STATE OF RHODE ISLAND
INVESTMENT COMMISSION MEETING

DATA AT
December 31st, 2019

January 22nd, 2020
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
Ms. Karen Hazard
Mr. Frank Karpinski
Ms. Sylvia Maxfield
Mr. Thomas Mullaney

Section I.

Agenda

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

Seth Magaziner
General Treasurer

RHODE ISLAND STATE INVESTMENT COMMISSION
MEETING NOTICE

The next meeting of the Rhode Island State Investment Commission has been scheduled for Wednesday, January 22nd, 2020 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 Draft Meeting Minutes [1]
  - State Investment Commission Meeting held December 11th, 2019
- Investment Policy Statement Update [1]
- Private Credit Investment Recommendation, CapitalSpring Investment Partners VI [1]
  - Richard Fitzgerald, CapitalSpring
  - Tom Lynch, Cliffwater
- Non-Core Real Estate Investment Recommendation, Berkeley Partners Value Industrial Fund V [1]
  - Aaron Snegg, Matthew Novak, & Erin Watson, Berkeley
  - David Glickman, Meketa
- Real Estate Asset Class Update
  - David Glickman, Meketa
- Equity Options Investment Recommendation, Neuberger Berman [1]
  - Derek Devens, Doug Kramer, & Chris Crevier, Neuberger Berman
  - Will Forde & Doug Moseley, NEPC
- Asset Class Assumptions Update
  - Will Forde & Doug Moseley, NEPC
- Legal Counsel Report
- Chief Investment Officer Report
- Treasurer's General Comments

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

POSTED ON JANUARY 16, 2020

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.

50 Service Avenue – Warwick, Rhode Island 02886-1021 – (401) 462–7650 / Fax 462–7695

Section II.

Approval of Minutes

State Investment Commission

Monthly Meeting Minutes
Wednesday, December 11th, 2019
9:00 a.m.
Executive Conference Room, Department of Administration

The Monthly Meeting of the State Investment Commission (SIC) was called to order at 9:02 AM, Wednesday, December 11th, 2019 in the Executive Conference Room, Department of Administration.

I. Roll Call of Members

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

Also in attendance: John Hatherly, Wynnchurch; Thomas Lynch, Cliffwater; Lindsey McMurray & Michael England, Pollen Street; Patrick Russo, Shamrock; Doug Moseley & Will Forde, NEPC; Mr. Alec Stais, Chief Investment Officer; Mr. Matthew Waters, Adler Pollock & Sheehan, legal counsel; and other members of the Treasurer's staff.

Treasurer Magaziner called the meeting to order at 9:02 AM.

II. Approval of Minutes

On a motion by Mr. Thomas Fay and seconded by Mr. Thomas Mullaney, it was unanimously **VOTED: to approve the draft meeting minutes of the November 20th, 2019 meeting of the State Investment Commission.**

III. Private Equity Investment Recommendation, Wynnchurch Capital Partners V, L.P.

Mr. John Hatherly, Wynnchurch Capital, provided an overview of the firm. Mr. Hatherly discussed Wynnchurch's value-based investment approach in the industrial sector, its portfolio construction and capital allocation. Mr. Hatherly provided case studies for discussion.

The Board asked questions.

Mr. Tom Lynch, Cliffwater, highlighted Wynnchurch's disciplined track record.

On a motion by Ms. Karen Hammond which was seconded by Mr. Erik Carleton, it was unanimously **VOTED: that the Rhode Island Employees Retirement Systems Pooled Trust make a commitment up to $50 million, in Wynnchurch Capital Partners V, L.P., subject to legal and investment staff review.**

IV. Private Equity Investment Recommendation, PSC IV (B), L.P.

Ms. Lindsey McMurray & Mr. Michael England, Pollen Street, provided an overview of the firm. Ms.

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McMurray discussed the firm's specialized approach to the financial and business services sectors.

Mr. England discussed how Pollen Street seeks to grow lower middle-market companies within the European financial services sector. Mr. England proceeded to discuss case studies.

The Board asked questions.

Mr. Thomas Lynch, Cliffwater, highlighted the track record and experience of Pollen Street's sector specialists.

The Board asked questions.

On a motion by Ms. Sylvia Maxfield which was seconded by Ms. Karen Hammond, it was unanimously **VOTED: that the Rhode Island Employees Retirement Systems Pooled Trust make a commitment up to $50 million, in PSC IV (B), L.P., subject to legal and investment staff review.**

V. Private Credit Investment Recommendation, Shamrock Capital Content Fund II, L.P.

Mr. Patrick Russo, Shamrock, provided an overview of the firm. Mr. Russo discussed the firm's approach to generating cashflow streams by licensing media/entertainment assets. Mr. Russo noted that the proliferation of entertainment content and technology services allow more content to reach a growing base of consumers. Mr. Russo highlighted the firm's history and experience in licensing intellectual property.

The Board asked questions.

Mr. Thomas Lynch, Cliffwater, highlighted the firm's assets, which provide diversification across types of entertainment and media.

On a motion by Ms. Karen Hammond which was seconded by Ms. Sylvia Maxfield, it was unanimously **VOTED: that the Rhode Island Employees Retirement Systems Pooled Trust make a commitment up to $20 million, Shamrock Capital Content Fund II, L.P., subject to legal and investment staff review.**

VI. Defined Benefit IPS and Benchmark Update

Mr. Doug Moseley & Mr. Will Forde, NEPC, provided an overview of the Strategic Asset Allocation study and reviewed the proposed updates to the Defined Benefit Investment Policy Statement. Mr. Forde summarized the recommended allocation changes discussed at the previous meeting, specifically: the introduction of an allocation to Emerging Market Debt (2%); the introduction of an allocation to Equity Options (2%); an increase of the Crisis Protection Class program allocation to 10%; the elimination of the Commodity target allocation; and the disaggregation of Core Bonds allocation into new Investment Grade Corporate Credit (3.25%) and Securitized Credit (3.25%) mandates.

Mr. Forde recommended adjusting the Plan's strategic benchmarks to reflect the changes. Specifically: the addition of a benchmark for Emerging Market Debt (50% JPM EMBI Global Diversified Index +

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50% JPM GBI-EM Global Diversified Index); the introduction of a benchmark for equity options (CBOE Put-Write Index); the disaggregation of the Core Bonds benchmark (Bloomberg US Corporate Index and Bloomberg Barclays US Securitized MBS/ABS/CMBS Index); and the elimination of the Bloomberg Barclays Commodities Index.

The Board asked questions.

On a motion by Mr. Thomas Mullaney which was seconded by Mr. Erik Carleton, it was unanimously **VOTED: to adopt the recommendations of NEPC outlined in the Plan Benchmarks and IPS Update presentation dated December 2019, including the updated version of the Defined Benefit Investment Policy Statement presented in connection therewith, subject to legal and investment staff review.**

VII. Legal Counsel Report

There was no legal counsel report.

VIII. Chief Investment Officer Report

Mr. Alec Stais discussed the Plan's performance across the different asset classes and buckets, highlighting the positive effects of diversification. Mr. Stais discussed the Total Plan's strong performance relative to its peers.

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. Thomas Fay and seconded by Mr. Erik Carleton, it was unanimously **VOTED: to adjourn the meeting at 11:06 AM.**

Respectfully submitted,

Seth Magaziner,
General Treasurer

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Section III.

Staff Summary

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

Seth Magaziner
General Treasurer

January 14, 2020

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

This is to certify that the amounts so listed below belong to the credit of the Employees' Retirement, Municipal Employees', State Police and Judicial Retirement Systems of the State of Rhode Island at the close of business on December 31, 2019

Employees' Retirement System of Rhode Island
Composite Reporting Investment Valuation
December 31, 2019

Asset Class		Base Market Value
Grand Total		**8,775,450,211**
CASH EQUIVALENT*		403,877,263
GLOBAL PUBLIC EQUITY		4,035,186,998
CREDIT		272,393,357
INFLATION-LINKED BDS		166,412,056
REIT - US FOCUSED		84,766,771
PRIVATE EQUITY**		917,112,282
REAL ESTATE**		517,564,879
HEDGE FUNDS**		514,789,222
INFRASTRUCTURE**		271,364,416
US TRADITIONAL FIXED		817,468,598
CPC PROGRAM		774,514,369

Plan Allocations	%	Base Market Value
Grand Total	**100.00%**	**8,775,450,211**
STATE EMP RET PLAN	73.78%	6,474,568,267
MUNI EMP RET PLAN	19.20%	1,685,120,661
TEACHER'S SURVIVOR BENEFIT	4.01%	351,683,550
STATE POLICE RET PL	1.77%	155,577,339
JUDICIAL RET PLAN	0.93%	81,420,177
NON-CONTRIB JUD RET	0.01%	1,026,128
NON-CONT ST POL RET	0.30%	26,054,089

* 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

50 Service Avenue – Warwick, Rhode Island 02886-1021 – (401) 462–7650 / Fax 462–7695

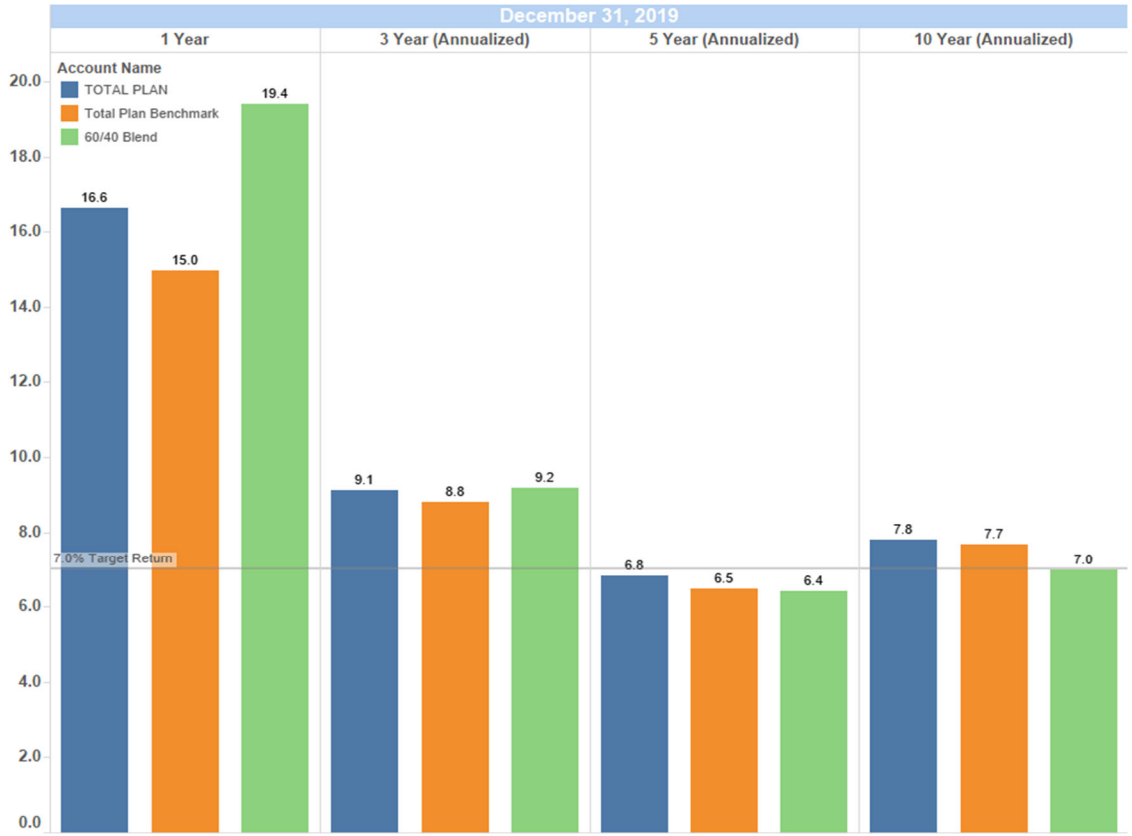
December 2019

The Plan returned 1.90% during the month of December, underperforming the Total Plan Benchmark, which returned 2.05%. The 60% global equity/40% fixed income benchmark returned of 2.09%. The Plan's Total Public Growth bucket was the primary contributor to the Plan's positive absolute performance, returning 3.47% as equities markets continued their bull run. On a relative basis, the biggest contributor to the Plan's underperformance compared to the Total Plan Benchmark was the Total Stability Bucket, which returned a loss of -0.16% compared to the Total Stability Composite benchmark, which returned a gain of 0.13%. The total portfolio increased by approximately $147.0 million, as about $23.6 million of net transfers were made to meet pension payroll in excess of pension contributions.

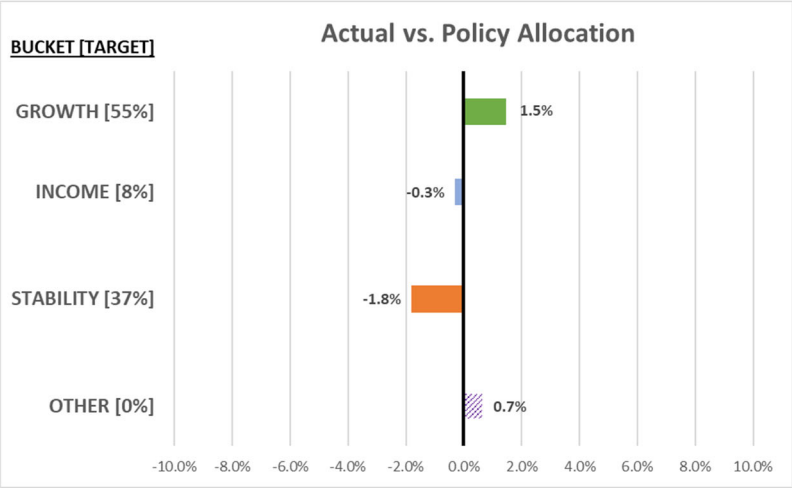
Calendar year-to-date the Plan returned 16.65% net of fees, outperforming the Total Plan benchmark return of 14.98%. The 60% global equity/40% fixed income benchmark returned 19.41%. A main contributor to the Total Plan's CYTD performance was its Total Public Growth bucket, which returned 25.77% driven primarily by a rally in US equities markets over the period. On a relative basis, the Plan's outperformance compared to the Total Plan benchmark was driven by the Total Stability Bucket, which returned 8.48% compared to the Total Stability Composite benchmark, which returned 6.17% over the period.

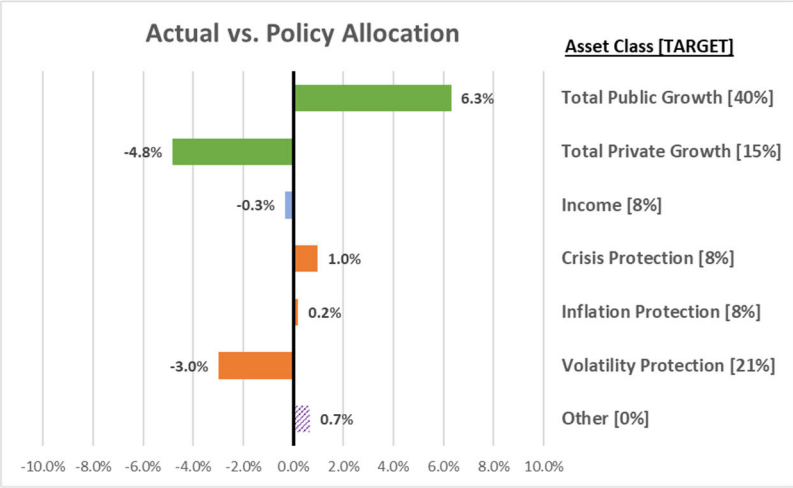
Fiscal year-to-date, the Plan returned 5.76% net of fees, outperforming the Total Plan benchmark of 5.17%. The 60% global equity/40% fixed income benchmark returned 6.36%. The Plan's Total Public Growth Bucket has been a primary contributor to the Total Plan's FYTD performance, which returned 8.73%, compared to the MSCI All Country World Net Index which has returned 8.92%. On a relative basis, the portfolio's outperformance compared to the Total Plan benchmark was driven by the Total Stability Bucket, which returned 2.47% compared to the Total Stability Composite benchmark, which returned 1.32% over the period.

Total Plan - December 31, 2019



	Dec-2019	YTD	FYTD	1 Year	Annualized 3 Years	5 Years	ITD	Inception
GROWTH	**3.32**	**23.15**	**8.45**	**23.15**			**11.05**	**7/1/2017**
GROWTH BM	*3.25*	*21.94*	*8.33*	*21.94*				
Public Growth	3.47	25.77	8.73	25.77	12.33	8.50	5.17	7/1/2000
Public Growth BM	*3.52*	*26.60*	*8.92*	*26.60*	*12.44*	*8.41*		
Private Growth	2.64	11.02	7.10	11.02			15.85	7/1/2017
Private Growth BM	*2.51*	*9.78*	*6.68*	*9.78*				
INCOME	**1.84**	**11.52**	**2.45**	**11.52**			**3.87**	**7/1/2017**
INCOME BM	*2.69*	*8.70*	*1.23*	*8.70*			*4.23*	*7/1/2017*
STABILITY	**-0.16**	**8.48**	**2.47**	**8.48**			**4.78**	**7/1/2017**
STABILITY BM	*0.13*	*6.17*	*1.32*	*6.17*				
CPC	-2.44	9.33	1.05	9.33			2.65	7/1/2017
CPC BM	*-2.05*	*1.98*	*-1.99*	*1.98*			*0.39*	*7/1/2017*
Inflation Protection	0.62	8.22	3.70	8.22			6.94	7/1/2017
Inflation Protection BM	*1.32*	*5.70*	*2.07*	*5.70*			*5.07*	*7/1/2017*
Volatility Protection	0.47	8.25	2.53	8.25			4.70	7/1/2017
Volatility Protection BM	*0.50*	*7.74*	*2.15*	*7.74*				
TOTAL PLAN	**1.90**	**16.65**	**5.76**	**16.65**	**9.12**	**6.82**	**5.31**	**7/1/2000**
TOTAL PLAN BM	*2.05*	*14.98*	*5.17*	*14.98*	*8.82*	*6.47*		
60/40	*2.09*	*19.41*	*6.36*	*19.41*	*9.20*	*6.43*		





**Allocation reflects physical exposure; Russell Overlay rebalancing program classified as, "Other"*

Section IV.

Asset Allocation

ERSRI Asset Allocation Tracking

Functional Bucket	Aggregate Asset Class	Aggregate Allocation Weight	Asset Class	Strategic Benchmark Weight	(a) Target Asset Allocation	(b) Actual exposure as of 12/31/19	(b) - (a)
GROWTH	Global Equity	40.0%	US Equity	22.2%	22.2%	26.0%	3.8%
			International Developed Equity	12.9%	12.9%	15.0%	2.1%
			EM Equity	4.9%	4.9%	5.4%	0.5%
	Private Growth	15.0%	PE	11.0%	11.25%	7.8%	-3.5%
			Non-core RE	2.5%	2.25%	1.7%	-0.5%
			Opp Private Credit	1.5%	1.5%	0.6%	-0.9%
INCOME	Income	8.0%	HY Infra	1.5%	1.0%	1.1%	0.1%
			REITs	0.0%	1.0%	1.0%	0.0%
			Liquid Credit	3.5%	2.8%	3.6%	0.8%
			Private Credit	3.0%	3.2%	2.0%	-1.2%
STABILITY	CPC	8.0%	Treasury Duration	4.0%	4.0%	4.5%	0.5%
			Systematic Trend	4.0%	4.0%	4.5%	0.5%
	Inflation Protection	8.0%	Core RE	4.0%	3.6%	4.1%	0.5%
			Private Infra	2.0%	2.4%	2.1%	-0.3%
			TIPs	1.0%	1.0%	2.0%	1.0%
			Nat' Resources	1.0%	1.0%	0.0%	-1.0%
	Volatility Protection	21.0%	IG Fixed Income	11.5%	11.5%	9.4%	-2.1%
			Absolute Return	6.5%	6.5%	6.5%	0.0%
			Strategic Cash	3.0%	3.0%	2.1%	-0.9%
OTHER	Short-term Tactical	-	Short-Term Cash	-	-	0.4%	0.4%
		-	Russell Overlay	-	-	0.2%	0.2%
TOTAL	Total	100.0%		100.0%	100.0%	100.0%	0.0%

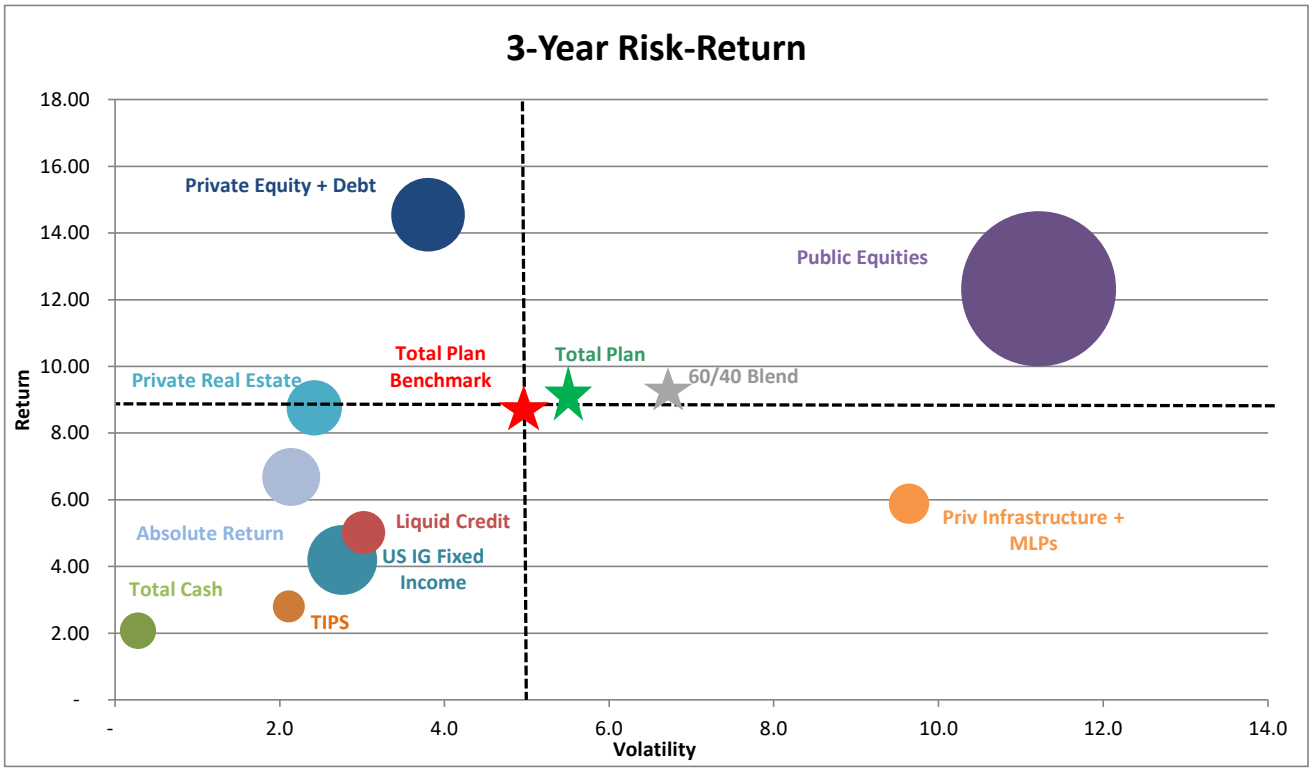
Section V.

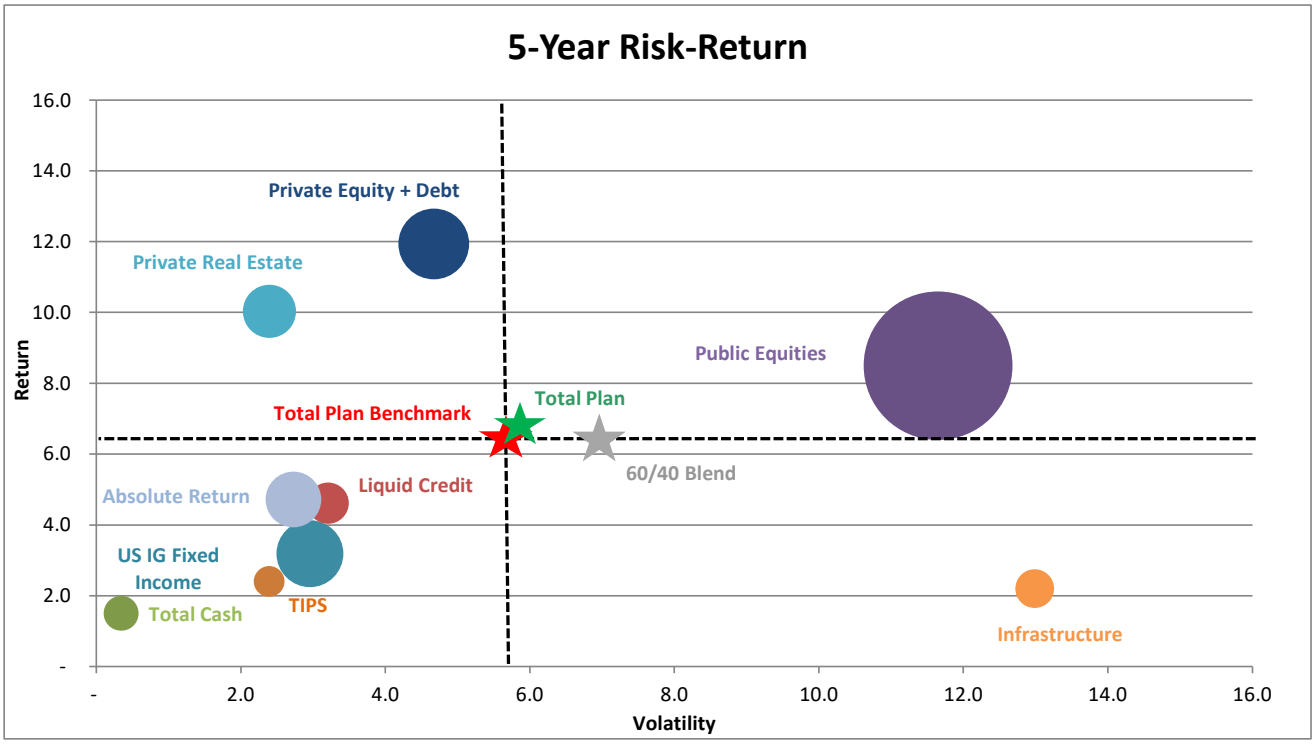
Risk Overview

ERSRI Portfolio

% - as of December 31th, 2019

Bubble-Size Scaled based on Current Allocations

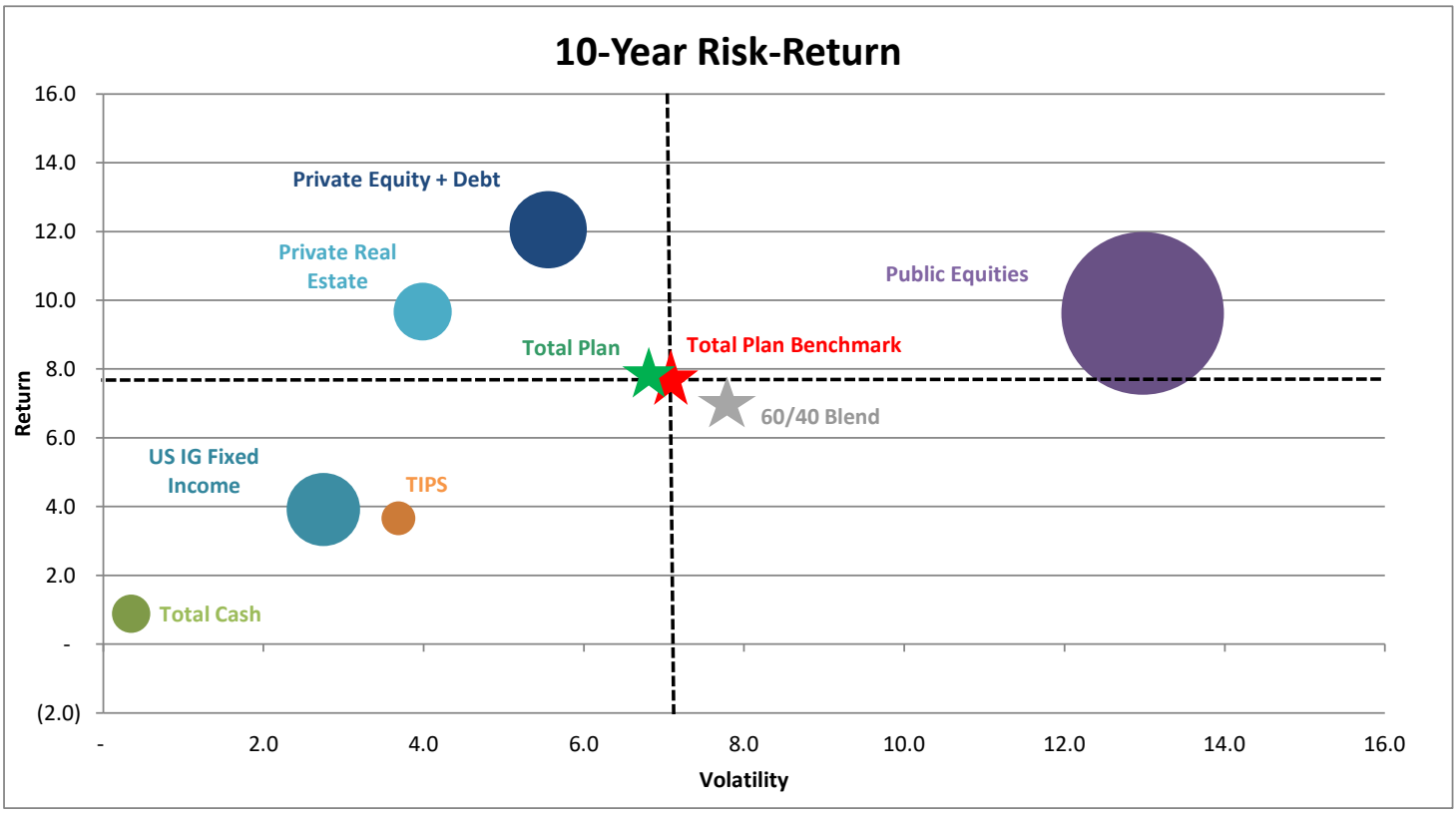




ERSRI Portfolio

% - as of December 31th, 2019

Bubble-Size Scaled based on Current Allocations



Section VI.

Performance Overview

BNY MELLON

Total Performance Summary

TOTAL NET OF FEES

12/31/2019

Account Name / *Benchmark Name*	Market Value	% of Total	Month	YTD	Fiscal YTD	1 Year	Annualized 3 Years	Annualized 5 Years	Annualized 10 Years	Annualized ITD	Inception Date
US Public Equity	1,450,781,150	17	2.87	31.16	10.38	31.16	14.64	11.33	13.21	8.91	8/1/2007
Russell 3000 Index			*2.89*	*31.02*	*10.37*	*31.02*	*14.57*	*11.24*	*13.42*	*8.89*	*8/1/2007*
Non-US Public Equity	1,259,356,570	14	4.75	21.27	7.02	21.27	10.10	5.72	5.15	8.19	5/1/2009
Total International Equity BM			*4.33*	*21.51*	*6.96*	*21.51*	*9.87*	*5.51*	*4.80*	*7.53*	*5/1/2009*
QVM Tilt	1,353,852,720	15	2.96	24.42	8.62	24.42	12.21			11.83	10/1/2015
MSCI World Net Dividend Index			*3.00*	*27.67*	*9.14*	*27.67*	*12.57*			*11.99*	*10/1/2015*
Total Public Growth	**4,063,990,440**	**46**	**3.47**	**25.77**	**8.73**	**25.77**	**12.33**	**8.50**	**9.62**	**5.17**	**7/1/2000**
MSCI All Country World Net Index			***3.52***	***26.60***	***8.92***	***26.60***	***12.44***	***8.41***	***8.79***		***7/1/2000***
Private Equity	683,607,366	8	3.16	12.54	8.43	12.54	16.50	13.08	12.63	9.78	2/1/1989
ILPA All Fds BM 1Q Lag 2			*3.16*	*11.23*	*8.00*	*11.23*	*14.29*	*11.58*	*14.13*		*2/1/1989*
Non Core Real Estate	153,551,710	2	1.49	8.19	3.17	8.19				16.70	7/1/2017
Opportunistic Private Credit	54,776,717	1	-0.17	1.40	2.94	1.40				9.75	7/1/2017
ILPA Distressed BM 1Q Lag			*-0.17*	*3.53*	*2.96*	*3.53*				*7.10*	*7/1/2017*
Total Private Growth	**891,935,792**	**10**	**2.64**	**11.02**	**7.10**	**11.02**				**15.85**	**7/1/2017**
Private Growth Benchmark			***2.51***	***9.78***	***6.68***	***9.78***					***7/1/2017***
TOTAL GROWTH COMPOSITE	**4,955,926,232**	**56**	**3.32**	**23.15**	**8.45**	**23.15**				**11.05**	**7/1/2017**
Total Growth Composite BM			***3.25***	***21.94***	***8.33***	***21.94***					***7/1/2017***
Harvest Fund Advisor	93,165,596	1	7.68	14.57	-5.89	14.57	-1.99	-4.76		-4.76	1/1/2015
Alerian MLP Index			*8.53*	*6.56*	*-8.90*	*6.56*	*-4.45*	*-7.00*		*-7.00*	*1/1/2015*
Heitman US Focused	85,185,343	1	-0.69		6.70					8.53	6/1/2019
MSCI US REIT Index			*-0.83*		*6.20*					*7.37*	*6/1/2019*
Liquid Credit	316,960,106	4	1.43	10.99	3.44	10.99	5.02	4.61		3.93	5/1/2013
Liquid Credit BM (50% BoA US HY/50% CS LL)			*1.85*	*11.27*	*3.24*	*11.27*	*4.99*	*4.98*		*4.52*	*5/1/2013*
Private Credit	178,728,146	2	0.94	3.24	4.38	3.24				4.20	7/1/2017
S&P LSTA Lev Loans + 3%			*0.74*	*6.10*	*3.94*	*6.10*				*6.96*	*7/1/2017*
TOTAL INCOME COMPOSITE	**674,039,192**	**8**	**1.84**	**11.52**	**2.45**	**11.52**				**3.87**	**7/1/2017**
Income Aggregate BM			***2.69***	***8.70***	***1.23***	***8.70***				***4.23***	***7/1/2017***
CPC Long Duration	393,647,059	4	-2.72	14.90	3.50	14.90				5.33	6/1/2017
Barclays US Treasury LT Index			*-2.79*	*14.83*	*3.47*	*14.83*				*5.50*	*6/1/2017*
CPC Trend Following	393,061,515	4	-2.15	3.86	-1.41	3.86				-0.69	6/1/2017
Credit Suisse Liquid Alt Beta			*-1.30*	*-9.85*	*-7.34*	*-9.85*				*-5.13*	*6/1/2017*
Total Crisis Protection	**786,708,574**	**9**	**-2.44**	**9.33**	**1.05**	**9.33**				**2.65**	**6/1/2017**
50/50 CPC Custom BM			***-2.05***	***1.98***	***-1.99***	***1.98***				***0.39***	***6/1/2017***

BNY MELLON

Total Performance Summary

TOTAL NET OF FEES

12/31/2019

Account Name *Benchmark Name*	Market Value	% of Total	Month	YTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	ITD	Inception Date
Priv Listed Infrastructure	181,223,142	2	1.21	16.67	7.54	16.67	14.13			10.60	3/1/2015
CPI + 4% 1 Mo Lag			*0.27*	*6.05*	*2.40*	*6.05*	*6.14*				*3/1/2015*
Core Real Estate	364,013,169	4	0.35	5.03	2.64	5.03				6.18	7/1/2017
NFI-ODCE BM 2			*1.08*	*4.64*	*1.86*	*4.64*				*6.21*	*7/1/2017*
Inflation-Linked Bonds	174,308,164	2	0.67	7.03	1.69	7.03	2.80	2.40	3.66	3.66	11/1/2009
Total Inflation Linked Custom			*0.70*	*6.85*	*1.61*	*6.85*	*2.79*	*2.44*	*3.65*	*3.64*	*11/1/2009*
Total Inflation Protection	**719,544,475**	**8**	**0.62**	**8.22**	**3.70**	**8.22**				**6.94**	**7/1/2017**
Inflation Protection Custom BM			***1.32***	***5.70***	***2.07***	***5.70***				***5.07***	***7/1/2017***
Absolute Return	569,742,385	6	1.23	8.74	2.71	8.74				6.81	7/1/2017
HFRI Fund of Funds Composite Index			*1.67*	*8.34*	*2.06*	*8.34*				*3.35*	*7/1/2017*
Traditional Fixed Income	825,093,414	9	0.01	9.33	2.70	9.33	4.20	3.19	3.92	5.09	7/1/2000
Bloomberg Barclays U.S. Aggregate Bond Index			*-0.07*	*8.72*	*2.45*	*8.72*	*4.03*	*3.05*	*3.75*	*4.95*	*7/1/2000*
Strategic Cash	185,829,236	2	0.20	2.94	1.25	2.94				2.03	2/1/2017
ICE BofAML US Treasury Notes 0-1 Year			*0.16*	*2.57*	*1.11*	*2.57*				*1.79*	*2/1/2017*
Total Volatility Protection	**1,580,667,905**	**18**	**0.47**	**8.25**	**2.53**	**8.25**				**4.70**	**7/1/2017**
Total Volitility Protection BM			***0.50***	***7.74***	***2.15***	***7.74***					***7/1/2017***
TOTAL STABILITY COMPOSITE	**3,086,920,954**	**35**	**-0.16**	**8.48**	**2.47**	**8.48**				**4.78**	**7/1/2017**
Total Stability Composite BM			***0.13***	***6.17***	***1.32***	***6.17***					***7/1/2017***
Short-Term Cash	38,067,469	0	0.20	4.93	1.09	4.93				2.93	7/1/2017
Russell Overlay Fd	20,061,378	0	-0.05	0.17	-0.03	0.17	0.04	0.04	-0.01	-0.03	9/1/2008
TOTAL PLAN	**8,775,450,211**	**100**	**1.90**	**16.65**	**5.76**	**16.65**	**9.12**	**6.82**	**7.80**	**5.31**	**7/1/2000**
Total Plan Benchmark			*2.05*	*14.98*	*5.17*	*14.98*	*8.82*	*6.47*	*7.68*		*7/1/2000*
60/40 Blend			*2.09*	*19.41*	*6.36*	*19.41*	*9.20*	*6.43*	*6.99*		*7/1/2000*
Total Plan ex PE,RE & Priv Inf	**7,159,549,961**	**82**	**1.93**	**18.19**	**5.76**	**18.19**	**8.54**	**6.11**	**7.13**	**6.43**	**4/1/1996**
Total Plan BM ex PE RE			*2.42*	*17.90*	*5.61*	*17.90*	*8.32*	*5.82*	*7.16*		*4/1/1996*

BNY MELLON

Total Performance Summary

END NOTES

12/31/2019

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

BNY MELLON

Total Performance Summary

TOTAL NET OF FEES

12/31/2019

Account Name *Benchmark Name*	Market Value	% of Total	Month	Cumulative 11/1/2019 - 11/30/2019	Cumulative 10/1/2019 - 10/31/2019	YTD	2018	2017	2016	Inception Date
US Public Equity	1,450,781,150	17	2.87	3.74	2.23	31.16	31.16	-5.17	21.14	8/1/2007
Russell 3000 Index			*2.89*	*3.80*	*2.15*	*31.02*	*31.02*	*-5.24*	*21.13*	*8/1/2007*
Non-US Public Equity	1,259,356,570	14	4.75	0.73	3.61	21.27	21.27	-13.85	27.76	5/1/2009
Total International Equity BM			*4.33*	*0.88*	*3.49*	*21.51*	*21.51*	*-14.20*	*27.19*	*5/1/2009*
QVM Tilt	1,353,852,720	15	2.96	2.86	2.91	24.42	24.42	-7.96	23.36	10/1/2015
MSCI World Net Dividend Index			*3.00*	*2.79*	*2.54*	*27.67*	*27.67*	*-8.71*	*22.40*	*10/1/2015*
Total Public Growth	**4,063,990,440**	**46**	**3.47**	**2.51**	**2.88**	**25.77**	**25.77**	**-9.20**	**24.11**	**7/1/2000**
MSCI All Country World Net Index			***3.52***	***2.44***	***2.74***	***26.60***	***26.60***	***-9.41***	***23.97***	***7/1/2000***
Private Equity	683,607,366	8	3.16	0.63	0.42	12.54	12.54	17.38	19.69	2/1/1989
ILPA All Fds BM 1Q Lag 2			*3.16*	*0.63*	*0.42*	*11.23*	*11.23*	*15.96*	*15.75*	*2/1/1989*
Non Core Real Estate	153,551,710	2	1.49	-0.09	0.01	8.19	8.19	25.66		7/1/2017
Opportunistic Private Credit	54,776,717	1	-0.17	2.34	-0.65	1.40	1.40	11.81		7/1/2017
ILPA Distressed BM 1Q Lag			*-0.17*	*2.34*	*-0.65*	*3.53*	*3.53*	*8.00*		*7/1/2017*
Total Private Growth	**891,935,792**	**10**	**2.64**	**0.61**	**0.28**	**11.02**	**11.02**	**18.83**		**7/1/2017**
Private Growth Benchmark			***2.51***	***0.73***	***0.28***	***9.78***	***9.78***	***14.18***		***7/1/2017***
TOTAL GROWTH COMPOSITE	**4,955,926,232**	**56**	**3.32**	**2.18**	**2.40**	**23.15**	**23.15**	**-5.23**		**7/1/2017**
Total Growth Composite BM			***3.25***	***1.97***	***2.07***	***21.94***	***21.94***	***-3.24***		***7/1/2017***
Harvest Fund Advisor	93,165,596	1	7.68	-3.10	-5.12	14.57	14.57	-13.27	-5.26	1/1/2015
Alerian MLP Index			*8.53*	*-5.75*	*-6.22*	*6.56*	*6.56*	*-12.42*	*-6.52*	*1/1/2015*
Heitman US Focused	85,185,343	1	-0.69	-1.55	1.72					6/1/2019
MSCI US REIT Index			*-0.83*	*-1.60*	*1.36*					*6/1/2019*
Liquid Credit	316,960,106	4	1.43	0.61	-0.08	10.99	10.99	0.78	3.54	5/1/2013
Liquid Credit BM (50% BoA US HY/50% CS LL)			*1.85*	*0.41*	*-0.13*	*11.27*	*11.27*	*-0.57*	*4.60*	*5/1/2013*
Private Credit	178,728,146	2	0.94	0.54	0.00	3.24	3.24	3.71		7/1/2017
S&P LSTA Lev Loans + 3%			*0.74*	*-0.02*	*1.02*	*6.10*	*6.10*	*8.19*		*7/1/2017*
TOTAL INCOME COMPOSITE	**674,039,192**	**8**	**1.84**	**-0.20**	**-0.55**	**11.52**	**11.52**	**-2.47**		**7/1/2017**
Income Aggregate BM			***2.69***	***-0.91***	***-0.84***	***8.70***	***8.70***	***0.57***		***7/1/2017***
CPC Long Duration	393,647,059	4	-2.72	-0.50	-0.85	14.90	14.90	-1.89		6/1/2017
Barclays US Treasury LT Index			*-2.79*	*-0.52*	*-0.86*	*14.83*	*14.83*	*-1.84*		*6/1/2017*
CPC Trend Following	393,061,515	4	-2.15	0.56	-5.36	3.86	3.86	-15.11		6/1/2017
Credit Suisse Liquid Alt Beta			*-1.30*	*-1.18*	*-5.53*	*-9.85*	*-9.85*	*-10.01*		*6/1/2017*
Total Crisis Protection	**786,708,574**	**9**	**-2.44**	**0.01**	**-3.06**	**9.33**	**9.33**	**-7.99**		**6/1/2017**
50/50 CPC Custom BM			***-2.05***	***-0.85***	***-3.19***	***1.98***	***1.98***	***-5.45***		***6/1/2017***

BNY MELLON

Total Performance Summary

TOTAL NET OF FEES

12/31/2019

Account Name *Benchmark Name*	Market Value	% of Total	Month	Cumulative 11/1/2019 - 11/30/2019	Cumulative 10/1/2019 - 10/31/2019	YTD	2018	2017	2016	Inception Date
Priv Listed Infrastructure	181,223,142	2	1.21	0.63	0.70	16.67	16.67	13.32	12.45	3/1/2015
CPI + 4% 1 Mo Lag			*0.27*	*0.55*	*0.40*	*6.05*	*6.05*	*6.18*	*6.20*	*3/1/2015*
Core Real Estate	364,013,169	4	0.35	0.07	0.73	5.03	5.03	7.22		7/1/2017
NFI-ODCE BM 2			*1.08*	*0.00*	*0.00*	*4.64*	*4.64*	*7.71*		*7/1/2017*
Inflation-Linked Bonds	174,308,164	2	0.67	-0.04	0.30	7.03	7.03	-0.23	1.73	11/1/2009
Total Inflation Linked Custom			*0.70*	*0.02*	*0.28*	*6.85*	*6.85*	*-0.25*	*1.90*	*11/1/2009*
Total Inflation Protection	**719,544,475**	**8**	**0.62**	**0.20**	**0.64**	**8.22**	**8.22**	**6.30**		**7/1/2017**
Inflation Protection Custom BM			***1.32***	***-0.18***	***0.39***	***5.70***	***5.70***	***3.84***		***7/1/2017***
Absolute Return	569,742,385	6	1.23	0.83	0.04	8.74	8.74	4.48		7/1/2017
HFRI Fund of Funds Composite Index			*1.67*	*0.84*	*0.50*	*8.34*	*8.34*	*-4.02*		*7/1/2017*
Traditional Fixed Income	825,093,414	9	0.01	0.03	0.36	9.33	9.33	-0.50	3.99	7/1/2000
Bloomberg Barclays U.S. Aggregate Bond Index			*-0.07*	*-0.05*	*0.30*	*8.72*	*8.72*	*0.01*	*3.54*	*7/1/2000*
Strategic Cash	185,829,236	2	0.20	0.13	0.27	2.94	2.94	1.88		2/1/2017
ICE BofAML US Treasury Notes 0-1 Year			*0.16*	*0.11*	*0.26*	*2.57*	*2.57*	*1.92*		*2/1/2017*
Total Volatility Protection	**1,580,667,905**	**18**	**0.47**	**0.30**	**0.24**	**8.25**	**8.25**	**1.41**		**7/1/2017**
Total Volitility Protection BM			***0.50***	***0.25***	***0.36***	***7.74***	***7.74***	***-0.95***		***7/1/2017***
TOTAL STABILITY COMPOSITE	**3,086,920,954**	**35**	**-0.16**	**0.21**	**-0.40**	**8.48**	**8.48**	**0.57**		**7/1/2017**
Total Stability Composite BM			***0.13***	***-0.08***	***-0.40***	***6.17***	***6.17***	***-0.79***		***7/1/2017***
Short-Term Cash	38,067,469	0	0.20	0.18	0.19	4.93	4.93	1.76		7/1/2017
Russell Overlay Fd	20,061,378	0	-0.05	-0.02	0.00	0.17	0.17	0.06	-0.09	9/1/2008
TOTAL PLAN	**8,775,450,211**	**100**	**1.90**	**1.24**	**1.12**	**16.65**	**16.65**	**-2.69**	**14.48**	**7/1/2000**
Total Plan Benchmark			*2.05*	*0.98*	*0.92*	*14.98*	*14.98*	*-1.94*	*14.30*	*7/1/2000*
60/40 Blend			*2.09*	*1.44*	*1.76*	*19.41*	*19.41*	*-5.52*	*15.41*	*7/1/2000*
Total Plan ex PE,RE & Priv Inf	**7,159,549,961**	**82**	**1.93**	**1.41**	**1.28**	**18.19**	**18.19**	**-5.64**	**14.66**	**4/1/1996**
Total Plan BM ex PE RE			*2.42*	*1.37*	*1.51*	*17.90*	*17.90*	*-5.82*	*14.46*	*4/1/1996*

BNY MELLON

Total Performance Summary

END NOTES

12/31/2019

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

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

GROWTH

- Total Public Growth
  - 40% MSCI ACWI Net
- Total Private Growth
  - 11% ILPA All Funds Index
  - 2.5% ODCE + 2.5%
  - 1.5% ILPA/Cambridge Distressed Securities Index

INCOME

- 1.5% Alerian MLP Total Return
- 3.5% Liquid Credit Custom (50% BoA HY/50% CS LL)
- 3% S&P LSTA Lev Loans + 3%

STABILITY

- Crisis Protection Class
  - 4% CS Managed Futures 18% Vol Index
  - 4% Barclays Long Duration US Treasury Index
- Inflation Protection
  - 2% CPI + 4%
  - 4% NFI-ODCE Index
  - 1% Barclays 1-10 Year TIPs Index
  - 1% BB Commodity Index
- Volatility Protection
  - 11.5% Barclays Agg
  - 6.5% HFRI FOF Composite
  - 3.0% BofA Merrill Lynch US T-Notes 0-1 Yr

Section VII.

Private Equity & Private Credit

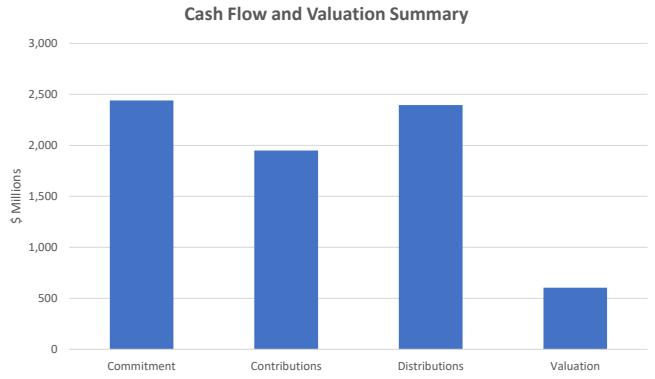
Portfolio Summary

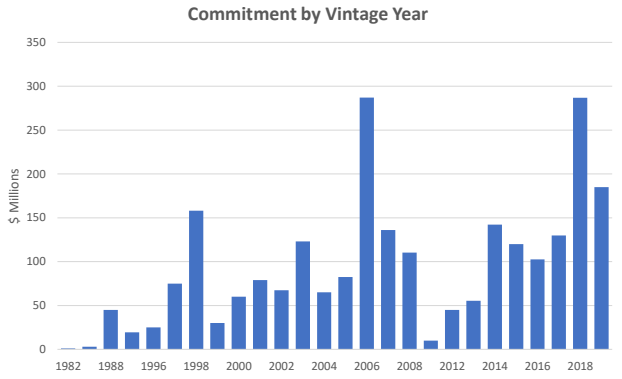
6/30/2019

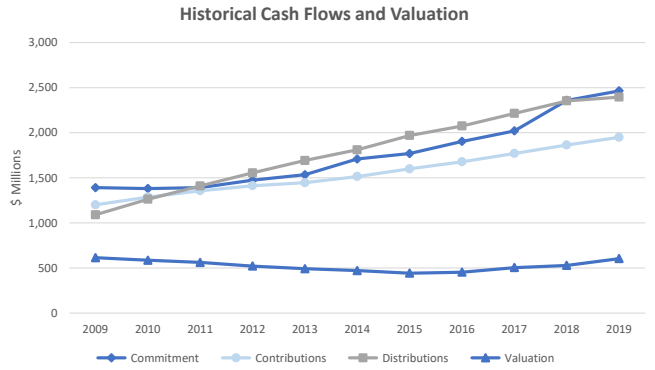
All Investments

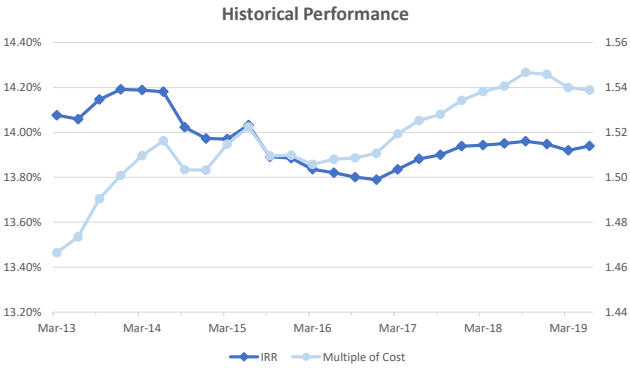
Performance Summary

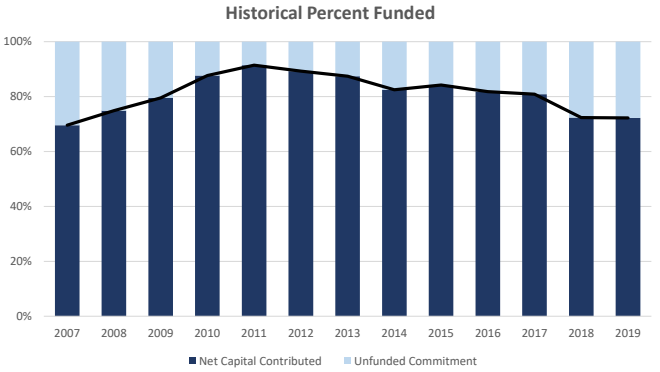
Asset Class	Investment Type	Number of Investments	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR	TWR
Private Equity Funds									
	Buyout Total	102	2,007,447,152	1,565,808,204	1,946,876,165	470,242,835	1.54	13.90%	12.92%
	Fund of Funds Total	1	45,000,000	45,000,000	106,748,821	-	2.37	19.94%	
	Secondary Total	4	60,000,000	55,009,798	65,353,045	2,154,286	1.23	5.82%	3.18%
	Venture Capital Total	24	328,750,000	283,356,745	276,077,065	132,058,399	1.44	6.61%	4.71%
Total: Private Equity Fu		**131**	**2,441,197,152**	**1,949,174,747**	**2,395,055,094**	**604,455,520**	**1.54**	**13.94%**	**11.79%**

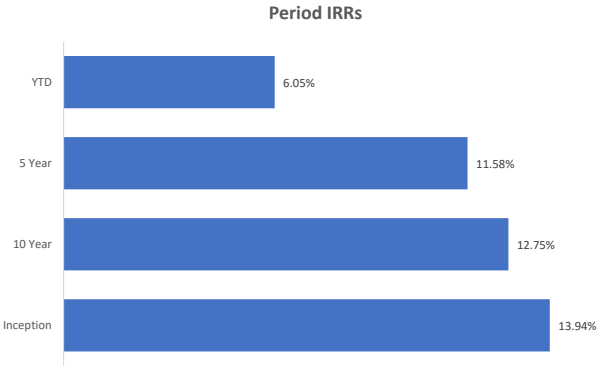












Employees' Retirement System of Rhode Island Private Equity Performance
6/30/2019

				Cumulative Cash Flows ($)				Cumulative Performance*	
Current Partnerships	Vintage Year	Type	Amount Committed (In $ unless otherwise noted)	Amount Drawn	Amount Distributed	Amount Unfunded	Valuation ($)	Net IRR (%)	Net Multiple of Investment
Nautic Partners V	2000	Buyout	20,000,000	20,331,229	40,506,615	600,000	1,479,385	17.09	2.07
CVC European Equity Partners III	2001	Buyout	€ 20,000,000	23,760,732	59,551,716	200,000	1,310,426	41.03	2.56
Parthenon Investors II	2001	Buyout	23,960,000	23,409,381	37,415,960	1,916,800	289,962	12.23	1.61
Nordic Capital V	2003	Buyout	€ 14,615,550	18,983,120	50,053,191	-	307,264	20.21	2.65
TPG Partners IV	2003	Buyout	15,000,000	16,672,684	31,655,907	-	434,774	15.43	1.92
Birch Hill Equity Partners III	2005	Buyout	CAD 18,000,000	15,668,740	28,699,222	137,549	3,469,927	13.22	2.05
CVC Equity Partners IV	2005	Buyout	€ 16,500,000	18,454,958	36,087,583	2,250,468	18,228	16.64	1.96
Providence Equity Partners V	2005	Buyout	25,000,000	31,142,133	36,171,706	2,250,000	411,124	3.08	1.17
Fenway III	2006	Buyout	15,000,000	17,285,636	26,400,433	900,000	1,566,861	7.50	1.62
First Reserve Fund XI	2006	Buyout	20,000,000	22,125,580	15,331,412	-	1,015,367	-7.12	0.74
Nordic Capital VI	2006	Buyout	€ 15,000,000	16,290,264	31,753,706	-	274,035	8.62	1.73
TPG Partners V	2006	Buyout	20,000,000	20,697,887	27,205,576	400,000	1,411,848	4.99	1.38
Green Equity V	2007	Buyout	20,000,000	20,422,420	37,357,653	1,800,000	10,164,794	18.67	2.33
Kayne Anderson IV	2007	Buyout	15,000,000	16,605,519	17,447,153	-	418,862	2.46	1.08
Nautic Partners VI	2007	Buyout	20,000,000	24,233,473	50,881,593	600,000	4,628,954	17.44	2.29
Providence Equity Partners VI	2007	Buyout	25,000,000	29,530,644	31,538,289	1,250,000	6,398,197	4.96	1.28
Trilantic Capital Partners IV	2007	Buyout	11,098,351	11,611,409	17,227,741	1,442,786	1,275,436	13.64	1.59
Bain Capital X	2008	Buyout	25,000,000	24,300,000	35,341,024	750,000	5,586,028	9.95	1.68
CVC Equity Partners V	2008	Buyout	€ 20,000,000	24,883,744	48,959,410	227,320	5,807,668	20.08	2.20
Nordic Capital VII	2008	Buyout	€ 15,000,000	17,578,427	27,430,841	852,450	502,982	8.20	1.59
TPG Partners VI	2008	Buyout	10,000,000	13,924,603	16,645,164	400,000	2,515,151	8.68	1.38
Advent International GPE VII-C	2012	Buyout	20,000,000	18,800,000	16,941,346	1,200,000	16,535,694	16.10	1.78
Providence Equity Partners VII	2012	Buyout	25,000,000	31,243,494	25,917,449	4,500,000	24,081,245	21.21	1.60
EnCap Energy IX	2013	Buyout	18,000,000	20,203,414	15,052,953	1,080,000	11,588,782	12.04	1.32
Nordic Capital VIII	2013	Buyout	€ 15,000,000	18,177,563	11,632,693	10,399,890	15,797,444	15.81	1.51
Riverside Capital Appreciation Fund VI	2013	Buyout	20,000,000	18,519,214	8,979,951	2,200,000	17,876,040	13.21	1.45
Carlyle Asia Partners IV	2014	Buyout	30,000,000	33,129,558	12,022,708	3,300,000	28,235,246	8.08	1.22
CVC Capital Partners VI	2014	Buyout	€ 15,000,000	19,315,428	5,895,328	3,580,290	19,405,167	12.98	1.31
Nautic Partners VII	2014	Buyout	20,000,000	16,832,318	24,594,724	5,200,000	9,217,216	42.62	2.01
Riverside Micro-Cap III	2014	Buyout	20,000,000	21,874,016	14,135,671	2,400,000	45,324,570	30.88	2.72
Sorenson Capital Partners III	2014	Buyout	30,000,000	26,190,869	45,271	12,300,000	32,546,392	8.13	1.24
Baring Asia VI	2015	Buyout	15,000,000	15,272,501	2,903,337	1,950,000	17,110,939	15.55	1.31
Centerbridge Capital Partners III	2015	Buyout	25,000,000	16,092,081	5,154,875	14,000,000	16,542,436	14.90	1.35
EnCap Energy X	2015	Buyout	25,000,000	21,065,512	4,101,073	5,500,000	21,334,504	10.38	1.21
Paine & Partners Capital IV	2015	Buyout	30,000,000	22,461,836	6,305,447	8,400,000	21,755,545	9.93	1.25
Advent International GPE VIII	2016	Buyout	20,000,000	16,820,000	-	3,200,000	20,709,676	15.74	1.23
Nautic Partners VIII	2016	Buyout	20,000,000	11,836,838	11,217,232	10,200,000	5,238,956	63.57	1.39
Southvest Partners VII	2016	Buyout	37,500,000	13,262,398	1,895,264	24,750,000	7,382,275	-40.74	0.70
Tenex Capital Partners II	2016	Buyout	25,000,000	14,422,898	875,603	11,250,000	16,638,896	11.36	1.21
CVC Capital Partners VII	2017	Buyout	€ 35,000,000	6,321,791	136,036	33,416,040	7,552,372	N/A	1.22
EnCap Energy XI	2017	Buyout	50,000,000	9,066,217	-	41,000,000	7,558,373	N/A	0.83
RLH IV	2017	Buyout	40,000,000	9,340,271	-	30,800,000	7,831,140	N/A	0.84
Altaris Constellation Partners IV	2018	Buyout	6,000,000	1,848,514	-	4,140,000	2,123,536	N/A	1.15
Altaris IV	2018	Buyout	24,000,000	6,326,439	-	17,760,000	6,788,703	N/A	1.07
Baring Asia VII	2018	Buyout	50,000,000	5,155,956	-	45,000,000	4,082,442	N/A	0.79
Carlyle Asia V	2018	Buyout	50,000,000	4,201,587	-	46,000,000	4,271,561	N/A	1.02
German Equity Partners V	2018	Buyout	€ 21,500,000	2,407,148	-	21,993,210	1,809,163	N/A	0.75
Level Equity Opportunities Fund	2018	Buyout	15,000,000	1,861,828	-	13,200,000	2,108,609	N/A	1.13
Siris Partners IV	2018	Buyout	50,000,000	7,629,044	-	42,500,000	7,521,483	N/A	0.99

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

Employees' Retirement System of Rhode Island Private Equity Performance
6/30/2019

Current Partnerships	Vintage Year	Type	Amount Committed (In $ unless otherwise noted)	Cumulative Cash Flows ($)				Cumulative Performance*	
				Amount Drawn	Amount Distributed	Amount Unfunded	Valuation ($)	Net IRR (%)	Net Multiple of Investment
Hastings Equity IV	2019	Buyout	25,000,000	4,516,452	-	20,500,000	3,686,572	N/A	0.82
Riverside Micro-Cap V	2019	Buyout	25,000,000	2,172,767	-	22,750,000	1,674,758	N/A	0.77
Vinci Capital Partners III-B	2019	Buyout	30,000,000	1,547,654	-	28,500,000	296,173	N/A	0.19
Coller V	2006	Secondary	15,000,000	12,620,912	16,902,008	3,300,000	1,355,446	8.27	1.45
W Capital II	2007	Secondary	15,000,000	14,896,718	19,924,585	1,650,000	798,840	10.26	1.39
Granite Global Ventures II	2004	Venture Capital	15,000,000	14,333,510	22,180,375	600,000	1,129,462	6.23	1.63
Leapfrog II	2005	Venture Capital	10,000,000	9,640,000	6,811,564	400,000	4,127,302	1.99	1.13
Alta VIII	2006	Venture Capital	15,000,000	15,000,000	28,214,986	-	12,261,118	18.05	2.70
Castile Ventures III	2006	Venture Capital	5,000,000	5,009,730	1,396,371	-	398,546	-19.39	0.36
Focus Ventures III	2006	Venture Capital	15,000,000	15,000,000	8,134,762	-	-	-9.96	0.54
Granite Global Ventures III	2006	Venture Capital	15,000,000	14,625,748	41,675,138	300,000	468,078	18.38	2.88
Point 406 Ventures I	2006	Venture Capital	10,000,000	11,317,207	9,439,777	200,000	8,411,529	7.40	1.58
Point Judith Venture II	2006	Venture Capital	5,000,000	6,286,683	7,928,451	100,000	1,240,162	5.76	1.46
Lighthouse VI	2007	Venture Capital	15,000,000	14,250,000	19,832,947	750,000	471,220	6.83	1.42
Paladin III	2008	Venture Capital	10,000,000	13,291,536	9,237,491	300,000	13,383,046	10.31	1.70
Industry Ventures III	2014	Venture Capital	25,000,000	25,314,348	5,106,429	1,750,000	40,973,195	22.50	1.82
Industry Ventures III Co-Inv.	2015	Venture Capital	15,000,000	10,395,765	181,258	4,650,000	15,756,992	21.83	1.53
Industry Ventures IV	2015	Venture Capital	10,000,000	6,400,000	489,841	3,600,000	7,142,988	14.25	1.19
Level Equity Growth Partners IV	2018	Venture Capital	17,500,000	4,141,221	-	13,300,000	3,808,500	N/A	0.92
Industry Ventures V	2019	Venture Capital	30,000,000	2,550,000	78,296	27,300,000	3,233,217	N/A	1.30
Other funds in aggregate**			115,000,000	119,553,772	141,304,162	3,200,000	19,490,657		
Total			**$ 1,596,832,285**	**$ 1,160,455,340**	**$ 1,210,307,297**	**$ 570,346,802**	**$ 588,363,479**		

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**Other funds in aggregate are the total commitments to and amounts drawn and distributed by funds whose confidentiality provisions do not permit the disclosure of their performance data. These funds include Braemar Energy Ventures III, Constellation Ventures III,Thomas, McNerney & Partners and Thomas McNerney & Partners II.“ In addition, other funds in aggregate includes commitments to funds where no capital has been drawn, as well as funds in final liquidation.

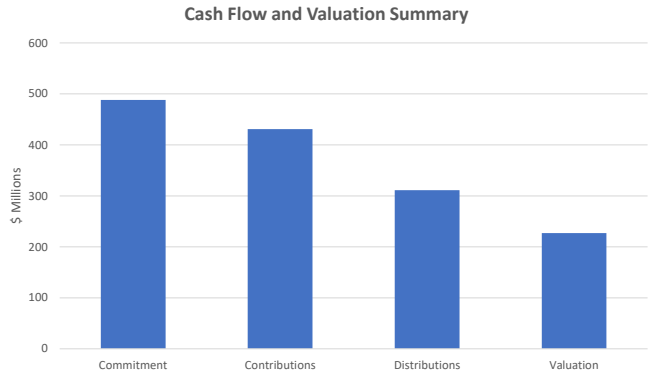
Portfolio Summary

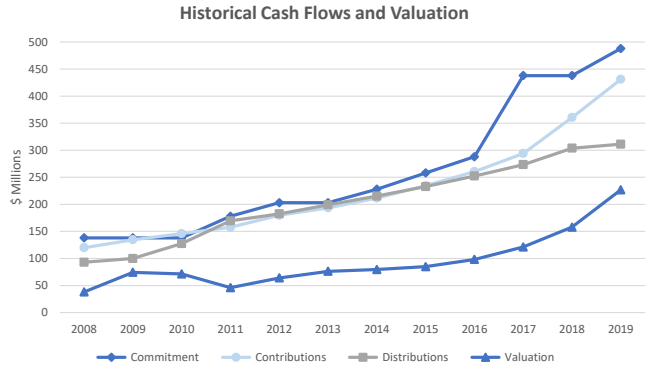
6/30/2019

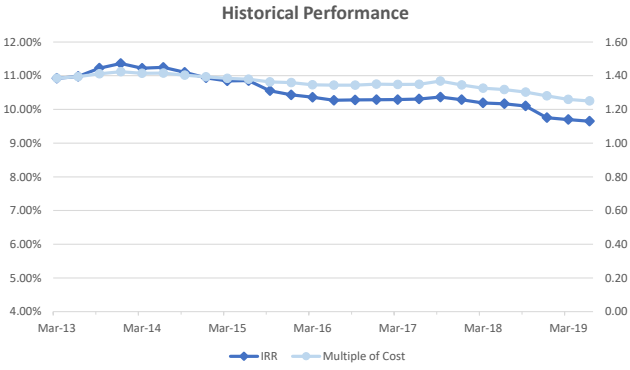
All Investments

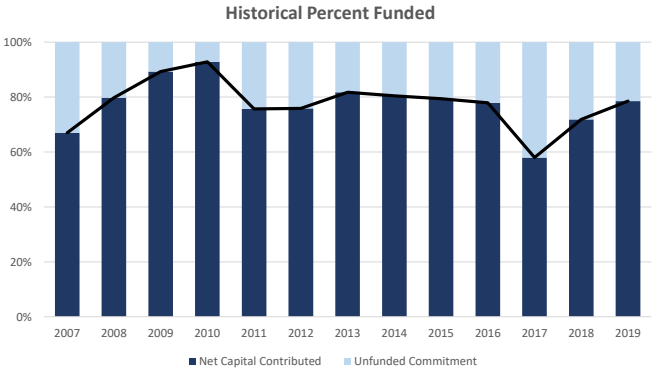
Performance Summary

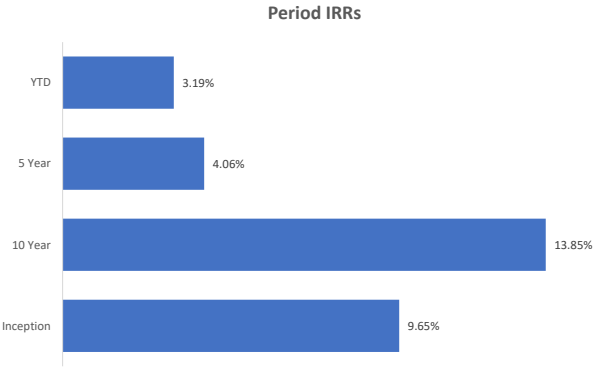
Asset Class	Investment Type	Number of Investments	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR	TWR
Private Credit Funds									
	Distressed Debt Total	15	263,000,000	228,823,412	254,785,394	62,993,972	1.39	10.21%	9.64%
	Private Credit Total	7	225,000,000	202,158,034	56,458,282	163,886,693	1.09	5.93%	6.55%
Total: Private Credit Funds		**22**	**488,000,000**	**430,981,446**	**311,243,676**	**226,880,665**	**1.25**	**9.65%**	**9.61%**











Employees' Retirement System of Rhode Island Private Credit Performance
6/30/2019

Current Partnerships	Vintage Year/Initial Investment	Type	Amount Committed (In $ unless otherwise noted)	Cumulative Cash Flows ($) Amount Drawn	Amount Distributed	Amount Unfunded	Valuation ($)	Cumulative Performance* Net IRR (%)	Net Multiple of Investment
GOF IV	2014	Private Credit	$30,000,000	$28,374,000	$5,760,000	-	$24,846,000	2.56	1.08
CSIP V	2016	Private Credit	$30,000,000	$23,844,000	$5,434,000	$9,300,000	$21,057,000	7.37	1.11
Virgo Societas Partnership IV	2017	Private Credit	$50,000,000	$37,650,000	318,000	$12,500,000	$36,610,000	N/A	0.98
Owl Rock Capital Corporation	2018	Private Credit	$50,000,000	$50,000,000	$2,658,000	$0	$49,688,000	N/A	1.05
Zephyrus Aviation Partners I	2019	Private Credit	$20,000,000	$9,706,000	-	$10,200,000	$9,834,000	N/A	N/A
CCP	2006	Opportunistic Private Credit	$15,000,000	$23,811,000	$40,475,000	$900,000	$2,021,000	19.39	1.78
MHR III	2006	Opportunistic Private Credit	$20,000,000	$20,817,000	$21,126,000	$7,000,000	$7,093,000	5.78	1.36
WLR Recovery IV	2007	Opportunistic Private Credit	$8,000,000	$7,277,000	$9,374,000	$240,000	$432,000	7.44	1.35
OCM EPF III	2011	Opportunistic Private Credit	$20,000,000	$17,150,000	$13,136,000	$5,800,000	$14,434,000	10.37	1.61
Centerbridge Sp. Credit II	2012	Opportunistic Private Credit	$25,000,000	$22,500,000	$19,847,000	$2,500,000	$5,175,000	2.66	1.11
DK L-T Opps. IV	2018	Opportunistic Private Credit	$50,000,000	$32,000,000	-	$18,000,000	$33,840,000	N/A	0.98
Other funds in aggregate**			$75,000,000	$52,585,000	$42,416,000	$9,200,000	$19,724,000		
Total			**$ 393,000,000**	**$ 325,714,000**	**$ 160,544,000**	**$ 75,640,000**	**$ 224,754,000**		

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Section VIII.

Crisis Protection Class

CPC Returns CPC Program, December 31, 2019, %				
Account Name	MTD Return	Annualized Return (Since Inception)	Annualized Std. Dev (December '19)	Annualized Std. Dev (Since Inception)
Total CPC Program	-2.44	2.65	10.99	9.55
CPC Trend	-2.15	-0.69	10.92	14.71
CPC Long Duration	-2.72	5.33	13.89	9.90

Transitive Risk CPC Program, 12/31/2019, USD								
Account Name	SPX +10% (No Decay) - P&L % MV	FTSE 100 +10% (No Decay) - P&L % MV	MSCI EM +10% (No Decay) - P&L % MV	Gold +10% (No Decay) - P&L % MV	Oil +10% (No Decay) - P&L % MV	20+ Year Treasury +10% (No Decay) - P&L % MV	DXY +10% (No Decay) - P&L % MV	MSCI All Country -20% (No Decay) - P&L % MV
Total CPC Program	3.00%	2.98%	2.92%	2.55%	0.98%	3.14%	-3.21%	-6.58%
CPC Trend	8.26%	8.41%	7.63%	0.96%	2.73%	-3.25%	-5.50%	-18.47%
CPC Long Duration	-2.26%	-2.45%	-1.79%	4.13%	-0.77%	9.53%	-0.91%	5.31%

Return Correlation (Since Inception)			
	Total CPC Program	CPC Trend	CPC Long Duration
Total CPC Program	1.00	0.85	0.67
CPC Trend	0.85	1.00	0.19
CPC Long Duration	0.67	0.19	1.00

Return Correlation (DEC '19)			
	Total CPC Program	CPC Trend	CPC Long Duration
Total CPC Program	1.00	0.83	0.92
CPC Trend	0.83	1.00	0.54
CPC Long Duration	0.92	0.54	1.00

Section IX.

Absolute Return

CLIFFWATER

Employees' Retirement System of the State of Rhode Island

Absolute Return Portfolio

Portfolio Performance Summary

Estimated as of December 31, 2019

Fund	Market Value	Actual %	Dec	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep	Std Dev	LTD Beta	Sharpe Ratio	Incep Date
			Returns											
Absolute Return Portfolio														
Capula Global Relative Value Fund Ltd.	79,619,015	13.9%		3.28%	7.89%	3.97%	7.89%	5.44%	6.43%	5.93%	1.76%	-0.03	2.68	Dec-11
Davidson Kempner Institutional Partners, L.P.	85,767,245	15.0%	1.21%	1.82%	7.06%	2.64%	7.06%	5.18%	4.80%	5.65%	2.00%	0.10	2.24	Nov-11
DE Shaw Composite Fund LLC	130,543,933	22.9%		0.85%	10.90%	4.93%	10.90%	11.08%	10.86%	12.47%	4.15%	0.03	2.61	Nov-11
Elliott Associates, L.P.	115,980,616	20.3%	1.50%	1.20%	6.88%	2.00%	6.88%	6.40%	7.11%	8.40%	3.53%	0.08	2.01	Nov-11
Graham Absolute Return Trading Ltd.	55,901,172	9.8%	1.43%	2.44%	10.18%	1.93%	10.18%	1.61%	3.22%	3.34%	5.67%	0.07	0.43	Jan-12
Viking Global Equities, LP	62,575,459	11.0%	1.11%	5.80%	18.37%	0.90%	18.37%	10.30%	6.90%	10.23%	7.57%	0.34	1.20	Dec-11
Winton Fund Limited	39,554,921	6.9%	1.50%	-0.55%	3.05%	2.93%	3.05%	3.43%	1.61%	3.48%	8.23%	0.10	0.34	Dec-11
Absolute Return Portfolio - Total	569,942,360	99.8%	1.01%	2.03%	9.26%	2.91%	9.26%	7.09%	5.12%	6.17%	3.01%	0.16	1.68	Nov-11
HFRI Fund of Funds Composite Index			1.67%	3.04%	8.34%	2.06%	8.34%	3.87%	2.36%	3.32%	3.56%		0.66	Nov-11
MSCI AC World Index Free - Net			3.52%	8.95%	26.60%	8.92%	26.60%	12.44%	8.41%	9.85%	11.30%		0.80	Nov-11
ML 3-month T-Bills			0.14%	0.46%	2.28%	1.03%	2.28%	1.67%	1.07%	0.68%	0.25%		-	Nov-11
25% MSCI ACWI/75% Barclays Aggregate			0.83%	2.33%	13.16%	4.09%	13.16%	6.23%	4.52%	4.79%	3.48%		1.08	Nov-11
Liquidating Portfolio														
Indus Asia Pacific Distribution Holding Company II, 06.30.14 Series (liquidating trust)	304,871	0.1%	-0.45%	-1.22%	-6.87%	-5.50%	-6.87%	-3.16%	-14.81%	-10.24%	17.51%	0.36	-0.58	Jan-12
Luxor Capital Partners, LP - Liquidating SPV	751,522	0.1%	-0.03%	-7.11%	-22.83%	-7.06%	-22.83%	4.16%	-	0.49%	18.32%	-0.41	0.02	Jul-16
Liquidating/Redeeming - Total	1,056,393	0.2%	-0.15%	-5.49%	-18.82%	-6.61%	-18.82%	-5.94%	-3.82%	-1.83%	7.52%	-0.08	-0.34	Nov-11
Total Absolute Return Portfolio	570,998,753	100.0%	1.01%	2.02%	9.19%	2.89%	9.19%	6.63%	4.73%	5.59%	2.86%	0.15	1.58	Nov-11
HFRI Fund of Funds Composite Index			1.67%	3.04%	8.34%	2.06%	8.34%	3.87%	2.36%	3.32%	3.56%		-	Nov-11
Market Indices														
Libor3Month			0.16%	0.48%	2.29%	1.02%	2.29%	1.98%	1.40%	0.98%	0.24%		-	Nov-11
Bloomberg Barclays US Aggregate Bond Index			-0.07%	0.18%	8.73%	2.45%	8.73%	4.04%	3.06%	2.98%	2.89%		0.69	Nov-11
Bloomberg Barclays US High Yield Bond Index			2.00%	2.61%	14.30%	3.98%	14.30%	6.36%	6.13%	6.90%	5.10%		1.14	Nov-11
S&P 500 TR			3.02%	9.07%	31.49%	10.92%	31.49%	15.27%	11.70%	14.68%	10.88%		1.23	Nov-11
MSCI EAFE - Net			3.25%	8.17%	22.01%	7.01%	22.01%	9.56%	5.67%	6.72%	12.59%		0.50	Nov-11
MSCI EMF (Emerging Markets Free) - Net			7.46%	11.84%	18.44%	7.09%	18.44%	11.57%	5.61%	3.88%	15.55%		0.26	Nov-11

*LTD Beta is calculated with Holding Level Returns. The market benchmark is MSCI AC World Index Free - Net Index

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.

CLIFFWATER

Employees' Retirement System of the State of Rhode Island

Absolute Return Portfolio

Fund Level Performance Report

Estimated as of December 31, 2019

						Trailing Returns			Calendar Year Returns					5 Yr	ITD Beta to	Sharpe Ratio			Start
Fund	QTD	YTD	Dec	Nov	Oct	1 Year	3 Year	5 Year	2018	2017	2016	2015	2014	Std Dev	MSCI ACWI[1]	3 yr	5 yr	Incep.	Date
Absolute Return																			
Capula Global Relative Value Fund Ltd.	3.26%	7.98%				7.98%	5.45%	6.45%	4.63%	3.79%	8.37%	7.54%	8.14%	1.62%	-0.03	2.24	2.92	1.84	Oct-05
Davidson Kempner Institutional Partners, L.P.	1.75%	6.70%	1.21%	0.17%	0.36%	6.70%	4.85%	4.54%	1.81%	6.11%	6.71%	1.51%	4.45%	1.81%	0.10	1.44	1.68	1.54	Mar-96
DE Shaw Composite Fund LLC	0.90%	10.91%				10.91%	10.90%	10.47%	11.38%	10.41%	6.12%	13.68%	15.57%	3.98%	0.03	2.17	2.18	1.61	Mar-01
Elliott Associates, L.P.	1.20%	6.53%	1.50%	-0.20%	-0.10%	6.53%	6.05%	6.68%	2.91%	8.80%	12.98%	2.51%	8.24%	3.50%	0.08	1.33	1.46	1.87	Jan-90
Graham Absolute Return Trading Ltd.	2.45%	9.54%	1.43%	-0.33%	1.34%	9.54%	1.41%	3.42%	2.36%	-7.01%	11.78%	1.50%	10.42%	7.13%	0.08	-0.05	0.31	0.89	Jan-05
Viking Global Equities, LP	5.58%	17.94%	1.10%	3.40%	1.00%	17.94%	11.73%	7.73%	4.64%	13.01%	-3.92%	8.27%	13.47%	8.25%	0.31	1.28	0.78	1.39	Oct-99
Winton Fund Limited	-0.57%	2.99%	1.49%	-0.76%	-1.28%	2.99%	3.38%	1.58%	-0.56%	7.88%	-3.01%	0.95%	13.88%	8.22%	0.10	0.22	0.06	0.63	Oct-97
Liquidating Portfolio																			
Indus Asia Pacific Fund, LP	-1.22%	-6.87%	-0.45%	-0.67%	-0.11%	-6.87%	-3.16%	-14.81%	-11.10%	9.70%	-26.00%	-33.23%	-15.60%	21.44%	0.37	-0.26	-0.70	-0.03	Dec-00
Luxor Capital Partners, LP	-7.11%	-22.83%	-0.03%	-0.03%	-7.06%	-22.83%	6.43%	1.02%	1.19%	54.38%	7.80%	-19.05%	-9.83%	17.23%	-0.41	0.32	0.07	0.66	Apr-02
Benchmark																			
HFRI Fund of Funds Composite Index	3.04%	8.34%	1.67%	0.84%	0.50%	8.34%	3.87%	2.36%	-4.02%	7.77%	0.51%	-0.27%	3.37%	8.96%					Sep-90
HFRI Fund Weighted Composite Index	3.50%	10.38%	1.84%	1.02%	0.61%	10.38%	4.52%	3.55%	-4.75%	8.59%	5.44%	-1.12%	2.98%	9.13%					Sep-90
Market Indices																			
3 Month Libor - BOM	0.48%	2.29%	0.16%	0.16%	0.16%	2.29%	1.98%	1.40%	2.36%	1.29%	0.76%	0.33%	0.23%	0.24%					Sep-87
Barclays Aggregate Bond Index	0.18%	8.73%	-0.07%	-0.05%	0.30%	8.73%	4.04%	3.06%	0.02%	3.55%	2.66%	0.57%	5.94%	3.06%					Sep-76
Barclays High Yield Credit Bond Index	2.61%	14.30%	2.00%	0.33%	0.28%	14.30%	6.36%	6.13%	-2.08%	7.50%	17.14%	-4.46%	2.46%	5.28%					Mar-84
S&P 500 (TR)	9.07%	31.49%	3.02%	3.63%	2.17%	31.49%	15.27%	11.70%	-4.38%	21.83%	11.96%	1.38%	13.69%	11.98%					Feb-89
MSCI EAFE - Net - USD	8.17%	22.01%	3.25%	1.13%	3.59%	22.01%	9.56%	5.67%	-13.79%	25.03%	1.00%	-0.81%	-4.90%	12.23%					Aug-70
MSCI EMF (EMERGING MARKETS FREE) - Net - USD	11.84%	18.44%	7.46%	-0.14%	4.22%	18.44%	11.57%	5.61%	-14.58%	37.28%	11.19%	-14.92%	-2.19%	15.79%					Aug-88

*LTD Beta is calculated with Fund Level Returns. The market benchmark is MSCI AC World Index Free - Net Index

Note: The above is manager composite history.

1. The inception date for this calculation is equivalent to the inception date of ERSRI's initial investment into the relevant fund.

Section X.

Real Estate

PORTFOLIO SUMMARY

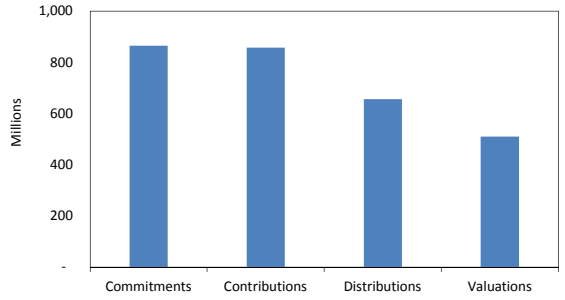
6/30/2019

All Portfolio Investments - Real Estate [1]

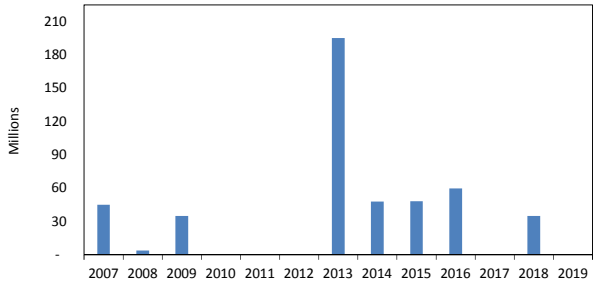
Performance Summary

Asset Class	Investment Type	Number of Investments [4]	Commitment	Contributions [2], [3]	Distributions [3]	Adjusted Valuation	Multiple of Cost	IRR	TWR
Real Estate Funds	Core	8	414,873,660	483,441,494	405,104,209	365,532,400	1.6x	5.5%	5.7%
	Non-Core	22	450,260,817	373,281,430	251,553,685	144,379,117	1.1x	1.2%	3.6%
Total: Real Estate Funds		30	865,134,477	856,722,924	656,657,894	509,911,517	1.4x	4.6%	5.1%
Total:		**30**	**865,134,477**	**856,722,924**	**656,657,894**	**509,911,517**	**1.4x**	**4.6%**	**5.1%**

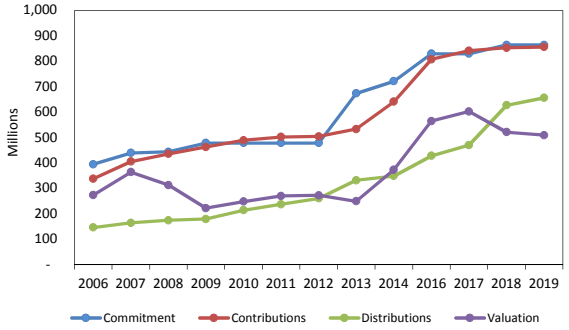
Cash Flow and Valuation Summary



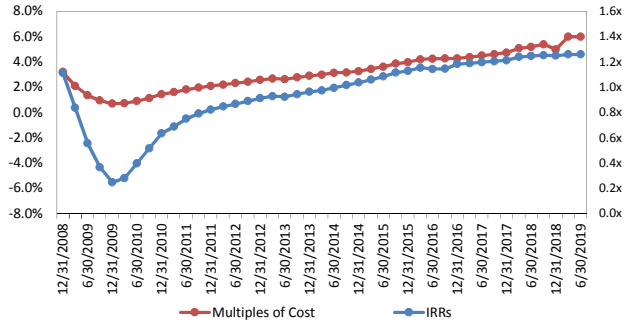
Commitment by Vintage Year



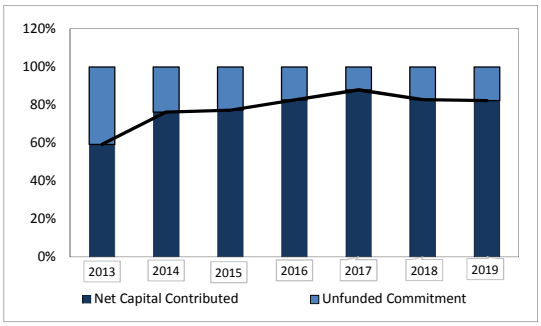
Historical Cash Flows and Valuation



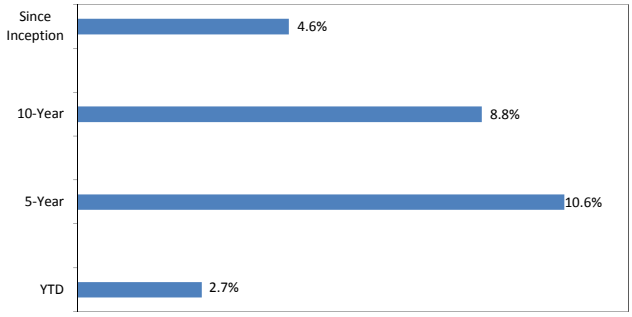
Historical Performance



Historical Percent Funded



Period IRRs [5]



[1] Investment information listed as of March 31, 1989 through June 30, 2019 and includes those investments which have been liquidated.
[2] Contributions are based on cash activity and are higher than commitments primarily due to reinvestments and contributions for management fees in some of the core open-end funds.
[3] Contributions and Distributions each include activity in the amount of $33.5 million related to a simultaneous sale and purchase of shares in a core open-end fund.
[4] As of June 30, 2019 there are four core funds and eleven non-core funds.
[5] The YTD IRR presented is an unannualized percentage.

Employees' Retirement System of Rhode Island Real Estate Performance
6/30/2019

Current Partnerships	Vintage Year/Initial Investment	Type	Amount Committed (In $ unless otherwise noted)	Cumulative Cash Flows ($) Amount Drawn	Amount Distributed	Amount Unfunded	Valuation ($)	Cumulative Performance* Net IRR (%)	Net Multiple of Investment
Morgan Stanley Prime Property Fund	2005	Core	35,000,000	35,000,000	25,593,729	-	66,299,186	7.3%	2.2
JP Morgan Strategic Property Fund	2006	Core	75,000,000	75,000,000	34,263,914	-	110,728,989	6.2%	1.7
AEW Core Property Trust	2010	Core	69,873,660	69,873,660	57,093,344	-	107,288,205	10.7%	1.6
Heitman America Real Estate Trust	2014	Core	60,000,000	60,000,000	14,457,314	-	81,216,020	8.6%	1.4
TriCon Capital Fund VII	2005	Non-Core	15,000,000	14,571,533	4,818,706	428,467	514,697	-15.8%	0.3
Magna Hotel Fund III	2008	Non-Core	4,000,000	3,426,573	5,764,047	573,427	10,331	14.4%	1.7
IC Berkeley Partners III	2013	Non-Core	18,000,000	16,038,326	24,551,493	1,961,674	182,040	19.9%	1.5
GEM Realty Fund V	2013	Non-Core	50,000,000	39,874,323	13,068,468	10,125,677	46,858,480	11.9%	1.4
Exeter Industrial Value Fund III	2014	Non-Core	30,000,000	29,099,454	44,580,952	900,546	12,378,001	29.1%	1.9
Waterton Fund XII	2014	Non-Core	35,000,000	34,265,141	17,544,728	-	34,685,966	14.0%	1.4
Crow Holdings Retail Fund	2015	Non-Core	24,000,000	20,935,313	3,340,836	3,064,687	24,282,487	11.0%	1.3
Lone Star Real Estate Fund IV	2015	Non-Core	24,260,817	19,056,195	16,432,132	5,204,622	10,823,961	18.8%	1.4
IC Berkeley Partners IV	2016	Non-Core	30,000,000	11,541,818	1,783,071	18,458,182	12,463,078	4.5%	1.1
GEM Realty Fund VI	2017	Non-Core	20,000,000	2,204,599	1,200,000	17,795,401	1,653,713	-2.7%	1.0
Raith Real Estate II	2018	Non-Core	35,000,000	692,688	242,368	34,307,312	526,363	N/A	N/A
Total			**$ 525,134,477**	**$ 431,579,623**	**$ 264,735,102**	**$ 92,819,995**	**$ 509,911,517**		

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

Section XI.

Infrastructure

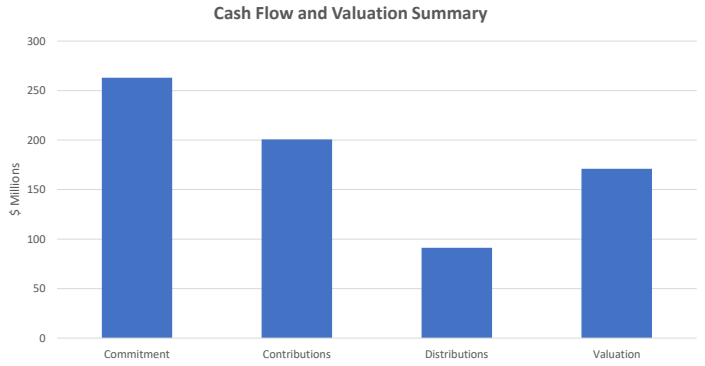
Portfolio Summary

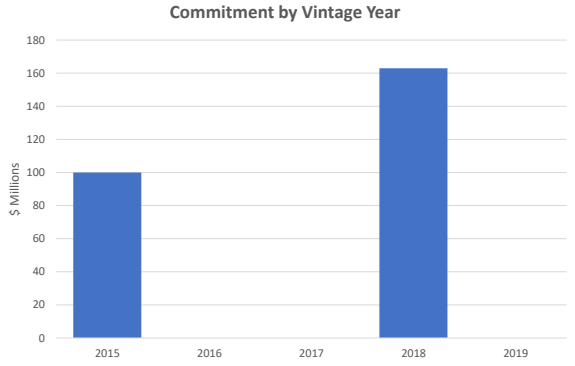
6/30/2019

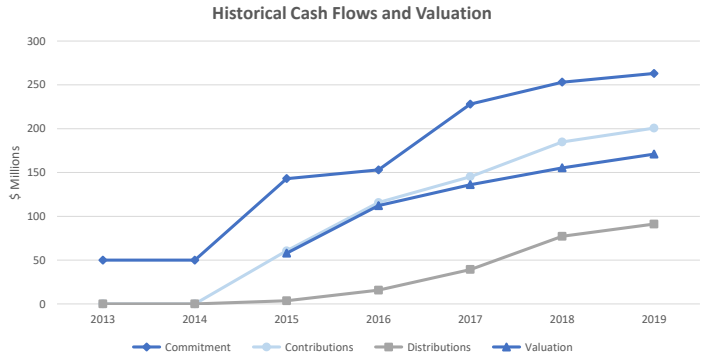
All Investments

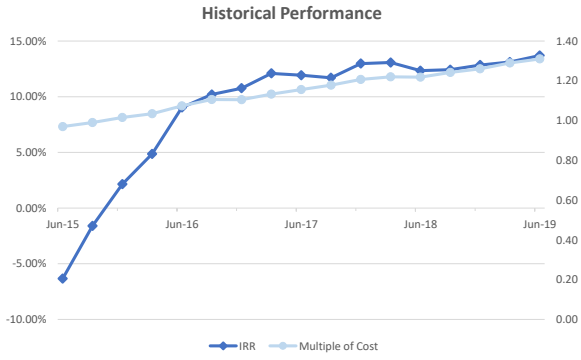
Performance Summary

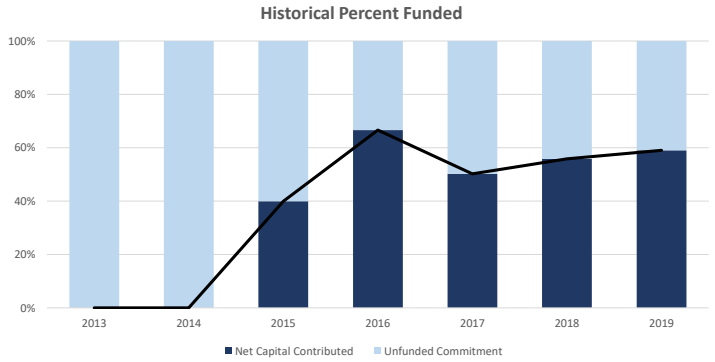
Asset Class	Investment Type	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR
Infrastructure Funds							
	Homestead Capital USA Farmland Fund III, L.P.	25,000,000	167,157	-	28,594	-	
	IFM Global Infrastructure Fund	50,032,902	50,032,902	20,776,714	55,507,125	1.52	11.87%
	ISQ Global Infrastructure Fund (UST), L.P.	50,000,000	64,895,667	41,384,814	43,599,264	1.31	16.63%
	ISQ Global Infrastructure Fund II (UST), L.P.	40,000,000	11,026,498	1,018,913	10,965,884	1.09	13.20%
	Stonepeak Infrastructure Fund II - Master Co- Investment Partners LP	20,000,000	9,325,844	632,375	10,078,019	1.15	9.63%
	Stonepeak Infrastructure Fund II Cayman (G AIV) LP	43,000,000	51,313,410	26,531,433	36,198,061	1.22	14.82%
	Stonepeak Infrastructure Fund III LP	35,000,000	13,877,253	822,809	14,556,524	1.11	27.81%
Total: Infrastructure Funds		**263,032,902**	**200,638,731**	**91,167,058**	**170,933,471**	**1.31**	**13.70%**

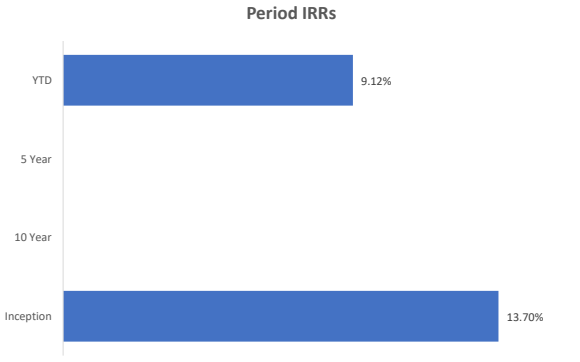












Employees' Retirement System of Rhode Island Private Infrastructure Performance
6/30/2019

Current Partnerships	Vintage Year/Initial Investment	Type	Amount Committed (In $ unless otherwise noted)	Cumulative Cash Flows ($) Amount Drawn	Amount Distributed	Amount Unfunded	Valuation ($)	Cumulative Performance* Net IRR (%)	Net Multiple of Investment
IFM Global Infrastructure, L.P.	2015	Core	50,033,000	50,033,000	20,777,000	-	55,507,000	11.9	1.5
Stonepeak Infrastructure Fund II, L.P.	2016	Opportunistic	43,000,000	51,313,000	26,531,000	8,170,000	36,198,000	14.8	1.2
Stonepeak Infrastructure Fund II-C	2016	Opportunistic	20,000,000	9,326,000	632,000	11,200,000	10,078,000	9.6	1.2
Stonepeak Infrastrucutre Fund III	2018	Opportunistic	35,000,000	13,877,000	823,000	22,050,000	14,557,000	N/A	1.1
ISQ Global Infrastructure Fund, L.P.	2015	Value-Add	50,000,000	64,896,000	41,385,000	12,500,000	43,599,000	16.6	1.3
ISQ Global Infrastructure Fund II, L.P.	2017	Value-Add	40,000,000	11,026,000	1,019,000	30,000,000	10,966,000	N/A	1.1
Homestead USA Farmland III	2018	Value-Add	25,000,000	167,000	-	24,750,000	29,000	N/A	N/A
Total			**$ 263,033,000**	**$ 200,638,000**	**$ 91,167,000**	**$ 108,670,000**	**$ 170,934,000**		

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

Section XII.

Cash Flow

CASH FLOW ANALYSIS - INCOME & EXPENSES

Employees Retirement System

FISCAL YEAR 2020	FY 2019-20												
	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Actual December	Actual November	Actual October	Actual September	Actual August	Actual July 2019
MEMBER BENEFITS	**832,820,031**	**69,132,324**	**69,155,407**	**69,178,465**	**69,266,687**	**69,343,077**	**69,424,081**	**69,573,911**	**69,588,526**	**69,696,408**	**69,594,830**	**69,472,755**	**69,393,560**
ADMINISTRATIVE EXPENSES	**8,818,451**	**1,245,040.43**	**610,799**	**594,437**	**861,267**	**801,556**	**610,285**	**688,897**	927,674	685,823	**620,260**	**817,218**	**355,195**
INVESTMENT EXPENSES	**37,914,085**	**10,037,448**	**17,681**	**18,470**	**10,062,340**	**20,460**	**18,168**	**6,335,494**	**17,500**	**17,509**	**11,333,904**	**17,530**	**17,581**
TOTAL OUTFLOW	**879,552,566**	**80,414,813**	**69,783,888**	**69,791,371**	**80,190,294**	**70,165,093**	**70,052,534**	**76,598,302**	**70,533,700**	**70,399,740**	**81,548,993**	**70,307,503**	**69,766,336**
CONTRIBUTIONS	**568,537,866**	**50,184,219**	**62,786,062**	**44,874,628**	**55,109,606**	**36,090,355**	**54,923,714**	**59,065,742**	**41,714,021**	**48,498,890**	**26,559,817**	**26,653,809**	**62,077,003**
OTHER INCOME*	**78,337,726**	**3,294,658**	**8,361,789**	**(926,666)**	**683,544**	**10,162,489**	**5,717,704**	**(399,190)**	**16,964,649**	**9,773,079**	**9,240,586**	**10,304,355**	**5,160,730**
TOTAL INCOME	**646,875,592**	**53,478,877**	**71,147,851**	**43,947,962**	**55,793,150**	**46,252,844**	**60,641,418**	**58,666,552**	**58,678,670**	**58,271,969**	**35,800,403**	**36,958,164**	**67,237,733**
DIFFERENCE	**(232,676,974)**	**(26,935,936)**	**1,363,964**	**(25,843,409)**	**(24,397,144)**	**(23,912,249)**	**(9,411,116)**	**(17,931,751)**	**(11,855,030)**	**(12,127,771)**	**(45,748,591)**	**(33,349,339)**	**(2,528,602)**

Municipal Employees Retirement System

	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Actual December	Actual November	Actual October	Actual September	Actual August	Actual July 2019
MEMBER BENEFITS	**102,457,199**	**8,492,798**	**8,506,904**	**8,490,720**	**8,451,729**	**8,415,263**	**8,384,093**	**8,717,645**	**8,671,244**	**8,650,757**	**8,586,800**	**8,558,190**	**8,531,056**
ADMINISTRATIVE EXPENSES	**2,154,548**	**303,272**	**148,540**	**144,781**	**209,053**	**194,360**	**147,562**	**170,060**	**229,041**	**168,937**	**152,513**	**199,939**	**86,489**
INVESTMENT EXPENSES	**9,273,540**	**2,444,966**	**4,300**	**4,499**	**2,442,403**	**4,961**	**4,393**	**1,563,973**	**4,321**	**4,313**	**2,786,843**	**4,289**	**4,281**
TOTAL OUTFLOW	**113,885,286**	**11,241,036**	**8,659,743**	**8,640,000**	**11,103,185**	**8,614,584**	**8,536,047**	**10,451,678**	**8,904,607**	**8,824,007**	**11,526,156**	**8,762,418**	**8,621,827**
CONTRIBUTIONS	**76,502,270**	**6,431,212**	**5,735,660**	**9,706,407**	**6,695,695**	**5,748,136**	**6,227,640**	**5,933,580**	**5,289,544**	**6,927,606**	**6,155,497**	**5,721,125**	**5,930,168**
OTHER INCOME*	**19,170,088**	**802,527**	**2,033,494**	**(225,699)**	**165,915**	**2,464,179**	**1,382,494**	**(98,544)**	**4,188,547**	**2,407,374**	**2,272,126**	**2,521,044**	**1,256,630**
TOTAL INCOME	**95,672,358**	**7,233,739**	**7,769,154**	**9,480,708**	**6,861,610**	**8,212,315**	**7,610,134**	**5,835,036**	**9,478,091**	**9,334,980**	**8,427,623**	**8,242,169**	**7,186,798**
DIFFERENCE	**(18,212,928)**	**(4,007,297)**	**(890,589)**	**840,707**	**(4,241,575)**	**(402,268)**	**(925,913)**	**(4,616,642)**	**573,485**	**510,974**	**(3,098,532)**	**(520,249)**	**(1,435,029)**

CASH FLOW ANALYSIS - INCOME & EXPENSES

State Police
Retirement System

	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Actual December	Actual November	Actual October	Actual September	Actual August	Actual July 2019
MEMBER BENEFITS	**6,018,776**	**499,445**	**499,445**	**499,445**	**499,003**	**508,193**	**499,263**	**508,102**	**508,102**	**499,445**	**499,445**	**499,445**	**499,445**
ADMINISTRATIVE EXPENSES	**196,347**	**27,589**	**13,497**	**13,113**	**18,896**	**17,553**	**13,297**	**15,701**	**21,101**	**15,479**	**13,967**	**18,271**	**7,884**
INVESTMENT EXPENSES	**846,008**	**222,419**	**391**	**407**	**220,762**	**448**	**396**	**144,392**	**398**	**395**	**255,217**	**392**	**390**
TOTAL OUTFLOW	**7,061,131**	**749,453**	**513,332**	**512,965**	**738,660**	**526,194**	**512,955**	**668,195**	**529,601**	**515,319**	**768,629**	**518,107**	**507,719**
CONTRIBUTIONS	**6,576,784**	**446,796**	**643,522**	**418,874**	**517,636**	**553,816**	**464,517**	**544,416**	**848,591**	**505,274**	**552,960**	**562,117**	**518,267**
OTHER INCOME*	**1,749,827**	**73,006**	**184,770**	**-20,442**	**14,997**	**222,547**	**124,577**	**(9,098)**	**385,877**	**220,584**	**208,080**	**230,376**	**114,554**
TOTAL INCOME	**8,326,611**	**519,802**	**828,291**	**398,432**	**532,632**	**776,363**	**589,093**	**535,318**	**1,234,468**	**725,858**	**761,039**	**792,493**	**632,821**
DIFFERENCE	**1,265,480**	**(229,651)**	**314,959**	**(114,534)**	**(206,028)**	**250,169**	**76,138**	**(132,877)**	**704,867**	**210,538**	**(7,589)**	**274,385**	**125,102**

Judicial
Retirement System

	TOTAL	Projected June	Projected May	Projected April	Projected March	Projected February	Projected January 2019	Actual December	Actual November	Actual October	Actual September	Actual August	Actual July 2019
MEMBER BENEFITS	**3,689,630**	**307,623**	**307,623**	**307,623**	**305,669**	**303,954**	**304,022**	**315,038**	**307,586**	**307,623**	**307,623**	**307,623**	**307,623**
ADMINISTRATIVE EXPENSES	**103,282**	**14,526**	**7,110**	**6,912**	**9,960**	**9,255**	**7,016**	**8,217**	**11,062**	**8,134**	**7,337**	**9,607**	**4,147**
INVESTMENT EXPENSES	**444,791**	**117,108**	**206**	**215**	**116,360**	**236**	**209**	**75,567**	**209**	**208**	**134,063**	**206**	**205**
TOTAL OUTFLOW	**4,237,702**	**439,256**	**314,939**	**314,749**	**431,989**	**313,445**	**311,247**	**398,821**	**318,857**	**315,965**	**449,023**	**317,436**	**311,976**
CONTRIBUTIONS	**3,271,747**	**241,159**	**365,766**	**241,379**	**242,261**	**221,422**	**219,459**	**241,399**	**381,785**	**254,526**	**308,067**	**308,121**	**246,403**
OTHER INCOME*	**813,002**	**38,439**	**97,335**	**(10,775)**	**7,904**	**155,323**	**65,732**	**(4,761)**	**202,293**	**(29,185)**	**109,302**	**121,135**	**60,259**
TOTAL INCOME	**4,084,749**	**279,598**	**463,101**	**230,604**	**250,166**	**376,745**	**285,191**	**236,637**	**584,078**	**225,341**	**417,369**	**429,256**	**306,662**
DIFFERENCE	**(152,953)**	**(159,659)**	**148,162**	**(84,145)**	**(181,823)**	**63,300**	**(26,056)**	**(162,184)**	**265,221**	**(90,623)**	**(31,654)**	**111,820**	**(5,313)**

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

FISCAL YEAR 2020 **INVESTMENT MANAGER FEES, PROFESSIONAL FEES & OPERATING EXPENSES**

ERSRI Pooled Trust **ACCRUAL BASIS**

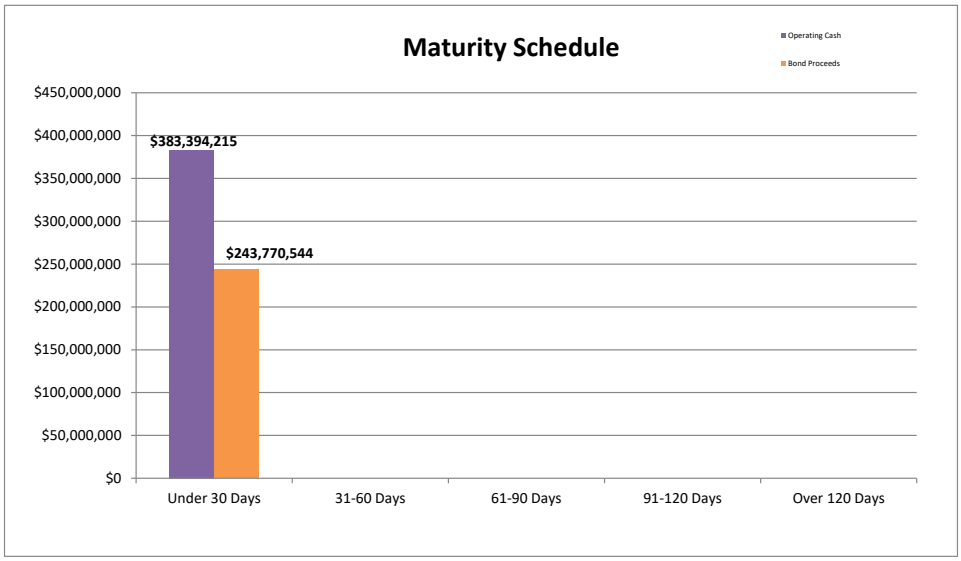
	Projected Jul 19	Projected Aug	Projected Sept	Projected Oct	Projected Nov	Projected Dec	Projected Jan 20	Projected Feb	Projected Mar	Projected Apr	Projected May	Projected June	Projected TOTAL
EQUITIES US													
SSGA Russell 3000			**41,899**			42,000			42,000			42,000	167,899
Shott Capital/Hamilton Lane			**338**			500			500			500	1,838
SSGA QVM Tilt			**190,229**			190,000			190,000			190,000	760,229
			232,467			232,500			232,500			239,300	176,537
FIXED INCOME													
Fidelity			156,000			156,000			156,000			156,000	624,000
Mackay Shields			**146,479**			170,000			170,000			170,000	656,479
Brown Bros.TIPS/GILB			**43,330**			60,000			60,000			60,000	223,330
			345,809			386,000			386,000			386,000	1,503,809
INT'L EQUITIES													
SSGA MSCI EAFE			**51,564**			55,000			55,000			55,000	216,564
SSGA MSCI CAD			**4,509**			5,000			5,000			5,000	19,509
SSGA MSCI Emerg Mkts			**103,790**			108,000			108,000			108,000	427,790
			159,863			168,000			168,000			168,000	663,863
CREDIT													
Loomis			**139,630**			110,000			110,000			110,000	469,630
PIMCO			110,000			110,000			110,000			110,000	440,000
			249,630			220,000			220,000			220,000	909,630
Infrastructure													
Harvest Partners			**214,627**			300,000			300,000			300,000	1,114,627
Systematic Trend Followers	**215,362**	**224,302**	**230,692**	**226,120**	**206,950**	210,000	210,000	210,000	210,000	210,000	210,000	210,000	2,573,426
Long Duration													
WAMCO			**33,396**			30,000			30,000			30,000	123,396
Mackay Shields			**32,951**			30,000			30,000			30,000	122,951
			66,347			60,000			60,000			60,000	246,347
REAL ESTATE	0	0	2,268,181	0	0	1,316,299	0	0	6,013,911	0	0	3,900,000	13,498,391
ALTERNATIVE INVESTMENTS													
Private Infrastructure			1,526,570			1,962,839			1,707,969			2,250,000	7,447,378
Hedge Funds			4,907,979			2,549,827			7,307,576			5,500,000	20,265,382
Private Equity			5,786,256			2,143,095			9,861,859			5,000,000	22,791,211
	0	0	12,220,805	0	0	6,655,761	0	0	18,877,404	0	0	12,750,000	50,503,970
Other													
Russell Overlay			50,000			50,000			50,000			75,000	225,000
Heitman			**100,825**			100,000			100,000			100,000	400,825
Payden & Rygel	**20,531**	**21,776**	22,500	**19,893**	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	264,700
	20,531	21,776	173,325	19,893	22,500	172,500	22,500	22,500	172,500	22,500	22,500	197,500	890,525
SUB TOTAL-INV MGMT FEES	235,893	246,078	16,161,747	246,013	229,450	9,721,060	232,500	232,500	26,640,315	232,500	232,500	18,430,800	72,081,126
PROFESSIONAL FEES													
Legal	**9,173**	**7,250**	**9,804**	**17,650**	**11,687**	10,000	10,000	10,000	10,000	10,000	10,000	10,000	125,563
BNY Mellon - Custodial	**42,213**	**42,213**	**42,213**	**42,213**	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	552,850
Cliffwater	**33,333**	**33,333**	**35,417**	**35,417**	**35,417**	33,334	33,333	33,333	33,334	33,333	33,333	33,333	406,250
Meketa General & Infrastructure	**6,250**	**6,250**	**6,250**	**6,250**	**6,250**	6,250	6,250	6,250	6,250	6,250	6,250	6,250	75,000
NEPC	0	0	**91,250**	0	0	**91,250**	0	0	91,250	0	0	91,250	365,000
Aberdeen	**28,721**	**29,811**	**28,985**	**28,834**	**27,471**	27,000	27,000	27,000	27,000	27,000	27,000	27,000	332,822
Meketa Real Estate	**10,417**	**10,417**	**10,417**	**10,417**	**10,417**	10,417	10,417	10,417	10,417	10,417	10,417	10,417	125,004
	130,107	129,273	224,335	140,780	139,242	226,251	135,000	135,000	226,251	135,000	135,000	226,250	1,982,489
OPERATING EXPENSE													
Retirement Transfers	**465,094**	**478,478**	**882,244**	**910,680**	**1,025,374**	553,937	968,951	780,086	834,367	630,113	650,150	1,361,470	9,540,942
Other Expense	0	**4,000**		**25,420**		**105,420**	6,098	2,005	25,394	96	3,080	6,420	177,933
	465,094	482,478	882,244	936,100	1,025,374	659,357	975,048	782,091	859,761	630,209	653,230	1,367,890	9,718,875
TOTAL:	**831,094**	**857,829**	**17,268,325**	**1,322,893**	**1,394,066**	**10,606,667**	**1,342,548**	**1,149,591**	**27,726,327**	**997,709**	**1,020,730**	**20,024,940**	**83,782,490**

Note: Numbers in bold are actual.

Section XIII.

Short-Term Investments

Short-Term Investment Maturity Schedule & SIC Compliance Report at December 31, 2019



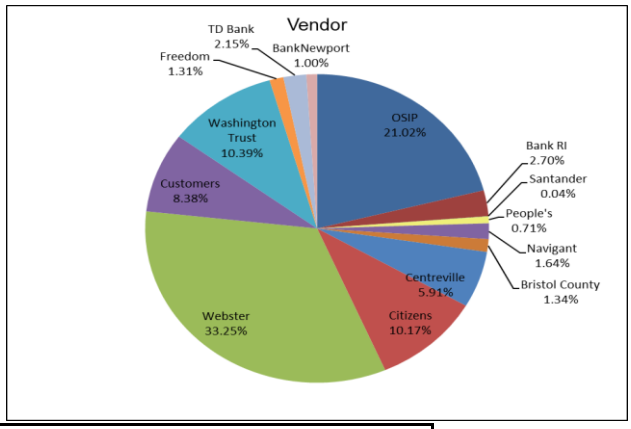
CD = Certificate of Deposit
CDARS = Cert.of Dep.Acct Registry Svc
MMKT = Money Market
CoD = Collateralized Deposit
OSIP = Ocean State Investment Pool

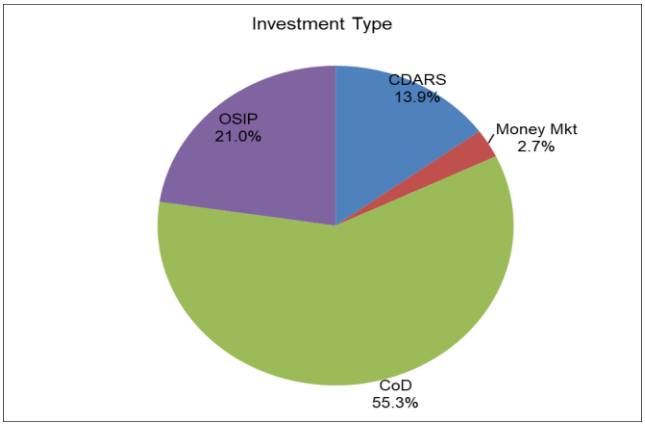
Vendor	CD	CDARS	Money Mkt	CoD	OSIP	Total ($)
Guidelines-Total/Vendor	50%/20%	50%/20%	75%/35%	75%/35%	50%/50%	
OSIP	0	0	0	0	80,604,335	$ 80,604,335.44
	0%	0%	0%	0%	21%	21.0%
Bank RI	0	0	10,342,769	0	0	$ 10,342,768.99
	0%	0%	3%	0%	0%	2.7%
Santander Bank	0	0	0	155,675	0	$ 155,675.00
	0%	0%	0%	0%	0%	0.0%
People's Credit Union Comm Dep.	0	2,704,498	0	0	0	$ 2,704,498.39
	0%	1%	0%	0%	0%	0.71%
Navigant Credit Union Comm Dep	0	6,301,739	0	0	0	$ 6,301,738.56
	0%	2%	0%	0%	0%	1.64%
Fidelity	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0.00%
Bristol County Savings Bk Comm Dep.	0	0	0	5,120,871	0	$ 5,120,871.11
	0%	0%	0%	1%	0%	1.34%
Centreville Bank		$ 15,271,137.95	0%	0	0	$ 15,271,137.95
Community Deposit	0	7,378,022	0	0	0	7,378,022
	0%	2%	0%	0%	0%	5.91%
Citizens Bank	0	0	0	38,981,315	0	$ 38,981,315.06
	0%	0%	0%	10%	0%	10.2%
Webster Bank	0	0	0	127,488,259	0	$ 127,488,258.70
	0%	0%	0%	33%	0%	33.3%
Customers Bank	0	0	0	32,120,759	0	$ 32,120,759.42
	0%	0%	0%	8%	0%	8.4%
Washington Trust	0	36,933,974	0	0	0	$ 36,933,974.24
Community Deposit	0	2,884,596	0	0	0	$ 2,884,596.45
	0%	10%	0%	0%	0%	10.4%
Freedom National Community Dep.	0	0	0	5,030,196	0	$ 5,030,195.63
	0%	0%	0%	1%	0%	1.3%
TD Bank	0	0	0	8,234,844	0	$ 8,234,844.27
	0%	0%	0%	2%	0%	2.1%
BankNewport Community Deposit	0	3,841,223	0	0	0	$ 3,841,223.03
	0%	1%	0%	0%	0%	1.0%
TOTALS	**-**	**53,318,234**	**10,342,769**	**212,101,724**	**80,604,335**	**$ 383,394,214.63**
(%) PORTFOLIO	**0.0%**	**13.9%**	**2.7%**	**55.3%**	**21.0%**	**100.0%**

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

Issuer Credit Rating
December 31, 2019

Issuer	Type of Instrument*	M/E % Portfolio	Issuer Ratings Moody's	S-T Debt Rating Moody's	S-T Debt Rating S&P	L-T Debt Rating Moody's	L-T Debt Rating S&P	Credit Outlook S&P	Rating Veribanc
Bank of America	-	0.0%	Baa1	P-1	A-1	A2	A-	Stable	GREEN/***
Bank RI	3,4	2.7%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***
Bristol County Sav. Bank	4	1.3%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***
Centreville Bank	4	5.9%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***/BB
Citizens Bank	4	10.2%	Baa1	P-1	A-2	A1	BBB+	Stable	GREEN/***
Customers Bank	4	8.4%	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	1.6%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***
Ocean State Inv. Pool	6	21.0%	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	0.0%	A3	P-1	A-1	A2	A	Stable	GREEN/***/B
TD Bank	4	2.2%	Aa2	P-1	A-1+	A2	AA-	Stable	GREEN/***
Washington Trust	4,7	10.4%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***
Webster Bank	4	33.3%	Baa1	P-2	A-2	A3	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 - Posess many favorable investment attributes
Baa - Medium-grade obligations
Ba - Posess 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 susceptibleto adverse effects of changes infinancial conditions; satisfactory
A-3 - Exhibits adequate protection parameters
B - Significant speculative characteristics, faces major ongoing uncertainties
C - Vulnerable to non-payment
D - Payment default
Modifiers: + or - show relative standing within the category.

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

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

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

State of Rhode Island
Short Term Cash Monthly Performance
Performance for
December 01, 2019 to December 31, 2019

Fund Name	Beginning Balance	Ending Balance	Average Daily Balance	Earnings	Yield(Annual)
GENERAL FUND	$ 50,606,219.37	$ 109,951,389.86	$ 107,131,400.20	$ 131,602.57	1.4464%
H.A.V.A	$ 2,339,365.07	$ 2,344,694.16	$ 2,342,008.87	$ 2,685.29	1.3500%
GENERAL FUND (HIST PRES)	$ 569,548.20	$ 571,236.59	$ 570,392.45	$ 844.14	1.7425%
HISTORIC TAX CREDITS	$ 9,964,659.89	$ 9,994,199.63	$ 9,979,430.72	$ 14,768.91	1.7425%
HIGHWAY FUND	$ 39,639,112.72	$ 39,851,066.96	$ 33,232,960.75	$ 50,364.27	1.7844%
T.D.I. RESERVE (DET)	$ 129,840,818.24	$ 115,249,920.74	$ 122,580,769.00	$ 71,538.83	0.6871%
RICAP GL FUND 21	$ 1,102,200.35	$ 1,105,393.21	$ 1,103,877.42	$ 1,515.79	1.6168%
BOND CAPITAL FUND	$ 2,695,446.38	$ 2,601,126.30	$ 2,797,894.07	$ 3,232.23	1.3602%
R.I. CLEAN WATER ACT	$ 3,957,166.37	$ 3,968,337.20	$ 3,962,744.86	$ 5,592.34	1.6616%
STATE LOTTERY FUND	$ 25,062,994.47	$ 57,280,648.01	$ 42,649,674.69	$ 63,231.39	1.7456%
ASSESSED FRINGE BEN ADM	$ 741,062.85	$ 1,744,235.90	$ 1,226,302.79	$ 1,804.08	1.7322%
AUTO EQUIPMENT SERVICE	$ 4,258.45	$ 4,268.15	$ 4,263.26	$ 4.89	1.3505%
HEALTH INSURANCE FUND	$ 3,512,569.77	$ 13,571,635.24	$ 6,356,369.89	$ 8,168.58	1.5131%
FLEET REVOLVING LOAN FUND	$ 3,970,737.94	$ 4,778,093.68	$ 4,539,617.20	$ 6,218.42	1.6128%
EMPLOYEES RETIREMENT	$ 1,669,430.49	$ 8,500,152.37	$ 14,221,675.56	$ 20,412.29	1.6899%
MUNICIPAL EMPLOYEES RET.	$ 70,878.05	$ 379,233.46	$ 3,058,630.51	$ 4,473.92	1.7222%
RETIREE HEALTH FUND	$ 3,378,699.47	$ 2,983,931.79	$ 2,471,412.65	$ 2,841.72	1.3538%
BOG RETIREE FUND	$ 2,165.04	$ 302,421.48	$ 221,522.33	$ 253.99	1.3500%
RIPTA HEALTH FUND	$ 2,782,435.13	$ 3,089,328.33	$ 3,269,450.63	$ 3,748.67	1.3500%
PERMANENT SCHOOL FUND	$ 735,416.15	$ 737,596.25	$ 736,506.27	$ 1,089.98	1.7425%
TEACHER RETIREE HEALTH FUND	$ 229,082.02	$ 229,899.72	$ 229,623.62	$ 276.10	1.4157%
RI ST POL RETIREE HEALTH	$ 735,425.70	$ 536,973.64	$ 600,800.91	$ 688.86	1.3500%
RI LEG RETIREE HEALTH	$ 861.47	$ 863.43	$ 862.44	$ 0.99	1.3516%
RI JUDICIAL RETIREE HEALTH	$ 342,262.68	$ 343,042.35	$ 342,649.48	$ 392.87	1.3500%
UNIVERSITY COLLEGE	$ 2,456,283.05	$ 3,063,799.21	$ 2,617,985.43	$ 3,878.30	1.7442%
INDUS. BLDG. & MTG. INS.	$ 762,933.87	$ 765,195.55	$ 764,064.78	$ 1,130.77	1.7425%
Operating Funds Totals	**$ 287,172,033.19**	**$ 383,948,683.21**	**$ 367,012,890.78**	**$ 400,760.19**	**1.286%**
BOND CCDL 2006 SERIES C	$ 479,015.13	$ 479,015.13	$ 479,015.17	$ 708.95	1.7426%
GO BND-NTAX 2007 SERIES A	$ 124,237.53	$ 124,237.53	$ 124,237.54	$ 183.87	1.7426%
CCDL10B BOND CAPITAL COMPONENT	$ 950,000.00	$ 950,000.00	$ 950,000.07	$ 1,406.01	1.7426%
CCDL10C	$ 168,573.71	$ 169,073.44	$ 168,823.59	$ 249.85	1.7425%
CCDL2011A	$ 1,172,503.07	$ 1,172,503.07	$ 1,172,503.33	$ 1,735.32	1.7426%
CCDL2012B	$ 5,100,000.00	$ 5,100,000.00	$ 5,100,000.38	$ 7,548.05	1.7426%
GO CCDL 2013A	$ 2,590,915.50	$ 2,590,915.50	$ 2,590,915.69	$ 3,834.58	1.7426%
GO CCDL 2014A	$ 94,193.10	$ 94,193.10	$ 94,193.11	$ 139.41	1.7426%
GO CCDL 2014B	$ 40,664.27	$ 40,664.27	$ 40,664.27	$ 60.18	1.7425%
GO CCDL 2016A	$ 2,458,928.12	$ 2,458,928.12	$ 2,458,929.00	$ 3,639.24	1.7426%
GO CCDL 2016B	$ 3,026,752.49	$ 2,861,730.16	$ 2,914,971.99	$ 4,315.95	1.7433%
GO CCDL 2017	$ 567,212.22	$ 561,812.22	$ 563,554.94	$ 834.12	1.7427%
CCDL99A 1999A	$ 206,569.39	$ 206,569.39	$ 206,569.41	$ 305.72	1.7426%
CLEAN WATER 2007 SERIES A	$ -	$ -		$ -	
CCDL2011A CLEAN WATER COMPONENT	$ 4,157.58	$ 4,157.58	$ 4,157.58	$ 6.15	1.7417%
GO CCDL 2018A	$ 3,000,000.00	$ 3,000,000.00	$ 3,000,047.81	$ 4,440.03	1.7426%
GO CCDL 2018B	$ 10,916,435.13	$ 10,916,435.13	$ 10,916,435.94	$ 16,156.42	1.7426%
GO CCDL 2019A	$ 38,305,855.72	$ 35,215,308.90	$ 36,212,584.60	$ 53,627.85	1.7437%
GO CCDL 2019B	$ 25,000,000.00	$ 25,000,000.00	$ 25,000,001.87	$ 37,000.23	1.7426%
GO CCDL 2019C	$ -	$ 135,500,000.00	$ 56,819,903.57	$ 82,989.41	1.7197%
GO CCDL 2019D	$ -	$ 17,325,000.00	$ 7,264,980.29	$ 10,611.01	1.7197%
Bond Proceeds Fund Totals	**$ 94,206,012.96**	**$ 243,770,543.54**	**$ 156,082,490.15**	**$ 229,792.35**	**1.733%**
TANS PROCEEDS	$ -	$ -	$ -	$ -	
Grand Totals	**$ 381,378,046.15**	**$ 627,719,226.75**	**$ 523,095,380.93**	**$ 630,552.54**	**1.419%**

State of Rhode Island

OSIP Performance FY20 Q2

October 1, 2019 through December 31, 2019

Fund #	Fund Name	Beginning Balance	Ending Balance	Average Daily Balance	Earnings	Yield
1000	GENERAL FUND	$ 40,055,505	$ 9,040,088	$ 28,676,734	$ 133,977	1.85%
1004	GENERAL FUND (HIST PRES)	$ 567,632	$ 571,237	$ 568,599	$ 2,618	1.83%
1100	HISTORIC TAX CREDITS	$ 9,931,139	$ 9,994,200	$ 9,948,053	$ 45,809	1.83%
1200	HIGHWAY FUND	$ 40,891,355	$ 24,696,730	$ 24,320,218	$ 113,597	1.85%
1400	T.D.I. RESERVE (DET)	$ 6,215,518	$ 5,458,417	$ 4,522,787	$ 20,322	1.78%
2100	RICAP GL FUND 21	$ 706,616	$ 711,103	$ 707,820	$ 3,259	1.83%
2200	BOND CAPITAL FUND	$ 355,147	$ 1,241	$ 12,916	$ 63	1.94%
2300	R.I. CLEAN WATER ACT	$ 2,132,700	$ 3,150,686	$ 3,103,692	$ 14,281	1.83%
4000	STATE LOTTERY FUND	$ 2,736,227	$ 15,061,467	$ 4,545,237	$ 20,486	1.79%
4300	ASSESSED FRINGE BEN ADM	$ 1,229,970	$ 1,738,124	$ 1,297,278	$ 6,017	1.84%
5700	HEALTH INSURANCE FUND	$ 11,221,326	$ 5,565,110	$ 6,810,992	$ 32,072	1.87%
6000	EMPLOYEES RETIREMENT	$ 6,782	$ 227,635	$ 4,027,910	$ 18,135	1.79%
6300	MUNICIPAL EMPLOYEES RET.	$ 17,184	$ 322,455	$ 1,126,058	$ 5,073	1.79%
6500	RETIREE HEALTH FUND	$ 24,075	$ 24,227	$ 24,116	$ 111	1.83%
6800	PERMANENT SCHOOL FUND	$ 732,942	$ 737,596	$ 734,191	$ 3,381	1.83%
7100	TEACHER RETIREE HEALTH FUND	$ 38,196	$ 38,439	$ 38,262	$ 176	1.83%
7500	UNIVERSITY COLLEGE	$ 1,939,337	$ 3,054,854	$ 2,631,747	$ 12,148	1.83%
8100	INDUS. BLDG. & MTG. INS.	$ 760,367	$ 765,196	$ 761,662	$ 3,507	1.83%
	Operating Funds Totals	**$ 119,562,020**	**$ 81,158,804**	**$ 93,858,270**	**$ 435,033**	**1.83%**
2235	BOND CCDL 2006 SERIES C	$ 479,015	$ 479,015	$ 478,240	$ 2,202	1.83%
2236	GO BND-NTAX 2007 SERIES A	$ 124,238	$ 124,238	$ 124,037	$ 571	1.83%
2240	CCDL10B BOND CAPITAL COMPONENT	$ 950,000	$ 950,000	$ 948,463	$ 4,368	1.83%
2241	CCDL10C	$ 168,007	$ 169,073	$ 168,293	$ 775	1.83%
2243	CCDL2011A	$ 2,013,259	$ 1,172,503	$ 1,427,100	$ 6,641	1.85%
2244	CCDL2012B	$ 5,100,000	$ 5,100,000	$ 5,091,750	$ 23,448	1.83%
2245	GO CCDL 2013A	$ 2,590,916	$ 2,590,916	$ 2,586,724	$ 11,912	1.83%
2247	GO CCDL 2014A	$ 94,193	$ 94,193	$ 94,041	$ 433	1.83%
2248	GO CCDL 2014B	$ 40,664	$ 40,664	$ 40,598	$ 187	1.83%
2249	GO CCDL 2016A	$ 2,492,316	$ 2,458,928	$ 2,470,874	$ 11,382	1.83%
2250	GO CCDL 2016B	$ 3,186,395	$ 2,861,730	$ 3,060,330	$ 14,116	1.83%
2251	GO CCDL 2017	$ 963,224	$ 561,812	$ 689,916	$ 3,210	1.85%
2339	CCDL99A 1999A	$ 206,569	$ 206,569	$ 206,235	$ 950	1.83%
2350	CCDL2011A CLEAN WATER COMPONENT	$ 4,158	$ 4,158	$ 4,151	$ 19	1.83%
2252	GO CCDL 2018A	$ 6,736,839	$ 3,000,000	$ 4,526,817	$ 21,154	1.85%
2253	GO CCDL 2018B	$ 11,500,857	$ 10,916,435	$ 11,076,061	$ 51,055	1.83%
2254	GO CCDL 2019A	$ 58,422,489	$ 35,215,309	$ 45,509,602	$ 211,418	1.84%
2255	GO CCDL 2019B	$ 24,989,337	$ 25,000,000	$ 24,956,324	$ 114,927	1.83%
2256	GO CCDL 2019C	$ -	$ 135,500,000	$ 19,145,837	$ 82,989	1.72%
2257	GO CCDL 2019D	$ -	$ 17,325,000	$ 2,447,982	$ 10,611	1.72%
	Bond Proceeds Fund Totals	**$ 120,062,474**	**$ 243,770,544**	**$ 125,053,375**	**$ 572,369**	**1.82%**
	Grand Totals	**$ 239,624,494**	**$ 324,929,348**	**$ 218,911,645**	**$ 1,007,402**	**1.83%**

Section XIV.

Defined Contribution Plan

State of Rhode Island

401(a) Quarterly Performance Summary

As of 12/31/2019

BUILT TO PERFORM.

CREATED TO SERVE.

State of Rhode Island
401(a) Performance Summary

TIAA

As of 12/31/2019

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									Recent Returns		Annualized Total Returns as of 12/31/2019													
Investment Name	Ticker	Morningstar Category	Mgr Tenure	AUM $M	Gross ER	Net ER	%-ile ER	Rev Share	3 Mo	YTD	1 Yr	Category Rank	%-ile	3 Yr	Category Rank	%-ile	5 Yr	Category Rank	%-ile	10 Yr	Category Rank	%-ile	SI	Incep Date
STABLE VALUE																								
Stable Value/Guaranteed																								
TIAA Stable Value[1]	Current crediting rate = 2.40								0.60	2.30	2.30			2.12			2.02						1.97	3/31/2012
FIXED INCOME																								
Intermediate Core Bond																								
Vanguard Total Bond Market Index I	VBTIX	US Fund Intermediate Core Bond	6.92	248,595	0.04	0.04	5	0.00	0.03	8.73	8.73	134	33	4.03	100	28	3.01	93	31	3.70	104	46	5.12	9/18/1995
BBgBarc US Agg Float Adj TR USD									0.14	8.87	8.87			4.08			3.07			3.78				
Intermediate Core Bond Median						0.58			0.08	8.32	8.32			3.64			2.76			3.61				
Intermediate Core Bond Number of Funds							430						418			402			381			351		
Inflation-Protected Bond																								
PIMCO Real Return Instl	PRRIX	US Fund Inflation-Protected Bond	1.00	9,283	0.98	0.98	70	0.00	0.92	8.52	8.52	36	21	3.40	18	14	2.46	37	32	3.39	5	9	5.66	1/29/1997
BBgBarc US Treasury US TIPS TR USD									0.79	8.43	8.43			3.32			2.62			3.36				
Inflation-Protected Bond Median						0.65		0.20	0.96	7.51	7.51			2.68			2.06			2.71				
Inflation-Protected Bond Number of Funds							210						207			200			195			138		
EQUITY																								
Large Cap Blend																								
Vanguard Institutional Index I	VINIX	US Fund Large Blend	19.08	242,173	0.04	0.04	3	0.00	9.06	31.46	31.46	300	24	15.24	178	17	11.67	82	10	13.53	53	8	10.08	7/31/1990
S&P 500 TR USD									9.07	31.49	31.49			15.27			11.70			13.56				
Vanguard FTSE Social Index Admiral[6,7]	VFTAX	US Fund Large Blend	4.08	7,483	0.14	0.14	5	0.00	10.53	33.93	33.93		7	17.11		2	12.40		4	14.35		2	23.59	2/7/2019
Spliced Social Index[2]									10.59	34.08	34.08			17.25			12.53			14.50				
FTSE4Good US Select TR USD									10.59	34.08	34.08			17.25			12.53			14.50				
Russell 3000 TR USD									9.10	31.02	31.02			14.57			11.24			13.42				
Large Blend Median						0.85			8.66	29.61	29.61			13.60			10.09			12.25				
Large Blend Number of Funds							1,310						1,282			1,208			1,147			1,007		
Mid-Cap Blend																								
Vanguard Mid Cap Index Institutional	VMCIX	US Fund Mid-Cap Blend	21.67	111,567	0.04	0.04	2	0.00	6.87	31.04	31.04	66	13	12.37	33	11	9.26	34	17	13.09	11	7	10.04	5/21/1998
Spliced Mid Cap Index[3]									6.88	31.09	31.09			12.39			9.29			13.13				
CRSP US Mid Cap TR USD									6.88	31.09	31.09			12.39			9.29			13.25				
Mid-Cap Blend Median						0.99			6.90	26.82	26.82			9.02			7.21			11.08				
Mid-Cap Blend Number of Funds							381						370			359			321			279		
Small Blend																								
Vanguard Small Cap Index I	VSCIX	US Fund Small Blend	3.75	96,752	0.04	0.04	2	0.00	8.14	27.40	27.40	127	18	10.33	41	7	8.90	81	17	12.83	33	9	9.02	7/7/1997
Spliced Small Cap Index[4]									8.12	27.35	27.35			10.31			8.86			12.78				
CRSP US Small Cap TR USD									8.12	27.35	27.35			10.31			8.86			12.99				
Small Blend Median						1.08			8.11	24.31	24.31			7.04			7.30			11.29				
Small Blend Number of Funds							679						672			657			603			495		

State of Rhode Island
401(a) Performance Summary

TIAA

As of 12/31/2019

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									Recent Returns		Annualized Total Returns as of 12/31/2019													
Investment Name	Ticker	Morningstar Category	Mgr Tenure	AUM $M	Gross ER	Net ER	%-ile ER	Rev Share	3 Mo	YTD	1 Yr	Category Rank	%-ile	3 Yr	Category Rank	%-ile	5 Yr	Category Rank	%-ile	10 Yr	Category Rank	%-ile	SI	Incep Date
EQUITY																								
Foreign Large Blend																								
Schwab International Index	**SWISX**	**US Fund Foreign Large Blend**	**2.75**	**5,749**	**0.06**	**0.06**	**3**	**0.00**	**7.89**	**21.87**	**21.87**	**358**	**46**	**9.78**	**200**	**33**	**5.80**	**140**	**34**	**5.46**	**129**	**37**	**4.55**	**5/19/1997**
MSCI EAFE NR USD									*8.17*	*22.01*	*22.01*			*9.56*			*5.67*			*5.50*				
Foreign Large Blend Median						*0.95*			*8.78*	*21.85*	*21.85*			*9.00*			*5.30*			*5.25*				
Foreign Large Blend Number of Funds							*718*						*685*			*650*			*577*			*498*		
Diversified Emerging Mkts																								
Vanguard Emerging Mkts Stock Idx Adm	**VEMAX**	**US Fund Diversified Emerging Mkts**	**11.42**	**92,867**	**0.14**	**0.14**	**2**	**0.00**	**11.32**	**20.31**	**20.31**	**411**	**41**	**10.53**	**379**	**51**	**5.01**	**312**	**52**	**3.45**	**138**	**54**	**5.68**	**6/23/2006**
Spliced Emerging Markets Index [5]									*11.38*	*20.40*	*20.40*			*10.39*			*4.93*			*3.52*				
MSCI EM NR USD									*11.84*	*18.42*	*18.42*			*11.57*			*5.61*			*3.68*				
FTSE Emerging NR USD									*11.76*	*20.11*	*20.11*			*11.19*			*5.62*			*3.82*				
FTSE EMs AC China A Incl (US RIC) NR USD									*11.38*	*20.41*	*20.41*			*10.39*			*5.11*			*3.74*				
Diversified Emerging Mkts Median						*1.25*			*11.11*	*20.77*	*20.77*			*10.79*			*5.24*			*3.89*				
Diversified Emerging Mkts Number of Funds							*795*						*772*			*721*			*635*			*343*		
ALLOCATION																								
Target-Date																								
Vanguard Target Retire Inc Trust I		**US Fund Target-Date Retirement**			**0.07**	**0.07**			**2.65**	**13.27**	**13.27**		**42**	**6.43**		**28**	**4.86**		**25**	**5.89**		**19**	**5.25**	**6/22/2007**
Vanguard Target Retirement Income Composite									*2.72*	*13.41*	*13.41*			*6.51*			*4.97*			*5.97*				
Target-Date Retirement Median						*0.67*			*2.53*	*13.02*	*13.02*			*5.81*			*4.18*			*5.23*				
Target-Date Retirement Number of Funds													*189*			*173*			*158*			*121*		
Vanguard Target Retire 2015 Trust I		**US Fund Target-Date 2015**			**0.07**	**0.07**			**3.25**	**14.91**	**14.91**		**62**	**7.56**		**31**	**5.67**		**43**	**7.32**		**25**	**5.30**	**6/28/2007**
Vanguard Target Retirement 2015 Composite									*3.34*	*15.08*	*15.08*			*7.65*			*5.78*			*7.39*				
Target-Date 2015 Median						*0.58*			*3.91*	*15.20*	*15.20*			*7.29*			*5.48*			*7.03*				
Target-Date 2015 Number of Funds													*134*			*113*			*96*			*73*		
Vanguard Target Retire 2020 Trust I		**US Fund Target-Date 2020**			**0.07**	**0.07**			**4.49**	**17.73**	**17.73**		**26**	**8.80**		**13**	**6.51**		**10**	**8.12**		**4**	**5.67**	**6/22/2007**
Vanguard Target Retirement 2020 Composite									*4.55*	*17.87*	*17.87*			*8.88*			*6.62*			*8.26*				
Target-Date 2020 Median						*0.68*			*3.89*	*15.85*	*15.85*			*7.57*			*5.57*			*7.11*				
Target-Date 2020 Number of Funds													*239*			*214*			*190*			*133*		
Vanguard Target Retire 2025 Trust I		**US Fund Target-Date 2025**			**0.07**	**0.07**			**5.29**	**19.78**	**19.78**		**16**	**9.68**		**8**	**7.10**		**9**	**8.68**		**8**	**5.79**	**6/28/2007**
Vanguard Target Retirement 2025 Composite									*5.36*	*19.92*	*19.92*			*9.76*			*7.20*			*8.83*				
Target-Date 2025 Median						*0.67*			*4.78*	*18.22*	*18.22*			*8.60*			*6.26*			*7.90*				
Target-Date 2025 Number of Funds													*238*			*214*			*191*			*119*		
Vanguard Target Retire 2030 Trust I		**US Fund Target-Date 2030**			**0.07**	**0.07**			**5.99**	**21.18**	**21.18**		**16**	**10.33**		**17**	**7.51**		**20**	**9.17**		**10**	**5.89**	**6/28/2007**
Vanguard Target Retirement 2030 Composite									*6.07*	*21.34*	*21.34*			*10.40*			*7.61*			*9.31*				
Target-Date 2030 Median						*0.69*			*5.59*	*20.25*	*20.25*			*9.51*			*6.82*			*8.34*				
Target-Date 2030 Number of Funds													*244*			*220*			*196*			*135*		
Vanguard Target Retire 2035 Trust I		**US Fund Target-Date 2035**			**0.07**	**0.07**			**6.70**	**22.58**	**22.58**		**36**	**10.96**		**24**	**7.92**		**21**	**9.63**		**8**	**6.10**	**6/28/2007**
Vanguard Target Retirement 2035 Composite									*6.79*	*22.76*	*22.76*			*11.04*			*8.02*			*9.77*				
Target-Date 2035 Median						*0.68*			*6.49*	*22.16*	*22.16*			*10.28*			*7.30*			*8.81*				
Target-Date 2035 Number of Funds													*232*			*208*			*185*			*113*		

State of Rhode Island
401(a) Performance Summary

TIAA

As of 12/31/2019

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									Recent Returns		Annualized Total Returns as of 12/31/2019													
Investment Name	Ticker	Morningstar Category	Mgr Tenure	AUM $M	Gross ER	Net ER	%-ile ER	Rev Share	3 Mo	YTD	1 Yr	Category Rank	%-ile	3 Yr	Category Rank	%-ile	5 Yr	Category Rank	%-ile	10 Yr	Category Rank	%-ile	SI	Incep Date
ALLOCATION																								
Target-Date																								
Vanguard Target Retire 2040 Trust I		**US Fund Target-Date 2040**			**0.07**	**0.07**			**7.42**	**23.97**	**23.97**		**37**	**11.57**		**24**	**8.29**		**21**	**9.97**		**12**	**6.39**	**6/28/2007**
Vanguard Target Retirement 2040 Composite									*7.50*	*24.19*	*24.19*			*11.67*			*8.43*			*10.14*				
Target-Date 2040 Median						*0.73*			*7.04*	*23.51*	*23.51*			*10.73*			*7.58*			*9.01*				
Target-Date 2040 Number of Funds													*244*			*220*			*196*	*135*		*135*		
Vanguard Target Retire 2045 Trust I		**US Fund Target-Date 2045**			**0.07**	**0.07**			**8.04**	**25.10**	**25.10**		**36**	**11.89**		**21**	**8.50**		**18**	**10.08**		**11**	**6.45**	**6/28/2007**
Vanguard Target Retirement 2045 Composite									*8.15*	*25.37*	*25.37*			*12.01*			*8.66*			*10.25*				
Target-Date 2045 Median						*0.70*			*7.53*	*24.50*	*24.50*			*11.04*			*7.79*			*9.29*				
Target-Date 2045 Number of Funds													*232*			*208*			*185*			*112*		
Vanguard Target Retire 2050 Trust I		**US Fund Target-Date 2050**			**0.07**	**0.07**			**8.05**	**25.07**	**25.07**		**41**	**11.88**		**27**	**8.49**		**21**	**10.08**		**13**	**6.49**	**6/28/2007**
Vanguard Target Retirement 2050 Composite									*8.15*	*25.37*	*25.37*			*12.01*			*8.66*			*10.25*				
Target-Date 2050 Median						*0.73*			*7.62*	*24.62*	*24.62*			*11.08*			*7.88*			*9.33*				
Target-Date 2050 Number of Funds													*244*			*220*			*196*			*110*		
Vanguard Target Retire 2055 Trust I		**US Fund Target-Date 2055**			**0.07**	**0.07**			**8.05**	**25.09**	**25.09**		**45**	**11.88**		**29**	**8.47**		**27**				**10.17**	**10/5/2010**
Vanguard Target Retirement 2055 Composite									*8.15*	*25.37*	*25.37*			*12.01*			*8.66*							
Target-Date 2055 Median						*0.71*			*7.78*	*24.76*	*24.76*			*11.21*			*7.93*							
Target-Date 2055 Number of Funds													*232*			*205*			*180*					
Vanguard Target Retire 2060 Trust I		**US Fund Target-Date 2060+**			**0.07**	**0.07**			**8.04**	**25.07**	**25.07**		**57**	**11.90**		**39**	**8.48**		**50**				**10.00**	**3/1/2012**
Vanguard Target Retirement 2060 Composite									*8.15*	*25.37*	*25.37*			*12.01*			*8.66*							
Target-Date 2060+ Median						*0.70*			*7.90*	*25.05*	*25.05*			*11.35*			*8.58*							
Target-Date 2060+ Number of Funds													*221*			*160*			*46*					
Vanguard Target Retire 2065 Trust I		**US Fund Target-Date 2060+**			**0.07**	**0.07**			**8.03**	**25.10**	**25.10**		**55**										**11.18**	**7/21/2017**
Vanguard Target Retirement 2065 Composite									*8.15*	*25.37*	*25.37*													
Target-Date 2060+ Median						*0.70*			*7.90*	*25.05*	*25.05*													
Target-Date 2060+ Number of Funds													*221*											

Source: Morningstar & TIAA

State of Rhode Island
401(a) Performance Summary

As of 12/31/2019

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% -ile --> Percentile Ranking in Morningstar Category

Note: Rankings shown for returns are calculated by Morningstar. Rankings for expense ratio is calculated by TIAA and may differ based on calculation methods

Morningstar peer rankings include fractional weights for all share classes. Morningstar peer rankings also include ETFs. Depending on the category, this may cause some variances with the category median illustrated in this report since most ETFs are index based options that can include more volatile
and less mainstream indices.

SI = Since Inception Annualized Total Return; Incep. Date = Since Inception Date (SI return is calculated from this date)

[1] 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.

[2] Calvert Social Index through December 16, 2005; FTSE4Good US Select Index thereafter

[3] 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

[4] 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

[5] 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.

[6] Investor share migrated to Admiral share 08/1/2019

[7] Performance shown for periods prior to the inception date reflects the performance of an oldest share class of the fund/account or underlying fund. Total returns have not been restated to reflect any expense differential between any of the classes. Had the expense differential been reflected, total returns for the fund may have been higher or lower. Category ranks are not available for periods prior to the inception of the fund.

You cannot invest directly in an index.

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.

The expense ratio paid by an investor is the net expense ratio as stated in the prospectus. The net expense ratio reflects total annual fund operating expenses excluding interest expense. If interest expense was included, returns would have been lower. For definitions please visit www.tiaa-cref.org/public/assetmanagement

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

Disclosures

TIAA

As of 12/31/2019

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 a 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.

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.

Morningstar Ranking/Number of Funds in Category displays the Fund's actual rank within its Morningstar Category based on average annual total return and number of funds in that Category. The returns assume reinvestment of dividends and do not reflect any applicable sales charge. Absent expense limitation, total return would be less. Morningstar Percentile Rankings are the Fund's total return rank relative to all funds in the same Morningstar category, where 1 is the highest percentile and 100 is the lowest percentile.

Disclosures

TIAA

As of 12/31/2019

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, 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.

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

State of Rhode Island - Plan Balance Summary

401(a)/414(h)(2)
State of Rhode Island Defined Contribution Retirement Plan

TIAA

As of 12/31/2019

Ticker	*Investment Name*	*Asset Class Description*	*Asset Balance*
PRRIX	PIMCO Real Return Inst Class	Fixed Income	$7,284,648
SS01#	State Street SP 500 Idx Sec II*	Equities	$37,231,619
SS02#	State Street Sm Mid Idx Sec II*	Equities	$28,095,771
SS03#	State Street Cp Eq ExUS Idx II*	Equities	$15,380,736
SS04#	State Street US Bd Idx Sec XIV*	Fixed Income	$8,738,778
TSVX#	TIAA STABLE VALUE	Guaranteed	$15,962,202
VFTAX	Vanguard FTSE Social Index Adm	Equities	$4,207,624
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	$42,854,902
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	$112,320,164
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	$148,898,759
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	$161,840,994
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	$181,745,588
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	$147,283,472
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	$113,128,634
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	$68,647,860
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	$30,108,822
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	$6,332,586
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	$419,828
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	$11,452,233
	STATE OF RHODE ISLAND DEFINED CONTRIBUTION RETIREMENT PLAN Total		**$1,141,935,218**

*State Street (SSgA) CIT's were added on December 26, 2019

State of Rhode Island - Plan Balance Summary

401(a)

Rhode Island FICA 406403 Alternative Retirement Income Security Program

As of 12/31/2019

Ticker	*Investment Name*	*Asset Class Description*	*Asset Balance*
TSVX#	TIAA STABLE VALUE	Guaranteed	$2,241
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	$14,038
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	$1,507,690
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	$183,601
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	$202,913
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	$121,517
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	$100,902
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	$121,526
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	$137,263
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	$259,007
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	$661,697
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	$206,536
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	$13,845
	RHODE ISLAND FICA ALTERNATIVE RET INCOME SECURITY PROGRAM Total		**$3,532,777**

Disclosures

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

TIAA 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 hypothetical investor over the requested time period. The return for one year is calculated using the same formula as one month. TIAA calculates returns by $1,000 owned by hypothetical investor for one month then links returns for requested time period. Both set of returns would include dividends and capital gains, if applicable.

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

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Section XV.

457 Plans

State of Rhode Island Total Assets 457 Plans

Plan Provider	3/31/2019	6/30/2019	9/30/2019	12/31/2019
Valic	$ 6,382,504.56	$ 6,375,023.87	$ 6,222,894.38	$4,091,353.00
Fidelity	$ 156,165,154.02	$ 158,731,186.55	$ 158,435,721.17	$ 168,750,998.02
Voya	$ 185,571,135.05	$ 191,880,720.19	$ 193,514,524.43	$ 202,341,226.76
TIAA	$ 30,496,977.83	$ 32,245,985.04	$ 34,230,911.00	$39,330,467
Total	$ 378,615,771.46	$ 389,232,915.65	$ 392,404,050.98	$ 414,514,044.78

State of Rhode Island

457(b) Quarterly Performance Summary

As of 12/31/2019

BUILT TO PERFORM.

CREATED TO SERVE.

State of Rhode Island
457(b) Performance Summary

As of 12/31/2019

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(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	(Y)
									Recent Returns		Annualized Total Returns as of 12/31/2019													
Investment Name	Ticker	Morningstar Category	Mgr Tenure	AUM $M	Gross ER	Net ER	%-ile ER	Rev Share	3 Mo	YTD	1 Yr	Category Rank	%-ile	3 Yr	Category Rank	%-ile	5 Yr	Category Rank	%-ile	10 Yr	Category Rank	%-ile	SI	Incep Date
GUARANTEED																								
Guaranteed																								
TIAA Traditional RCP	Current crediting rate = 3.00								0.80	3.26	3.26			3.31			3.41			3.46			3.68	6/1/2006
FIXED INCOME																								
Intermediate Core Bond																								
Vanguard Total Bond Market Index I	VBTIX	US Fund Intermediate Core Bond	6.92	248,595	0.04	0.04	5	0.00	0.03	8.73	8.73	134	33	4.03	100	28	3.01	93	31	3.70	104	46	5.12	9/18/1995
BBgBarc US Agg Float Adj TR USD									0.14	8.87	8.87			4.08			3.07			3.78				
Intermediate Core Bond Median						0.58			0.08	8.32	8.32			3.64			2.76			3.61				
Intermediate Core Bond Number of Funds							430						418			402			381			351		
Intermediate Core-Plus Bond																								
PIMCO Total Return Instl	PTTRX	US Fund Intermediate Core-Plus Bond	5.33	67,096	0.71	0.71	52	0.00	(0.30)	8.26	8.26	463	73	4.31	184	36	3.25	186	45	4.19	165	54	7.11	5/11/1987
BBgBarc US Agg Bond TR USD									0.18	8.72	8.72			4.03			3.05			3.75				
Intermediate Core-Plus Bond Median						0.70			0.32	9.23	9.23			4.10			3.17			4.27				
Intermediate Core-Plus Bond Number of Funds							610						606			567			522			460		
Inflation-Protected Bond																								
American Century Inflation-Adjs Bond R6 [5]	AIADX	US Fund Inflation-Protected Bond	18.17	2,531	0.22	0.22	10	0.00	0.48	8.14	8.14	73	45	2.91		52	2.24		46	2.86		50	3.02	7/28/2017
BBgBarc US Treasury US TIPS TR USD									0.79	8.43	8.43			3.32			2.62			3.36				
Inflation-Protected Bond Median						0.65		0.20	0.96	7.51	7.51			2.68			2.06			2.71				
Inflation-Protected Bond Number of Funds							210						207			200			195			138		
EQUITY																								
Large Cap Blend																								
Vanguard Institutional Index I	VINIX	US Fund Large Blend	19.08	242,173	0.04	0.04	3	0.00	9.06	31.46	31.46	300	24	15.24	178	17	11.67	82	10	13.53	53	8	10.08	7/31/1990
S&P 500 TR USD									9.07	31.49	31.49			15.27			11.70			13.56				
Vanguard FTSE Social Index Admiral [4, 5]	VFTAX	US Fund Large Blend	4.08	7,483	0.14	0.14	5	0.00	10.53	33.93	33.93		7	17.11		2	12.40		4	14.35		2	23.59	2/7/2019
Spliced Social Index [1]									10.59	34.08	34.08			17.25			12.53			14.50				
FTSE4Good US Select TR USD									10.59	34.08	34.08			17.25			12.53			14.50				
Russell 3000 TR USD									9.10	31.02	31.02			14.57			11.24			13.42				
Large Blend Median						0.85			8.66	29.61	29.61			13.60			10.09			12.25				
Large Blend Number of Funds							1,310						1,282			1,208			1,147			1,007		
Mid-Cap Blend																								
Vanguard Mid Cap Index Institutional	VMCIX	US Fund Mid-Cap Blend	21.67	111,567	0.04	0.04	2	0.00	6.87	31.04	31.04	66	13	12.37	33	11	9.26	34	17	13.09	11	7	10.04	5/21/1998
Spliced Mid Cap Index [2]									6.88	31.09	31.09			12.39			9.29			13.13				
CRSP US Mid Cap TR USD									6.88	31.09	31.09			12.39			9.29			13.25				
Mid-Cap Blend Median						0.99			6.90	26.82	26.82			9.02			7.21			11.08				
Mid-Cap Blend Number of Funds							381						370			359			321			279		
Small Blend																								
Vanguard Small Cap Index I	VSCIX	US Fund Small Blend	3.75	96,752	0.04	0.04	2	0.00	8.14	27.40	27.40	127	18	10.33	41	7	8.90	81	17	12.83	33	9	9.02	7/7/1997
Spliced Small Cap Index [3]									8.12	27.35	27.35			10.31			8.86			12.78				
CRSP US Small Cap TR USD									8.12	27.35	27.35			10.31			8.86			12.99				
Small Blend Median						1.08			8.11	24.31	24.31			7.04			7.30			11.29				
Small Blend Number of Funds							679						672			657			603			495		

State of Rhode Island
457(b) Performance Summary

TIAA

As of 12/31/2019

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(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	(Y)
									Recent Returns		Annualized Total Returns as of 12/31/2019													
Investment Name	Ticker	Morningstar Category	Mgr Tenure	AUM $M	Gross ER	Net ER	%-ile ER	Rev Share	3 Mo	YTD	1 Yr	Category Rank	%-ile	3 Yr	Category Rank	%-ile	5 Yr	Category Rank	%-ile	10 Yr	Category Rank	%-ile	SI	Incep Date
EQUITY																								
Foreign Large Blend																								
Schwab International Index	**SWISX**	**US Fund Foreign Large Blend**	**2.75**	**5,749**	**0.06**	**0.06**	**3**	**0.00**	**7.89**	**21.87**	**21.87**	**358**	**46**	**9.78**	**200**	**33**	**5.80**	**140**	**34**	**5.46**	**129**	**37**	**4.55**	**5/19/1997**
MSCI EAFE NR USD									*8.17*	*22.01*	*22.01*			*9.56*			*5.67*			*5.50*				
Foreign Large Blend Median						*0.95*			*8.78*	*21.85*	*21.85*			*9.00*			*5.30*			*5.25*				
Foreign Large Blend Number of Funds							*718*						*685*			*650*			*577*			*498*		
Foreign Large Growth																								
American Funds Europacific Growth R6	**RERGX**	**US Fund Foreign Large Growth**	**18.58**	**171,878**	**0.49**	**0.49**	**3**	**0.00**	**10.09**	**27.40**	**27.40**	**276**	**59**	**12.45**	**186**	**47**	**7.41**	**130**	**44**	**6.73**	**120**	**55**	**9.43**	**5/1/2009**
MSCI ACWI Ex USA NR USD									*8.92*	*21.51*	*21.51*			*9.87*			*5.51*			*4.97*				
Foreign Large Growth Median						*1.05*			*9.70*	*27.86*	*27.86*			*12.46*			*7.08*			*6.79*				
Foreign Large Growth Number of Funds							*492*						*480*			*460*			*419*			*336*		
ALLOCATION																								
Target-Date																								
Vanguard Target Retire Inc Trust I		**US Fund Target-Date Retirement**			**0.07**	**0.07**			**2.65**	**13.27**	**13.27**		**42**	**6.43**		**28**	**4.86**		**25**	**5.89**		**19**	**5.25**	**6/22/2007**
Vanguard Target Retirement Income Composite									*2.72*	*13.41*	*13.41*			*6.51*			*4.97*			*5.97*				
Target-Date Retirement Median						*0.67*			*2.53*	*13.02*	*13.02*			*5.81*			*4.18*			*5.23*				
Target-Date Retirement Number of Funds													*189*			*173*			*158*			*121*		
Vanguard Target Retire 2015 Trust I		**US Fund Target-Date 2015**			**0.07**	**0.07**			**3.25**	**14.91**	**14.91**		**62**	**7.56**		**31**	**5.67**		**43**	**7.32**		**25**	**5.30**	**6/28/2007**
Vanguard Target Retirement 2015 Composite									*3.34*	*15.08*	*15.08*			*7.65*			*5.78*			*7.39*				
Target-Date 2015 Median						*0.58*			*3.91*	*15.20*	*15.20*			*7.29*			*5.48*			*7.03*				
Target-Date 2015 Number of Funds													*134*			*113*			*96*			*73*		
Vanguard Target Retire 2020 Trust I		**US Fund Target-Date 2020**			**0.07**	**0.07**			**4.49**	**17.73**	**17.73**		**26**	**8.80**		**13**	**6.51**		**10**	**8.12**		**4**	**5.67**	**6/22/2007**
Vanguard Target Retirement 2020 Composite									*4.55*	*17.87*	*17.87*			*8.88*			*6.62*			*8.26*				
Target-Date 2020 Median						*0.68*			*3.89*	*15.85*	*15.85*			*7.57*			*5.57*			*7.11*				
Target-Date 2020 Number of Funds													*239*			*214*			*190*			*133*		
Vanguard Target Retire 2025 Trust I		**US Fund Target-Date 2025**			**0.07**	**0.07**			**5.29**	**19.78**	**19.78**		**16**	**9.68**		**8**	**7.10**		**9**	**8.68**		**8**	**5.79**	**6/28/2000**
Vanguard Target Retirement 2025 Composite									*5.36*	*19.92*	*19.92*			*9.76*			*7.20*			*8.83*				
Target-Date 2025 Median						*0.67*			*4.78*	*18.22*	*18.22*			*8.60*			*6.26*			*7.90*				
Target-Date 2025 Number of Funds													*238*			*214*			*191*			*119*		
Vanguard Target Retire 2030 Trust I		**US Fund Target-Date 2030**			**0.07**	**0.07**			**5.99**	**21.18**	**21.18**		**16**	**10.33**		**17**	**7.51**		**20**	**9.17**		**10**	**5.89**	**6/28/2007**
Vanguard Target Retirement 2030 Composite									*6.07*	*21.34*	*21.34*			*10.40*			*7.61*			*9.31*				
Target-Date 2030 Median						*0.69*			*5.59*	*20.25*	*20.25*			*9.51*			*6.82*			*8.34*				
Target-Date 2030 Number of Funds													*244*			*220*			*196*			*135*		
Vanguard Target Retire 2035 Trust I		**US Fund Target-Date 2035**			**0.07**	**0.07**			**6.70**	**22.58**	**22.58**		**36**	**10.96**		**24**	**7.92**		**21**	**9.63**		**8**	**6.10**	**6/28/2007**
Vanguard Target Retirement 2035 Composite									*6.79*	*22.76*	*22.76*			*11.04*			*8.02*			*9.77*				
Target-Date 2035 Median						*0.68*			*6.49*	*22.16*	*22.16*			*10.28*			*7.30*			*8.81*				
Target-Date 2035 Number of Funds													*232*			*208*			*185*			*113*		
Vanguard Target Retire 2040 Trust I		**US Fund Target-Date 2040**			**0.07**	**0.07**			**7.42**	**23.97**	**23.97**		**37**	**11.57**		**24**	**8.29**		**21**	**9.97**		**12**	**6.39**	**6/28/2007**
Vanguard Target Retirement 2040 Composite									*7.50*	*24.19*	*24.19*			*11.67*			*8.43*			*10.14*				
Target-Date 2040 Median						*0.73*			*7.04*	*23.51*	*23.51*			*10.73*			*7.58*			*9.01*				
Target-Date 2040 Number of Funds													*244*			*220*			*196*	*135*		*135*		

State of Rhode Island
457(b) Performance Summary

As of 12/31/2019

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									Recent Returns		Annualized Total Returns as of 12/31/2019													
Investment Name	Ticker	Morningstar Category	Mgr Tenure	AUM $M	Gross ER	Net ER	%-ile ER	Rev Share	3 Mo	YTD	1 Yr	Category Rank	%-ile	3 Yr	Category Rank	%-ile	5 Yr	Category Rank	%-ile	10 Yr	Category Rank	%-ile	SI	Incep Date
ALLOCATION																								
Target-Date																								
Vanguard Target Retire 2045 Trust I		**US Fund Target-Date 2045**			**0.07**	**0.07**			**8.04**	**25.10**	**25.10**		**36**	**11.89**		**21**	**8.50**		**18**	**10.08**		**11**	**6.45**	**6/28/2007**
Vanguard Target Retirement 2045 Composite									*8.15*	*25.37*	*25.37*			*12.01*			*8.66*			*10.25*				
Target-Date 2045 Median						*0.70*			*7.53*	*24.50*	*24.50*			*11.04*			*7.79*			*9.29*				
Target-Date 2045 Number of Funds													*232*			*208*			*185*			*112*		
Vanguard Target Retire 2050 Trust I		**US Fund Target-Date 2050**			**0.07**	**0.07**			**8.05**	**25.07**	**25.07**		**41**	**11.88**		**27**	**8.49**		**21**	**10.08**		**13**	**6.49**	**6/28/2007**
Vanguard Target Retirement 2050 Composite									*8.15*	*25.37*	*25.37*			*12.01*			*8.66*			*10.25*				
Target-Date 2050 Median						*0.73*			*7.62*	*24.62*	*24.62*			*11.08*			*7.88*			*9.33*				
Target-Date 2050 Number of Funds													*244*			*220*			*196*			*110*		
Vanguard Target Retire 2055 Trust I		**US Fund Target-Date 2055**			**0.07**	**0.07**			**8.05**	**25.09**	**25.09**		**45**	**11.88**		**29**	**8.47**		**27**				**10.17**	**10/5/2010**
Vanguard Target Retirement 2055 Composite									*8.15*	*25.37*	*25.37*			*12.01*			*8.66*							
Target-Date 2055 Median						*0.71*			*7.78*	*24.76*	*24.76*			*11.21*			*7.93*							
Target-Date 2055 Number of Funds													*232*			*205*			*180*					
Vanguard Target Retire 2060 Trust I		**US Fund Target-Date 2060+**			**0.07**	**0.07**			**8.04**	**25.07**	**25.07**		**57**	**11.90**		**39**	**8.48**		**50**				**10.00**	**3/1/2012**
Vanguard Target Retirement 2060 Composite									*8.15*	*25.37*	*25.37*			*12.01*			*8.66*							
Target-Date 2060+ Median						*0.70*			*7.90*	*25.05*	*25.05*			*11.35*			*8.58*							
Target-Date 2060+ Number of Funds													*221*			*160*			*46*					
Vanguard Target Retire 2065 Trust I		**US Fund Target-Date 2060+**			**0.07**	**0.07**			**8.03**	**25.10**	**25.10**		**55**										**11.18**	**7/21/2017**
Vanguard Target Retirement 2060 Composite									*8.15*	*25.37*	*25.37*													
Target-Date 2060+ Median						*0.70*			*7.90*	*25.05*	*25.05*													
Target-Date 2060+ Number of Funds													*221*											

Source: Morningstar & TIAA

% -ile --> Percentile Ranking in Morningstar Category

Note: Rankings shown for returns are calculated by Morningstar. Rankings for expense ratio is calculated by TIAA and may differ based on calculation methods

Morningstar peer rankings include fractional weights for all share classes. Morningstar peer rankings also include ETFs. Depending on the category, this may cause some variances with the category median illustrated in this report since most ETFs are index based options that can include more volatile and less mainstream indices.

SI = Since Inception Annualized Total Return; Incep. Date = Since Inception Date (SI return is calculated from this date)

[1] Calvert Social Index through December 16, 2005; FTSE4Good US Select Index thereafter

[2] 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

[3] 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

[4] Investor share migrated to Admiral share 08/1/2019

[5] Performance shown for periods prior to the inception date reflects the performance of an oldest share class of the fund/account or underlying fund. Total returns have not been restated to reflect any expense differential between any of the classes. Had the expense differential been reflected, total returns for fund may have been higher or lower. Category ranks are not available for periods prior to the inception of the fund.

You cannot invest directly in an index.

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.

The expense ratio paid by an investor is the net expense ratio as stated in the prospectus. The net expense ratio reflects total annual fund operating expenses excluding interest expense. If interest expense was included, returns would have been lower. For definitions please visit www.tiaa-cref.org/public/assetmanagement

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

Disclosures

As of 12/31/2019

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 Traditional is a 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.

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.

Morningstar Ranking/Number of Funds in Category displays the Fund's actual rank within its Morningstar Category based on average annual total return and number of funds in that Category. The returns assume reinvestment of dividends and do not reflect any applicable sales charge. Absent expense limitation, total return would be less. Morningstar Percentile Rankings are the Fund's total return rank relative to all funds in the same Morningstar category, where 1 is the highest percentile and 100 is the lowest percentile.

Disclosures

As of 12/31/2019

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, 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.

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

State of Rhode Island - Plan Balance Summary

457(b)

State of Rhode Island 457(b) Deferred Compensation Plan

TIAA

As of 12/31/2019

Ticker	*Investment Name*	*Asset Class Description*	*Asset Balance*
AIADX	American Century Inf Adj Bd R6	Fixed Income	$604,294
PTTRX	PIMCO Total Return Instl	Fixed Income	$654,242
RERGX	American EuroPac Growth R6	Equities	$1,852,459
SS01#	State Street SP 500 Idx Sec II*	Equities	$11,366,316
SS03#	State Street Cp Eq ExUS Idx II*	Equities	$409,725
SS04#	State Street US Bd Idx Sec XIV*	Fixed Income	$702,594
TIAA#	TIAA Traditional Benefit Responsive 2	Guaranteed	$9,429,192
VFTAX	Vanguard FTSE Social Index Adm	Equities	$687,891
VLC1#	VALIC Fixed-Interest Opt 3%	Guaranteed	$4,067,833
VLC2#	VALIC Fixed-Interest Opt 1.5%	Guaranteed	$23,520
VMCIX	Vanguard Mid-Cap Idx Inst	Equities	$5,875,930
VSCIX	Vanguard Small-Cap Idx Inst	Equities	$3,583,208
VT15#	Vanguard Tgt Rtmt 2015 Tr I	Multi-Asset	$275,304
VT20#	Vanguard Tgt Rtmt 2020 Tr I	Multi-Asset	$742,261
VT25#	Vanguard Tgt Rtmt 2025 Tr I	Multi-Asset	$797,040
VT30#	Vanguard Tgt Rtmt 2030 Tr I	Multi-Asset	$1,282,726
VT35#	Vanguard Tgt Rtmt 2035 Tr I	Multi-Asset	$458,981
VT40#	Vanguard Tgt Rtmt 2040 Tr I	Multi-Asset	$136,599
VT45#	Vanguard Tgt Rtmt 2045 Tr I	Multi-Asset	$165,813
VT50#	Vanguard Tgt Rtmt 2050 Tr I	Multi-Asset	$141,991
VT55#	Vanguard Tgt Rtmt 2055 Tr I	Multi-Asset	$54,838
VT60#	Vanguard Tgt Rtmt 2060 Tr I	Multi-Asset	$26,537
VT65#	Vanguard Target Rtmt 2065 Tr I	Multi-Asset	$4,483
VTIN#	Vanguard Tgt Rtmt Income Tr I	Multi-Asset	$78,040
	STATE OF RHODE ISLAND 457(B) DEFERRED COMPENSATION PLAN Total		**$43,421,820**

*State Street (SSgA) CIT's were added on December 26, 2019

Disclosures

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

TIAA 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 hypothetical investor over the requested time period. The return for one year is calculated using the same formula as one month. TIAA calculates returns by $1,000 owned by hypothetical investor for one month then links returns for requested time period. Both set of returns would include dividends and capital gains, if applicable.

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

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1061394

Monthly Plan Performance Update

STATE OF RHODE ISLAND - STATE OF RI (35835)

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

	Cumulative Total Returns				Average Annual Total Returns				
Name	**As of**	**1 mo**	**3 mo**	**YTD**	**As of**	**1 yr**	**3 yr**	**5 yr**	**10 yr**
DOW JONES INDUSTRIAL AVERAGE	12/31/2019	1.87	6.67	25.34	12/31/2019	25.34	15.73	12.59	13.40
BLOOMBERG BARCLAYS U.S. AGGREGATE BOND INDEX	12/31/2019	-0.07	0.18	8.72	12/31/2019	8.72	4.03	3.05	3.75
NASDAQ COMPOSITE INDEX	12/31/2019	3.63	12.47	36.69	12/31/2019	36.69	19.86	14.93	16.05
RUSSELL 2000 INDEX	12/31/2019	2.88	9.94	25.52	12/31/2019	25.52	8.59	8.23	11.83
S&P 500 INDEX	12/31/2019	3.02	9.07	31.49	12/31/2019	31.49	15.27	11.70	13.56

	Cumulative Total Returns				Average Annual Total Returns						Fees		
Investment Name	**As of**	**1 mo**	**3 mo**	**YTD**	**As of**	**1 yr**	**3 yr**	**5 yr**	**10 yr**	**Life**	**Short Term Trading**	**Expense Ratio**	**Inception Date**
Stock Investments													
Others													
VAN FTSE SOC IDX ADM	12/31/2019	3.32	10.53	33.93	12/31/2019	33.93	17.11	12.40	14.35	5.56	--	0.14% on 12/20/2019	01/14/2003
Large Cap													
FID CONTRAFUND K	12/31/2019	2.86	10.29	30.17	12/31/2019	30.17	19.04	13.22	14.08	12.60	--	0.73% on 03/01/2019	05/17/1967
FID LARGE CAP STOCK	12/31/2019	2.67	11.92	31.55	12/31/2019	31.55	12.19	9.80	13.14	8.85	--	0.63% on 06/29/2019	06/22/1995
INVESCO DIVRS DIV R6	12/31/2019	3.19	5.21	25.58	12/31/2019	25.58	8.08	8.17	11.25	8.09	--	0.43% on 02/28/2019	12/31/2001
SS S&P 500 INDEX II	12/31/2019	3.01	9.07	31.47	12/31/2019	31.47	15.16	11.57	13.42	8.91	--	0.01% on 08/01/2019	02/28/1996
Mid-Cap													
FID LOW PRICED STK K	12/31/2019	3.95	12.49	25.81	12/31/2019	25.81	10.72	8.03	11.83	13.39	--	0.43% on 09/28/2019	12/27/1989
SS RSL SMMDCP IDX II	12/31/2019	2.13	8.93	27.99	12/31/2019	27.99	11.26	9.22	12.85	8.54	--	0.02% on 08/30/2019	08/31/1997
International													
AF EUROPAC GROWTH R6	12/31/2019	4.30	10.09	27.40	12/31/2019	27.40	12.45	7.41	6.73	10.71	--	0.49% on 06/01/2019	04/16/1984
SS GACEQ EXUS IDX II	12/31/2019	4.40	9.20	--	12/31/2019	--	--	--	--	13.69	--	0.04% on 12/31/2018	05/31/2019

Investment Name	Cumulative Total Returns				Average Annual Total Returns						Fees		
	As of	1 mo	3 mo	YTD	As of	1 yr	3 yr	5 yr	10 yr	Life	Short Term Trading	Expense Ratio	Inception Date
Blended Investments*													
Others													
FID FREEDOM 2005 K	12/31/2019	1.24	3.03	12.33	12/31/2019	12.33	6.56	5.02	5.68	5.03	--	0.42% on 05/30/2019	11/06/2003
FID FREEDOM 2010 K	12/31/2019	1.57	3.92	14.41	12/31/2019	14.41	7.49	5.68	6.56	6.49	--	0.46% on 05/30/2019	10/17/1996
FID FREEDOM 2015 K	12/31/2019	1.91	4.86	16.37	12/31/2019	16.37	8.35	6.29	7.00	6.04	--	0.49% on 05/30/2019	11/06/2003
FID FREEDOM 2020 K	12/31/2019	2.24	5.77	18.14	12/31/2019	18.14	9.04	6.77	7.49	6.87	--	0.53% on 05/30/2019	10/17/1996
FID FREEDOM 2025 K	12/31/2019	2.45	6.44	19.57	12/31/2019	19.57	9.59	7.15	8.10	6.66	--	0.56% on 05/30/2019	11/06/2003
FID FREEDOM 2030 K	12/31/2019	2.76	7.37	21.87	12/31/2019	21.87	10.78	7.98	8.67	7.10	--	0.60% on 05/30/2019	10/17/1996
FID FREEDOM 2035 K	12/31/2019	3.32	8.90	24.55	12/31/2019	24.55	11.70	8.60	9.19	7.21	--	0.63% on 05/30/2019	11/06/2003
FID FREEDOM 2040 K	12/31/2019	3.50	9.54	25.49	12/31/2019	25.49	11.85	8.69	9.28	4.56	--	0.65% on 05/30/2019	09/06/2000
FID FREEDOM 2045 K	12/31/2019	3.54	9.61	25.54	12/31/2019	25.54	11.85	8.69	9.33	6.46	--	0.65% on 05/30/2019	06/01/2006
FID FREEDOM 2050 K	12/31/2019	3.55	9.57	25.48	12/31/2019	25.48	11.85	8.68	9.33	6.31	--	0.65% on 05/30/2019	06/01/2006
FID FREEDOM 2055 K	12/31/2019	3.59	9.68	25.57	12/31/2019	25.57	11.88	8.70	--	8.66	--	0.65% on 05/30/2019	06/01/2011
FID FREEDOM 2060 K	12/31/2019	3.54	9.58	25.44	12/31/2019	25.44	11.81	8.66	--	8.57	--	0.65% on 05/30/2019	08/05/2014
FID FREEDOM 2065 K	12/31/2019	3.49	9.52	--	12/31/2019	--	--	--	--	9.08	--	0.65% on 05/30/2019	06/28/2019
FID FREEDOM INC K	12/31/2019	1.10	2.37	10.74	12/31/2019	10.74	5.57	4.27	4.57	4.84	--	0.42% on 05/30/2019	10/17/1996
Bond Investments													
Stable Value													
TRP STABLE VALUE A	12/31/2019	0.18	0.54	2.20	12/31/2019	2.20	2.05	1.97	2.36	4.71	--	0.30% on 12/31/2018	09/12/1988
Income													
PIM TOTAL RT INST	12/31/2019	-0.25	-0.30	8.26	12/31/2019	8.26	4.31	3.25	4.19	7.11	--	0.71% on 07/31/2019	05/11/1987
SS US BOND INDX XIV	12/31/2019	-0.06	0.17	8.74	12/31/2019	8.74	4.04	3.05	3.73	4.12	--	0.02% on 08/01/2019	02/02/2004
Other Investments													
Others													
BROKERAGELINK	--	--	--	--	--	--	--	--	--	--	--	--	--

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

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

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

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

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

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

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

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

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

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

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STATE OF RHODE ISLAND

Balance by Fund

Data As Of: 12/31/19

DC Plan Number	DC Plan Short Name	Fund Code	Fund Name	Fund Ticker Symbol	Fund Type	Fund Distinct Count By Participant	Market Value	Asset Percentage
35835	STATE OF RI	338	FID LARGE CAP STOCK	FLCSX	DOMESTIC EQUITY	372	$9,315,355.51	5.52%
35835	STATE OF RI	2080	FID CONTRAFUND K	FCNKX	DOMESTIC EQUITY	690	$38,935,123.98	23.07%
35835	STATE OF RI	2095	FID LOW PRICED STK K	FLPKX	DOMESTIC EQUITY	436	$10,814,593.40	6.41%
35835	STATE OF RI	3019	FID FREEDOM INC K	FNSHX	LIFECYCLE	46	$1,686,879.11	1.00%
35835	STATE OF RI	3020	FID FREEDOM 2005 K	FSNJX	LIFECYCLE	9	$373,453.17	0.22%
35835	STATE OF RI	3021	FID FREEDOM 2010 K	FSNKX	LIFECYCLE	70	$4,270,461.44	2.53%
35835	STATE OF RI	3022	FID FREEDOM 2015 K	FSNLX	LIFECYCLE	50	$2,165,202.65	1.28%
35835	STATE OF RI	3023	FID FREEDOM 2020 K	FSNOX	LIFECYCLE	224	$14,965,614.35	8.87%
35835	STATE OF RI	3024	FID FREEDOM 2025 K	FSNPX	LIFECYCLE	112	$4,789,650.94	2.84%
35835	STATE OF RI	3025	FID FREEDOM 2030 K	FSNQX	LIFECYCLE	261	$13,938,801.89	8.26%
35835	STATE OF RI	3026	FID FREEDOM 2035 K	FSNUX	LIFECYCLE	83	$3,470,568.29	2.06%
35835	STATE OF RI	3027	FID FREEDOM 2040 K	FSNVX	LIFECYCLE	64	$1,768,531.89	1.05%
35835	STATE OF RI	3028	FID FREEDOM 2045 K	FSNZX	LIFECYCLE	64	$1,406,076.98	0.83%
35835	STATE OF RI	3029	FID FREEDOM 2050 K	FNSBX	LIFECYCLE	60	$371,391.31	0.22%
35835	STATE OF RI	3030	FID FREEDOM 2055 K	FNSDX	LIFECYCLE	50	$853,885.18	0.51%
35835	STATE OF RI	3031	FID FREEDOM 2060 K	FNSFX	LIFECYCLE	24	$108,645.09	0.06%
35835	STATE OF RI	BLNK	BROKERAGELINK		OTHER	113	$12,293,425.02	7.28%
35835	STATE OF RI	OE9Q	VAN FTSE SOC IDX ADM	VFTAX	DOMESTIC EQUITY	150	$1,591,243.73	0.94%
35835	STATE OF RI	OF1P	PIM TOTAL RT INST	PTTRX	BOND	266	$7,295,855.15	4.32%
35835	STATE OF RI	OGMU	TRP STABLE VALUE A		STABLE VALUE	343	$7,918,330.72	4.69%
35835	STATE OF RI	OK26	INVESCO DIVRS DIV R6	LCEFX	DOMESTIC EQUITY	116	$2,492,729.33	1.48%
35835	STATE OF RI	OMF4	SS GACEQ EXUS IDX II		INTERNATIONAL EQUITY	210	$2,570,573.13	1.52%
35835	STATE OF RI	OMF5	SS RSL SMMDCP IDX II		DOMESTIC EQUITY	297	$3,981,757.09	2.36%
35835	STATE OF RI	OMF6	SS S&P 500 INDEX II		DOMESTIC EQUITY	366	$14,028,820.14	8.31%
35835	STATE OF RI	OMF7	SS US BOND INDX XIV		BOND	205	$2,679,503.39	1.59%
35835	STATE OF RI	OUBE	AF EUROPAC GROWTH R6	RERGX	INTERNATIONAL EQUITY	343	$4,664,525.11	2.76%
							$168,750,998.02	

P E R F O R M A N C E U P D A T E

Voya Retirement Insurance and Annuity Company

STATE OF RHODE ISLAND VK0450

Average Annual Total Returns as of: 12/31/2019 (shown in percentages)

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

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

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

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

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

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

Investment Options	Fund Benchmark ID (BM)	1-Mo Fund	1-Mo BM	3-Mo Fund	3-Mo BM	YTD Fund	YTD BM	1-Yr Fund	1-Yr BM	3-Yr Fund	3-Yr BM	5-Yr Fund	5-Yr BM	10-Yr Fund	10-Yr BM	Incept	Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
Stability of Principal																			
Stability of Principal																			
Voya Fixed Account - 457/401 II A - 4573 (17)(18)	MFR	0.13	0.11	0.39	0.35	1.70	1.86	1.70	1.86	1.74	1.24	1.88	1.44	2.21	0.73				
Bonds																			
High Yield Bond																			
PGIM High Yield Fund - Class Z - 2482	BCUSH1IC	2.16	2.04	3.06	2.63	16.12	14.27	16.12	14.27	7.30	6.30	6.77	6.10	7.73	7.50		03/01/1996	0.54	0.54
Inflation-Protected Bond																			

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 %*
PIMCO Real Return Fund - Institutional Class - 2695	LBUSTIPS	0.57	0.38	0.92	0.79	8.53	8.43	8.53	8.43	3.40	3.32	2.47	2.62	3.40	3.36		01/29/1997	0.98	0.98
Intermediate Core-Plus Bond																			
Voya Intermediate Bond Fund - Class I - 238 (1)(2)	LEHM	-0.09	-0.07	0.22	0.18	10.04	8.72	10.04	8.72	4.79	4.03	3.81	3.05	5.23	3.75		12/15/1998	0.36	0.36
Intermediate-Term Bond																			
State Street U.S. Bond Index SL Series Fund - Class XIV CIT - C925	LEHM	-0.06	-0.07	0.17	0.18	8.74	8.72	8.74	8.72	4.04	4.03	3.05	3.05	3.73	3.75		01/02/2004	0.03	0.01
Asset Allocation																			
Lifecycle																			
Voya Solution 2020 Portfolio - Initial Class - 6750 (3)(4)	SPT2020	1.09	1.57	2.94	4.19	15.22	16.52	15.22	16.52	7.71	8.00	6.02	6.16			8.62	10/03/2011	0.87	0.72
Voya Solution 2025 Portfolio - Initial Class - 790 (4)(5)	SPT2025	1.83	1.89	4.83	4.97	18.32	18.38	18.32	18.38	8.95	8.80	6.58	6.73	7.90	8.13		04/29/2005	0.85	0.78
Voya Solution 2030 Portfolio - Initial Class - 6753 (4)(6)	SPT2030	2.27	2.22	5.91	5.81	20.64	20.38	20.64	20.38	9.77	9.55	7.24	7.27			10.54	10/03/2011	0.94	0.79
Voya Solution 2035 Portfolio - Initial Class - 761 (4)(7)	SP2035	2.66	2.54	6.87	6.61	22.22	22.18	22.22	22.18	10.41	10.25	7.40	7.77	8.75	9.13		04/29/2005	0.90	0.83
Voya Solution 2040 Portfolio - Initial Class - 6756 (4)(8)	SPT2040	2.85	2.76	7.37	7.15	23.44	23.37	23.44	23.37	10.74	10.73	7.82	8.11			11.69	10/03/2011	1.01	0.83
Voya Solution 2045 Portfolio - Initial Class - 764 (4)(9)	SP2045	3.04	2.90	7.92	7.48	24.29	24.02	24.29	24.02	10.75	11.01	7.57	8.32	9.18	9.67		04/29/2005	0.92	0.86
Voya Solution 2050 Portfolio - Initial Class - 6759 (4)(10)	SPT2050	3.11	2.97	8.10	7.65	24.74	24.35	24.74	24.35	10.90	11.22	7.89	8.49			11.83	10/03/2011	1.03	0.86
Voya Solution 2055 Portfolio - Initial Class - 1166 (4)(11)	SPT2055	3.13	3.01	8.17	7.73	24.76	24.48	24.76	24.48	10.92	11.34	7.67	8.58			9.27	03/08/2010	0.93	0.86
Voya Solution 2060 Portfolio - Initial Class - 3290 (4)(12)	SPT2060	3.20	3.03	8.22	7.81	24.79	24.73	24.79	24.73	10.97	11.50					7.84	02/09/2015	1.13	0.87
Voya Solution Income Portfolio - Initial Class - 767 (4)(13)	SPTREIN	1.01	1.13	2.55	3.05	13.38	13.33	13.38	13.33	6.51	6.23	4.87	4.67	5.79	5.50		04/29/2005	0.80	0.68
Balanced																			
Allocation--50% to 70% Equity																			
VY® T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	SPXLBGC	1.86	1.73	5.50	5.38	24.71	22.64	24.71	22.64	13.17	10.81	10.62	8.34	11.93	9.81		01/24/1989	0.64	0.64
Large Cap Value																			
Large Blend																			
Vanguard® FTSE Social Index Fund - Admiral™ Shares - D591	FTSE4GUSS	3.32	3.32	10.53	10.58	33.93	34.08	33.93	34.08	17.12	15.88	12.41	11.73	14.36	15.45		05/31/2000	0.14	0.14
Voya Growth and Income Portfolio - Class I - 001	SPXRE	2.79	3.02	7.48	9.07	28.88	31.49	28.88	31.49	14.01	15.27	9.90	11.70	11.82	13.56		12/31/1979	0.63	0.58
Voya U.S. Stock Index Portfolio - Institutional Class - 829	SPXRE	3.01	3.02	9.01	9.07	31.12	31.49	31.12	31.49	14.95	15.27	11.39	11.70	13.25	13.56		05/03/2004	0.27	0.27
Large Value																			
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (14)	RS1000V	2.81	2.75	8.33	7.41	27.52	26.54	27.52	26.54	11.39	9.68	9.92	8.29	11.40	11.80		11/29/1988	0.73	0.73
Large Cap Growth																			
Large Growth																			
Voya Large Cap Growth Portfolio - Institutional Class - 742 (15)	RS1000G	2.59	3.02	9.26	10.62	32.76	36.39	32.76	36.39	19.28	20.49	13.42	14.63	14.50	15.22		05/03/2004	0.67	0.67
Small/Mid/Specialty																			
Mid-Cap Growth																			

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 %*
Principal MidCap Fund - Class R-6 - C906	RSMID	1.38	2.29	6.20	7.06	43.08	30.54	43.08	30.54	18.77	12.06	13.32	9.33	16.06	13.19		12/06/2000	0.59	0.59
Small Blend																			
State Street Russell Small Mid Cap Index SL Fund - Class II - QF52		2.13		8.93		27.95		27.95		11.13		9.07		12.68			04/09/2009	0.04	0.02
Voya Small Company Portfolio - Class I - 042 (16)	RS2000	2.71	2.88	8.88	9.94	26.21	25.52	26.21	25.52	5.73	8.59	7.86	8.23	11.52	11.83		12/27/1996	0.90	0.90
Voya Small Company Portfolio - Class I - 042 (16)	RS2000	2.71	2.88	8.88	9.94	26.21	25.52	26.21	25.52	5.73	8.59	7.86	8.23	11.52	11.83		12/27/1996	0.90	0.90
Global / International																			
Foreign Large Blend																			
State Street Global All Cap Eq Ex-U.S. Ind SL Srs F - II CIT - D937		4.40		9.20												13.69	05/31/2019	0.05	0.05
Foreign Large Growth																			
American Funds EuroPacific Growth Fund® - Class R-4 - 573	MSCIXUS	4.27	4.33	10.01	8.92	26.98	21.51	26.98	21.51	12.06	9.86	7.04	5.50	6.36	4.97		04/16/1984	0.84	0.84

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.

P E R F O R M A N C E U P D A T E

Voya Retirement Insurance and Annuity Company

STATE OF RHODE ISLAND VK0450

Separate Account D

Average Annual Total Returns as of: 12/31/2019 (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, ranging from 0.09% to 0.44% 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. See "Additional Notes" section for charges by investment option.

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

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

Investment Options	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
Stability of Principal									
Stability of Principal									
Voya Fixed Account - 457/401 II A - 4573 (17)(18)	0.13	0.39	1.70	1.70	1.74	1.88	2.21		
This fund is not part of the product's separate account.									
Bonds									
High Yield Bond									
PGIM High Yield Fund - Class Z - 2482	2.14	3.01	15.90	15.90	7.09	6.56	7.52		03/01/1996
Inflation-Protected Bond									
PIMCO Real Return Fund - Institutional Class - 2695	0.53	0.81	8.05	8.05	2.95	2.02	2.94		01/29/1997
Intermediate Core-Plus Bond									

Investment Options	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
Voya Intermediate Bond Fund - Class I - 238 (1)(2)	-0.12	0.15	9.74	9.74	4.50	3.53	4.95		12/15/1998
Intermediate-Term Bond									
State Street U.S. Bond Index SL Series Fund - Class XIV CIT - C925	-0.10	0.06	8.26	8.26	3.59	2.60	3.28		01/02/2004
Asset Allocation									
Lifecycle									
Voya Solution 2020 Portfolio - Initial Class - 6750 (3)(4)	1.08	2.91	15.08	15.08	7.58	5.89		8.49	10/03/2011
Voya Solution 2025 Portfolio - Initial Class - 790 (4)(5)	1.82	4.80	18.18	18.18	8.82	6.45	7.77		04/29/2005
Voya Solution 2030 Portfolio - Initial Class - 6753 (4)(6)	2.26	5.88	20.50	20.50	9.64	7.12		10.41	10/03/2011
Voya Solution 2035 Portfolio - Initial Class - 761 (4)(7)	2.65	6.84	22.07	22.07	10.28	7.27	8.62		04/29/2005
Voya Solution 2040 Portfolio - Initial Class - 6756 (4)(8)	2.84	7.34	23.29	23.29	10.61	7.69		11.55	10/03/2011
Voya Solution 2045 Portfolio - Initial Class - 764 (4)(9)	3.03	7.89	24.14	24.14	10.61	7.44	9.05		04/29/2005
Voya Solution 2050 Portfolio - Initial Class - 6759 (4)(10)	3.10	8.07	24.59	24.59	10.77	7.76		11.69	10/03/2011
Voya Solution 2055 Portfolio - Initial Class - 1166 (4)(11)	3.12	8.14	24.61	24.61	10.79	7.54		9.13	03/08/2010
Voya Solution 2060 Portfolio - Initial Class - 3290 (4)(12)	3.19	8.18	24.64	24.64	10.84			7.72	02/09/2015
Voya Solution Income Portfolio - Initial Class - 767 (4)(13)	1.00	2.52	13.24	13.24	6.39	4.75	5.66		04/29/2005
Balanced									
Allocation--50% to 70% Equity									
VY® T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	1.84	5.46	24.51	24.51	12.99	10.45	11.76		01/24/1989
Large Cap Value									
Large Blend									
Vanguard® FTSE Social Index Fund - Admiral™ Shares - D591	3.28	10.41	33.36	33.36	16.61	11.92	13.87		05/31/2000
Voya Growth and Income Portfolio - Class I - 001	2.78	7.44	28.70	28.70	13.85	9.75	11.67		12/31/1979
Voya U.S. Stock Index Portfolio - Institutional Class - 829	2.99	8.97	30.92	30.92	14.77	11.21	13.08		05/03/2004
Large Value									
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (14)	2.79	8.27	27.28	27.28	11.18	9.71	11.19		11/29/1988
Large Cap Growth									
Large Growth									
Voya Large Cap Growth Portfolio - Institutional Class - 742 (15)	2.57	9.22	32.58	32.58	19.11	13.26	14.34		05/03/2004
Small/Mid/Specialty									
Mid-Cap Growth									
Principal MidCap Fund - Class R-6 - C906	1.34	6.08	42.47	42.47	18.26	12.82	15.55		12/06/2000
Small Blend									
State Street Russell Small Mid Cap Index SL Fund - Class II - QF52	2.09	8.82	27.40	27.40	10.65	8.60	12.19		04/09/2009
Voya Small Company Portfolio - Class I - 042 (16)	2.70	8.85	26.04	26.04	5.59	7.71	11.37		12/27/1996
Voya Small Company Portfolio - Class I - 042 (16)	2.70	8.85	26.04	26.04	5.59	7.71	11.37		12/27/1996
Global / International									

Investment Options	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
Foreign Large Blend									
State Street Global All Cap Eq Ex-U.S. Ind SL Srs F - II CIT - D937	4.36	9.08						13.41	05/31/2019
Foreign Large Growth									
American Funds EuroPacific Growth Fund® - Class R-4 - 573	4.26	9.98	26.86	26.86	11.96	6.94	6.26		04/16/1984

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

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

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

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

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

Additional Notes

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

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

(1)Voya Intermediate Bond Fund - Class I has identical investment objectives and policies, the same portfolio manager, and invests in the same holdings as Class A. The performance information above is based upon the Class A performance, excluding sales charges, and has not been adjusted by the fee differences between classes.

(2)Voya Intermediate Bond Fund - Class I: The adviser is contractually obligated to limit expenses to 0.50% through August 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 Fund's board.

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

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

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

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.

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

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

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

(8)Voya Solution 2040 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.83% of Class I 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 2045 Portfolio - Initial Class: The adviser is contractually obligated to limit expenses to 0.86% of Class I through May 1, 2019. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Portfolio's board.

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

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

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

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

(14)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.

Additional Notes

(15)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.

(16)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.

These numbers reflect the fund's investment advisory fees, other fund expenses, and the annual deduction from the Separate Account as stated below:
American Funds EuroPacific Growth Fund® - Class R-4: 0.09%
Voya Growth and Income Portfolio - Class I, Voya Large Cap Growth Portfolio - Institutional Class, Voya Small Company Portfolio - Class I, Voya Small Company Portfolio - Class I: 0.14%
VY® T. Rowe Price Capital Appreciation Portfolio - Inst, Voya U.S. Stock Index Portfolio - Institutional Class: 0.16%
PGIM High Yield Fund - Class Z, BlackRock Equity Dividend Fund - Institutional Shares: 0.19%
Voya Intermediate Bond Fund - Class I: 0.27%
PIMCO Real Return Fund - Institutional Class, State Street U.S. Bond Index SL Series Fund - Class XIV CIT, Vanguard® FTSE Social Index Fund - Admiral™ Shares, Principal MidCap Fund - Class R-6, State Street Russell Small Mid Cap Index SL Fund - Class II, State Street Global All Cap Eq Ex-U.S. Ind SL Srs F - II CIT: 0.44%
All Other funds: 0.12%

(17)The current rate for the Voya Fixed Account - 457/401 II A MC 901, Fund 4573 is 1.55%, 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.

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

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

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

Benchmark Id	Benchmark Description
BCUSH1IC	BBgBarc US HY 1% Issuer Cap TR USD
FTSE4GUSS	FTSE 4Good US Select Index measures the performance of companies that meet globally recognized corporate responsibility standards, and to facilitate investment in those companies.
LBUSTIPS	BBgBarc 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	BBgBarc 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.
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.

Benchmark Id	Benchmark Description
RS1000G	Russell 1000 Growth Index measures the performance of the large-cap growth segment of the U.S. equity securities. It includes the Russell 1000 index companies with higher price-to-book ratios and higher forecasted growth values. It is market-capitalization weighted.
RS1000V	Russell 1000 Value Index measures the performance of the large-cap value segment of the U.S. equity securities. It includes the Russell 1000 index companies with lower price-to-book ratios and lower expected growth values. It is market-capitalization weighted.
RS2000	Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 and includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.
RSMID	Russell Mid-Cap Index measures the performance of the mid-cap segment of the U.S. equity universe. It is a subset of Russell 1000 index and includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership. The index represents approximately 31% of the total market capitalization of the Russell 1000 companies.
SP2035	S&P Target Date 2035 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2035, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SP2045	S&P Target Date 2045 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2045, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2020	S&P Target Date 2020 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2020, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2025	S&P Target Date 2025 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2025, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2030	S&P Target Date 2030 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2030, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2040	S&P Target Date 2040 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2040, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2050	S&P Target Date 2050 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2050, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2055	S&P Target Date 2055+ Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2055, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2060	S&P Target Date 2060+ TR USD - description is not available.
SPTREIN	S&P Target Date Retirement Income Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.

Benchmark Id	Benchmark Description
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.

Fund Name	Fund Number	Ticker*	Asset Class	Total Assets
Voya Solution 2020 Portfolio I	6750	ISNBX	Asset Allocation	**$26,800.88**
Voya Solution 2025 Portfolio I	790	ISZIX	Asset Allocation	**$1,674,915.72**
Voya Solution 2030 Port I	6753	ISNGX	Asset Allocation	**$48,869.15**
Voya Solution 2035 Portfolio I	761	ISQIX	Asset Allocation	**$1,294,427.53**
Voya Solution 2040 Port I	6756	ISNLX	Asset Allocation	**$3,444.63**
Voya Solution 2045 Portfolio I	764	ISRIX	Asset Allocation	**$1,123,422.97**
Voya Solution 2050 Port I	6759	ISNQX	Asset Allocation	**$11,180.31**
Voya Solution 2055 Portfolio I	1166	IISPX	Asset Allocation	**$588,102.04**
Voya Solution 2060 Port I	3290	VSIPX	Asset Allocation	**$33,090.89**
Voya Solution Income Prt I	767	ISWIX	Asset Allocation	**$369,429.95**
VY TRowePrice Captl Apprec Pt Inst	1257	ITRIX	Balanced	**$9,515,345.14**
PGIM High Yield Fund Z	2482	PHYZX	Bonds	**$736,344.20**
PIMCO VIT Real Return Portfolio Adm	833	N/A	Bonds	**$536,835.77**
Voya Intermediate Bond Port I	4	IPIIX	Bonds	**$8,224,708.40**
Voya U.S. Bond Index Portfolio I	1554	ILBAX	Bonds	**$729,823.04**
American Funds EuroPacific R4	573	REREX	Global / International	**$6,621,763.21**
Voya International Index Port I	1551	IIIIX	Global / International	**$578,233.31**
VY Oppenhmr Global Port I	432	IGMIX	Global / International	**$7,889,559.89**
Voya Growth and Income Port I	1	IIVGX	Large Cap Blend	**$29,841,341.53**
Voya Large Cap Growth Port Inst	742	IEOHX	Large Cap Growth	**$13,617,210.83**
BlackRock Equity Dividend Fund Inst	8518	MADVX	Large Cap Value	**$4,744,457.73**
Voya U.S. Stock Index Port Inst	829	INGIX	Large Cap Value	**$10,211,452.06**
Principal MidCap Fund R5	3412	PMBPX	Small/Mid/Specialty	**$12,494,242.11**
Voya Russell Mid Cap Index Port I	1560	IIRMX	Small/Mid/Specialty	**$1,757,643.05**
Voya Russell Sm Cp Index Port I	1563	IIRSX	Small/Mid/Specialty	**$1,506,429.28**
Voya Small Company Portfolio I	42	IVCSX	Small/Mid/Specialty	**$7,855,836.46**
Voya Fixed Account - 457/401	43	N/A	Stability of Principal	**$70,177,331.35**
Voya Fixed Account 457401 II A	4573	N/A	Stability of Principal	**$10,103,254.74**
Voya Long-Term GAA (4560)	4560	N/A	Stability of Principal	**$25,730.59**
				$202,341,226.76

Section XVI.

OPEB Trust

BNY MELLON

Total Performance Summary

Report ID: IPM0005

Reporting Currency: USD

TOTAL NET OF FEES

12/31/2019

Account Name Benchmark Name	Market Value	% of Total	Month	YTD	Fiscal YTD	1 Year	Annualized 3 Years	5 Years	10 Years	ITD	Inception Date
Mackay Shields OPEB	129,606,239.7	34.2	-0.08	8.91	2.47	8.91	3.98	2.93		2.64	5/1/2013
Bloomberg Barclays U.S. Aggregate Bond Index			*-0.07*	*8.72*	*2.45*	*8.72*	*4.03*	*3.05*		*2.72*	*5/1/2013*
SSGA S&P 500 INDX	249,407,122.9	65.8	3.01	31.19	10.90	31.19	15.16	11.66		13.30	5/1/2011
S&P 500 - Total Return Index			*3.02*	*31.49*	*10.92*	*31.49*	*15.27*	*11.70*		*12.81*	*5/1/2011*
Total OPEB	**379,013,362.5**	**100.0**	**1.93**	**22.99**	**7.97**	**22.99**	**11.27**	**8.66**		**9.47**	**5/1/2011**
OPEB Custom Blend [1]			*1.94*	*23.33*	*7.94*	*23.33*	*11.42*	*8.80*		*8.94*	*5/1/2011*

END NOTES

12/31/2019

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

BNY MELLON

Total Performance Summary

Report ID: IPM0005

Reporting Currency: USD

TOTAL NET OF FEES

12/31/2019

Account Name / Benchmark Name		Market Value	% of Total	YTD	Month	Cumulative 11/1/2019 - 11/30/2019	Cumulative 10/1/2019 - 10/31/2019	2019	2018	2017	Inception Date
Mackay Shields OPEB		129,606,239.7	34.2	8.91	-0.08	-0.06	0.23	8.91	-0.54	3.78	5/1/2013
Bloomberg Barclays U.S. Aggregate Bond Index				*8.72*	*-0.07*	*-0.05*	*0.30*	*8.72*	*0.01*	*3.54*	*5/1/2013*
SSGA S&P 500 INDX		249,407,122.9	65.8	31.19	3.01	3.63	2.17	31.19	-4.42	21.80	5/1/2011
S&P 500 - Total Return Index				*31.49*	*3.02*	*3.63*	*2.17*	*31.49*	*-4.38*	*21.83*	*5/1/2011*
Total OPEB	1	**379,013,362.5**	**100.0**	**22.99**	**1.93**	**2.36**	**1.49**	**22.99**	**-2.85**	**15.32**	**5/1/2011**
OPEB Custom Blend	2			*23.33*	*1.94*	*2.34*	*1.51*	*23.33*	*-2.58*	*15.14*	*5/1/2011*

END NOTES

12/31/2019

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