

**STATE OF RHODE ISLAND  
INVESTMENT COMMISSION MEETING**

**DATA AT  
October 31<sup>st</sup>, 2018  
December 12<sup>th</sup>, 2018  
MEETING**

**MEMBERS OF THE STATE INVESTMENT COMMISSION**

**Honorable Seth Magaziner, Chair**

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

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

## Section I.

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### Agenda



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

**Seth Magaziner**  
General Treasurer

**RHODE ISLAND STATE INVESTMENT COMMISSION  
MEETING NOTICE**

The next meeting of the Rhode Island State Investment Commission has been scheduled for Wednesday, December 12<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 October 24<sup>th</sup>, 2018
- Private Equity Investment Recommendation, Nautic Partners IX <sup>1</sup>
  - Scott Hilinski & Chris Pierce, Nautic Partners, LLC
  - Tom Lynch, Cliffwater
- Real Estate Investment Recommendation, Raith Real Estate Fund II <sup>1</sup>
  - Bill Nelson & Nelson Hioe, Raith Capital
  - David Glickman & Samantha Spencer, PCA
- CollegeBound 529 Update, Invesco <sup>1</sup>
  - Tiffany Spudich & Peter Harvey, Capital Cities
  - Jacob Borbidge, Invesco
- Voya 457 Target Date Adjustment <sup>1</sup>
  - Kim Shockley
- REIT Asset Class Overview
  - Doug Moseley, NEPC
- Legal Counsel Report
- Chief Investment Officer Report
- Treasurer's General Comments

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

**POSTED ON December 7, 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.

## Section II.

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### Approval of Minutes



## State Investment Commission

### Monthly Meeting Minutes

Wednesday, October 24th, 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 9:01 AM, Wednesday, October 24<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, Mr. Thomas Mullaney, Mr. Michael Costello, Ms. Karen Hammond, Mr. Frank Karpinski, Mr. Erik Carleton and Treasurer Seth Magaziner.

Also in attendance: Frank Baker, Sirius Partners; Thomas Lynch, Cliffwater; Michael Morin & Jim Scalisi, Fidelity; Vincent Izzo, Treasury; Allan Emkin, PCA; Greg Miller, Deltra Hayes & Frederick Blue, Voya; 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 9:01 AM.

#### II. Approval of Minutes

On a motion by Mr. Thomas Fay and seconded by Mr. Michael Costello, it was unanimously **VOTED: to approve the draft minutes of the September 26<sup>th</sup>, 2018 meeting of the State Investment Commission.**

#### III. Siris Capital Partners IV & Recommendation

Mr. Frank Baker, Co-founder of Siris Capital, provided an overview of the firm. Mr. Baker explained Siris's strategy, sourcing model and research process for identifying and acquiring established technology companies. Mr. Baker stated how prospective investments are vetted and outlined the firm's ongoing initiatives to attract and attain diverse talent to the firm.

Mr. Lynch commented positively on the Siris team's extensive experience, industry focus, and discipline in deploying capital.

The Board asked questions.

On a motion by Mr. Carleton which was seconded by Mr. Fay, it was unanimously **VOTED: that the Employees' Retirement System of the State of Rhode Island make a commitment up to \$50 million in Siris Capital Partners IV, subject to legal and investment staff review.**

#### IV. Ocean State Investment Pool Management Recommendation

Mr. Michael Morin, Head of Liquidity Management Solutions at Fidelity, shared his thoughts on the firm's competitive advantages, discussed Fidelity's approach to customer service, and Fidelity's scale and resources available to the team managing OSIP. Furthermore, Mr. Morin provided examples of Fidelity's

risk management measures.

Mr. Jim Scalisi, OSIP Senior Cash Relationship Manager, outlined Fidelity's customer marketing approach and client service. Additionally, Mr. Scalisi explained Fidelity's upgraded online presence, extensive management team, and commitment to help OSIP grow.

The Board asked questions.

Mr. Vincent Izzo commented positively on Fidelity's work and communication between credit analysts and traders, as well as, Fidelity's local presence.

The Board asked questions.

Ms. Hammond recused herself from participating in the consideration of an investment in Fidelity Investments. On a motion by Mr. Mullaney which was seconded by Mr. Carleton, it was unanimously **VOTED: that the Employees' Retirement System of the State of Rhode Island retain Fidelity Investments to manage the Ocean State Investment Pool, subject to legal and investment staff review.**

## **V. Investment Advisor Update**

Mr. Allan Emkin, Founder of PCA, provided an update on the financial markets. Mr. Emkin highlighted the practical importance of portfolio diversification and risk management over market cycles. Furthermore, Mr. Emkin outlined the potential for the crisis protection class to assist in mitigating risk. Mr. Emkin noted that the distinction between a prolonged market crisis and other risk factors such as volatility and inflation, is that a market crisis would typically be expected to include an equity market downturn of at least 20% over a period of at least two quarters.

The Board asked questions.

## **VI. 457 Plan Review, Voya**

Mr. Greg Miller, Voya Regional Vice President, proceeded to outline the growth of total assets and new enrollments under the 457 Plan over the past several years. Mr. Miller discussed Voya's engagement of plan participants through technology services, noting that Rhode Island state employees save for retirement at a greater rate than the median public sector Voya plan member.

Ms. Deltra Hayes, Vice President for Strategic Relationships outlined participants' high utilization of target date funds and commented on the diversification benefits target date funds offer.

## **VII. Legal Counsel Report**

There was no legal counsel report

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

Mr. Alec Stais discussed the Plan's Fiscal YTD returns, highlighting strong performance versus the Total Plan and 60/40 benchmarks. Mr. Stais pointed out public equities and private growth as notable contributors. Mr. Stais also noted the Total Plan portfolio is well-balanced and is close to its aggregate risk

target, while performing within expectations.

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 Mr. Carleton and seconded by Mr. Costello, it was unanimously **VOTED: to adjourn the meeting at 10:55 AM.**

Respectfully submitted,

**Seth Magaziner,  
General Treasurer**

## Section III.

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### Staff Summary





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

Seth Magaziner

General Treasurer

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

December 7, 2018

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 October 31, 2018.

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

Asset Class		Base Market Value
<b>Grand Total</b>		<b>8,039,806,059</b>
CASH EQUIVALENT*		446,851,935
EQUITY HEDGE FUNDS**		260,402,222
GLOBAL PUBLIC EQUITY		3,585,517,141
CREDIT		269,021,988
INFLATION-LINKED BDS		198,261,636
PRIVATE EQUITY**		656,771,593
REAL ESTATE**		580,690,181
REAL RET HEDGE FUNDS**		291,601,125
INFRASTRUCTURE**		293,224,502
US TRADITIONAL FIXED		872,398,810
CPC PROGRAM		585,064,926

Plan Allocations	%	Base Market Value
<b>Grand Total</b>	<b>100.00%</b>	<b>8,039,806,059</b>
STATE EMP RET PLAN	74.46%	5,986,739,854
MUNI EMP RET PLAN	18.86%	1,515,953,431
TEACHER'S SURVIVOR BENEFIT	3.96%	318,125,647
STATE POLICE RET PL	1.69%	135,843,061
JUDICIAL RET PLAN	0.89%	71,859,000
NON-CONTRIB JUD RET	0.01%	800,000
NON-CONT ST POL RET	0.13%	10,485,066

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

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

Respectfully submitted,

  
Vincent Izzo  
Investment Accounting Manager

# Portfolio Highlights

## October 2018

The Plan returned -4.03% during the month of October, outperforming the 60/40 benchmark's return of -4.81%. The Total Plan benchmark returned -3.61%. The Plan's Total Growth allocation return declined 6.25% on the month due to equities selling off. The total portfolio decreased by approximately \$372.5 million as the investment portfolio decreased by \$339.3 million and \$33.2 million of transfers were made to meet pension payroll in excess of pension contributions.

Fiscal year-to-date through October, the portfolio decreased 1.35% net of fees, beating the 60% global equity/40% fixed income benchmark return of -2.37%. Over this period, the total portfolio value has decreased by \$259.3 million, with net investment losses of \$108.4 million and \$150.9 million worth of transfers to meet pension payroll.

Calendar year-to-date the portfolio's -0.63% net return outperformed the 60/40 return of -3.18%, as well as the strategic benchmark return of -0.69%. Over this period, the total portfolio value has decreased by \$381.1 million, with net investment losses of \$48.0 million and \$333.1 million worth of transfers to meet pension payroll.

Over a 3-year time frame, the ERSRI portfolio outperformed, earning an annualized return of 6.32% net of fees versus the plan benchmark of 5.94% and the 60/40 portfolio which earned 5.14%. Over a 5-year time frame, the ERSRI portfolio earned an annualized return of 5.40% net of fees, outperforming the plan benchmark return of 5.27% and 60/40 benchmark, which posted 4.54%.

## Section IV.

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### Asset Allocation

# Asset Summary

Balance Date: 10/31/2018



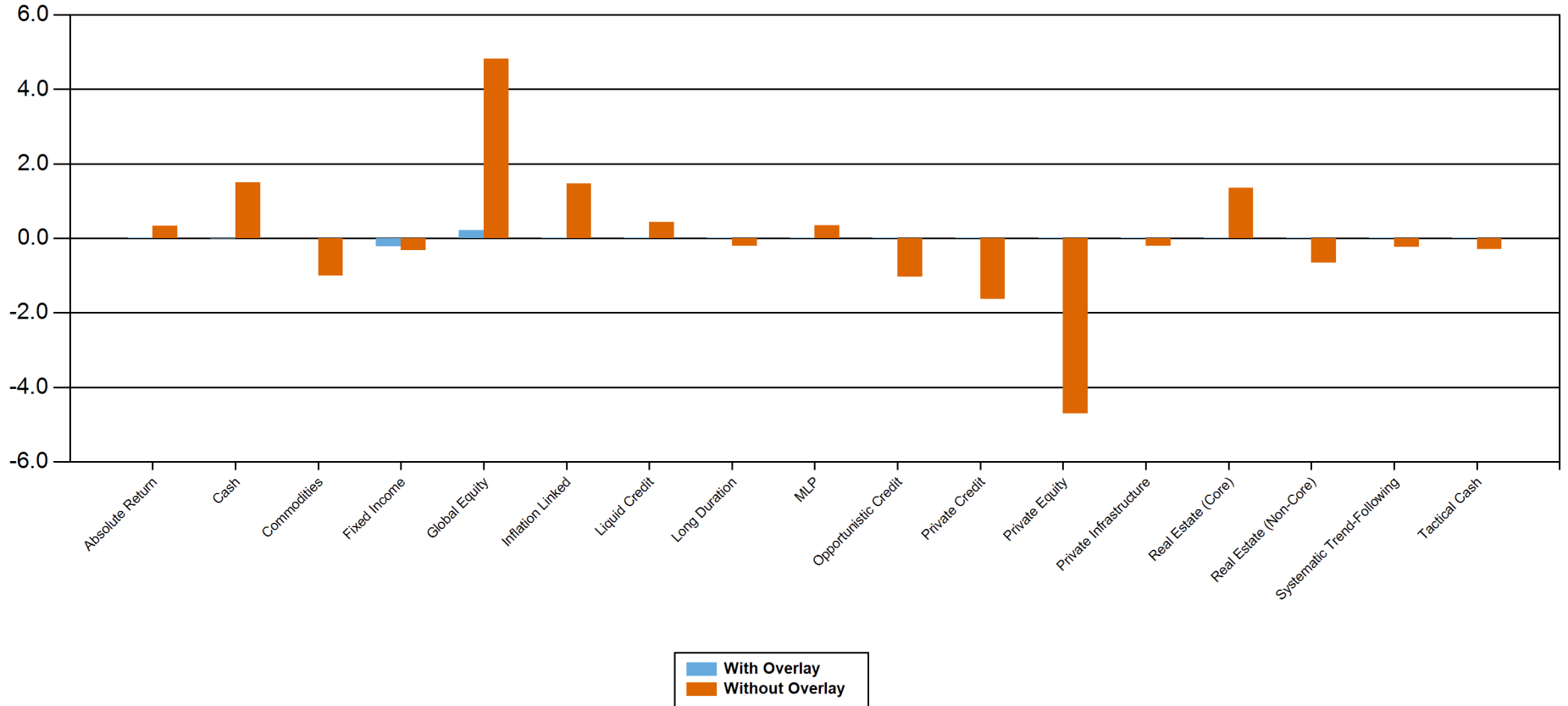
<u>Asset Class</u>	<u>Physical Exposure</u>		<u>Synthetic Exposure</u>		<u>Net Position</u>		<u>Overlay Target</u>		<u>Policy Target</u>	
<b>Total Market Value</b>	<b>8,066.7</b>	<b>100.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>8,066.7</b>	<b>100.0 %</b>	<b>8,066.8</b>	<b>100.0 %</b>	<b>8,066.8</b>	<b>100.00 %</b>
<b>Cash</b>	<b>120.9</b>	<b>1.5 %</b>	<b>-118.0</b>	<b>-1.5 %</b>	<b>2.9</b>	<b>0.0 %</b>	<b>3.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.00 %</b>
Cash	120.9	1.5 %	-118.0	-1.5 %	2.9	0.0 %	3.0	0.0 %	0.0	0.00 %
<b>Equity</b>	<b>4,123.3</b>	<b>51.1 %</b>	<b>82.8</b>	<b>1.0 %</b>	<b>4,206.1</b>	<b>52.1 %</b>	<b>4,188.1</b>	<b>51.9 %</b>	<b>4,114.1</b>	<b>51.00 %</b>
Global Equity	3,616.0	44.8 %	82.8	1.0 %	3,698.9	45.9 %	3,680.9	45.6 %	3,226.7	40.00 %
Private Equity	507.2	6.3 %	0.0	0.0 %	507.2	6.3 %	507.2	6.3 %	887.3	11.00 %
<b>Fixed</b>	<b>1,835.6</b>	<b>22.8 %</b>	<b>35.2</b>	<b>0.4 %</b>	<b>1,870.9</b>	<b>23.2 %</b>	<b>1,888.8</b>	<b>23.4 %</b>	<b>1,855.4</b>	<b>23.00 %</b>
Fixed Income	902.1	11.2 %	35.2	0.4 %	937.3	11.6 %	955.3	11.8 %	927.7	11.50 %
Inflation Linked	199.0	2.5 %	0.0	0.0 %	199.0	2.5 %	199.0	2.5 %	80.7	1.00 %
Liquid Credit	317.4	3.9 %	0.0	0.0 %	317.4	3.9 %	317.4	3.9 %	282.3	3.50 %
Long Duration	306.2	3.8 %	0.0	0.0 %	306.2	3.8 %	306.2	3.8 %	322.7	4.00 %
Private Credit	110.9	1.4 %	0.0	0.0 %	110.9	1.4 %	110.9	1.4 %	242.0	3.00 %
<b>Other</b>	<b>1,986.9</b>	<b>24.6 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>1,986.9</b>	<b>24.6 %</b>	<b>1,986.9</b>	<b>24.6 %</b>	<b>2,097.4</b>	<b>26.00 %</b>
Absolute Return	551.6	6.8 %	0.0	0.0 %	551.6	6.8 %	551.6	6.8 %	524.3	6.50 %
Commodities	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	80.7	1.00 %
MLP	148.7	1.8 %	0.0	0.0 %	148.7	1.8 %	148.7	1.8 %	121.0	1.50 %
Opportunistic Credit	37.6	0.5 %	0.0	0.0 %	37.6	0.5 %	37.6	0.5 %	121.0	1.50 %
Private Infrastructure	145.2	1.8 %	0.0	0.0 %	145.2	1.8 %	145.2	1.8 %	161.3	2.00 %
Real Estate (Core)	432.2	5.4 %	0.0	0.0 %	432.2	5.4 %	432.2	5.4 %	322.7	4.00 %
Real Estate (Non-Core)	148.5	1.8 %	0.0	0.0 %	148.5	1.8 %	148.5	1.8 %	201.7	2.50 %
Systematic Trend-Following	304.3	3.8 %	0.0	0.0 %	304.3	3.8 %	304.3	3.8 %	322.7	4.00 %
Tactical Cash	218.8	2.7 %	0.0	0.0 %	218.8	2.7 %	218.8	2.7 %	242.0	3.00 %

# Asset Summary

Balance Date: 10/31/2018



Percent Deviation from Overlay Target



Total Absolute Notional Value: 118.0 (USD)

# Asset Summary

Balance Date: 10/31/2018



<u>Manager</u>	<u>Total Market Value</u>		<u>Equity Market Value</u>		<u>Fixed Market Value</u>		<u>Other Market Value</u>		<u>Cash Balance</u>	
<b>Total Assets</b>	<b>8,066.8</b>	<b>100.0 %</b>	<b>4,123.3</b>	<b>51.1 %</b>	<b>1,835.6</b>	<b>22.8 %</b>	<b>1,986.9</b>	<b>24.6 %</b>	<b>120.9</b>	<b>1.5 %</b>
<b>Cash</b>	<b>120.9</b>	<b>1.5 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>120.8</b>	<b>1.5 %</b>
Cash Acct (Pooled Trust)	110.8	1.4 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	110.7	1.4 %
Municipal EE's Retirement Plan	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
Russell Overlay	10.1	0.1 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	10.1	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 %
<b>Equity</b>	<b>4,123.3</b>	<b>51.1 %</b>	<b>4,123.3</b>	<b>51.1 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
<b>Global Equity</b>	<b>3,616.1</b>	<b>44.8 %</b>	<b>3,616.0</b>	<b>44.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
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	1,207.8	15.0 %	1,207.8	15.0 %	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	392.5	4.9 %	392.5	4.9 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA MSCI Canada	60.2	0.7 %	60.2	0.7 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA MSCI EAFE	674.3	8.4 %	674.3	8.4 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
SSgA Russell 3000	1,281.0	15.9 %	1,281.0	15.9 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>Private Equity</b>	<b>507.2</b>	<b>6.3 %</b>	<b>507.2</b>	<b>6.3 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Private Equity	507.2	6.3 %	507.2	6.3 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
<b>Fixed</b>	<b>1,835.6</b>	<b>22.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>1,835.6</b>	<b>22.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
<b>Fixed Income</b>	<b>902.1</b>	<b>11.2 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>902.1</b>	<b>11.2 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
MacKay Shields Core	442.6	5.5 %	0.0	0.0 %	442.6	5.5 %	0.0	0.0 %	0.0	0.0 %
Pyramis Core	459.5	5.7 %	0.0	0.0 %	459.5	5.7 %	0.0	0.0 %	0.0	0.0 %
<b>Inflation Linked</b>	<b>199.0</b>	<b>2.5 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>199.0</b>	<b>2.5 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Brown Brothers Harriman-GILBS	199.0	2.5 %	0.0	0.0 %	199.0	2.5 %	0.0	0.0 %	0.0	0.0 %
<b>Liquid Credit</b>	<b>317.4</b>	<b>3.9 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>317.4</b>	<b>3.9 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Loomis	126.6	1.6 %	0.0	0.0 %	126.6	1.6 %	0.0	0.0 %	0.0	0.0 %
PIMCO	165.7	2.1 %	0.0	0.0 %	165.7	2.1 %	0.0	0.0 %	0.0	0.0 %
WAMCO	25.1	0.3 %	0.0	0.0 %	25.1	0.3 %	0.0	0.0 %	0.0	0.0 %
<b>Long Duration</b>	<b>306.2</b>	<b>3.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>306.2</b>	<b>3.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Mackay Long Duration	153.1	1.9 %	0.0	0.0 %	153.1	1.9 %	0.0	0.0 %	0.0	0.0 %
WAMCO Long Duration	153.1	1.9 %	0.0	0.0 %	153.1	1.9 %	0.0	0.0 %	0.0	0.0 %
<b>Private Credit</b>	<b>110.9</b>	<b>1.4 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>110.9</b>	<b>1.4 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>
Private Credit	110.9	1.4 %	0.0	0.0 %	110.9	1.4 %	0.0	0.0 %	0.0	0.0 %
<b>Other</b>	<b>1,986.9</b>	<b>24.6 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>1,986.9</b>	<b>24.6 %</b>	<b>0.0</b>	<b>0.0 %</b>
<b>Tactical Cash</b>	<b>218.8</b>	<b>2.7 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>218.8</b>	<b>2.7 %</b>	<b>0.0</b>	<b>0.0 %</b>
ERSRI SMA CASH	218.8	2.7 %	0.0	0.0 %	0.0	0.0 %	218.8	2.7 %	0.0	0.0 %
<b>Absolute Return</b>	<b>551.6</b>	<b>6.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>551.6</b>	<b>6.8 %</b>	<b>0.0</b>	<b>0.0 %</b>
Capula Global Relative Value	73.2	0.9 %	0.0	0.0 %	0.0	0.0 %	73.2	0.9 %	0.0	0.0 %
Claren Road Cr Fund	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %
D.E. Shaw Composite Fund	115.1	1.4 %	0.0	0.0 %	0.0	0.0 %	115.1	1.4 %	0.0	0.0 %
Davidson Kempner	89.2	1.1 %	0.0	0.0 %	0.0	0.0 %	89.2	1.1 %	0.0	0.0 %

# Asset Summary

Balance Date: 10/31/2018

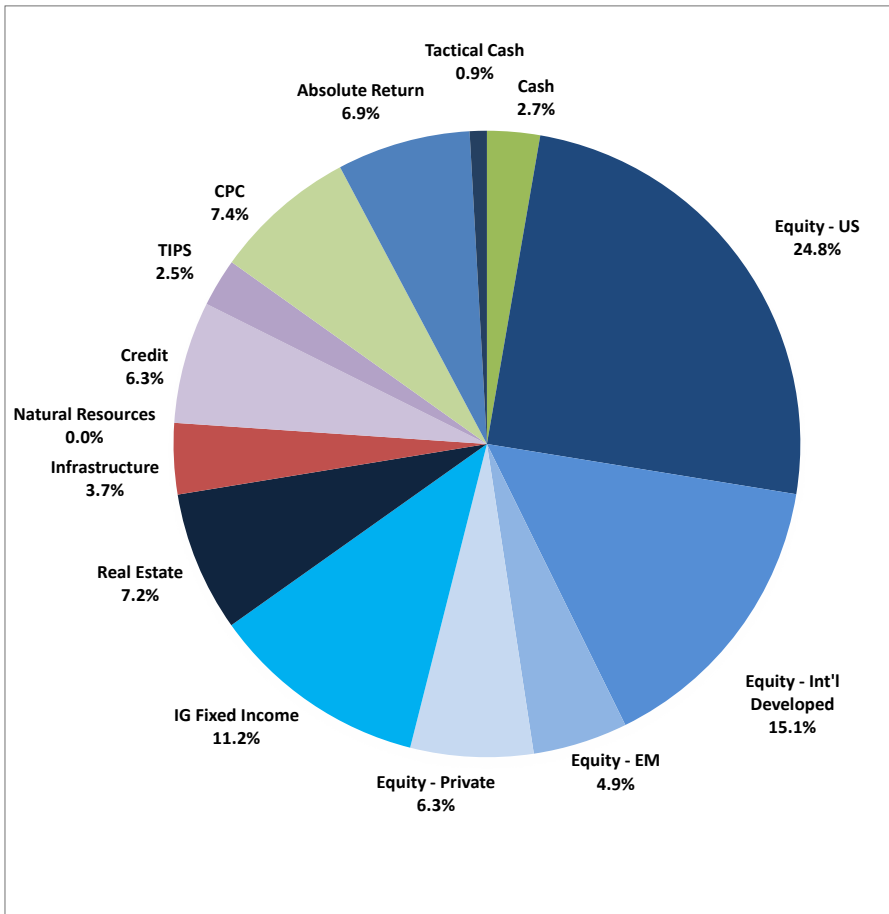


<u>Manager</u>	<u>Total Market Value</u>		<u>Equity Market Value</u>		<u>Fixed Market Value</u>		<u>Other Market Value</u>		<u>Cash Balance</u>	
Elliot Associates, LP	109.1	1.4 %	0.0	0.0 %	0.0	0.0 %	109.1	1.4 %	0.0	0.0 %
Graham Global	60.9	0.8 %	0.0	0.0 %	0.0	0.0 %	60.9	0.8 %	0.0	0.0 %
Indus Asia Pacific Fund	0.3	0.0 %	0.0	0.0 %	0.0	0.0 %	0.3	0.0 %	0.0	0.0 %
Luxor Capital Partners	1.1	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	39.4	0.5 %	0.0	0.0 %	0.0	0.0 %	39.4	0.5 %	0.0	0.0 %
<b>MLP</b>	<b>148.7</b>	<b>1.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>148.7</b>	<b>1.8 %</b>	<b>0.0</b>	<b>0.0 %</b>
Harvest Fund Advisor	148.7	1.8 %	0.0	0.0 %	0.0	0.0 %	148.7	1.8 %	0.0	0.0 %
<b>Opportunistic Credit</b>	<b>37.6</b>	<b>0.5 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>37.6</b>	<b>0.5 %</b>	<b>0.0</b>	<b>0.0 %</b>
Opportunistic Private Credit	37.6	0.5 %	0.0	0.0 %	0.0	0.0 %	37.6	0.5 %	0.0	0.0 %
<b>Private Infrastructure</b>	<b>145.2</b>	<b>1.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>145.2</b>	<b>1.8 %</b>	<b>0.0</b>	<b>0.0 %</b>
Priv Listed Infrastructure	145.2	1.8 %	0.0	0.0 %	0.0	0.0 %	145.2	1.8 %	0.0	0.0 %
<b>Real Estate (Core)</b>	<b>432.2</b>	<b>5.4 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>432.2</b>	<b>5.4 %</b>	<b>0.0</b>	<b>0.0 %</b>
Core Real Estate	432.2	5.4 %	0.0	0.0 %	0.0	0.0 %	432.2	5.4 %	0.0	0.0 %
<b>Real Estate (Non-Core)</b>	<b>148.5</b>	<b>1.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>148.5</b>	<b>1.8 %</b>	<b>0.0</b>	<b>0.0 %</b>
Non-Core Real Estate	148.5	1.8 %	0.0	0.0 %	0.0	0.0 %	148.5	1.8 %	0.0	0.0 %
<b>Systematic Trend-Following</b>	<b>304.3</b>	<b>3.8 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>304.3</b>	<b>3.8 %</b>	<b>0.0</b>	<b>0.0 %</b>
CPC AP LLC	103.4	1.3 %	0.0	0.0 %	0.0	0.0 %	103.4	1.3 %	0.0	0.0 %
CPC CB LLC	99.3	1.2 %	0.0	0.0 %	0.0	0.0 %	99.3	1.2 %	0.0	0.0 %
CPC QIS LLC	101.6	1.3 %	0.0	0.0 %	0.0	0.0 %	101.6	1.3 %	0.0	0.0 %

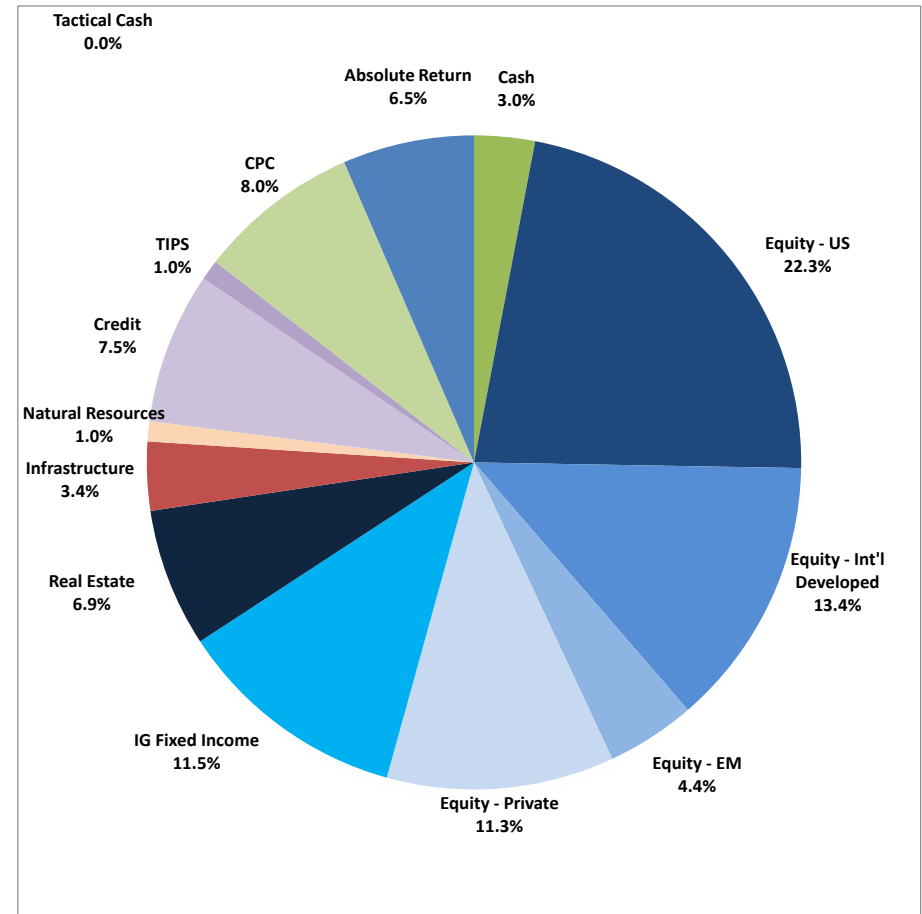
# ERSRI Portfolio

%%% - as of October 31, 2018

## Actual Allocation



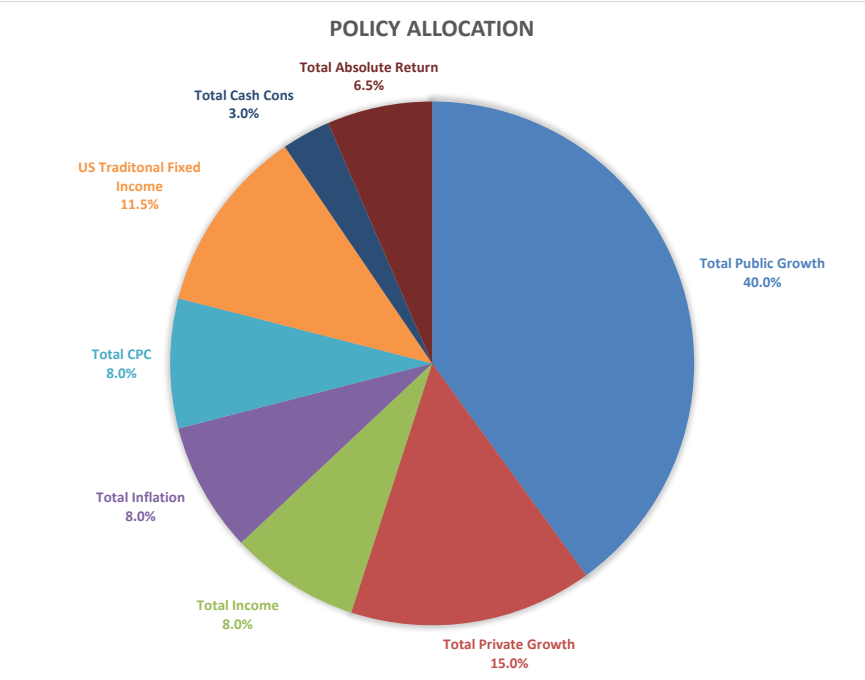
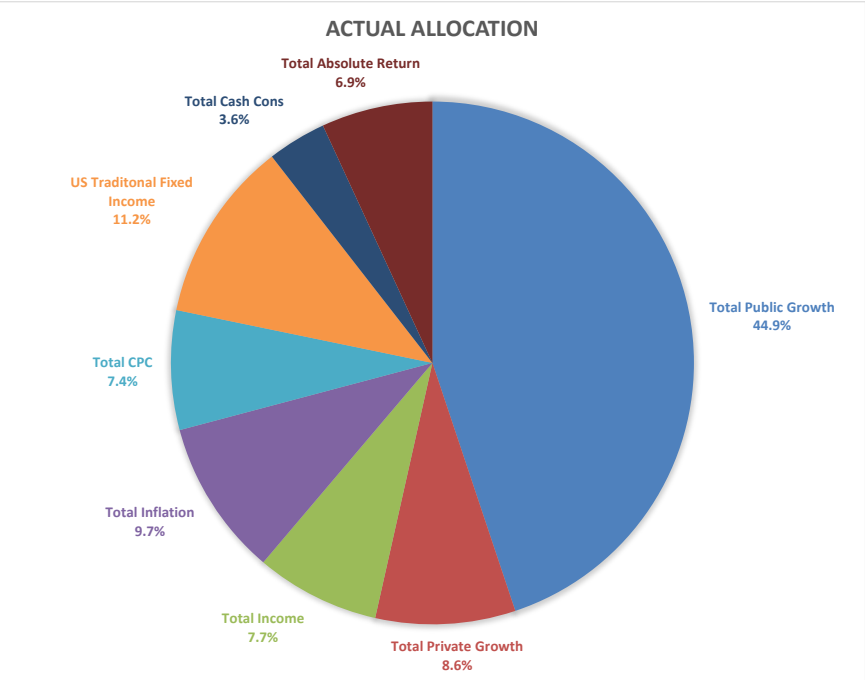
## Policy Allocation





**ERSRI Portfolio**

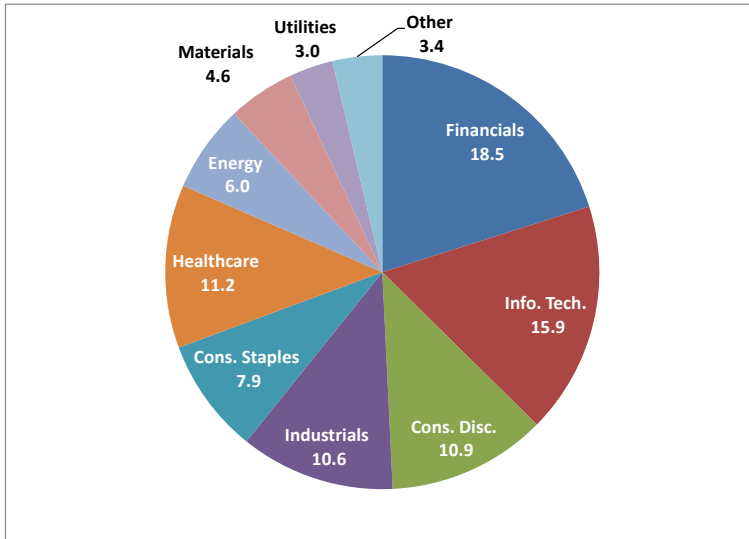
%% - as of October 31, 2018



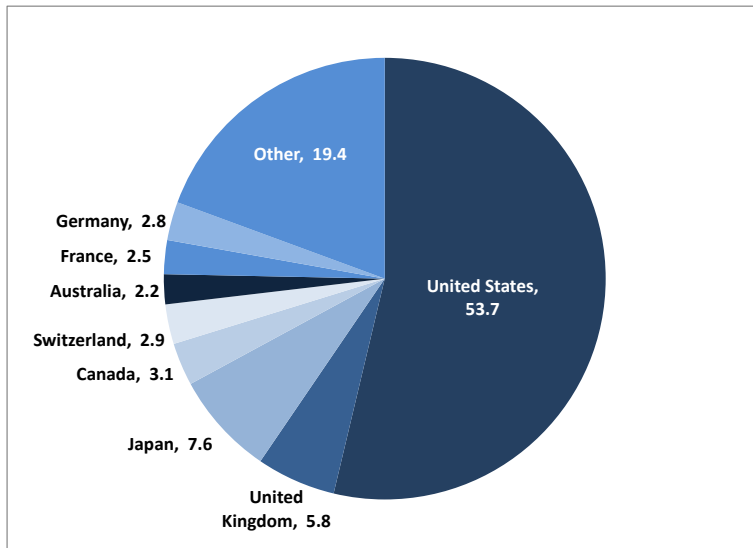
# ERSRI Asset Allocation Public-Asset Portfolios

%% - as of October 31, 2018

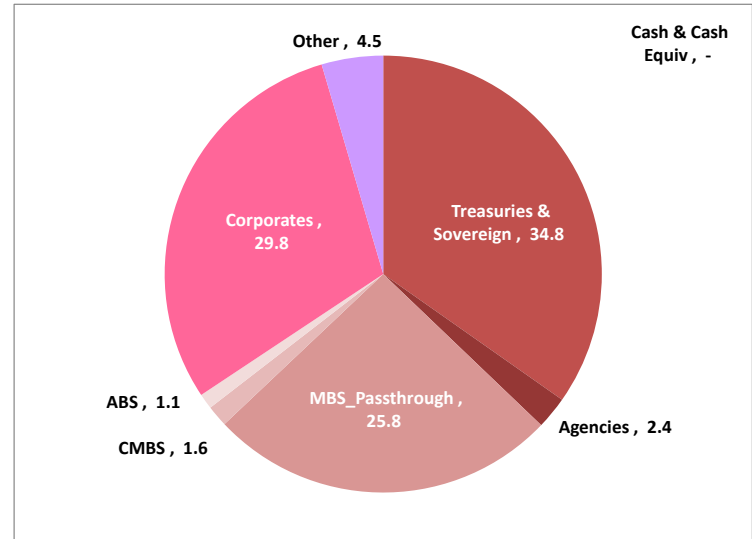
### Global Public Equity - by Industry Sector



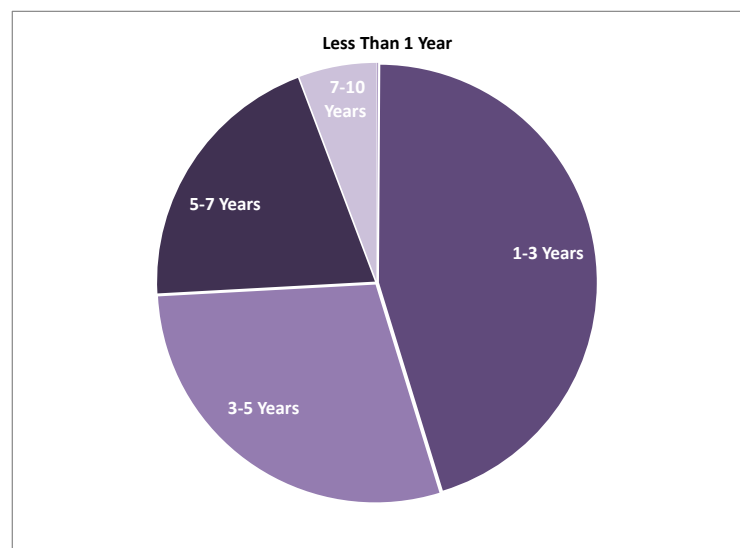
### Global Public Equity - by Geography



### Core Fixed Income - by Type



### Inflation-Linked Bonds - by Duration



ERSRI Asset Allocation Tracking

Functional Bucket	Aggregate Asset Class	Aggregate Allocation Weight	Asset Class	(a) Asset Allocation	(b) Actual exposure as of 10/31/18	(b) - (a)
GROWTH	Global Equity	40.0%	US Equity	22.3%	24.8%	2.5%
			International Developed Equity	13.4%	15.1%	1.7%
			EM Equity	4.4%	4.9%	0.5%
	Private Growth	15.0%	PE	11.25%	6.3%	-4.9%
			Non-core RE	2.25%	1.8%	-0.4%
			Opp Private Credit	1.5%	0.5%	-1.0%
INCOME	Income	8.0%	HY Infra	1.0%	1.8%	0.8%
			REITs	1.0%	0.0%	-1.0%
			Liquid Credit	2.8%	4.4%	1.6%
			Private Credit	3.2%	1.4%	-1.8%
STABILITY	CPC	8.0%	Treasury Duration	4.0%	3.8%	-0.2%
			Systematic Trend	4.0%	3.6%	-0.4%
	Inflation Protection	8.0%	Core RE	3.6%	5.4%	1.8%
			Private Infra	2.4%	1.8%	-0.6%
			TIPS	1.0%	2.5%	1.5%
			Nat' Resources	1.0%	0.0%	-1.0%
	Volatility Protection	21.0%	IG Fixed Income	11.5%	11.2%	-0.3%
			Absolute Return	6.5%	6.9%	0.4%
Cash			3.0%	2.7%	-0.3%	
OTHER	Short-term Tactical	n/a	ST Tactical Cash	0.0%	0.9%	0.9%
		n/a	Russell Overlay	0.0%	0.1%	0.1%
<b>TOTAL</b>	<b>Total</b>	<b>100.0%</b>		<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

## Section V.

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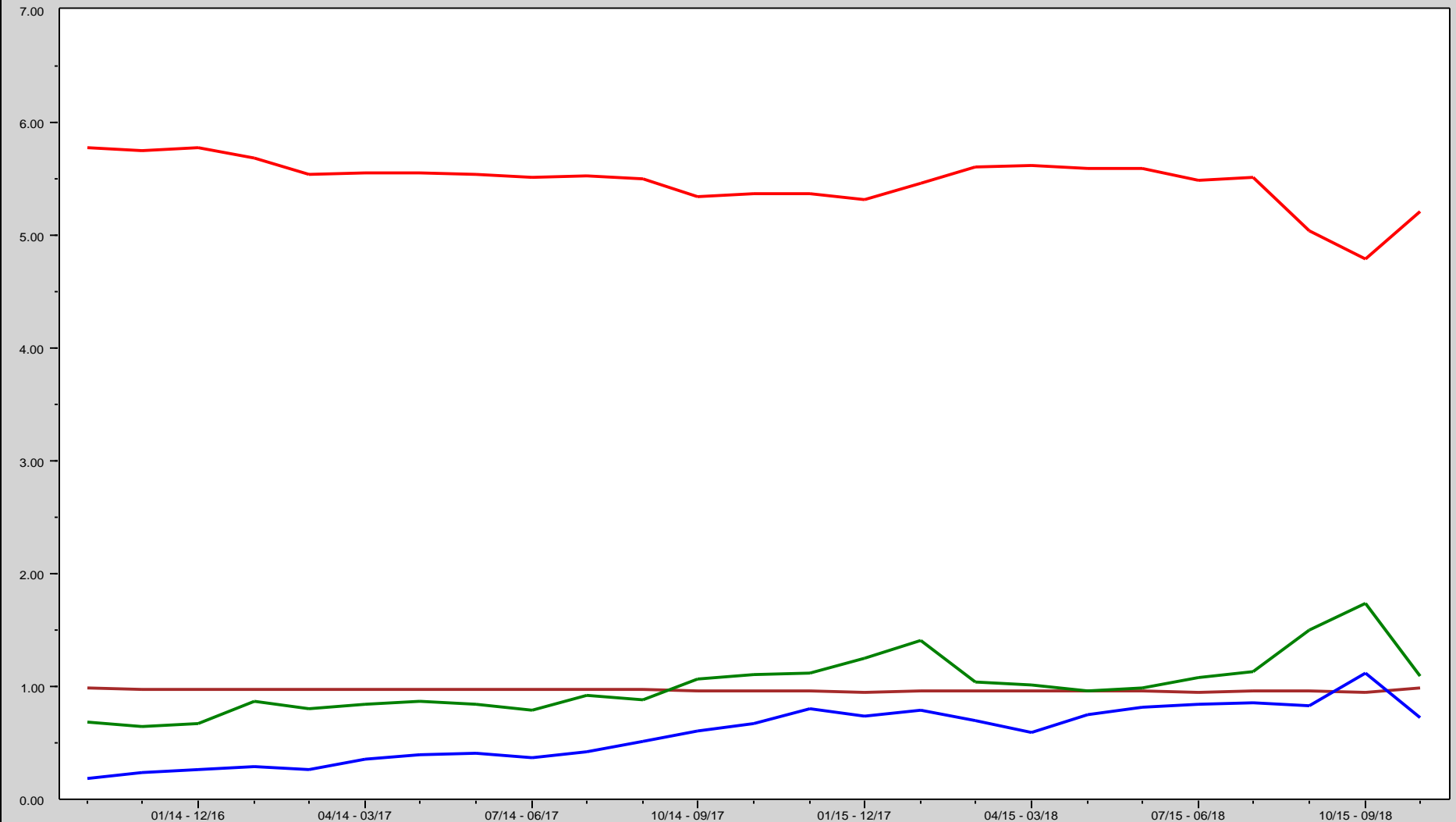
### Risk Overview

# Historical Risk - Three Year Rolling Periods

TOTAL PLAN

5 Years Ending October 31, 2018

Trend



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

Ann Std Dev      Ann Sharpe Ratio      Ann Alpha      Beta

## Risk Exposures

### 3 Years Ending October 31, 2018

	Annualized Return	Ann Std Dev	Beta (ACWI)	Beta (BC AGG)	Beta (GSCI)	Beta (CPI)
US Public Equity	11.32	9.63	0.92	0.06	0.24	0.86
Non-US Public Equity	4.52	11.21	1.10	0.68	0.28	2.43
Equity Hedge Funds	3.92	3.47	0.16	-0.33	0.06	0.48
<b>TOTAL PRIVATE EQUITY</b>	12.89	3.76	0.10	0.32	0.03	0.37
Traditional Fixed Income	1.25	2.65	0.05	0.99	-0.00	0.57
<b>TOTAL REAL ESTATE</b>	9.86	2.17	-0.00	0.15	0.00	0.43
Real Return Hedge Funds	5.94	2.12	0.02	-0.33	0.02	0.44
Inflation-Linked Bonds	1.35	2.32	0.02	0.74	0.01	0.70
Cash	1.30	0.24	0.01	0.01	0.00	0.06
Russell Overlay Fd	0.01	0.06	0.00	0.01	-0.00	0.01
<b>TOTAL PLAN</b>	6.32	5.23	0.54	0.33	0.15	0.98

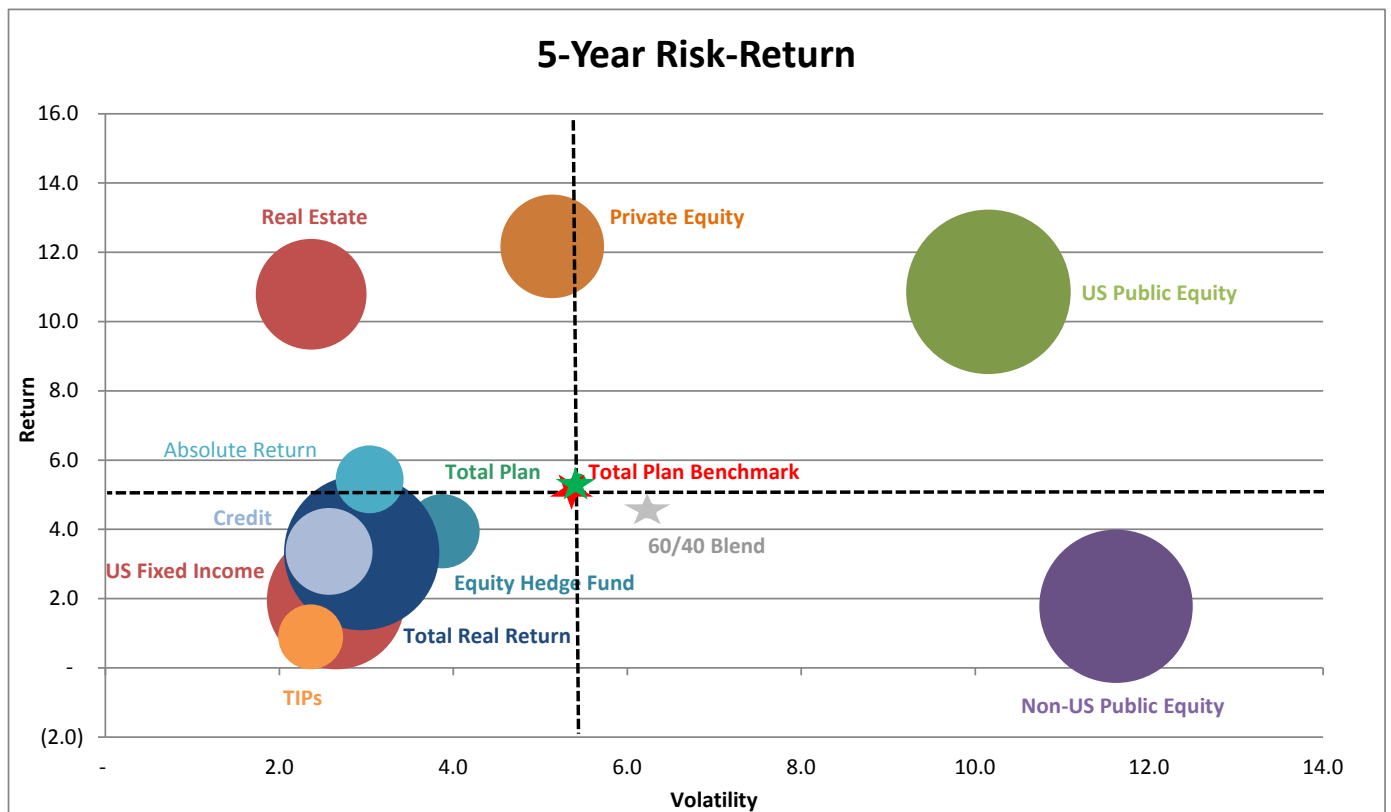
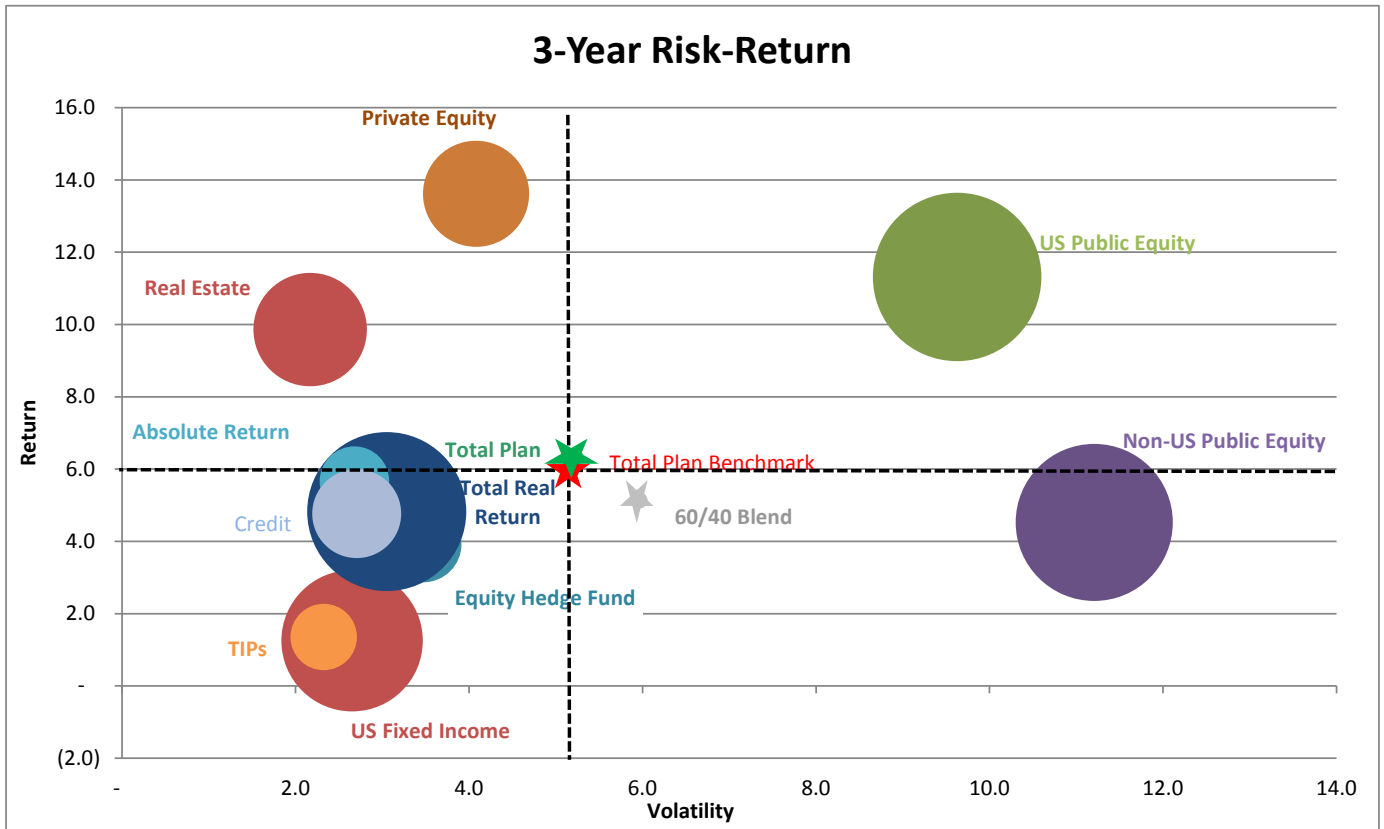
## 5 Years Ending October 31, 2018 Comparison

	TOTAL PLAN	Total Plan Benchmark	60/40 Blend
Ann Return	5.40	5.28	4.54
Ann Ex Ret vs Mkt	0.12		
Ann Tracking Error	0.95		
Ann Std Dev	5.45	5.37	6.25
Beta	1.00		
R-Squared	0.97		
Ann Alpha	0.13		
Ann Sharpe Ratio	0.89	0.88	0.66

# ERSRI Portfolio

% - as of October 31, 2018

Bubble-Size Scaled based on Current Allocations





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

Ann Return

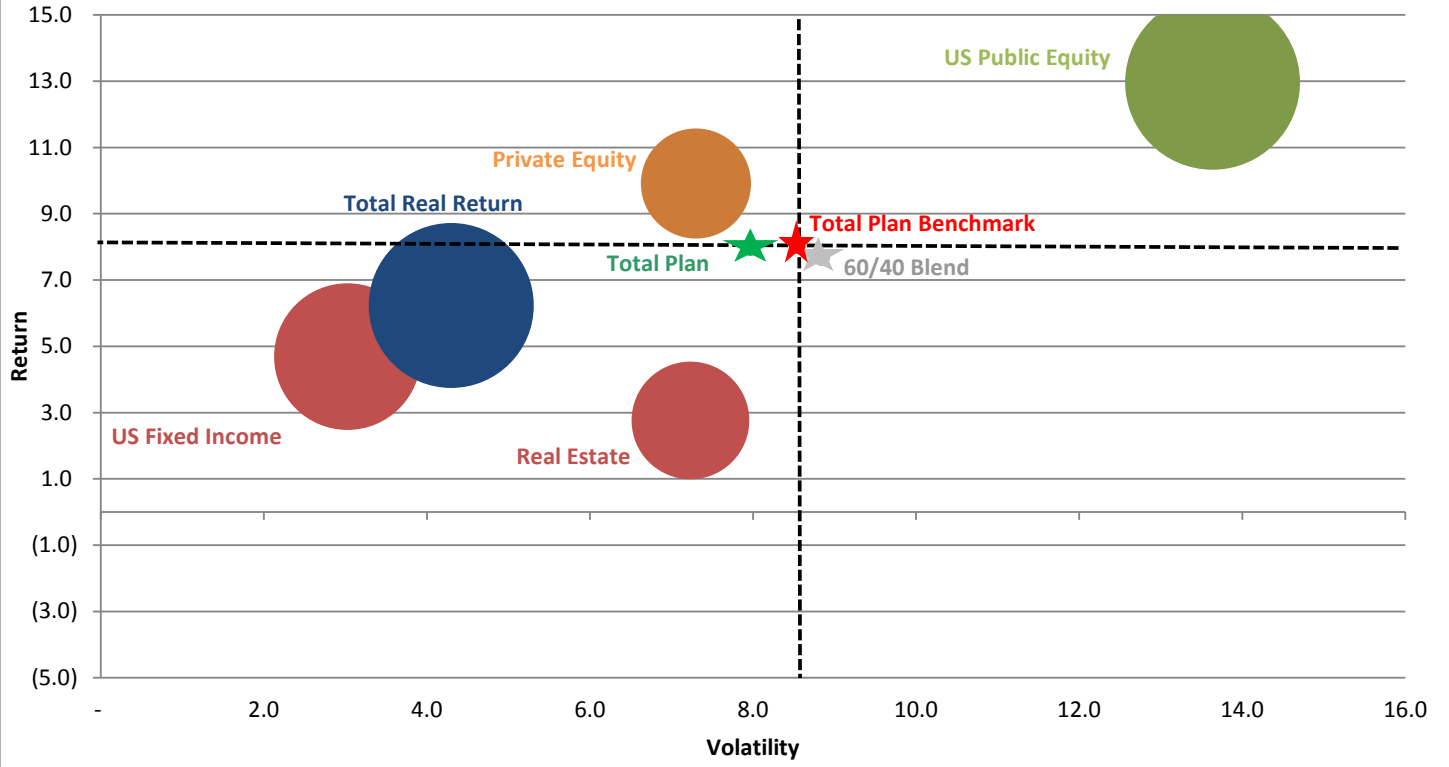
	US Pub EQ	Non-US Pub EQ	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
<b>US Pub E</b>	1.00										
<b>Non-US P</b>	0.75	1.00									
<b>Eq HF</b>	0.41	0.43	1.00								
<b>PE</b>	0.25	0.21	0.10	1.00							
<b>FI</b>	0.09	0.24	-0.21	0.23	1.00						
<b>RE</b>	0.06	-0.08	0.13	0.31	0.15	1.00					
<b>RR HF</b>	0.19	-0.02	0.24	0.05	-0.39	0.13	1.00				
<b>TIPS</b>	0.00	0.15	-0.38	0.19	0.84	0.22	-0.31	1.00			
<b>Cash</b>	0.13	0.15	0.29	0.14	0.09	0.07	0.09	-0.04	1.00		
<b>Overlay</b>	-0.06	-0.17	-0.03	0.14	-0.20	0.16	0.27	-0.15	0.20	1.00	
<b>Total</b>	0.93	0.92	0.44	0.29	0.25	0.03	0.09	0.14	0.20	-0.13	1.00
<b>Tot BM</b>	0.90	0.94	0.41	0.23	0.27	-0.04	0.02	0.16	0.18	-0.15	0.98

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

Ann Return

	US Pub Eq	Non-US Pub Eq	Eq HF	PE	FI	RE	RR HF	TIPS	Cash	Overlay	Total
<b>US Pub E</b>	1.00										
<b>Non-US P</b>	0.78	1.00									
<b>Eq HF</b>	0.52	0.47	1.00								
<b>PE</b>	0.05	0.01	0.09	1.00							
<b>FI</b>	0.03	0.15	-0.15	-0.06	1.00						
<b>RE</b>	0.07	0.06	0.06	-0.06	0.30	1.00					
<b>RR HF</b>	0.28	0.17	0.51	0.01	-0.14	-0.04	1.00				
<b>TIPS</b>	-0.01	0.21	-0.21	-0.04	0.82	0.31	-0.09	1.00			
<b>Cash</b>	0.11	0.06	0.11	0.01	-0.09	-0.16	0.16	-0.19	1.00		
<b>Overlay</b>	-0.33	-0.27	-0.37	-0.05	-0.06	0.11	-0.10	-0.03	0.02	1.00	
<b>Total</b>	0.93	0.93	0.54	0.09	0.16	0.09	0.27	0.17	0.10	-0.33	1.00
<b>Tot BM</b>	0.92	0.95	0.50	0.02	0.17	0.05	0.21	0.17	0.08	-0.32	0.98

# 10-Year Risk-Return



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

**Ann Return**

	<b>US Pub Eq</b>	<b>Non-US Pub Eq</b>	<b>Eq HF</b>	<b>PE</b>	<b>FI</b>	<b>RE</b>	<b>RR HF</b>	<b>TIPS</b>	<b>Cash</b>	<b>Overlay</b>	<b>Total</b>
<b>US Pub E</b>	1.00										
<b>Non-US P</b>	---	---									
<b>Eq HF</b>	---	---	---								
<b>PE</b>	0.10	---	---	1.00							
<b>FI</b>	0.12	---	---	-0.19	1.00						
<b>RE</b>	-0.02	---	---	0.23	-0.24	1.00					
<b>RR HF</b>	---	---	---	---	---	---	---				
<b>TIPS</b>	---	---	---	---	---	---	---	---			
<b>Cash</b>	-0.01	---	---	-0.03	-0.09	0.02	---	---	1.00		
<b>Overlay</b>	0.26	---	---	-0.05	0.18	-0.18	---	---	-0.03	1.00	
<b>Total</b>	0.95	---	---	0.15	0.28	-0.02	---	---	-0.03	0.31	1.00
<b>Tot BM</b>	0.95	---	---	0.07	0.28	-0.04	---	---	-0.04	0.34	0.99

## Section VI.

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### Performance Overview

TOTAL NET OF FEES

10/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	Annualized				ITD	Inception Date
						1 Year	3 Years	5 Years	10 Years		
US Public Equity <i>Russell 3000 Index</i>	1,281,068,783	16	-7.33 -7.36	2.46 2.43	-0.72 -0.76	6.62 6.60	11.32 11.27	10.86 10.81	12.96	8.00 13.13	8/1/2007 10/1/2012
Non-US Public Equity <i>Total International Equity BM</i>	1,113,865,255	14	-8.14 -8.13	-11.26 -10.97	-7.65 -7.49	-8.53 -8.24	4.52 4.37	1.78 1.63		7.38 6.70	5/1/2009 5/1/2009
QVM Tilt <i>MSCI World Net Dividend Index</i>	1,207,586,294	15	-6.82 -7.34	-0.79 -2.31	-1.27 -2.73	2.65 1.16	8.94 7.91			11.35 10.39	10/1/2015 10/1/2015
<b>Total Public Growth</b> <i>MSCI All Country World Net Index</i>	<b>3,602,520,332</b>	<b>45</b>	<b>-7.42</b> <b>-7.49</b>	<b>-3.44</b> <b>-3.96</b>	<b>-3.24</b> <b>-3.54</b>	<b>0.09</b> <b>-0.52</b>	<b>8.27</b> <b>7.74</b>	<b>6.50</b> <b>6.15</b>	<b>10.27</b> <b>9.75</b>	<b>4.55</b>	<b>7/1/2000</b> <b>7/1/2000</b>
Private Equity <i>ILPA All Fds BM 1Q Lag 2</i>	508,286,679	6	0.08 0.08	12.92 12.56	5.17 4.39	16.36 17.10	13.62 11.47	12.17 12.97	9.91 14.91	9.60	2/1/1989 2/1/1989
Non Core Real Estate	148,474,215	2	0.00	22.11	4.06	23.84				23.25	7/1/2017
Opportunistic Private Credit <i>ILPA Distressed BM 1Q Lag</i>	37,608,563	0	5.17 5.17	11.79 12.00	4.52 7.82	18.23 14.66				17.82 13.86	7/1/2017 7/1/2017
<b>Total Private Growth</b> <i>Private Growth Benchmark</i>	<b>694,369,457</b>	<b>9</b>	<b>0.32</b> <b>0.61</b>	<b>14.81</b> <b>11.72</b>	<b>4.92</b> <b>4.45</b>	<b>17.97</b> <b>15.66</b>				<b>18.73</b>	<b>7/1/2017</b> <b>7/1/2017</b>
<b>TOTAL GROWTH COMPOSITE</b> <i>Total Growth Composite BM</i>	<b>4,296,889,789</b>	<b>53</b>	<b>-6.25</b> <b>-5.29</b>	<b>-0.83</b> <b>0.27</b>	<b>-2.02</b> <b>-1.33</b>	<b>2.64</b> <b>3.86</b>				<b>7.73</b>	<b>7/1/2017</b> <b>7/1/2017</b>
Harvest Fund Advisor <i>Alerian MLP Index</i>	148,724,829	2	-9.32 -7.99	-1.29 -2.57	-3.86 -1.95	2.93 0.68	-0.42 -1.52			-6.33 -8.00	1/1/2015 1/1/2015
Liquid Credit <i>Liquid Credit BM (50% BoA US HY/50% CS LL)</i>	357,040,485	4	-0.13 -0.82	3.70 2.59	1.51 1.35	3.96 2.86	4.77 4.99	3.36 4.03		3.36 4.07	5/1/2013 5/1/2013
Private Credit <i>S&amp;P LSTA Lev Loans + 3%</i>	110,876,312	1	0.00 -0.66	3.55 4.80	1.79 0.53	4.12 7.42				5.34	7/1/2017 7/1/2017
<b>TOTAL INCOME COMPOSITE</b> <i>Income Aggregate BM</i>	<b>616,641,626</b>	<b>8</b>	<b>-2.48</b> <b>-2.10</b>	<b>2.39</b> <b>2.89</b>	<b>0.23</b> <b>0.66</b>	<b>3.70</b> <b>4.62</b>				<b>2.63</b> <b>3.64</b>	<b>7/1/2017</b> <b>7/1/2017</b>
CPC Long Duration <i>Barclays US Treasury LT Index</i>	306,232,931	4	-2.98 -3.05	-8.79 -8.66	-5.85 -5.84	-6.92 -6.43				-5.34 -4.96	6/1/2017 6/1/2017
CPC Trend Following <i>Credit Suisse Liquid Alt Beta</i>	286,424,774	4	-5.86 -2.82	-15.97 -17.29	-5.16 -2.86	-11.85 -14.25				-4.55 -7.90	6/1/2017 6/1/2017
<b>Total Crisis Protection</b> <i>50/50 CPC Custom BM</i>	<b>592,657,705</b>	<b>7</b>	<b>-4.39</b> <b>-2.93</b>	<b>-11.90</b> <b>-12.61</b>	<b>-5.52</b> <b>-4.36</b>	<b>-8.83</b> <b>-9.93</b>				<b>-4.49</b> <b>-6.04</b>	<b>6/1/2017</b> <b>6/1/2017</b>



Total Performance Summary

Report ID: IPM0005

Reporting Currency: USD

TOTAL NET OF FEES

10/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	Annualized				ITD	Inception Date
						1 Year	3 Years	5 Years	10 Years		
Priv Listed Infrastructure <i>CPI + 4% 1 Mo Lag</i>	145,231,219	2	0.01 0.45	12.34 5.65	3.27 1.67	12.26 6.28	12.14			9.24	3/1/2015 3/1/2015
Core Real Estate <i>NFI-ODCE BM 2</i>	432,215,966	5	0.00 0.00	5.30 5.73	0.95 1.81	5.93 7.47				6.40 6.71	7/1/2017 7/1/2017
Inflation-Linked Bonds <i>Total Inflation Linked Custom</i>	199,012,859	2	-0.73 -0.78	-0.91 -0.98	-1.18 -1.19	-0.48 -0.61	1.35 1.38	0.90 1.03		3.28 3.28	11/1/2009 11/1/2009
<b>Total Inflation Protection</b> <i>Inflation Protection Custom BM</i>	<b>776,460,044</b>	<b>10</b>	<b>-0.19</b> <b>-0.25</b>	<b>4.87</b> <b>3.62</b>	<b>0.83</b> <b>0.65</b>	<b>5.33</b> <b>4.99</b>				<b>5.81</b> <b>5.08</b>	<b>7/1/2017</b> <b>7/1/2017</b>
Absolute Return <i>HFRI Fund of Funds Composite Index</i>	552,190,013	7	0.10 -3.04	5.34 -2.13	1.78 -2.84	5.95 -1.25				6.90 1.64	7/1/2017 7/1/2017
Traditional Fixed Income <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	902,137,899	11	-0.87 -0.79	-2.52 -2.38	-0.78 -0.77	-2.14 -2.05	1.25 1.04	1.95 1.83	4.69	4.79 1.34	7/1/2000 11/1/2012
Total Cash and Other Funds	302,494,525	4	0.94	2.90	0.95	2.95	1.59	1.06		1.67	11/1/2012
Russell Overlay Fd	10,110,289	0	0.03	0.05	0.01	0.04	0.01	-0.01	0.02	-0.05	9/1/2008
<b>Total Volatility Protection</b> <i>Total Volatility Protection BM</i>	<b>1,756,822,437</b>	<b>22</b>	<b>-0.28</b> <b>-1.35</b>	<b>0.80</b> <b>-1.74</b>	<b>0.29</b> <b>-1.20</b>	<b>1.18</b> <b>-1.26</b>				<b>1.97</b> <b>7/1/2017</b>	<b>7/1/2017</b>
<b>TOTAL STABILITY COMPOSITE</b> <i>Total Stability Composite BM</i>	<b>3,125,940,186</b>	<b>39</b>	<b>-1.06</b> <b>-1.45</b>	<b>-0.92</b> <b>-2.99</b>	<b>-0.74</b> <b>-1.49</b>	<b>-0.05</b> <b>-1.81</b>				<b>1.32</b> <b>7/1/2017</b>	<b>7/1/2017</b>
<b>TOTAL PLAN</b> <i>Total Plan Benchmark</i> <i>60/40 Blend</i>	<b>8,039,806,059</b>	<b>100</b>	<b>-4.03</b> -3.61 -4.81	<b>-0.63</b> -0.69 -3.18	<b>-1.35</b> -1.19 -2.37	<b>1.69</b> 1.84 -0.98	<b>6.32</b> 5.94 5.14	<b>5.40</b> 5.27 4.54	<b>7.96</b> 8.03 7.67	<b>4.89</b>	<b>7/1/2000</b> 7/1/2000 7/1/2000
<b>Total Plan ex PE,RE &amp; Priv Inf</b> <i>Total Plan BM ex PE RE</i>	<b>6,657,113,106</b>	<b>83</b>	<b>-4.86</b> -4.79	<b>-2.70</b> -2.62	<b>-2.25</b> -2.46	<b>-0.31</b> -0.44	<b>5.40</b> 5.10	<b>4.49</b> 4.28	<b>7.97</b> 7.64	<b>6.13</b>	<b>4/1/1996</b> 4/1/1996

END NOTES

10/31/2018

1 RI6G23000000 TOTAL PLAN

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

GROWTH

Total Public Growth

40% MSCI ACWI Net

Total Private Growth

11% ILPA All Funds Index

2.5% ODCE + 2.5%

1.5% ILPA/Cambridge Distressed Securities Index

INCOME

1.5% Alerian MLP Total Return

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

3% S&P LSTA Lev Loans + 3%

STABILITY

Crisis Protection Class

4% CS Managed Futures 18% Vol Index

4% Barclays Long Duration US Treasury Index

Inflation Protection

2% CPI + 4%

4% NFI-ODCE Index

1% Barclays 1-10 Year TIPs Index

1% BB Commodity Index

Volatility Protection

11.5% Barclays Agg

6.5% HFRI FOF Composite

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

TOTAL NET OF FEES

10/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	Cumulative		YTD	2017	2016	2015	Inception Date
				9/1/2018 - 9/30/2018	8/1/2018 - 8/31/2018					
US Public Equity <i>Russell 3000 Index</i>	1,281,068,783	16	-7.33 -7.36	0.17 0.17	3.50 3.51	2.46 2.43	21.14 21.13	12.84 12.74	0.60 0.48	8/1/2007 8/1/2007
Non-US Public Equity <i>Total International Equity BM</i>	1,113,865,255	14	-8.14 -8.13	0.37 0.46	-2.15 -2.09	-11.26 -10.97	27.76 27.19	5.01 4.50	-5.77 -5.66	5/1/2009 5/1/2009
QVM Tilt <i>MSCI World Net Dividend Index</i>	1,207,586,294	15	-6.82 -7.34	0.62 0.56	1.76 1.24	-0.79 -2.31	23.36 22.40	7.58 7.51		10/1/2015 10/1/2015
<b>Total Public Growth</b> <i>MSCI All Country World Net Index</i>	<b>3,602,520,332</b>	<b>45</b>	<b>-7.42</b> <b>-7.49</b>	<b>0.38</b> <b>0.44</b>	<b>1.04</b> <b>0.79</b>	<b>-3.44</b> <b>-3.96</b>	<b>24.11</b> <b>23.97</b>	<b>8.78</b> <b>7.86</b>	<b>-2.48</b> <b>-2.36</b>	<b>7/1/2000</b> <b>7/1/2000</b>
Private Equity <i>ILPA All Fds BM 1Q Lag 2</i>	508,286,679	6	0.08 0.08	2.39 4.31	2.06 0.00	12.92 12.56	19.69 15.69	9.19 7.99	7.08 7.22	2/1/1989 2/1/1989
Non Core Real Estate	148,474,215	2	0.00	4.06	0.00	22.11				7/1/2017
Opportunistic Private Credit <i>ILPA Distressed BM 1Q Lag</i>	37,608,563	0	5.17 5.17	-0.31 2.52	0.00 0.00	11.79 12.00				7/1/2017 7/1/2017
<b>Total Private Growth</b> <i>Private Growth Benchmark</i>	<b>694,369,457</b>	<b>9</b>	<b>0.32</b> <b>0.61</b>	<b>2.61</b> <b>3.75</b>	<b>1.51</b> <b>0.03</b>	<b>14.81</b> <b>11.72</b>				<b>7/1/2017</b> <b>7/1/2017</b>
<b>TOTAL GROWTH COMPOSITE</b> <i>Total Growth Composite BM</i>	<b>4,296,889,789</b>	<b>53</b>	<b>-6.25</b> <b>-5.29</b>	<b>0.71</b> <b>1.34</b>	<b>1.11</b> <b>0.58</b>	<b>-0.83</b> <b>0.27</b>				<b>7/1/2017</b> <b>7/1/2017</b>
Harvest Fund Advisor <i>Alerian MLP Index</i>	148,724,829	2	-9.32 -7.99	-1.76 -1.57	1.23 1.58	-1.29 -2.57	-5.26 -6.52	20.64 18.31	-31.01 -32.59	1/1/2015 1/1/2015
Liquid Credit <i>Liquid Credit BM (50% BoA US HY/50% CS LL)</i>	357,040,485	4	-0.13 -0.82	0.67 0.63	0.27 0.57	3.70 2.59	3.54 4.60	9.59 9.63	-1.29 0.49	5/1/2013 5/1/2013
Private Credit <i>S&amp;P LSTA Lev Loans + 3%</i>	110,876,312	1	0.00 -0.66	0.33 -8.21	1.45 9.53	3.55 4.80				7/1/2017 7/1/2017
<b>TOTAL INCOME COMPOSITE</b> <i>Income Aggregate BM</i>	<b>616,641,626</b>	<b>8</b>	<b>-2.48</b> <b>-2.10</b>	<b>-0.03</b> <b>-3.10</b>	<b>0.72</b> <b>4.12</b>	<b>2.39</b> <b>2.89</b>				<b>7/1/2017</b> <b>7/1/2017</b>
CPC Long Duration <i>Barclays US Treasury LT Index</i>	306,232,931	4	-2.98 -3.05	-2.99 -2.96	1.60 1.58	-8.79 -8.66				6/1/2017 6/1/2017
CPC Trend Following <i>Credit Suisse Liquid Alt Beta</i>	286,424,774	4	-5.86 -2.82	-0.77 -1.02	2.60 2.31	-15.97 -17.29				6/1/2017 6/1/2017
<b>Total Crisis Protection</b> <i>50/50 CPC Custom BM</i>	<b>592,657,705</b>	<b>7</b>	<b>-4.39</b> <b>-2.93</b>	<b>-1.92</b> <b>-1.99</b>	<b>2.08</b> <b>1.95</b>	<b>-11.90</b> <b>-12.61</b>				<b>6/1/2017</b> <b>6/1/2017</b>



TOTAL NET OF FEES

10/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	Cumulative		YTD	2017	2016	2015	Inception Date
				9/1/2018 - 9/30/2018	8/1/2018 - 8/31/2018					
Priv Listed Infrastructure <i>CPI + 4% 1 Mo Lag</i>	145,231,219	2	0.01 0.45	1.05 0.39	1.84 0.33	12.34 5.65	12.45	13.35		3/1/2015 3/1/2015
Core Real Estate <i>NFI-ODCE BM 2</i>	432,215,966	5	0.00 0.00	0.61 1.81	0.34 0.00	5.30 5.73				7/1/2017 7/1/2017
Inflation-Linked Bonds <i>Total Inflation Linked Custom</i>	199,012,859	2	-0.73 -0.78	-0.67 -0.70	0.62 0.67	-0.91 -0.98	1.73 1.90	3.91 4.01	-0.26 -0.15	11/1/2009 11/1/2009
<b>Total Inflation Protection</b> <i>Inflation Protection Custom BM</i>	<b>776,460,044</b>	<b>10</b>	<b>-0.19</b> <b>-0.25</b>	<b>0.36</b> <b>1.15</b>	<b>0.69</b> <b>-0.05</b>	<b>4.87</b> <b>3.62</b>				<b>7/1/2017</b> <b>7/1/2017</b>
Absolute Return <i>HFRF Fund of Funds Composite Index</i>	552,190,013	7	0.10 -3.04	0.99 -0.24	0.46 0.23	5.34 -2.13				7/1/2017 7/1/2017
Traditional Fixed Income <i>Bloomberg Barclays U.S. Aggregate Bond Index</i>	902,137,899	11	-0.87 -0.79	-0.58 -0.64	0.61 0.64	-2.52 -2.38	3.99 3.54	3.15 2.65	0.25 0.55	7/1/2000 7/1/2000
Total Cash and Other Funds	302,494,525	4	0.94	-0.31	0.36	2.90	-1.64	3.33	0.03	11/1/2012
Russell Overlay Fd	10,110,289	0	0.03	-0.01	0.00	0.05	-0.09	0.06	0.00	9/1/2008
<b>Total Volatility Protection</b> <i>Total Volatility Protection BM</i>	<b>1,756,822,437</b>	<b>22</b>	<b>-0.28</b> <b>-1.35</b>	<b>-0.04</b> <b>-0.41</b>	<b>0.52</b> <b>0.45</b>	<b>0.80</b> <b>-1.74</b>				<b>7/1/2017</b> <b>7/1/2017</b>
<b>TOTAL STABILITY COMPOSITE</b> <i>Total Stability Composite BM</i>	<b>3,125,940,186</b>	<b>39</b>	<b>-1.06</b> <b>-1.45</b>	<b>-0.32</b> <b>-0.41</b>	<b>0.87</b> <b>0.67</b>	<b>-0.92</b> <b>-2.99</b>				<b>7/1/2017</b> <b>7/1/2017</b>
<b>TOTAL PLAN</b> <i>Total Plan Benchmark</i> <i>60/40 Blend</i>	<b>8,039,806,059</b>	<b>100</b>	<b>-4.03</b> -3.61 -4.81	<b>0.27</b> 0.34 0.00	<b>0.99</b> 0.90 0.73	<b>-0.63</b> -0.69 -3.18	<b>14.48</b> 14.30 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
<b>Total Plan ex PE,RE &amp; Priv Inf</b> <i>Total Plan BM ex PE RE</i>	<b>6,657,113,106</b>	<b>83</b>	<b>-4.86</b> -4.79	<b>0.01</b> 0.02	<b>0.96</b> 0.66	<b>-2.70</b> -2.62	<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

**END NOTES**

10/31/2018

1 RI6G23000000 TOTAL PLAN

Month - Current Month

Cumulative Months - Prior Month and Second Prior Month

Monthly Reporting for Private Equity and Real Estate skew performance on an actual and benchmark basis due to nature of valuations

2014, 2013, 2012 - Calendar Years

RI6G23000000 TOTAL PLAN

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

**GROWTH**

Total Public Growth

40% MSCI ACWI Net

Total Private Growth

11% ILPA All Funds Index

2.5% ODCE + 2.5%

1.5% ILPA/Cambridge Distressed Securities Index

**INCOME**

1.5% Alerian MLP Total Return

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

3% S&amp;P LSTA Lev Loans + 3%

**STABILITY**

Crisis Protection Class

4% CS Managed Futures 18% Vol Index

4% Barclays Long Duration US Treasury Index

Inflation Protection

2% CPI + 4%

4% NFI-ODCE Index

1% Barclays 1-10 Year TIPs Index

1% BB Commodity Index

Volatility Protection

11.5% Barclays Agg

6.5% HFRI FOF Composite

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

## Section VII.

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### Crisis Protection Class

CPC Returns				
CPC Program, October 31, 2018, %				
Account Name	MTD Return	Annualized Return (Since Inception)	Annualized Std. Dev (October '18)	Annualized Std. Dev (Since Inception)
Total CPC Program	-4.39	-4.49	6.44	8.47
CPC Trend	-5.86	-4.55	17.80	15.78
CPC Long Duration	-2.98	-5.34	10.31	9.00

Portfolio Beta						
CPC Program, 10/31/2018, USD, Monte Carlo 1 Day - .94 Decay						
Account Name	Market Monitor:		Market Monitor:		Market Monitor:	
	Barclays Long term bond Index Beta	Dollar Index Beta	Market Monitor: Gold Beta	GSCI Non-Energy Beta	IBOXHY  Beta	S&P 500 INDEX Beta
Total CPC Program	-0.57	0.99	0.07	-0.38	-1.32	-0.26
CPC Trend	-2.16	2.34	0.08	-0.57	-2.91	-0.62
CPC Long Duration	0.92	-0.28	0.07	-0.20	0.16	0.07

Portfolio Beta						
CPC Program, 10/31/2018, USD, Monte Carlo 1 Day - .94 Decay						
Account Name	Market Monitor:		Market Monitor:		Market Monitor:	
	SG Trend Index Beta	US 10YR NOTE (CBT) Beta	WTI Crude Oil Beta	90 Day T-Bill Beta	Bench Global Equity D Beta	Russell 3000 Index Beta
Total CPC Program	-2.60	1.28	-0.13	-69.57	-0.29	-0.27
CPC Trend	-11.59	0.54	-0.22	-59.44	-0.66	-0.60
CPC Long Duration	5.82	1.97	-0.05	-79.05	0.06	0.05

Return Correlation (Since Inception)			
	Total CPC Program	CPC Trend	CPC Long Duration
Total CPC Program	1.00	0.85	0.42
CPC Trend	0.85	1.00	-0.13
CPC Long Duration	0.42	-0.13	1.00

Return Correlation (OCT'18)			
	Total CPC Program	CPC Trend	CPC Long Duration
Total CPC Program	1.00	0.81	-0.13
CPC Trend	0.81	1.00	-0.69
CPC Long Duration	-0.13	-0.69	1.00

## Section VIII.

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### Absolute Returns

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

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

Fund	Market Value	Actual %	Returns								Std Dev	Sharpe Ratio	Incep Date
			Oct	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep			
<b>Absolute Return Portfolio</b>													
Capula Global Relative Value Fund Ltd.	73,617,426	13.4%			4.39%	2.02%	4.21%	5.80%	6.54%	5.75%	1.80%	2.66	Dec-11
Davidson Kempner Institutional Partners, L.P.	88,496,847	16.1%	-0.82%	-0.82%	2.96%	0.79%	3.09%	5.43%	4.61%	5.71%	1.99%	2.39	Nov-11
DE Shaw Composite Fund LLC	117,078,085	21.3%			11.04%	5.35%	9.87%	10.33%	12.22%	12.92%	4.01%	2.86	Nov-11
Elliott Associates, L.P.	108,357,894	19.7%	-0.10%	-0.10%	3.20%	-1.10%	5.01%	8.42%	7.96%	8.81%	3.55%	2.17	Nov-11
Graham Absolute Return Trading Ltd.	61,472,410	11.2%	1.00%	1.00%	6.47%	0.45%	5.67%	3.93%	3.16%	3.04%	5.54%	0.43	Jan-12
Viking Global Equities, LP	61,437,253	11.2%	-2.90%	-2.90%	4.02%	-0.76%	2.57%	4.88%	7.78%	9.81%	7.04%	1.26	Dec-11
Winton Fund Limited	38,431,601	7.0%	-2.54%	-2.54%	-0.40%	-1.74%	2.67%	1.85%	4.21%	3.65%	8.48%	0.38	Dec-11
<b>Absolute Return Portfolio - Total</b>	<b>548,891,516</b>	<b>99.7%</b>	<b>-0.13%</b>	<b>-0.13%</b>	<b>5.02%</b>	<b>1.11%</b>	<b>5.21%</b>	<b>5.17%</b>	<b>5.03%</b>	<b>5.99%</b>	<b>3.07%</b>	<b>1.66</b>	<b>Nov-11</b>
HFRI Fund of Funds Composite Index			-2.68%	-2.68%	-1.78%	-2.49%	-0.89%	2.05%	2.35%	3.04%	3.46%	0.66	Nov-11
MSCI AC World Index Free - Net			-7.49%	-7.49%	-3.96%	-3.54%	-0.52%	7.74%	6.15%	8.79%	10.79%	0.77	Nov-11
ML 3-month T-Bills			0.17%	0.17%	1.48%	0.66%	1.67%	0.90%	0.55%	0.42%	0.17%	-	Nov-11
25% MSCI ACWI/75% Barclays Aggregate			-2.47%	-2.47%	-2.66%	-1.42%	-1.55%	2.78%	3.01%	3.70%	3.44%	0.85	Nov-11
<b>Liquidating Portfolio</b>													
Indus Asia Pacific Distribution Holding Company II, 06.30.14 Series (liquidating trust)	319,828	0.1%	0.00%	0.00%	-13.14%	-6.40%	5.36%	-13.28%	-16.64%	-11.26%	18.62%	-0.58	Jan-12
Luxor Capital Partners, LP - Liquidating SPV	1,104,693	0.2%	-1.11%	-1.11%	-3.21%	-2.46%	-10.31%	-	-	10.45%	16.92%	0.58	Jul-16
<b>Liquidating/Redeeming - Total</b>	<b>1,424,521</b>	<b>0.3%</b>	<b>-0.86%</b>	<b>-0.86%</b>	<b>1.30%</b>	<b>-1.48%</b>	<b>-0.13%</b>	<b>0.02%</b>	<b>-1.24%</b>	<b>0.23%</b>	<b>5.09%</b>	<b>-0.08</b>	<b>Nov-11</b>
<b>Total Absolute Return Portfolio</b>	<b>550,316,037</b>	<b>100.0%</b>	<b>-0.14%</b>	<b>-0.14%</b>	<b>4.90%</b>	<b>1.10%</b>	<b>5.01%</b>	<b>4.70%</b>	<b>4.33%</b>	<b>5.32%</b>	<b>2.91%</b>	<b>1.54</b>	<b>Nov-11</b>
HFRI Fund of Funds Composite Index			-2.68%	-2.68%	-1.78%	-2.49%	-0.89%	2.05%	2.35%	3.04%	3.46%	-	Nov-11
<b>Market Indices</b>													
Libor3Month			0.21%	0.21%	1.89%	0.80%	2.16%	1.34%	0.91%	0.75%	0.19%	-	Nov-11
Bloomberg Barclays US Aggregate Bond Index			-0.79%	-0.79%	-2.38%	-0.77%	-2.06%	1.05%	1.84%	1.90%	2.72%	0.42	Nov-11
Bloomberg Barclays US High Yield Bond Index			-1.60%	-1.60%	0.93%	0.77%	0.97%	6.60%	4.69%	6.51%	5.03%	1.13	Nov-11
S&P 500 TR			-6.83%	-6.83%	3.01%	0.35%	7.35%	11.52%	11.34%	14.03%	9.94%	1.30	Nov-11
MSCI EAFE - Net			-7.96%	-7.96%	-9.28%	-6.71%	-6.85%	3.62%	2.02%	5.63%	12.69%	0.44	Nov-11
MSCI EMF (Emerging Markets Free) - Net			-8.71%	-8.71%	-15.72%	-9.71%	-12.52%	6.52%	0.78%	1.85%	15.52%	0.15	Nov-11

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

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

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

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

Absolute Return Portfolio  
Fund Level Performance Report  
Estimated as of October 31, 2018

Fund	Trailing Returns					Calendar Year Returns					5 Yr Std Dev	Sharpe Ratio			Start Date			
	QTD	YTD	Oct	Sep	Aug	1 Year	3 Year	5 Year	2017	2016		2015	2014	2013		3 yr	5 yr	Incep.
<b>Absolute Return</b>																		
Capula Global Relative Value Fund Ltd.		4.40%				4.20%	5.82%	6.55%	3.79%	8.37%	7.54%	8.14%	7.60%	1.56%	2.69	3.37	1.83	Oct-05
Davidson Kempner Institutional Partners, L.P.	-0.82%	2.75%	-0.82%	0.71%	0.49%	2.80%	5.15%	4.43%	6.11%	6.71%	1.51%	4.45%	9.52%	2.00%	2.06	1.71	1.56	Mar-96
DE Shaw Composite Fund LLC		10.39%				9.29%	9.82%	11.54%	10.41%	6.12%	13.68%	15.57%	11.51%	3.85%	2.51	2.62	1.62	Mar-01
Elliott Associates, L.P.	-0.10%	3.01%	-0.10%	-0.30%	0.00%	4.76%	8.08%	7.55%	8.80%	12.98%	2.51%	8.24%	12.44%	3.51%	1.67	1.83	1.90	Jan-90
Graham Absolute Return Trading Ltd.	1.00%	6.38%	1.00%	0.59%	0.42%	5.61%	3.86%	5.42%	-7.01%	11.78%	1.50%	10.42%	10.50%	7.84%	0.40	0.60	0.93	Jan-05
Viking Global Equities, LP	-2.90%	4.02%	-2.90%	-0.10%	-0.20%	3.18%	5.15%	7.89%	13.01%	-3.92%	8.27%	13.47%	22.65%	7.77%	0.51	0.90	1.39	Oct-99
Winton Fund Limited	-2.54%	-0.43%	-2.54%	-0.12%	1.40%	2.63%	1.82%	4.20%	7.88%	-3.01%	0.95%	13.88%	9.43%	8.70%	0.10	0.41	0.65	Oct-97
<b>Liquidating Portfolio</b>																		
Indus Asia Pacific Fund, LP	-4.37%	-16.94%	-4.37%	-2.98%	-3.41%	0.75%	-14.57%	-17.30%	9.70%	-26.00%	-33.23%	-15.60%	4.97%	21.34%	-0.60	-0.81	-0.02	Dec-00
Luxor Capital Partners, LP	-1.11%	-3.21%	-1.11%	-1.61%	-0.89%	-10.31%	14.27%	3.87%	54.38%	7.80%	-19.05%	-9.83%	19.53%	14.50%	0.81	0.27	0.83	Apr-02
<b>Benchmark</b>																		
HFRI Fund of Funds Composite Index	-2.68%	-1.78%	-2.68%	-0.25%	0.23%	-0.89%	2.05%	2.35%	7.77%	0.51%	-0.27%	3.37%	8.96%	3.46%				Jan-90
HFRI Fund Weighted Composite Index	-2.98%	-1.66%	-2.98%	-0.25%	0.33%	-0.16%	3.69%	3.17%	8.59%	5.44%	-1.12%	2.98%	9.13%	3.81%				Jan-90
<b>Market Indices</b>																		
3 Month Libor - BOM	0.21%	1.89%	0.21%	0.19%	0.20%	2.16%	1.34%	0.91%	1.29%	0.76%	0.33%	0.23%	0.27%	0.21%				Jan-87
Barclays Aggregate Bond Index	-0.79%	-2.38%	-0.79%	-0.64%	0.64%	-2.06%	1.05%	1.84%	3.55%	2.66%	0.57%	5.94%	-2.02%	2.72%				Jan-76
Barclays High Yield Credit Bond Index	-1.60%	0.93%	-1.60%	0.56%	0.74%	0.97%	6.60%	4.69%	7.50%	17.14%	-4.46%	2.46%	7.46%	4.95%				Jul-83
S&P 500 (TR)	-6.84%	3.01%	-6.84%	0.57%	3.26%	7.35%	11.52%	11.34%	21.83%	11.96%	1.38%	13.69%	32.39%	10.06%				Jun-88
MSCI EAFE - Net - USD	-7.96%	-9.28%	-7.96%	0.87%	-1.93%	-6.85%	3.62%	2.02%	25.03%	1.00%	-0.81%	-4.90%	22.78%	11.58%				Dec-69
MSCI EMF (EMERGING MARKETS FREE) - Net - USD	-8.71%	-15.72%	-8.71%	-0.53%	-2.70%	-12.52%	6.52%	0.78%	37.28%	11.19%	-14.92%	-2.19%	-2.60%	15.07%				Dec-87

Note: The above is manager composite history.

## Section IV.

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# Private Equity Returns



## Portfolio Summary

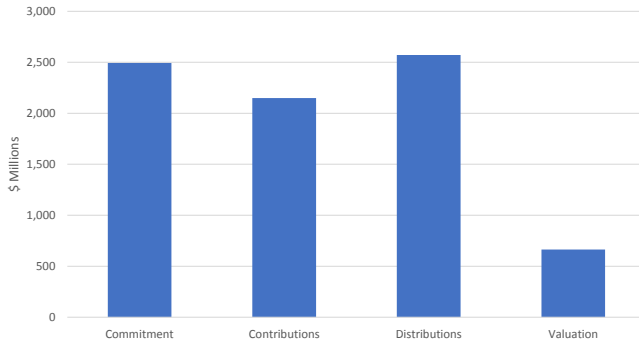
6/30/2018

All Investments

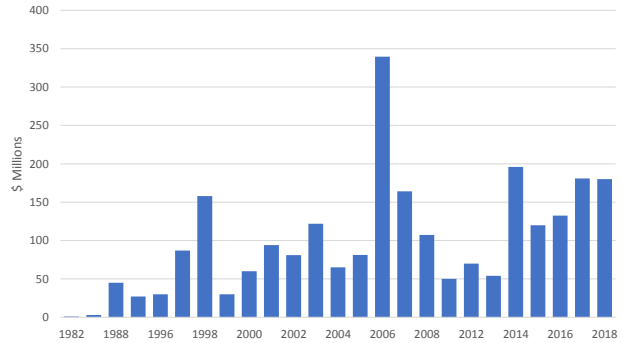
### Performance Summary

Asset Class	Investment Type	Number of Investments	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR	TWR
Private Equity Funds									
	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%
<b>Total: Private Equity Funds</b>		<b>140</b>	<b>2,493,267,725</b>	<b>2,150,192,755</b>	<b>2,572,679,771</b>	<b>664,836,268</b>	<b>1.51</b>	<b>13.52%</b>	<b>11.42%</b>

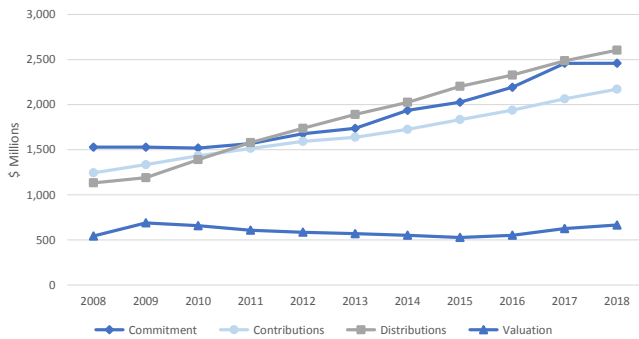
#### Cash Flow and Valuation Summary



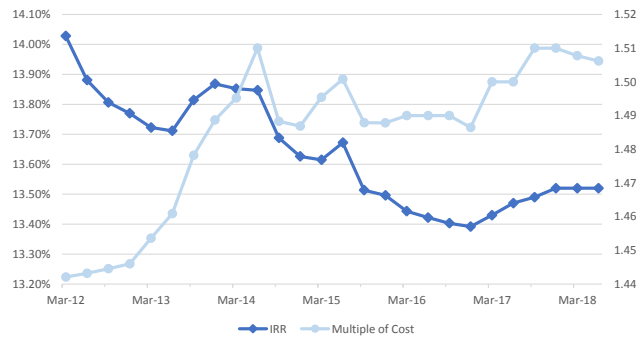
#### Commitment by Vintage Year



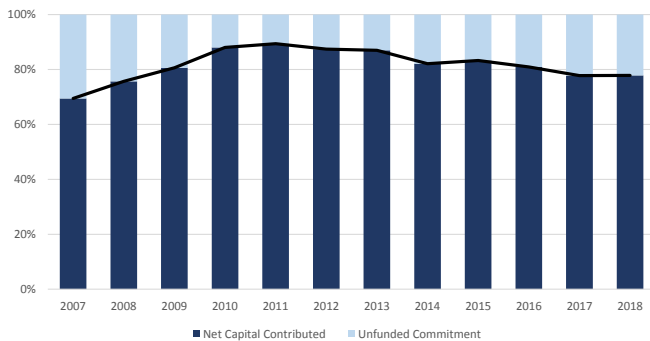
#### Historical Cash Flows and Valuation



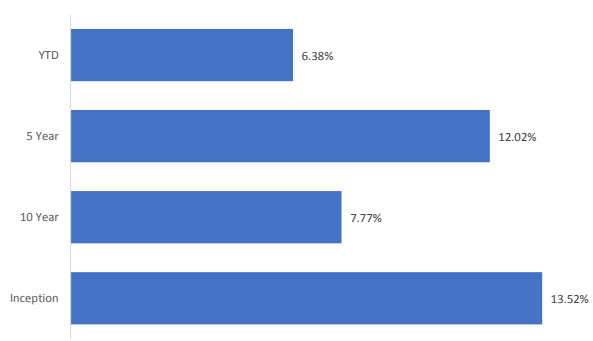
#### Historical Performance



#### Historical Percent Funded



#### Period IRRs





Section X.

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## Real Estate Returns

**PORTFOLIO SUMMARY**

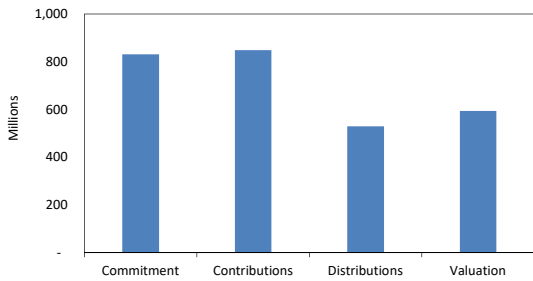
6/30/2018

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

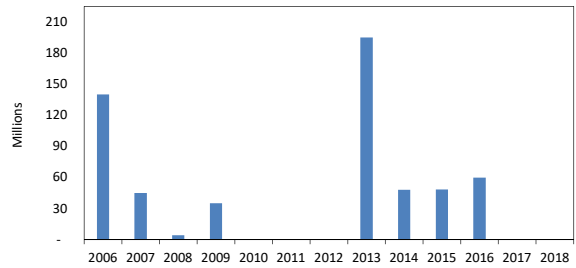
**Performance Summary**

Asset Class	Investment Type	Number of Investments <sup>(4)</sup>	Commitment	Contributions <sup>(2), (3)</sup>	Distributions <sup>(3)</sup>	Adjusted Valuation	Multiple of Cost	IRR	TWR
Real Estate Funds	Core	8	414,873,657	481,706,835	310,458,349	437,000,133	1.5x	5.5%	5.7%
	Non-Core	21	415,260,817	366,027,063	217,807,833	156,903,359	1.0x	0.5%	3.1%
<b>Total: Real Estate Funds</b>		<b>29</b>	<b>830,134,474</b>	<b>847,733,898</b>	<b>528,266,182</b>	<b>593,903,492</b>	<b>1.3x</b>	<b>4.4%</b>	<b>5.0%</b>
<b>Total:</b>		<b>29</b>	<b>830,134,474</b>	<b>847,733,898</b>	<b>528,266,182</b>	<b>593,903,492</b>	<b>1.3x</b>	<b>4.4%</b>	<b>5.0%</b>

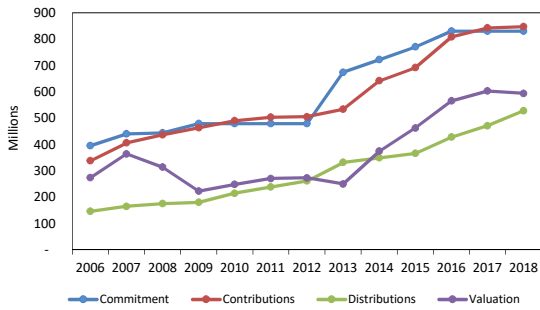
**Cash Flow and Valuation Summary**



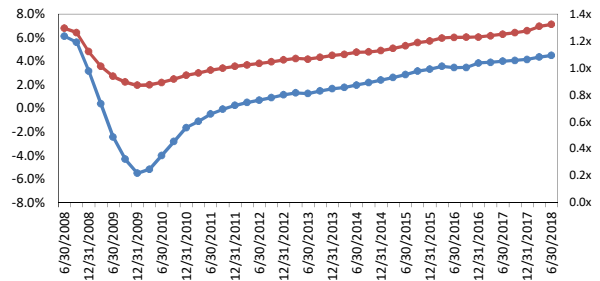
**Commitment by Vintage Year**



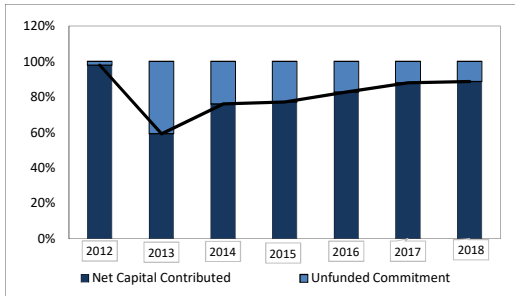
**Historical Cash Flows and Valuation**



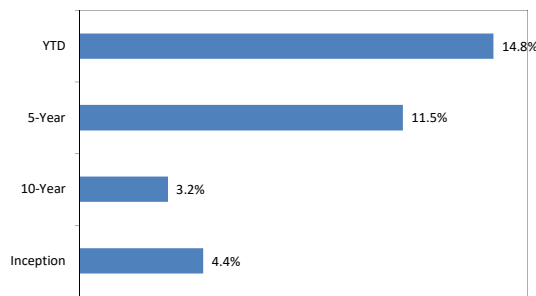
**Historical Performance**



**Historical Percent Funded**



**Period IRRs <sup>(5)</sup>**



<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.

<sup>(5)</sup> 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**

Current Partnerships	Vintage Year/Initial Investment	Type	Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance*	
				Amount Drawn	Amount Distributed	Amount Unfunded		Net IRR (%)	Net Multiple of Investment
AEW Core Property Trust	2010	Core	69,873,660	69,873,660	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
<b>Total</b>			<b>\$ 560,134,477</b>	<b>\$ 496,628,936</b>	<b>\$ 220,271,705</b>	<b>\$ 63,505,541</b>	<b>\$ 593,903,487</b>		

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

Section XI.

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## Infrastructure Returns

## Portfolio Summary

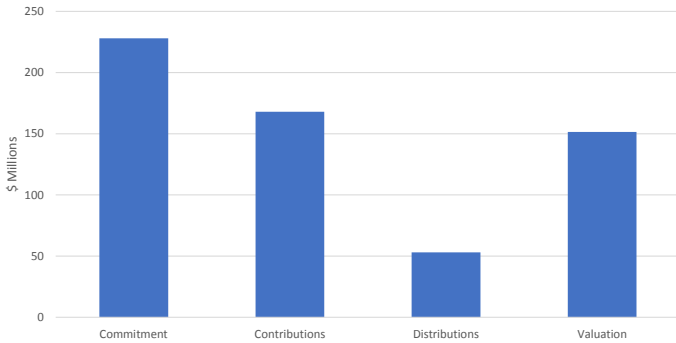
6/30/2018

All Investments

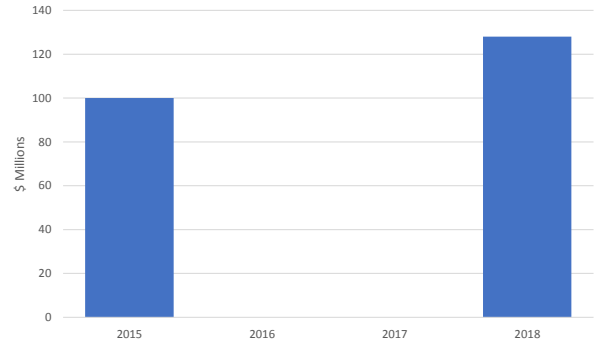
### Performance Summary

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

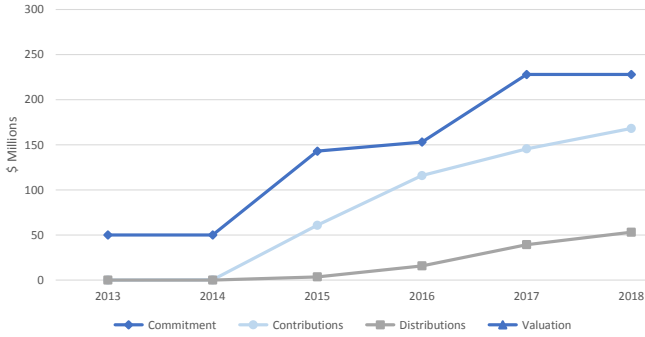
**Cash Flow and Valuation Summary**



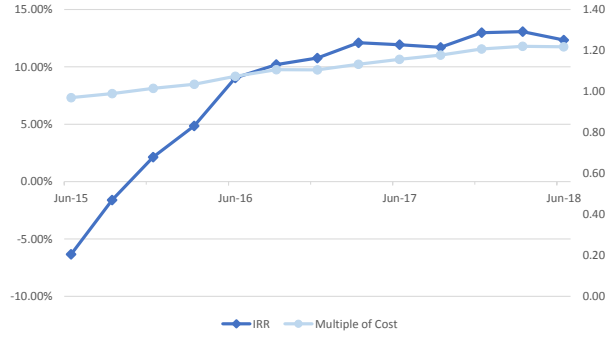
**Commitment by Vintage Year**



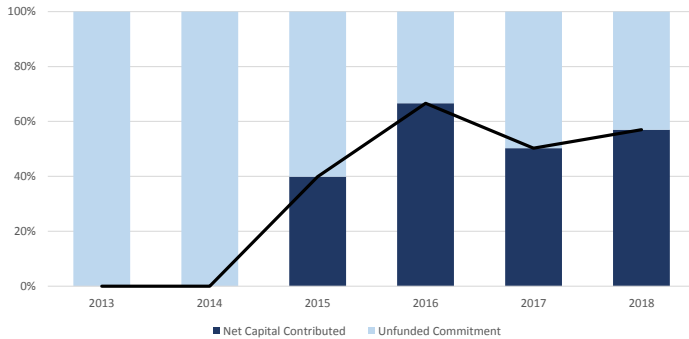
**Historical Cash Flows and Valuation**



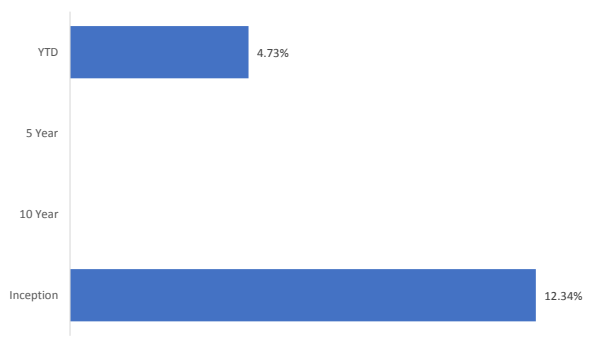
**Historical Performance**



**Historical Percent Funded**



**Period IRRs**



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

Current Partnerships	Vintage Year/Initial Investment		Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance*	
				Amount Drawn	Amount Distributed	Amount Unfunded		Net IRR (%)	Net Multiple of Investment
IFM Global Infrastructure, L.P.	2015	Core	50,000,000	50,000,000	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 Infrastructure Fund III	2018	Opportunistic	35,000,000	3,039,126	831,489	31,960,874	2,860,035	n/a	n/a
<b>Total</b>			<b>\$ 228,000,000</b>	<b>\$ 134,586,612</b>	<b>\$ 53,076,766</b>	<b>\$ 93,413,388</b>	<b>\$ 151,528,784</b>		

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



## Section XII.

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### Cash Flow

# Monthly Valuation Change

Period : 2018-10-01 - 2018-10-31

Category	Source Account Name	Closing Balance	Market Value Increase/(Decrease)	Transfer In/(Out)	Opening Balance
<b>Grand Total</b>		<b>8,039,806,059.16</b>	<b>(339,285,784.83)</b>	<b>(33,191,845.00)</b>	<b>8,412,283,688.99</b>
<b>Total Global Equity</b>		<b>3,863,061,479.28</b>	<b>(294,629,278.40)</b>	<b>(60,000,000.00)</b>	<b>4,217,690,757.68</b>
<b>Global Equity</b>		<b>3,602,477,125.51</b>	<b>(292,193,701.19)</b>	<b>(60,000,000.00)</b>	<b>3,954,670,826.70</b>
	SSGA R3000 INDEX	1,281,068,783.12	(102,262,573.14)	(17,500,000.00)	1,400,831,356.26
	SSGA MSCI EAFE	660,146,910.61	(57,945,538.98)	(14,500,000.00)	732,592,449.59
	SSGA MSCI CANADA	61,219,302.10	(6,375,628.86)	(28,000,000.00)	95,594,930.96
	SSGA MSCI EM	392,455,835.83	(37,290,398.81)	0.00	429,746,234.64
	QVM TILT	1,207,586,293.85	(88,319,561.40)	0.00	1,295,905,855.25
<b>Global Equity Hedge Funds</b>		<b>260,584,353.77</b>	<b>(2,435,577.21)</b>	<b>0.00</b>	<b>263,019,930.98</b>
	DAVIDSON KEMPNER	88,496,847.13	(691,684.15)	0.00	89,188,531.28
	ELLIOTT ASSOCIATES	109,230,538.49	109,121.42	0.00	109,121,417.07
	INDUS ASIA PACIFIC	305,850.25	(13,977.44)	0.00	319,827.69
	PFM DIVERSIFIED	174.44	0.00	0.00	174.44
	SAMLYN ON/OFFSHORE	579.00	0.33	0.00	578.67
	VIKING GLOBAL EQUITI	61,443,788.52	(1,828,357.08)	0.00	63,272,145.60
	LUXOR CAP PTNS LP	1,106,368.92	(10,680.29)	0.00	1,117,049.21
	ESG CBE FUND LP	207.02	0.00	0.00	207.02
<b>Private Equity</b>		<b>508,286,679.00</b>	<b>391,004.58</b>	<b>(5,307,077.38)</b>	<b>513,202,751.80</b>
<b>Private Equity</b>		<b>508,286,679.00</b>	<b>391,004.58</b>	<b>(5,307,077.38)</b>	<b>513,202,751.80</b>
	PRIVATE EQUITY	508,286,679.00	391,004.58	(5,307,077.38)	513,202,751.80
<b>Total Fixed Income</b>		<b>902,129,127.60</b>	<b>(8,003,715.41)</b>	<b>(11,769,684.58)</b>	<b>921,902,527.59</b>
<b>Fixed Income</b>		<b>902,129,127.60</b>	<b>(8,003,715.41)</b>	<b>(11,769,684.58)</b>	<b>921,902,527.59</b>
	MACKAY SHIELDS	442,588,547.86	(3,735,793.94)	(8,352,676.00)	454,677,017.80
	PYRAMIS GLOBAL ADV	459,540,579.74	(4,267,921.47)	(3,417,008.58)	467,225,509.79
<b>Total Real Return</b>		<b>1,141,615,052.00</b>	<b>(14,186,941.83)</b>	<b>(10,839,617.28)</b>	<b>1,166,641,611.11</b>
<b>Alternative Absolute Return</b>		<b>217,988,222.02</b>	<b>2,610,419.68</b>	<b>0.00</b>	<b>215,377,802.34</b>
	BREVAN HOWARD	4,335.86	2.64	0.00	4,333.22
	DE SHAW	117,078,085.48	1,992,994.45	0.00	115,085,091.03
	OZ DOMESTIC PTRS	186.78	0.00	0.00	186.78
	WINTON FUTURE FD	39,433,204.00	0.00	0.00	39,433,204.00
	GRAHAM ABS RETURN	61,472,409.90	617,422.59	0.00	60,854,987.31
<b>Alternative Fixed Income</b>		<b>73,617,437.06</b>	<b>399,576.70</b>	<b>0.00</b>	<b>73,217,860.36</b>
	CAPULA GLOBAL	73,617,426.00	399,576.70	0.00	73,217,849.30
	CLAREN ROAD CR. FUND	11.06	0.00	0.00	11.06
<b>Credit</b>		<b>357,040,485.16</b>	<b>(448,472.91)</b>	<b>(5,066,647.00)</b>	<b>362,555,605.07</b>
	LOOMIS SAYLES1	127,708,420.55	(508,059.98)	128,216,480.53	0.00
	PIMCO	185,647,317.76	(106,312.27)	(2,675,000.00)	188,428,630.03
	WAMCO	43,684,746.85	165,899.34	(130,608,127.53)	174,126,975.04
<b>GILBs</b>		<b>199,012,859.22</b>	<b>(1,472,325.96)</b>	<b>(844,731.03)</b>	<b>201,329,916.21</b>
	BROWN BROTHERS HARR	199,012,859.22	(1,472,325.96)	(844,731.03)	201,329,916.21
<b>Publicly Traded Infrastructure</b>		<b>293,956,048.54</b>	<b>(15,276,139.34)</b>	<b>(4,928,239.25)</b>	<b>314,160,427.13</b>
	PRIV INFRASTR AGGR	145,231,219.22	9,711.00	(4,928,239.25)	150,149,747.47
	HARVEST FUND ADVISOR	148,724,829.32	(15,285,850.34)	0.00	164,010,679.66
<b>Total Cash</b>		<b>73,554,716.35</b>	<b>(81,554.00)</b>	<b>48,897,956.10</b>	<b>24,738,314.25</b>
<b>Cash Accounts</b>		<b>73,554,716.35</b>	<b>(81,554.00)</b>	<b>48,897,956.10</b>	<b>24,738,314.25</b>
	ERSRI CASH	70,773,310.35	(81,554.00)	47,889,801.10	22,965,063.25
	CITIZENS CASH	2,781,406.00	0.00	1,008,155.00	1,773,251.00

# Monthly Valuation Change

Period : 2018-10-01 - 2018-10-31

Category	Source Account Name	Closing Balance	Market Value Increase/(Decrease)	Transfer In/(Out)	Opening Balance
<b>Total Other</b>		<b>10,110,289.39</b>	<b>2,204,692.27</b>	<b>0.00</b>	<b>7,905,597.12</b>
<b>Other</b>		<b>10,110,289.39</b>	<b>2,204,692.27</b>	<b>0.00</b>	<b>7,905,597.12</b>
	RUSSELL OVERLAY FD	10,110,289.39	2,204,692.27	0.00	7,905,597.12
<b>Total Miscellaneous</b>		<b>391,582.11</b>	<b>5,530.31</b>	<b>0.00</b>	<b>386,051.80</b>
<b>Miscellaneous Accounts</b>		<b>391,582.11</b>	<b>5,530.31</b>	<b>0.00</b>	<b>386,051.80</b>
	RI TRANS ACCT	5,146.32	(82.21)	0.00	5,228.53
	SHOTT CAPITAL	334,458.00	7,146.87	0.00	327,311.13
	NON-US EQUITY TRANS	43,206.61	(413.56)	0.00	43,620.17
	FIXED INC TRANS	8,771.18	(1,120.79)	0.00	9,891.97
<b>*unclassified</b>		<b>1,540,657,133.43</b>	<b>(24,985,522.35)</b>	<b>5,826,578.14</b>	<b>1,559,816,077.64</b>
<b>*Unclassified</b>		<b>1,540,657,133.43</b>	<b>(24,985,522.35)</b>	<b>5,826,578.14</b>	<b>1,559,816,077.64</b>
	ERSRI SMA CASH	218,824,373.23	386,301.57	10,700,000.00	207,738,071.66
	MACKAY LONG DURATION	153,140,002.13	(4,801,847.26)	0.00	157,941,849.39
	WAMCO LONG DURATION	153,092,928.98	(4,592,576.13)	0.00	157,685,505.11
	CPC CB LLC	94,330,374.19	(4,934,079.25)	0.00	99,264,453.44
	CPC QIS LLC	98,929,538.29	(2,686,969.74)	0.00	101,616,508.03
	CPC AP LLC	93,164,861.21	(10,205,862.34)	0.00	103,370,723.55
	PRIVATE CREDIT	110,876,311.93	0.00	1,333,708.45	109,542,603.48
	OPPORTUNISTIC PRV CR	37,608,563.00	1,850,293.00	(640,836.00)	36,399,106.00
	CORE REAL ESTATE	432,215,965.85	0.00	(1,432,009.12)	433,647,974.97
	NON CORE REAL ESTATE	148,474,214.62	(782.20)	(4,134,285.19)	152,609,282.01

CASH FLOW ANALYSIS - INCOME & EXPENSES

Employees Retirement System

FISCAL YEAR 2019	FY 2018-19												
	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Projected December	Projected November	Actual October	Actual September	Actual August	Actual July 2018
MEMBER BENEFITS	834,596,972	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,500,000	69,729,526	69,703,524	69,681,837	69,482,084
ADMINISTRATIVE EXPENSES	8,908,689	1,255,280.98	1,021,300	529,120	1,264,456	523,667	661,953	855,600	497,568	684,123	733,118	483,861	398,643
INVESTMENT EXPENSES	34,042,952	270,376	10,424,015	3,807,683	2,045,442	2,252,368	708,685	(955)	574,291	18,146	13,138,426	0	804,475
TOTAL OUTFLOW	877,548,614	71,025,657	80,945,315	73,836,803	72,809,898	72,276,035	70,870,638	70,354,645	70,571,859	70,431,795	83,575,068	70,165,698	70,685,202
CONTRIBUTIONS	515,584,476	54,595,381	44,734,514	41,272,504	42,480,747	40,865,166	47,531,440	47,242,656	41,926,087	43,359,980	27,337,674	31,357,169	52,881,158
OTHER INCOME*	93,328,305	3,138,460	13,807,256	14,038,691	2,870,790	14,041,528	(10,388,798)	(461,275)	8,186,393	(2,560,631)	30,034,164	18,350,593	2,271,136
TOTAL INCOME	608,912,781	57,733,841	58,541,770	55,311,195	45,351,537	54,906,694	37,142,642	46,781,381	50,112,480	40,799,349	57,371,838	49,707,762	55,152,294
DIFFERENCE	(268,635,832)	(13,291,816)	(22,403,546)	(18,525,608)	(27,458,361)	(17,369,341)	(33,727,996)	(23,573,264)	(20,459,379)	(29,632,446)	(26,203,230)	(20,457,936)	(15,532,908)

Municipal Employees Retirement System

FISCAL YEAR 2019	FY 2018-19												
	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Projected December	Projected November	Actual October	Actual September	Actual August	Actual July 2018
MEMBER BENEFITS	98,489,464	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,200,000	8,310,615	8,246,506	8,185,416	8,146,928
ADMINISTRATIVE EXPENSES	2,113,655	298,439	242,816	125,497	299,070	123,576	155,785	201,000	116,695	164,492	175,891	115,551	94,842
INVESTMENT EXPENSES	8,110,229	64,281	2,478,330	903,107	483,790	531,519	166,784	(224)	134,689	4,363	3,152,198	0	191,394
TOTAL OUTFLOW	108,713,347	8,562,720	10,921,146	9,228,603	8,982,860	8,855,095	8,522,569	8,400,775	8,451,384	8,479,470	11,574,595	8,300,967	8,433,164
CONTRIBUTIONS	65,809,581	5,597,269	5,857,272	5,099,829	6,369,814	5,329,289	5,854,840	5,485,021	4,955,181	5,723,536	5,286,222	4,903,739	5,347,569
OTHER INCOME*	22,230,612	746,159	3,282,702	3,329,698	679,002	3,313,551	(2,444,924)	(108,364)	1,919,961	(615,683)	7,205,857	4,382,324	540,330
TOTAL INCOME	88,040,193	6,343,428	9,139,974	8,429,527	7,048,816	8,642,840	3,409,916	5,376,657	6,875,142	5,107,853	12,492,079	9,286,063	5,887,899
DIFFERENCE	(20,673,154)	(2,219,292)	(1,781,172)	(799,077)	(1,934,044)	(212,255)	(5,112,653)	(3,024,118)	(1,576,242)	(3,371,616)	917,484	985,097	(2,545,265)

CASH FLOW ANALYSIS - INCOME & EXPENSES

<b>State Police Retirement System</b>													
TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Projected December	Projected November	Actual October	Actual September	Actual August	Actual July 2018	
MEMBER BENEFITS	5,997,050	500,000	500,000	500,000	500,000	500,000	500,000	500,000	499,263	499,263	499,263	499,263	
ADMINISTRATIVE EXPENSES	187,961	26,577	21,565	11,140	26,530	10,986	13,802	17,789	14,740	15,742	10,327	8,458	
INVESTMENT EXPENSES	722,388	5,724	220,101	80,165	42,917	47,252	14,777	(20)	11,894	391	282,118	0	17,069
TOTAL OUTFLOW	6,907,399	532,302	741,665	591,305	569,447	558,238	528,579	517,770	522,199	514,393	797,122	509,589	524,790
CONTRIBUTIONS	5,382,178	527,408	316,594	332,007	290,687	447,000	417,169	556,883	638,832	473,748	511,035	444,510	426,307
OTHER INCOME*	2,032,848	66,448	291,537	295,564	60,234	294,578	(216,615)	(9,591)	169,546	(55,171)	644,915	391,653	99,750
TOTAL INCOME	7,415,026	593,856	608,131	627,571	350,921	741,578	200,554	547,292	808,378	418,577	1,155,949	836,162	526,057
DIFFERENCE	507,627	61,555	(133,534)	36,266	(218,526)	183,339	(328,024)	29,523	286,179	(95,817)	358,827	326,573	1,267

<b>Judicial Retirement System</b>													
TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Projected December	Projected November	Actual October	Actual September	Actual August	Actual July 2018	
MEMBER BENEFITS	3,335,514	275,000	275,000	275,000	275,000	275,000	275,000	275,000	288,071	288,071	288,071	271,301	
ADMINISTRATIVE EXPENSES	99,089	14,070	11,402	5,885	13,828	5,793	7,265	9,360	7,797	8,326	5,463	4,476	
INVESTMENT EXPENSES	381,512	3,031	116,375	42,351	22,369	24,915	7,778	(10)	6,261	207	149,204	0	9,033
TOTAL OUTFLOW	3,816,115	292,100	402,777	323,236	311,197	305,708	290,042	284,350	296,075	445,601	293,534	284,810	
CONTRIBUTIONS	3,530,239	380,045	236,017	260,088	267,842	271,001	270,000	286,056	219,155	218,491	240,520	216,269	
OTHER INCOME*	1,073,698	35,178	154,145	156,146	31,395	155,323	(114,013)	(5,046)	89,242	(29,185)	341,078	207,202	52,233
TOTAL INCOME	4,603,937	415,223	390,162	416,234	299,237	426,324	155,987	281,010	189,971	559,569	447,722	268,502	
DIFFERENCE	787,822	123,122	(12,614)	92,998	(11,960)	120,616	(134,055)	(3,340)	467,313	(106,105)	113,968	154,188	(16,308)

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

FISCAL YEAR 2019

INVESTMENT MANAGER FEES, PROFESSIONAL FEES & OPERATING EXPENSES

ERSRI Pooled Trust

ACCRUAL BASIS

	Projected Jul 18	Projected Aug	Projected Sept	Projected Oct	Projected Nov	Projected Dec	Projected Jan 19	Projected Feb	Projected Mar	Projected Apr	Projected May	Projected June	Projected TOTAL
<b>EQUITIES US</b>													
SSGA Russell 3000			41,941			41,602			37,937			39,443	160,923
Shott Capital/Hamilton Lane			<b>415</b>			1,364			1,087			539	3,406
SSGA QVM Tilt			<u>121,825</u>			<u>124,353</u>			<u>124,256</u>			<u>123,000</u>	<u>493,434</u>
			164,181			167,319			163,281			169,782	171,129
<b>FIXED INCOME</b>													
Pyramis			158,892			159,089			157,734			156,000	631,715
Mackay Shields			161,197			149,208			170,000			156,000	636,405
Brown Bros. TIPS/GILB			<u>74,186</u>			<u>68,794</u>			<u>63,102</u>			<u>65,000</u>	<u>271,082</u>
			394,275			377,091			390,836			377,000	1,539,202
<b>INT'L EQUITIES</b>													
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			<u>93,947</u>			<u>90,521</u>			<u>96,777</u>			<u>104,950</u>	<u>386,196</u>
			160,769			160,794			176,232			174,883	672,678
<b>CREDIT</b>													
WAMCO			115,575			111,879			108,385			108,461	444,300
PIMCO			<u>125,861</u>			<u>122,220</u>			<u>118,394</u>			<u>117,000</u>	<u>483,475</u>
			241,436			234,099			226,779			225,461	927,775
<b>Infrastructure</b>													
Harvest Partners			<b>302,413</b>			268,080			269,214			275,283	1,114,990
<b>Systematic Trend Followers</b>	<b>202,916</b>	<b>210,203</b>	<b>203,143</b>	<b>205,889</b>	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,422,150
<b>Long Duration</b>													
WAMCO			31,000			31,000			31,000			31,000	124,000
Mackay Shields			<u>32,000</u>			<u>32,000</u>			<u>32,000</u>			<u>32,000</u>	<u>128,000</u>
			63,000			63,000			63,000			63,000	252,000
<b>REAL ESTATE</b>													
	0	0	3,900,000	0	0	3,900,000	0	0	3,900,000	0	0	3,900,000	15,600,000
<b>ALTERNATIVE INVESTMENTS</b>													
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			<u>5,000,137</u>			<u>5,000,000</u>			<u>5,000,000</u>			<u>5,000,000</u>	<u>20,000,137</u>
	0	0	12,750,137	0	0	12,750,000	0	0	12,750,000	0	0	12,750,000	51,000,137
<b>Other</b>													
Russell Overlay			<b>48,690</b>			75,000			75,000			75,000	273,690
Payden & Rygel	<b>22,355</b>	<b>21,954</b>	<b>19,940</b>	<b>23,139</b>	<b>25,446</b>	<b>23,187</b>	<b>23,186</b>	<b>26,124</b>	<b>23,988</b>	<b>23,600</b>	<b>22,583</b>	<b>23,400</b>	<b>278,902</b>
	22,355	21,954	68,630	23,139	25,446	98,187	23,186	26,124	98,988	23,600	22,583	98,400	552,592
<b>SUB TOTAL-INV MGMT FEES</b>	<b>225,271</b>	<b>232,157</b>	<b>18,247,986</b>	<b>229,028</b>	<b>225,446</b>	<b>18,218,570</b>	<b>223,186</b>	<b>226,124</b>	<b>18,238,329</b>	<b>223,600</b>	<b>222,583</b>	<b>18,233,809</b>	<b>74,252,653</b>
<b>PROFESSIONAL FEES</b>													
Legal	<b>8,276</b>	<b>11,982</b>	<b>10,063</b>	14,678	15,170	6,514	2,588	4,663	11,832	10,327	7,892	15,569	119,552
BNY Mellon - Custodial	<b>52,464</b>	<b>41,456</b>	40,247	44,474	40,140	46,222	44,254	38,731	41,190	38,931	39,126	39,492	506,728
Cliffwater	<b>33,333</b>	<b>33,333</b>	<b>33,334</b>	33,333	33,333	33,334	33,333	33,333	33,334	33,333	33,333	33,333	400,000
PCA General & Infrastructure	<b>6,250</b>	<b>6,250</b>	<b>6,250</b>	6,250	6,250	25,000	6,250	6,250	25,000	6,250	6,250	25,000	131,250
NEPC	0	0	<b>91,250</b>	0	0	91,250	0	0	91,250	0	0	91,250	365,000
Aberdeen	<b>26,494</b>	<b>26,564</b>	<b>25,723</b>	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	321,781
PCA Real Estate	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>10,417</b>	<b>125,004</b>
	137,234	130,001	217,284	136,152	132,310	239,737	123,841	120,393	240,024	126,258	124,018	242,062	1,969,314
<b>OPERATING EXPENSE</b>													
Retirement Transfers	<b>319,579</b>	<b>913,890</b>	<b>551,642</b>	721,761	837,137	896,040	648,915	901,064	834,367	696,560	650,150	1,361,470	9,332,574
Other Expense	0	0	<b>19,000</b>	14,463	21,750	7,245	0	2,500	7,020	0	2,976	25,244	<u>100,198</u>
	319,579	913,890	570,642	736,224	858,887	903,285	648,915	903,564	841,387	696,560	653,126	1,386,714	9,432,772
<b>TOTAL:</b>	<b>682,084</b>	<b>1,276,048</b>	<b>19,035,912</b>	<b>1,101,404</b>	<b>1,216,643</b>	<b>19,361,592</b>	<b>995,942</b>	<b>1,250,081</b>	<b>19,319,740</b>	<b>1,046,418</b>	<b>999,727</b>	<b>19,862,585</b>	<b>85,654,740</b>

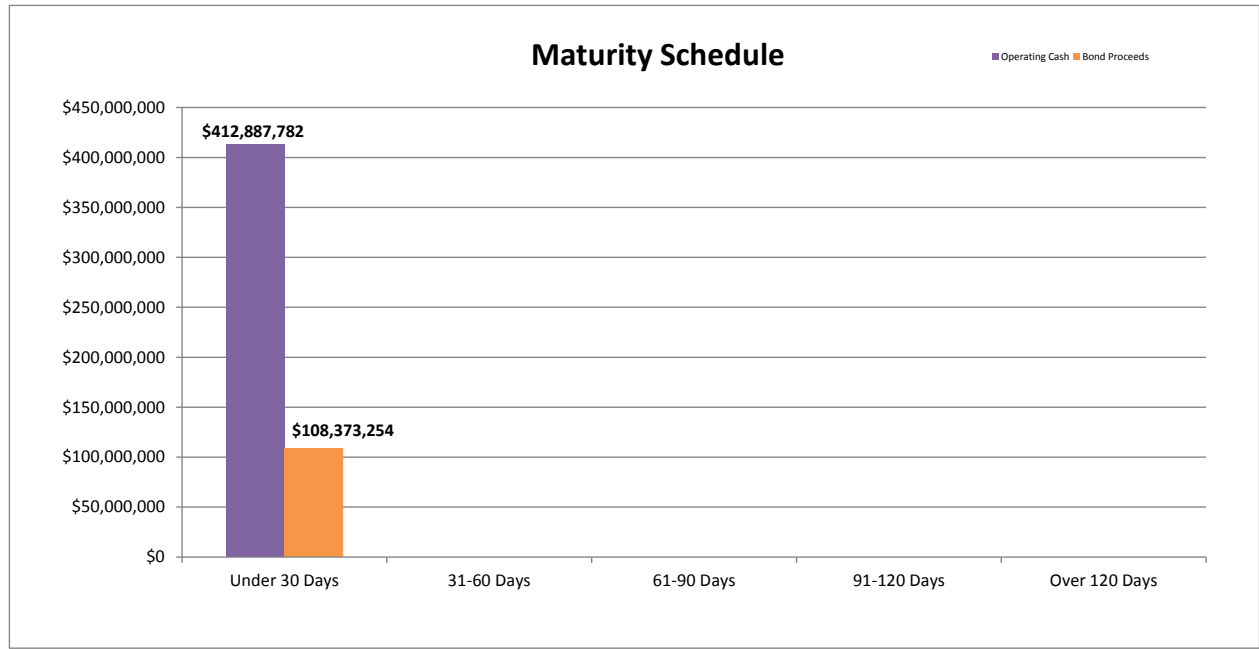
Note: Numbers in bold are actual.

## Section XIII.

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### Short-Term Investments

**Short-Term Investment Maturity Schedule & SIC Compliance Report at October 31, 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%	0 0%	0 0%	211,384,555 51%	211,384,555
Bank RI	0 0%	0 0%	10,161,303 2%	0 0%	0 0%	10,161,303 2.5%
Santander Bank	0 0%	0 0%	0 0%	16,755,234 4%	0 0%	16,755,234 4.1%
People's Credit Union	0 0%	0 0%	0 0%	2,696,601 1%	0 0%	2,696,601 0.65%
Navigant Credit Union	0 0%	0 0%	0 0%	4,762,763 1%	0 0%	4,762,763 1.15%
Fidelity	0 0%	0 0%	0 0%	0 0%	0 0%	0 0.00%
Bristol County Savings Bk	0 0%	4,094,752 1%	0 0%	0 0%	0 0%	4,094,752 0.99%
Centreville Bank	0 0%	7,538,110 2%	15,094,385 4%	0 0%	0 0%	22,632,495 5.48%
Citizens Bank	0 0%	0 0%	0 0%	26,534,511 6%	0 0%	26,534,511 6.4%
Webster Bank	0 0%	0 0%	0 0%	35,454,821 9%	0 0%	35,454,821 8.6%
Customers Bank	0 0%	0 0%	0 0%	41,809,593 10%	0 0%	41,809,593 10.1%
Washington Trust	0 0%	21,357,863 5%	0 0%	2,478,828 1%	0 0%	23,836,690 5.8%
TD Bank	0	0	0	12,764,463	0	12,764,463



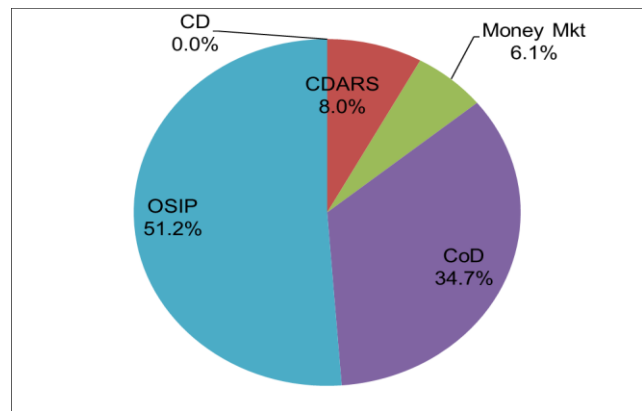
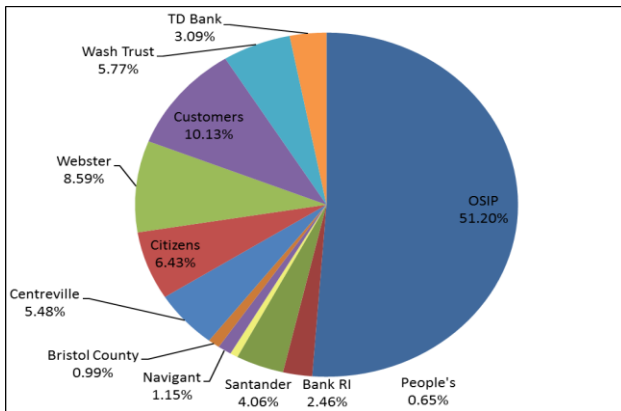
**State of Rhode Island**  
**Short Term Cash Monthly Performance**  
**Performance for**  
**October 01, 2018 to October 31, 2018**

<b>Fund Name</b>	<b>Beginning Balance</b>	<b>Ending Balance</b>	<b>Average Daily Balance</b>	<b>Earnings</b>	<b>Yield(Annual)</b>
GENERAL FUND	\$ 198,636,901.28	\$ 137,634,987.83	\$ 196,843,467.85	\$ 337,118.88	2.0165%
H.A.V.A	\$ 302.38	\$ 302.74	\$ 302.73	\$ 0.37	1.4391%
GENERAL FUND (HIST PRES)	\$ 554,371.48	\$ 555,313.49	\$ 555,279.69	\$ 1,047.79	2.2217%
HISTORIC TAX CREDITS	\$ 10,778,552.49	\$ 10,796,867.76	\$ 10,796,210.60	\$ 20,371.93	2.2217%
HIGHWAY FUND	\$ 85,153,280.71	\$ 61,780,236.28	\$ 68,931,039.78	\$ 125,091.46	2.1367%
T.D.I. RESERVE (DET)	\$ 101,684,710.16	\$ 90,321,134.25	\$ 94,543,069.59	\$ 120,004.16	1.4945%
RICAP GL FUND 21	\$ 17,413,540.90	\$ 8,141,189.24	\$ 12,451,569.76	\$ 22,370.75	2.1154%
BOND CAPITAL FUND	\$ 57,172.64	\$ 23,057,249.91	\$ 9,701,932.15	\$ 14,850.53	1.8022%
R.I. CLEAN WATER ACT	\$ 3,274,401.13	\$ 3,279,509.99	\$ 3,279,329.36	\$ 5,599.47	2.0104%
STATE LOTTERY FUND	\$ 20,639,198.42	\$ 27,073,110.69	\$ 22,891,108.93	\$ 42,054.49	2.1631%
ASSESSED FRINGE BEN ADM	\$ 1,014,881.32	\$ 1,005,303.72	\$ 1,005,586.25	\$ 1,241.65	1.4538%
AUTO EQUIPMENT SERVICE	\$ 2,193.42	\$ 2,196.03	\$ 2,195.94	\$ 2.70	1.4477%
HEALTH INSURANCE FUND	\$ 31,078,212.04	\$ 31,831,221.24	\$ 33,658,357.45	\$ 58,777.36	2.0561%
FLEET REVOLVING LOAN FUND	\$ 2,897,725.02	\$ 2,900,805.13	\$ 2,900,654.13	\$ 4,681.03	1.9001%
EMPLOYEES RETIREMENT	\$ 172,871.60	\$ 1,284,925.61	\$ 11,961,827.14	\$ 16,052.53	1.5801%
MUNICIPAL EMPLOYEES RET.	\$ 160,386.25	\$ 412,967.84	\$ 2,624,142.60	\$ 3,582.43	1.6074%
RETIREE HEALTH FUND	\$ 2,233,058.94	\$ 2,235,720.25	\$ 2,235,631.43	\$ 2,753.30	1.4501%
BOG RETIREE FUND	\$ 1,606.03	\$ 1,607.94	\$ 1,607.88	\$ 1.98	1.4499%
RIPTA HEALTH FUND	\$ 2,267,847.96	\$ 3,270,189.23	\$ 2,124,943.52	\$ 2,616.98	1.4501%
PERMANENT SCHOOL FUND	\$ 1,794,541.51	\$ 1,797,590.85	\$ 1,797,481.44	\$ 3,391.76	2.2217%
TEACHER RETIREE HEALTH FUND	\$ 4,471,689.22	\$ 4,478,189.21	\$ 4,477,962.46	\$ 7,029.37	1.8483%
RI ST POL RETIREE HEALTH	\$ 227,184.38	\$ 227,455.13	\$ 227,446.09	\$ 280.11	1.4500%
RI LEG RETIREE HEALTH	\$ 842.97	\$ 843.97	\$ 843.94	\$ 1.04	1.4510%
RI JUDICIAL RETIREE HEALTH	\$ 41,174.60	\$ 41,223.67	\$ 41,222.03	\$ 50.77	1.4501%
UNIVERSITY COLLEGE	\$ 1,511,721.36	\$ 13,774.42	\$ 965,329.22	\$ 1,801.09	2.1968%
INDUS. BLDG. & MTG. INS.	\$ 742,604.00	\$ 743,865.86	\$ 743,820.58	\$ 1,403.55	2.2217%
<b>Operating Funds Totals</b>	<b>\$ 486,810,972.21</b>	<b>\$ 412,887,782.28</b>	<b>\$ 484,762,362.54</b>	<b>\$ 792,177.48</b>	<b>1.92%</b>
BOND CCDL 2006 SERIES C	\$ 492,149.70	\$ 492,149.70	\$ 492,119.74	\$ 928.61	2.2217%
GO BND-NTAX 2007 SERIES A	\$ 124,237.53	\$ 124,237.53	\$ 124,229.97	\$ 234.42	2.2218%
CCDL10B BOND CAPITAL COMPONENT	\$ 950,000.00	\$ 950,000.00	\$ 949,942.18	\$ 1,792.50	2.2217%
CCDL10C	\$ 164,081.75	\$ 164,360.56	\$ 164,350.56	\$ 310.12	2.2217%
CCDL2011A	\$ 4,369,029.36	\$ 3,801,145.96	\$ 4,130,633.50	\$ 7,787.50	2.2198%
CCDL2012B	\$ 6,092,902.03	\$ 6,092,902.03	\$ 6,092,531.18	\$ 11,496.31	2.2217%
GO CCDL 2013A	\$ 2,700,000.00	\$ 2,700,000.00	\$ 2,699,835.66	\$ 5,094.46	2.2217%
GO CCDL 2014A	\$ 94,193.10	\$ 94,193.10	\$ 94,187.37	\$ 177.73	2.2218%
GO CCDL 2014B	\$ 40,664.27	\$ 40,664.27	\$ 40,661.79	\$ 76.73	2.2218%
GO CCDL 2016A	\$ 9,715,922.98	\$ 5,808,057.65	\$ 8,076,650.63	\$ 15,193.41	2.2149%
GO CCDL 2016B	\$ 3,231,498.20	\$ 3,230,683.20	\$ 3,230,959.76	\$ 6,096.66	2.2217%
GO CCDL 2017	\$ 8,831,052.41	\$ 4,645,341.45	\$ 7,075,325.21	\$ 13,300.63	2.2134%
CCDL99A 1999A	\$ 206,569.39	\$ 206,569.39	\$ 206,556.82	\$ 389.76	2.2217%
CLEAN WATER 2007 SERIES A	\$ 198,130.34	\$ 198,130.34	\$ 198,118.28	\$ 373.84	2.2217%
CCDL2011A CLEAN WATER COMPONENT	\$ 1,236,000.00	\$ 1,236,000.00	\$ 1,235,924.77	\$ 2,332.13	2.2217%
GO CCDL 2018A	\$ 67,955,082.08	\$ 49,420,601.69	\$ 60,178,902.16	\$ 113,332.53	2.2174%
GO CCDL 2018B	\$ 31,227,431.17	\$ 29,168,217.49	\$ 30,362,042.63	\$ 57,267.03	2.2208%
<b>Bond Proceeds Fund Totals</b>	<b>\$ 137,628,944.31</b>	<b>\$ 108,373,254.36</b>	<b>\$ 125,352,972.21</b>	<b>\$ 236,184.37</b>	<b>2.218%</b>
TANS PROCEEDS	\$ -	\$ -	\$ -	\$ -	
<b>Grand Totals</b>	<b>\$ 624,439,916.52</b>	<b>\$ 521,261,036.64</b>	<b>\$ 610,115,334.75</b>	<b>\$ 1,028,361.85</b>	<b>1.985%</b>

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

**Issuer Credit Rating  
October 31, 2018**

Issuer	Type of Instrument*	M/E % Portfolio	Issuer Ratings			S-T Debt Rating		L-T Debt Rating		Credit Outlook	Rating
			Moody's	Moody's	S&P	Moody's	S&P	S&P	Veribanc		
Bank of America	-	0.0%	Baa1	P-2	A-2	A3	A-	Stable	GREEN/*		
Bank RI	3,4	2.5%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Bristol County Sav. Bank	4	1.0%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Centreville Bank	4	5.5%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**/BB		
Citizens Bank	4	6.4%	Baa1	P-2	A-2	A1	BBB+	Stable	GREEN/*		
Customers Bank	4	10.1%	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	1.2%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Ocean State Inv. Pool	6	51.2%	N/R	N/R	N/R	N/R	N/R	N/R	N/R		
People's Credit Union	4	0.7%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Santander Bank	4	4.1%	A3	P-2	A-2	A3	A-	Stable	GREEN/*		
TD Bank	4	3.1%	Aa2	P-1	A-1+	Aa2	AA-	Stable	GREEN/**		
Washington Trust	4,7	5.8%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/**		
Webster Bank	4	8.6%	Baa1	P-1	A-2	A1	BBB+	Stable	GREEN/**		



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

**Ratings Definitions**

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

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

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

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

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

**S&P Outlook Definitions:**  
**Positive** - A rating may be raised  
**Negative** - A rating may be lowered  
**Stable** - A rating is not likely to change  
**Developing** - May be raised or lowered  
**NM** - Not meaningful

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

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

Section XIV.

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## Defined Contribution Plan



# 2018 401(a) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(I)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
As of 10/31/2018	Mgr. Ticker	Tenure	AUM \$ Millions	Gross ER	Net ER	Net %ile	Rev Share	Recent Returns		Annualized Total Returns as of 9/30/2018							Since Incep.	Incep. Date	
								1mo.	YTD	1 Year	%ile	3 Year	%ile	5 Year	%ile	10 Year	%ile		
TIAA Stable Value								0.18	1.70	2.03		1.96		1.93				1.91	03/31/12
<b>FIXED INCOME</b>																			
<b>Intermediate-Term Bond</b>																			
Vanguard Total Bond Market Index Adm	VBTLX	5.67	199,724.68	0.05	0.05	3	-	(0.72)	(2.32)	(1.21)	51	1.28	61	2.09	50	3.70	72	3.91	11/12/01
	BBgBarc US Agg Float Adj TR USD							(0.80)	(2.42)	(1.23)		1.35		2.16					
	Intermediate-Term Bond Median			0.82	0.68			(0.83)	(2.33)	(1.26)		1.53		2.12		4.31			
	Intermediate-Term Bond Number of Funds	1085	994	1085	1085	1085				(1.26)	1052	1052	980	980	939	939	829	829	
<b>Inflation-Protected Bond</b>																			
PIMCO Real Return Instl	PRRIX	10.83	10,399.76	0.88	0.88	65	-	(1.61)	(2.65)	0.26	63	2.32	20	1.24	24	3.89	5	5.65	01/29/97
	BBgBarc US Treasury US TIPS TR USD							(1.43)	(2.27)	0.41		2.04		1.37		3.32			
	Inflation-Protected Bond Median			0.81	0.69			(1.41)	(2.31)	0.24		1.82		0.85		2.83			
	Inflation-Protected Bond Number of Funds	238	224	238	238	238				0.24	232	232	226	226	214	214	154	154	
<b>EQUITY</b>																			
<b>Large Cap Blend - Index</b>																			
Vanguard Institutional Index I	VINIX	17.83	235,207.56	0.04	0.04	3	-	(6.84)	2.97	17.86	21	17.27	10	13.92	9	11.96	18	10.04	07/31/90
	S&P 500 TR USD							(6.84)	3.01	17.91		17.31		13.95		11.97			
Vanguard FTSE Social Index Inv	VFTSX	2.83	4,813.01	0.20	0.20	8	-	(6.46)	3.95	18.71	12	17.38	9	14.49	3	12.38	10	4.99	05/31/00
	Spliced Social Index*****							(6.43)	4.11	18.90		17.57		14.73		12.61			
	Russell 3000 TR USD							(7.36)	2.43	17.58		17.07		13.46		12.01			
	Large Blend Median			1.00	0.90			(7.03)	1.16	15.62		15.41		12.29		11.01			
	Large Blend Number of Funds	1346	1277	1346	1346	1346				15.62	1316	1315	1234	1233	1168	1168	1037	1030	
<b>Mid-Cap Blend</b>																			
Vanguard Mid Cap Index Institutional	VMCIX	20.42	102,759.69	0.04	0.04	2	-	(8.39)	(1.65)	13.45	41	13.79	46	11.68	17	12.44	12	10.13	05/21/98
	Spliced Mid Cap Index*							(8.39)	(1.64)	13.44		13.81		11.71		12.46			
	CRSP US Mid Cap TR USD							(8.39)	(1.64)	13.44		13.81		11.71		12.18			
	Mid-Cap Blend Median			1.11	1.00			(9.02)	(3.38)	11.02		12.56		10.00		11.01			
	Mid-Cap Blend Number of Funds	436	412	436	436	436				11.02	433	433	391	391	369	369	312	312	
<b>Small Blend</b>																			
Vanguard Small Cap Index I	VSCIX	2.50	95,352.33	0.04	0.04	2	-	(10.08)	(0.15)	16.72	14	16.35	31	11.49	17	12.39	15	9.37	07/07/97
	Spliced Small Cap Index**							(10.09)	(0.18)	16.68		16.31		11.46		12.30			
	CRSP US Small Cap TR USD							(10.09)	(0.18)	16.68		16.31		11.46		12.90			
	Small Blend Median			1.25	1.12			(10.08)	(2.14)	12.53		14.80		9.94		10.77			
	Small Blend Number of Funds	765	745	765	765	765				12.53	754	754	721	721	642	642	538	538	



# 2018 401(a) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)		(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	
As of 10/31/2018	Ticker	Mgr. Tenure	AUM \$ Millions	Gross ER	Net ER	Net %-ile	Rev Share	Recent Returns		Annualized Total Returns as of 9/30/2018								Since Incep.	Incep. Date	
								1mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile			
<b>Foreign Large Blend</b>																				
	Schwab International Index	SWISX	1.50	4,599.57	0.06	0.06	4	-	(7.99)	(9.00)	2.62	32	9.08	44	4.34	41	4.96	51	4.50	05/19/97
	MSCI EAFE NR USD								(7.96)	(9.28)	2.74		9.23		4.42		5.38			
	Foreign Large Blend Median				1.14	0.99			(8.32)	(10.80)	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		
<b>Diversified Emerging Mkts</b>																				
	Vanguard Emerging Mkts Stock Idx Adm	VEMAX	10.17	79,720.46	0.14	0.14	2	-	(7.59)	(15.76)	(3.10)	47	10.08	55	2.98	45	4.70	50	5.25	06/23/06
	Spliced Emerging Markets Index***								(7.81)	(16.03)	(2.81)		10.23		3.02		4.95			
	FTSE EMs AC China A Inclusion NR USD								(7.81)	(16.05)	(2.84)		10.22		3.47		5.44			
	FTSE Emerging NR USD								(7.49)	(14.59)	(1.23)		11.42		3.68		5.36			
	MSCI EM NR USD								(8.71)	(15.72)	(0.81)		12.36		3.61		5.40			
	Diversified Emerging Mkts Median				1.62	1.30			(8.36)	(17.40)	(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		
<b>Lifecycle</b>																				
	Vanguard Target Retire Inc Trust I				0.07	0.07			(2.64)	(1.42)	3.32		5.42		4.59		5.75		4.98	6/22/2007
	Vanguard Target Retirement Income Composite								(2.68)	(1.40)	3.47		5.55		4.72		5.78			
	Target-Date Retirement Median				0.71				(2.84)	(2.31)	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			(3.42)	(1.66)	4.62		7.26		6.01		7.02		5.06	6/28/2007
	Vanguard Target Retirement 2015 Composite								(3.41)	(1.60)	4.77		7.41		6.13		7.00			
	Target-Date 2015 Median				0.65				(3.73)	(2.20)	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			(4.38)	(2.02)	5.96		8.76		7.03		7.66		5.41	6/22/2007
	Vanguard Target Retirement 2020 Composite								(4.36)	(1.97)	6.11		8.93		7.15		7.75			
	Target-Date 2020 Median				0.71				(4.14)	(2.44)	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			(5.04)	(2.29)	6.89		9.81		7.67		8.08		5.52	6/28/2007
	Vanguard Target Retirement 2025 Composite								(5.04)	(2.23)	7.08		10.00		7.80		8.18			
	Target-Date 2025 Median				0.70				(4.80)	(2.52)	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 401(a) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(I)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
As of 10/31/2018	Mgr. Ticker	Tenure	AUM \$ Millions	Gross ER	Net ER	Net %-ile	Rev Share	Recent Returns		Annualized Total Returns as of 9/30/2018								Since Incep.	Incep. Date
								1mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile		
Vanguard Target Retire 2030 Trust I				0.07	0.07			(5.57)	(2.40)	7.74		10.74		8.23		8.45		5.63	6/28/2007
<i>Vanguard Target Retirement 2030 Composite</i>								(5.58)	(2.38)	7.94		10.95		8.37		8.57			
<i>Target-Date 2030 Median</i>					0.75			(5.53)	(2.82)	6.85		9.94		7.20		7.65			
<i>Target-Date 2030 Number of Funds</i>					267	267				246	246	221	221	197	197	141	141		
Vanguard Target Retire 2035 Trust I				0.07	0.07			(6.09)	(2.55)	8.60		11.68		8.79		8.89		5.86	6/28/2007
<i>Vanguard Target Retirement 2035 Composite</i>								(6.12)	(2.54)	8.80		11.89		8.93		8.99			
<i>Target-Date 2035 Median</i>					0.72			(6.30)	(2.90)	7.98		11.01		7.84		8.20			
<i>Target-Date 2035 Number of Funds</i>					243	243				222	222	198	198	171	171	99	99		
Vanguard Target Retire 2040 Trust I				0.07	0.07			(6.66)	(2.74)	9.46		12.62		9.28		9.24		6.20	6/28/2007
<i>Vanguard Target Retirement 2040 Composite</i>								(6.66)	(2.72)	9.66		12.84		9.44		9.36			
<i>Target-Date 2040 Median</i>					0.77			(6.66)	(3.16)	8.51		11.50		8.21		8.21			
<i>Target-Date 2040 Number of Funds</i>					267	267				246	246	221	221	197	197	141	141		
Vanguard Target Retire 2045 Trust I				0.07	0.07			(7.04)	(2.92)	9.90		12.98		9.48		9.34		6.25	6/28/2007
<i>Vanguard Target Retirement 2045 Composite</i>								(7.03)	(2.86)	10.15		13.22		9.65		9.46			
<i>Target-Date 2045 Median</i>					0.72			(6.99)	(3.14)	9.13		12.14		8.57		8.59			
<i>Target-Date 2045 Number of Funds</i>					243	243				222	222	198	198	171	171	98	98		
Vanguard Target Retire 2050 Trust I				0.07	0.07			(7.03)	(2.89)	9.92		12.98		9.47		9.36		6.31	6/28/2007
<i>Vanguard Target Retirement 2050 Composite</i>								(7.03)	(2.86)	10.15		13.22		9.65		9.46			
<i>Target-Date 2050 Median</i>					0.77			(7.07)	(3.28)	9.18		12.09		8.60		8.55			
<i>Target-Date 2050 Number of Funds</i>					263	263				242	242	217	217	193	193	112	112		
Vanguard Target Retire 2055 Trust I				0.07	0.07			(7.04)	(2.90)	9.95		13.00						10.48	10/5/2010
<i>Vanguard Target Retirement 2055 Composite</i>								(7.03)	(2.86)	10.15		13.22							
<i>Target-Date 2055 Median</i>					0.74			(7.11)	(3.25)	9.38		12.31		8.70		8.65			
<i>Target-Date 2055 Number of Funds</i>					243	243				222	222	196	196	146	146	9	9		
Vanguard Target Retirement 2060 Trust I				0.07	0.07			(7.03)	(2.87)	9.95		13.00		9.45				10.35	3/1/2012
<i>Vanguard Target Retirement 2060 Composite</i>								(7.03)	(2.86)	10.15		13.22		9.65					
<i>Target-Date 2060+ Median</i>					0.75			(7.25)	(3.25)	9.81		12.73		8.82					
<i>Target-Date 2060+ Number of Funds</i>					228	228				195	195	86	86	9	9	0	0		
Vanguard Target Retirement 2065 Trust I				0.07	0.07			(7.02)	(2.80)	9.96								12.77	7/7/2017
<i>Vanguard Target Retirement 2060 Composite</i>								(7.03)	(2.86)	10.15									
<i>Target-Date 2060+ Median</i>					0.75			(7.25)	(3.25)	9.81		12.73		8.82					
<i>Target-Date 2060+ Number of Funds</i>					228	228				195	195	86	86	9	9	0	0		



# 2018 401(a) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
As of 10/31/2018	Mgr. Ticker	Tenure	AUM \$ Millions	Gross ER	Net ER	Net %-ile	Rev Share	Recent Returns		Annualized Total Returns as of 9/30/2018						Since Incep.	Incep. Date		
								1mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile		

Source: Morningstar & TIAA-CREF

Morningstar Analyst Assigned Benchmark"

Data for 1-month and YTD return as of 10/31/2018. All other data as of 9/30/2018.

**VA = Variable Annuity**

Since Incep. = Since Inception Date

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

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

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

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

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

"Since Inception" performance is calculated from this date.

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

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

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

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

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

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

**State of Rhode Island**  
**Market Value as of 10/31/2018**  
**Plan Balance Summary**

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

<i><b>Ticker</b></i>	<i><b>Investment Name</b></i>	<i><b>Asset Class Description</b></i>	<i><b>Current Account Balance Amount</b></i>
PRRIX	PIMCO Real Return Inst Class	Fixed Income	\$5,462,931.83
SWISX	Schwab International Index Fd	Equities	\$6,218,429.73
TSVX#	TIAA STABLE VALUE	Guaranteed	\$12,019,307.36
VBTLX	Vanguard Ttl Bd Mkt Idx Adm	Fixed Income	\$6,124,648.98
VEMAX	Vanguard Emr Mkts Stk Idx Adm	Equities	\$4,449,352.65
VFTSX	Vanguard FTSE Social Index Inv	Equities	\$2,324,050.34
VINIX	Vanguard Inst Idx Inst	Equities	\$26,475,547.73
VMCIX	Vanguard Mid-Cap Idx Inst	Equities	\$10,090,392.89
VSCIX	Vanguard Small-Cap Idx Inst	Equities	\$10,455,280.55
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	\$38,257,334.88
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	\$92,885,625.51
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	\$114,931,968.24
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	\$123,244,290.94
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	\$134,549,879.20
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	\$108,537,485.74
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	\$81,580,133.04
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	\$48,045,096.71
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	\$19,022,279.66
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	\$2,650,721.28
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	\$147,966.76
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	\$10,732,446.72
			<b>\$858,205,170.74</b>



**State of Rhode Island**  
**Market Value as of 10/31/2018**  
**Plan Balance Summary**

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

<b>Ticker</b>	<b>Investment Name</b>	<b>Asset Class Description</b>	<b>Current Account Balance Amount</b>
TSVX#	TIAA STABLE VALUE	Guaranteed	\$4,245.89
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	\$12,192.05
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	\$1,354,408.81
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	\$141,507.82
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	\$160,934.40
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	\$89,077.42
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	\$66,891.45
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	\$96,725.02
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	\$103,290.69
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	\$219,691.88
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	\$554,036.53
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	\$71,406.64
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	\$12,178.24
			<b>\$2,886,586.84</b>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## **Prospectus Gross Expense Ratio**

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

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

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

## **Prospectus Net Expense Ratio**

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

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

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

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

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

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

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

## Section XV.

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457 Plans



# 2018 457(b) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)		(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
As of 10/31/2018	Mgr. Ticker	Tenure	AUM \$ Millions	Gross ER	Net ER	Net %ile	Rev Share	Recent Returns		Annualized Total Returns as of 9/30/2018								Since Incep.	Incep. Date
								1mo.	YTD	1 Year	%ile	3 Year	%ile	5 Year	%ile	10 Year	%ile		
TIAA Traditional RCP								0.28	2.80	3.33		3.45		3.50		3.52		3.72	06/01/06
<b>FIXED INCOME</b>																			
<b>Intermediate-Term Bond</b>																			
PIMCO Total Return Instl	PTTRX	4.08	70,033.20	0.55	0.55	38	-	(0.27)	(1.89)	(1.52)	72	2.16	25	2.27	41	5.08	16	7.09	05/11/87
	<i>BBgBarc US Agg Bond TR USD</i>							(0.79)	(2.38)	(1.22)		1.31		2.16		3.77			
Vanguard Total Bond Market Index Adm	VBTLX	5.67	199,724.68	0.05	0.05	3	-	(0.72)	(2.32)	(1.21)	51	1.28	61	2.09	50	3.70	72	3.91	11/12/01
	<i>BBgBarc US Agg Float Adj TR USD</i>							(0.80)	(2.42)	(1.23)		1.35		2.16					
	<i>Intermediate-Term Bond Median</i>			0.82	0.68			(0.83)	(2.33)	(1.26)		1.53		2.12		4.31			
	<i>Intermediate-Term Bond Number of Funds</i>	1085	994	1085	1085	1085					1052	1052	980	980	939	939	829	829	
<b>Inflation-Protected Bond</b>																			
American Century Inflation-Adjs Bond R6	AIADX	16.92	2,798.65	0.22	0.22	9	-	(1.86)	(3.07)	0.10	72	1.93	43	0.97	43	2.96	45	0.38	07/28/17
	<i>BBgBarc US Treasury US TIPS TR USD</i>							(1.43)	(2.27)	0.41		2.04		1.37		3.32			
	<i>Inflation-Protected Bond Median</i>			0.81	0.69			(1.41)	(2.31)	0.24		1.82		0.85		2.83			
	<i>Inflation-Protected Bond Number of Funds</i>	238	224	238	238	238					232	232	226	226	214	214	154	154	
<b>EQUITY</b>																			
<b>Large Cap Blend - Index</b>																			
Vanguard Institutional Index I	VINIX	17.83	235,207.56	0.04	0.04	3	-	(6.84)	2.97	17.86	21	17.27	10	13.92	9	11.96	18	10.04	07/31/90
	<i>S&amp;P 500 TR USD</i>							(6.84)	3.01	17.91		17.31		13.95		11.97			
Vanguard FTSE Social Index Inv	VFTSX	2.83	4,813.01	0.20	0.20	8	-	(6.46)	3.95	18.71	12	17.38	9	14.49	3	12.38	10	4.99	05/31/00
	<i>Spliced Social Index***</i>							(6.43)	4.11	18.90		17.57		14.73		12.61			
	<i>Russell 3000 TR USD</i>							(7.36)	2.43	17.58		17.07		13.46		12.01			
	<i>Large Blend Median</i>			1.00	0.90			(7.03)	1.16	15.62		15.41		12.29		11.01			
	<i>Large Blend Number of Funds</i>	1346	1277	1346	1346	1346					1316	1315	1234	1233	1168	1168	1037	1030	
<b>Mid-Cap Blend</b>																			
Vanguard Mid Cap Index Institutional	VMCIX	20.42	102,759.69	0.04	0.04	2	-	(8.39)	(1.65)	13.45	41	13.79	46	11.68	17	12.44	12	10.13	05/21/98
	<i>Spliced Mid Cap Index*</i>							(8.39)	(1.64)	13.44		13.81		11.71		12.46			
	<i>CRSP US Mid Cap TR USD</i>							(8.39)	(1.64)	13.44		13.81		11.71		12.18			
	<i>Mid-Cap Blend Median</i>			1.11	1.00			(9.02)	(3.38)	11.02		12.56		10.00		11.01			
	<i>Mid-Cap Blend Number of Funds</i>	436	412	436	436	436					433	433	391	391	369	369	312	312	



# 2018 457(b) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(I)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
As of 10/31/2018	Ticker	Mgr. Tenure	AUM \$ Millions	Gross ER	Net ER	Net %-ile	Rev Share	Recent Returns		Annualized Total Returns as of 9/30/2018								Since Incep.	Incep. Date
								1mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile		
<b>Small Blend</b>																			
Vanguard Small Cap Index I	VSCIX	2.50	95,352.33	0.04	0.04	2	-	(10.08)	(0.15)	16.72	14	16.35	31	11.49	17	12.39	15	9.37	07/07/97
	<i>Spliced Small Cap Index**</i>							(10.09)	(0.18)	16.68		16.31		11.46		12.30			
	<i>CRSP US Small Cap TR USD</i>							(10.09)	(0.18)	16.68		16.31		11.46		12.90			
	<i>Small Blend Median</i>			1.25	1.12			(10.08)	(2.14)	12.53		14.80		9.94		10.77			
	<i>Small Blend Number of Funds</i>	765	745	765	765	765				754	754	721	721	642	642	538	538		
<b>Foreign Large Blend</b>																			
Schwab International Index	SWISX	1.50	4,599.57	0.06	0.06	4	-	(7.99)	(9.00)	2.62	32	9.08	44	4.34	41	4.96	51	4.50	05/19/97
	<i>MSCI EAFE NR USD</i>							(7.96)	(9.28)	2.74		9.23		4.42		5.38			
	<i>Foreign Large Blend Median</i>			1.14	0.99			(8.32)	(10.80)	1.07		8.47		3.94		4.96			
	<i>Foreign Large Blend Number of Funds</i>	777	718	777	777	777				758	758	704	704	639	639	527	527		
<b>Foreign Large Growth</b>																			
American Funds Europacific Growth R6	RERGX	26.83	162,581.07	0.49	0.49	3	-	(9.18)	(11.58)	1.47	79	9.93	50	6.20	28	6.83	33	9.49	05/01/09
	<i>MSCI ACWI Ex USA NR USD</i>							(8.13)	(10.97)	1.76		9.97		4.12		5.18		4.91	
	<i>Foreign Large Growth Median</i>			1.23	1.09			(9.18)	(11.58)	3.68		9.61		5.54		6.40			
	<i>Foreign Large Growth Number of Funds</i>	435	402	435	435	435				429	429	386	386	374	374	316	306		
<b>Lifecycle</b>																			
Vanguard Target Retire Inc Trust I				0.07	0.07			(2.64)	(1.42)	3.32		5.42		4.59		5.75		4.98	6/22/2007
	<i>Vanguard Target Retirement Income Composite</i>							(2.68)	(1.40)	3.47		5.55		4.72		5.78			
	<i>Target-Date Retirement Median</i>			0.71				(2.84)	(2.31)	2.69		5.12		3.94		5.22			
	<i>Target-Date Retirement Number of Funds</i>			209	209					194	194	182	182	163	163	127	127		
Vanguard Target Retire 2015 Trust I				0.07	0.07			(3.42)	(1.66)	4.62		7.26		6.01		7.02		5.06	6/28/2007
	<i>Vanguard Target Retirement 2015 Composite</i>							(3.41)	(1.60)	4.77		7.41		6.13		7.00			
	<i>Target-Date 2015 Median</i>			0.65				(3.73)	(2.20)	4.11		7.22		5.57		6.67			
	<i>Target-Date 2015 Number of Funds</i>			160	160					141	141	124	124	100	100	69	69		
Vanguard Target Retire 2020 Trust I				0.07	0.07			(4.38)	(2.02)	5.96		8.76		7.03		7.66		5.41	6/22/2007
	<i>Vanguard Target Retirement 2020 Composite</i>							(4.36)	(1.97)	6.11		8.93		7.15		7.75			
	<i>Target-Date 2020 Median</i>			0.71				(4.14)	(2.44)	4.58		7.56		5.79		6.69			
	<i>Target-Date 2020 Number of Funds</i>			278	278					257	257	231	231	207	207	151	151		
Vanguard Target Retire 2025 Trust I				0.07	0.07			(5.04)	(2.29)	6.89		9.81		7.67		8.08		5.52	6/28/2007
	<i>Vanguard Target Retirement 2025 Composite</i>							(5.04)	(2.23)	7.08		10.00		7.80		8.18			
	<i>Target-Date 2025 Median</i>			0.70				(4.80)	(2.52)	5.79		8.84		6.54		7.38			
	<i>Target-Date 2025 Number of Funds</i>			248	248					227	227	203	203	176	176	104	104		



# 2018 457(b) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)		(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
As of 10/31/2018	Mgr. Ticker	Tenure	AUM \$ Millions	Gross ER	Net ER	Net %-ile	Rev Share	Recent Returns		Annualized Total Returns as of 9/30/2018								Since Incep.	Incep. Date
								1mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile		
Vanguard Target Retire 2030 Trust I				0.07	0.07			(5.57)	(2.40)	7.74		10.74		8.23		8.45		5.63	6/28/2007
<i>Vanguard Target Retirement 2030 Composite</i>								(5.58)	(2.38)	7.94		10.95		8.37		8.57			
<i>Target-Date 2030 Median</i>					0.75			(5.53)	(2.82)	6.85		9.94		7.20		7.65			
<i>Target-Date 2030 Number of Funds</i>					267	267				246	246	221	221	197	197	141	141		
Vanguard Target Retire 2035 Trust I				0.07	0.07			(6.09)	(2.55)	8.60		11.68		8.79		8.89		5.86	6/28/2007
<i>Vanguard Target Retirement 2035 Composite</i>								(6.12)	(2.54)	8.80		11.89		8.93		8.99			
<i>Target-Date 2035 Median</i>					0.72			(6.30)	(2.90)	7.98		11.01		7.84		8.20			
<i>Target-Date 2035 Number of Funds</i>					243	243				222	222	198	198	171	171	99	99		
Vanguard Target Retire 2040 Trust I				0.07	0.07			(6.66)	(2.74)	9.46		12.62		9.28		9.24		6.20	6/28/2007
<i>Vanguard Target Retirement 2040 Composite</i>								(6.66)	(2.72)	9.66		12.84		9.44		9.36			
<i>Target-Date 2040 Median</i>					0.77			(6.66)	(3.16)	8.51		11.50		8.21		8.21			
<i>Target-Date 2040 Number of Funds</i>					267	267				246	246	221	221	197	197	141	141		
Vanguard Target Retire 2045 Trust I				0.07	0.07			(7.04)	(2.92)	9.90		12.98		9.48		9.34		6.25	6/28/2007
<i>Vanguard Target Retirement 2045 Composite</i>								(7.03)	(2.86)	10.15		13.22		9.65		9.46			
<i>Target-Date 2045 Median</i>					0.72			(6.99)	(3.14)	9.13		12.14		8.57		8.59			
<i>Target-Date 2045 Number of Funds</i>					243	243				222	222	198	198	171	171	98	98		
Vanguard Target Retire 2050 Trust I				0.07	0.07			(7.03)	(2.89)	9.92		12.98		9.47		9.36		6.31	6/28/2007
<i>Vanguard Target Retirement 2050 Composite</i>								(7.03)	(2.86)	10.15		13.22		9.65		9.46			
<i>Target-Date 2050 Median</i>					0.77			(7.07)	(3.28)	9.18		12.09		8.60		8.55			
<i>Target-Date 2050 Number of Funds</i>					263	263				242	242	217	217	193	193	112	112		
Vanguard Target Retire 2055 Trust I				0.07	0.07			(7.04)	(2.90)	9.95		13.00						10.48	10/5/2010
<i>Vanguard Target Retirement 2055 Composite</i>								(7.03)	(2.86)	10.15		13.22							
<i>Target-Date 2055 Median</i>					0.74			(7.11)	(3.25)	9.38		12.31		8.70		8.65			
<i>Target-Date 2055 Number of Funds</i>					243	243				222	222	196	196	146	146	9	9		
Vanguard Target Retirement 2060 Trust I				0.07	0.07			(7.03)	(2.87)	9.95		13.00		9.45				10.35	3/1/2012
<i>Vanguard Target Retirement 2060 Composite</i>								(7.03)	(2.86)	10.15		13.22		9.65					
<i>Target-Date 2060+ Median</i>					0.75			(7.25)	(3.25)	9.81		12.73		8.82					
<i>Target-Date 2060+ Number of Funds</i>					228	228				195	195	86	86	9	9	0	0		
Vanguard Target Retirement 2065 Trust I				0.07	0.07			(7.02)	(2.80)	9.96								12.77	7/7/2017
<i>Vanguard Target Retirement 2060 Composite</i>								(7.03)	(2.86)	10.15									
<i>Target-Date 2060+ Median</i>					0.75			(7.25)	(3.25)	9.81		12.73		8.82					
<i>Target-Date 2060+ Number of Funds</i>					228	228				195	195	86	86	9	9	0	0		





# 2018 457(b) Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)		(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)
As of 10/31/2018	Ticker	Mgr. Tenure	AUM \$ Millions	Gross ER	Net ER	Net %-ile	Rev Share	Recent Returns		Annualized Total Returns as of 9/30/2018						Since Incep.	Incep. Date		
								1mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile		

Source: Morningstar & TIAA-CREF

Data for 1-month and YTD return as of 10/31/2018. 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

"Since Inception" performance is calculated from this date.

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

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

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

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

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

**State of Rhode Island**  
**Market Value as of 10/31/2018**  
**Plan Balance Summary**

457(b) - Plan 407359

State of Rhode Island 457(b) Deferred Compensation Plan

<b>Ticker</b>	<b>Investment Name</b>	<b>Asset Class Description</b>	<b>Current Account Balance Amount</b>
AIADX	American Century Inf Adj Bd R6	Fixed Income	\$533,950.02
PTRX	PIMCO Total Return Instl	Fixed Income	\$585,637.52
RERGX	American EuroPac Growth R6	Equities	\$1,465,592.76
SWISX	Schwab International Index Fd	Equities	\$218,404.23
TIAA#	TIAA Traditional Benefit Responsive 2	Guaranteed	\$6,079,515.58
VBTLX	Vanguard Ttl Bd Mkt Idx Adm	Fixed Income	\$152,459.82
VFTSX	Vanguard FTSE Social Index Inv	Equities	\$266,678.37
VINIX	Vanguard Inst Idx Inst	Equities	\$9,326,328.50
VLC1#	VALIC Fixed-Interest Opt 3%	Guaranteed	\$6,606,524.09
VLC2#	VALIC Fixed-Interest Opt 1.5%	Guaranteed	\$37,411.64
VMCIX	Vanguard Mid-Cap Idx Inst	Equities	\$4,750,432.94
VSCIX	Vanguard Small-Cap Idx Inst	Equities	\$2,938,529.01
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	\$10,617.89
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	\$553,205.16
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	\$92,054.32
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	\$514,840.93
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	\$215,582.92
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	\$23,371.59
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	\$60,178.23
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	\$62,558.04
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	\$3,104.67
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	\$1,813.02
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	\$380.06
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	\$54,395.43
			<b>\$34,553,567.74</b>



## Disclosures

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**BUILT TO PERFORM.**

**CREATED TO SERVE.**

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

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

## **Prospectus Gross Expense Ratio**

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

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

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

## **Prospectus Net Expense Ratio**

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

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

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

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

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

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

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# Investment Performance and Rankings Report | STATE OF RI

Compiled as of: December 07, 2018

**Understanding investment performance:** As you review this update, please remember that the performance data stated represents past performance, which does not guarantee future results. Investment return and principal value of an investment will fluctuate; therefore, you may have a gain or loss when you sell your shares. Current performance may be higher or lower than the performance stated. To learn more or to obtain the most recent month-end performance, call Fidelity or visit www.401k.com (log in, choose plan, select Investment Choices & Research, and then pick investment option.).

Monthly Data As Of: 10/31/2018

Product Name	Ticker	Monthly Average Annual Returns 1 Year	Monthly (Count) Rank 1 Year	Monthly Average Annual Returns 3 Year	Monthly (Count) Rank 3 Year	Monthly Average Annual Returns 5 Year	Monthly (Count) Rank 5 Year	Monthly Average Annual Returns 10 Year	Monthly (Count) Rank 10 Year	Monthly Average Annual Returns LOF	Inception Date	Short-term Trading fee (%/days)	Gross Expense Ratio	Gross Expense Ratio Date	Net Expense Ratio	Net Expense Ratio Date
Asset Class: Bond																
Morningstar Category: Intermediate-Term Bond		-1.87%	(1027)	1.30%	(887)	1.79%	(785)	4.55%	(568)				1.83%	10/31/2018	0.76%	10/31/2018
Fidelity® U.S. Bond Index Fund	FXNAX	-2.05%	53%	0.96%	65%	1.79%	48%	3.83%	75%	5.76%	03/08/1990	None	0.03%	11/29/2018	0.03%	11/29/2018
<i>BBgBarc U.S. Agg Bond</i>		-2.05%		1.04%		1.83%		3.94%		5.83%						
PIMCO Total Return Fund Institutional Class	PTTRX	-1.59%	31%	1.81%	24%	2.02%	33%	5.14%	26%	7.06%	05/11/1987	None	0.55%	08/24/2018	0.55%	08/24/2018
<i>BBgBarc U.S. Agg Bond</i>		-2.05%		1.04%		1.83%		3.94%		6.13%						
Asset Class: Domestic Equities																
Morningstar Category: Large Blend		5.28%	(1412)	9.73%	(1218)	9.44%	(1084)	12.14%	(817)				2.75%	10/31/2018	0.96%	10/31/2018
Fidelity® 500 Index Fund	FXAIX	7.33%	21%	11.51%	11%	11.33%	9%	13.23%	19%	10.20%	02/17/1988	None	0.02%	04/28/2018	0.02%	04/28/2018
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		10.35%						
Fidelity® Large Cap Stock Fund	FLCSX	7.10%	28%	11.12%	27%	9.82%	51%	14.97%	2%	8.56%	06/22/1995	None	0.67%	06/29/2018	0.67%	06/29/2018
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		9.11%						
Vanguard FTSE Social Index Fund Investor Shares	VFTSX	8.02%	17%	11.91%	6%	12.02%	3%	14.05%	8%	4.59%	05/31/2000	None	0.20%	12/21/2017	0.20%	12/21/2017
<i>DJ US Total Stk Mkt</i>		6.56%		11.24%		10.76%		13.36%		6.13%						
<i>FTSE USA Permissible</i>		8.22%		12.10%		N/A		N/A		N/A						
Morningstar Category: Large Growth		8.70%	(1427)	11.25%	(1253)	11.05%	(1120)	13.73%	(811)				1.90%	10/31/2018	1.09%	10/31/2018
Fidelity® Contrafund® - Class K	FCNKX	7.57%	62%	12.79%	26%	12.23%	35%	14.23%	40%	12.49%	05/17/1967	None	0.65%	03/01/2018	0.65%	03/01/2018
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		N/A						
Morningstar Category: Large Value		3.34%	(1249)	8.69%	(1089)	8.03%	(932)	11.13%	(678)				1.24%	10/31/2018	1.01%	10/31/2018
Invesco Diversified Dividend Fund Class R6	LCEFX	0.07%	86%	6.17%	91%	7.80%	59%	11.20%	48%	7.56%	12/31/2001	None	0.44%	02/28/2018	0.42%	02/28/2018
<i>Russell 1000 Value</i>		3.03%		8.88%		8.61%		11.30%		7.30%						
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		7.38%						
Morningstar Category: Mid-Cap Blend		0.61%	(465)	7.47%	(382)	6.95%	(341)	12.30%	(241)				1.28%	10/31/2018	1.06%	10/31/2018
Fidelity® Mid Cap Index Fund	FSMDX	2.72%	29%	9.02%	39%	8.94%	14%	N/A	N/A	13.14%	09/08/2011	None	0.03%	08/01/2018	0.03%	08/01/2018
<i>Russell MidCap</i>		2.79%		9.04%		8.97%		14.19%		13.18%						
Morningstar Category: Mid-Cap Value		-0.20%	(412)	7.44%	(363)	6.70%	(306)	12.13%	(220)				2.39%	10/31/2018	1.12%	10/31/2018
Fidelity® Low-Priced Stock Fund - Class K	FLPKX	1.07%	35%	7.41%	50%	7.20%	40%	13.73%	17%	13.36%	12/27/1989	None	0.53%	09/29/2018	0.53%	09/29/2018
<i>Russell 2000</i>		1.85%		10.68%		8.01%		12.44%		9.50%						
Morningstar Category: Small Blend		-0.07%	(784)	8.86%	(653)	6.75%	(542)	12.10%	(395)				2.73%	10/31/2018	1.17%	10/31/2018

Fidelity® Small Cap Index Fund <i>Russell 2000</i>	FSSNX	1.97% 1.85%	32%	10.90% 10.68%	19%	8.24% 8.01%	23%	N/A 12.44%	N/A	13.19% 13.02%	09/08/2011	None	0.03%	08/01/2018	0.03%	08/01/2018
Asset Class: International/Global																
Morningstar Category: Foreign Large Blend																
Fidelity® International Index Fund <i>MSCI EAFE (Net MA)</i>	FSPSX	-7.11% -6.65%	30%	3.89% 3.84%	40%	2.12% 2.21%	32%	6.90% 7.06%	37%	4.60% 4.75%	11/05/1997	None	0.05%	04/28/2018	0.05%	04/28/2018
Harbor International Fund Institutional Class <i>MSCI EAFE (N)</i> <i>MSCI AC Wid ex US (N)</i>	HAINX	-11.33% -6.85% -8.24%	88%	0.31% 3.62% 4.37%	97%	-0.45% 2.02% 1.63%	92%	6.38% 6.89% 6.92%	55%	9.98% 5.14% N/A	12/29/1987	None	0.81%	03/01/2018	0.72%	03/01/2018
Asset Class: Stable Value																
Morningstar Category: Stable Value																
T. Rowe Price Stable Value Common Trust Fund A <i>FTSE 3-Mo Treasury Bill</i>		2.04% 1.67%	N/A	1.89% 0.86%	N/A	1.92% 0.53%	N/A	2.57% 0.33%	N/A	4.81% 3.05%	09/12/1988	None	0.30%	12/31/2015		%
Asset Class: Target Date																
Morningstar Category: Target-Date 2000-2010																
Fidelity Freedom® 2005 Fund - Class K <i>BBgBarc U.S. Agg Bond</i> <i>FID FF 2005 Comp Idx</i>	FSNJX	-0.63% -2.05% 0.34%	56%	4.23% 1.04% 3.91%	51%	3.93% 1.83% 3.91%	46%	6.51% 3.94% 6.34%	83%	4.65% 3.82% 4.94%	11/06/2003	None	0.43%	05/30/2018	0.43%	05/30/2018
Fidelity Freedom® 2010 Fund - Class K <i>BBgBarc U.S. Agg Bond</i> <i>FID FF 2010 Comp Idx</i>	FSNKX	-0.52% -2.05% 0.52%	41%	4.92% 1.04% 4.64%	7%	4.51% 1.83% 4.54%	8%	7.40% 3.94% 7.41%	37%	6.26% 4.92% 6.42%	10/17/1996	None	0.46%	05/30/2018	0.46%	05/30/2018
Morningstar Category: Target-Date 2015																
Fidelity Freedom® 2015 Fund - Class K <i>BBgBarc U.S. Agg Bond</i> <i>FID FF 2015 Comp Idx</i>	FSNLX	-0.46% -2.05% 0.70%	50%	5.56% 1.04% 5.40%	1%	5.05% 1.83% 5.13%	6%	7.78% 3.94% 7.86%	51%	5.59% 3.82% 6.05%	11/06/2003	None	0.50%	05/30/2018	0.50%	05/30/2018
Morningstar Category: Target-Date 2020																
Fidelity Freedom® 2020 Fund - Class K <i>S&amp;P 500</i> <i>FID FF 2020 Comp Idx</i>	FSNOX	-0.48% 7.35% 0.79%	45%	5.99% 11.52% 5.90%	3%	5.42% 11.34% 5.55%	4%	8.35% 13.24% 8.58%	35%	6.56% 8.30% 6.75%	10/17/1996	None	0.54%	05/30/2018	0.54%	05/30/2018
Morningstar Category: Target-Date 2025																
Fidelity Freedom® 2025 Fund - Class K <i>S&amp;P 500</i> <i>FID FF 2025 Comp Idx</i>	FSNPX	-0.54% 7.35% 0.86%	58%	6.33% 11.52% 6.35%	7%	5.80% 11.34% 6.05%	10%	8.93% 13.24% 9.40%	40%	6.15% 8.69% 6.87%	11/06/2003	None	0.57%	05/30/2018	0.57%	05/30/2018
Morningstar Category: Target-Date 2030																
Fidelity Freedom® 2030 Fund - Class K <i>S&amp;P 500</i> <i>FID FF 2030 Comp Idx</i>	FSNQX	-0.39% 7.35% 1.19%	47%	7.33% 11.52% 7.47%	1%	6.55% 11.34% 6.85%	5%	9.37% 13.24% 9.96%	34%	6.72% 8.30% 7.00%	10/17/1996	None	0.61%	05/30/2018	0.61%	05/30/2018
Morningstar Category: Target-Date 2035																



Fidelity Freedom® 2035 Fund - Class K	FSNUX	-0.29%	52%	8.01%	5%	7.03%	4%	9.82%	39%	6.60%	11/06/2003	None	0.64%	05/30/2018	0.64%	05/30/2018
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		8.69%						
<i>FID FF 2035 Comp Idx</i>		1.54%		8.36%		7.45%		10.67%		7.53%						
Morningstar Category: Target-Date 2040		-0.34%	(241)	6.92%	(194)	5.92%	(161)	9.60%	(98)				1.78%	10/31/2018	0.82%	10/31/2018
Fidelity Freedom® 2040 Fund - Class K	FSNVX	-0.22%	48%	8.10%	4%	7.08%	5%	9.88%	35%	3.89%	09/06/2000	None	0.65%	05/30/2018	0.65%	05/30/2018
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		5.39%						
<i>FID FF 2040 Comp Idx</i>		1.52%		8.40%		7.48%		10.79%		5.16%						
Morningstar Category: Target-Date 2045		-0.19%	(215)	7.23%	(174)	6.15%	(136)	9.95%	(66)				2.45%	10/31/2018	0.79%	10/31/2018
Fidelity Freedom® 2045 Fund - Class K	FSNZX	-0.25%	54%	8.06%	8%	7.07%	10%	9.95%	48%	5.64%	06/01/2006	None	0.65%	05/30/2018	0.65%	05/30/2018
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		8.45%						
<i>FID FF 2045 Comp Idx</i>		1.52%		8.40%		7.49%		10.88%		6.66%						
Morningstar Category: Target-Date 2050		-0.40%	(237)	7.22%	(189)	6.16%	(156)	9.77%	(75)				1.76%	10/31/2018	0.83%	10/31/2018
Fidelity Freedom® 2050 Fund - Class K	FNSBX	-0.27%	47%	8.08%	10%	7.08%	10%	9.96%	45%	5.48%	06/01/2006	None	0.65%	05/30/2018	0.65%	05/30/2018
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		8.45%						
<i>FID FF 2050 Comp Idx</i>		1.52%		8.40%		7.50%		10.97%		6.56%						
Morningstar Category: Target-Date 2055		-0.20%	(218)	7.38%	(172)	6.36%	(112)	10.54%	(9)				3.36%	10/31/2018	0.79%	10/31/2018
Fidelity Freedom® 2055 Fund - Class K	FNSDX	-0.22%	54%	8.08%	13%	7.08%	14%	N/A	N/A	7.61%	06/01/2011	None	0.65%	05/30/2018	0.65%	05/30/2018
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		12.58%						
<i>FID FF 2055 Comp Idx</i>		1.52%		8.40%		7.52%		N/A		8.93%						
Morningstar Category: Target-Date 2060+		-0.16%	(189)	7.60%	(75)	6.05%	(9)						9.16%	10/31/2018	0.80%	10/31/2018
Fidelity Freedom® 2060 Fund - Class K	FNSFX	-0.27%	55%	8.05%	27%	N/A	N/A	N/A	N/A	6.73%	08/05/2014	None	0.65%	05/30/2018	0.65%	05/30/2018
<i>S&amp;P 500</i>		7.35%		11.52%		11.34%		13.24%		10.73%						
<i>FID FF 2060 Comp Idx</i>		1.52%		8.40%		N/A		N/A		6.88%						
Morningstar Category: Target-Date Retirement		-0.89%	(189)	3.34%	(163)	3.03%	(137)	5.89%	(94)				3.14%	10/31/2018	0.78%	10/31/2018
Fidelity Freedom® Income Fund - Class K	FNSHX	-0.72%	40%	3.39%	50%	3.11%	50%	4.98%	85%	4.62%	10/17/1996	None	0.42%	05/30/2018	0.42%	05/30/2018
<i>BBgBarc U.S. Agg Bond</i>		-2.05%		1.04%		1.83%		3.94%		4.92%						
<i>FID FF Income Comp Idx</i>		0.10%		2.99%		3.02%		4.44%		4.67%						

**Footnotes**

Fund line-up as of 12/07/2018

Last categorization update date 10/31/2018

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. These figures do not include the effect of sales charges, if any, as these charges are waived for contributions made through your company's employee benefit plans. If sales charges were included, returns would have been lower.

Indices are unmanaged and you cannot invest directly in an index.

Morningstar, Inc., provided data on the non-Fidelity mutual funds. Although the data is gathered from reliable sources, accuracy and completeness cannot be guaranteed by Morningstar.

The Morningstar Category Average is the average return for the peer group based on the returns of each individual fund within the group, for the period shown. This average assumes reinvestment of dividends and capital gains, if any, and excludes sales charges.

% Rank in Category is the fund's total-return percentile rank relative to all funds that have the same Morningstar Category. The highest (or most favorable) percentile rank is one and the lowest (or least favorable) percentile rank is 100. The top-performing fund in a category will always receive a rank of one. The number in parentheses represents the number of funds in the category. % Rank in Category is based on total returns, which include reinvested dividends and capital gains, if any, and exclude sales charges.

With the exception of domestic equity mutual funds, investment options have been assigned to investment categories based on Fidelity's analysis. Fidelity has verified the accuracy of the placement of certain third party non-mutual funds with either the plan sponsor or the plan sponsor's consultant. Within Domestic Equities, mutual funds are listed according to their actual Morningstar categories as of the date indicated. Morningstar categories are based on a fund's style as measured by its underlying portfolio holdings over the past 3 years and may change at any time. These style calculations do not represent the funds' objectives and do not predict the funds' future styles.

Fidelity Freedom® 2005 Fund - Class K, Fidelity Freedom® 2035 Fund - Class K, Fidelity Freedom® Income Fund - Class K: On July 20, 2017, an initial offering of the Fidelity Freedom K class took place. Returns and expenses prior to that date are those of the Freedom (retail) class. Had K class expenses been reflected in the returns shown, total returns would have been higher.

Fidelity Freedom® 2010 Fund - Class K, Fidelity Freedom® 2015 Fund - Class K, Fidelity Freedom® 2020 Fund - Class K, Fidelity Freedom® 2025 Fund - Class K, Fidelity Freedom® 2030 Fund - Class K, Fidelity Freedom® 2040 Fund - Class K, Fidelity Freedom® 2045 Fund - Class K, Fidelity Freedom® 2050 Fund - Class K, Fidelity Freedom® 2055 Fund - Class K, Fidelity Freedom® 2060 Fund - Class K: On July 20, 2017, an initial offering of the Fidelity Freedom K class took place. Returns and expenses prior to that date are those of the Freedom (retail) class. Had K class expenses been reflected in the returns shown, total returns would have been higher.

T. Rowe Price Stable Value Common Trust Fund A: This investment option is not a mutual fund.

Fidelity® 500 Index Fund: As of 11/05/2018, this fund changed its name from Fidelity 500 Index Fund - Institutional Premium Class.

Fidelity® Mid Cap Index Fund: As of 11/12/2018, this fund changed its name from Fidelity Mid Cap Index Fund - Institutional Premium Class.

Fidelity® U.S. Bond Index Fund: As of 11/05/2018, this fund changed its name from Fidelity U.S. Bond Index Fund - Institutional Premium Class.

Fidelity® Small Cap Index Fund: As of 11/12/2018, this fund changed its name from Fidelity Small Cap Index Fund - Institutional Premium Class.

Fidelity® International Index Fund: As of 11/05/2018, this fund changed its name from Fidelity International Index Fund - Institutional Premium Class.

Invesco Diversified Dividend Fund Class R6: The analysis on these pages may be based, in part, on adjusted historical returns for periods prior to the class's actual inception of 09/24/2012. These calculated returns reflect the historical performance of the oldest share class of the fund, with an inception date of 12/31/2001, adjusted to reflect the fees and expenses of this share class (when this share class's fees and expenses are higher.) Please refer to a fund's prospectus for information regarding fees and expenses. These adjusted historical returns are not actual returns. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

Fidelity® 500 Index Fund, Fidelity® U.S. Bond Index Fund: Returns prior to May 4, 2011 are those of the Premium Class and reflect the Premium Class' expense ratio. Had the Institutional Premium Class' expense ratio been reflected, total returns would have been higher.

Fidelity® International Index Fund: Returns prior to September 8, 2011 are those of the Premium Class and reflect the Premium Class' expense ratio. Had the Institutional Premium Class' expense ratio been reflected, total returns would have been higher.

Fidelity® Contrafund® - Class K: On May 9, 2008, an initial offering of the retirement (K) class took place. Returns and expenses prior to that date are those of the non-K, non-advisor class. Had K class expenses been reflected in the returns shown, total returns would have been higher.

Fidelity® Low-Priced Stock Fund - Class K: On May 9, 2008, an initial offering of the retirement (K) class took place. Returns and expenses prior to that date are those of the non-K, non-advisor class. Had K class expenses been reflected in the returns shown, total returns would have been higher.

#### Expense Ratio Footnotes

For a mutual fund, the expense ratio is the total annual fund or class operating expenses (before waivers or reimbursements) paid by the fund and stated as a percent of the fund's total net assets. Where the investment option is not a mutual fund, the figure displayed in the expense ratio field is intended to reflect similar information. However, it may have been calculated using methodologies that differ from those used for mutual funds. Mutual fund data has been drawn from the most recent prospectus. For non-mutual fund investment options, the information has been provided by the trustee or plan sponsor. When no ratio is shown for these options it is due to the fact that none was available. Nevertheless, there may be fees and expenses associated with the investment option.

Expense Ratio after Reduction is the total annual operating expense from the fund's most recent prospectus after any fee waiver and/or expense reimbursements that will reduce any fund operating expenses for no less than one year from the effective date of the fund's registration statement. This number does not include any fee waiver arrangement or expense reimbursement that may be terminated without agreement of the fund's board of trustees during the one-year period.

Morningstar Category Gross Expense Ratio: This figure represents average gross expense ratio paid by the funds in the Morningstar category. The information is based on the gross expense ratio as reported in each fund's most current prospectus and is provided by Morningstar.

Morningstar Category Net Expense Ratio: This figure represents average net expense ratio paid by the funds in the Morningstar category. The information is based on the net expense ratio as reported in each fund's most current prospectus and is provided by Morningstar.

Harbor International Fund Institutional Class: Contractual Management Fee Waiver of 0.09 subject to Expiration Date of 02/28/2019. Management Fee Waiver is the amount that the fund company waives or assumes of the management fees borne by the fund, until the expiration date, in order to lower the fund's actual management fees. After the expiration date, the management fee waiver may be terminated or revised, which may lower the fund's yield and return.

Invesco Diversified Dividend Fund Class R6: Contractual Expense Ratio Waiver of 0.02 subject to Expiration Date of 06/30/2019. Expense Waiver is the amount that the fund company waives or assumes of the expenses borne by the fund, until the expiration date, in order to lower the fund's actual expenses. After the expiration date, the expense waiver may be terminated or revised, which may lower the fund's yield and return.

#### Investment Risk

Stock markets, especially foreign markets, are volatile and can decline significantly in response to adverse issuer, political, regulatory, market or economic developments.

Foreign investments, especially those in emerging markets, involve greater risk and may offer greater potential returns than U.S. investments. This risk includes political and economic uncertainties of foreign countries, as well as the risk of currency fluctuation.

In general the bond market is volatile and bonds entail interest rate risk (as interest rates rise bond prices usually fall and vice versa). This effect is usually pronounced for longer-term securities. Bonds also entail the risk of issuer default, issuer credit risk and inflation risk.

Fidelity Freedom Funds are designed for investors expecting to retire around the year indicated in each fund's name. Except for the Freedom Income Fund, the funds' asset allocation strategy becomes increasingly conservative as it approaches the target date and beyond. Ultimately, they are expected to merge with the Freedom Income Fund. The investment risks of each Fidelity Freedom Fund change over time as its asset allocation changes. They are subject to the volatility of the financial markets, including equity and fixed income investments in the U.S. and abroad and may be subject to risks associated with investing in high yield, small cap and, commodity-related, foreign securities. Principal invested is not guaranteed at any time, including at or after their target dates.

Investments in mid-sized companies may involve greater risk than those of larger, more well known companies, but may be less volatile than investments in smaller companies.

Investments in smaller companies may involve greater risk than those in larger, more well known companies.

#### Index Definitions

FID FF 2040 Comp Idx: Fidelity Freedom 2040 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FID FF 2045 Comp Idx: Fidelity Freedom 2045 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FID FF 2050 Comp Idx: Fidelity Freedom 2050 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10

Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

MSCI AC Wld ex US (N): MSCI All Country World ex USA Index is a market capitalization-weighted index of stocks traded in global developed and emerging markets, excluding the United States. The Index is designed to measure equity market performance in global developed and emerging markets, excluding the United States and excludes certain market segments unavailable to U.S. based investors

BBgBarc U.S. Agg Bond: The Bloomberg Barclays U.S. Aggregate Bond Index is an unmanaged market value-weighted index for U.S. dollar denominated investment-grade fixed-rate debt issues, including government, corporate, asset-backed, and mortgage-backed securities with maturities of at least one year.

MSCI EAFE (Net MA): The MSCI Europe, Australasia and Far East Index (net MA tax) is an unmanaged market capitalization-weighted index of equity securities of companies domiciled in various countries. The index is designed to represent performance of developed stock markets outside the United States and Canada and excludes certain market segments unavailable to U.S. based investors. The index returns for periods after 1/1/1997 are adjusted for tax withholding rates applicable to U.S.-based mutual funds organized as Massachusetts business trusts.

Russell 1000 Value: The Russell 1000® Value Index is an unmanaged market capitalization-weighted index of value-oriented stocks of the largest U.S. domiciled companies that are included in the Russell 1000 Index. Value-oriented stocks tend to have lower price-to-book ratios and lower forecasted growth values.

Russell 2000: The Russell 2000® Index is an unmanaged market capitalization-weighted index of 2,000 small company stocks of U.S. domiciled companies.

Russell MidCap: The Russell Midcap® Index is an unmanaged market capitalization-weighted index of 800 medium-capitalization stocks. The stocks are also members of the Russell 1000® index.

FTSE 3-Mo Treasury Bill: The FTSE 3-Month Treasury Bill Index is an unmanaged index designed to represent the average of T-bill rates for each of the prior three months, adjusted to a bond-equivalent basis.

S&P 500: S&P 500 Index is a market capitalization-weighted index of 500 common stocks chosen for market size, liquidity, and industry group representation to represent U.S. equity performance.

FID FF Income Comp Idx: Fidelity Freedom Income Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FID FF 2010 Comp Idx: Fidelity Freedom 2010 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FID FF 2020 Comp Idx: Fidelity Freedom 2020 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FID FF 2030 Comp Idx: Fidelity Freedom 2030 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FID FF 2055 Comp Idx: Fidelity Freedom 2055 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

DJ US Total Stk Mkt: Dow Jones U.S. Total Stock Market Index SM is a float-adjusted market capitalization-weighted index of all equity securities of U.S. headquartered companies with readily available price data.

FID FF 2060 Comp Idx: Fidelity Freedom 2060 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FTSE USA Permissible: The FTSE USA Permissible Index includes stocks selected from approximately 700 of the largest public companies in the United States by evaluating each company's performance in the following categories: environmental sustainability, upholding and supporting universal human rights, and developing positive relations with stakeholders. The Index includes companies considered to have (1) superior environmental policies; (2) a strong hiring and promotion record for minorities and women; and (3) a safe and healthy workplace. Excluded from the Index are companies that are involved with (1) tobacco; (2) alcohol; (3) adult entertainment; (4) firearms; (5) gambling; (6) nuclear power; or (7) those that violate fair labor practices and equal opportunity standards.

MSCI EAFE (N): The MSCI Europe, Australasia and Far East (EAFE ®) Index is an unmanaged market capitalization-weighted index of equity securities of companies domiciled in various countries. The index is designed to represent performance of developed stock markets outside the United States and Canada and excludes certain market segments unavailable to U.S. based investors. This index is calculated using the minimum possible dividend reinvestment, after deduction of withholding tax, applying the maximum withholding tax rate.

FID FF 2005 Comp Idx: Fidelity Freedom 2005 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FID FF 2015 Comp Idx: Fidelity Freedom 2015 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FID FF 2025 Comp Idx: Fidelity Freedom 2025 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

FID FF 2035 Comp Idx: Fidelity Freedom 2035 Composite Index is a customized blend of the following unmanaged indexes: Dow Jones U.S. Total Stock Market Index; MSCI ACWI (All Country World Index) ex USA Index; Barclays U.S. Aggregate Bond Index; Bloomberg Barclays U.S. LT Treasury Index; Bloomberg Barclays U.S. TIPS 1-10 Year Index; and Barclays U.S. 3-6 Month Treasury Bellwether Index. The index weightings are adjusted monthly to reflect the fund's changing asset allocations. The compositions differed in periods prior to July 1, 2018.

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

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

# STATE OF RHODE ISLAND

## Balance by Fund

Data As Of: 10/31/2018

Calendar Day	Plan Number	Plan Name	Fund Code	Fund Name	Fund Ticker Symbol	Fund Type	Participant Count	Market Value	Asset Percentage
10/31/2018	35835	STATE OF RI	338	FID LARGE CAP STOCK	FLCSX	DOMESTIC EQUITY	330	\$8,485,988.37	5.76%
10/31/2018	35835	STATE OF RI	2080	FID CONTRAFUND K	FCNKX	DOMESTIC EQUITY	693	\$34,648,149.69	23.53%
10/31/2018	35835	STATE OF RI	2095	FID LOW PRICED STK K	FLPKX	DOMESTIC EQUITY	392	\$10,293,228.71	6.99%
10/31/2018	35835	STATE OF RI	2326	FID US BOND IDX	FXNAX	BOND	114	\$1,373,129.14	0.93%
10/31/2018	35835	STATE OF RI	2328	FID 500 INDEX	FXAIX	DOMESTIC EQUITY	370	\$11,525,795.16	7.83%
10/31/2018	35835	STATE OF RI	2352	FID MID CAP IDX	FSMDX	DOMESTIC EQUITY	156	\$1,697,613.97	1.15%
10/31/2018	35835	STATE OF RI	2358	FID SM CAP IDX	FSSNX	DOMESTIC EQUITY	191	\$1,591,110.39	1.08%
10/31/2018	35835	STATE OF RI	2363	FID INTL INDEX	FSPSX	INTERNATIONAL EQUITY	156	\$2,328,741.05	1.58%
10/31/2018	35835	STATE OF RI	3019	FID FREEDOM INC K	FNSHX	LIFECYCLE	48	\$1,579,283.27	1.07%
10/31/2018	35835	STATE OF RI	3020	FID FREEDOM 2005 K	FSNJX	LIFECYCLE	10	\$340,292.42	0.23%
10/31/2018	35835	STATE OF RI	3021	FID FREEDOM 2010 K	FSNKX	LIFECYCLE	74	\$3,480,998.35	2.36%
10/31/2018	35835	STATE OF RI	3022	FID FREEDOM 2015 K	FSNLX	LIFECYCLE	52	\$2,215,772.87	1.50%
10/31/2018	35835	STATE OF RI	3023	FID FREEDOM 2020 K	FSNOX	LIFECYCLE	247	\$15,352,289.16	10.43%
10/31/2018	35835	STATE OF RI	3024	FID FREEDOM 2025 K	FSNPX	LIFECYCLE	92	\$3,489,172.68	2.37%
10/31/2018	35835	STATE OF RI	3025	FID FREEDOM 2030 K	FSNQX	LIFECYCLE	260	\$12,007,313.12	8.15%
10/31/2018	35835	STATE OF RI	3026	FID FREEDOM 2035 K	FSNUX	LIFECYCLE	67	\$2,645,895.17	1.80%
10/31/2018	35835	STATE OF RI	3027	FID FREEDOM 2040 K	FSNVX	LIFECYCLE	52	\$1,282,203.50	0.87%
10/31/2018	35835	STATE OF RI	3028	FID FREEDOM 2045 K	FSNZX	LIFECYCLE	57	\$958,248.89	0.65%
10/31/2018	35835	STATE OF RI	3029	FID FREEDOM 2050 K	FNSBX	LIFECYCLE	42	\$268,162.29	0.18%
10/31/2018	35835	STATE OF RI	3030	FID FREEDOM 2055 K	FNSDX	LIFECYCLE	36	\$545,594.87	0.37%
10/31/2018	35835	STATE OF RI	3031	FID FREEDOM 2060 K	FNSFX	LIFECYCLE	16	\$56,265.34	0.04%
10/31/2018	35835	STATE OF RI	BLNK	BROKERAGELINK		OTHER	110	\$12,009,988.70	8.16%
10/31/2018	35835	STATE OF RI	OF1P	PIM TOTAL RT INST	PTTRX	BOND	249	\$6,987,905.35	4.75%
10/31/2018	35835	STATE OF RI	OFHL	HARBOR INTL INST	HAINX	INTERNATIONAL EQUITY	300	\$3,832,830.95	2.60%
10/31/2018	35835	STATE OF RI	OGMU	TRP STABLE VALUE A		STABLE VALUE	312	\$6,068,380.24	4.12%
10/31/2018	35835	STATE OF RI	OK26	INVESCO DIVRS DIV R6	LCEFX	DOMESTIC EQUITY	150	\$2,058,505.52	1.40%
10/31/2018	35835	STATE OF RI	OQPN	VANG FTSE SOCIAL IDX	VFTSX	DOMESTIC EQUITY	52	\$137,928.67	0.09%

# PERFORMANCE UPDATE

## Voya Retirement Insurance and Annuity Company

### State of RI 457 Plan

#### Average Annual Total Returns as of: 10/31/2018 (shown in percentages)

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

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

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

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

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

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

Investment Options	Fund Benchmark ID (BM)	1-Mo Fund	1-Mo BM	3-Mo Fund	3-Mo BM	YTD Fund	YTD BM	1-Yr Fund	1-Yr BM	3-Yr Fund	3-Yr BM	5-Yr Fund	5-Yr BM	10-Yr Fund	10-Yr BM	Incept	Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
<b>Stability of Principal</b>																			
<i>Stability of Principal</i>																			
Voya Fixed Account - 457/401 II A - 4573 (18)(19)	MFR	0.15	0.15	0.44	0.42	1.46		1.75		1.88		1.97		2.38					
<b>Bonds</b>																			
<i>High Yield Bond</i>																			
PGIM High Yield Fund - Class Z - 2482	BCUSH1C	-1.50	-1.63	-0.31	-0.37	1.45	0.85	1.38	0.90	6.51	6.58	4.97	4.66	10.35	11.11		03/01/1996	0.55	0.55
<i>Inflation-Protected Bond</i>																			



Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM			
PIMCO VIT Real Return Portfolio - Administrative Class - 833 (1)	LBUSTIPS	-1.68	-1.43	-2.15	-1.77	-2.75	-2.27	-1.74	-1.24	1.49	1.46	0.71	0.97	4.54	4.11	09/30/1999	1.04	1.04
<b>Intermediate-Term Bond</b>																		
Voya Intermediate Bond Portfolio - Class I - 004 (2)	LEHM	-0.86	-0.79	-0.87	-0.79	-2.34	-2.38	-1.89	-2.05	2.06	1.04	2.69	1.83	5.10	3.94	05/23/1973	0.55	0.55
Voya U.S. Bond Index Portfolio - Class I - 1554 (3)	LEHM	-0.78	-0.79	-0.88	-0.79	-2.64	-2.38	-2.35	-2.05	0.71	1.04	1.51	1.83	3.54	3.94	03/07/2008	0.41	0.40
<b>Asset Allocation</b>																		
<b>Lifecycle</b>																		
Voya Solution 2025 Portfolio - Initial Class - 790 (4)(5)	SPT2025	-4.73	-4.86	-4.20	-3.92	-2.85	-1.99	-0.53	0.38	5.42	5.98	5.32	5.48	8.46	8.72	04/29/2005	0.85	0.78
Voya Solution 2035 Portfolio - Initial Class - 761 (5)(6)	SP2035	-6.41	-6.25	-5.67	-5.08	-3.87	-2.41	-0.88	0.54	6.34	7.08	5.99	6.31	9.31	9.63	04/29/2005	0.90	0.83
Voya Solution 2045 Portfolio - Initial Class - 764 (5)(7)	SP2045	-7.35	-6.88	-6.65	-5.65	-4.97	-2.65	-1.57	0.59	6.51	7.70	6.18	6.76	9.77	10.09	04/29/2005	0.93	0.86
Voya Solution 2055 Portfolio - Initial Class - 1166 (5)(8)	SPT2055	-7.50	-7.08	-6.88	-5.84	-5.24	-2.72	-1.85	0.62	6.54	8.06	6.25	7.04		8.47	03/08/2010	0.94	0.86
Voya Solution Income Portfolio - Initial Class - 767 (5)(9)	SPTREIN	-2.84	-2.92	-2.34	-2.36	-1.94	-1.52	-0.46	0.58	3.62	3.53	3.86	3.42	6.25	5.73	04/29/2005	0.81	0.68
<b>Balanced</b>																		
<b>Allocation--50% to 70% Equity</b>																		
VY® T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	SPXLBGC	-4.03	-4.45	-1.75	-2.26	3.19	0.32	5.11	3.01	8.43	7.19	9.64	7.49	12.73	9.72	01/24/1989	0.64	0.64
<b>Large Cap Value</b>																		
<b>Large Blend</b>																		
Voya Growth and Income Portfolio - Class I - 001 (10)	SPXRE	-5.96	-6.84	-2.70	-3.25	1.78	2.43	6.00	7.35	9.52	11.52	9.04	11.34	11.86	13.24	12/31/1979	0.63	0.58
Voya U.S. Stock Index Portfolio - Institutional Class - 829	SPXRE	-6.85	-6.84	-3.36	-3.25	2.77	2.43	7.05	7.35	11.21	11.52	11.03	11.34	12.95	13.24	05/03/2004	0.27	0.27
<b>Large Value</b>																		
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (11)	RS1000V	-5.23	-5.18	-3.82	-3.59	0.23	-1.20	3.87	3.03	10.59	8.88	9.41	8.61	11.16	11.30	11/29/1988	0.73	0.73
<b>Large Cap Growth</b>																		
<b>Large Growth</b>																		
Voya Large Cap Growth Portfolio - Institutional Class - 742 (12)	RS1000G	-8.42	-7.97	-3.45	-3.43	5.50	6.62	10.27	10.71	12.40	13.67	12.66	13.43	15.72	15.45	05/03/2004	0.67	0.67
<b>Small/Mid/Specialty</b>																		
<b>Mid-Cap Blend</b>																		
Voya Russell™ Mid Cap Index Portfolio - Class I - 1560 (13)	RSMID	-8.36	-8.31	-6.15	-6.07	-1.75	-1.10	2.40	2.79	8.60	9.04	8.54	8.97	13.80	14.19	03/04/2008	0.44	0.40
<b>Mid-Cap Growth</b>																		
Principal MidCap Fund - Class R-5 - 3412	RSMID	-8.53	-8.31	-6.99	-6.07	-1.68	-1.10	0.97	2.79	10.01	9.04	9.92	8.97	15.22	14.19	12/06/2000	0.85	0.85
<b>Small Blend</b>																		
Voya Russell™ Small Cap Index Portfolio - Class I - 1563 (14)	RS2000	-10.87	-10.86	-9.37	-9.26	-0.82	-0.60	1.58	1.85	10.39	10.68	7.82	8.01	12.25	12.43	03/04/2008	0.46	0.45

See Performance Introduction Page for Important Information

Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM			
Voya Small Company Portfolio - Class I - 042 (15)	RS2000	-9.83	-10.86	-10.29	-9.26	-6.33	-0.60	-4.02	1.85	8.62	10.68	7.74	8.01	12.19	12.43	12/27/1996	0.89	0.89
<b>Global / International</b>																		
<i><b>Foreign Large Blend</b></i>																		
Voya International Index Portfolio - Class I - 1551 (16)	MSEAFANET	-8.05	-7.96	-9.28	-8.95	-9.33	-9.28	-7.53	-5.61	3.49	3.62	1.75	2.02	6.51	6.89	03/04/2008	0.53	0.45
<i><b>Foreign Large Growth</b></i>																		
American Funds EuroPacific Growth Fund - Class R-4 - 573	MSCIXUS	-9.20	-7.33	-11.90	-9.65	-11.85	-10.97	-10.91	-8.24	4.11	4.37	3.06	1.63	7.89	4.22	04/16/1984	0.83	0.83
<i><b>World Large Stock</b></i>																		
VY® Oppenheimer Global Portfolio - Initial Class - 432 (17)	MSCIACN	-9.51	-7.49	-10.73	-6.36	-6.54	-3.96	-3.56	-0.52	7.68	7.74	7.38	6.15	11.96	7.33	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

**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.

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

Investment Options	Fund Benchmark ID (BM)	1-Mo Fund	1-Mo BM	3-Mo Fund	3-Mo BM	YTD Fund	YTD BM	1-Yr Fund	1-Yr BM	3-Yr Fund	3-Yr BM	5-Yr Fund	5-Yr BM	10-Yr Fund	10-Yr BM	Incept	Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
<b>Stability of Principal</b>																			
<i>Stability of Principal</i>																			
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					
<b>Bonds</b>																			
<i>High Yield Bond</i>																			
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	0.55	0.55
<i>Inflation-Protected Bond</i>																			
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
<i>Intermediate-Term Bond</i>																			



See Performance Introduction Page for Important Information

Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM			
<b>Asset Allocation</b>																		
<i>Lifecycle</i>																		
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 (5)(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 (5)(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 (5)(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 (5)(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
<b>Balanced</b>																		
<i>Allocation--50% to 70% Equity</i>																		
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
<b>Large Cap Value</b>																		
<i>Large Blend</i>																		
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
<i>Large Value</i>																		
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (11)	RS1000V	-0.08	0.20	6.18	5.70	5.76	4.20	11.48	9.45	15.48	13.55	11.49	10.72	10.01	9.79	11/29/1988	0.73	0.73
<b>Large Cap Growth</b>																		
<i>Large Growth</i>																		
Voya Large Cap Growth Portfolio - Institutional Class - 742 (12)	RS1000G	0.63	-0.50	8.82	8.02	15.20	15.85	24.35	24.96	19.01	20.13	15.62	16.34	14.70	14.18	05/03/2004	0.67	0.67
<b>Small/Mid/Specialty</b>																		
<i>Mid-Cap Blend</i>																		
Voya Russell™ Mid Cap Index Portfolio - Class I - 1560 (13)	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
<i>Mid-Cap Growth</i>																		
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
<i>Small Blend</i>																		
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
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
<b>Global / International</b>																		
<i>Foreign Large Blend</i>																		

See Performance Introduction Page for Important Information

Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM			
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
<b>Foreign Large Growth</b>																		
American Funds EuroPacific Growth Fund - Class R-4 - 573	MSCIXUS	-0.59	-0.41	-0.93	-0.16	-2.92	-3.92	1.10	0.88	9.54	9.65	5.83	3.94	6.49	5.09	04/16/1984	0.83	0.83
<b>World Large Stock</b>																		
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.

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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-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
<b>Stability of Principal</b>									
<i>Stability of Principal</i>									
Voya Fixed Account - 457/401 II A - 4573 (18)(19) <i>This fund is not part of the product's separate account.</i>	0.14	0.44	1.31	1.75	1.89	1.98	2.40		
<b>Bonds</b>									
<i>High Yield Bond</i>									
PGIM High Yield Fund - Class Z - 2482	0.26	2.25	2.88	3.28	7.74	5.61	8.64		03/01/1996
<i>Inflation-Protected Bond</i>									
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
<i>Intermediate-Term Bond</i>									

See Performance Introduction Page for Important Information

<b>Investment Options</b>	<b>1-Mo</b>	<b>3-Mo</b>	<b>YTD</b>	<b>1-Yr</b>	<b>3-Yr</b>	<b>5-Yr</b>	<b>10-Yr</b>	<b>Incept</b>	<b>Fund Inception Date</b>
Voya Intermediate Bond Portfolio - Class I - 004 (2)	-0.39	0.30	-1.61	-1.14	2.38	2.99	4.75		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
<b>Asset Allocation</b>									
<b>Lifecycle</b>									
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 (5)(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 (5)(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 (5)(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 (5)(9)	-0.18	1.56	0.82	3.16	5.41	4.75	5.37		04/29/2005
<b>Balanced</b>									
<b>Allocation--50% to 70% Equity</b>									
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
<b>Large Cap Value</b>									
<b>Large Blend</b>									
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
<b>Large Value</b>									
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
<b>Large Cap Growth</b>									
<b>Large Growth</b>									
Voya Large Cap Growth Portfolio - Institutional Class - 742 (12)	0.62	8.78	15.07	24.16	18.83	15.45	14.53		05/03/2004
<b>Small/Mid/Specialty</b>									
<b>Mid-Cap Blend</b>									
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
<b>Mid-Cap Growth</b>									
Principal MidCap Fund - Class R-5 - 3412	-0.39	4.42	7.36	12.54	15.51	12.59	13.49		12/06/2000
<b>Small Blend</b>									
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
<b>Global / International</b>									
<b>Foreign Large Blend</b>									
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
<b>Foreign Large Growth</b>									
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
<b>World Large Stock</b>									

See Performance Introduction Page for Important Information

<b>Investment Options</b>	<b>1-Mo</b>	<b>3-Mo</b>	<b>YTD</b>	<b>1-Yr</b>	<b>3-Yr</b>	<b>5-Yr</b>	<b>10-Yr</b>	<b>Incept</b>	<b>Fund Inception Date</b>
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)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.

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

See Performance Introduction Page for Important Information

**Additional Notes**

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

The Voya Solution Portfolios<sup>SM</sup> 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.

(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.

See Performance Introduction Page for Important Information

**Additional Notes**

(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.

(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.

<b>Benchmark ID</b>	<b>Benchmark Description</b>
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.

See Performance Introduction Page for Important Information

<b>Benchmark ID</b>	<b>Benchmark Description</b>
RS1000V	Russell 1000 Value Index measures the performance of the large-cap value segment of the U.S. equity securities. It includes the Russell 1000 index companies with lower price-to-book ratios and lower expected growth values. It is market-capitalization weighted.
RS2000	Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 and includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.
RSMID	Russell Mid-Cap Index measures the performance of the mid-cap segment of the U.S. equity universe. It is a subset of Russell 1000 index and includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership. The index represents approximately 31% of the total market capitalization of the Russell 1000 companies.
SP2035	S&P Target Date 2035 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2035, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SP2045	S&P Target Date 2045 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2045, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
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.



**State of RI 457: Plan Balance By Investment - 10/31/2018**

<b>Fund Name</b>	<b>Fund Number</b>	<b>Asset Class</b>	<b>Balance</b>	<b>YTD Contributions</b>	<b>Percent</b>
VOYA SOLUTION 2025 PORTFOLIO I	790	Asset Allocation	\$775,261.03	\$90,345.56	0.43%
VOYA SOLUTION 2035 PORTFOLIO I	761	Asset Allocation	\$853,342.13	\$126,254.86	0.48%
VOYA SOLUTION 2045 PORTFOLIO I	764	Asset Allocation	\$807,884.69	\$141,692.50	0.45%
VOYA SOLUTION 2055 PORTFOLIO I	1166	Asset Allocation	\$403,880.32	\$135,009.54	0.23%
VOYA SOLUTION INCOME PRT I	767	Asset Allocation	\$477,974.02	\$46,649.00	0.27%
VY TROWEPRICE CAPTL APPREC PT INST	1257	Balanced	\$7,952,576.32	\$452,770.92	4.43%
PGIM HIGH YIELD FUND Z	2482	Bonds	\$547,235.40	\$41,951.85	0.31%
PIMCO VIT REAL RETURN PORTFOLIO ADM	833	Bonds	\$341,462.09	\$39,007.59	0.19%
VOYA INTERMEDIATE BOND PORT I	4	Bonds	\$6,684,620.80	\$706,974.91	3.73%
VOYA U.S. BOND INDEX PORTFOLIO I	1554	Bonds	\$574,399.04	\$42,590.93	0.32%
AMERICAN FUNDS EUROPACIFIC R4	573	Global / International	\$5,498,058.57	\$460,675.81	3.07%
VOYA INTERNATIONAL INDEX PORT I	1551	Global / International	\$349,841.75	\$38,535.68	0.20%
VY OPPENHMR GLOBAL PORT I	432	Global / International	\$6,566,003.67	\$390,265.31	3.66%
VOYA GROWTH AND INCOME PORT I	1	Large Cap Blend	\$25,703,170.64	\$838,454.98	14.32%
VOYA LARGE CAP GROWTH PORT INST	742	Large Cap Growth	\$11,007,760.42	\$741,928.58	6.14%
BLACKROCK EQUITY DIVIDEND FUND INST	8518	Large Cap Value	\$3,873,880.14	\$225,307.30	2.16%
VOYA U.S. STOCK INDEX PORT INST	829	Large Cap Value	\$8,540,033.98	\$432,337.13	4.76%
PRINCIPAL MIDCAP FUND R5	3412	Small/Mid/Specialty	\$9,661,358.05	\$387,221.55	5.39%
VOYA RUSSELL MID CAP INDEX PORT I	1560	Small/Mid/Specialty	\$1,235,879.30	\$141,252.52	0.69%
VOYA RUSSELL SM CP INDEX PORT I	1563	Small/Mid/Specialty	\$1,276,788.45	\$145,595.10	0.71%
VOYA SMALL COMPANY PORTFOLIO I	42	Small/Mid/Specialty	\$7,548,955.78	\$327,761.81	4.21%
VOYA FIXED ACCOUNT - 457/401	43	Stability of Principal	\$73,706,645.99	\$538,169.41	41.09%
VOYA FIXED ACCOUNT - 457/401 II A	4573	Stability of Principal	\$4,937,573.41	\$2,580,578.33	2.75%
VOYA LONG-TERM GAA (4560)	4560	Stability of Principal	\$25,385.86	\$0.00	0.01%
<b>TOTAL</b>			<b>\$179,349,971.85</b>	<b>\$9,071,331.17</b>	

## Section XVI.

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### OPEB Trust



**Total Performance Summary**

Report ID: IPM0005

Reporting Currency: USD

**TOTAL NET OF FEES**

10/31/2018

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	1 Year	Annualized				Inception Date
							3 Years	5 Years	10 Years	ITD	
Mackay Shields OPEB	100,786,728.9	35.8	-0.82	-2.69	-0.79	-2.35	0.84	1.77		1.22	5/1/2013
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			-0.79	-2.38	-0.77	-2.05	1.04	1.83		1.30	5/1/2013
SSGA S&P 500 INDX	180,824,746.8	64.2	-6.83	2.96	0.32	7.30	11.52	11.33		12.53	5/1/2011
<i>S&amp;P 500 - Total Return Index</i>			-6.84	3.01	0.35	7.35	11.52	11.34		11.93	5/1/2011
<b>Total OPEB</b>	<b>281,611,475.7</b>	<b>100.0</b>	<b>-4.75</b>	<b>1.05</b>	<b>-0.01</b>	<b>3.94</b>	<b>7.82</b>	<b>8.02</b>		<b>8.57</b>	<b>5/1/2011</b>
<i>OPEB Custom Blend</i> <sup>1</sup>			-4.72	1.24	0.02	4.12	7.86	8.06		7.91	5/1/2011

END NOTES

10/31/2018

1 RI7GX0903OPE OPEB Custom Blend

35% Barclays Aggregate and 65% S&P 500



Total Performance Summary

Report ID: IPM0005

Reporting Currency: USD

TOTAL NET OF FEES

10/31/2018

Account Name Benchmark Name	Market Value	% of Total	YTD	Month	Cumulative			2017	2016	2015	Inception Date
					9/1/2018 - 9/30/2018	8/1/2018 - 8/31/2018					
Mackay Shields OPEB	100,786,728.9	35.8	-2.69	-0.82	-0.66	0.65	3.78	2.28	0.46	5/1/2013	
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			-2.38	-0.79	-0.64	0.64	3.54	2.65	0.55	5/1/2013	
SSGA S&P 500 INDX	180,824,746.8	64.2	2.96	-6.83	0.56	3.25	21.80	11.99	1.46	5/1/2011	
<i>S&amp;P 500 - Total Return Index</i>			3.01	-6.84	0.57	3.26	21.83	11.96	1.38	5/1/2011	
<b>Total OPEB</b>	<b>281,611,475.7</b>	<b>100.0</b>	<b>1.05</b>	<b>-4.75</b>	<b>0.13</b>	<b>2.35</b>	<b>15.32</b>	<b>8.69</b>	<b>1.16</b>	<b>5/1/2011</b>	
<i>OPEB Custom Blend</i>			1.24	-4.72	0.14	2.34	15.14	8.77	1.31	5/1/2011	

## END NOTES

10/31/2018

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