



Virginia Retirement System Political Subdivisions June 30, 2014 Actuarial Valuations

November 20, 2014

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- Aggregate funded status increases and average employer contribution rate decreases for all pension plans.
- 2014 valuations are not rate setting and are only for informational purposes.
- Employer contribution rates reflect new funding policy –
 - 30-year closed amortization of unfunded actuarial accrued liability as of 2013 with 30-years decreasing by one each year until reaching 0 years.
 - Future annual increases or decreases in unfunded liability to be funded over closed 20-year periods beginning on each valuation date.
- 2014 valuations include Hybrid Plan members for the first time.
 - Initial valuation of Virginia Local Disability Program (VLDP).



Average Employer Contribution Rates

(% of Total Covered Payroll)



System	FY 2013 & 2014	FY 2015 & 2016	Informational Purposes Only		
	2011 Valuation	2013 Valuation	Employer Rate for Defined Benefit Plans	Employer Rate for Hybrid DC Component	Total Employer Rate for Retirement Plans
			2014 valuation		
Pension Plans	10.63%	9.91%	8.81%	0.02%	8.83%
Participating HIC	0.31%	0.27%	0.29%	n/a	0.29%
HIC - Constitutional Officers	0.36%	0.36%	0.34%	n/a	0.34%
HIC - Social Service Employees	0.45%	0.44%	0.40%	n/a	0.40%
HIC - Registrars	0.43%	0.40%	0.39%	n/a	0.39%

Contribution rates for retirement systems are net of 5% and 4% member contribution rates for Plan 1 and 2 and Hybrid Plan, respectively.

Employer rate for Hybrid defined contribution component assumes employer match to DC portion of the Hybrid Plan of 1.12% of payroll for members in the Hybrid Plan.

Funded Ratio (Aggregate)



	2013 Actuarial Assets	2013 Market Assets	2014 Actuarial Assets	2014 Market Assets
Pension plans with no LEOS	81.1%	85.3%	87.2%	94.9%
Pension plans with LEOS	73.7%	77.6%	78.9%	85.7%
All pension plans	75.3%	79.2%	80.5%	87.6%
All pension plans < 100% funded	74.9%	78.4%	79.5%	85.8%
HIC Participating Locals	48.5%	48.5%	52.9%	52.9%
HIC Constitutional Officers	3.4%	3.4%	9.2%	9.2%
HIC Social Services	5.4%	5.4%	13.4%	13.4%
HIC Registrars	-0.5%	-0.5%	6.4%	6.4%

Note: Aggregate funded ratio is sum of all assets divided by sum of all liabilities
All pension plans are those with active members

Unfunded Pension Liabilities (\$ Thousands)



System	Unfunded Liability using Actuarial Value of Assets	
	FYE 2013	FYE 2014
State	\$ 7,354,247	\$ 6,996,203
Teachers	\$ 15,127,655	\$ 14,270,138
SPORS	\$ 404,707	\$ 366,887
VaLORS	\$ 800,177	\$ 761,997
Judicial	\$ 221,955	\$ 202,102
Total State-Wide Systems	\$ 23,908,741	\$ 22,597,328
Locals Aggregate	\$ 4,471,108	\$ 3,691,342
Total Fund	\$ 28,379,849	\$ 26,288,670

System	Unfunded Liability using Market Value of Assets	
	FYE 2013	FYE 2014
State	\$ 6,566,289	\$ 5,651,778
Teachers	\$ 13,775,909	\$ 11,881,714
SPORS	\$ 371,128	\$ 308,047
VaLORS	\$ 750,079	\$ 669,409
Judicial	\$ 201,791	\$ 165,904
Total State-Wide Systems	\$ 21,665,196	\$ 18,676,853
Locals Aggregate	\$ 3,762,657	\$ 2,358,010
Total Fund	\$ 25,427,853	\$ 21,034,863



Pension Results

Comments on June 30, 2014 Valuations



- The 2014 valuation is not for rate setting, but for informational purposes.
 - 2013 valuations used to set contribution rates for fiscal years 2015 and 2016.
- Contribution timing adjustment made for the 2014 valuation based on feedback from the 2014 quadrennial actuarial audit of the Virginia Retirement System conducted by JLARC. On average, increases employer contribution by 0.26% of pay.
- Employer contribution rates reflect new funding policy –
 - 29-year closed amortization of 2013 UAL (rolled-forward to 2014)
 - 2014 change in UAL (total UAL less rolled-forward 2013 UAL) funded over closed 20-year period.
- Additional funding requirement for plans that may be at risk of insolvency.
 - 22 plans affected with average additional funding of 0.74% of pay.

Unfunded Liability Amortization



- Unfunded liability contribution in two pieces.
 - As of June 30, 2014, 29 years remaining of legacy unfunded as of June 30, 2013
 - 20 years for change in unfunded liability for year ending June 30, 2014

	Aggregate Unfunded Accrued Liability (UAL) (\$'s Thousands)		
	Balance as of 6/30/2014 of Legacy UAL 6/30/2013	New UAL 6/30/2014	Total UAL
All Pension Plans	\$4,540,905	(\$849,563)	\$3,691,342

Hybrid Plan



- 2014 valuations include Hybrid Plan members for the first time.
- Eligible new hires on or after January 1, 2014.
- Does not affect political subdivision pension plan members with hazardous duty benefits coverage.
- Defined benefit component
 - 1% pension benefit multiplier.
 - 4% employee contribution.
- Defined contribution component

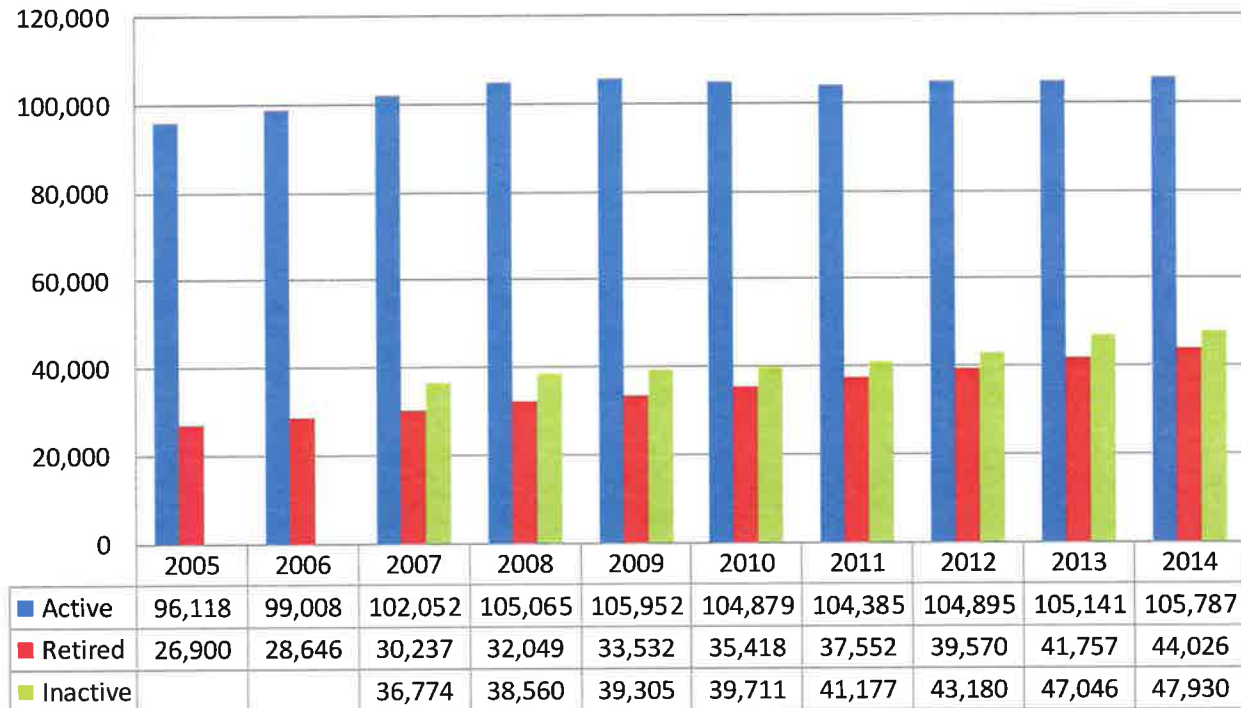
	Employee Contribution	Employer Contribution
Required	1%	1%
Voluntary	Up to 4% additional contribution	Match the employee's first 1% + 0.5% match for each additional 1%
Maximum	5%	3.5%

Changes In Coverage Since Last Valuation



Coverage Expanded to EMT's, Firefighters and Police Officers as HD Alternate Option		
Employer	Employee Group	Change in Employer Contribution Rate
Accomack County (55100)	EMT's and firefighters	0.00%
City of Alexandria (55200)	Law enforcement	0.01%
City of Fairfax (55316)	Law enforcement	0.07%
Coverage Expanded to EMT's, Firefighters and Police Officers at 1.7% Hazardous Duty Benefits		
Employer	Employee Group	Change in Employer Contribution Rate
Rockbridge County (55181)	EMT's and firefighters	0.06%
Town of Bluefield (55371)	Law enforcement	2.94%
Coverage Expanded to EMT's, Firefighters and Police Officers at 1.85% Hazardous Duty Benefits		
Employer	Employee Group	Change in Employer Contribution Rate
City of Lexington (55307)	Firefighters	0.85%
Town of Orange (55397)	Law enforcement	4.12%
New Political Subdivision in VRS		
Bedford Regional Water Authority (55870)		

Total Membership



1.1% average increase in active members since 2005; 0.6% increase for 2014.

5.6% average increase in retired members since 2005; 5.4% increase for 2014.

3.6 actives per retiree 9 years ago; 2.4 actives per retiree now.

“Retired” includes retirees, disabled retirees and beneficiaries.

“Inactive” includes deferred vested and non-vested members with employee contributions in plan.

“Inactive” data before 2007 is not available.

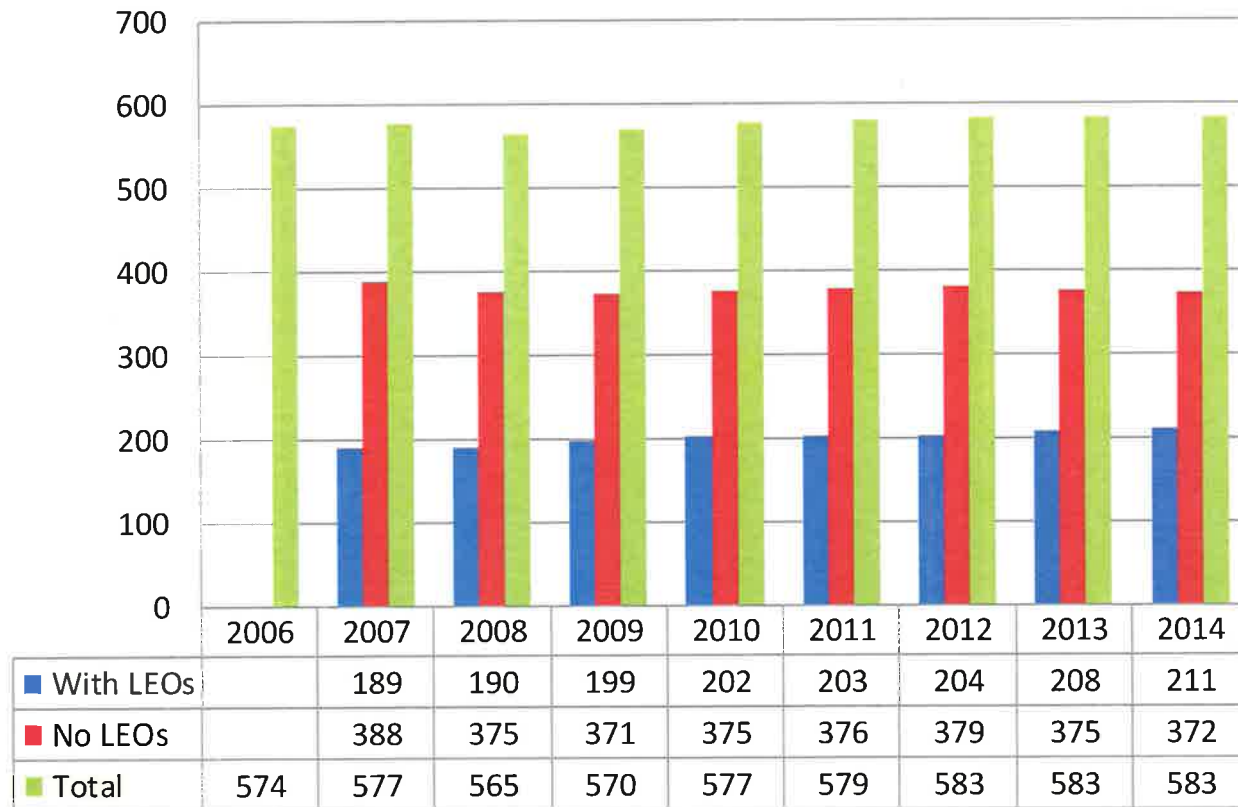
Average Age, Service, Pay and Benefits



	2009	2010	2011	2012	2013	2014
Actives:						
Average Age	45.5	45.9	46.1	46.2	46.3	46.3
Average Vesting Service	10.3	10.7	10.9	11.0	11.1	11.2
Average Entry Age	35.1	35.2	36.1	36.2	36.2	36.2
Average pay	\$39,348	\$39,329	\$39,282	\$39,683	\$41,287	\$42,101
Retirees in the past year:						
Average Age at Retirement	61.1	61.2	61.7	62.1	62.1	62.4
Average Service at Retirement	19.5	18.8	20.5	19.9	19.9	19.6
Average AFC at Retirement	\$41,416	\$42,410	\$44,169	\$44,728	\$44,240	\$45,642
Average VRS Benefit at Retirement (as a Percent of Pay)	33.3%	33.6%	35.0%	33.8%	34.7%	33.5%
Average VRS Benefit at Retirement	\$13,791	\$14,664	\$15,446	\$15,135	\$15,367	\$15,290
Average Social Security Benefit at Age 62	\$14,196	\$14,530	\$14,568	\$14,736	\$14,640	\$14,988



Number of Political Subdivisions Covered in VRS

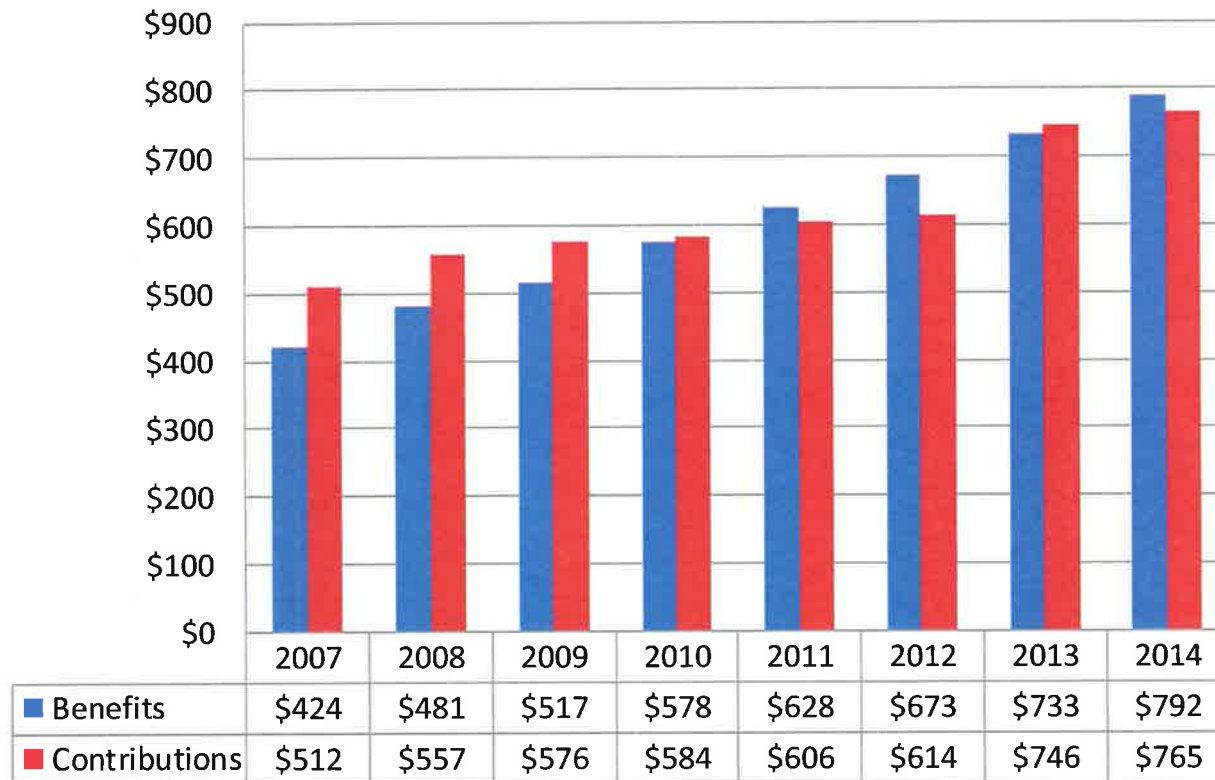


Note: Includes only political subdivisions with active members

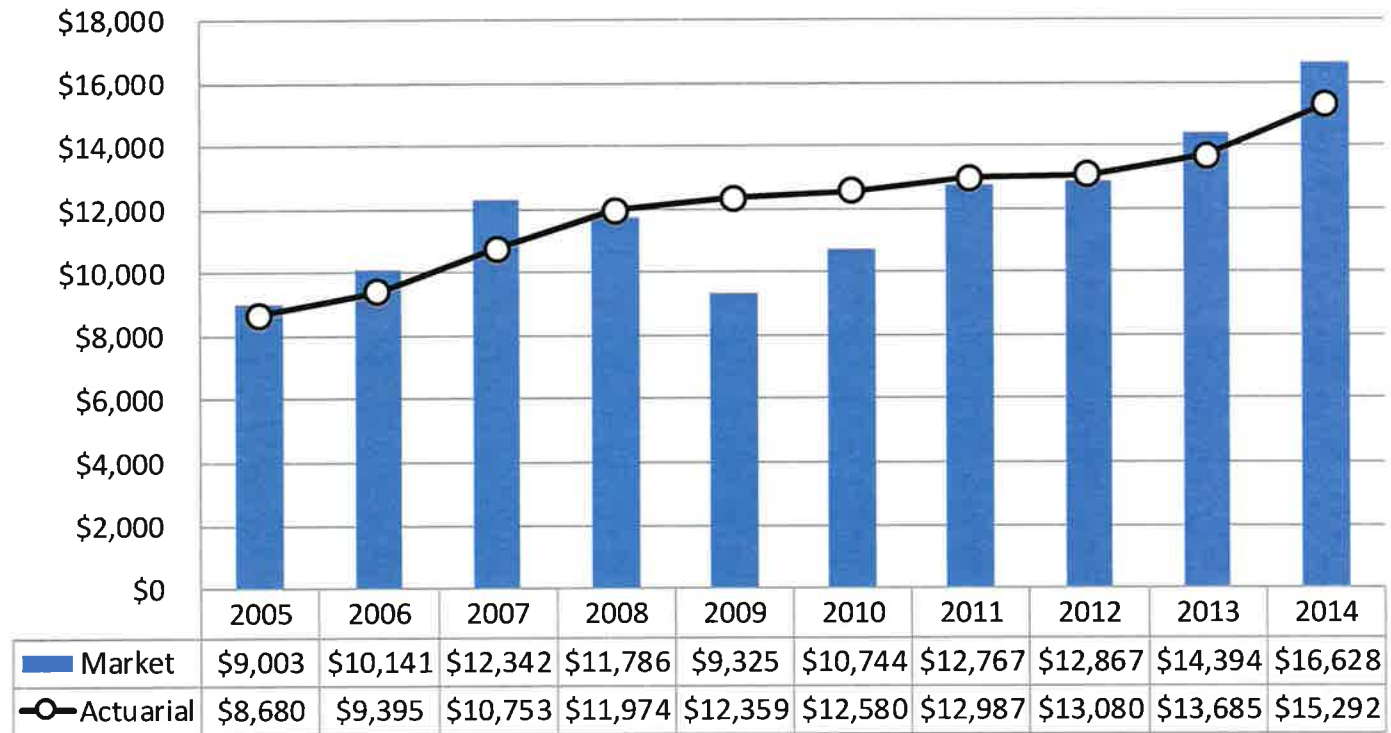
Active Member Payroll (\$ Millions)



Benefits and Contributions (\$ Millions)



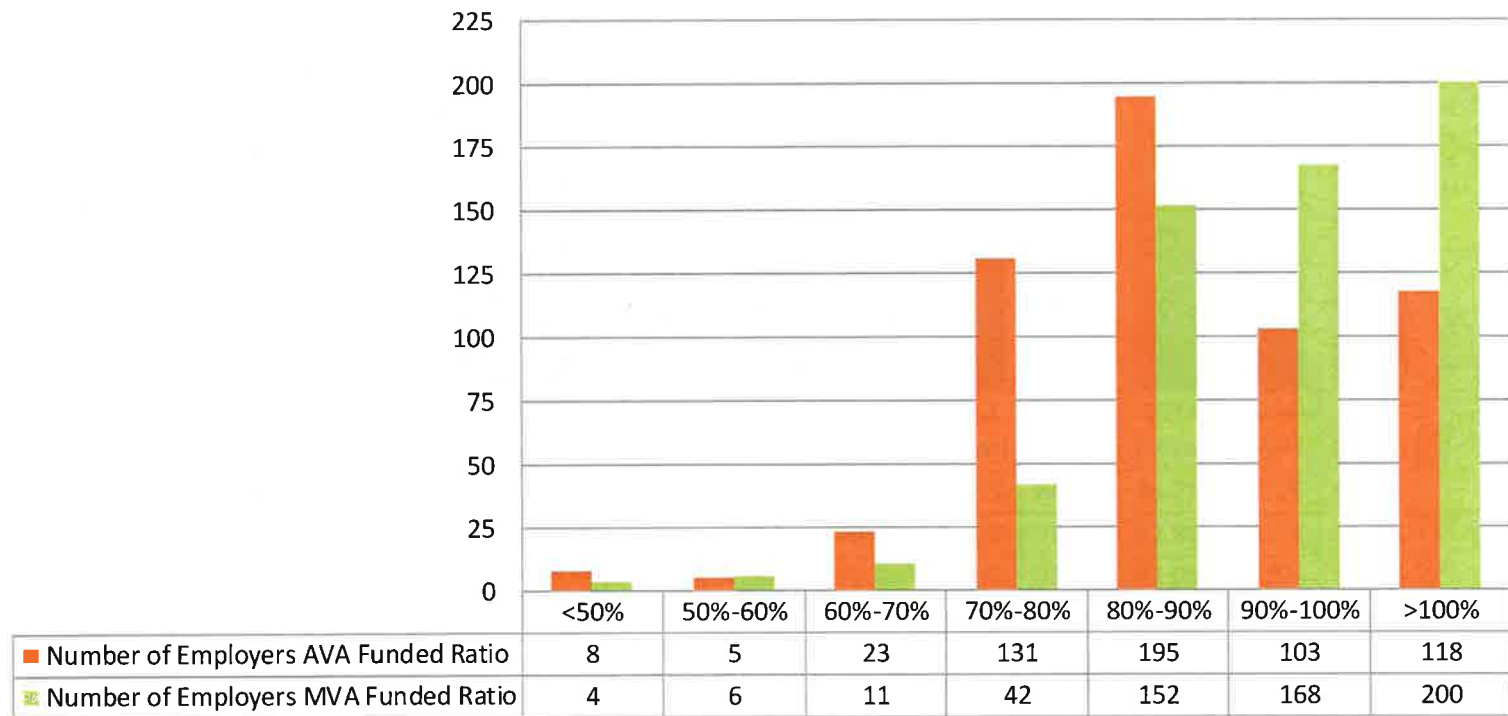
Assets (\$ Millions)



Actuarial value of assets does not have a corridor in 2009.

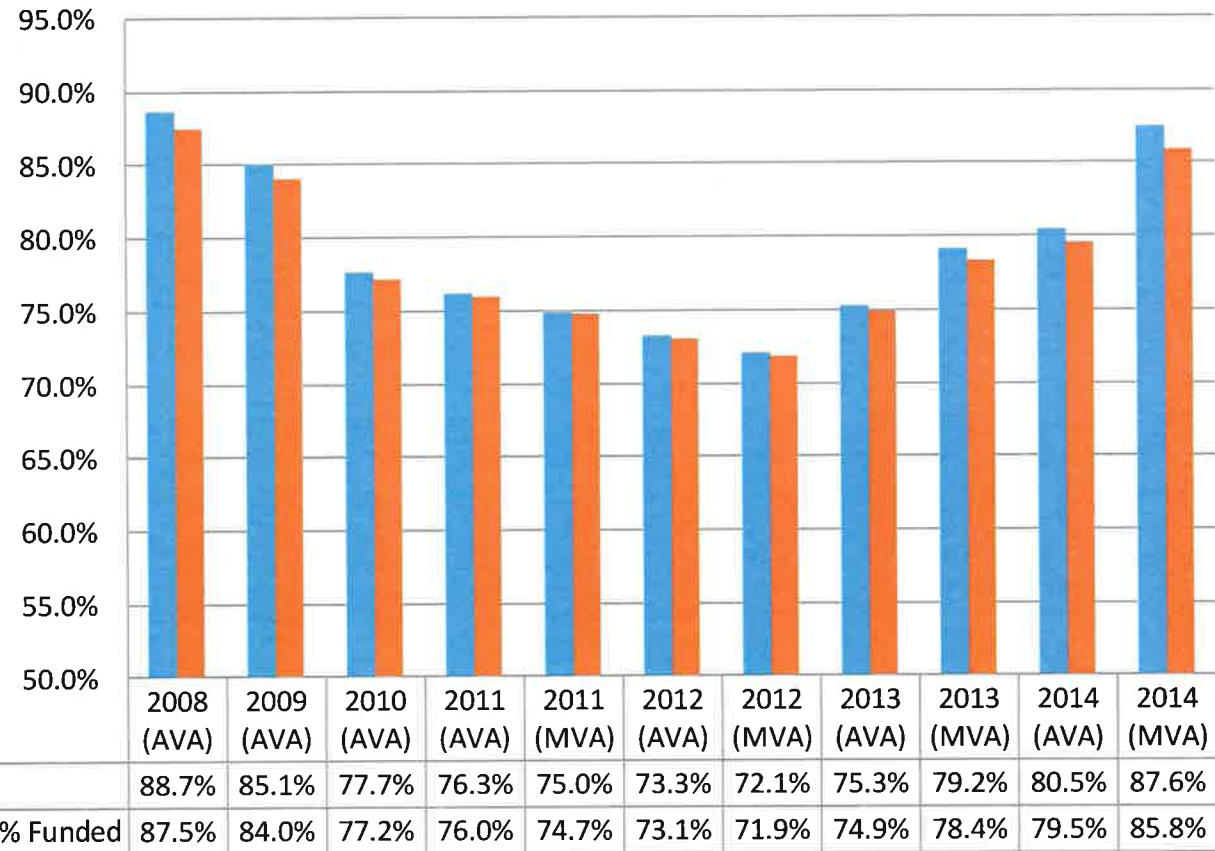
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Market Return	N/A	N/A	20.76%	-4.91%	-21.42%	15.04%	19.06%	1.25%	11.75%	15.72%
Actuarial Return	N/A	N/A	13.46%	10.84%	2.59%	1.64%	3.41%	1.18%	4.52%	11.94%

Funded Ratio Ranges By Employers



AVA = Actuarial Value of Assets; MVA = Market Value of Assets.

Aggregate Funded Ratio



Aggregate funded ratio is the sum of assets for all locations divided by sum of liabilities for all locations.

Includes only locations with active members.

AVA = Actuarial Value of Assets; MVA = Market Value of Assets.

Average Funded Ratio by Market Asset Size (\$ Millions)



AVA = Actuarial Value of Assets; MVA = Market Value of Assets.

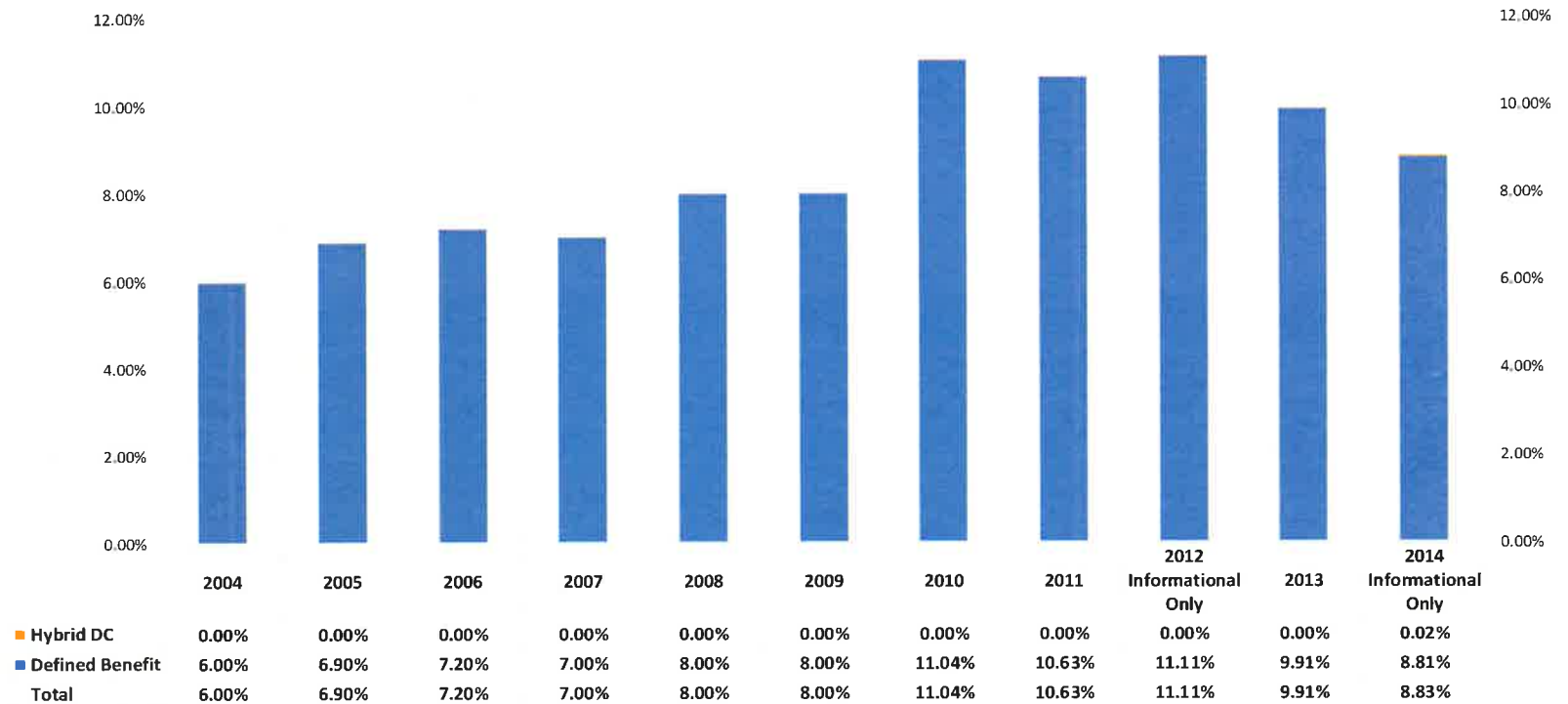
➤ For Fiscal Years 2015 and 2016

Local governments were given option to either elect to fund the VRS-certified contribution rate or a temporary alternate reduced rate

	Certified Rate	Alternate Rate
Political Subdivisions	427	23
School Divisions	124	9
Total Received	551	32

Item 468 H.1 of the 2013 Appropriation Act provides that localities that chose alternate rate are scheduled to pay the higher of the contribution rate in effect for fiscal year 2012 or 80% of the results from the June 30, 2013 actuarial valuation as approved by the VRS Board of Trustees for the 2014-2016 biennium.

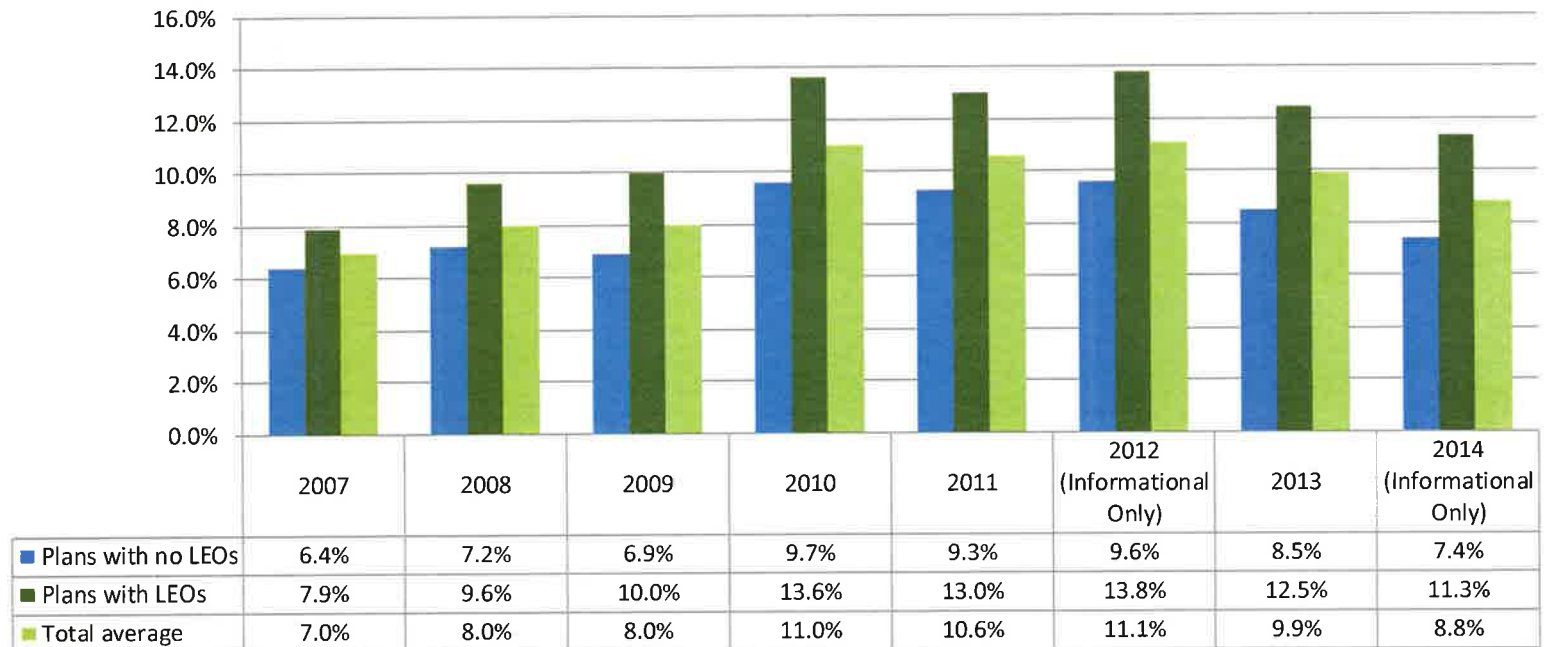
Average Employer Contribution Rates Including Defined Contribution Hybrid



Rates net of member contribution rate.

Average Contribution Rates

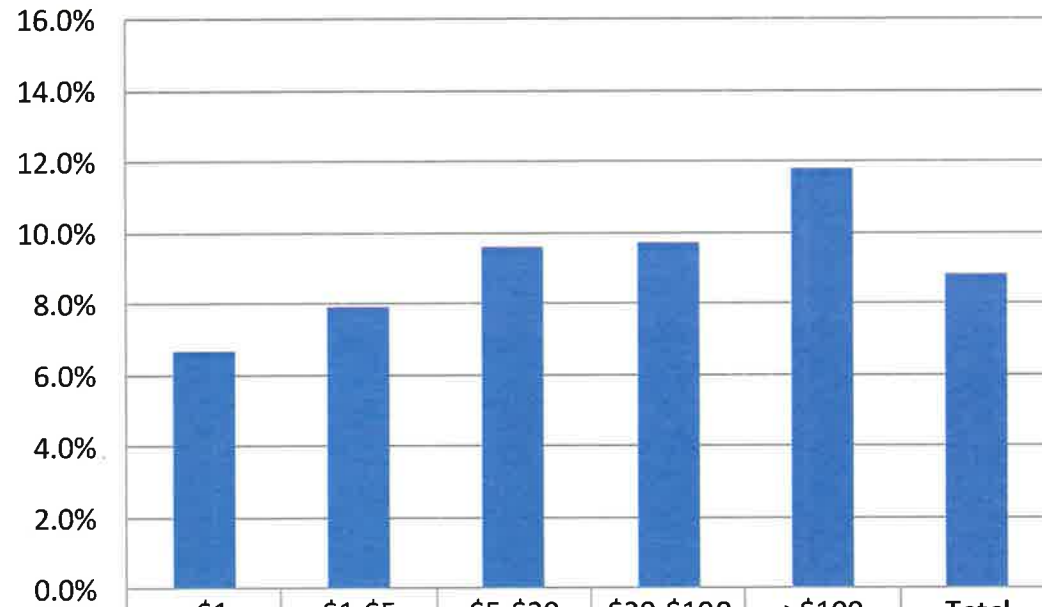
Plans with No LEOS and Plans with LEOS Defined Benefit Only



Rates net of member contribution rate.

Rates beginning 2014 include employer contribution rate for Hybrid defined contribution component.

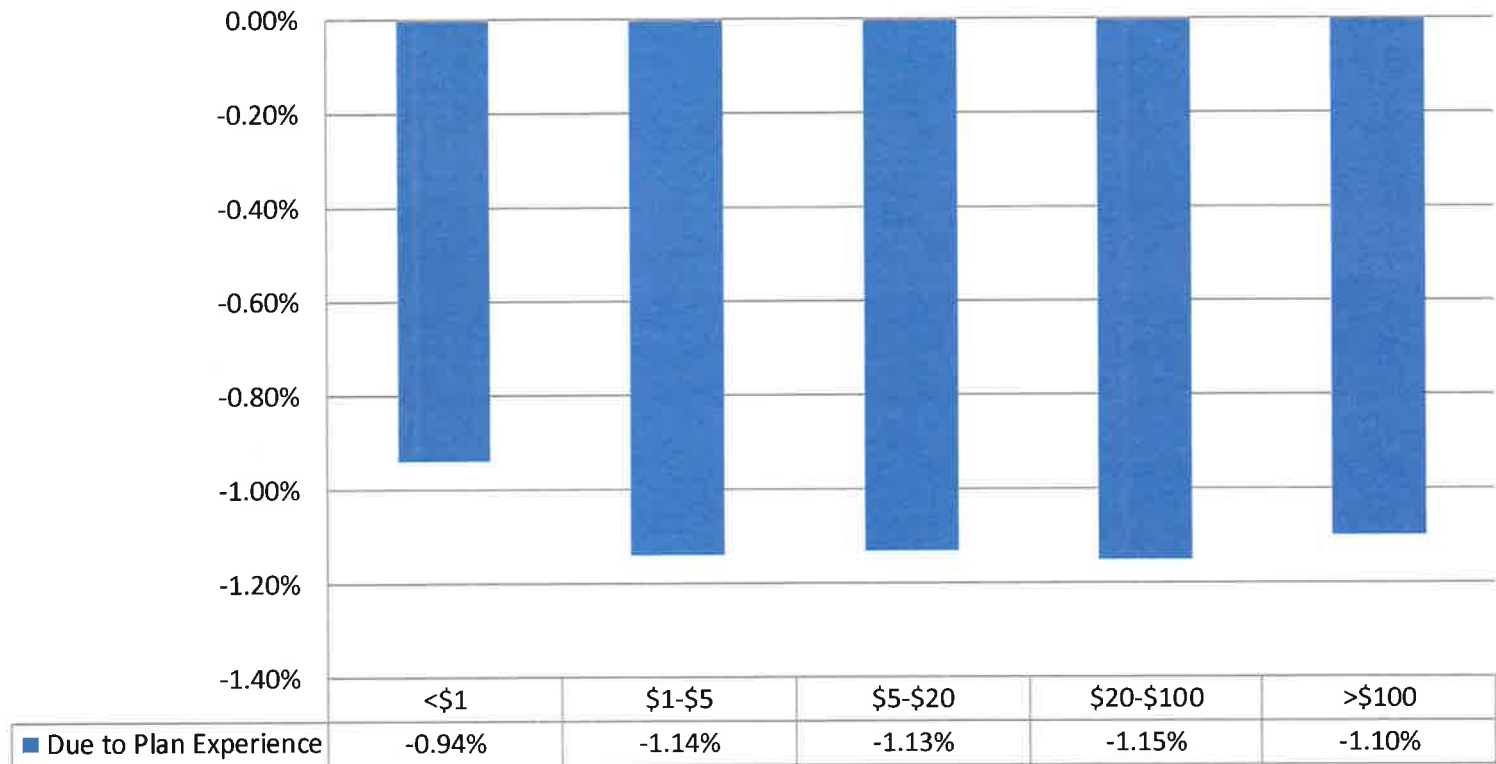
Average Contribution Rates by Market Asset Size Defined Benefit Only (\$ Millions)



	<\$1	\$1-\$5	\$5-\$20	\$20-\$100	>\$100	Total
Number of Employers	90	168	176	120	29	583
Average Employer Contribution Rate	6.7%	7.9%	9.6%	9.7%	11.8%	8.8%

Rates net of member contribution rate.
Does not include employer rate for Hybrid Defined Contribution component.

Average Change in Unfunded Contribution Rates by Market Asset Size (2014 vs. 2013) (\$ Millions)



Average change in contribution due to plan experience is (1.10)%.

Note: Distribution includes only the 582 locations that have a 2013 rate for comparison.

Results for Top 10 Localities



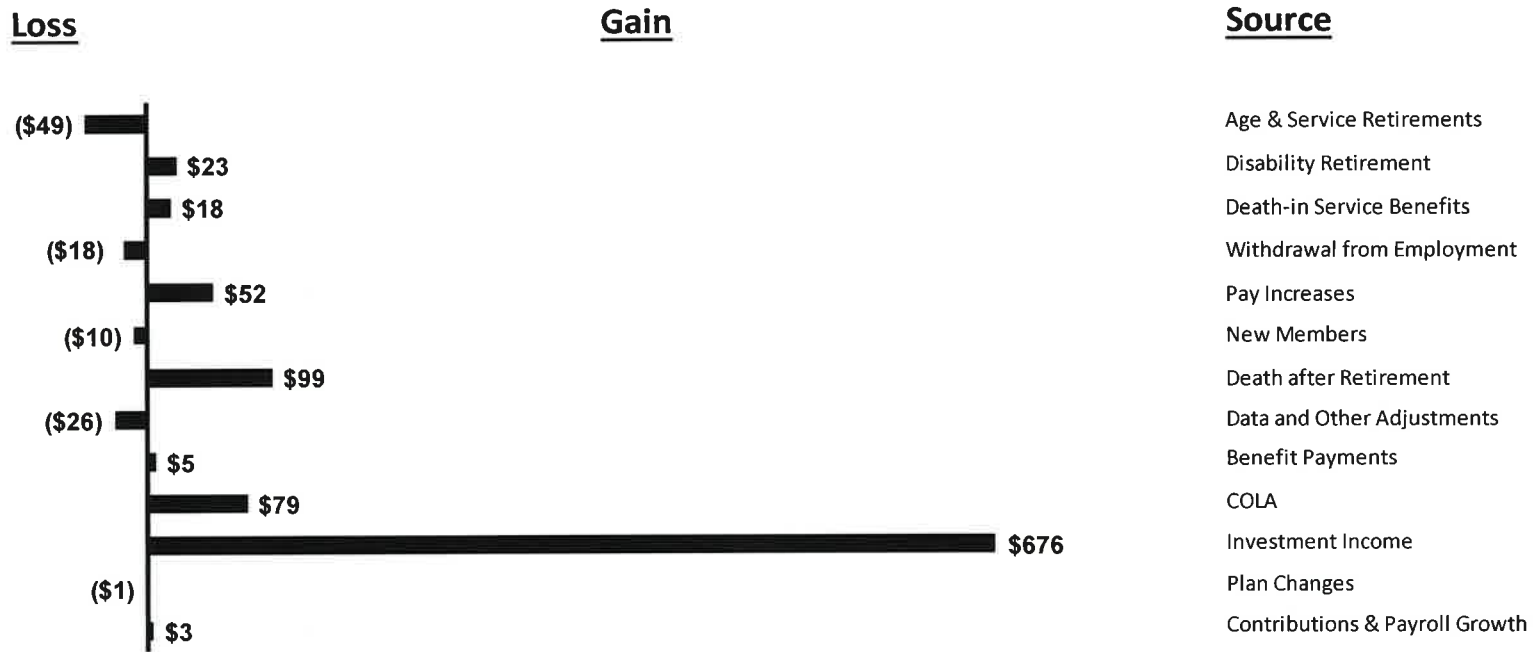
Locality	Market Value of Assets (\$ Millions)	Funded Ratio Based On:		Fiscal Years 2013 & 2014	Fiscal Years 2015 & 2016	Information Only		
		Actuarial Assets	Market Assets	2011 Rate*	2013 Rate*	Employer Rate for Defined Benefit Plan	Employer Rate for Hybrid DC Component	Total Employer Rate for Retirement Plans
						2014 Valuation*		
Chesterfield County	\$756	76.2%	82.8%	15.03%	15.29%	13.91%	0.02%	13.93%
Henrico County	\$1,021	77.3%	84.0%	14.98%	15.16%	13.87%	0.01%	13.88%
Loudoun County	\$518	84.1%	91.4%	10.76%	10.20%	9.50%	0.03%	9.53%
Prince William County	\$898	79.5%	86.5%	13.52%	13.32%	12.26%	0.02%	12.28%
City of Alexandria	\$447	80.1%	87.1%	10.30%	9.81%	8.65%	0.03%	8.68%
City of Hampton	\$408	70.9%	77.1%	18.57%	18.36%	16.88%	0.02%	16.90%
City of Lynchburg	\$239	65.2%	70.9%	20.89%	20.62%	19.89%	0.02%	19.91%
City of Portsmouth	\$261	83.4%	90.7%	11.82%	12.09%	10.79%	0.03%	10.82%
City of Chesapeake	\$687	78.7%	85.6%	15.50%	15.93%	14.24%	0.02%	14.26%
City of Virginia Beach	\$1,416	75.4%	82.0%	15.68%	16.35%	14.66%	0.02%	14.68%

* Contribution rates are net of 5% and 4% member contribution rates for Plan 1 and 2 and Hybrid Plan respectively.

Employer rate for Hybrid defined contribution component assumes employer match to DC portion of the Hybrid Plan of 1.12% of payroll for members in the Hybrid Plan.

2014 Aggregate Pension Gain/Loss Analysis

(\$ Millions)



Member Contributions

Local governments and school systems began to impose the 5 percent member contribution effective July 1, 2012 with offsetting raises required by 2012 legislation.

	Local Governments		School Systems	
	Plan 1	Plan 2	Plan 1	Plan 2
Full 5%	390	413	224	230
Phase-in 4%	2	1	2	2
Phase-in 3%	58	36	52	46
Phase-in 2%	0	0	0	0
Phase-in 1%	0	0	0	0
Total	450	450	278	278

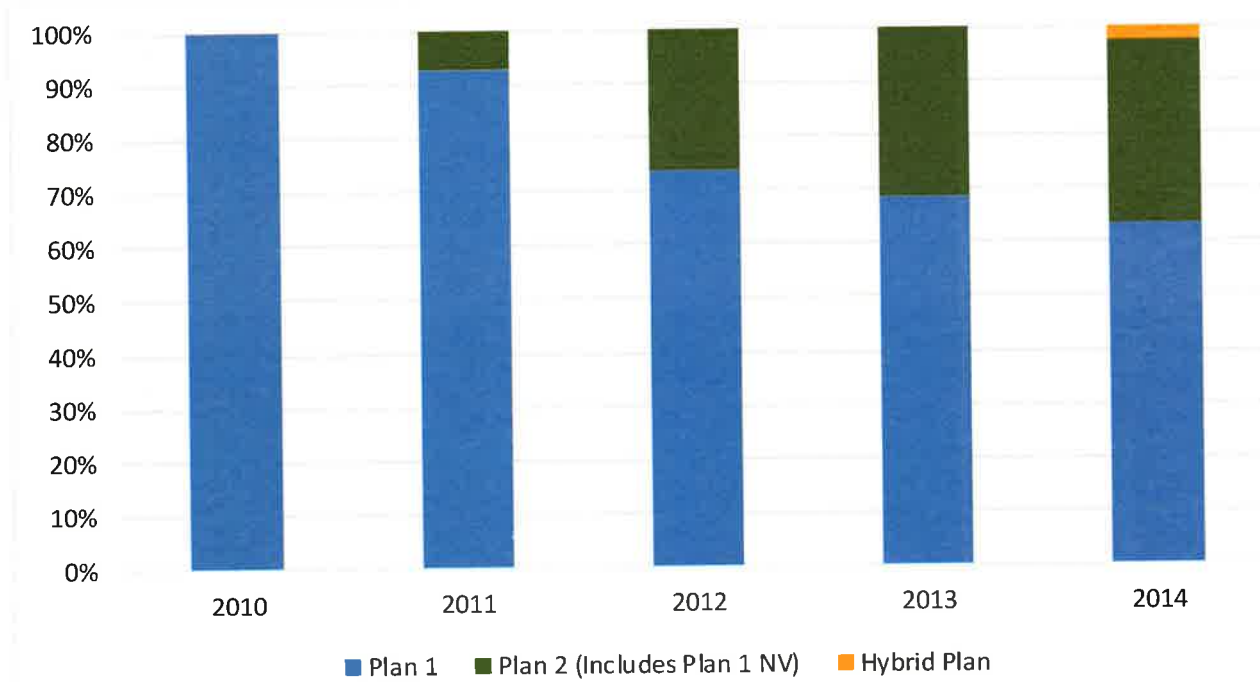


Active Members Demographics by Plan (Payroll in Millions)



	June 30, 2014 Valuation Aggregate Locals					Total
	Plan 1 Vested 1/1/2013	Plan 1 Non-Vested 1/1/2013	Plan 2	Hybrid Plan	Pension Reform Plan Total	
Number Active Members	67,064	11,135	24,755	2,833	38,723	105,787
<i>Percent of Total</i>					36.6%	
Payroll Active Members	\$3,128	\$403	\$832	\$91	\$1,326	\$4,454
<i>Percent of Total</i>					29.8%	

Political Subdivision Plans Active Member Breakdowns



Normal Cost Before and After Pension Reform Fully Phased-In (Changes to Current Defined Benefit & Hybrid Plan)



System	2014 Valuation			After Full Impact of 2012 Pension Reform (Hybrid Plan)		
	Normal Cost Rate for Defined Benefit Plan	Employer Rate for Hybrid DC Component	Normal Cost and Hybrid DC Component Rate for Retirement Plans	Normal Cost Rate for Defined Benefit Plan ⁺	Employer Rate for Hybrid DC Component	Normal Cost and Hybrid DC Component Rate for Retirement Plans
Aggregate Locals	6.15%	0.02%	6.17%	3.58%	1.50%	5.08%
Long-term savings						1.09%

Full phase-in of impact of Hybrid Plan and benefit changes for members with hazardous duty benefits estimated to take over 20 years.

* Net of 5% member contribution rate for Plan 1 and Plan 2 and 4% member contribution rate for Hybrid Plan members.

+ Net of 4% member contribution rate under hybrid plan for members with non-hazardous duty benefits. Net of 5% member contribution for members with hazardous duty benefits with no hybrid plan. Hybrid plan normal cost includes employer match to defined contribution portion of hybrid plan assuming 80% of members pay minimum contribution with employer making 1% contribution and 20% of members pay maximum contribution with employer making 3.5% contribution.



Health Insurance Credit (HIC) Program Results

- The 2014 valuation is not for rate setting, but for informational purposes.
 - 2013 valuations used to set contribution rates for fiscal years 2015 and 2016.
- Employer contribution rates reflect new funding policy –
 - 29-year closed amortization of 2013 UAL (rolled-forward to 2014)
 - 2014 change in UAL (total UAL less rolled-forward 2013 UAL) funded over closed 20-year period.
- Actuarial value of assets equal to market value of assets

- Basic Benefit
 - \$1.50 per month per year of service
 - \$45.00 per month maximum benefit
 - Eligible employees
 - General registrars and their employees
 - Constitutional officers and their employees
 - Local social service employees
 - Other political subdivision employees, if employer elects
 - Additional \$1.00 per month per year of service
 - Additional \$30.00 per month maximum benefit
 - Political subdivision must elect \$1.00 enhancement
 - Eligible employees
 - General registrars and their employees
 - Constitutional officers and their employees
 - Local social service employees

- If an eligible employee has worked for more than one VRS employer, benefit and full liability attributed to the most current (or last) HIC participating employer
- New Participating Localities:
 - Fiscal Year 2015
 - 55100 Accomack County
 - 55128 Essex County
 - 55172 Powhatan County
 - 55571 Pittsylvania County School Board

Local Health Insurance Credit Data Summary



June 30, 2014 Valuation				
	Participating Locals	Constitutional Officers	Social Services Employees	General Registrars
Number of Employers	117	N/A	N/A	N/A
Number of Active Members	20,921	11,796	4,895	203
Number of Inactive Members	4,274	2,844	1,647	57
Payroll (\$ Millions)				
Total Payroll*	\$1,085.0	\$567.1	\$210.5	\$9.2
Covered Payroll	\$875.5	\$567.1	\$210.5	\$9.2
Market Value of Assets (\$ Millions)	\$18.6	\$2.4	\$1.7	\$0.0**

*In addition to the payroll of covered employees, Total Payroll includes the pay of Constitutional Officers, Social Services Employees, and General Registrars working for a political subdivision.

** Actual assets are \$30,778.

Local Health Insurance Credit Employer Contribution Rates



	Valuation	
	June 30, 2013	June 30, 2014*
Participating Locals (average contribution rate)		
Total Payroll**	0.27%	0.26%
Covered Payroll	0.30%	0.29%
Constitutional Officers	0.36%	0.34%
Social Services Employees	0.44%	0.40%
General Registrars	0.40%	0.39%
Funding Period (Years)		
June 30, 2013 Base	30	29
June 30, 2014 Base	n/a	20
Discount Rate	7.00%	7.00%

*Includes contribution timing adjustment made for the 2014 valuation based on feedback from the 2014 quadrennial actuarial audit of the Virginia Retirement System conducted by JLARC.

**In addition to the payroll of covered employees, Total Payroll includes the pay of Constitutional Officers, Social Services Employees, and General Registrars working for a political subdivision.



Local Health Insurance Credit UAAL and Funded Status Summary



June 30, 2014 Valuation				
	Participating Locals	Constitutional Officers	Social Services Employees	General Registrars
Unfunded Actuarial Accrued Liability (\$ Thousands)	\$16,591.9	\$23,492.2	\$11,210.6	\$451.1
Market Value of Assets (\$ Thousands)	\$18,605.3	\$2,378.0	\$1,736.2	\$30.8
Funded Status	52.86%	9.19%	13.41%	6.39%
Discount Rate	7.00%	7.00%	7.00%	7.00%



Virginia Local Disability Program Results

- Disability program created to provide managed disability benefits for participating local public school divisions and political subdivisions
 - Virginia Local Disability Program (VLDP)
- VLDP benefits are similar to existing VSDP benefits
 - Benefits include:
 - Short-Term Disability (STD) (paid by employer through payroll)
 - Long-Term Disability (LTD)
 - Long-Term Care (LTC)
 - Exceptions
 - LTD disability income replacement benefits will not be adjusted for cost-of-living increases
 - Benefits payable under the Health Insurance Credit program (HIC) are based upon the HIC benefit structure applicable to a member's employer group

- Virginia Local Disability Program (VLDP)
 - Provides applicable disability benefits through a new disability program similar to VSDP.
 - Applies only to participating public school divisions and political subdivisions.
 - School Divisions and political subdivisions had choice to opt-out of VRS administered VLDP plan prior to January 1, 2014, as long as employer agreed to provide comparable disability benefits to their members.
 - Multiple employer cost-sharing arrangement
 - Potential cost differences between employer groups.
 - Excludes disability benefit costs associated with:
 - VRS Service Credit
 - Employer-based health insurance coverage (if eligible)
 - Health Insurance Credit program (HIC) benefits (if eligible)
 - Group Life Insurance program (GLI) benefits
 - Short-term disability (STD) benefits

Demographics



Population	Employer Group	Number of Employer Groups	Number of Active Members	Average Pay	Average Age	Average Creditable Service
Participating in VLDP	Teachers*	36	282	\$32,790	35.1	0.4
	Political Subdivisions**	197	845	\$29,217	39.0	0.3
	<i>Combined</i>	233	1,127	\$30,111	38.1	0.3
Total Political Subdivision Non-LEOs & Teachers***	Teachers	145	146,977	\$50,095	45.2	12.0
	Political Subdivisions	583	83,420	\$39,955	48.1	10.1
	<i>Combined</i>	728	230,397	\$46,424	46.2	11.3

* While 36 employer groups are participating, only 22 have hybrid plan members as of June 30, 2014.

** While 197 employer groups are participating, only 85 have hybrid plan members as of June 30, 2014.

***Initial VLDP rates were based on disability incidence experience from total eligible population prior to opt-out resolutions.

Summary of Results



Population	Employer Group	Normal Cost*		UAAL Amortization Rate	Total Contribution Rate
		Prior	Current**		
Participating in VLDP	Teachers	n/a	0.30%	0.00%	0.30%
	Political Subdivisions	n/a	0.59%	0.00%	0.59%
	<i>Combined</i>	<i>n/a</i>	<i>0.51%</i>	0.00%	<i>0.51%</i>
Total Political Subdivision Non-LEOs & Teachers***	Teachers	0.29%	0.30%	n/a	0.30%
	Political Subdivisions	0.60%	0.61%	n/a	0.61%
	<i>Combined</i>	<i>0.39%</i>	<i>0.39%</i>	<i>n/a</i>	<i>0.39%</i>

* Normal cost estimates include estimates for administrative fees and LTC costs as provided by the LTC actuary, Milliman, for the fiscal year 2015.

** Includes contribution timing adjustment made for the 2014 valuation based on feedback from the 2014 quadrennial actuarial audit of the Virginia Retirement System conducted by JLARC.

***Initial VLDP rates were based on disability incidence experience from total eligible population prior to opt-out resolutions.

- Calculations based on the data, actuarial assumptions and methods used in the June 30, 2014 actuarial valuation of the VSDP LTD benefit.
 - Benefit offsets
 - Rates of termination
 - Rates of disability incidence
 - Rates of mortality
 - Rates of retirement (dates of initial defined benefit distribution)
 - Rates of recovery from disability
 - Percentage meeting Social Security definition of disability
- The applicable data, assumptions, methods, and benefit provisions were applied to the June 30, 2014 active employee population of each membership group.