



# VRS Overview

## Presented to the Joint Legislative Audit and Review Commission

July 10, 2017

### Presenters:

Mitchell L. Nason, Chairman, VRS Board of Trustees

Ronald D. Schmitz, Chief Investment Officer

Patricia S. Bishop, Director



## VRS Overview

- **Mitchell L. Nason**  
Chairman, VRS Board of Trustees

## Investments Overview

- **Ronald D. Schmitz**  
Chief Investment Officer

## Administration Overview

- **Patricia S. Bishop**  
Director





# Remarks

**Mitchell L. Nason**  
*Chairman*  
*VRS Board of Trustees*



# Board Members



**Mitchell L. Nason, *Chairman***

Prince William County Department of Fire and Rescue

**Diana F. Cantor, *Vice Chairman***

Alternative Investment Management

**The Honorable J. Brandon Bell II, CRPC**

Brandon Bell Financial Partners

**O'Kelly E. McWilliams III**

Gordon & Rees LLP

**Wallace G. "Bo" Harris, Ph.D.**

University of Richmond

**Joseph W. Montgomery**

The Optimal Service Group,  
Wells Fargo Advisors

**W. Brett Hayes**

Wells Fargo Advisors Financial Network

**Troilen Gainey Seward, Ed.S.**

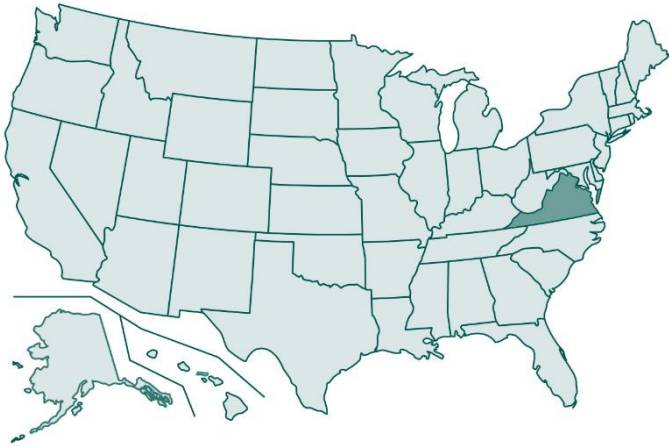
Dinwiddie County Public Schools  
(Retired)

**William H. Leighty**

Virginia Tech



# VRS Overview



**VRS** is the

**20<sup>th</sup> largest**

public or private pension system in the U.S.

and the **44<sup>th</sup> largest**

public or private pension system in the world



with **more than 676,000**  
members, retirees and beneficiaries

As of May 31, 2017





# Investments

**Ronald D. Schmitz**  
*Chief Investment Officer*



# VRS Investment Presentation Outline



- Total fund performance ending 3/31/17
- Returns through 4/30/17
- Fiscal year returns for the past 25 years, compared to the actuarially assumed return
- Asset allocation overview
- Update on the asset allocation policy
- Overview of internally managed assets
- Economic/market outlook



# Total Fund Performance as of March 31, 2017



	10 Yr	5 Yr	3 Yr	1 Yr	Market Value (\$MM)
<b>Total Public Equity</b>	<b>4.9</b>	<b>9.7</b>	<b>6.5</b>	<b>14.0</b>	<b>29,520</b>
<i>Benchmark</i>	4.4	9.0	5.9	14.4	
<b>Total Investment-Grade Fixed Income</b>	<b>5.0</b>	<b>2.8</b>	<b>3.2</b>	<b>1.6</b>	<b>11,860</b>
<i>Benchmark</i>	4.4	2.4	2.7	0.4	
<b>Total Credit Strategies</b>	<b>5.9</b>	<b>6.4</b>	<b>4.5</b>	<b>11.7</b>	<b>12,836</b>
<i>Benchmark</i>	4.8	5.8	4.4	11.0	
<b>Total Real Assets</b>	<b>6.1</b>	<b>11.9</b>	<b>11.7</b>	<b>10.9</b>	<b>9,328</b>
<i>Benchmark</i>	6.0	10.2	9.7	7.4	
<b>Total Private Equity</b>	<b>10.2</b>	<b>13.5</b>	<b>10.7</b>	<b>12.7</b>	<b>6,039</b>
<i>Benchmark</i>	8.3	14.4	7.9	12.9	
<b>Total Strategic Opportunities Portfolio</b>	<b>n/a</b>	<b>n/a</b>	<b>3.1</b>	<b>9.1</b>	<b>1,808</b>
<i>Benchmark</i>	n/a	n/a	3.6	9.7	
<b>Total Fund</b>	<b>5.1</b>	<b>8.2</b>	<b>6.3</b>	<b>10.7</b>	<b>72,447</b>
<i>VRS Custom Benchmark</i>	4.6	7.7	5.7	10.3	

- Total Plan return exceeds benchmark over the past one, three, five and 10 years.
- Outperformance versus benchmark over the past 10 years across all programs.



# Total Fund Performance as of April 30, 2017

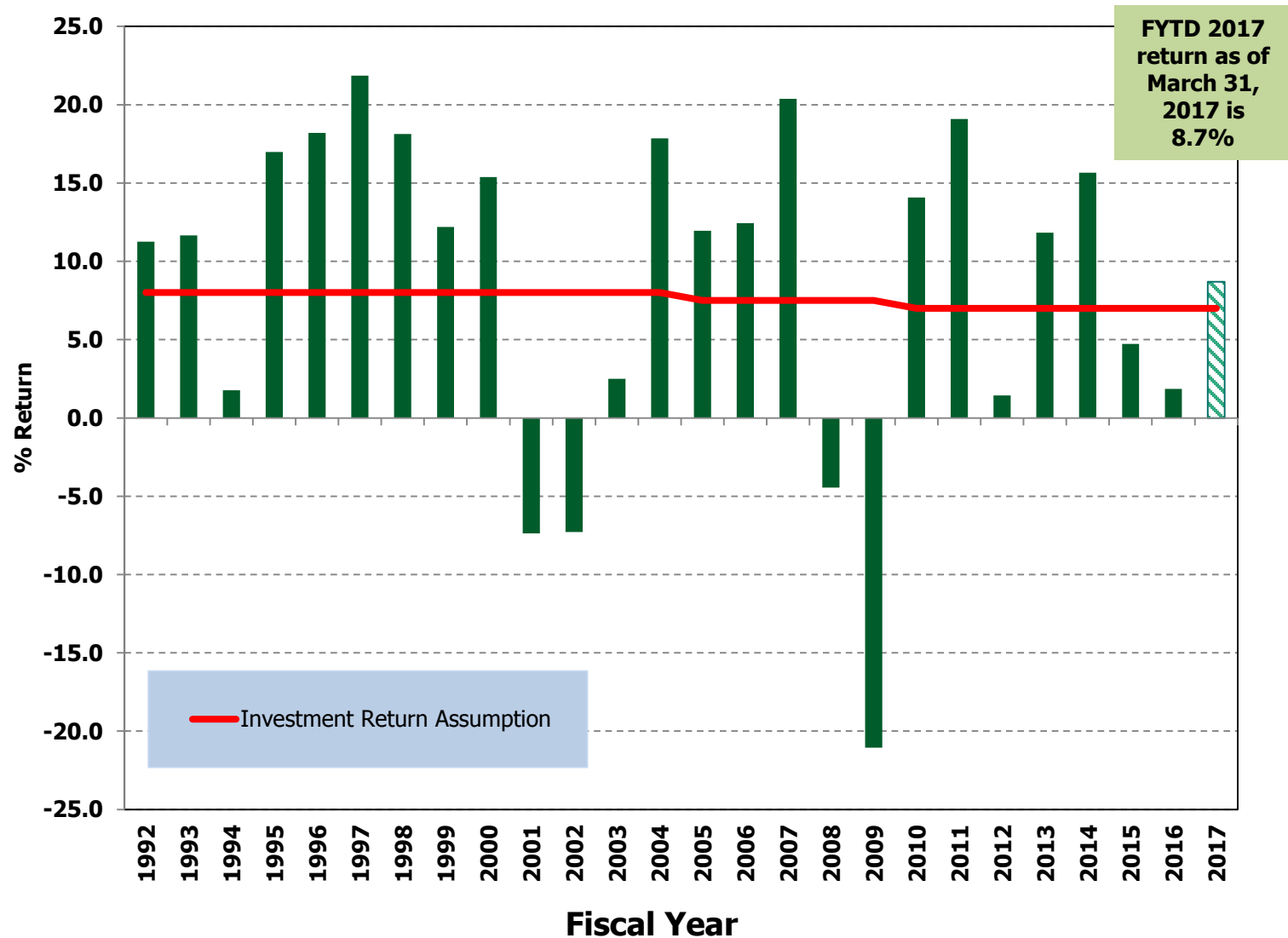


	10 Yr	5 Yr	3 Yr	1 Yr	Fiscal YTD	Market Value (\$MM)
<b>Total Public Equity</b> <i>Benchmark</i>	<b>4.6</b> 4.1	<b>10.3</b> 9.6	<b>7.0</b> 6.3	<b>15.0</b> 15.1	<b>15.1</b> 15.2	<b>30,001</b>
<b>Total Investment-Grade Fixed Income</b> <i>Benchmark</i>	<b>5.0</b> 4.4	<b>2.8</b> 2.3	<b>3.2</b> 2.7	<b>1.8</b> 0.8	<b>-0.3</b> -1.0	<b>11,955</b>
<b>Total Credit Strategies</b> <i>Benchmark</i>	<b>5.8</b> 4.7	<b>6.6</b> 5.9	<b>4.6</b> 4.6	<b>10.7</b> 9.8	<b>8.9</b> 8.1	<b>12,963</b>
<b>Total Real Assets</b> <i>Benchmark</i>	<b>6.1</b> 5.9	<b>11.9</b> 10.1	<b>11.6</b> 9.5	<b>10.9</b> 7.6	<b>8.2</b> 6.0	<b>9,288</b>
<b>Total Private Equity</b> <i>Benchmark</i>	<b>10.2</b> 8.3	<b>13.7</b> 13.7	<b>11.0</b> 9.8	<b>14.0</b> 20.9	<b>13.5</b> 14.3	<b>6,171</b>
<b>Total Strategic Opportunities Portfolio</b> <i>Benchmark</i>	<b>n/a</b> n/a	<b>n/a</b> n/a	<b>3.0</b> 3.8	<b>9.1</b> 9.5	<b>8.0</b> 8.5	<b>1,814</b>
<b>Total Fund</b> <i>VRS Custom Benchmark</i>	<b>4.9</b> 4.4	<b>8.5</b> 7.9	<b>6.6</b> 6.1	<b>11.0</b> 11.1	<b>9.9</b> 9.8	<b>73,412</b>

- FYTD returns likely to exceed the 7% assumed rate.



# VRS Fiscal Year Returns





# Total Fund Performance as of March 31, 2017

Net of Fees



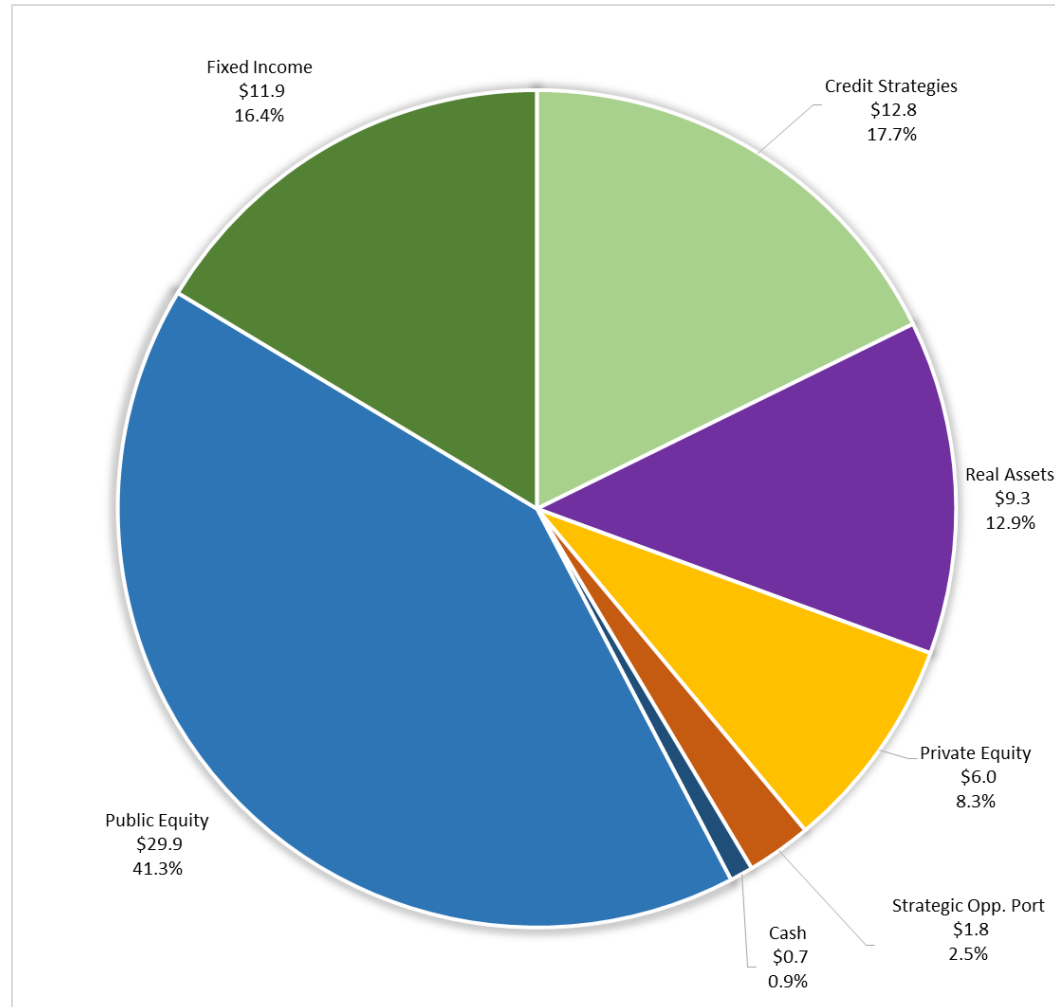
	VRS Return	Benchmark
1-year	10.7%	10.3%
3-year	6.3%	5.7%
5-year	8.2%	7.7%
10-year	5.1%	4.6%
15-year	6.8%	6.3%
20-year	7.4%	6.9%
25-year	8.3%	7.9%



# VRS Asset Allocation as of March 31, 2017



**Total Fund market value = \$72.4 billion**



(Dollar Amounts in Billions/Percent of Total Fund)



# FY 2018 Board Target Asset Mix



	Policy Target % as of July 1, 2016	Policy Target % as of July 1, 2017	Long-Term Policy Targets
<b>Public Equity</b>	43%	43%	40%
<b>Fixed Income</b>	17%	17%	15%
<b>Credit Strategies</b>	17%	17%	15%
<b>Real Assets</b>	14%	14%	15%
<b>Private Equity</b>	9%	9%	15%
<b>Cash</b>	0%	0%	0%

*The Strategic Opportunities Portfolio has a Policy Target Percent of 0% and an Allowable Range of 0% - 5%.*



# Internal Asset Management (IAM)

## Mandates as of March 31, 2017



Asset Class	Objective	Assets (mm)
Equity	Passive, Emerging Market Small Cap (Cardinal)	\$58.9
	Low Tracking Error, U.S. Large (Potomac)	\$5,065.7
	Low Tracking Error, Non-U.S. Large (Matoaka)	\$2,918.7
	Low Tracking Error, U.S. Small (Afton)	\$432.3
	Low Tracking Error, U.S. REIT (Monroe)	\$531.5
	Low Volatility, U.S. Large Cap (Mobjack)	\$1,178.5
	Low Volatility, Non-U.S. Large (Piedmont)	\$1,658.7
	Active Emerging Market Large and Small Cap (Tuckahoe)	\$390.2
	Rebalancing Account	\$578.8
	Energy Overlay	\$180.7
	Currency Hedge (Overlay)	\$4,673.1
<b>Subtotal</b>		<b>\$17,667.1</b>
Fixed Income	Mortgage and Asset-Backed Securities	\$3,897.6
	Investment Grade Corporates	\$3,994.5
	Treasuries and Agencies	\$3,809.5
	Fixed Income Opportunistic	\$147.7
	Rate Overlay	\$10.8
<b>Subtotal</b>		<b>\$11,860.1</b>
<b>Total</b>		<b>\$29,527.2</b>



# IAM Track Record as of March 31, 2017



		1 year	3 years	5 years	10 years	Inception*
Equity	Return	15.47	8.35	11.72	7.01	6.56
	Benchmark	15.10	7.61	10.73	5.85	5.66
	Excess	0.37	0.74	0.99	1.16	0.90
	Risk (TE)	0.84	0.90	0.99	1.12	1.02
	Info Ratio	0.44	0.83	1.01	1.04	0.88
Fixed Income	Return	1.36	3.15	2.85	5.28	5.87
	Benchmark	0.44	2.68	2.34	4.84	5.54
	Excess	0.92	0.47	0.51	0.44	0.33
	Risk (TE)	0.20	0.29	0.31	0.45	0.33
	Info Ratio	4.64	1.64	1.66	0.98	0.97

*\* Equity Inception April 2001, Fixed Income Inception August 1995. These inception dates represent the current team's tenure.*



- U.S. and non-U.S. macroeconomic data are now showing signs of a synchronized global recovery. Industrial production has rebounded and inflation globally has begun to show moderate signs of increase. Consumer confidence and business surveys are at recent highs.
- The Fed has begun to raise interest rates, but the pace of anticipated rate increases continues to be slow.
- Equity markets have traded up over the past year on stronger earnings expectations. Valuations are at or near historical highs and have continued to increase.
- Credit spreads have rebounded from weakness early in 2016 and levels in the liquid markets are compressed.
- Real assets overall remain fundamentally strong, but pricing is above long-term averages and increases, particularly in real estate, are beginning to moderate.
- Private Equity purchase price multiples continue to be high.

**Conclusion: Markets continue to be expensive across virtually all asset classes.**





# **Administration**

**Patricia S. Bishop**  
*Director*





# VRS Membership Overview



# VRS Total Membership



	Plan 1	Plan 2	Hybrid	Total
Teachers	84,771	35,464	30,272	150,507
Political Subdivisions	53,391	31,988	21,502	106,881
State Employees	43,281	17,742	16,518	77,541
State Police Officers' Retirement System (SPORS)	1,288	599	—	1,887
Virginia Law Officers' Retirement System (VaLORS)	4,069	4,599	—	8,668
Judicial Retirement System (JRS)	266	48	105	419
<b>Total Active Members</b>	<b>187,066</b>	<b>90,440</b>	<b>68,397</b>	<b>345,903</b>

Total Active Members	Retirees/ Beneficiaries	Inactive/ Deferred Members	VRS Total Population
<b>345,903</b>	<b>198,903</b>	<b>131,608</b>	<b>676,414</b>

As of May 31, 2017

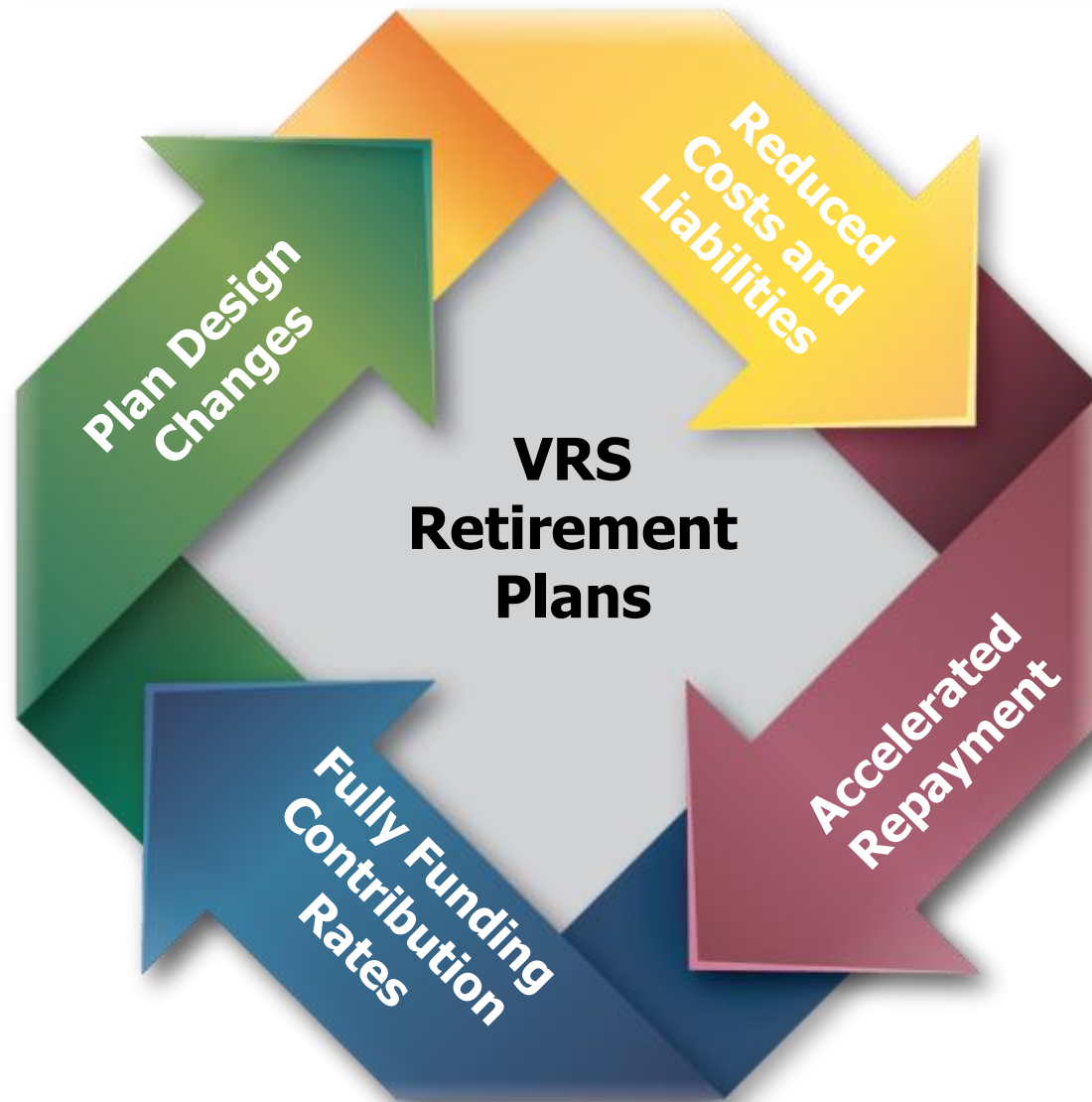




## **Positive Impact of Pension Reform Efforts**



# Impact of Pension Reform



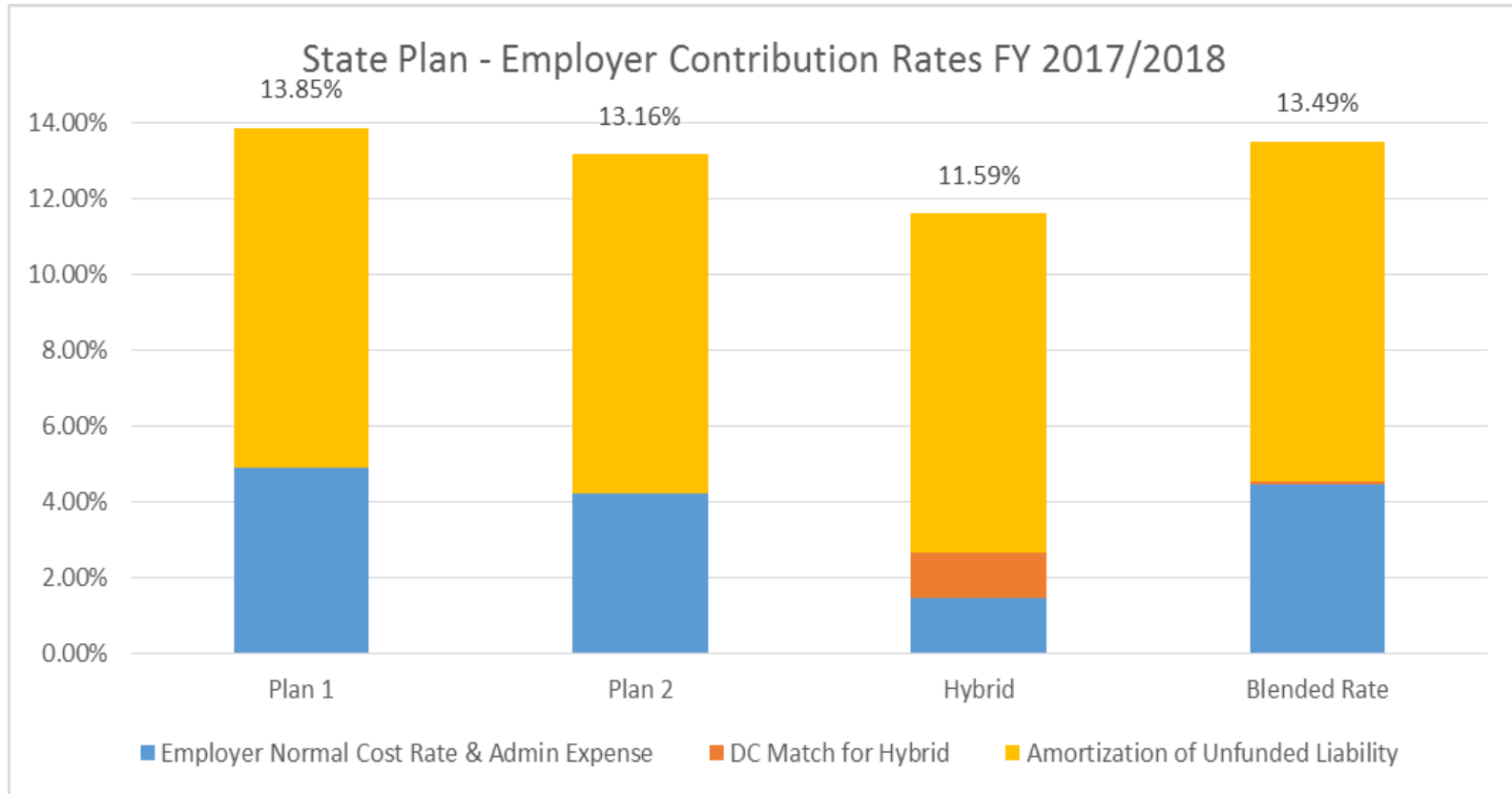




# Funded Status and Contribution Rates



# Impact of Pension Reform on Plan Costs



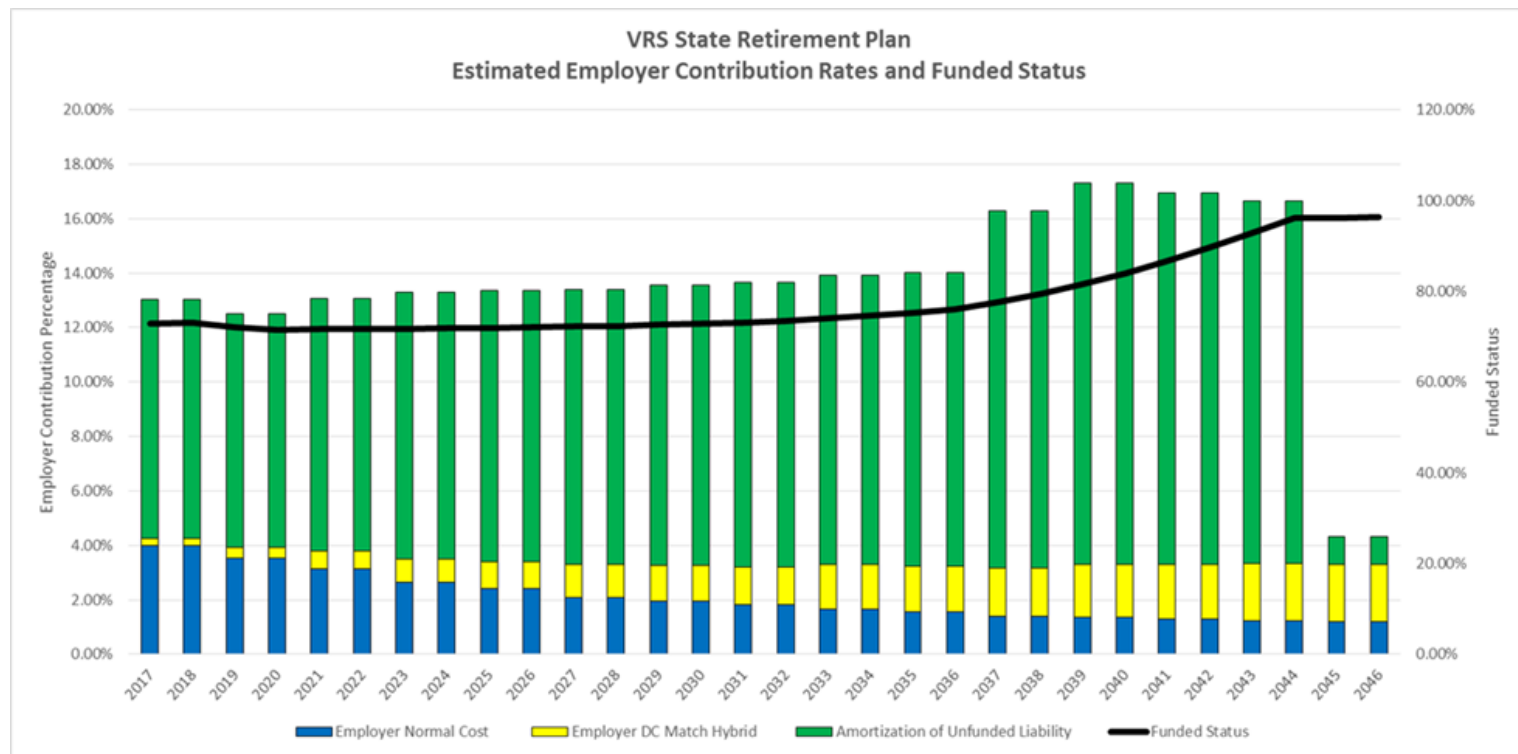
- Amortization of unfunded liability represents over two-thirds of employer costs.



# Projected Plan Costs – State Plan



If we project out future rates for the State plan under current plan assumptions, contribution rates are expected to remain around 14% of covered payroll level until the legacy unfunded liability is paid off in 2044, at which time employer rates are expected to show a significant drop.





# State Employer Contribution Rates Reflecting Deferred Contributions Repayment



	FISCAL YEAR				
	2015	2016	2017	2018	2019 & 2020
Phase-In of VRS Board Certified Rates Agreed Upon in 2012 Legislative Session	78.02%	78.02% (Modified to 90% Effective August 2015)	89.01%	89.01%	100%
Expected Employer Rates Based on Phase-In Schedule	12.33%	14.22%	12.87%	12.87%	13.85%
Employer Rates Based on Introduced Budget	12.33%	14.22%	14.46% *	14.46% *	TBD
Employer Rates Based on 2017 Virginia Acts of Assembly, Chapter 836	12.33%	14.22%	13.49% **	13.49% **	TBD

\* Introduced budget includes 100% funding of Board-certified rates in FY 2017-18, which is ahead of statutory schedule.

\*\* Rates include 100% funding of Board-certified rates in FY 2017-18 as well as reduction due to full repayment of 10 year deferred contributions from FY 2010-2012.

## Additional Notes:

- Above contribution rates are net of employee contributions.
- State rate for FY 2016 was increased to 90% of Board certified rate effective August 10, 2015 after favorable State revenues for FY 2015 allowed additional funds to go towards contributions.



# Teacher Employer Contribution Rates



	FISCAL YEAR				
	2015	2016	2017	2018	2019 & 2020
Phase-In of VRS Board Certified Rates Agreed Upon in 2012 Legislative Session	79.69%	79.69%	89.84%	89.84%	100%
Expected Employer Rates Based on Phase-In Schedule	14.50%	14.06%	14.66%	14.66%	15.79%
Employer Rates Based on 2017 Virginia Acts of Assembly, Chapter 836	14.50%	14.06%	14.66%	16.32% *	TBD

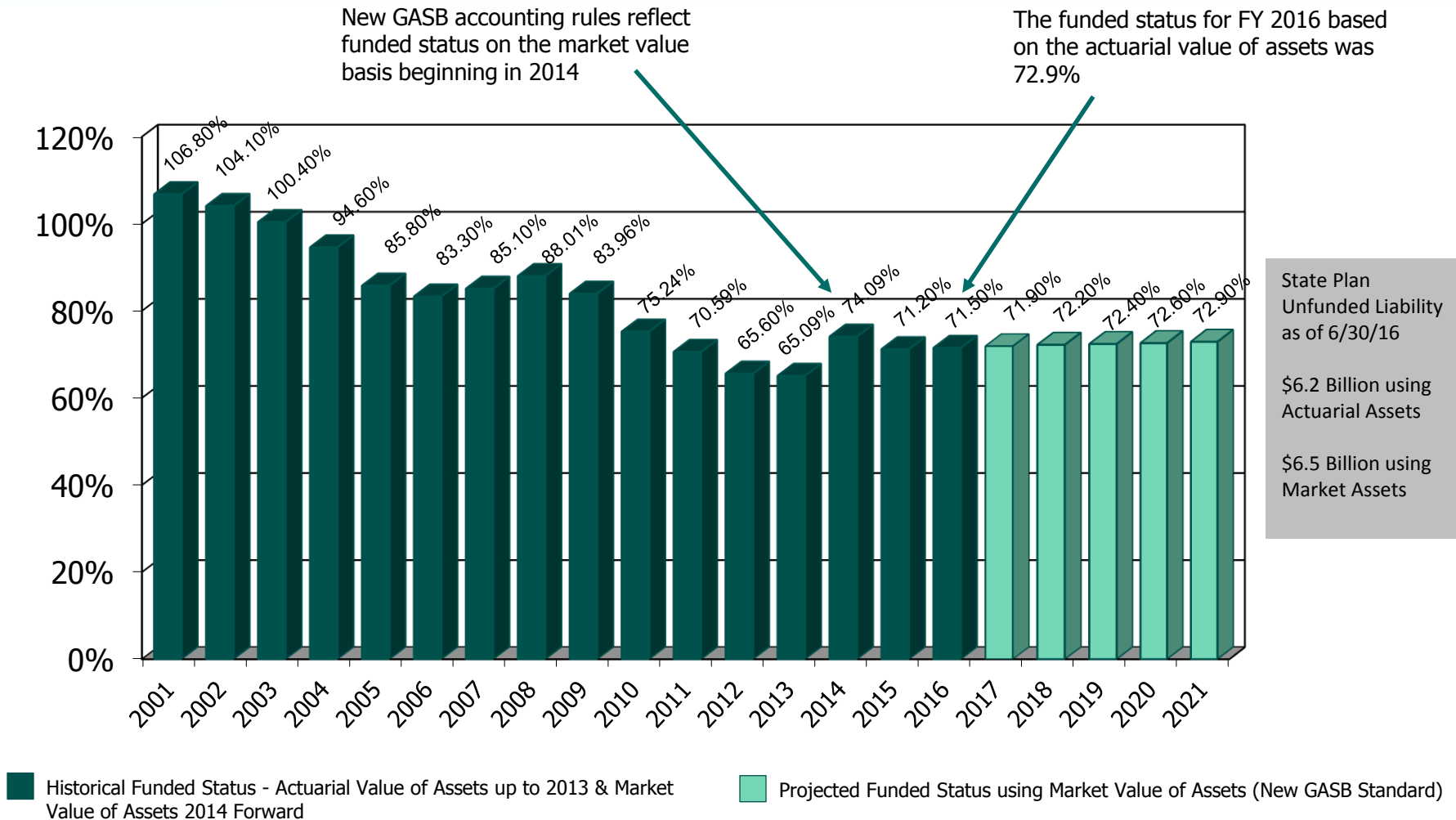
\* Teacher contribution rate is increased to 100% of Board-certified rate in second year of biennium.

## Additional Notes:

- Above contribution rates are net of employee contributions.
- Teacher rates for FY 2016 decreased due to an additional contribution of \$192.9 million that was applied to the deferred contribution balance in FY 2015. The subsequent rates for FY 2017-20 were also lowered to reflect the accelerated repayment.



# Funded Status: State Employees

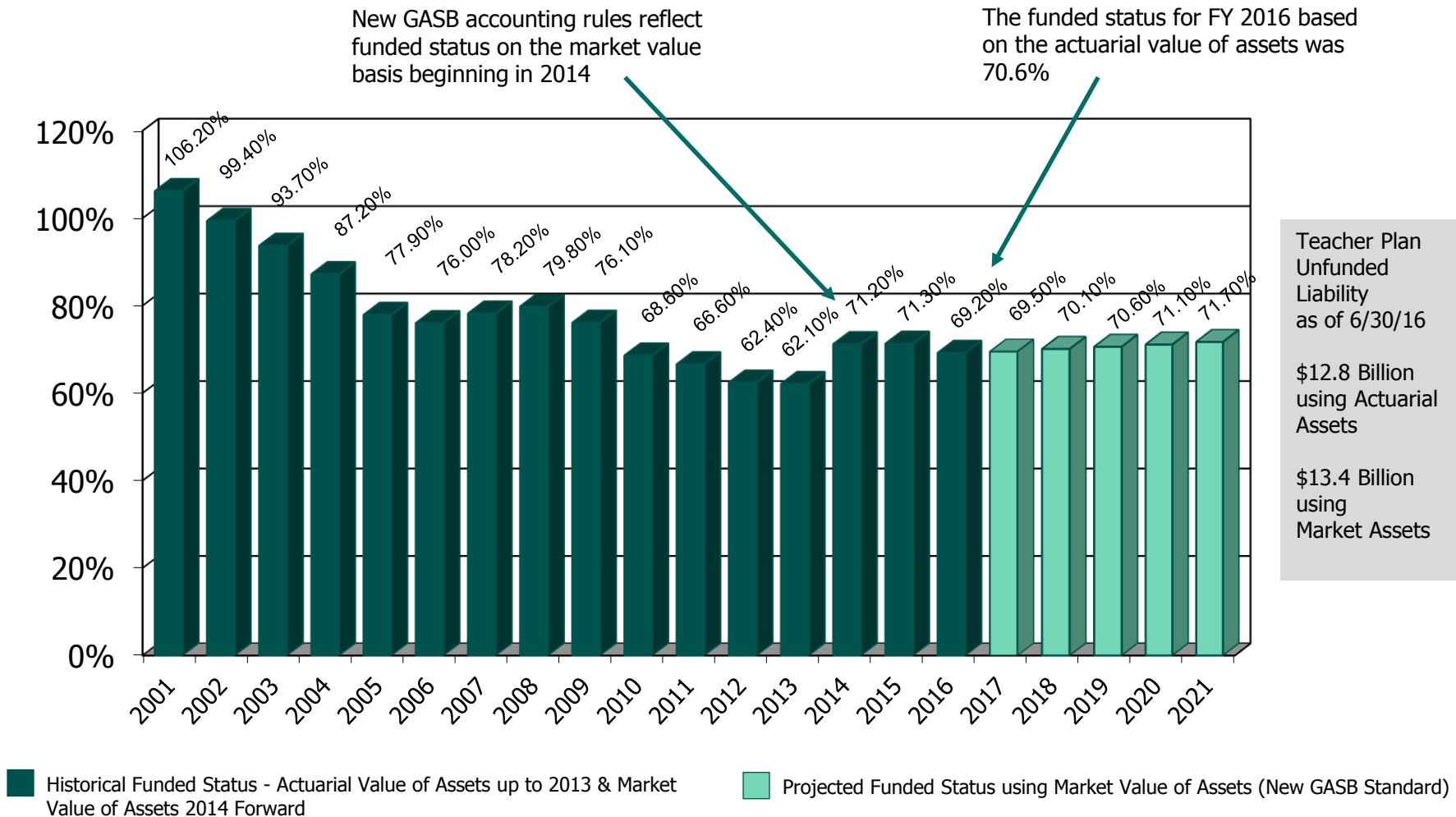


Notes:

- Projected years' investment returns assume 7.0% with 2.5% inflation rate.
- New GASB Accounting Rules will reflect funded status using Market Value of Assets effective 6/30/14 for Plan Reporting and 6/30/15 for Employer Reporting.



# Funded Status: Teachers

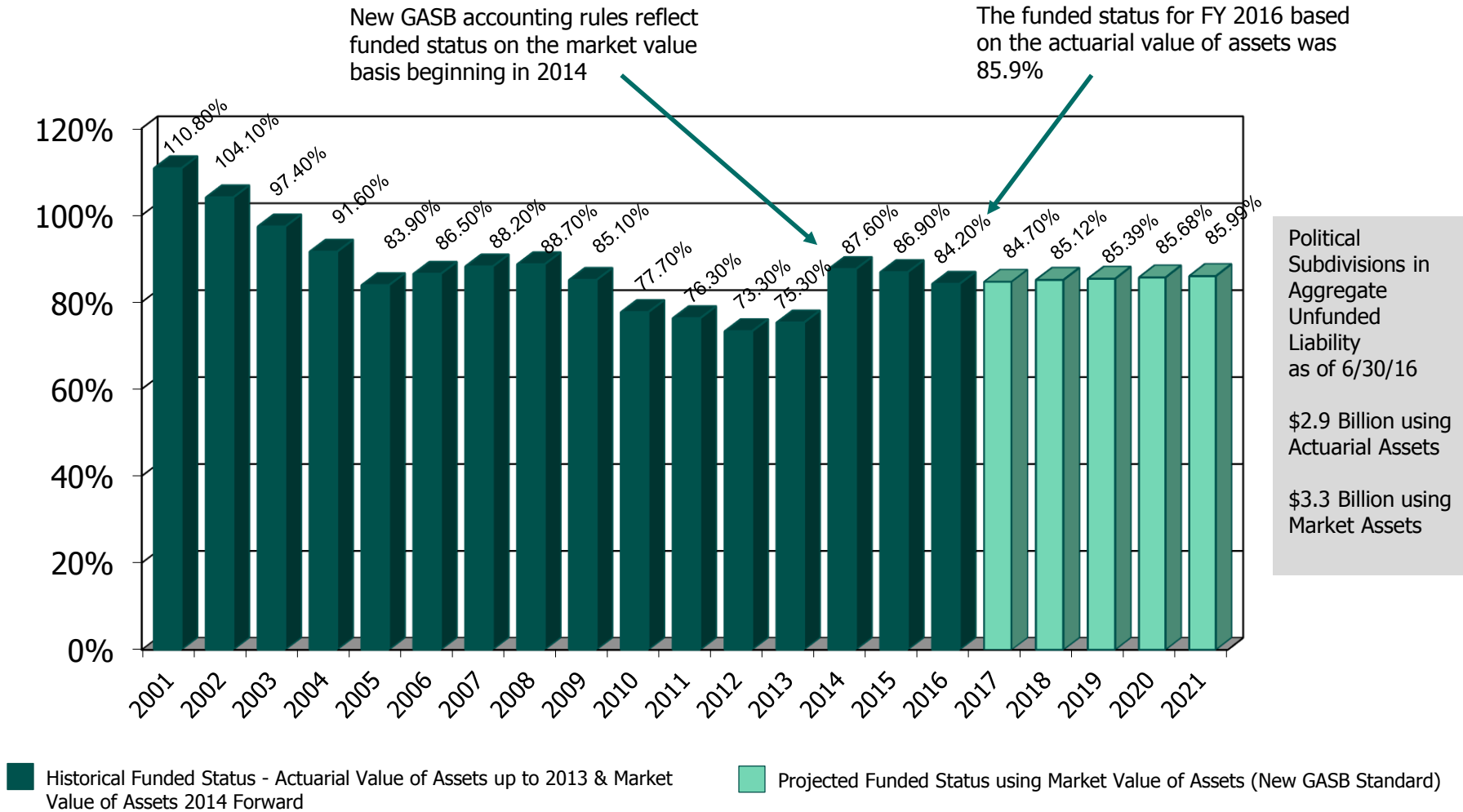


Notes:

- Projected years' investment returns assume 7.0% with 2.5% inflation rate.
- New GASB Accounting Rules will reflect funded status using Market Value of Assets effective 6/30/14 for Plan Reporting and 6/30/15 for Employer Reporting.



# Funded Status: Political Subdivisions in Aggregate



Notes:

- Projected years' investment returns assume 7.0% with 2.5% inflation rate.
- New GASB Accounting Rules will reflect funded status using Market Value of Assets effective 6/30/14 for Plan Reporting and 6/30/15 for Employer Reporting.



## **Experience study**

- Conducted at least once every four years by statute
- Helps validate assumptions and provides opportunity for adjustments
- Assumptions were updated to better reflect plan experience
  - Economic assumptions were reviewed and considered within a reasonable range
  - Demographic assumptions were updated, including changes to reflect future improvements in mortality

## **Sensitivity and stress testing analysis**

- House Bill 1768 (Chapter 639 of the 2017 Acts of Assembly) codified existing VRS practice
- Future reporting to coincide with actuarial valuation reporting cycle





# Hybrid Retirement Plan



# Hybrid Retirement Plan



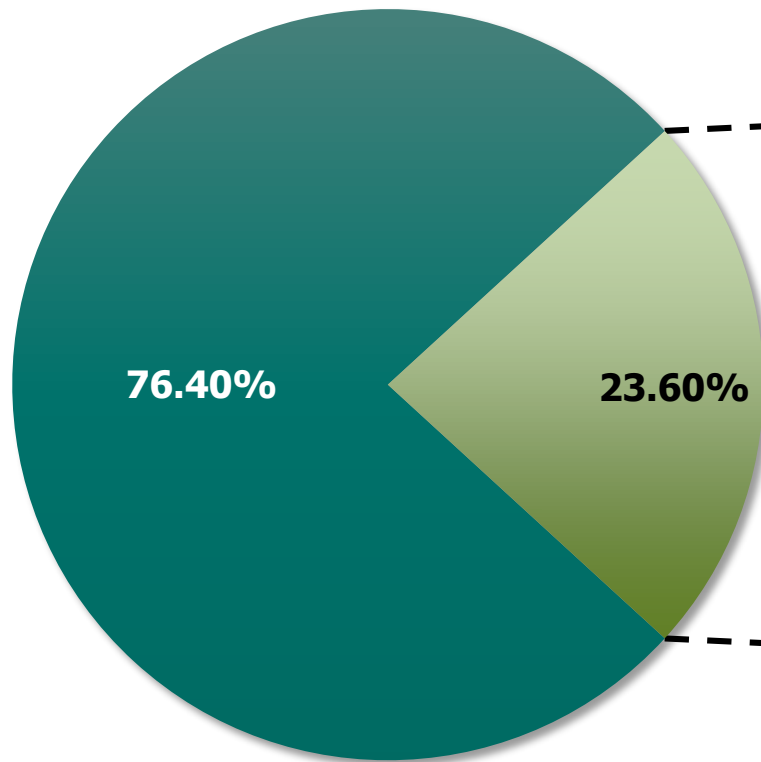
- Total combined balance in the Hybrid 401(a) Cash Match Plan and the Hybrid 457 Deferred Compensation Plan is \$148 million
- Due to auto-escalation there are now 53,276 hybrid members making voluntary contributions, or 79.23 percent
  - Of those, 12,714 hybrid members actively elected a voluntary contribution



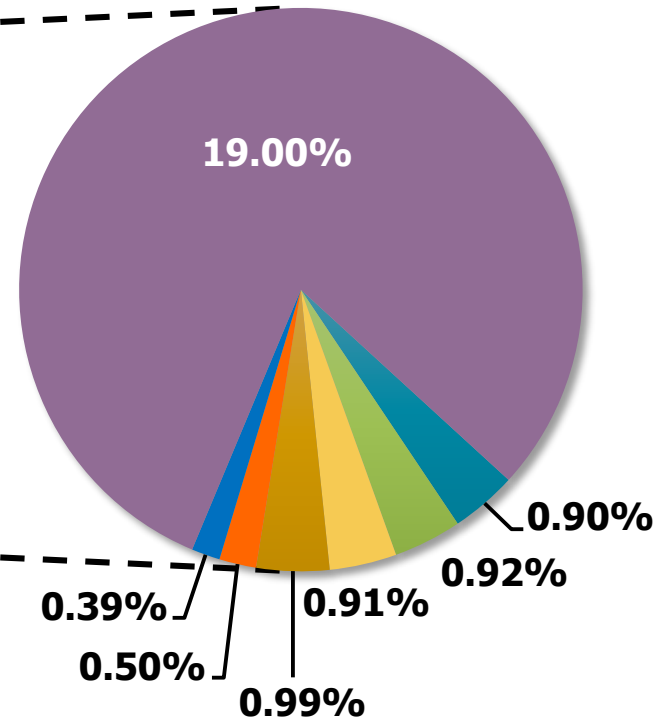
# Hybrid 457 Plan: Voluntary Contributions



**Active members  
who have a voluntary contribution  
as of March 15, 2017**



**Active members with a voluntary  
contribution greater than 0.5%**



**Voluntary Contribution Percentages**

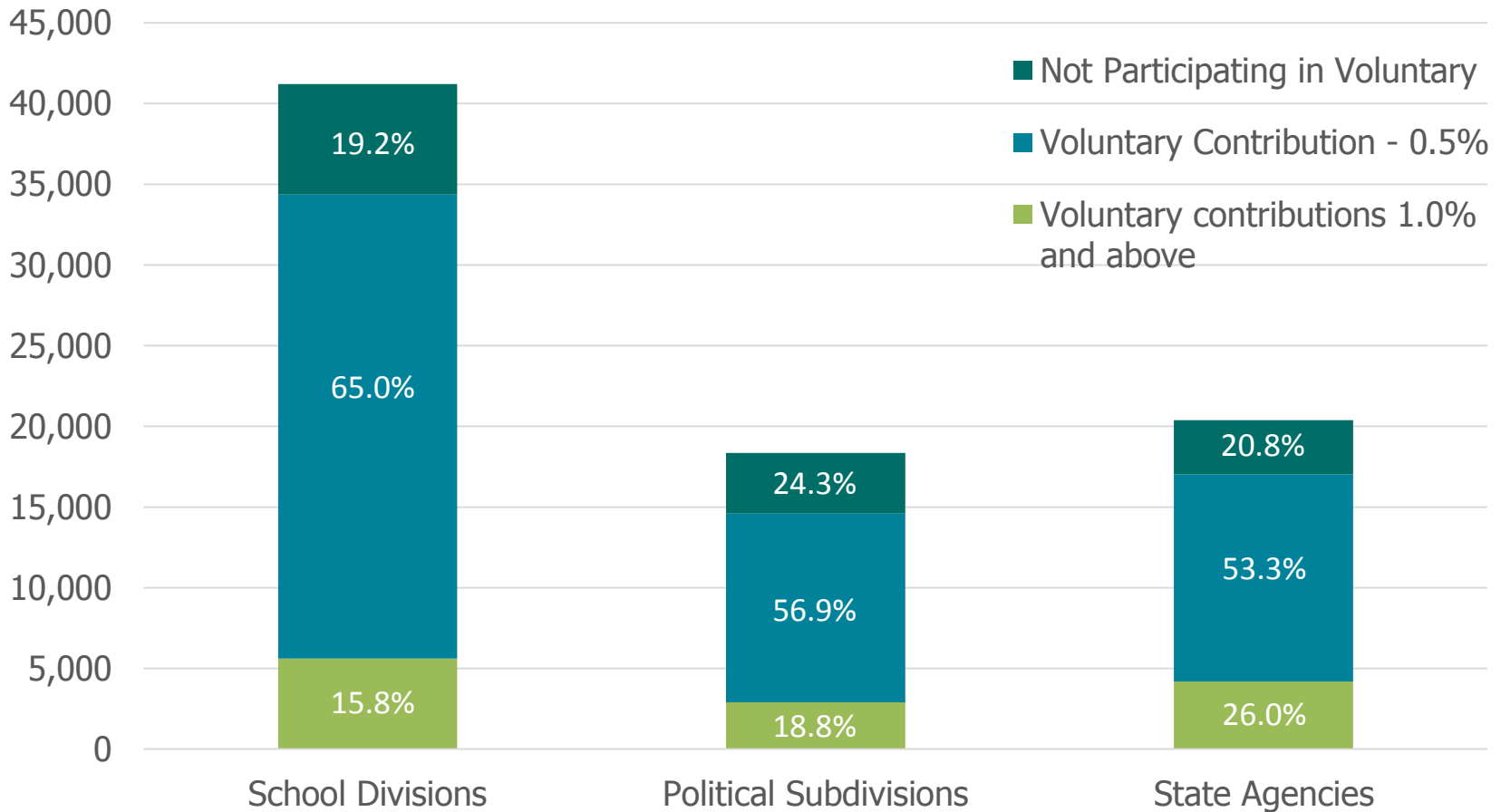
0.5% 1.0% 1.5% 2.0% 2.5% 3.0% 3.5% 4.0%



# Hybrid Retirement Plan



## Hybrid Members by Employer Type





# Hybrid Plan Resources



**Virginia Retirement System**

Paycheck Calculator | Next steps

Hybrid Retirement Plan

Annual salary: \$36,000

Pay frequency: semimont...

Are you married? Yes No

Withholding allowances: 1

Do you pay Social Security? Yes No

Choose your state: Virginia

Overview

A visual showing the effect on your paycheck.

Graph Table

Current: \$1,500 (GROSS), \$1,144 (NET)

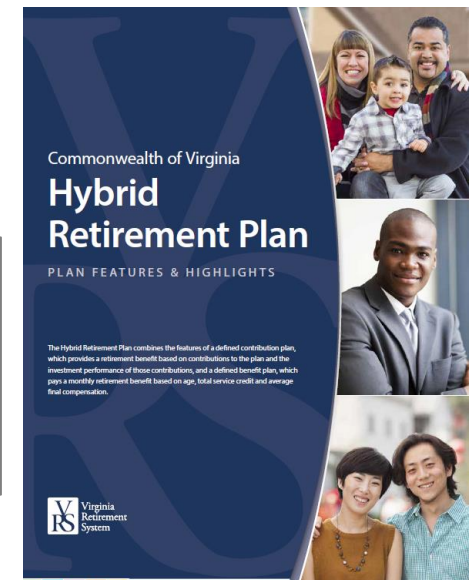
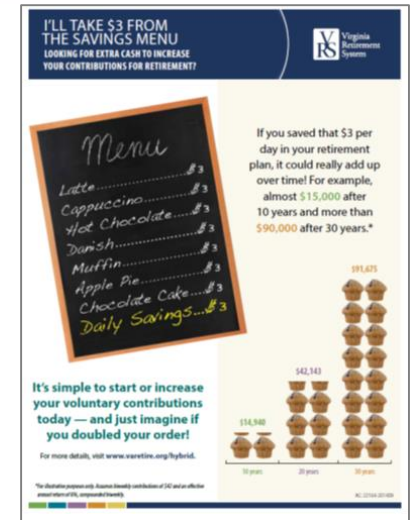
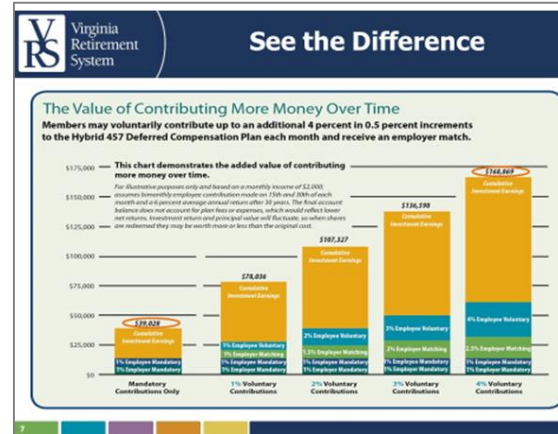
New: \$1,500 (GROSS), \$1,144 (NET)

Hybrid voluntary contributions: Current 0.0%, New 0.0%

Other pre-tax deductions: Current \$0, New \$0

After-tax deductions: Current \$0, New \$0

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# Benchmarking

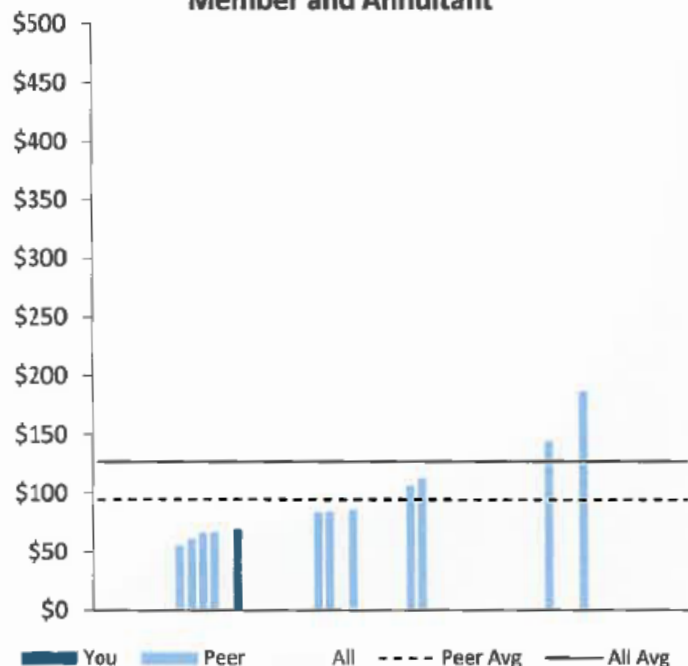


# External Benchmarking: VRS Cost



**Your total pension administration cost was \$69 per active member and annuitant. This was \$25 below the peer average of \$94 and \$58 below the CEM Universe average of \$127.**

**Pension Administration Cost Per Active Member and Annuitant**



Category	\$ per Active Member and Annuitant		\$000s
	You	Peer Avg	
Member Transactions	7	13	3,813
Member Communication	9	17	4,996
Collections and Data Maintenance	6	7	3,327
Governance and Financial Control	4	6	2,225
Major Projects	14	7	7,350
Information Technology	18	25	9,630
Building	4	6	2,287
Legal	2	3	969
HR, Actuarial, Audit	4	9	2,277
<b>Total Pension Administration</b>	<b>69</b>	<b>94</b>	<b>36,875</b>

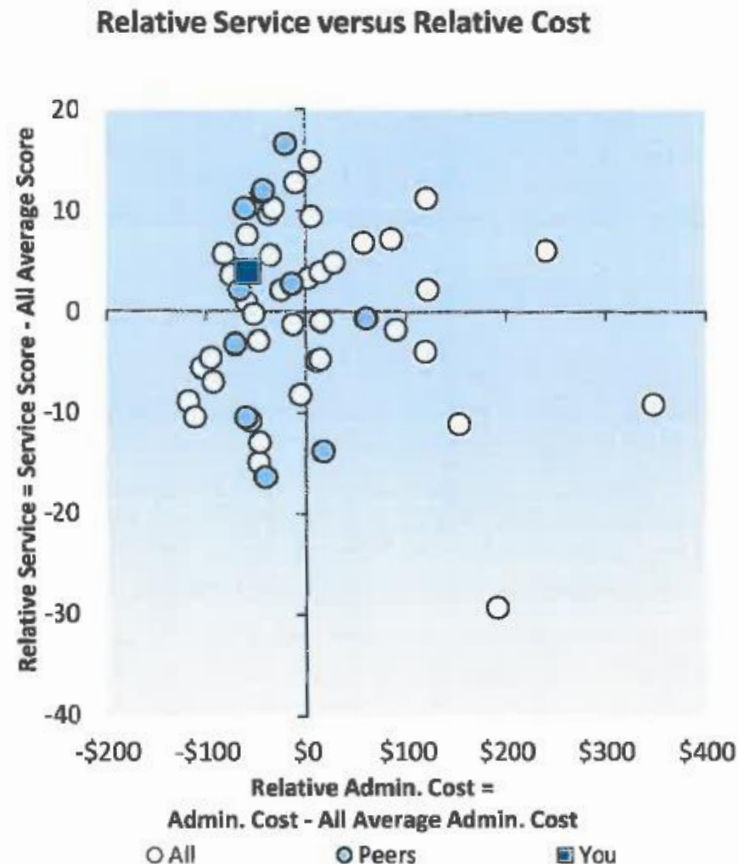
Your total pension administration cost was \$36.9 million. This excludes the fully-attributed cost of administering healthcare, and optional and third-party administered benefits of \$9.8 million.



# External Benchmarking: Service and Cost Relationship



The relationship between service and pension administration cost in the CEM universe:



© 2017 CEM Benchmarking Inc.





## Line of Duty Act



# LODA Administrative Roles



The Virginia Line of Duty Act (LODA):

- Established in Title 9.1 of the *Code of Virginia*, enacted in 1972
- Provides benefits to the following persons:
  - Eligible family members of eligible employees killed in the line of duty
  - Eligible employees disabled in the line of duty and their eligible family members

VRS	DHRM
<ul style="list-style-type: none"><li>▪ <b>Determines line of duty eligibility</b></li><li>▪ <b>Issues benefit payments on behalf of LODA Fund participating employers</b></li><li>▪ <b>Issues notification for benefit payments for LODA Fund non-participating employers</b></li></ul>	<ul style="list-style-type: none"><li>▪ <b>Administers continuous LODA Health Benefits Plans</b><ul style="list-style-type: none"><li>○ Eligible spouse and dependent children in case of death (line of duty or presumption)</li><li>○ Disabled person and eligible family members in case of disability</li></ul></li></ul>



# Websites



[www.valoda.org](http://www.valoda.org)



[www.dhrm.virginia.gov/healthcoverage/loda-health-benefits](http://www.dhrm.virginia.gov/healthcoverage/loda-health-benefits)

[loda@dhrm.virginia.gov](mailto:loda@dhrm.virginia.gov)





## **Awards and Recognition**





Public Pension Coordinating Council

***Public Pension Standards Award  
For Funding and Administration  
2016***

Presented to

***Virginia Retirement System***

In recognition of meeting professional standards for  
plan funding and administration as  
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)



Alan H. Winkie  
Program Administrator

- VRS received a 2016 Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council (PPCC)
- This is the 13<sup>th</sup> award VRS has received from PPCC



# GFOA Certificates of Achievement: VRS CAFR and PAFR



- For the 35<sup>th</sup> consecutive year, VRS received a Certificate of Achievement from the Government Finance Officers Association – the highest form of recognition in governmental accounting and financial reporting for the FY 2016 Comprehensive Annual Financial Report (CAFR)
- VRS also received a Certificate of Achievement for its first Popular Annual Financial Report (PAFR), a concise eight-page summary of our organization, services, financial results and investments, all of which are reported in more detail in the 2016 CAFR





# AIVA Communicator Award of Distinction



- VRS has received a Communicator Award of Distinction from the International Academy of Interactive & Visual Arts (AIVA)
- The award – in the marketing effectiveness-content marketing category – recognizes creative excellence in communications for the Hybrid 457 Deferred Compensation Plan's auto-escalation campaign
- More than 6,000 entries were received
- The award resulted from the collaborative effort of our defined contribution plans and public relations-communications staff and our plan record keeper, ICMA-RC





VRS' 2015 Voluntary Contributions Campaign was honored with a Leadership Award—Participant Education and Communications Initiative from the National Association of Government Defined Contribution Administrators (NAGDCA) at the 2016 NAGDCA Conference

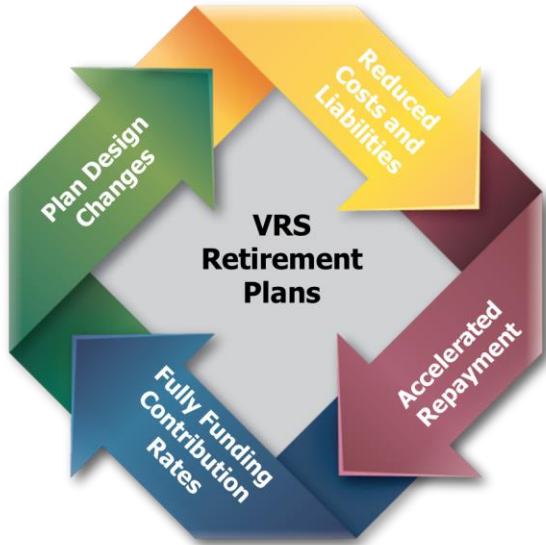






## Key Messages





- Pension reforms have effectively addressed the cost of benefits.
- Savings from pension reforms will be fully realized in the future as the hybrid plan becomes the dominant plan.
- Legacy unfunded liability, which represents approximately two-thirds of the plan cost, is scheduled to be repaid over the next 26 years.
- Commitment to fund 100% of actuarially determined contributions improves health of plan and avoids adding future costs to the plan.
- Funded status of statewide plans has stabilized and is expected to trend upward with the actions taken by the General Assembly to get to 100% of Board-certified rates, given experience aligns with assumptions.