr		Sharpe Rat	io	Start
Fund	QTD	YTD	Sep	Aug	Jul	1 Year	3 Year	5 Year	2017	2016	2015	2014	2013	Std Dev	3 yr	5 yr	Incep.	Date
Absolute Return																		
Capula Global Relative Value Fund Ltd.	1.41%	3.74%				3.92%	5.69%	6.45%	3.79%	8.37%	7.54%	8.14%	7.60%	1.57%	2.65	3.32	1.83	Oct-05
Davidson Kempner Institutional Partners, L.P.	1.54%	3.60%	0.71%	0.49%	0.33%	4.38%	5.55%	4.83%	6.11%	6.71%	1.51%	4.45%	9.52%	1.95%	2.56	1.98	1.58	Mar-96
DE Shaw Composite Fund LLC	3.44%	8.65%				8.10%	9.78%	11.36%	10.41%	6.12%	13.68%	15.57%	11.51%	3.84%	2.51	2.59	1.61	Mar-01
Elliott Associates, L.P.	-1.00%	3.11%	-0.30%	0.00%	-0.70%	4.97%	8.15%	7.66%	8.80%	12.98%	2.51%	8.24%	12.44%	3.49%	1.71	1.88	1.91	Jan-90
Graham Absolute Return Trading Ltd.	-0.66%	5.32%	0.59%	0.42%	-1.66%	4.02%	3.07%	5.77%	-7.01%	11.78%	1.50%	10.42%	10.50%	7.90%	0.29	0.64	0.93	Jan-05
Viking Global Equities, LP	2.19%	7.12%	-0.10%	-0.20%	2.50%	9.34%	6.57%	9.11%	13.01%	-3.92%	8.27%	13.47%	22.65%	7.65%	0.71	1.07	1.42	Oct-99
Winton Fund Limited	0.83%	2.19%	-0.10%	1.40%	-0.46%	10.03%	1.97%	5.41%	7.88%	-3.01%	0.95%	13.88%	9.43%	8.69%	0.12	0.55	0.66	Oct-97
Liquidating Portfolio																		
Indus Asia Pacific Fund, LP	-6.40%	-13.14%	-2.98%	-3.41%	-0.12%	-7.37%	-13.15%	-16.41%	9.70%	-26.00%	-33.23%	-15.60%	4.97%	21.32%	-0.53	-0.76	0.00	Dec-00
Luxor Capital Partners, LP	-1.37%	-2.13%	-1.61%	-0.89%	1.15%	-2.06%	13.13%	4.70%	54.38%	7.80%	-19.05%	-9.83%	19.53%	14.52%	0.74	0.33	0.84	Apr-02
Benchmark																		
HFRI Fund of Funds Composite Index	0.27%	0.99%	-0.18%	0.24%	0.21%	3.08%	3.29%	3.18%	7.77%	0.51%	-0.27%	3.37%	8.96%	3.24%				Jan-90
HFRI Fund Weighted Composite Index	0.55%	1.37%	-0.26%	0.34%	0.48%	3.98%	5.34%	4.11%	8.59%	5.44%	-1.12%	2.98%	9.13%	3.55%				Jan-90
Market Indices																		
3 Month Libor - BOM	0.59%	1.67%	0.19%	0.20%	0.20%	2.06%	1.28%	0.87%	1.29%	0.76%	0.33%	0.23%	0.27%	0.20%				Jan-87
Barclays Aggregate Bond Index	0.02%	-1.60%	-0.64%	0.64%	0.02%	-1.22%	1.32%	2.16%	3.55%	2.66%	0.57%	5.94%	-2.02%	2.70%				Jan-76
Barclays High Yield Credit Bond Index	2.41%	2.57%	0.56%	0.74%	1.09%	3.04%	8.15%	5.55%	7.50%	17.14%	-4.46%	2.46%	7.46%	4.95%				Jul-83
S&P 500 (TR)	7.71%	10.56%	0.57%	3.26%	3.72%	17.91%	17.31%	13.95%	21.83%	11.96%	1.38%	13.69%	32.39%	9.55%				Jun-88
MSCI EAFE - Net - USD	1.35%	-1.43%	0.87%	-1.93%	2.46%	2.74%	9.23%	4.42%	25.03%	1.00%	-0.81%	-4.90%	22.78%	11.04%				Dec-69
MSCI EMF (EMERGING MARKETS FREE) - Net - USD	-1.09%	-7.68%	-0.53%	-2.70%	2.20%	-0.81%	12.36%	3.61%	37.28%	11.19%	-14.92%	-2.19%	-2.60%	14.66%				Dec-87

Note: The above is manager composite history.



#### **Portfolio Summary**

6/30/2018 All Investments

Performance Summary

		Number of					Multiple of		
Asset Class	Investment Type	Investments	Commitment	Contributions	Distributions	Valuation	Cost	IRR	TWR
Private Equity Funds									
	Buyout Total	84	1,471,017,725	1,295,716,313	1,662,382,021	372,975,045	1.57	13.33%	12.96%
	Direct Lending Total	4	125,000,000	79,085,490	41,055,328	49,730,786	1.15	9.47%	8.27%
	Distressed Debt Total	14	263,000,000	229,976,135	246,304,482	76,059,508	1.41	10.27%	9.98%
	Energy Total	9	198,000,000	155,257,332	192,184,152	37,448,554	1.48	23.70%	7.75%
	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	21,153,955		20,394,402	0.96	-3.59%	-5.68%
	Secondary Total	4	60,000,000	55,009,798	64,390,258	3,100,759	1.23	5.86%	3.10%
	Venture Capital Total	23	281,250,000	268,993,732	259,614,710	105,127,214	1.36	5.77%	3.65%
Total: Private Equity F	Total: Private Equity Funds		2,493,267,725	2,150,192,755	2,572,679,771	664,836,268	1.51	13.52%	11.42%



2007 2008 2009

2012

■ Net Capital Contributed ■ Unfunded Commitment

2013

2015

2016 2017

# Employees' Retirement System of Rhode Island Private Equity Performance 6/30/2018

Cumulative Cash Flows (\$)

Cumulative Performance\*

Current Partnerships	Vintage Year		Amount Committed (In \$ unless otherwise noted)	Amount Drawn	Amount Distributed	Amount Unfunded	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
Fenway Partners Capital Fund II	1998	Buyout	15,000,000	18,538,740	20,462,364	206,830	-	3.27	1.10
Nautic Partners V	2000	Buyout	20,000,000	20,331,229	40,426,893	636,249	1,556,960	17.13	2.06
CVC European Equity Partners III Parthenon Investors II	2001 2001	Buyout Buyout	20,000,000 23,960,000	23,760,732 23,409,381	59,551,716 37,415,960	297,277 550,619	1,430,600 596,106	41.04 12.32	2.57 1.62
Leeds Equity Partners IV	2003	Buyout	10,000,000	10,209,327	13,266,210	1,100,000	174,633	4.31	1.32
Nordic Capital Fund V	2003	Buyout	€ 14,615,550	16,986,770	44,789,371	-	294,284	20.22	2.65
TPG Partners IV	2003	Buyout	15,000,000	16,672,684	31,589,548	64,421	752,952	15.52	1.94
Aurora Equity Partners III	2004	Buyout	15,000,000	16,243,392	26,952,245	835,850	113,031	14.86	1.67
W Capital Birch Hill Equity Partners III	2004 2005	Buyout Buyout	15,000,000 CAD 18,000,000.00	14,197,500 15,639,608	10,411,595 28,078,160	13,696,200	159,699 3,872,024	-10.26 13.34	0.74 2.04
CVC European Equity Partners IV	2005	Buyout	€ 16,500,000	16,514,151	32,284,348	2,175,147	25,313	16.64	1.96
Providence Equity Partners V	2005	Buyout	25,000,000	31,142,133	36,171,706	2,200,670	807,897	3.26	1.19
Centerbridge Capital Partners	2006	Buyout	15,000,000	23,606,988	39,001,831	1,050,000	4,455,449	19.93	1.84
Fenway Partners Capital Fund III	2006	Buyout	15,000,000	17,230,534	14,495,125	1,050,000	6,485,363	3.58	1.22
LNK Partners Nordic Capital Fund VI	2006 2006	Buyout Buyout	12,500,000 € 15,000,000	12,143,603 16,568,339	16,923,986 28,414,342	299,438 16,816,500	297,841	8.12 8.65	1.39 1.73
TPG Partners V	2006	Buyout	20,000,000	20,697,887	25,196,079	1,774,959	3,409,317	5.05	1.73
Green Equity V	2007	Buyout	20,000,000	20,422,420	31,350,166	1,800,000	14,148,143	18.71	2.23
Nautic Partners VI	2007	Buyout	20,000,000	24,233,473	49,504,788	520,720	5,949,967	17.61	2.29
Providence Equity Partners VI	2007	Buyout	25,000,000	29,481,221	30,574,323	1,394,675	8,545,897	5.68	1.33
Trilantic Capital Partners IV	2007	Buyout	11,098,351	11,606,535	17,222,868	700.000	1,498,037	14.00	1.61
Bain Capital Fund X	2008	Buyout Buyout	25,000,000 € 20,000,000	24,300,000 22,266,857	31,702,360 37,140,402	700,000 326,086	9,707,792 10,534,330	10.41 20.12	1.70 2.14
Nordic Capital Fund VI	2008	Buyout	€ 15,000,000	15,729,800	23,426,684	927,150	1,547,151	8.25	1.59
TPG VI	2008	Buyout	10,000,000	13,853,837	14,763,436	678,959	4,329,785	9.03	1.38
Advent International GPE VII-C, L.P.	2012	Buyout	20,000,000	18,800,000	11,240,000	1,200,000	23,557,220	19.97	1.85
Providence Equity Partners VII	2012	Buyout	25,000,000	30,475,715	18,149,024	4,821,879	27,512,279	22.29	1.50
Nordic Capital Fund VIII Riverside Capital Appreciation Fund VI	2013 2013	Buyout Buyout	€ 15,000,000 20,000,000	15,799,445 16,927,323	5,349,737 8,324,530	1,483,440 3,363,483	16,925,819 16,590,739	16.69 16.09	1.41 1.47
Carlyle Asia Partners IV	2013	Buyout	30,000,000	32,965,564	4,602,277	1,154,239	37,415,649	14.27	1.27
CVC Capital Partners VI	2014	Buyout	€ 15,000,000	15,591,979	3,129,847	2,225,160	14,092,313	6.60	1.10
Nautic Partners VII	2014	Buyout	20,000,000	16,558,426	20,225,071	4,680,242	11,954,285	46.48	1.94
Riverside Micro-Cap Fund III	2014	Buyout	20,000,000	17,758,317	10,324,966	2,241,683	31,112,334	27.74	2.33
Sorenson Capital Partners III	2014	Buyout	30,000,000	23,772,306	7,769	6,957,140	26,660,306	5.94	1.12
Baring Asia Private Equity Fund VI	2015 2015	Buyout	15,000,000	9,730,055 13,614,788	2,438,197	5,269,945	10,403,134	17.64 16.30	1.32 1.28
Centerbridge Capital Partners III Paine & Partners Capital Fund IV	2015	Buyout Buyout	25,000,000 30,000,000	20,627,579	3,363,501 805,848	14,126,187 9,966,597	14,062,979 23,984,384	11.12	1.20
Advent International GPE VIII	2016	Buyout	20,000,000	9,830,000	-	10,170,000	10,826,745	9.92	1.10
Nautic Partners VIII	2016	Buyout	20,000,000	6,621,982	6,767,878	13,416,078	3,923,340	N/M	1.61
Southvest Partners VII	2016	Buyout	37,500,000	6,016,737	941,378	32,456,531	3,121,824	-54.62	0.68
RLH IV	2017	Buyout	40,000,000	1,279,288		38,720,712	693,974	N/M	0.54
Altaris Constellation Partners IV, L.P. Altaris IV	2018 2018	Buyout Buyout	6,000,000 24,000,000	1,848,514 5,048,912	-	4,151,486 18,951,088	1,840,389 4,962,067	N/M N/M	1.00 0.98
MHR Institutional Partners III	2006	Debt	20,000,000	20,800,000	20,907,835	6,974,396	8,983,880	6.93	1.44
WLR Recovery Fund IV	2007	Debt	8,000,000	7,277,318	9,260,089	-	728,898	7.86	1.37
Oaktree European Principal Fund III	2011	Debt	20,000,000	17,150,000	10,478,209	-	16,287,199	10.91	1.56
Centerbridge Special Credit Partners II	2012	Debt	25,000,000	22,500,000	16,326,832	2,500,000	7,880,965	1.95	1.08
Garrison Opportunity Fund IV CSIP V	2014 2016	Debt	30,000,000	28,373,532	(498,315)	1,571,514	32,290,776	5.51 N/M	1.12
Tenex Capital Partners II	2016	Debt Debt	30,000,000 25,000,000	15,311,638 10,083,903	2,676,995 770,585	15,531,685	14,077,929 10,564,233	9.55	1.09 1.12
Virgo Societas Partnership IV (Offshore), L.P.	2017	Debt	50,000,000	21,153,955	-	-	20,394,402	N/M	0.96
Davidson Kempner L-T Opps. IV	2018	Debt	50,000,000	5,000,000	-	-	5,432,341	N/M	1.09
Owl Rock Capital Corporation	2018	Debt	50,000,000	17,391,573	227,889	-	17,192,158	N/M	1.00
First Reserve Fund X	2004	Energy	20,000,000	19,999,999	36,485,800		68,612	31.03	1.83
Kayne Anderson Energy Fund III First Reserve Fund XI	2005 2006	Energy Energy	15,000,000 20,000,000	15,965,344 22,125,580	15,214,110 14,833,318	-	33,923 1,358,289	-2.57 -7.65	0.96 0.73
Kayne Anderson Energy Fund IV	2007	Energy	15,000,000	16,605,519	16,631,275		1,209,802	2.44	1.07
EnCap Energy Capital Fund IX	2013	Energy	18,000,000	19,544,124	12,499,156	1,980,000	13,538,054	14.68	1.33
EnCap Energy Capital Fund X	2015	Energy	25,000,000	19,049,032	3,808,078	6,573,261	17,906,271	11.36	1.14
EnCap Energy Capital Fund XI	2017	Energy	50,000,000	4,158,292	-	46,465,165	3,333,603	N/M	0.80
Coller V W Capital II	2006 2007	Secondaries Secondaries	15,000,000 15,000,000	12,620,912	16,234,087	2,379,088	1,736,442	8.12 10.57	1.42 1.41
W Capital II  Alta BioPharma Partners III	2007	Venture Capital	15,000,000	14,896,718 14,250,000	19,748,146 20,297,956	103,282	1,204,618 511,466	5.81	1.41
Granite Global Ventures II	2004	Venture Capital	15,000,000	14,333,510	21,812,249	675,000	2,416,344	6.68	1.69
Leapfrog Ventures II	2005	Venture Capital	10,000,000	9,640,000	6,811,564	360,000	4,128,404	2.11	1.13
Alta Partners VIII	2006	Venture Capital	15,000,000	15,000,000	26,769,196	750,000	6,803,455	16.33	2.24
Castile Ventures III	2006	Venture Capital	5,000,000	5,009,730	1,396,371		675,170	-16.53	0.41
Focus Ventures III GGV III	2006	Venture Capital	15,000,000	15,000,000	6,480,361	- 274 050	1,823,167	-9.90 18.33	0.55 2.85
Point 406 Ventures I	2006 2006	Venture Capital Venture Capital	15,000,000 10,000,000	14,625,748 10,950,534	39,505,464 8,474,403	374,252 400,000	2,184,752 9,428,259	18.22 8.30	2.85 1.63
Point Judith Venture Fund II	2006	Venture Capital	5,000,000	6,213,735	2,319,569	50,000	6,495,933	5.53	1.42
Lighthouse Capital Partners VI	2007	Venture Capital	15,000,000	14,250,000	19,719,297	750,000	492,474	6.78	1.42
Paladin III	2008	Venture Capital	10,000,000	13,041,537	9,090,987	400,000	9,239,820	7.59	1.41
Industry Ventures Partnership Holdings III	2014	Venture Capital	25,000,000	22,187,702	4,032,277	2,875,000	27,263,875	14.96	1.41
Industry Ventures Partnership Holdings III C	2015	Venture Capital Venture Capital	15,000,000	8,925,529	110,218	- e een ooo	12,298,949	26.80	1.39
Industry Ventures Partnership Holdings IV  Other funds in aggregrate**	2015 various	venture Capital	10,000,000 \$100,000,000	3,450,000 \$102,814,012	40,923 \$84,407,873	6,550,000 \$14,513,287	4,120,148 \$35,705,697	16.95	1.21
Total			\$ 1,649,955,101	\$ 1,318,753,547					

\*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.

<sup>\*\*</sup>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, McNerney & Partners, Thomas McNerney & Partners III and Wellspring Capital Partners III.



Real Estate Returns

#### PORTFOLIO SUMMARY

6/30/2018

All Portfolio Investments - Real Estate (1)

#### Performance Summary

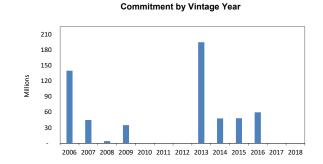
8	414.873.657	481.706.835	310.458.349	437.000.133	1 Ev	5.5%	E 70/
21	415,260,817	366,027,063	217,807,833	156,903,359	1.5x 1.0x	0.5%	5.7% 3.1%
29	830,134,474	847,733,898	528,266,182	593,903,492	1.3x	4.4%	5.0%
		29 830,134,474	29 830,134,474 847,733,898	29 830,134,474 847,733,898 528,266,182	29 830,134,474 847,733,898 528,266,182 593,903,492	29 830,134,474 847,733,898 528,266,182 593,903,492 1.3x	29 830,134,474 847,733,898 528,266,182 593,903,492 1.3x 4.4%

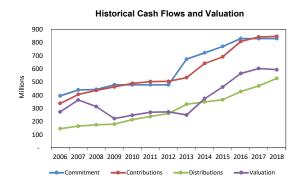
### **Cash Flow and Valuation Summary** 1.000 800 Millions 600 400 200

Contributions

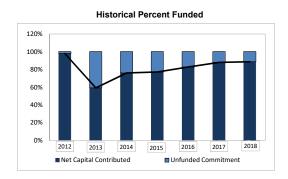
Distributions

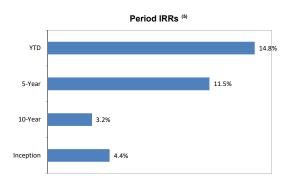
Commitment











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

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

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

<sup>(4)</sup> As of June 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 2Q18 is 7.1%

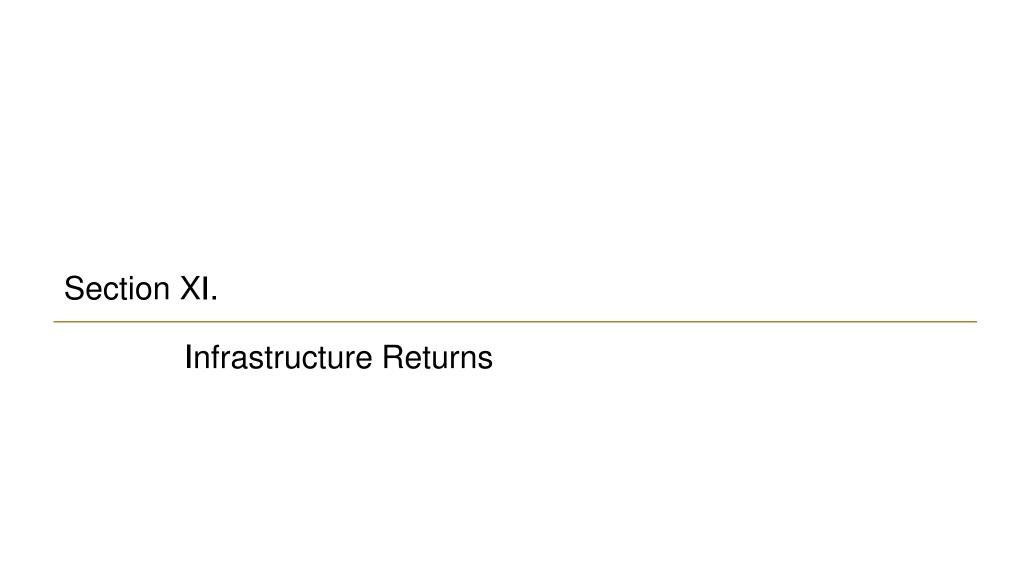
# Employees' Retirement System of Rhode Island Real Estate Performance 6/30/2018

Cumulative Cash Flows (\$)

Cumulative Performance\*

Current Partnerships	Vintage Year/Initial Investment	Туре	Amount Committed (In \$ unless otherwise noted)	Amount Drawn	Amount Distributed	Amount Unfunded	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
AEW Core Property Trust	2010	Core	69,873,660	69,873,660	19,330,278	-	105,062,402	11.0	1.5
Heitman America Real Estate Trust	2014	Core	60,000,000	60,000,000	11,108,700	-	81,145,258	10.1	1.3
JP Morgan Strategic Property Fund	2006	Core	75,000,000	75,000,000	30,084,547	-	109,171,450	6.3	1.7
Morgan Stanley Prime Property Fund	2005	Core	35,000,000	35,000,000	23,027,109	-	64,303,378	7.4	2.1
Prudential (PRISA)	2005	Core	50,000,000	50,000,000	22,188,693	-	77,317,642	5.4	1.8
Magna Hotel Fund III	2008	Value-Add	4,000,000	3,426,573	5,668,115	573,427	126,006	14.4	1.7
IC Berkeley Partners III	2013	Value-Add	18,000,000	16,038,326	19,347,499	1,961,674	5,437,406	20.9	1.5
Exeter Industrial Value Fund III	2014	Value-Add	30,000,000	29,099,454	38,743,396	900,546	14,728,850	30.4	1.8
Waterton Fund XII	2014	Value-Add	35,000,000	34,265,141	8,600,065	734,859	40,242,138	16.3	1.4
Crow Holdings Retail Fund	2015	Value-Add	24,000,000	20,935,313	2,671,894	3,064,687	22,884,611	12.0	1.2
IC Berkeley Partners IV	2016	Value-Add	30,000,000	8,814,545	1,783,071	21,185,455	9,235,957	4.4	1.0
TriCon Capital Fund VII	2005	Opportunistic	15,000,000	14,571,533	4,689,913	428,467	536,224	-16.7	0.3
JP Morgan Alternative Property Fund	2006	Opportunistic	20,000,000	20,000,000	14,750,429	-	192,070	-4.4	0.7
GEM Realty Fund V	2013	Opportunistic	50,000,000	39,874,323	9,922,250	10,125,677	46,018,809	12.9	1.3
Lone Star Real Estate Fund IV	2015	Opportunistic	24,260,817	18,230,068	8,355,746	6,030,749	15,892,493	20.2	1.3
GEM Realty Fund VI	2017	Opportunistic	20,000,000	1,500,000	-	18,500,000	1,608,793	n/a	n/a
Total			\$ 560,134,477	\$ 496,628,936	\$ 220,271,705	\$ 63,505,541	\$ 593,903,487		

<sup>\*</sup>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 currulative 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.

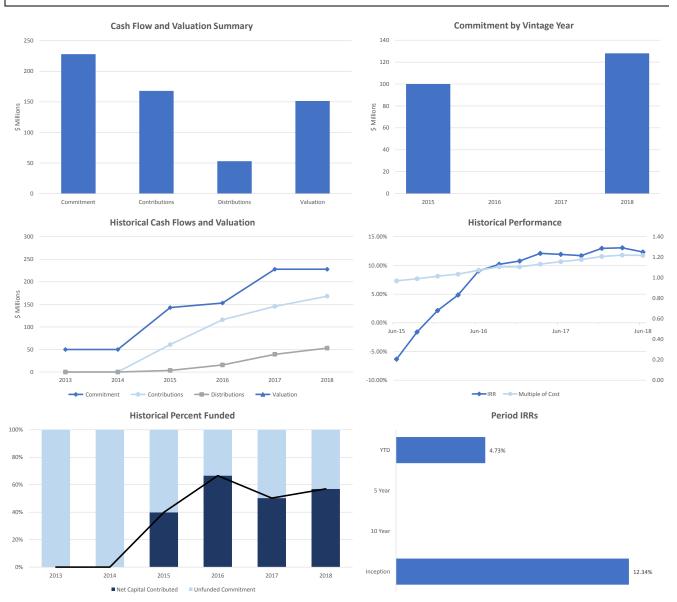


#### **Portfolio Summary**

6/30/2018 All Investments

Performance Summary

		renormance Junin	aiy				
Asset						Multiple of	
Class	Investment Type	Commitment	Contributions	Distributions	Valuation	Cost	IRR
Infrastruc	cture Funds						
- 1	FM Global Infrastructure Fund	50,000,000	50,000,000	9,822,841	58,279,846	1.36	10.81%
1	SQ Global Infrastructure Fund (UST), L.P.	50,000,000	57,108,364	22,329,720	45,991,601	1.20	14.69%
1	SQ Global Infrastructure Fund II (UST), L.P.	40,000,000	2,648,872		2,266,486	0.86	-70.68%
5	Stonepeak Infrastructure Fund II - Master Co- Investment Partners LP	10,000,000	8,478,420	163,022	8,786,300	1.06	8.53%
5	Stonepeak Infrastructure Fund II Cayman (G AIV) LP	43,000,000	45,836,795	19,929,694	33,344,516	1.16	16.19%
5	Stonepeak Infrastructure Fund III (AIV I) LP	35,000,000	3,868,517	831,489	2,860,035	0.95	-7.41%
Total: Inf	rastructure Funds	228,000,000	167,940,968	53,076,766	151,528,784	1.22	12.34%



### Employees' Retirement System of Rhode Island Private Infrastructure Performance 6/30/2018

Cumulative Cash Flows (\$)

Cumulative Performance\*

Current Partnerships	Vintage Year/Initial Investment		Amount Committed (In \$ unless otherwise noted)	Amount Drawn	Amount Distributed	Amount Unfunded	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
IFM Global Infrastructure, L.P.	2015	Core	50,000,000	50,000,000	9,822,841		58,279,846	10.8	1.4
ISQ Global Infrastructure Fund, L.P.	2015	Value-Add	50,000,000	35,862,741	22,329,720	14,137,259	45,991,601	14.7	1.2
ISQ Global Infrastructure Fund II, L.P.	2017	Value-Add	40,000,000	2,648,872	-	37,351,128	2,266,486	n/a	n/a
Stonepeak Infrastructure Fund II, L.P.	2016	Opportunistic	43,000,000	34,675,150	19,929,694	8,324,850	33,344,516	16.2	1.2
Stonepeak Infrastructure Fund II-C	2016	Opportunistic	10,000,000	8,360,723	163,022	1,639,277	8,786,300	8.5	1.1
Stonepeak Infrastrucutre Fund III	2018	Opportunistic	35,000,000	3,039,126	831,489	31,960,874	2,860,035	n/a	n/a
Total		:	\$ 228,000,000	\$ 134,586,612	\$ 53,076,766	\$ 93,413,388	\$ 151,528,784		



Cash Flow



# Monthly Valuation Change

Period: 2018-09-01 - 2018-09-30

Category	Source Account Name	Closing Balance	Market Value Increase/(Decrease)	Transfer In/(Out)	Opening Balance
outogory	Source Account Name	Closing Bulanos	market value increase/postease/	Transist in (Out)	Opening Bulance
Grand Total		8,412,283,688.99	26,560,495.29	(48,987,611.00)	8,434,710,804.7
Total Global Equity		4,217,690,757.68	18,404,261.08	(50,000,000.00)	4,249,286,496.6
Global Equity		3,954,670,826.70	15,271,667.76	(50,000,000.00)	3,989,399,158.9
	SSGA R3000 INDEX	1,400,831,356.26	2,404,418.08	0.00	1,398,426,938.1
	SSGA MSCI EAFE	732,592,449.59	7,025,443.74	(50,000,000.00)	775,567,005.8
	SSGA MSCI CANADA	95,594,930.96	(31,191.44)	0.00	95,626,122.4
	SSGA MSCI EM	429,746,234.64	(2,122,469.47)	0.00	431,868,704.1
	QVM TILT	1,295,905,855.25	7,995,466.85	0.00	1,287,910,388.4
Global Equity Hedge Fund	ds	263,019,930.98	3,132,593.32	0.00	259,887,337.6
	DAVIDSON KEMPNER	89,188,531.28	642,952.55	0.00	88,545,578.7
	ELLIOTT ASSOCIATES	109,121,417.07	2,582,338.75	0.00	106,539,078.3
	INDUS ASIA PACIFIC	319,827.69	(9,831.76)	0.00	329,659.4
	PFM DIVERSIFIED	174.44	0.00	0.00	174.4
	SAMLYN ON/OFFSHORE	578.67	0.28	0.00	578.3
	VIKING GLOBAL EQUITI	63,272,145.60	(64,562.17)	0.00	63,336,707.7
	LUXOR CAP PTNS LP	1,117,049.21	(18,304.33)	0.00	1,135,353.5
	ESG CBE FUND LP	207.02	0.00	0.00	207.0
Private Equity		513,202,751.80	12,006,710.08	(968,198.20)	502,164,239.9
Private Equity		513,202,751.80	12,006,710.08	(968,198.20)	502,164,239.9
	PRIVATE EQUITY	513,202,751.80	12,006,710.08	(968,198.20)	502,164,239.9
Total Fixed Income		921,902,527.59	(5,406,092.28)	0.00	927,308,619.8
Fixed Income		921,902,527.59	(5,406,092.28)	0.00	927,308,619.8
	MACKAY SHIELDS	454,677,017.80	(2,949,186.29)	0.00	457,626,204.0
	PYRAMIS GLOBAL ADV	467,225,509.79	(2,456,905.99)	0.00	469,682,415.7
Total Real Return		1,166,641,611.11	1,963,583.63	0.00	1,164,678,027.4
Alternative Absolute Retu	urn	215,377,802.34	1,981,512.03	0.00	213,396,290.3
	BREVAN HOWARD	4,333.22	1.97	0.00	4,331.2
	DE SHAW	115,085,091.03	1,610,405.84	0.00	113,474,685.1
	OZ DOMESTIC PTRS	186.78	0.00	0.00	186.7
	WINTON FUTURE FD	39,433,204.00	(45,054.38)	0.00	39,478,258.3
	GRAHAM ABS RETURN	60,854,987.31	416,158.60	0.00	60,438,828.7
Alternative Fixed Income		73,217,860.36	311,072.00	0.00	72,906,788.30
	CAPULA GLOBAL	73,217,849.30	311,072.00	0.00	72,906,777.3
	CLAREN ROAD CR. FUND	11.06	0.00	0.00	11.0
Credit		362,555,605.07	2,396,540.63	0.00	360,159,064.4
	PIMCO	188,428,630.03	1,256,511.49	0.00	187,172,118.5
	WAMCO	174,126,975.04	1,140,029.14	0.00	172,986,945.9
GILBs		201,329,916.21	(1,350,346.39)	0.00	202,680,262.60
	BROWN BROTHERS HARR	201,329,916.21	(1,350,346.39)	0.00	202,680,262.6
Publicly Traded Infrastruc	cture	314,160,427.13	(1,375,194.64)	0.00	315,535,621.7
,	PRIV INFRASTR AGGR	150,149,747.47	1,554,749.20	0.00	148,594,998.2
	HARVEST FUND ADVISOR	164,010,679.66	(2,929,943.84)	0.00	166,940,623.5
Total Cash		24,738,314.25	(178,972.21)	7,428,002.70	17,489,283.7
Cash Accounts		24,738,314.25	(178,972.21)	7,428,002.70	17,489,283.7
	ERSRI CASH	22,965,063.25	(178,972.21)	7,415,613.70	15,728,421.7
	CITIZENS CASH	1,773,251.00	0.00	12,389.00	1,760,862.0
Total Other		7,905,597.12	(1,155,622.68)	5,000,000.00	4,061,219.80



# Monthly Valuation Change

Period: 2018-09-01 - 2018-09-30

Category	Source Account Name	Closing Balance	Market Value Increase/(Decrease)	Transfer In/(Out)	Opening Balance
Other		7,905,597.12	(1,155,622.68)	5,000,000.00	4,061,219.80
	RUSSELL OVERLAY FD	7,905,597.12	(1,155,622.68)	5,000,000.00	4,061,219.80
Total Miscellaneous		386,051.80	(38,313.91)	0.00	424,365.71
Miscellaneous Acco	unts	386,051.80	(38,313.91)	0.00	424,365.71
	RI TRANS ACCT	5,228.53	45.48	0.00	5,183.05
	SHOTT CAPITAL	327,311.13	(36,720.85)	0.00	364,031.98
	NON-US EQUITY TRANS	43,620.17	(581.56)	0.00	44,201.73
	FIXED INC TRANS	9,891.97	(1,056.98)	0.00	10,948.95
*unclassified		1,559,816,077.64	964,941.58	(10,447,415.50)	1,569,298,551.56
*Unclassified		1,559,816,077.64	964,941.58	(10,447,415.50)	1,569,298,551.56
	ERSRI SMA CASH	207,738,071.66	374,435.87	(15,000,000.00)	222,363,635.79
	MACKAY LONG DURATION	157,941,849.39	(4,851,455.96)	0.00	162,793,305.35
	WAMCO LONG DURATION	157,685,505.11	(4,886,610.73)	0.00	162,572,115.84
	CPC CB LLC	99,264,453.44	(823,525.64)	0.00	100,087,979.08
	CPC QIS LLC	101,616,508.03	(693,522.15)	0.00	102,310,030.18
	CPC AP LLC	103,370,723.55	(852,306.22)	0.00	104,223,029.77
	PRIVATE CREDIT	109,542,603.48	4,215,653.47	2,976,656.17	102,350,293.84
	OPPORTUNISTIC PRV CR	36,399,106.00	(105,251.00)	2,953,028.00	33,551,329.00
	CORE REAL ESTATE	433,647,974.97	2,637,134.02	(1,291,173.67)	432,302,014.62
	NON CORE REAL ESTATE	152,609,282.01	5,950,389.92	(85,926.00)	146,744,818.09

#### **CASH FLOW ANALYSIS - INCOME & EXPENSES**

#### **Employees Retirement System**

FISCAL YEAR 2019	FY 2018-19												
		Projected	Actual	Actual	Actual								
	TOTAL	June	May	April	March	February	January	December	November	October	September	August	July
							2019						2018
MEMBER BENEFITS	834,367,446	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,703,524	69,681,837	69,482,084
ADMINISTRATIVE EXPENSES	9,068,974	1,255,280.98	1,021,300	529,120	1,264,456	523,667	661,953	855,600	497,568	844,408	733,118	483,861	398,643
INVESTMENT EXPENSES	34,899,930	270,376	10,424,015	3,807,683	2,045,442	2,252,368	708,685	(955)	574,291	875,124	13,138,426	0	804,475
TOTAL OUTFLOW	878,336,350	71,025,657	80,945,315	73,836,803	72,809,898	72,276,035	70,870,638	70,354,645	70,571,859	71,219,532	83,575,068	70,165,698	70,685,202
CONTRIBUTIONS	517,408,546	54,595,381	44,734,514	41,272,504	42,480,747	40,865,166	47,531,440	47,242,656	41,926,087	45,184,050	27,337,674	31,357,169	52,881,158
OTHER INCOME*	105,294,274	3,138,460	13,807,256	14,038,691	2,870,790	14,041,528	(10,388,798)	(461,275)	8,186,393	9,405,337	30,034,164	18,350,593	2,271,136
TOTAL INCOME	622,702,820	57,733,841	58,541,770	55,311,195	45,351,537	54,906,694	37,142,642	46,781,381	50,112,480	54,589,387	57,371,838	49,707,762	55,152,294
DIFFERENCE	(255,633,531)	(13,291,816)	(22,403,546)	(18,525,608)	(27,458,361)	(17,369,341)	(33,727,996)	(23,573,264)	(20,459,379)	(16,630,145)	(26,203,230)	(20,457,936)	(15,532,908)

#### **Municipal Employees Retirement System**

	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Projected December	Projected November	Projected October	Actual September	Actual August	Actual July 2018
MEMBER BENEFITS	98,378,849	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,246,506	8,185,416	8,146,928
ADMINISTRATIVE EXPENSES	2,146,785	298,439	242,816	125,497	299,070	123,576	155,785	201,000	116,695	197,622	175,891	115,551	94,842
INVESTMENT EXPENSES	8,310,676	64,281	2,478,330	903,107	483,790	531,519	166,784	(224)	134,689	204,810	3,152,198	0	191,394
TOTAL OUTFLOW	108,836,310	8,562,720	10,921,146	9,228,603	8,982,860	8,855,095	8,522,569	8,400,775	8,451,384	8,602,432	11,574,595	8,300,967	8,433,164
CONTRIBUTIONS	65,779,618	5,597,269	5,857,272	5,099,829	6,369,814	5,329,289	5,854,840	5,485,021	4,955,181	5,693,573	5,286,222	4,903,739	5,347,569
OTHER INCOME*	25,047,483	746,159	3,282,702	3,329,698	679,002	3,313,551	(2,444,924)	(108,364)	1,919,961	2,201,187	7,205,857	4,382,324	540,330
TOTAL INCOME	90,827,101	6,343,428	9,139,974	8,429,527	7,048,816	8,642,840	3,409,916	5,376,657	6,875,142	7,894,760	12,492,079	9,286,063	5,887,899
DIFFERENCE	(18,009,210)	(2,219,292)	(1,781,172)	(799,077)	(1,934,044)	(212,255)	(5,112,653)	(3,024,118)	(1,576,242)	(707,672)	917,484	985,097	(2,545,265)

#### **CASH FLOW ANALYSIS - INCOME & EXPENSES**

State	Police	

Retirement System	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Projected December	Projected November	Projected October	Actual September	Actual August	Actual July 2018
MEMBER BENEFITS	5,997,788	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	499,263	499,263	499,263
ADMINISTRATIVE EXPENSES	190,655	26,577	21,565	11,140	26,530	10,986	13,802	17,789	10,305	17,434	15,742	10,327	8,458
INVESTMENT EXPENSES	740,065	5,724	220,101	80,165	42,917	47,252	14,777	(20)	11,894	18,068	282,118	0	17,069
TOTAL OUTFLOW	6,928,507	532,302	741,665	591,305	569,447	558,238	528,579	517,770	522,199	535,501	797,122	509,589	524,790
CONTRIBUTIONS	5,708,122	527,408	316,594	332,007	290,687	447,000	417,169	556,883	638,832	799,691	511,035	444,510	426,307
OTHER INCOME*	2,282,200	66,448	291,537	295,564	60,234	294,578	(216,615)	(9,591)	169,546	194,181	644,915	391,653	99,750
TOTAL INCOME	7,990,321	593,856	608,131	627,571	350,921	741,578	200,554	547,292	808,378	993,872	1,155,949	836,162	526,057
DIFFERENCE	1,061,814	61,555	(133,534)	36,266	(218,526)	183,339	(328,024)	29,523	286,179	458,371	358,827	326,573	1,267

Judicial		

Judiciai													
Retirement System	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January	Projected December	Projected November	Projected October	Actual September	Actual August	Actual July
			,	,		,	2019				, i	Ü	2018
MEMBER BENEFITS	3,322,443	275,000	275,000	275,000	275,000	275,000	275,000	275,000	275,000	275,000	288,071	288,071	271,301
ADMINISTRATIVE EXPENSES	100,456	14,070	11,402	5,885	13,828	5,793	7,265	9,360	5,424	9,164	8,326	5,463	4,476
INVESTMENT EXPENSES	390,803	3,031	116,375	42,351	22,369	24,915	7,778	(10)	6,261	9,498	149,204	0	9,033
TOTAL OUTFLOW	3,813,702	292,100	402,777	323,236	311,197	305,708	290,042	284,350	286,685	293,662	445,601	293,534	284,810
CONTRIBUTIONS	3,815,507	380,045	236,017	260,088	267,842	271,001	270,000	286,056	664,755	504,423	218,491	240,520	216,269
OTHER INCOME*	1,204,959	35,178	154,145	156,146	31,395	155,323	(114,013)	(5,046)	89,242	102,077	341,078	207,202	52,233
TOTAL INCOME	5,020,466	415,223	390,162	416,234	299,237	426,324	155,987	281,010	753,997	606,500	559,569	447,722	268,502
DIFFERENCE	1,206,764	123,122	(12,614)	92,998	(11,960)	120,616	(134,055)	(3,340)	467,313	312,837	113,968	154,188	(16,308)

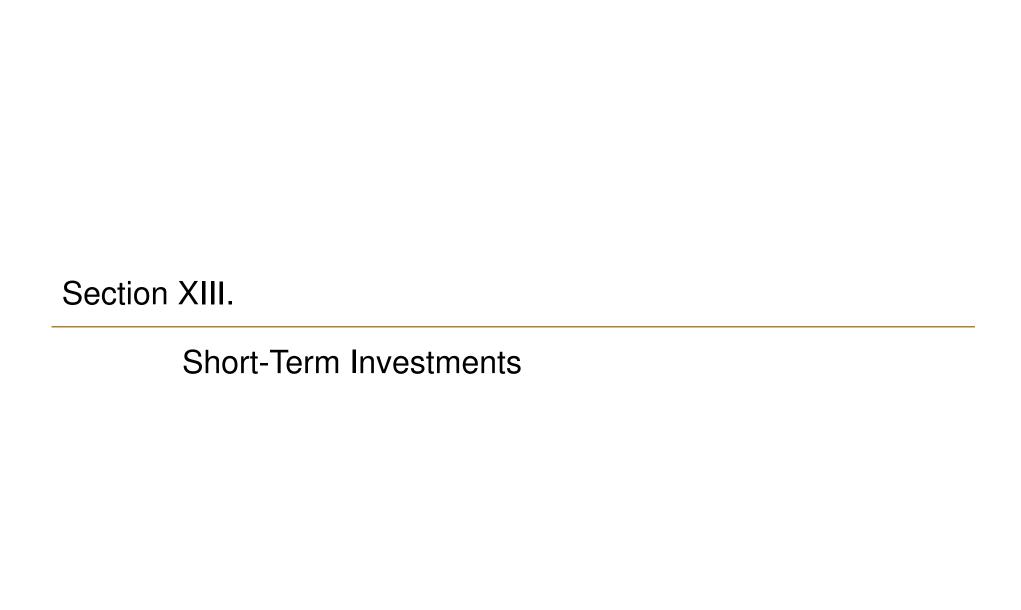
<sup>\*</sup>includes income from Real Estate Investments, Private Equity, and Cash Accounts

**ERSRI Pooled Trust** 

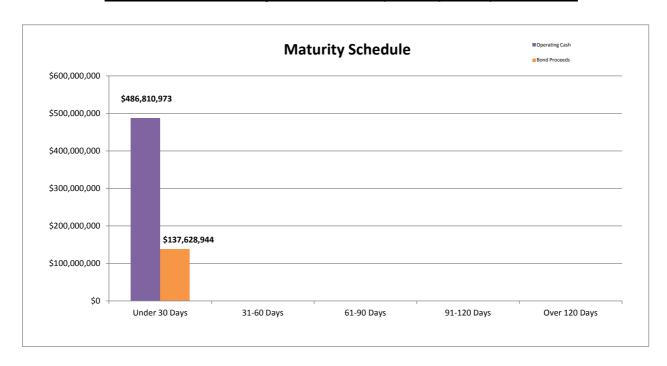
ACCRUAL BASIS

	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
EQUITIES US	Jul 18	Aug	Sept	Oct	Nov	Dec	Jan 19	Feb	Mar	Apr	May	June	TOTAL
SSGA Russell 3000			41,941			41,602			37,937			39,443	160,923
Shott Capital/Hamilton Lane			10,797			1,364			1,087			539	13,788
SSGA QVM Tilt									124,256			<u>123,000</u>	493,434
SSGA QVIVI TIIL			<u>121,825</u> 174,563			<u>124,353</u> 167,319			163,281			169,782	181,511
FIXED INCOME			174,363			107,519			105,201			109,762	161,511
Pyramis			158,892			159,089			157,734			156,000	631,715
•			161,197			,			170,000			,	,
Mackay Shields						149,208						156,000	636,405
Brown Bros.TIPS/GILB			74,186			68,794			63,102			65,000	<u>271,082</u>
INTER COLUMNIC			394,275			377,091			390,836			377,000	1,539,202
INT'L EQUITIES			F0 022			64.040			74 240			62.400	254 400
SSGA MSCI EAFE			58,822			61,940			71,248			62,489	254,499
SSGA MSCI CAD			8,000			8,333			8,206			7,443	31,983
SSGA MSCI Emerg Mkts			93,947			90,521			96,777			104,950	386,196
			160,769			160,794			176,232			174,883	672,678
CREDIT													
WAMCO			115,575			111,879			108,385			108,461	444,300
PIMCO			<u>125,861</u>			122,220			<u>118,394</u>			<u>117,000</u>	<u>483,475</u>
			241,436			234,099			226,779			225,461	927,775
Infrastructure													
Harvest Partners			277,776			268,080			269,214			275,283	1,090,353
Systematic Trend Followers	202,916	210,203	203,143	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,416,261
Long Duration													
WAMCO			31,000			31,000			31,000			31,000	124,000
Mackay Shields			32,000			32,000			32,000			32,000	128,000
			63,000			63,000			63,000			63,000	252,000
REAL ESTATE	0	0	3,900,000	0	0	3,900,000	0	0	3,900,000	0	0	3,900,000	15,600,000
ALTERNATIVE INVESTMENTS													
Private Infrastructure			2,250,000			2,250,000			2,250,000			2,250,000	9,000,000
Hedge Funds			5,500,000			5,500,000			5,500,000			5,500,000	22,000,000
Private Equity			5,000,137			5,000,000			5,000,000			5,000,000	20,000,137
	0	0	12,750,137	0	0	12,750,000	0	0	12,750,000	0	0	12,750,000	51,000,137
Other													
Russell Overlay			75,000			75,000			75,000			75,000	300,000
Payden & Rygel	22,355	21,954	22,973	23,139	25,446	23,187	23,186	26,124	23,988	23,600	22,583	23,400	281,935
	22,355	21,954	97,973	23,139	25,446	98,187	23,186	26,124	98,988	23,600	22,583	98,400	581,935
SUB TOTAL-INV MGMT FEES	225,271	232,157	18,263,073	223,139	225,446	18,218,570	223,186	226,124	18,238,329	223,600	222,583	18,233,809	74,261,852
													1
PROFESSIONAL FEES													
Legal	8,276	11,982	10,736	14,678	15,170	6,514	2,588	4,663	11,832	10,327	7,892	15,569	120,225
BNY Mellon - Custodial	40,636	39,239	40,247	44,474	40,140	46,222	44,254	38,731	41,190	38,931	39,126	39,492	492,682
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	25,000	6,250	6,250	25,000	6,250	6,250	25,000	6,250	6,250	25,000	150,000
NEPC	0	0	91,250	0	0	91,250	0	0	91,250	0	0	91,250	365,000
Aberdeen	26,494	26,564	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	323,058
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
	125,406	127,785	237,984	136,152	132,310	239,737	123,841	120,393	240,024	126,258	124,018	242,062	1,975,969
OPERATING EXPENSE	123,400	12,,,05	237,304	150,152	132,310	233,737	123,041	120,333	240,024	120,230	12-7,010	2-72,002	1,5,5,505
Retirement Transfers	319,579	913.890	677,553	721,761	837,137	896,040	648,915	901,064	834,367	696,560	650,150	1,361,470	9,458,485
Other Expense	319,379	913,630	19,000	14,463	21,750	7,245	046,913	2,500	7,020	090,300	2,976	25,244	100,198
Other Expense	319,579	913,890	696,553	736,224	858,887	903,285	648,915	903,564	841,387	696,560	653,126	1,386,714	9,558,683
	313,379	313,030	050,555	130,224	030,007	303,263	040,313	303,304	041,367	050,500	033,120	1,300,714	3,330,063
TOTAL:	670,256	1,273,831	19,197,609	1,095,515	1,216,643	19,361,592	995,942	1,250,081	19,319,740	1,046,418	999.727	19,862,585	95 706 503
I U I AL.	0/0,250	1,2/3,831	12,127,009	1,035,515	1,210,043	13,301,592	333,942	1,250,081	13,313,740	1,040,418	555,727	13,002,383	85,796,503

Note: Numbers in bold are actual.



#### Short-Term Investment Maturity Schedule & SIC Compliance Report at September 30, 2018



CD = Certificate of Deposit

CDARS = Cert.of Dep.Acct Registry Svc

MMKT = Money Market

CoD = Collateralized Deposit

OSIP = Ocean State Investment Pool

Vendor	CD	CDARS	Money Mkt	CoD	OSIP	Total (\$)
Guidelines-Total/Vendor	50%/20%	50%/20%	75%/35%	75%/35%	50%/50%	
OSIP	0	0	0	0	231,442,201	231,442,201
	0%	0%	0%	0%	48%	47.5%
Bank RI	0	0	10,148,874	0	0	10,148,874
	0%	0%	2%	0%	0%	2.1%
Santander Bank	0	0	0	46,053,658	0	46,053,658
	0%	0%	0%	9%	0%	9.5%
People's Credit Union	0	0	0	2,696,066	0	2,696,066
	0%	0%	0%	1%	0%	0.55%
Navigant Credit Union	0	0	0	4,759,857	0	4,759,857
	0%	0%	0%	1%	0%	0.98%
Bristol County Savings Bk	0	4,093,236	0	0	0	4,093,236
	0%	1%	0%	0%	0%	0.84%
Centreville Bank	0	7,534,084	15,075,788	0	0	22,609,872
	0%	2%	3%	0%	0%	4.64%
Citizens Bank	0	0	0	32,987,613	0	32,987,613
	0%	0%	0%	7%	0%	6.8%
Webster Bank	0	0	0	33,747,309	0	33,747,309
	0%	0%	0%	7%	0%	6.9%
Customers Bank	0	0	0	61,713,219	0	61,713,219
	0%	0%	0%	13%	0%	12.7%
Washington Trust	0	21,331,548	0	2,475,774	0	23,807,322
	0%	4%	0%	1%	0%	4.9%
TD Bank	0	0	0	12,751,746	0	12,751,746
	0%	0%	0%	3%	0%	2.6%
TOTALS	-	32,958,868	25,224,662	197,185,242	231,442,201	486,810,973
(%) PORTFOLIO	0.0%	6.8%	5.2%	40.5%	47.5%	100.0%

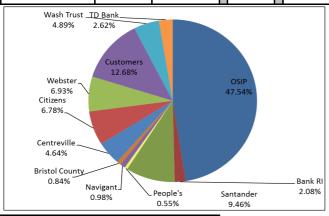
# State of Rhode Island Short Term Cash Monthly Performance Performance for September 01, 2018 to September 30, 2018

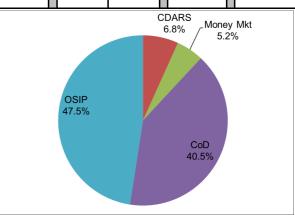
Fund Name	Ве	eginning Balance		Ending Balance	A	verage Daily Balance		Earnings	Yield(Annua
GENERAL FUND	\$	126,061,538.06	\$	198,636,901.28	\$	197,010,298.39	\$	298,086.55	1.8409%
H.A.V.A	\$	302.01	\$	302.38	\$	302.37	\$	0.36	1.4486%
GENERAL FUND (HIST PRES)	\$	553,400.46	\$	554,371.48	\$	554,340.08	\$	942.01	2.0675%
HISTORIC TAX CREDITS	\$	10,759,673.08	\$	10,778,552.49	\$	10,777,941.98	\$	18,315.27	2.0675%
HIGHWAY FUND	\$	87,124,731.40	\$	85,153,280.71	\$	78,409,048.86	\$	126,955.57	1.9700%
T.D.I. RESERVE (DET)	\$	118,530,675.60	\$	101,684,710.16	\$	111,080,106.38	\$	136,424.09	1.4943%
RICAP GL FUND 21	\$	11,672,843.83	\$	17,413,540.90	\$	14,216,125.77	\$	22,453.90	1.9217%
BOND CAPITAL FUND	\$	55,347.11	\$	57,172.64	\$	57,170.07	\$	77.27	1.6444%
R.I. CLEAN WATER ACT	\$	3,269,133.56	\$	3,274,401.13	\$	3,274,230.83	\$	5,108.86	1.8984%
STATE LOTTERY FUND	\$	19,505,125.65	\$	20,639,198.42	\$	21,344,734.68	\$	33,912.27	1.9330%
ASSESSED FRINGE BEN ADM	\$	14,855.41		1,014,881.32		348,200.57	\$	422.40	1.4759%
AUTO EQUIPMENT SERVICE	, \$	2,012.18		2,193.42		2,193.33		2.61	1.4478%
HEALTH INSURANCE FUND	\$	30,429,454.45		31,078,212.04		33,239,778.40		53,009.20	1.9403%
LEET REVOLVING LOAN FUND	\$	1,295,854.02		2,897,725.02		2,204,289.02		3,080.11	1.7001%
EMPLOYEES RETIREMENT	\$	63,791.12		172,871.60		10,155,803.12		12,054.02	1.4441%
MUNICIPAL EMPLOYEES RET.	\$	57,273.42		160,386.25		2,156,966.87		2,581.59	1.4562%
RETIREE HEALTH FUND	\$ \$	2,230,669.39		2,233,058.94		2,130,966.87		2,561.39	1.4501%
SOG RETIREE FUND	\$ \$	1,604.05		2,233,058.94 1,606.03		2,232,970.23 1,605.97		2,661.31	1.4501%
RIPTA HEALTH FUND	\$	1,564,419.72		2,267,847.96		1,964,436.58		2,341.27	1.4501%
PERMANENT SCHOOL FUND	\$	1,791,398.24	•	1,794,541.51		1,794,439.87		3,049.34	2.0675%
EACHER RETIREE HEALTH FUND	\$	4,464,985.77	•	4,471,689.22		4,471,472.56		6,499.99	1.7686%
RI ST POL RETIREE HEALTH	\$	226,904.95		227,184.38		227,175.36		270.75	1.4500%
RI LEG RETIREE HEALTH	\$	841.93		842.97		842.94		1.00	1.4434%
RI JUDICIAL RETIREE HEALTH	\$	41,123.96		41,174.60		41,172.96		49.07	1.4500%
JNIVERSITY COLLEGE	\$	11,705.39		1,511,721.36		1,211,652.92		2,053.06	2.0616%
NDUS. BLDG. & MTG. INS.	\$	741,303.28	\$	742,604.00	\$	742,561.94	\$	1,261.86	2.0675%
Operating Funds Totals	\$	420,470,968.04	\$	486,810,972.21	\$	497,519,862.05	\$	731,615.64	1.789%
BOND CCDL 2006 SERIES C	\$	492,149.70	\$	492,149.70	\$	492,121.82	\$	836.42	2.0679%
GO BND-NTAX 2007 SERIES A	\$	124,237.53		124,237.53		124,230.49		211.15	2.0679%
CCDL10B BOND CAPITAL COMPONENT	\$	950,000.00		950,000.00		949,946.18		1,614.56	2.0679%
CDL10C	\$	163,794.35		164,081.75	\$	164,072.46		278.81	2.0675%
CCDL2011A	\$	4,369,029.36		4,369,029.36		4,368,781.85		7,425.31	2.0679%
CCDL2012B	\$	6,092,902.03		6,092,902.03		6,092,556.86		10,355.08	2.0679%
				2,700,000.00					
50 CCDL 2013A	\$ \$	2,700,000.00 94,193.10		94,193.10		2,699,847.04 94,187.76		4,588.74 160.08	2.0679% 2.0678%
GO CCDL 2014A									
	\$	40,664.27		40,664.27		40,661.97		69.11	2.0679%
	<b>~</b>	0.745.022.00		9,715,922.98	>	9,715,372.56	Þ	16,512.52	2.0679%
60 CCDL 2016A	\$	9,715,922.98			_	2 224 245 :-	4		
GO CCDL 2016A GO CCDL 2016B	\$	3,231,498.20	\$	3,231,498.20		3,231,315.13		5,492.03	2.0679%
GO CCDL 2016A GO CCDL 2016B GO CCDL 2017	\$ \$	3,231,498.20 8,831,052.41	\$	3,231,498.20 8,831,052.41	\$	8,830,552.12	\$	15,008.66	2.0679%
60 CCDL 2016A 60 CCDL 2016B 60 CCDL 2017 CCDL99A 1999A	\$ \$ \$	3,231,498.20 8,831,052.41 206,569.39	\$ \$ \$	3,231,498.20 8,831,052.41 206,569.39	\$ \$	8,830,552.12 206,557.69	\$ \$	15,008.66 351.07	2.0679% 2.0679%
GO CCDL 2016A GO CCDL 2016B GO CCDL 2017 CCDL99A 1999A CLEAN WATER 2007 SERIES A	\$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34	\$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34	\$ \$ \$	8,830,552.12 206,557.69 198,119.12	\$ \$ \$	15,008.66 351.07 336.73	2.0679% 2.0679% 2.0679%
GO CCDL 2016A GO CCDL 2016B GO CCDL 2017 CCDL99A 1999A CLEAN WATER 2007 SERIES A CCDL2011A CLEAN WATER COMPONENT	\$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34 1,236,000.00	\$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34 1,236,000.00	\$ \$ \$	8,830,552.12 206,557.69 198,119.12 1,235,929.98	\$ \$ \$	15,008.66 351.07 336.73 2,100.62	2.0679% 2.0679% 2.0679% 2.0679%
GO CCDL 2016A GO CCDL 2016B GO CCDL 2017 CCDL99A 1999A CLEAN WATER 2007 SERIES A CCDL2011A CLEAN WATER COMPONENT	\$ \$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34 1,236,000.00 67,955,082.08	\$ \$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34	\$ \$ \$	8,830,552.12 206,557.69 198,119.12	\$ \$ \$	15,008.66 351.07 336.73	2.0679% 2.0679% 2.0679% 2.0679% 2.0679%
GO CCDL 2016A GO CCDL 2016B GO CCDL 2017 CCDL99A 1999A CLEAN WATER 2007 SERIES A CCDL2011A CLEAN WATER COMPONENT GO CCDL 2018A	\$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34 1,236,000.00	\$ \$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34 1,236,000.00	\$ \$ \$ \$	8,830,552.12 206,557.69 198,119.12 1,235,929.98	\$ \$ \$ \$	15,008.66 351.07 336.73 2,100.62	2.0679% 2.0679% 2.0679% 2.0679%
GO CCDL 2014B GO CCDL 2016A GO CCDL 2016B GO CCDL 2017 CCDL99A 1999A CLEAN WATER 2007 SERIES A CCDL2011A CLEAN WATER COMPONENT GO CCDL 2018A GO CCDL 2018B Bond Proceeds Fund Totals	\$ \$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34 1,236,000.00 67,955,082.08	\$ \$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34 1,236,000.00 67,955,082.08	\$ \$ \$ \$ \$	8,830,552.12 206,557.69 198,119.12 1,235,929.98 67,951,232.35	\$ \$ \$ \$	15,008.66 351.07 336.73 2,100.62 115,491.84	2.0679% 2.0679% 2.0679% 2.0679% 2.0679%
GO CCDL 2016A GO CCDL 2016B GO CCDL 2017 CCDL99A 1999A CLEAN WATER 2007 SERIES A CCDL2011A CLEAN WATER COMPONENT GO CCDL 2018A GO CCDL 2018B	\$ \$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34 1,236,000.00 67,955,082.08 31,227,431.17	\$ \$ \$ \$ \$	3,231,498.20 8,831,052.41 206,569.39 198,130.34 1,236,000.00 67,955,082.08 31,227,431.17	\$ \$ \$ \$ \$	8,830,552.12 206,557.69 198,119.12 1,235,929.98 67,951,232.35 31,225,662.10	\$ \$ \$ \$	15,008.66 351.07 336.73 2,100.62 115,491.84 53,072.02	2.0679% 2.0679% 2.0679% 2.0679% 2.0679% 2.0679%

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

#### **Issuer Credit Rating** September 30, 2018

			Issuer Ratings	S-T Deb	t Rating	L-T Deb	t Rating	Credit Outlook	Rating
Issuer	Type of Instrument*	M/E % Portfolio	Moody's	Moody's	S&P	Moody's	<u>S&amp;P</u>	<u>S&amp;P</u>	Veribanc
Bank of America	-	0.0%	Baa1	P-2	A-2	A3	A-	Stable	GREEN/*
Bank RI	3,4	2.1%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***
Bristol County Sav. Bank	4	0.8%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***
Centreville Bank	4	4.6%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***/BB
Citizens Bank	4	6.8%	Baa1	P-2	A-2	A1	BBB+	Stable	GREEN/*
Customers Bank	4	12.7%	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	1.0%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***
Ocean State Inv. Pool	6	47.5%	N/R	N/R	N/R	N/R	N/R	N/R	N/R
People's Credit Union	4	0.6%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***
Santander Bank	4	9.5%	A3	P-2	A-2	A3	A-	Stable	GREEN/*
TD Bank	4	2.6%	Aa2	P-1	A-1+	Aa2	AA-	Stable	GREEN/***
Washington Trust	4,7	4.9%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***
Webster Bank	4	6.9%	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*

#### 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
- Lowest rated class, usually in default

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

- Aaa Best Quality
- Aa High Quality
- A Posess many favorable investment attributes
- Baa Medium-grade obligations
- Ba Posess speculative elements
- Generally lack characteristics of desirable investments
- Caa Poor standing
- Ca Speculative in a high degree
- 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

#### **Ratings Definitions**

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

- A-1 Highest rated, strong capacity to meet obligations
- A-2 Somewhat more susceptibleto adverse effects of changes infinancial 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

#### VERIBANC Ratings:

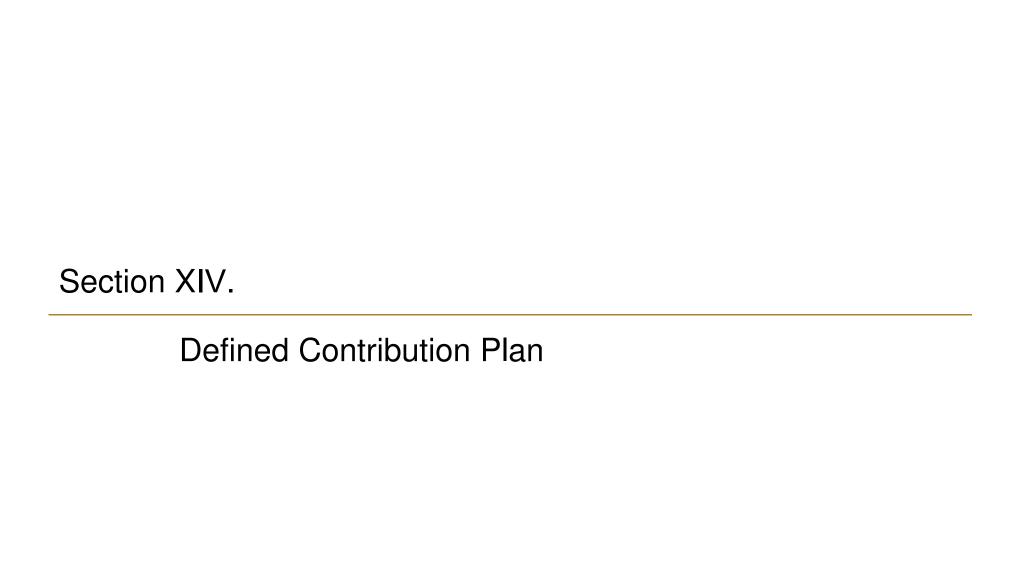
- GREEN The institution's equity exceeds a modest percentage of its assets and had positive
  - net income during the most recent reporting period.
- YELLOW The institution's equity is at a minimal percentage of its assets or it incurred a net loss
  - during the most recent reporting period.
- RED The 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 Q1

July 1, 2018 through September 30, 2018

Fund #	Fund Name	Begir	ning Balance	Enc	ding Balance	Av	erage Daily Balance	Ear	rnings	Yield
1000	GENERAL FUND	\$	42,583,726	\$	73,831,807	\$	40,303,549	\$	210,679	2.07%
1004	GENERAL FUND (HIST PRES)	\$	551,532	\$	554,371	\$	552,396	\$	2,887	2.07%
1100	HISTORIC TAX CREDITS	\$	10,727,667	\$	10,778,552	\$	10,740,134	\$	56,123	2.07%
1200	HIGHWAY FUND	\$	88,218,303	\$	66,028,634	\$	74,727,532	\$	390,574	2.07%
1400	T.D.I. RESERVE (DET)	\$	26,048,284	\$	24,186,419	\$	24,208,335	\$	126,503	2.07%
2100	RICAP GL FUND 21	\$	490,254	\$	8,524,399	\$	9,218,787	\$	48,176	2.07%
2300	R.I. CLEAN WATER ACT	\$	2,365,381	\$	2,377,558	\$	2,369,084	\$	12,380	2.07%
4000	STATE LOTTERY FUND	\$	15,206,588	\$	12,407,192	\$	15,386,103	\$	80,427	2.07%
4300	ASSESSED FRINGE BEN ADM	\$	14,507	\$	14,582	\$	14,530	\$	76	2.07%
5700	HEALTH INSURANCE FUND	\$	23,262,574	\$	26,391,500	\$	25,118,902	\$	131,234	2.07%
6800	PERMANENT SCHOOL FUND	\$	1,984,732	\$	1,794,542	\$	1,844,369	\$	9,639	2.07%
7100	TEACHER RETIREE HEALTH FUND	\$	-	\$	2,307,052	\$	2,099,881	\$	10,972	2.07%
7500	UNIVERSITY COLLEGE	\$	1,500,301	\$	1,502,988	\$	740,253	\$	3,867	2.07%
8100	INDUS. BLDG. & MTG. INS.	\$	738,801	\$	742,604	\$	739,872	\$	3,867	2.07%
	Operating Funds Totals	\$	213,692,648	\$	231,442,201	\$	208,063,727	\$	1,087,402	2.07%
2235	BOND CCDL 2006 SERIES C	\$	492,150		492,150		491,430		2,567	2.07%
2236	GO BND-NTAX 2007 SERIES A	\$	366,002	\$	124,238		134,611		703	2.07%
2240	CCDL10B BOND CAPITAL COMPONENT	\$	950,000	\$	950,000		948,611	\$	4,956	2.07%
2241	CCDL10C	\$	163,241	\$	164,082	\$	163,497	\$	854	2.07%
2243	CCDL2011A	\$	4,392,512	\$	4,369,029	\$	4,371,740	\$	22,838	2.07%
2244	CCDL2012B	\$	6,092,902	\$	6,092,902	\$	6,083,992	\$	31,784	2.07%
2245	GO CCDL 2013A	\$	2,700,000	\$	2,700,000	\$	2,695,690	\$	14,085	2.07%
2247	GO CCDL 2014A	\$	94,193	\$	94,193	\$	94,055	\$	491	2.07%
2248	GO CCDL 2014B	\$	40,664	\$	40,664	\$	40,605	\$	212	2.07%
2249	GO CCDL 2016A	\$	10,671,359	\$	9,715,923	\$	10,073,326	\$	52,629	2.07%
2250	GO CCDL 2016B	\$	3,646,406	\$	3,231,498	\$	3,387,606	\$	17,700	2.07%
2251	GO CCDL 2017	\$	9,362,125	\$	8,831,052	\$	8,972,571	\$	46,877	2.07%
2339	CCDL99A 1999A	\$	206,569	\$	206,569	\$	206,267	\$	1,078	2.07%
2347	CLEAN WATER 2007 SERIES A	\$	205,772	\$	198,130	\$	200,990	\$	1,050	2.07%
2350	CCDL2011A CLEAN WATER COMPONENT	\$	1,236,000	\$	1,236,000	\$	1,234,193	\$	6,448	2.07%
2252	GO CCDL 2018A	\$	69,417,664	\$	67,955,082	\$	67,920,934	\$	354,825	2.07%
2253	GO CCDL 2018B	\$	35,100,000	\$	31,227,431	\$	32,693,430	\$	170,825	2.07%
	Bond Proceeds Fund Totals	\$	145,137,559	\$	137,628,944	\$	139,713,546	\$	729,922	2.07%
	Grand Totals	\$	358,830,207	\$	369,071,145	\$	347,777,272	\$_	1,817,324	2.07%





	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(1)	(1)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
			Mgr.	AUM	Gross	Net	Net	Rev	Red	cent Retur	ns		Annı	ualized To	otal Re	urns as	of 9/30	/2018		Since	Incep.
As of 9/30/2018		Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date
TIAA Sta	able Value	Current c	rediting rate	e = 2.10					0.17	0.53	1.52	2.03		1.96		1.93				1.91	03/31/12
FIXED INCOME																					
Intermediate-Term Bon	nd																				
Vanguar	rd Total Bond Market Index Adm	VBTLX	5.67	199,724.68	0.05	0.05	3	-	(0.53)	0.03	(1.61)	(1.21)	51	1.28	61	2.09	50	3.70	72	3.91	11/12/01
	BBgBarc US Agg Float Adj TR U								(0.64)	0.04	(1.64)	(1.23)		1.35		2.16					
	Intermediate-Term Bond Med				0.82	0.68			(0.53)	0.11	(1.55)	(1.26)		1.53		2.12		4.31			
	Intermediate-Term Bond Number of Fu	ınds	1085	994	1085	1085	1085					1052	1052	980	980	939	939	829	829		
Inflation-Protected Bon																					
PIMCO F	Real Return Instl	PRRIX	10.83	10,399.76	0.88	0.88	65	-	(0.86)	(0.80)	(1.06)	0.26	63	2.32	20	1.24	24	3.89	5	5.65	01/29/9
	BBgBarc US Treasury US TIPS TR L				0.01	0.40			(1.05)	(0.82)	(0.84)	0.41		2.04		1.37		3.32			
	Inflation-Protected Bond Med		220	224	0.81	0.69	220		(0.87)	(0.72)	(0.91)	0.24	222	1.82	22/	0.85	21.4	2.83	154		
EOUITY	Inflation-Protected Bond Number of Fu	nas	238	224	238	238	238					232	232	226	226	214	214	154	154		
Large Cap Blend - Inde:	V.																				
3 1	rd Institutional Index I	VINIX	17.83	235,207.56	0.04	0.04	3		0.57	7.70	10.53	17.86	21	17.27	10	13.92	9	11.96	18	10.04	07/31/90
variguai	S&P 500 TR U		17.03	233,207.30	0.04	0.04	3	-	0.57	7.71	10.56	17.91	21	17.31	10	13.95	,	11.97	10	10.04	07/31/70
Vangua	rd FTSE Social Index Inv	VFTSX	2.83	4,813.01	0.20	0.20	8	_	0.12	7.66	11.12	18.71	12	17.38	9	14.49	3	12.38	10	4.99	05/31/00
- angua	Spliced Social Index**		2.00	1,010101	0.20	0.20			0.12	7.66	11.27	18.90		17.57	ŕ	14.73		12.61		,	00/01/0
	Russell 3000 TR L								0.17	7.12	10.57	17.58		17.07		13.46		12.01			
	Large Blend Med	dian			1.00	0.90			0.42	7.00	8.76	15.62		15.41		12.29		11.01			
	Large Blend Number of Fu	ınds	1346	1277	1346	1346	1346					1316	1315	1234	1233	1168	1168	1037	1030		
Mid-Cap Blend																					
Vanguar	rd Mid Cap Index Institutional	VMCIX	20.42	102,759.69	0.04	0.04	2	-	(0.47)	4.68	7.36	13.45	41	13.79	46	11.68	17	12.44	12	10.13	05/21/98
	Spliced Mid Cap Inc	dex*							(0.47)	4.65	7.37	13.44		13.81		11.71		12.46			
	CRSP US Mid Cap TR U	JSD							(0.47)	4.65	7.37	13.44		13.81		11.71		12.18			
	Mid-Cap Blend Med	dian			1.11	1.00			(1.00)	3.83	5.66	11.02		12.56		10.00		11.01			
	Mid-Cap Blend Number of Fu	ınds	436	412	436	436	436					433	433	391	391	369	369	312	312		
Small Blend																					
Vanguar	rd Small Cap Index I	VSCIX	2.50	95,352.33	0.04	0.04	2	-	(1.53)	4.78	11.05	16.72	14	16.35	31	11.49	17	12.39	15	9.37	07/07/9
	Spliced Small Cap Index*								(1.53)	4.77	11.02	16.68		16.31		11.46		12.30			
	CRSP US Small Cap TR L								(1.54)	4.77	11.02	16.68		16.31		11.46		12.90			
	Small Blend Med				1.25	1.12			(2.40)	3.15	8.51	12.53		14.80		9.94		10.77			
	Small Blend Number of Fu	ınds	765	745	765	765	765					754	754	721	721	642	642	538	538		



(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(1)	(1)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
A 50/00/0040		Mgr.	AUM	Gross	Net	Net	Rev		cent Returi						turns as				Since	Incep.
As of 9/30/2018	Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date
Foreign Large Blend																				
Schwab International Index	SWISX	1.50	4,599.57	0.06	0.06	4	-	0.93	1.42	(1.10)		32	9.08	44	4.34	41	4.96	51	4.50	05/19/97
MSCI EAFE NR USD								0.87	1.35	(1.43)	2.74		9.23		4.42		5.38			
Foreign Large Blend Median				1.14	0.99			0.44	0.58	(2.90)	1.07		8.47		3.94		4.96			
Foreign Large Blend Number of Funds		777	718	777	777	777	_				758	758	704	704	639	639	527	527		
Diversified Emerging Mkts																				
Vanguard Emerging Mkts Stock ldx Adm	VEMAX	10.17	79,720.46	0.14	0.14	2		(1.30)	(1.75)	(8.84)	` ′	47	10.08	55	2.98	45	4.70	50	5.25	06/23/06
Spliced Emerging Markets Index***								(1.12)	(1.75)	(8.91)			10.23		3.02		4.95			
FTSE EMs AC China A Inclusion NR USD								(1.12)	(1.88)	(8.94)			10.22		3.47		5.44			
FTSE Emerging NR USD								(0.63)	(0.80)	(7.67)	(1.23)		11.42		3.68		5.36			
MSCI EM NR USD								(0.53)	(1.09)	(7.68)	(0.81)		12.36		3.61		5.40			
Diversified Emerging Mkts Median				1.62	1.30			(0.98)	(2.64)	(9.93)	(4.15)		10.49		2.94		5.05			
Diversified Emerging Mkts Number of Funds		824	749	824	824	824					794	794	746	746	583	583	318	317		
Lifecycle																	1			
Vanguard Target Retire Inc Trust I				0.07	0.07			(0.23)	1.33	1.25	3.32		5.42		4.59		5.75		4.98	6/22/2007
Vanguard Target Retirement Income Composite								(0.25)	1.33	1.31	3.47		5.55		4.72		5.78			
Target-Date Retirement Median					0.71			(0.22)	1.41	0.59	2.69		5.12		3.94		5.22			
Target-Date Retirement Number of Funds					209	209					194	194	182	182	163	163	127	127		
Vanguard Target Retire 2015 Trust I				0.07	0.07			(0.15)	1.81	1.83	4.62		7.26		6.01		7.02		5.06	6/28/2007
Vanguard Target Retirement 2015 Composite								(0.18)	1.80	1.87	4.77		7.41		6.13		7.00			
Target-Date 2015 Median					0.65			(0.18)	1.78	1.47	4.11		7.22		5.57		6.67			
Target-Date 2015 Number of Funds					160	160					141	141	124	124	100	100	69	69		
Vanguard Target Retire 2020 Trust I				0.07	0.07			(0.09)	2.37	2.47	5.96		8.76		7.03		7.66		5.41	6/22/2007
Vanguard Target Retirement 2020 Composite								(0.11)	2.36	2.50	6.11		8.93		7.15		7.75			
Target-Date 2020 Median					0.71			(0.18)	1.99	1.61	4.58		7.56		5.79		6.69			
Target-Date 2020 Number of Funds					278	278					257	257	231	231	207	207	151	151		
Vanguard Target Retire 2025 Trust I				0.07	0.07			(0.04)	2.77	2.90	6.89		9.81		7.67		8.08		5.52	6/28/2007
Vanguard Target Retirement 2025 Composite								(0.05)	2.76	2.95	7.08		10.00		7.80		8.18			
Target-Date 2025 Median					0.70			(0.14)	2.35	2.31	5.79		8.84		6.54		7.38			
Target-Date 2025 Number of Funds					248	248					227	227	203	203	176	176	104	104		



(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(1)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
		Mgr.	AUM	Gross	Net	Net	Rev	Rec	Recent Returns			Annı	Annualized Total Returns as						Since	Incep.
As of 9/30/2018	Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date
Vanguard Target Retire 2030 Trust I				0.07	0.07			0.02	3.12	3.35	7.74		10.74		8.23		8.45		5.63	6/28/2007
Vanguard Target Retirement 203	0 Composite							0.00	3.10	3.38	7.94		10.95		8.37		8.57			
Target-Date 2	2030 Median				0.75			(0.10)	2.78	2.82	6.85		9.94		7.20		7.65			
Target-Date 2030 Numi	ber of Funds				267	267					246	246	221	221	197	197	141	141		
Vanguard Target Retire 2035 Trust I				0.07	0.07			0.07	3.45	3.77	8.60		11.68		8.79		8.89		5.86	6/28/2007
Vanguard Target Retirement 203	5 Composite							0.06	3.43	3.81	8.80		11.89		8.93		8.99			
Target-Date 2	2035 Median				0.72			(0.06)	3.16	3.46	7.98		11.01		7.84		8.20			
Target-Date 2035 Numi	ber of Funds				243	243					222	222	198	198	171	171	99	99		
Vanguard Target Retire 2040 Trust I				0.07	0.07			0.14	3.80	4.20	9.46		12.62		9.28		9.24		6.20	6/28/2007
Vanguard Target Retirement 204	0 Composite							0.11	3.77	4.22	9.66		12.84		9.44		9.36			
Target-Date 2	2040 Median				0.77			0.00	3.41	3.72	8.51		11.50		8.21		8.21			
Target-Date 2040 Numi	ber of Funds				267	267					246	246	221	221	197	197	141	141		
Vanguard Target Retire 2045 Trust I				0.07	0.07			0.15	4.01	4.43	9.90		12.98		9.48		9.34		6.25	6/28/2007
Vanguard Target Retirement 204s	5 Composite							0.14	3.98	4.49	10.15		13.22		9.65		9.46			
Target-Date 2	2045 Median				0.72			0.00	3.53	4.08	9.13		12.14		8.57		8.59			
Target-Date 2045 Numi	ber of Funds				243	243					222	222	198	198	171	171	98	98		
Vanguard Target Retire 2050 Trust I				0.07	0.07			0.15	4.02	4.46	9.92		12.98		9.47		9.36		6.31	6/28/2007
Vanguard Target Retirement 2050	0 Composite							0.14	3.98	4.49	10.15		13.22		9.65		9.46			
Target-Date 2	2050 Median				0.77			0.00	3.58	4.04	9.18		12.09		8.60		8.55			
Target-Date 2050 Numi	ber of Funds				263	263					242	242	217	217	193	193	112	112		
Vanguard Target Retire 2055 Trust I				0.07	0.07			0.15	4.03	4.48	9.95		13.00						10.48	10/5/2010
Vanguard Target Retirement 205:	5 Composite							0.14	3.98	4.49	10.15		13.22							
Target-Date 2	2055 Median				0.74			0.02	3.64	4.19	9.38		12.31		8.70		8.65			
Target-Date 2055 Numi	ber of Funds				243	243					222	222	196	196	146	146	9	9		
Vanguard Target Retirement 2060 Trust I				0.07	0.07			0.16	4.03	4.48	9.95		13.00		9.45				10.35	3/1/2012
Vanguard Target Retirement 206	0 Composite							0.14	3.98	4.49	10.15		13.22		9.65					
Target-Date 20	060+ Median				0.75			0.08	3.76	4.36	9.81		12.73		8.82					
Target-Date 2060+ Numi	ber of Funds				228	228					195	195	86	86	9	9	0	0		
Vanguard Target Retirement 2065 Trust I				0.07	0.07			0.17	4.03	4.54	9.96								12.77	7/7/2017
Vanguard Target Retirement 206	0 Composite							0.14	3.98	4.49	10.15									
Target-Date 20					0.75			0.08	3.76	4.36	9.81		12.73		8.82					
Target-Date 2060+ Numi	ber of Funds				228	228					195	195	86	86	9	9	0	0		



	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	<b>(I)</b>	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
			Mgr.	AUM	Gross					cent Retur								/2018		Since	Incep.
As of 9/30/2018		Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date

Source: Morningstar & TIAA-CREF

Morningstar Analyst Assigned Benchmark"

Data for 1-month and YTD return as of 9/30/2018. All other data as of 9/30/2018.

#### VA = Variable Annuity

Since Incep. = Since Inception Date

Incep. Date = Inception Date

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

- \* = S&P MidCap 400 Index through May 16, 2003; the MSCI US Mid Cap 450 Index through January 30, 2013; and the CRSP US Mid Cap Index thereafter
- \*\* = Russell 2000 Index through May 16, 2003; the MSCI US Small Cap 1750 Index through January 30, 2013; and the CRSP US Small Cap Index thereafter
- \*\*\* = Spliced Emerging Markets Index reflects performance of the Select Emerging Markets Index through August 23, 2006; the MSCI Emerging Markets Index through January 9, 2013; FTSE Emerging Transition Index through June 27, 2013; FTSE Emerging Index through November 1, 2015; FTSE Emerging Markets All Cap China A Transition Index through September 18, 2016; and FTSE Emerging Markets All Cap China A Inclusion Index thereafter.

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. Ifinterest 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 quarantee 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.

<sup>\*\*\*\* =</sup> 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.

<sup>&</sup>quot;Since Inception" performance is calculated from this date.

<sup>\*\*\*\*\*\*</sup> Calvert Social Index through December 16, 2005; FTSE4Good US Select Index thereafter

# **Disclosures**



· %-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.

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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.

# **Disclosures**



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For each fund/account with at least a three-year history, Morningstar calculates a Morningstar Rating<sup>TM</sup> 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.

# **Disclosures**



#### **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.

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237048

# **State of Rhode Island**

# Market Value as of 9/30/2018 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	\$5,569,077.99
SWISX	Schwab International Index Fd	Equities	\$6,603,699.72
TSVX#	TIAA STABLE VALUE	Guaranteed	\$11,540,010.85
VBTLX	Vanguard Ttl Bd Mkt Idx Adm	Fixed Income	\$6,061,274.03
VEMAX	Vanguard Emr Mkts Stk Idx Adm	Equities	\$4,710,385.29
VFTSX	Vanguard FTSE Social Index Inv	Equities	\$2,315,476.00
VINIX	Vanguard Inst Idx Inst	Equities	\$27,966,077.13
VMCIX	Vanguard Mid-Cap Idx Inst	Equities	\$10,858,967.41
VSCIX	Vanguard Small-Cap Idx Inst	Equities	\$11,392,805.47
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	\$39,876,100.40
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	\$96,690,808.06
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	\$120,317,772.14
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	\$129,366,237.88
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	\$141,673,558.04
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	\$114,987,538.46
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	\$86,702,151.42
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	\$50,981,974.05
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	\$20,042,235.44
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	\$2,688,680.88
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	\$145,519.96
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	\$11,171,631.31
			\$901,661,981.93

# **State of Rhode Island**

# Market Value as of 9/30/2018 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	\$4,057.57				
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	\$12,356.94				
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	\$1,433,692.51				
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	\$146,220.37				
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	\$151,503.71				
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	\$93,366.90				
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	\$70,007.46				
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	\$104,130.27				
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	\$110,517.10				
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	\$234,273.60				
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	\$597,621.38				
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	\$76,044.47				
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	\$14,868.90				
			\$3,048,661.18				

# TIAA

# **Disclosures**

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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.

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**BUILT TO PERFORM.** 



457 Plans

# **State of Rhode Island Total Assets 457 Plans**

Plan Provider	12/31/2017		3/31/2018	#	6/30/2018	#	9/30/2018
Valic Fidelity ING/Voya TIAA	\$ 9,649,545.00 \$ 147,786,502.78 \$ 181,622,770.56 \$ 24,342,894.00	\$ \$ \$ \$			9,274,764.50 151,293,425.61 181,920,232.81 25,618,861.39		\$ 9,057,863.05 \$ 157,548,610.58 \$ 179,625,992.32 \$ 27,381,104.70
Total	\$ 363,401,712.34	\$	363,444,948.41		\$ 368,107,284.31		\$ 373,613,570.65

# **□**TIAA

# 2018 457(b) Performance Summary

Part		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(l)	(1)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
TITAL Traditional RCP		2010		Mgr.	AUM	Gross	Net	Net	Rev												Since	Incep.
PIMCO Total Return Insist	As of 9/30/					ER	ER	%-ile	Share					%-ile		%-ile		%-ile		%-ile		Date
PIMCO Total Return Instit		TIAA Traditional RCP	Current o	crediting rate	e = 3.50					0.27	0.84	2.51	3.33		3.45		3.50		3.52		3.72	06/01/06
PIMCO Total Return Insit	FIXED INCOM	IE																				
Part	Intermediate-	Term Bond																				
Vanguard Total Bond Market Index Arim   VBTLX   5.67   199,724.68   0.05   0.		PIMCO Total Return Instl	PTTRX	4.08	70,033.20	0.55	0.55	38	-	(0.60)	0.08	(1.62)	(1.52)	72	2.16	25	2.27	41	5.08	16	7.09	05/11/87
BBBBarc US Agg Float Adj TR USD    Note   100		BBgBarc US Agg Bond TR USL	)							(0.64)	0.02	(1.60)	(1.22)		1.31		2.16		3.77			
Intermediale—Term Bond Mediale—Term Bond Mediale—Term Bond Number of Funds 1085 994 1085 1085 1085 1085 1085 1085 1085 1085		Vanguard Total Bond Market Index Adm	VBTLX	5.67	199,724.68	0.05	0.05	3	-	(0.53)	0.03	(1.61)	(1.21)	51	1.28	61	2.09	50	3.70	72	3.91	11/12/01
Intermediale-Term Bond Number of Funds 1085 994 1085 1085 '		BBgBarc US Agg Float Adj TR USI	)							(0.64)	0.04	(1.64)	(1.23)		1.35		2.16					
Marcian Century Inflation-Adjs Bond R6		Intermediate-Term Bond Mediar	7			0.82	0.68			(0.53)	0.11	(1.55)	(1.26)		1.53		2.12		4.31			
American Century Inflation-Adjs Bond R6 AIADX 16.92 2,798.65 0.22 0.22 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0		Intermediate-Term Bond Number of Funds	S	1085	994	1085	1085	1085					1052	1052	980	980	939	939	829	829		
BBgBarc US Treasury US TIPS TR USD   1.37   3.32   1.5	Inflation-Prote	ected Bond																				
Inflation-Protected Bond Median		American Century Inflation-Adjs Bond R6	AIADX	16.92	2,798.65	0.22	0.22	9	-	(0.79)	(0.79)	(1.23)	0.10	72	1.93	43	0.97	43	2.96	45	0.38	07/28/17
EQUITY   Large Cap Blend - Index I		BBgBarc US Treasury US TIPS TR USD	)							(1.05)	(0.82)	(0.84)	0.41		2.04		1.37		3.32			
EQUITY  Large Cap Blend - Index  Vanguard Institutional Index I VFTSX 2.83 4,813.01 0.20 0.20 8 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0		Inflation-Protected Bond Mediar	7			0.81	0.69			(0.87)	(0.72)	(0.91)	0.24		1.82		0.85		2.83			
Large Cap Blend - Index         Vanguard Institutional Index I       VINIX       17.83       235,207.56       0.04       0.04       3       -       0.57       7.70       10.53       17.86       21       17.27       10       13.92       9       11.96       18       10.04       07/31/20         Vanguard FTSE Social Index Inv       VFTSX       2.83       4,813.01       0.20       0.20       8       -       0.12       7.66       11.12       18.71       12       17.38       9       14.49       3       12.38       10       4.99       05/31/20       0.12       7.66       11.12       18.71       12       17.38       9       14.49       3       12.38       10       4.99       05/31/20       0.12       7.66       11.27       18.90       17.57       14.73       14.73       12.38       10       4.99       05/31/20       0.12       7.66       11.27       18.90       17.57       14.73       14.73       12.61       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01 <td></td> <td>Inflation-Protected Bond Number of Funds</td> <td>S</td> <td>238</td> <td>224</td> <td>238</td> <td>238</td> <td>238</td> <td></td> <td></td> <td></td> <td></td> <td>232</td> <td>232</td> <td>226</td> <td>226</td> <td>214</td> <td>214</td> <td>154</td> <td>154</td> <td></td> <td></td>		Inflation-Protected Bond Number of Funds	S	238	224	238	238	238					232	232	226	226	214	214	154	154		
Vanguard Institutional Index I       VINIX       17.83       235,207.56       0.04       0.04       3       -       0.57       7.70       10.53       17.86       21       17.27       10       13.92       9       11.96       18       10.04       07/31/20         S&P 500 TR USD         Vanguard FTSE Social Index***       2.83       4,813.01       0.20       0.20       8       -       0.12       7.66       11.12       18.71       12       17.38       9       14.49       3       12.38       10       4.99       05/31/20         Spliced Social Index***       2       4,813.01       0.20       0.20       8       -       0.12       7.66       11.12       18.70       17.57       14.49       3       12.38       10       4.99       05/31/20         Spliced Social Index****       2       4,813.01       0.20       0.20       8       -       0.12       7.66       11.27       18.90       17.57       14.73       12.61       12.61       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       12.01       13.06       15.62       15.61       15.61	EQUITY																					
S&P 500 TR USD  Vanguard FTSE Social Index Inv  VFTSX  2.83  4,813.01  0.20  0.20  8  -  0.57  7.71  10.56  17.91  10.57  17.11  10.56  17.91  17.31  17.31  17.38  9  14.49  3  12.38  10  4.99  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/  1.90  05/31/ 1.90  05/31/ 1.90	Large Cap Ble	end - Index																				
Vanguard FTSE Social Index Inv         VFTSX         2.83         4,813.01         0.20         0.20         8         -         0.12         7.66         11.12         18.71         12         17.38         9         14.49         3         12.38         10         4.99         05/31/4           Spliced Social Index***         -         -         0.12         7.66         11.27         18.90         -         17.57         14.73         12.61 </td <td></td> <td>Vanguard Institutional Index I</td> <td>VINIX</td> <td>17.83</td> <td>235,207.56</td> <td>0.04</td> <td>0.04</td> <td>3</td> <td>-</td> <td>0.57</td> <td>7.70</td> <td>10.53</td> <td>17.86</td> <td>21</td> <td>17.27</td> <td>10</td> <td>13.92</td> <td>9</td> <td>11.96</td> <td>18</td> <td>10.04</td> <td>07/31/90</td>		Vanguard Institutional Index I	VINIX	17.83	235,207.56	0.04	0.04	3	-	0.57	7.70	10.53	17.86	21	17.27	10	13.92	9	11.96	18	10.04	07/31/90
Spliced Social Index****  Russell 3000 TR USD  Large Blend Median  1.00  0.90  0.12  7.66  11.27  18.90  17.57  17.18  17.07  13.46  17.07  13.46  12.01  13.46  12.01  13.46  13.47  13.46  13.47  13.46  13		S&P 500 TR USE	)							0.57	7.71	10.56	17.91		17.31		13.95		11.97			
Russell 3000 TR USD  Large Blend Median  1.00 0.90 0.17 7.12 10.57 17.58 17.07 13.46 17.07 13.46 17.07 13.46 11.01 12.01 13.00		Vanguard FTSE Social Index Inv	VFTSX	2.83	4,813.01	0.20	0.20	8	-	0.12	7.66	11.12	18.71	12	17.38	9	14.49	3	12.38	10	4.99	05/31/00
Large Blend Median 1.00 0.90 0.42 7.00 8.76 15.62 15.41 12.29 11.01  Large Blend Number of Funds 1346 1277 1346 1346 1346 1346 1346 1346 1316 1315 1234 1233 1168 1168 1037 1030		Spliced Social Index**	*							0.12	7.66	11.27	18.90		17.57		14.73		12.61			
Large Blend Number of Funds 1346 1277 1346 1346 1346 1346 1346 1316 1315 1234 1233 1168 1168 1037 1030		Russell 3000 TR USE	)							0.17	7.12	10.57	17.58		17.07		13.46		12.01			
		Large Blend Mediar	1			1.00	0.90			0.42	7.00	8.76	15.62		15.41		12.29		11.01			
Mid-Cap Blend		Large Blend Number of Funds	S	1346	1277	1346	1346	1346					1316	1315	1234	1233	1168	1168	1037	1030		
	Mid-Cap Blen	d																				
Vanguard Mid Cap Index Institutional VMCIX 20.42 102,759.69 0.04 0.04 2 - (0.47) 4.68 7.36 13.45 41 13.79 46 11.68 17 12.44 12 10.13 05/21/		Vanguard Mid Cap Index Institutional	VMCIX	20.42	102,759.69	0.04	0.04	2	-	(0.47)	4.68	7.36	13.45	41	13.79	46	11.68	17	12.44	12	10.13	05/21/98
Spliced Mid Cap Index* (0.47) 4.65 7.37 13.44 13.81 11.71 12.46		Spliced Mid Cap Index	*							(0.47)	4.65	7.37	13.44		13.81		11.71		12.46			
CRSP US Mid Cap TR USD (0.47) 4.65 7.37 13.44 13.81 11.71 12.18		CRSP US Mid Cap TR USI	)							(0.47)	4.65	7.37	13.44		13.81		11.71		12.18			
Mid-Cap Blend Median 1.11 1.00 (1.00) 3.83 5.66 11.02 12.56 10.00 11.01		Mid-Cap Blend Mediar	1			1.11	1.00			(1.00)	3.83	5.66	11.02		12.56		10.00		11.01			
Mid-Cap Blend Number of Funds 436 412 436 436 436 436 433 433 391 391 369 369 312 312		Mid-Cap Blend Number of Funds	S	436	412	436	436	436					433	433	391	391	369	369	312	312		

# **□**TIAA

# 2018 457(b) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(1)	(1)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
		Mgr.	AUM	Gross	Net	Net	Rev		ent Retur				ualized To						Since	Incep.
As of 9/30/2018	Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date
Small Blend																				
Vanguard Small Cap Index I	VSCIX	2.50	95,352.33	0.04	0.04	2	-	(1.53)	4.78	11.05	16.72	14	16.35	31	11.49	17	12.39	15	9.37	07/07/97
Spliced Small Cap Index**								(1.53)	4.77	11.02	16.68		16.31		11.46		12.30			
CRSP US Small Cap TR USD								(1.54)	4.77	11.02	16.68		16.31		11.46		12.90			
Small Blend Median				1.25	1.12			(2.40)	3.15	8.51	12.53		14.80		9.94		10.77			
Small Blend Number of Funds		765	745	765	765	765					754	754	721	721	642	642	538	538		
Foreign Large Blend	014/101/	4.50	4.500.53	2.01	2.24				1.10	(4.40)	0.40	00							4.50	05/40/05
Schwab International Index	SWISX	1.50	4,599.57	0.06	0.06	4	٠.	0.93	1.42	(1.10)	2.62	32	9.08	44	4.34	41	4.96	51	4.50	05/19/97
MSCI EAFE NR USD				444	0.00			0.87	1.35	(1.43)	2.74		9.23		4.42		5.38			
Foreign Large Blend Median		777	710	1.14	0.99	777		0.44	0.58	(2.90)	1.07	750	8.47	704	3.94	(20	4.96	F27		
Foreign Large Blend Number of Funds		777	718	777	777	777					758	758	704	704	639	639	527	527		
Foreign Large Growth	RERGX	27.02	1/2 501 07	0.40	0.49	3		(0 F 4)	(0.04)	(2 (5)	1 47	79	9.93	50	/ 20	28	6.83	33	9.49	05/01/09
American Funds Europacific Growth R6 MSCI ACWI Ex USA NR USD		26.83	162,581.07	0.49	0.49	3	-	(0.54) 0.46	<b>(0.84)</b> 0.71	<b>(2.65)</b> <i>(3.09)</i>	1.4 <b>7</b> 1.76	19	9.93 9.97	50	6.20 4.12	20	5.18	33	9.49 4.91	03/01/09
Foreign Large Growth Median				1.23	1.09			(0.65)	0.71	(0.77)	3.68		9.97 9.61		5.54		6.40		4.91	
Foreign Large Growth Number of Funds		435	402	435	435	435		(0.03)	0.15	(0.77)	429	429	386	386	374	374	316	306		
Lifecycle		433	402	433	433	433					427	427	300	300	374	374	310	300		
Vanguard Target Retire Inc Trust I				0.07	0.07			(0.23)	1.33	1.25	3.32		5.42		4.59		5.75		4.98	6/22/2007
Vanquard Target Retirement Income Composite								(0.25)	1.33	1.31	3.47		5.55		4.72		5.78			
Target-Date Retirement Median					0.71			(0.22)	1.41	0.59	2.69		5.12		3.94		5.22			
Target-Date Retirement Number of Funds					209	209					194	194	182	182	163	163	127	127		
Vanguard Target Retire 2015 Trust I				0.07	0.07			(0.15)	1.81	1.83	4.62		7.26		6.01		7.02		5.06	6/28/2007
Vanguard Target Retirement 2015 Composite								(0.18)	1.80	1.87	4.77		7.41		6.13		7.00			
Target-Date 2015 Median					0.65			(0.18)	1.78	1.47	4.11		7.22		5.57		6.67			
Target-Date 2015 Number of Funds					160	160					141	141	124	124	100	100	69	69		
Vanguard Target Retire 2020 Trust I				0.07	0.07			(0.09)	2.37	2.47	5.96		8.76		7.03		7.66		5.41	6/22/2007
Vanguard Target Retirement 2020 Composite								(0.11)	2.36	2.50	6.11		8.93		7.15		7.75			
Target-Date 2020 Median					0.71			(0.18)	1.99	1.61	4.58		7.56		5.79		6.69			
Target-Date 2020 Number of Funds					278	278					257	257	231	231	207	207	151	151		
Vanguard Target Retire 2025 Trust I				0.07	0.07			(0.04)	2.77	2.90	6.89		9.81		7.67		8.08		5.52	6/28/2007
Vanguard Target Retirement 2025 Composite								(0.05)	2.76	2.95	7.08		10.00		7.80		8.18			
Target-Date 2025 Median					0.70			(0.14)	2.35	2.31	5.79		8.84		6.54		7.38			
Target-Date 2025 Number of Funds					248	248					227	227	203	203	176	176	104	104		



# 2018 457(b) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
		Mgr.	AUM	Gross	Net	Net	Rev	Rec	ent Retur	ns		Annı	ualized T						Since	Incep.
As of 9/30/2018	Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date
Vanguard Target Retire 2030 Trust I				0.07	0.07			0.02	3.12	3.35	7.74		10.74		8.23		8.45		5.63	6/28/2007
Vanguard Target Retirement 2030 Composite								0.00	3.10	3.38	7.94		10.95		8.37		8.57			
Target-Date 2030 Median					0.75			(0.10)	2.78	2.82	6.85		9.94		7.20		7.65			
Target-Date 2030 Number of Funds					267	267					246	246	221	221	197	197	141	141		
Vanguard Target Retire 2035 Trust I				0.07	0.07			0.07	3.45	3.77	8.60		11.68		8.79		8.89		5.86	6/28/2007
Vanguard Target Retirement 2035 Composite								0.06	3.43	3.81	8.80		11.89		8.93		8.99			
Target-Date 2035 Median					0.72			(0.06)	3.16	3.46	7.98		11.01		7.84		8.20			
Target-Date 2035 Number of Funds					243	243					222	222	198	198	171	171	99	99		
Vanguard Target Retire 2040 Trust I				0.07	0.07			0.14	3.80	4.20	9.46		12.62		9.28		9.24		6.20	6/28/2007
Vanguard Target Retirement 2040 Composite								0.11	3.77	4.22	9.66		12.84		9.44		9.36			
Target-Date 2040 Median					0.77			0.00	3.41	3.72	8.51		11.50		8.21		8.21			
Target-Date 2040 Number of Funds					267	267					246	246	221	221	197	197	141	141		
Vanguard Target Retire 2045 Trust I				0.07	0.07			0.15	4.01	4.43	9.90		12.98		9.48		9.34		6.25	6/28/2007
Vanguard Target Retirement 2045 Composite								0.14	3.98	4.49	10.15		13.22		9.65		9.46			
Target-Date 2045 Median					0.72			0.00	3.53	4.08	9.13		12.14		8.57		8.59			
Target-Date 2045 Number of Funds					243	243					222	222	198	198	171	171	98	98		
Vanguard Target Retire 2050 Trust I				0.07	0.07			0.15	4.02	4.46	9.92		12.98		9.47		9.36		6.31	6/28/2007
Vanguard Target Retirement 2050 Composite								0.14	3.98	4.49	10.15		13.22		9.65		9.46			
Target-Date 2050 Median					0.77			0.00	3.58	4.04	9.18		12.09		8.60		8.55			
Target-Date 2050 Number of Funds					263	263					242	242	217	217	193	193	112	112		
Vanguard Target Retire 2055 Trust I				0.07	0.07			0.15	4.03	4.48	9.95		13.00						10.48	10/5/2010
Vanguard Target Retirement 2055 Composite								0.14	3.98	4.49	10.15		13.22							
Target-Date 2055 Median					0.74			0.02	3.64	4.19	9.38		12.31		8.70		8.65			
Target-Date 2055 Number of Funds					243	243					222	222	196	196	146	146	9	9		
Vanguard Target Retirement 2060 Trust I				0.07	0.07			0.16	4.03	4.48	9.95		13.00		9.45				10.35	3/1/2012
Vanguard Target Retirement 2060 Composite								0.14	3.98	4.49	10.15		13.22		9.65					
Target-Date 2060+ Median					0.75			0.08	3.76	4.36	9.81		12.73		8.82					
Target-Date 2060+ Number of Funds					228	228					195	195	86	86	9	9	0	0		
Vanguard Target Retirement 2065 Trust I				0.07	0.07			0.17	4.03	4.54	9.96								12.77	7/7/2017
Vanguard Target Retirement 2060 Composite								0.14	3.98	4.49	10.15									
Target-Date 2060+ Median					0.75			0.08	3.76	4.36	9.81		12.73		8.82					
Target-Date 2060+ Number of Funds					228	228					195	195	86	86	9	9	0	0		



# 2018 457(b) Performance Summary

(	A) (B)	(C)	(D)	(E)	(F)	(G)	(H)	<b>(I)</b>	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
		Mgr.	AUM	Gross	Net				cent Retur				ialized To						Since	Incep.
As of 9/30/2018	Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date

Source: Morningstar & TIAA-CREF

Data for 1-month and YTD return as of 9/30/2018. All other data as of 9/30/2018.

Since Incep. = Since Inception Date

Incep. Date = Inception Date

In a multi-share situation, Morningstar will adjust the performance history of the original portfolio to reflect any differences in fees between the original share class and the new share class.

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

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. Ifinterest 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.

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

<sup>&</sup>quot;Since Inception" performance is calculated from this date.

## **Disclosures**



· %-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.

## **Disclosures**



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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.

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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<sup>TM</sup> 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.

## **Disclosures**



#### **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.

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## **State of Rhode Island**

# Market Value as of 9/30/2018 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	\$553,098.29
PTTRX	PIMCO Total Return Instl	Fixed Income	\$617,540.77
RERGX	American EuroPac Growth R6	Equities	\$1,628,117.71
SWISX	Schwab International Index Fd	Equities	\$235,860.98
TIAA#	TIAA Traditional Benefit Responsive 2	Guaranteed	\$3,802,315.85
VBTLX	Vanguard Ttl Bd Mkt Idx Adm	Fixed Income	\$151,296.75
VFTSX	Vanguard FTSE Social Index Inv	Equities	\$273,335.18
VINIX	Vanguard Inst Idx Inst	Equities	\$9,978,798.39
VLC1#	VALIC Fixed-Interest Opt 3%	Guaranteed	\$8,978,140.62
VLC2#	VALIC Fixed-Interest Opt 1.5%	Guaranteed	\$79,722.43
VMCIX	Vanguard Mid-Cap Idx Inst	Equities	\$5,231,493.40
VSCIX	Vanguard Small-Cap Idx Inst	Equities	\$3,272,065.83
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	\$9,030.30
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	\$569,738.06
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	\$90,764.34
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	\$537,279.42
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	\$224,854.86
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	\$22,072.82
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	\$61,965.78
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	\$64,346.99
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	\$2,484.71
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	\$1,268.46
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	\$201.27
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	\$53,174.54

# TIAA

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**BUILT TO PERFORM.** 

# **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.

	Cum	ılative T	otal Retu	ırns	Ave	rage An	nual Tot	al Returi	ns
Name	As of	1 mo	3 mo	YTD	As of	1 yr	3 yr	5 yr	10 yr
DOW JONES INDUSTRIAL AVERAGE	09/30/2018	1.97	9.63	8.83	06/30/2018	16.31	14.07	12.96	10.78
BLOOMBERG BARCLAYS U.S. AGGREGATE BOND INDEX	09/30/2018	-0.64	0.02	-1.60	06/30/2018	-0.40	1.72	2.27	3.72
NASDAQ COMPOSITE INDEX	09/30/2018	-0.70	7.41	17.48	06/30/2018	23.60	15.96	18.54	13.87
RUSSELL 2000 INDEX	09/30/2018	-2.41	3.58	11.51	06/30/2018	17.57	10.96	12.46	10.60
S&P 500 INDEX	09/30/2018	0.57	7.71	10.56	06/30/2018	14.37	11.93	13.42	10.17

	Cum	ılative T	otal Retu	ırns	Ave	rage An	nual Tot	al Retur	ns		Fe	es	
Investment Name	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
<b>Stock Investment</b>	s												
Large Cap													
FID 500 INDEX INST	09/30/2018	0.57	7.71	10.54	09/30/2018	17.88	17.28	13.92	11.94	10.48		0.01% on 08/01/2018	02/17/1988
FID CONTRAFUND K	09/30/2018	0.14	6.69	16.91	09/30/2018	24.80	19.40	15.65	13.44	12.74		0.65% on 03/01/2018	
FID LARGE CAP STOCK	09/30/2018	0.64	7.24	8.53	09/30/2018	14.99	16.32	12.15	13.13	8.90		0.67% on 06/29/2018	
INVESCO DIVRS DIV R6	09/30/2018	-0.36	3.88	1.70	09/30/2018	4.79	9.19	9.65	9.67	7.86		0.44% on 02/28/2018	12/31/2001
VANG FTSE SOCIAL IDX	09/30/2018	0.12	7.66	11.12	09/30/2018	18.71	17.38	14.49	12.38	4.99		0.20% on 12/21/2017	05/31/2000
Mid-Cap													
FID LOW PRICED STK K	09/30/2018	0.40	2.34	3.28	09/30/2018	10.17	11.36	9.47	12.00	13.68		0.53% on 09/29/2018	12/27/1989
FID MID CAP IDX PR	09/30/2018	-0.67	4.97	7.39	09/30/2018	13.91	14.48	11.59		14.67		0.03% on 08/01/2018	
Small Cap													
FID SM CAP IDX PR	09/30/2018	-2.38	3.63	11.64	09/30/2018	15.41	17.34	11.28		15.18		0.03% on 08/01/2018	09/08/2011
International													
FID INTL INDEX PR	09/30/2018	0.97	1.31	-1.27	09/30/2018	2.64	9.18	4.47	5.31	5.02		0.04% on 08/01/2018	11/05/1997
HARBOR INTL INST	09/30/2018	-1.02	-3.83	-5.09	09/30/2018	-3.02	6.35	1.89	4.79	10.34		0.81% on 03/01/2018	12/29/1987

	Cum	ılative T	otal Retu	ırns	Ave	rage An	nual Tot	al Retur	ns		Fe	es	
Investment Name	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
<b>Blended Investm</b>	ents*												
Others													
FID FREEDOM 2005 K	09/30/2018	-0.32	0.89	0.81	09/30/2018	2.98	6.22	4.79	5.49	4.88		0.43% on 05/30/2018	11/06/2003
FID FREEDOM 2010 K	09/30/2018	-0.25	1.28	1.28	09/30/2018	4.01	7.40	5.64	6.38	6.46		0.46% on 05/30/2018	10/17/1996
FID FREEDOM 2015 K	09/30/2018	-0.23	1.61	1.79	09/30/2018	4.93	8.49	6.35	6.75	5.93		0.50% on 05/30/2018	11/06/2003
FID FREEDOM 2020 K	09/30/2018	-0.12	1.98	2.20	09/30/2018	5.73	9.29	6.87	7.08	6.82		0.54% on 05/30/2018	10/17/1996
FID FREEDOM 2025 K	09/30/2018	-0.14	2.20	2.53	09/30/2018	6.40	10.02	7.45	7.62	6.57		0.57% on 05/30/2018	11/06/2003
FID FREEDOM 2030 K	09/30/2018	-0.11	2.66	3.25	09/30/2018	7.77	11.71	8.44	7.98	7.05		0.61% on 05/30/2018	10/17/1996
FID FREEDOM 2035 K	09/30/2018	0.06	3.21	4.11	09/30/2018	9.32	13.02	9.20	8.49	7.17		0.64% on 05/30/2018	11/06/2003
FID FREEDOM 2040 K	09/30/2018	0.09	3.53	4.30	09/30/2018	9.68	13.19	9.31	8.51	4.35		0.65% on 05/30/2018	09/06/2000
FID FREEDOM 2045 K	09/30/2018	0.08	3.45	4.29	09/30/2018	9.63	13.16	9.33	8.57	6.34		0.65% on 05/30/2018	06/01/2006
FID FREEDOM 2050 K	09/30/2018	0.08	3.43	4.32	09/30/2018	9.63	13.18	9.33	8.49	6.18		0.65% on 05/30/2018	06/01/2006
FID FREEDOM 2055 K	09/30/2018	0.07	3.48	4.33	09/30/2018	9.64	13.19	9.36		8.83		0.65% on 05/30/2018	06/01/2011
FID FREEDOM 2060 K	09/30/2018	0.08	3.48	4.32	09/30/2018	9.65	13.14			8.85		0.65% on 05/30/2018	08/05/2014
FID FREEDOM INC K	09/30/2018	-0.31	0.58	0.26	09/30/2018	1.91	4.80	3.75	4.50	4.74		0.42% on 05/30/2018	10/17/1996
<b>Bond Investment</b>	ts												
Stable Value													
TRP STABLE VALUE A	09/30/2018	0.15	0.52	1.53	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 PR	09/30/2018	-0.57	0.06	-1.67	09/30/2018	-1.32	1.21	2.06	3.63	5.79		0.03% on 08/01/2018	03/08/1990
PIM TOTAL RT INST	09/30/2018	-0.60	0.08	-1.62	09/30/2018	-1.52	2.16	2.27	5.08	7.09		0.55% on 08/24/2018	05/11/1987
Other Investmen	its												
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.

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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.

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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.

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### **STATE OF RHODE ISLAND**

#### **Balance by Fund**

Data As Of: 09/30/2018

Calendar Day	Plan Number	Plan Name	Fund Code	Fund Name	Fund Ticker Symbol	Fund Type	Participant Count	Market Value	Asset Percentage
9/30/2018	35835	STATE OF RI	0338	FID LARGE CAP STOCK	FLCSX	DOMESTIC EQUITY	329	\$9,048,991.93	5.74%
9/30/2018	35835	STATE OF RI	1522	FID INTL INDEX PR	FSIVX	INTERNATIONAL EQUITY	151	\$2,376,556.67	1.51%
9/30/2018	35835	STATE OF RI	2080	FID CONTRAFUND K	FCNKX	DOMESTIC EQUITY	691	\$39,085,602.84	24.81%
9/30/2018	35835	STATE OF RI	2095	FID LOW PRICED STK K	FLPKX	DOMESTIC EQUITY	391	\$11,166,126.29	7.09%
9/30/2018	35835	STATE OF RI	2324	FID US BOND IDX PR	FSITX	BOND	109	\$1,331,182.61	0.84%
9/30/2018	35835	STATE OF RI	2327	FID 500 INDEX INST	FXSIX	DOMESTIC EQUITY	364	\$12,196,019.39	7.74%
9/30/2018	35835	STATE OF RI	2350	FID MID CAP IDX PR	FSCKX	DOMESTIC EQUITY	154	\$1,924,668.70	1.22%
9/30/2018	35835	STATE OF RI	2359	FID SM CAP IDX PR	FSSVX	DOMESTIC EQUITY	185	\$1,747,445.01	1.11%
9/30/2018	35835	STATE OF RI	3019	FID FREEDOM INC K	FNSHX	LIFECYCLE	49	\$1,629,918.06	1.03%
9/30/2018	35835	STATE OF RI	3020	FID FREEDOM 2005 K	FSNJX	LIFECYCLE	11	\$349,004.26	0.22%
9/30/2018	35835	STATE OF RI	3021	FID FREEDOM 2010 K	FSNKX	LIFECYCLE	75	\$3,696,880.50	2.35%
9/30/2018	35835	STATE OF RI	3022	FID FREEDOM 2015 K	FSNLX	LIFECYCLE	52	\$2,311,054.04	1.47%
9/30/2018	35835	STATE OF RI	3023	FID FREEDOM 2020 K	FSNOX	LIFECYCLE	249	\$16,209,587.89	10.29%
9/30/2018	35835	STATE OF RI	3024	FID FREEDOM 2025 K	FSNPX	LIFECYCLE	94	\$3,802,005.73	2.41%
9/30/2018	35835	STATE OF RI	3025	FID FREEDOM 2030 K	FSNQX	LIFECYCLE	259	\$12,490,207.95	7.93%
9/30/2018	35835	STATE OF RI	3026	FID FREEDOM 2035 K	FSNUX	LIFECYCLE	63	\$2,988,901.10	1.90%
9/30/2018	35835	STATE OF RI	3027	FID FREEDOM 2040 K	FSNVX	LIFECYCLE	53	\$1,358,002.47	0.86%
9/30/2018	35835	STATE OF RI	3028	FID FREEDOM 2045 K	FSNZX	LIFECYCLE	58	\$1,169,662.51	0.74%
9/30/2018	35835	STATE OF RI	3029	FID FREEDOM 2050 K	FNSBX	LIFECYCLE	39	\$283,148.74	0.18%
9/30/2018	35835	STATE OF RI	3030	FID FREEDOM 2055 K	FNSDX	LIFECYCLE	35	\$577,032.37	0.37%
9/30/2018	35835	STATE OF RI	3031	FID FREEDOM 2060 K	FNSFX	LIFECYCLE	16	\$57,655.96	0.04%
9/30/2018	35835	STATE OF RI	BLNK	BROKERAGELINK		OTHER	108	\$12,442,830.24	7.90%
9/30/2018	35835	STATE OF RI	OF1P	PIM TOTAL RT INST	PTTRX	BOND	247	\$6,766,405.97	4.29%
9/30/2018	35835	STATE OF RI	OFHL	HARBOR INTL INST	HAINX	INTERNATIONAL EQUITY	300	\$4,329,520.92	2.75%
9/30/2018	35835	STATE OF RI	OGMU	TRP STABLE VALUE A		STABLE VALUE	310	\$5,957,598.52	3.78%
9/30/2018	35835	STATE OF RI	OK26	INVESCO DIVRS DIV R6	LCEFX	DOMESTIC EQUITY	117	\$2,127,612.84	1.35%
9/30/2018	35835	STATE OF RI	OQPN	VANG FTSE SOCIAL IDX	VFTSX	DOMESTIC EQUITY	45	\$124,987.07	0.08%

#### PERFORMANCE UPDATE

#### **Voya Retirement Insurance and Annuity Company**

#### State of RI 457 Plan

#### Average Annual Total Returns as of: 09/30/2018 (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.

	Fund Benchmark	1-N	Ло	3-1	VIO	ΥT	D.	1-	Yr	3-	Yr	5-`	Yr	10-	-Yr		Fund Inception	Gross Fund	Net Fund
Investment Options	ID (BM)	Fund	BM	Incept	Date	Exp %*	Exp %*												
Stability of Principal																			
Stability of Principal																			
Voya Fixed Account - 457/401 II A - 4573 (18)(19)	MFR	0.14	0.13	0.44	0.40	1.31		1.75		1.89		1.98		2.40					
Bonds																			
High Yield Bond																			
PGIM High Yield Fund - Class Z - 2482	BCUSH1IC	0.27	0.55	2.29	2.36	3.00	2.51	3.44	3.06	7.93	8.12	5.78	5.52	8.82	9.29		03/01/1996	0.53	0.53
Inflation-Protected Bond																			



	Fund																Fund	Gross	Net
Investment Ontions	Benchmark	1-N	Mo BM	3-N	Mo BM	YT	_	-	Yr BM	•	Yr	5-`			-Yr	Incent	Inception	Fund	Fund
Investment Options	ID (BM)	Fund		Fund		Fund	BM			Fund	BM	Fund		Fund		Incept	Date	Exp %*	
PIMCO VIT Real Return Portfolio - Administrative Class - 833 (1)	LBUSTIPS	-0.82	-1.05	-0.74	-0.82	-1.09	-0.84	0.22	0.41	2.28	2.04	1.14	1.37	3.69	3.32		09/30/1999	1.04	1.04
Intermediate-Term Bond																			
Voya Intermediate Bond Portfolio - Class I - 004 (2)	LEHM	-0.37	-0.64	0.34	0.02	-1.50	-1.60	-0.99	-1.22	2.54	1.31	3.15	2.16	4.91	3.77		05/23/1973	0.55	0.55
Voya U.S. Bond Index Portfolio - Class I - 1554 (3)	LEHM	-0.58	-0.64	0.01	0.02	-1.87	-1.60	-1.57	-1.22	0.97	1.31	1.81	2.16	3.41	3.77		03/07/2008	0.41	0.40
Asset Allocation																			
Lifecycle																			
Voya Solution 2025 Portfolio - Initial Class - 790 (4)(5)	SPT2025	-0.17	-0.11	2.32	2.72	1.98	3.02	5.84	6.86	8.85	9.45	6.96	7.13	7.08	7.59		04/29/2005	0.85	0.78
Voya Solution 2035 Portfolio - Initial Class - 761 (4)(6)	SP2035	0.00	-0.02	3.04	3.52	2.72	4.10	7.77	8.99	10.90	11.44	8.10	8.39	7.93	8.39		04/29/2005	0.90	0.83
Voya Solution 2045 Portfolio - Initial Class - 764 (4)(7)	SP2045	0.00	0.01	3.31	3.81	2.58	4.54	8.18	9.98	11.57	12.54	8.58	9.05	8.27	8.79		04/29/2005	0.93	0.86
Voya Solution 2055 Portfolio - Initial Class - 1166 (4)(8)	SPT2055	-0.07	0.01	3.21	3.88	2.45	4.69	8.15	10.32	11.72	13.13	8.69	9.42			9.55	03/08/2010	0.94	0.86
Voya Solution Income Portfolio - Initial Class - 767 (4)(9)	SPTREIN	-0.17	-0.21	1.60	1.37	0.93	1.44	3.32	3.71	5.57	5.35	4.91	4.37	5.53	5.10		04/29/2005	0.81	0.68
Balanced																			
Allocation50% to 70% Equity																			
VY® T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	SPXLBGC	-0.04	0.08	4.75	4.06	7.52	4.99	10.65	9.35	11.97	10.64	11.13	9.14	11.07	8.93		01/24/1989	0.64	0.64
Large Cap Value																			
Large Blend																			
Voya Growth and Income Portfolio - Class I - 001 (10)	SPXRE	0.59	0.57	7.12	7.71	8.24	9.94	14.97	17.91	14.86	16.91	11.32	13.95	10.61	11.97		12/31/1979	0.63	0.58
Voya U.S. Stock Index Portfolio - Institutional Class - 829	SPXRE	0.49	0.57	7.58	7.71	10.33	9.94	17.54	17.91	16.99	16.91	13.63	13.95	11.68	11.97		05/03/2004	0.27	0.27
Large Value																			
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (11)	RS1000V	-0.08	0.20	6.18	5.70	5.76	3.92	11.48	9.45	15.48	13.55	11.49	10.72	10.01	9.79		11/29/1988	0.73	0.73
Large Cap Growth																			
Large Growth																			
Voya Large Cap Growth Portfolio - Institutional Class - 742 (12)	RS1000G	0.63	0.56	8.87	7.29	15.20	17.09	24.35	26.30	19.01	20.55	15.62	16.58	14.70	14.30		05/03/2004	0.67	0.67
Small/Mid/Specialty																			
Mid-Cap Blend																			
Voya Russell™ Mid Cap Index Portfolio - Class I - 1560	RSMID	-0.65	-0.64	4.93	5.00	7.21	7.86	13.55	13.98	14.08	14.52	11.20	11.65	11.94	12.31		03/04/2008	0.44	0.40
(13)																			
Mid-Cap Growth																			
Principal MidCap Fund - Class R-5 - 3412	RSMID	-0.38	-0.64	4.46	5.00	7.48	7.86	12.71	13.98	15.68	14.52	12.76	11.65	13.66	12.31		12/06/2000	0.85	0.85
Small Blend																			
Voya Russell™ Small Cap Index Portfolio - Class I - 1563 (14)	RS2000	-2.46	-2.41	3.43	2.17	11.28	11.51	14.88	15.24	16.84	17.12	10.88	11.46	10.93	11.11		03/04/2008	0.46	0.45

	Fund Benchmark	1-N	Ио	3-1	Ио	ΥT	D.	1-	Yr	3-	Yr	5-	Yr	10	-Yr		Fund Inception	Gross Fund	Net Fund
Investment Options	ID (BM)	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	ВМ	Fund	BM	Incept	Date	Exp %*	Exp %*
Voya Small Company Portfolio - Class I - 042 (15)	RS2000	-3.38	-2.41	0.73	2.17	3.88	11.51	7.30	15.24	14.37	17.12	10.60	11.46	10.98	11.11		12/27/1996	0.89	0.89
Global / International																			
Foreign Large Blend																			
Voya International Index Portfolio - Class I - 1551 (16)	MSEAFANET	0.98	0.87	1.28	1.35	-1.40	-1.43	2.22	2.74	8.74	9.23	4.11	4.42	4.98	5.38		03/04/2008	0.53	0.45
Foreign Large Growth																			
American Funds EuroPacific Growth Fund - Class R-4 - 573	MSCIXUS	-0.59	0.46	-0.93	0.71	-2.92	-3.09	1.10	1.76	9.54	9.97	5.83	4.12	6.49	5.18		04/16/1984	0.83	0.83
World Large Stock																			
VY® Oppenheimer Global Portfolio - Initial Class - 432 (17)	MSCIACN	-1.89	0.44	1.42	4.28	3.28	3.83	10.77	9.77	14.30	13.40	10.14	8.67	10.55	8.19		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 RI 457 Plan

**Separate Account D** 

#### Average Annual Total Returns as of: 09/30/2018 (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- <b>M</b> o	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date	
Stability of Principal										
Stability of Principal										
Voya Fixed Account - 457/401 II A - 4573 (18)(19)  This fund is not part of the product's separate account.	0.14	0.44	1.31	1.75	1.89	1.98	2.40			
Bonds										
High Yield Bond										
PGIM High Yield Fund - Class Z - 2482	0.26	2.25	2.88	3.28	7.74	5.61	8.64		03/01/1996	
Inflation-Protected Bond										
PIMCO VIT Real Return Portfolio - Administrative Class - 833 (1)	-0.83	-0.78	-1.20	0.07	2.12	0.99	3.53		09/30/1999	

Intermediate-Term Bond

Investment Options	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
Voya Intermediate Bond Portfolio - Class I - 004 (2)	-0.39	0.30	-1.61	-1.14	2.38	2.99	4.75	Пооре	05/23/1973
Voya U.S. Bond Index Portfolio - Class I - 1554 (3)	-0.60	-0.03	-1.98	-1.72	0.82	1.66	3.26		03/07/2008
Asset Allocation							5.25		
Lifecycle									
Voya Solution 2025 Portfolio - Initial Class - 790 (4)(5)	-0.18	2.28	1.86	5.69	8.69	6.80	6.91		04/29/2005
Voya Solution 2035 Portfolio - Initial Class - 761 (4)(6)	-0.01	3.00	2.60	7.61	10.73	7.94	7.77		04/29/2005
Voya Solution 2045 Portfolio - Initial Class - 764 (4)(7)	-0.01	3.27	2.46	8.01	11.40	8.41	8.11		04/29/2005
Voya Solution 2055 Portfolio - Initial Class - 1166 (4)(8)	-0.08	3.18	2.33	7.99	11.55	8.52		9.39	03/08/2010
Voya Solution Income Portfolio - Initial Class - 767 (4)(9)	-0.18	1.56	0.82	3.16	5.41	4.75	5.37		04/29/2005
Balanced									
Allocation50% to 70% Equity									
VY® T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	-0.05	4.71	7.40	10.48	11.80	10.97	10.90		01/24/1989
Large Cap Value									
Large Blend									
Voya Growth and Income Portfolio - Class I - 001 (10)	0.58	7.08	8.12	14.79	14.69	11.16	10.45		12/31/1979
Voya U.S. Stock Index Portfolio - Institutional Class - 829	0.48	7.54	10.20	17.36	16.82	13.46	11.52		05/03/2004
Large Value									
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (11)	-0.10	6.14	5.64	11.31	15.31	11.33	9.85		11/29/1988
Large Cap Growth									
Large Growth									
Voya Large Cap Growth Portfolio - Institutional Class - 742 (12)	0.62	8.83	15.07	24.16	18.83	15.45	14.53		05/03/2004
Small/Mid/Specialty									
Mid-Cap Blend									
Voya Russell™ Mid Cap Index Portfolio - Class I - 1560 (13)	-0.66	4.89	7.09	13.38	13.91	11.04	11.77		03/04/2008
Mid-Cap Growth									
Principal MidCap Fund - Class R-5 - 3412	-0.39	4.42	7.36	12.54	15.51	12.59	13.49		12/06/2000
Small Blend									
Voya Russell™ Small Cap Index Portfolio - Class I - 1563 (14)	-2.47	3.39	11.16	14.71	16.66	10.72	10.76		03/04/2008
Voya Small Company Portfolio - Class I - 042 (15)	-3.39	0.69	3.76	7.14	14.20	10.43	10.82		12/27/1996
Global / International									
Foreign Large Blend		_	_		_				
Voya International Index Portfolio - Class I - 1551 (16)	0.97	1.24	-1.51	2.07	8.58	3.96	4.82		03/04/2008
Foreign Large Growth									
American Funds EuroPacific Growth Fund - Class R-4 - 573	-0.60	-0.97	-3.03	0.95	9.37	5.67	6.33		04/16/1984
World Large Stock									

Fund

Investment Options	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Inception Date
VY® Oppenheimer Global Portfolio - Initial Class - 432 (17)	-1.90	1.38	3.17	10.61	14.13	9.98	10.39		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)PIMCO VIT Real Return Portfolio - Administrative Class: "Other Expenses" within the fund's prospectus reflect interest expense and is based on the amount incurred during the Portfolio's most recent fiscal year as a result of entering into certain investments, such as reverse repurchase agreements. Interest expense is required to be treated as a Portfolio expense for accounting purposes and is not payable to PIMCO. The amount of interest expense (if any) will vary based on the Portfolio's use of such investments as an investment strategy. Total Annual Portfolio Operating Expenses excluding interest expense is 0.65%.

(2) 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.

(3)Voya U.S. Bond Index Portfolio - Class I: The adviser is contractually obligated to limit expenses to 0.40% through May 1, 2018. 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.

(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.

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.

#### **Additional Notes**

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 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.
- (7)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.
- (8)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.
- (9) 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.
- (10)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.
- (11)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.
- (12)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.
- (13)Voya Russell (TM) Mid Cap Index Portfolio Class I: The adviser is contractually obligated to limit expenses to 0.43% through May 1, 2018. 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.
- (14)Voya Russell (TM) Small Cap Index Portfolio Class I: The adviser is contractually obligated to limit expenses to 0.45% through May 1, 2018. 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.
- (15)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.

#### **Additional Notes**

(16)Voya International Index Portfolio - Class I: The adviser is contractually obligated to limit expenses to 0.50% through May 1, 2018. In addition, the adviser is contractually obligated to further limit expenses to 0.45% through May 1, 2018. 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. The distributor is contractually obligated to waive 0.01% of the distribution fee through May 1, 2018. Termination or modification of these obligations requires approval by the Portfolio's board.

(17)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.

(18)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.

(19)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).
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.

Benchmark ID	See Performance Introduction Page for Important Information  Benchmark Description
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.
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.
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.
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.

Creation Date: Tuesday, October 16, 2018

State of RI	457: Plan E	Balance By Investm	ent - 09/30/2018	1	
Fund Name	Fund Number	Asset Class	Balance	YTD Contributions	Percent
VOYA SOLUTION 2025 PORTFOLIO I	790	Asset Allocation	\$795,481.26	\$80,567.48	0.44%
VOYA SOLUTION 2035 PORTFOLIO I	761	Asset Allocation	\$845,728.72	\$113,368.10	0.47%
VOYA SOLUTION 2045 PORTFOLIO I	764	Asset Allocation	\$799,281.42	\$128,398.70	0.44%
VOYA SOLUTION 2055 PORTFOLIO I	1166	Asset Allocation	\$398,192.40	\$124,864.04	0.22%
VOYA SOLUTION INCOME PRT I	767	Asset Allocation	\$473,597.89	\$42,144.00	0.26%
VY TROWEPRICE CAPTL APPREC PT INST	1257	Balanced	\$7,921,408.96	\$418,641.76	4.41%
PGIM HIGH YIELD FUND Z	2482	Bonds	\$560,260.99	\$37,609.93	0.31%
PIMCO VIT REAL RETURN PORTFOLIO ADM	833	Bonds	\$341,652.74	\$35,410.99	0.19%
VOYA INTERMEDIATE BOND PORT I	4	Bonds	\$6,666,073.29	\$649,612.05	3.71%
VOYA U.S. BOND INDEX PORTFOLIO I	1554	Bonds	\$570,347.89	\$38,784.31	0.32%
AMERICAN FUNDS EUROPACIFIC R4	573	Global / International	\$5,531,300.67	\$427,752.32	3.08%
VOYA INTERNATIONAL INDEX PORT I	1551	Global / International	\$351,590.20	\$35,184.82	0.20%
VY OPPENHMR GLOBAL PORT I	432	Global / International	\$6,713,199.83	\$355,355.13	3.74%
VOYA GROWTH AND INCOME PORT I	1	Large Cap Blend	\$25,795,957.57	\$764,734.53	14.36%
VOYA LARGE CAP GROWTH PORT INST	742	Large Cap Growth	\$11,135,382.12	\$682,713.80	6.20%
BLACKROCK EQUITY DIVIDEND FUND INST	8518	Large Cap Value	\$3,883,236.11	\$207,497.09	2.16%
VOYA U.S. STOCK INDEX PORT INST	829	Large Cap Value	\$8,560,376.39	\$394,629.62	4.77%
PRINCIPAL MIDCAP FUND R5	3412	Small/Mid/Specialty	\$9,572,100.77	\$353,760.70	5.33%
VOYA RUSSELL MID CAP INDEX PORT I	1560	Small/Mid/Specialty	\$1,272,371.86	\$128,727.12	0.71%
VOYA RUSSELL SM CP INDEX PORT I	1563	Small/Mid/Specialty	\$1,329,456.62	\$132,778.34	0.74%
VOYA SMALL COMPANY PORTFOLIO I	42	Small/Mid/Specialty	\$7,601,737.71	\$298,379.96	4.23%
VOYA FIXED ACCOUNT - 457/401	43	Stability of Principal	\$73,882,293.95	\$538,655.91	41.13%
VOYA FIXED ACCOUNT - 457/401 II A	4573	Stability of Principal	\$4,599,640.70	\$2,340,348.74	2.56%
VOYA LONG-TERM GAA (4560)	4560	Stability of Principal	\$25,322.26	\$0.00	0.02%
		TOTAL	\$179,625,992.32	\$8,329,919.44	



**OPEB Trust** 



Report ID: IPM0005

**Reporting Currency: USD** 

#### TOTAL NET OF FEES 9/30/2018

				Annualized							
Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	ITD	Inception Date
Mackay Shields OPEB Bloomberg Barclays U.S. Aggregate Bond Index	101,625,049.7	34.7	-0.66 -0.64	-1.88 -1.60	0.03 <i>0.0</i> 2	-1.40 -1.22	1.13 1.31	2.12 2.16		1.39 1.47	5/1/2013 5/1/2013
SSGA S&P 500 INDX S&P 500 - Total Return Index	191,408,070.5	65.3	0.56 <i>0.57</i>	10.52 <i>10.56</i>	7.68 7.71	17.86 17.91	17.31 17.31	13.94 <i>13.95</i>		13.76 13.15	5/1/2011 5/1/2011
Total OPEB OPEB Custom Blend	293,033,120.2	100.0	<b>0.13</b> <i>0.14</i>	<b>6.09</b> 6.25	<b>4.98</b> 4.98	<b>10.85</b> <i>10.96</i>	<b>11.51</b> <i>11.58</i>	<b>9.79</b> 9.81		<b>9.39</b> 8.71	<b>5/1/2011</b> 5/1/2011



Report ID: IPM0005

**Reporting Currency: USD** 

### **END NOTES**

9/30/2018

1 RI7GX0903OPE

OPEB Custom Blend

35% Barclays Aggregate and 65% S&P 500



Report ID: IPM0005

**Reporting Currency: USD** 

AL NET OF FEES

#### TOTAL NET OF FEES 9/30/2018

						Cumu						
Account Name Benchmark Name		Market Value	% of Total	YTD	Month	8/1/2018 - 8/31/2018	7/1/2018 - 7/31/2018	2017	2016	2015	Inception Date	
Mackay Shields OPEB Bloomberg Barclays U.S. Aggregate Bond Index		101,625,049.7	34.7	-1.88 <i>-1.60</i>	-0.66 -0.64	0.65 <i>0.64</i>	0.05 <i>0.02</i>	3.78 3.54	2.28 2.65	0.46 <i>0.55</i>	5/1/2013 5/1/2013	
SSGA S&P 500 INDX S&P 500 - Total Return Index		191,408,070.5	65.3	10.52 10.56	0.56 <i>0.57</i>	3.25 3.26	3.71 3. <i>7</i> 2	21.80 21.83	11.99 <i>11.9</i> 6	1.46 1.38	5/1/2011 5/1/2011	
Total OPEB OPEB Custom Blend	1	293,033,120.2	100.0	<b>6.09</b> 6.25	<b>0.13</b> <i>0.14</i>	<b>2.35</b> 2.34	<b>2.43</b> 2.43	<b>15.32</b> <i>15.14</i>	<b>8.69</b> 8.77	<b>1.16</b> <i>1.31</i>	<b>5/1/2011</b> 5/1/2011	



Report ID: IPM0005

**Reporting Currency: USD** 

**END NOTES** 

9/30/2018

1 RI7G10000000 Total OPEB YTD - Calendar Year to Date

Month - Current Month

Cumulative Months - Prior Month and Second Prior Month

2013, 2012, 2011 - Calendar Year

2 RI7GX0903OPE OPEB Custom Blend 65% S&P 500 and 35% Barclays Aggregate