



**Cavanaugh Macdonald**  
CONSULTING, LLC  
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# Virginia Retirement System Political Subdivisions 2009 Actuarial Valuation Results



Virginia  
Retirement  
System

- Key Findings
- Funded Status
- Pension Results
  - Changes Since Last Valuation
  - Data Information
  - Market and Actuarial Value of Assets
  - Funding Results
- Health Insurance Credit (HIC) Program Results
  - Comments on HIC Valuation
  - Data Summary
  - Employer Contribution Rates

- Pension:
  - Aggregate funded status has decreased for political subdivision pension plans.
  - Average employer contribution rate increase of 0.0% of pay (no change) for local pension plans between 6/30/08 and 6/30/09
    - Assumption changes result in a contribution change of -1.1% on average
    - Plan experience results in a contribution change of 1.0% on average
  - Average employer contribution rate increase of 1.0% between 6/30/07 and 6/30/09
- Health Insurance Credit:
  - Funded status has declined for the Registrars and for the Constitutional Officers.
  - Average employer contribution rate decrease for local health plans.

# Funded Ratio (Aggregate)



	June 30		
	2008 (Actuarial Assets)	2009 (Actuarial Assets, No Corridor)	2009 (Market Assets)
Pension plans with no LEOS	94.0%	90.7%	68.3%
Pension plans with LEOS	87.3%	83.6%	63.1%
All pension plans	88.7%	85.1%	64.2%
All pension plans < 100% funded	87.5%	84.0%	63.3%
HIC Locals	30.4%	32.7%	32.7%
HIC Constitutional Officers	12.3%	10.3%	10.3%
HIC Social Services	6.5%	9.1%	9.1%
HIC Registrars	0.0%	-6.8%	-6.8%

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

# Pension Results

# Valuation Assumptions



1 Valuation Date	6/30/2009
2 Actuarial Cost Method	Entry Age Normal
3 Amortization Method	Level Percent of Pay, Open
4 Payroll Growth Rate	3.00%
5 Remaining Amortization Period	20 Years
6 Asset Valuation Method	Five-Year Smoothed Market Value, No Corridor
7 Actuarial Assumptions	
a. Investment Rate of Return*	7.50%
b. Projected Salary Increases*	
1) Non-LEO Members	3.75%-5.60%
2) LEO Members	3.50%-4.75%
c. Cost-of-living adjustment	2.50%
*Includes Inflation of 2.5%	

# Changes Since Last Valuation



- Changes in actuarial assumptions based on the 2004-2008 experience study:

POLITICAL SUBDIVISION GROUP	ASSUMPTION CHANGE
Largest 10 - Non-LEOs	Increase rates of withdrawals Change rates of service retirement Decrease rates of disability retirement
Largest 10 - LEOs	Decrease rates of withdrawals Decrease rates of service retirement with less than 25 years of service Increase rates of service retirement with 25 or more years of service Decrease rates of disability retirement
Non-Largest 10 - Non-LEOs	Increase rates of withdrawals Change rates of service retirement Decrease rates of disability retirement
Non-Largest 10 - LEOs	Increase rates of withdrawals Decrease rates of service retirement Decrease rates of disability retirement

Note: The changes outlined above apply to the Localities HIC valuation.

# Changes Since Last Valuation (continued)



- Coverage expanded to firefighters:
  - Culpepper County (55123)
  - New Kent County (55163)
  - Town of Chilhowie (55229)
  - Town of Chincoteague (55341)
  - Average change in contribution: 1.03%
  
- The following locations now cover sworn officers and superintendents of regional jails, resulting from HB 2065
  - Middle Peninsula Security Center (55491) - 1.85% multiplier
  - Piedmont Regional Jail (55922) - 1.85% multiplier
  - Peumansend Creek Regional Jail (55965) - 1.85% multiplier
  - Southwest Virginia Regional Jail Authority (55998) - 1.85% multiplier

# Changes Since Last Valuation (continued)



- 5 employers elected 1.85% LEOs coverage since previous valuation:
  - New Kent County (55163)
  - Southampton County (55187)
  - Town of Colonial Beach (55309)
  - Town of Leesburg (55329)
  - Town of Hillsville (55345)
  - Average change in contribution: 0.62%

# Changes Since Last Valuation (continued)



➤ The following locations now have LEOs coverage:

- 1.85% multiplier:
  - City of Franklin (55232)
  - Town of Stephens City (55254)
- 1.70% multiplier
  - Town of Middletown (55228)
  - Town of Victoria (55392)
  - Middle Peninsula Security Center (55491)
  - Piedmont Regional Jail (55922)
  - Hampton Roads Regional Jail Authority (55959)
  - Peumansend Creek Regional Jail (55965)
  - Southwest Virginia Regional Jail Authority (55998)
- Average change in contribution: 5.11%

# Changes Since Last Valuation (continued)



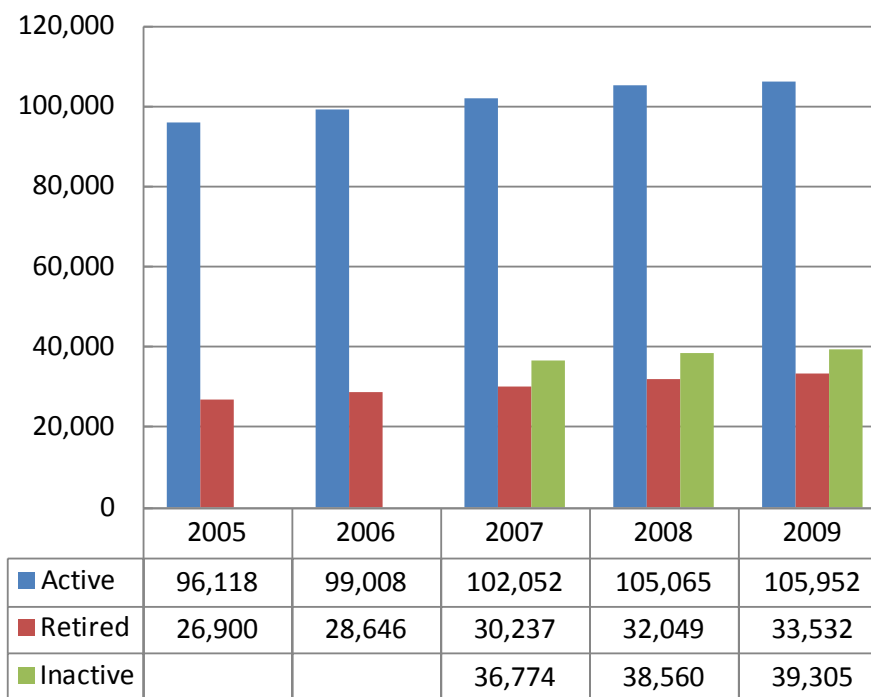
- The following locations are new this year:
  - Western Virginia Regional Jail Authority (55883)
    - 1.85% LEOs coverage
  - Big Sandy Soil & Water Conservation District (55880)
  - Virginia's Region 2000 Local Government Council (55881)
  - Middle Peninsula Planning District Commission (55882)

# Political Subdivisions with No Active Members



- 13 employers have 0 active members
  - Town of Boyce (55227)
  - Town of Dillwyn (55244)
  - Town of Stuart (55356)
  - Town of Damascus (55373)
  - Bedford Recreation Commission (55400)
  - District Home – Waynesboro (55434)
  - Peninsula Ports Authority (55437)
  - Fredericksburg-Stafford Parks Authority (55480)
  - Upper Valley Regional Park Authority (55490)
  - P D Pruden Vocational-Technical Center (55613)
  - Fort Monroe Area Development Authority (55885)
  - State Education Assistance Authority (55903)
  - Virginia Small Business Financing Authority (55907)

# Total Membership



2.5% average increase in active members since 2005; 0.8% increase for 2009.

5.7% average increase in retired members since 2005; 4.6% increase for 2009.

3.6 actives per retiree 5 years ago; 3.2 actives per retiree now.

“Retired” includes retirees, disabled retirees and beneficiaries.

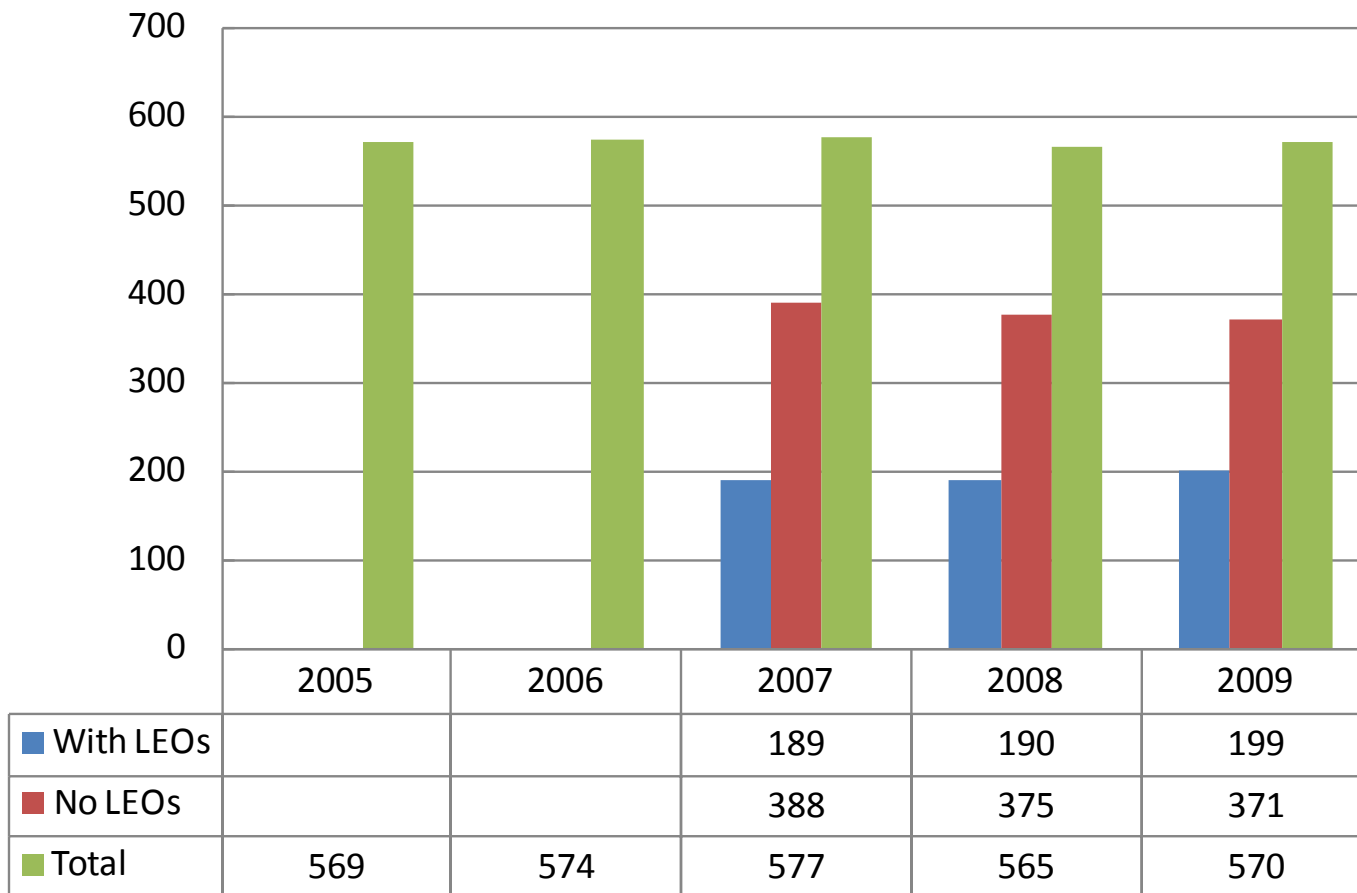
“Inactive” includes deferred vested and non-vested members with employee contributions in plan.

# Average Age, Service, Pay and Benefits



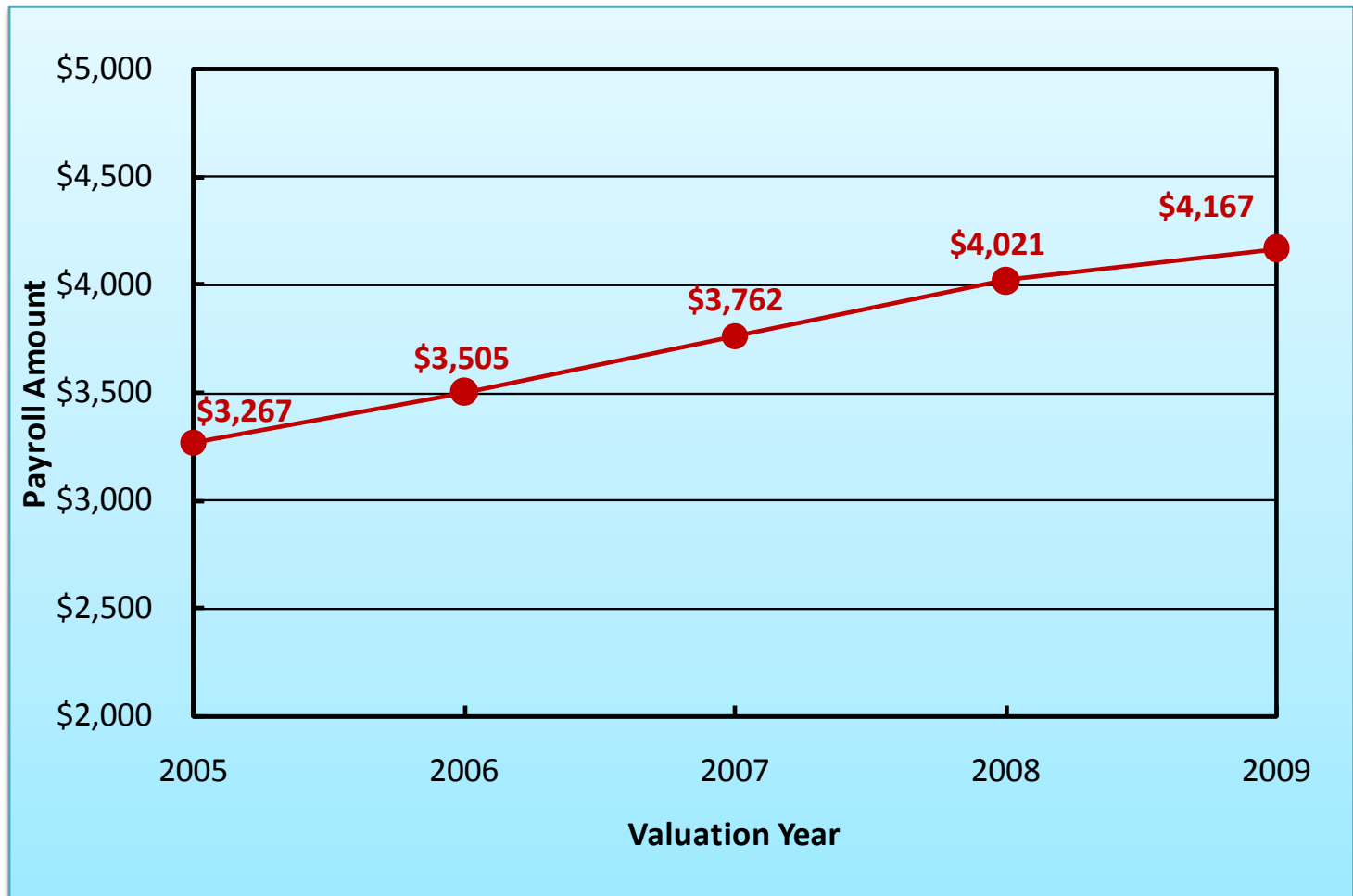
	2008	2009
<b>Actives:</b>		
Average Age	45.2	45.5
Average Vesting Service	10.0	10.3
Average Entry Age	35.2	35.1
Average pay	\$38,276	\$39,348
<b>Inactives, retiring in the past year:</b>		
Average Age at Retirement	61.3	61.1
Average Service at Retirement	18.6	19.5
Average AFC at Retirement	\$41,665	\$41,416
Average VRS Benefit at Retirement (as % of pay)	34.7%	33.3%
Average Social Security Benefit at Age 62	\$14,520	\$14,724

# Number of Political Subdivisions Covered in VRS

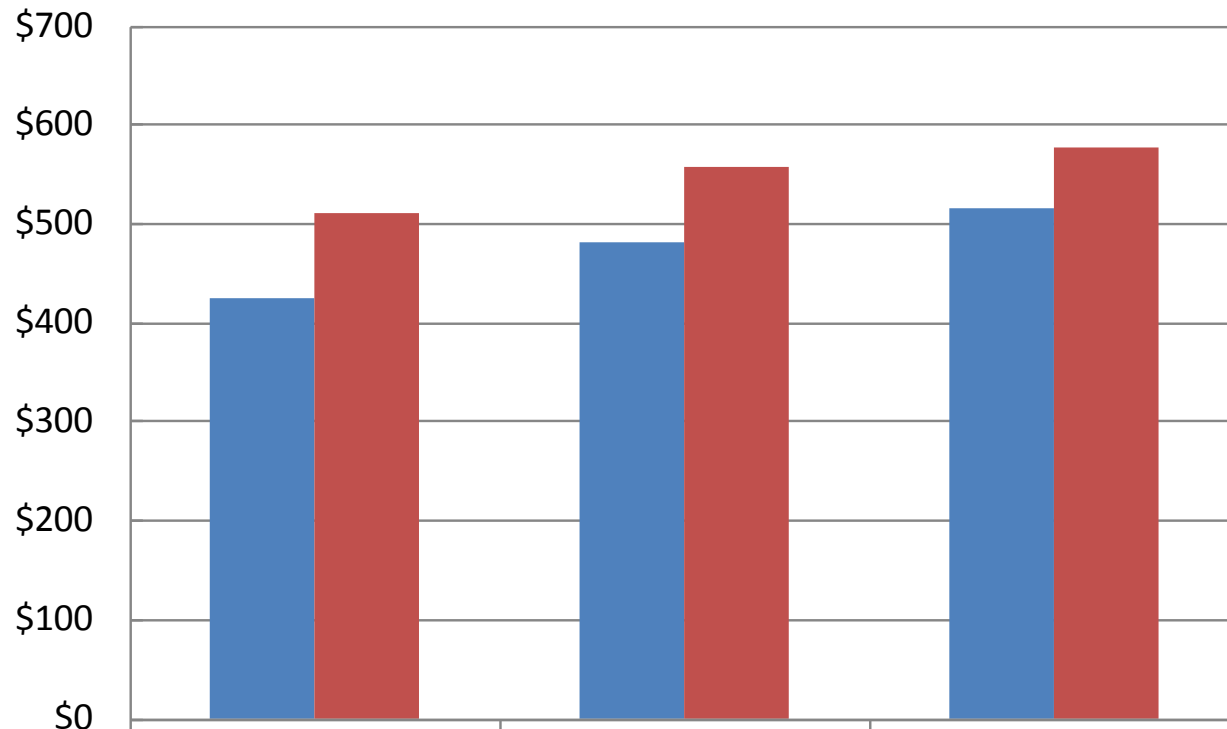


Note: Includes only political subdivisions with active members

# Active Member Payroll (\$ Millions)

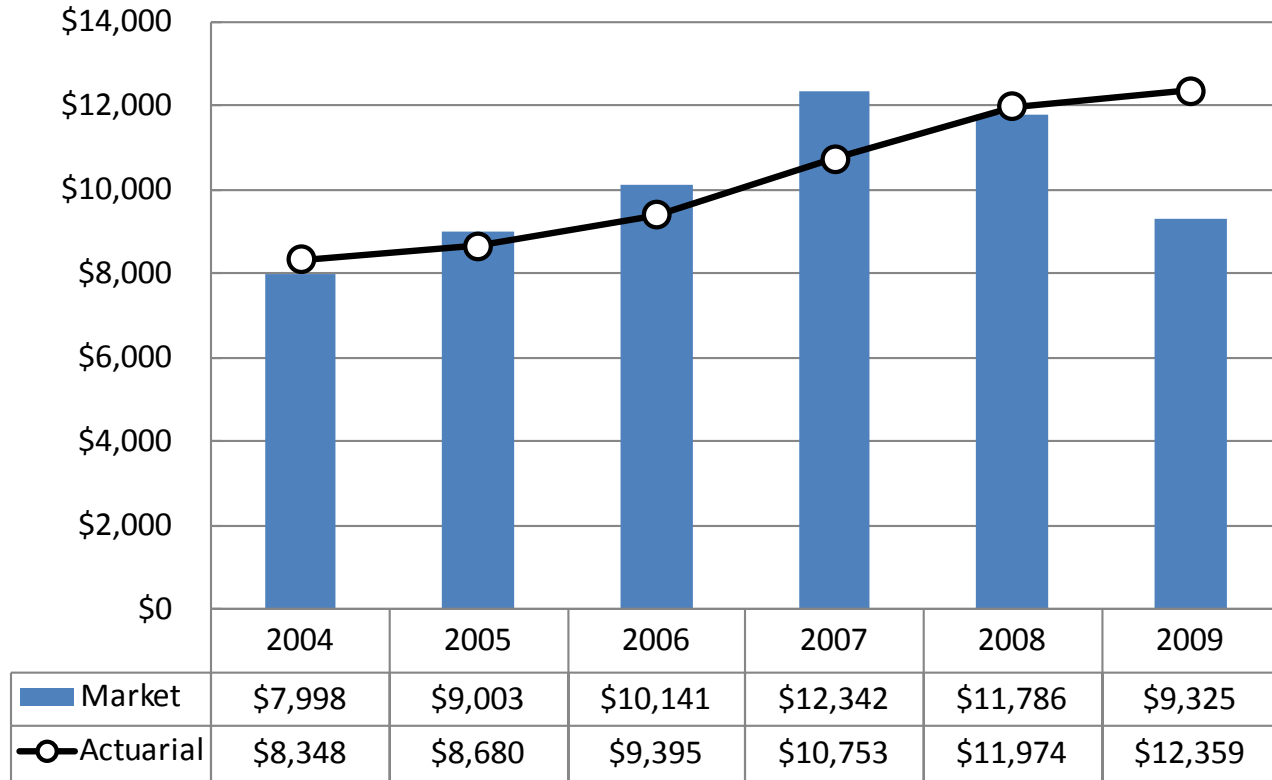


# Benefits and Contributions (\$ Millions)



	2007	2008	2009
■ Benefits	\$424	\$481	\$517
■ Contributions	\$512	\$557	\$576

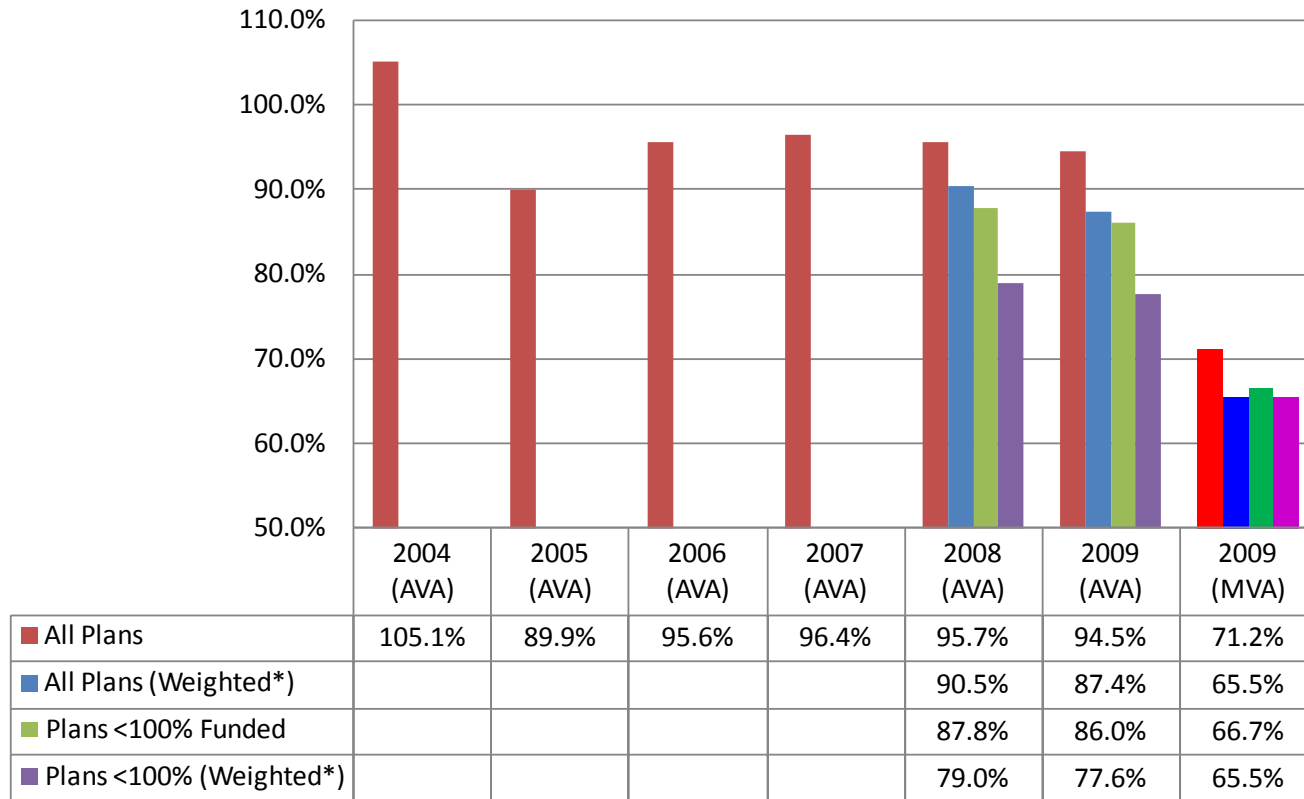
# Assets (\$ Millions)



Actuarial value of assets does not use a corridor.

	2004	2005	2006	2007	2008	2009
Market Return	N/A	N/A	N/A	20.76%	-4.91%	-21.42%
Actuarial Return	N/A	N/A	N/A	13.46%	10.84%	2.59%

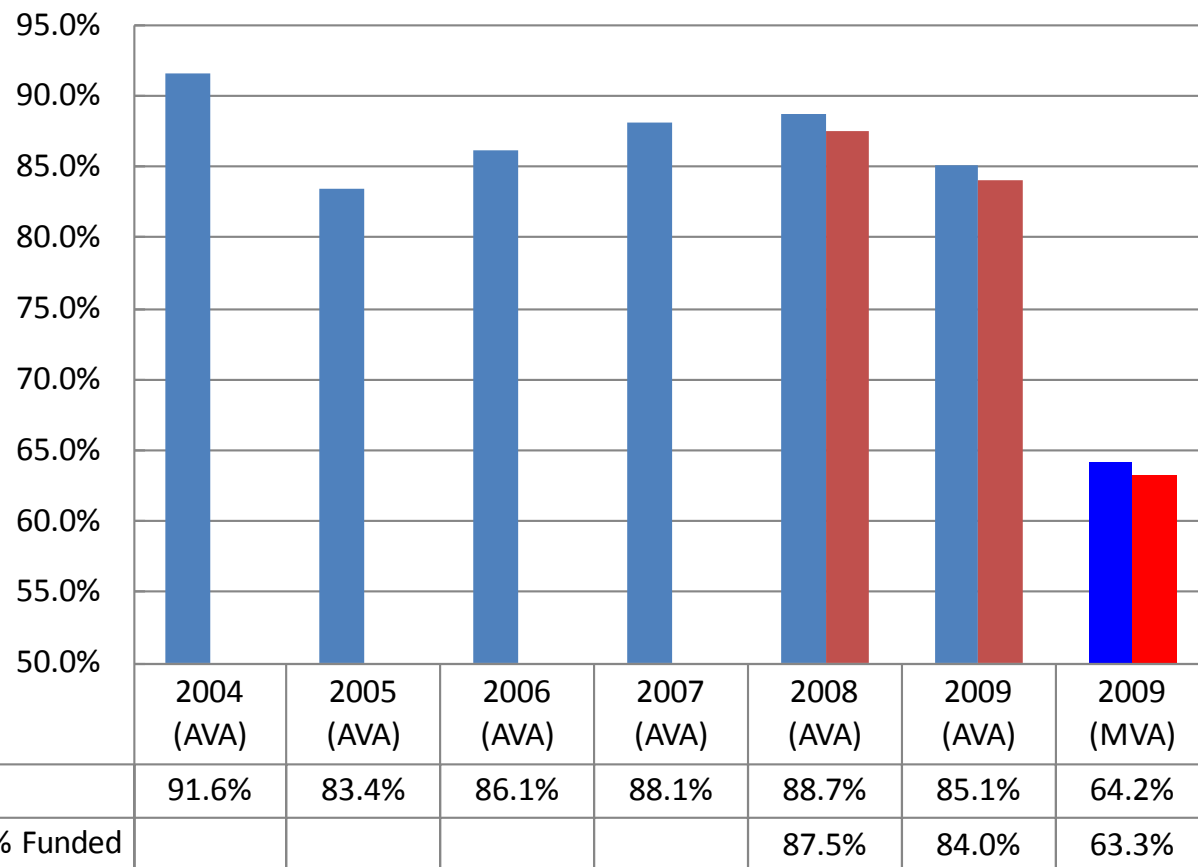
# Average Funded Ratio



Note: Funding ratio for each location is determined first. Then the average for all locations is calculated.  
 AVA = Actuarial Value of Assets ; MVA = Market Value of Assets.

\*Weighted averages are based on active headcounts. Plans with larger headcounts have a greater effect on the average. If you take a plan that is 100% funded and another that is 50% funded, the average funded ratio is 75%. If the 100% plan has 2000 members and the 50% plan has 4 members, the average funded ratio is 75% (not weighted) and 99.9% (weighted).

# Aggregate Funded Ratio

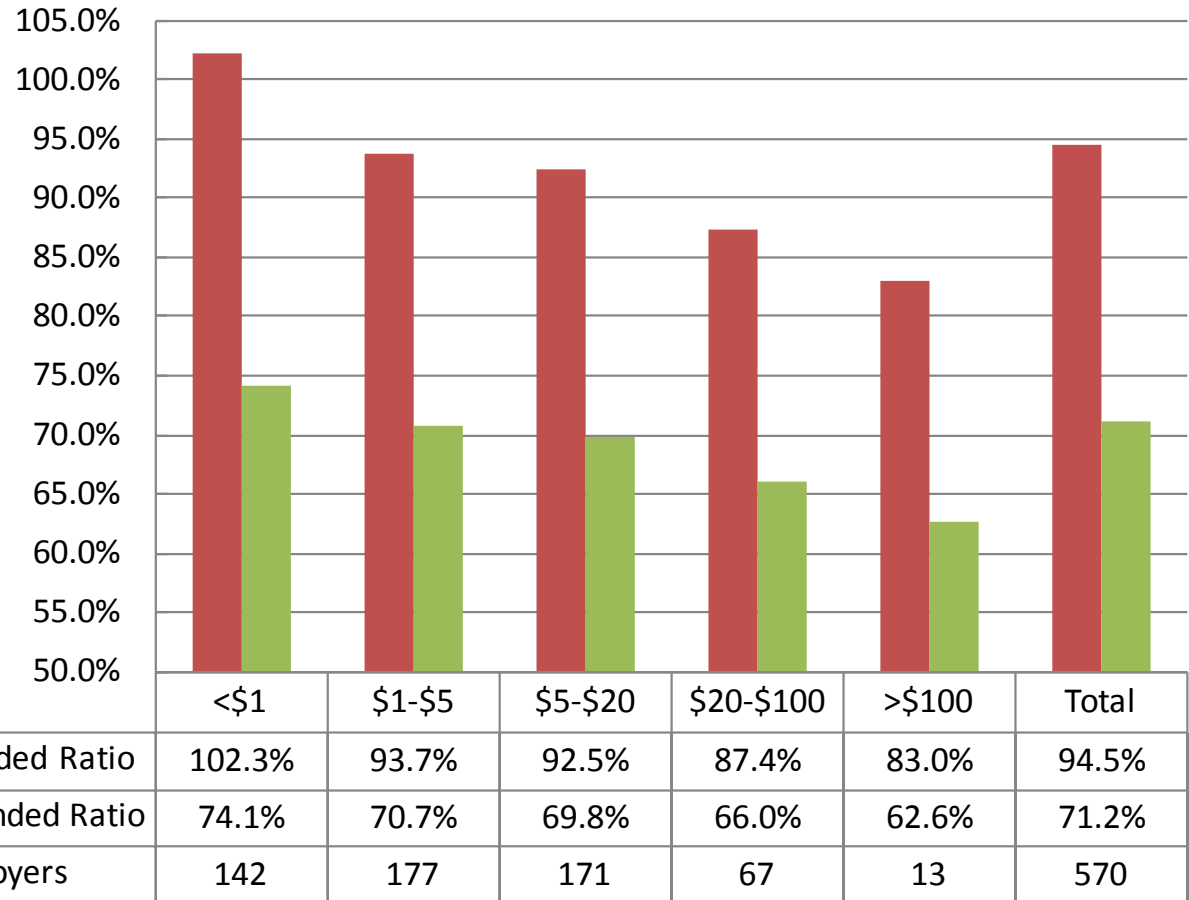


Aggregate funded ratio is the sum of assets for all locations divided by sum of liabilities for all locations.

Includes only locations with active members.

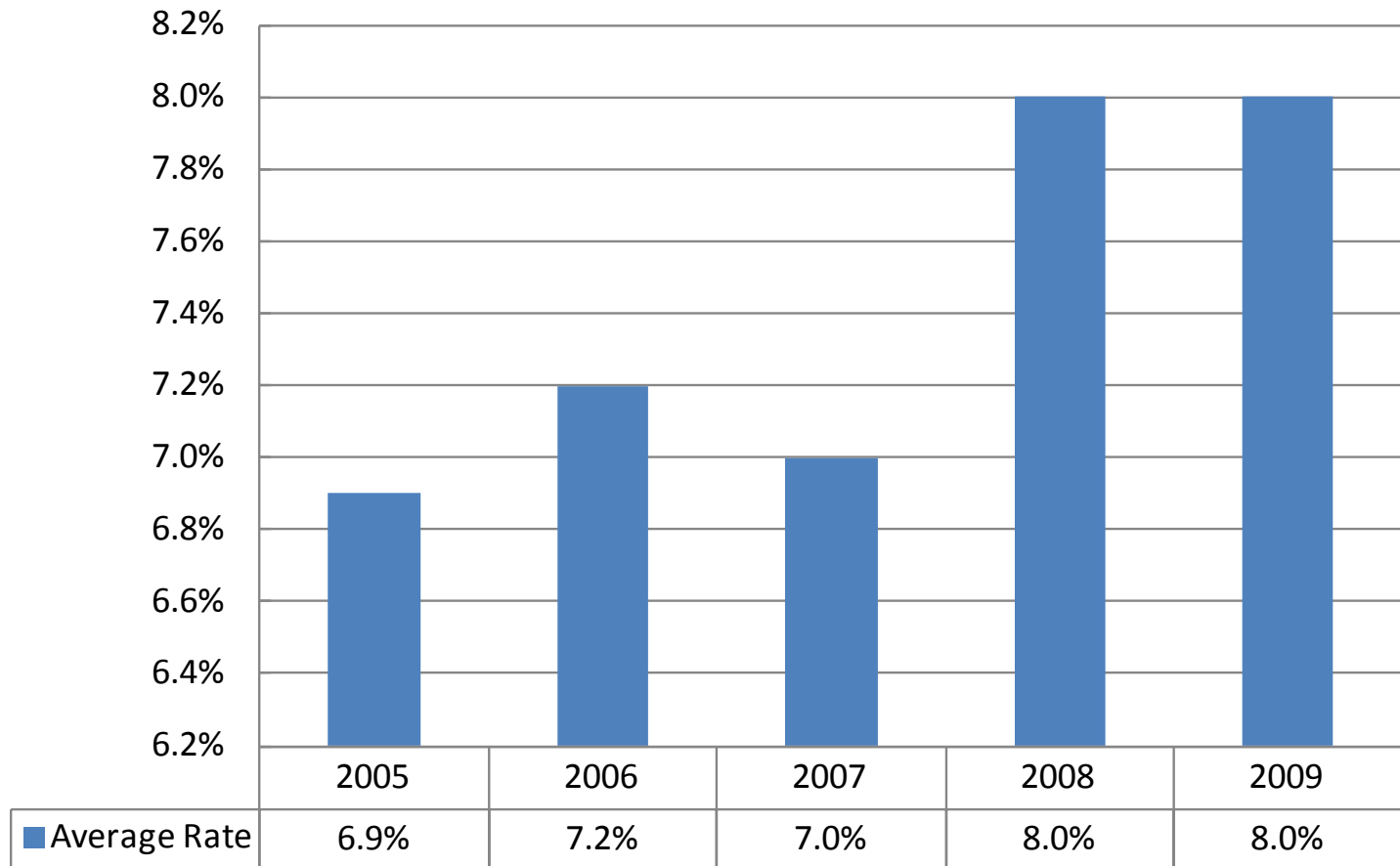
AVA = Actuarial Value of Assets ; MVA = Market Value of Assets.

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



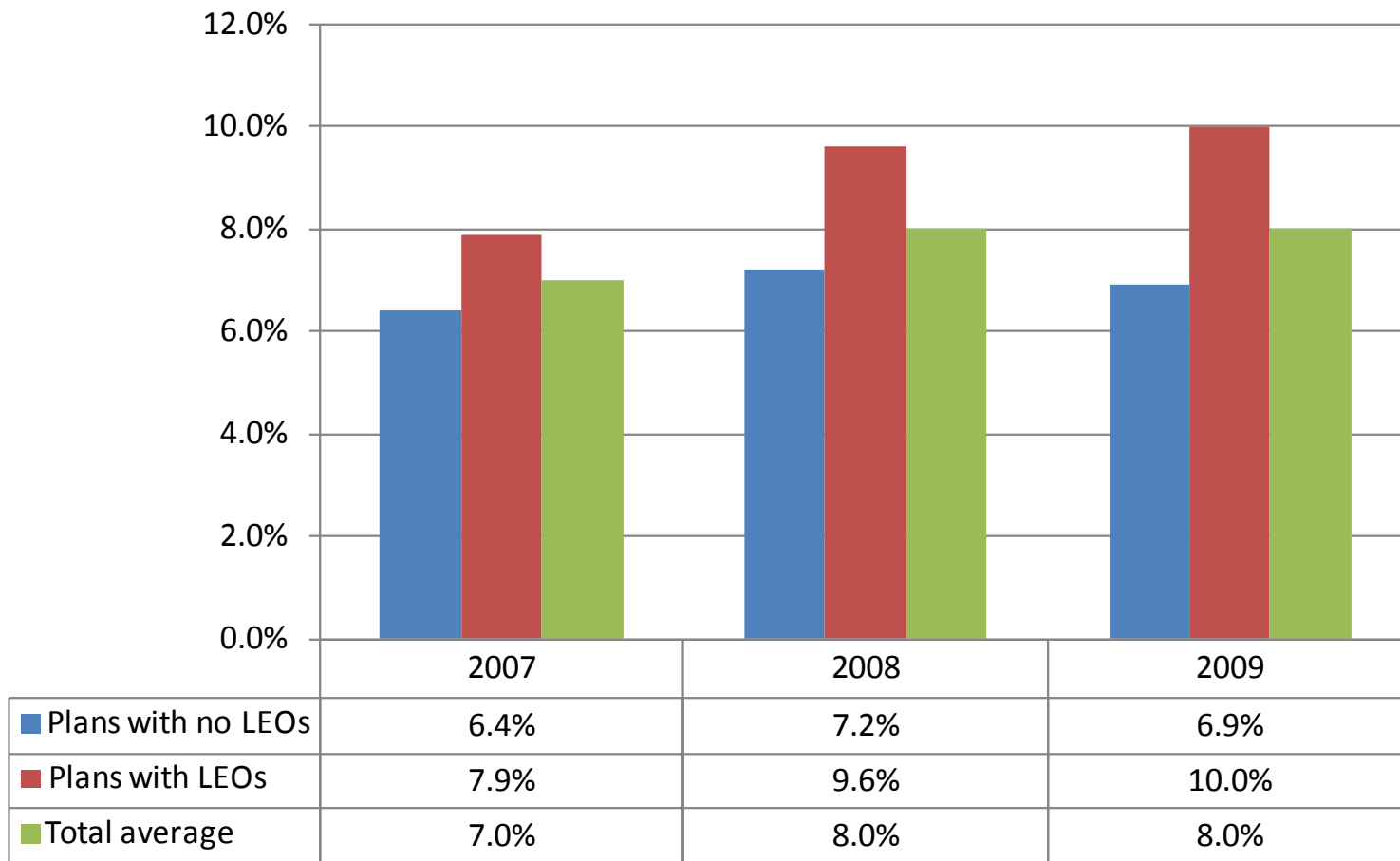
AVA = Actuarial Value of Assets ; MVA = Market Value of Assets.

# Average Employer Contribution Rates

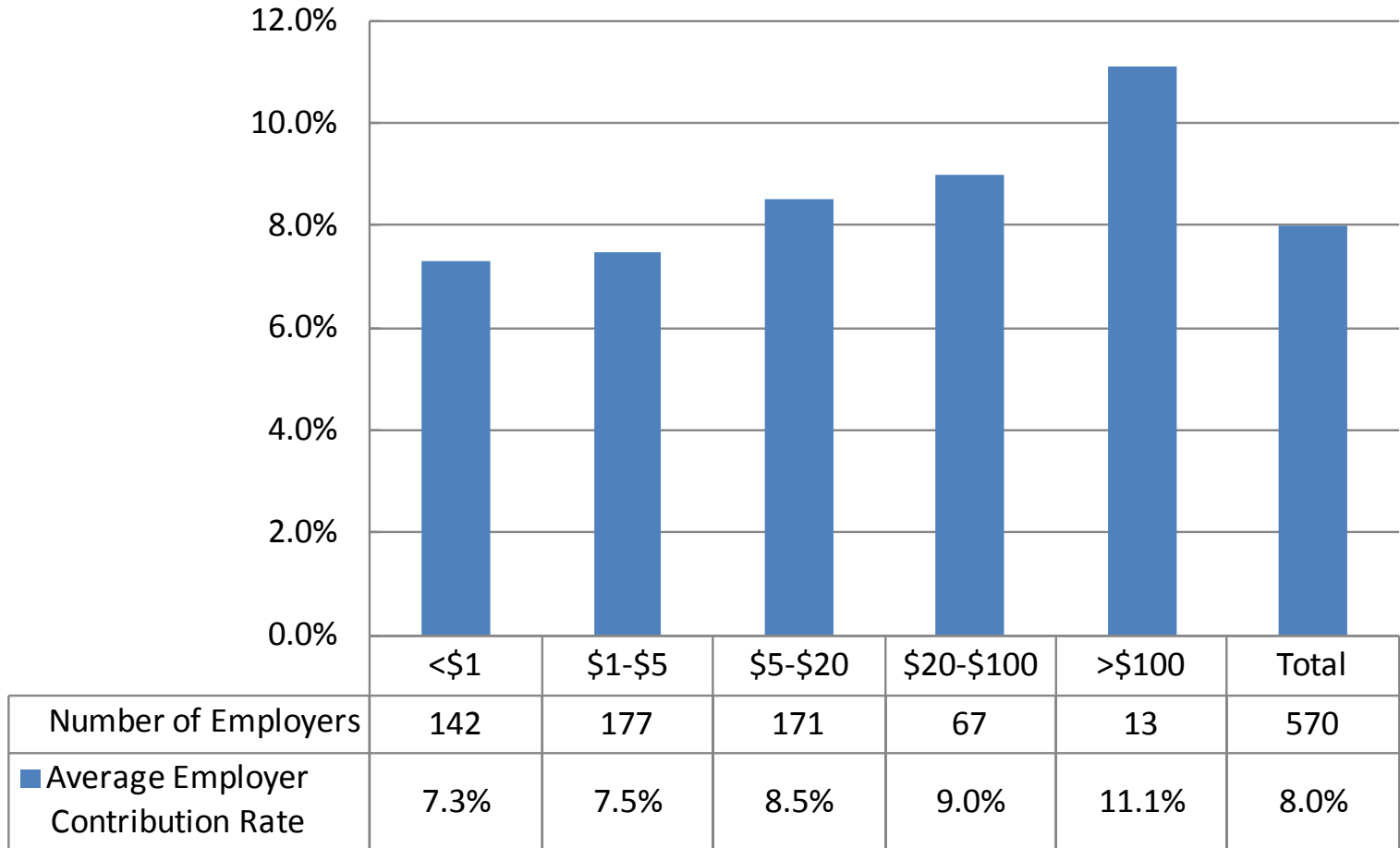


Rates net of member contribution rate of 5%.

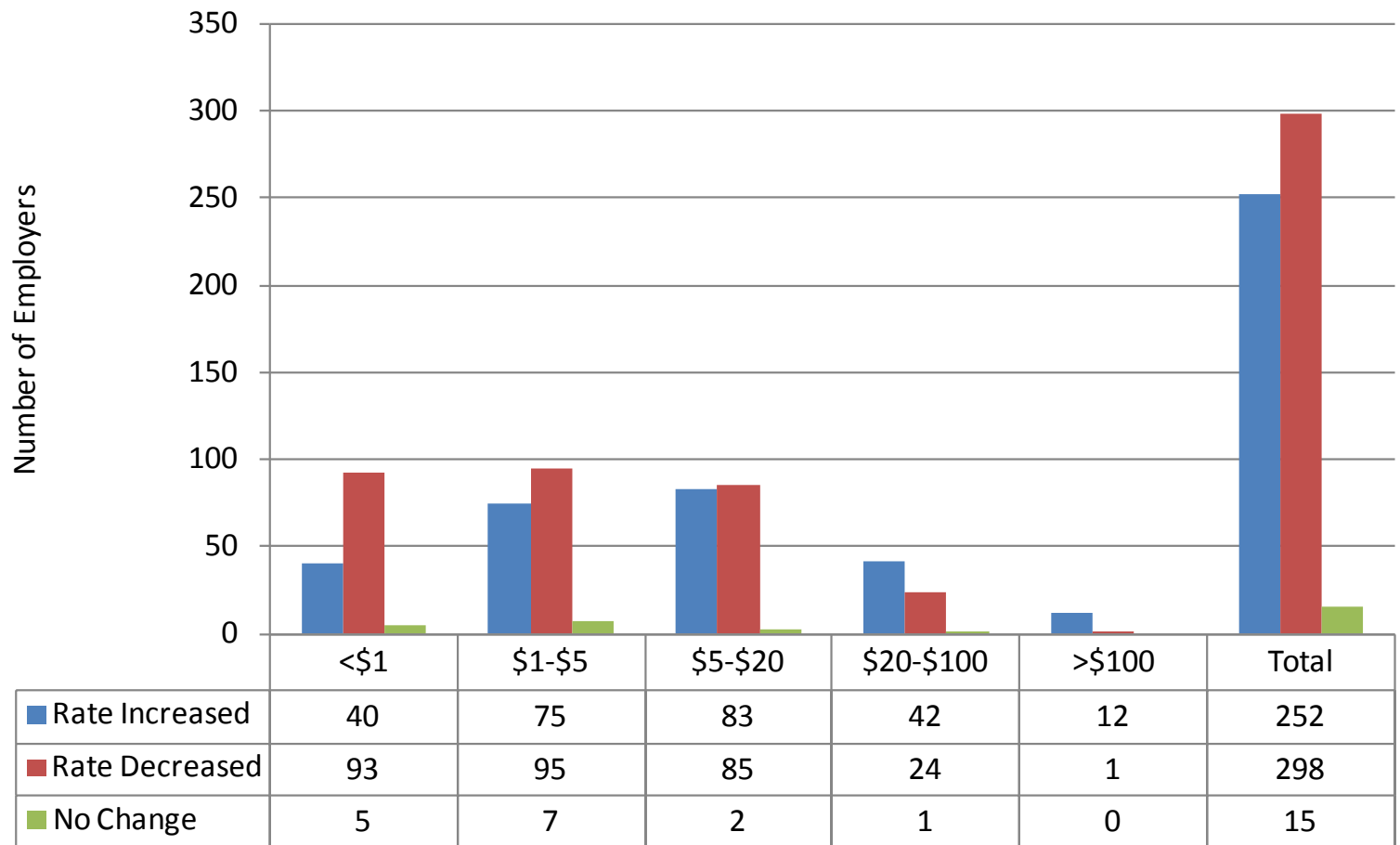
# Average Contribution Rates Plans with No LEOS and Plans with LEOS



# Average Contribution Rates by Market Asset Size (\$ Millions)

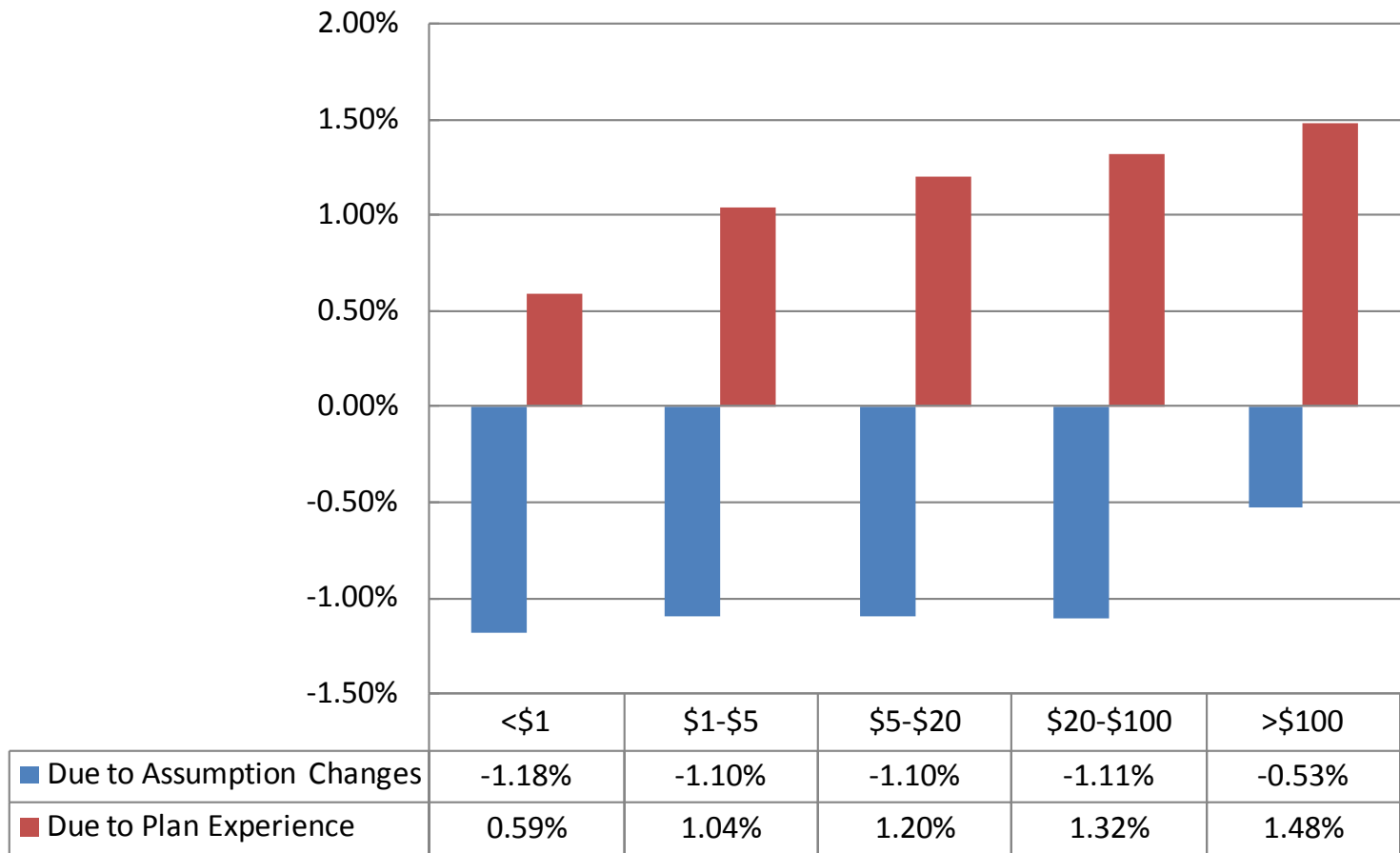


# Changes in Contribution Rates by Market Asset Size (2009 vs. 2008) (\$ Millions)



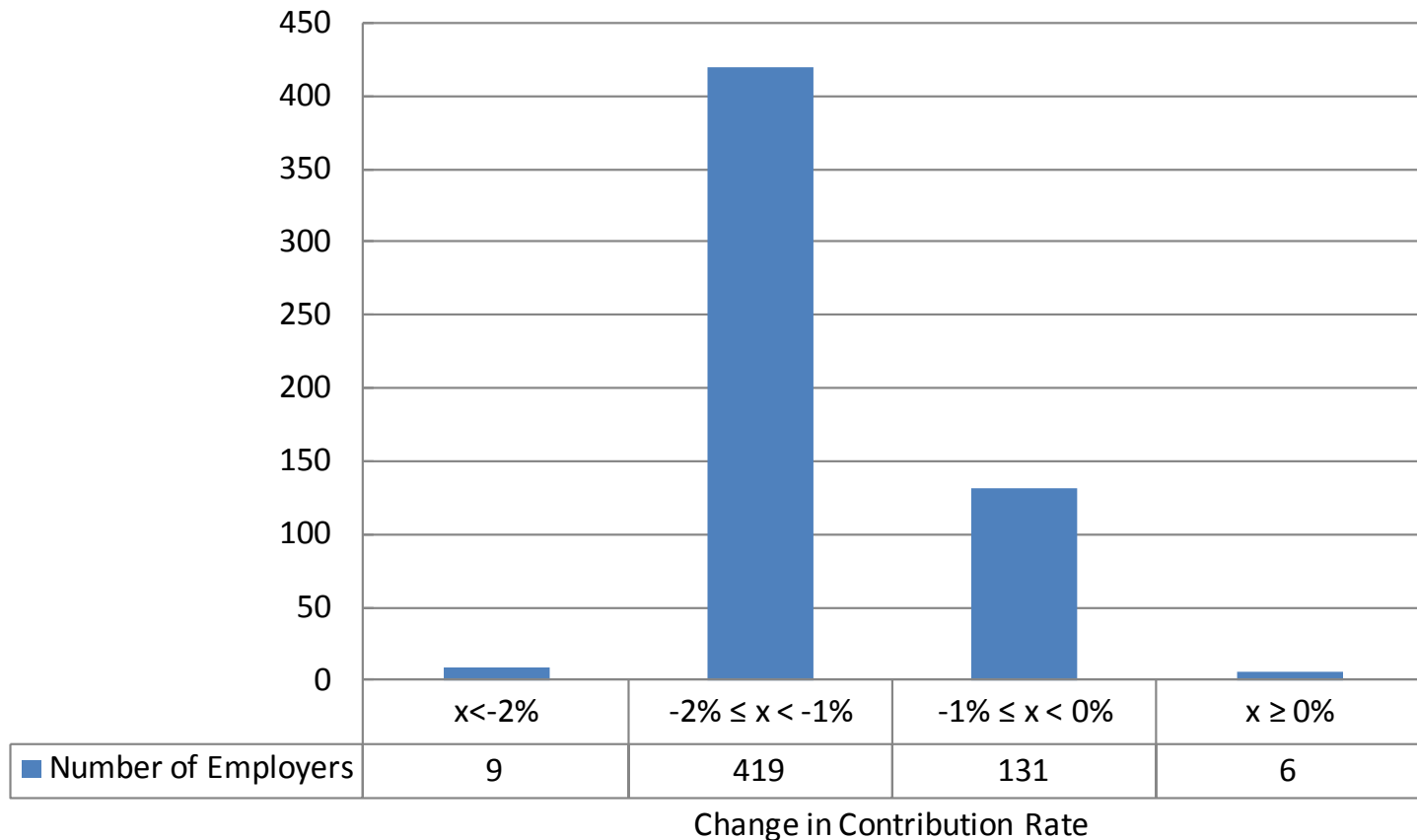
Note: Distribution includes only the 565 locations that have a 2008 rate for comparison.

# Average Changes in Contribution Rates by Market Asset Size (2009 vs. 2008) (\$ Millions)



Note: Distribution includes only the 565 locations that have a 2008 rate for comparison.

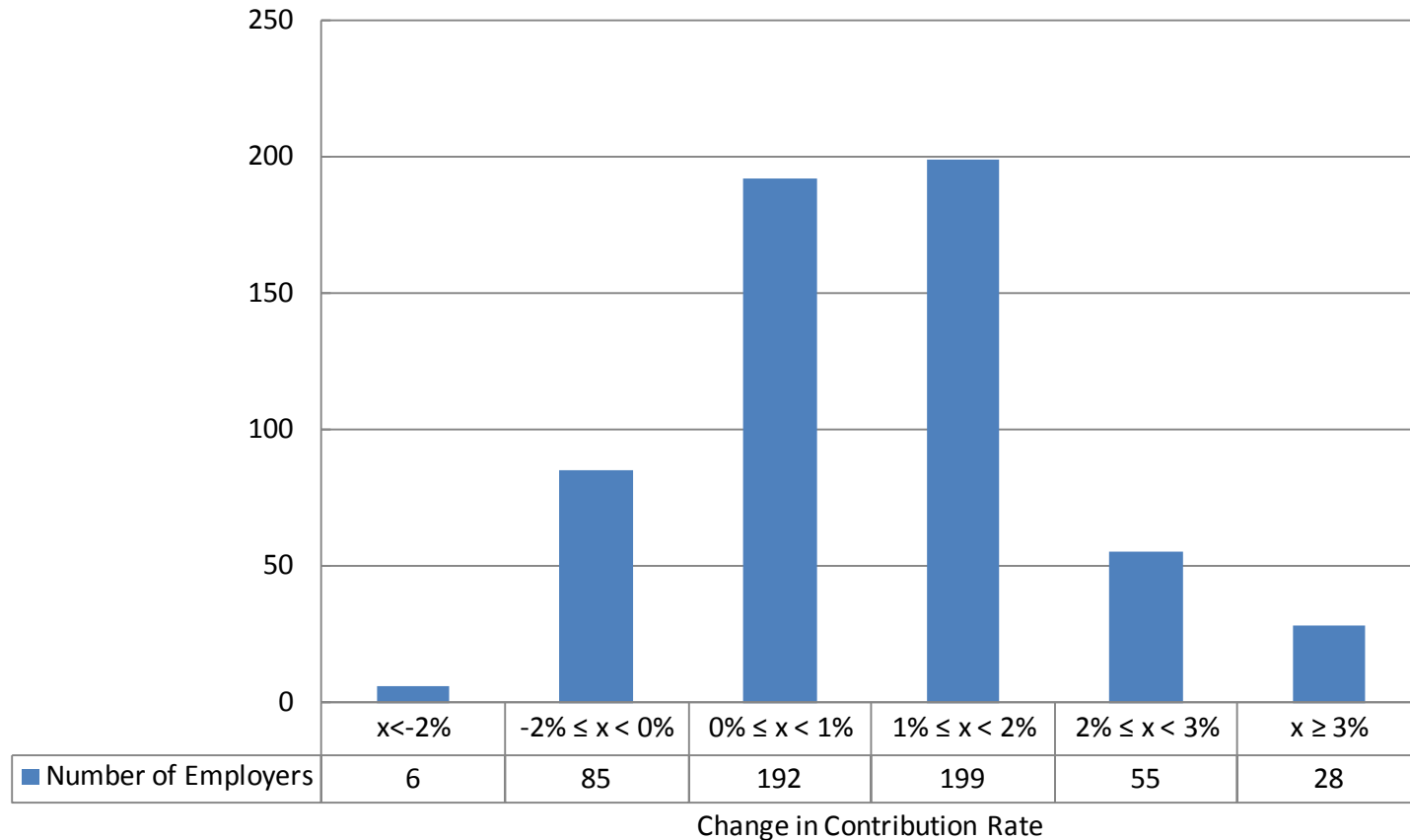
# Changes in Contribution Rates Due to Assumption Changes



Average change in contribution due to assumption changes is -1.1%.

Note: Distribution includes only the 565 locations that have a 2008 rate for comparison.

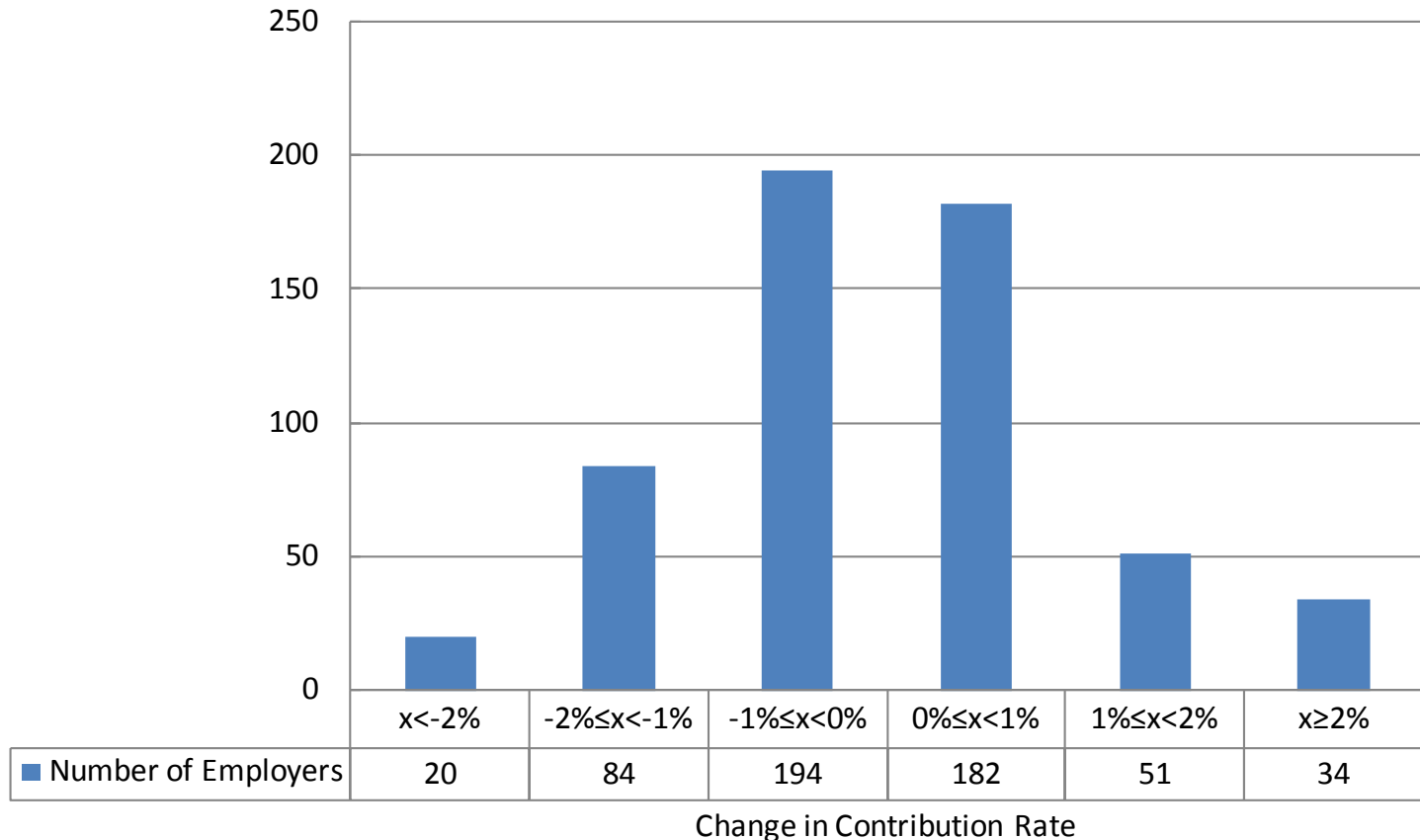
# Changes in Contribution Rates Due to Plan Experience



Average change in contribution due to plan experience is 1.0%.

Note: Distribution includes only the 565 locations that have a 2008 rate for comparison.

# Changes in Employer Contribution Rates



Average change in employer contribution rate is 0.0%.

Note: Distribution includes only the 565 locations that have a 2008 rate for comparison.

# Results for Top 10 Localities



Locality	Asset Value*	Funded Ratio Based On:		2009 Rate**	2008 Rate**
		Actuarial Assets	Market Assets		
City of Virginia Beach	\$835	80.1%	60.4%	12.6%	11.3%
Henrico County	\$593	81.0%	61.1%	12.2%	11.0%
Prince William County	\$493	84.8%	64.0%	10.4%	9.3%
Chesterfield County	\$424	82.1%	61.9%	11.6%	10.5%
City of Chesapeake	\$398	82.5%	62.2%	12.3%	10.9%
City of Alexandria	\$258	85.1%	64.2%	7.8%	7.6%
City of Hampton	\$252	75.4%	56.9%	15.3%	13.4%
Loudoun County	\$243	86.2%	65.1%	8.6%	8.6%
City of Lynchburg	\$152	70.3%	53.1%	18.1%	16.0%
City of Portsmouth	\$148	91.1%	68.7%	8.3%	7.4%

\* Market value of assets (\$ Millions)

\*\* Net of 5% employee contribution

# Health Insurance Credit (HIC) Program Results

- Participation Assumption Changes
  - Current retirees not receiving HIC benefit omitted
  - 85% of active employees assumed to utilize HIC benefit
- Eligible vested and terminated participants valued for the first time.
  - Includes valuation of active employee liability associated with termination decrement.
- Actuarial value of assets equal to market value.
- Valuation assumptions have been changed to reflect the results of the 2004-2008 experience study.

# Local Health Insurance Credit Data Summary



	Locals All Inclusive Payroll	Constitutional Officers	Social Services	Registrars
Number Employers	103	N/A	N/A	N/A
Number Actives	24,152	11,801	5,045	206
Payroll ( \$Millions)	\$976.2	\$531.9	\$209.2	\$8.7
Number Retirees	3,073	2,080	1,144	21
Market Value Assets (\$ Millions)	\$8.3	\$2.1	\$1.0	-\$0.0*

\*Value of assets is -\$20,383

# Local Health Insurance Credit Employer Contribution Rates



	2008	2009
Locals providing health credit (average contribution rate)	0.35%	0.30%
All Inclusive Payroll		
Constitutional Officers	0.30%	0.32%
Social Services	0.56%	0.40%
Registrars	0.34%	0.36%