Building Brighter Futures for Public Employees

North Carolina Retirement Systems

Local Governmental Employees' Retirement System Principal Results of Actuarial Valuation as of December 31, 2012

October 17, 2013
Board of Trustees Meeting
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Purpose of the Annual Actuarial Valuation

- Each year, the actuary determines the amount of contributions to be made to the Retirement System during each member's career that, when combined with investment return, will be sufficient to pay for retiree benefits.

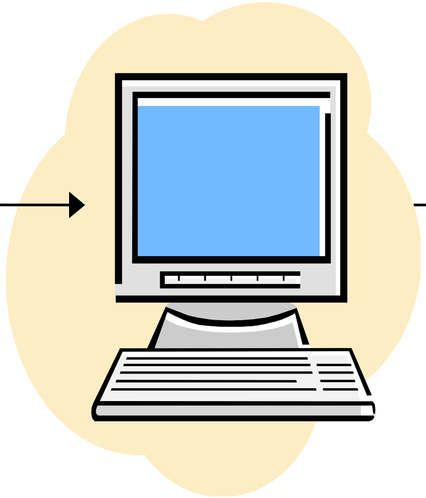
- This contribution is determined through the annual actuarial valuation, which is summarized in the annual actuarial valuation report.

- In addition, the annual actuarial valuation is performed to:
  - Determine progress on funding the Retirement Systems
  - Explore why the results of the current valuation differ from the results of the valuation of the previous year
  - Satisfy regulatory and accounting requirements

The Valuation Process

INPUT

- Member Data
- Asset Data
- Benefit Provisions
- Actuarial Assumptions
- Funding Methodology



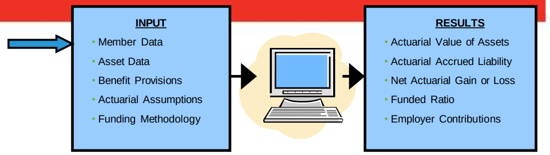
RESULTS

- Actuarial Value of Assets
- Actuarial Accrued Liability
- Net Actuarial Gain or Loss
- Funded Ratio
- Employer Contributions

Events During Year Ending December 31, 2012 Which Impacted the December 31, 2012 Actuarial Valuation Results

- Results of this valuation deviated from last year's valuation due to several causes:
  - Market value returns of 11.8% compared to 7.25% assumed
  - Payroll increased by 0.3% compared to 3% assumed increase
- Overall, when compared to the December 31, 2011 baseline projections, the above events resulted in:
  - Lower employer required base contribution rates for fiscal year ending June 30, 2015
    - 6.94% in the valuation compared to 7.81% in the baseline projection for general employees and firefighters
    - 7.42% in the valuation compared to 8.29% in the baseline projection for law enforcement officers
  - Lower projected benefit amounts being accrued by active members

Member Data



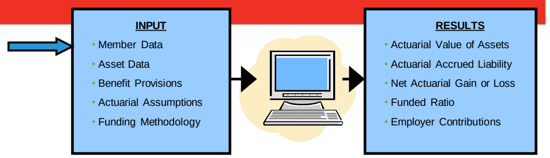
GROUP	NUMBER As of 12/31/12	NUMBER As of 12/31/11
Retired members and survivors of deceased members currently receiving benefits	54,547	51,700
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	47,663	44,350
Active members	122,270	121,638
Total	224,480	217,688

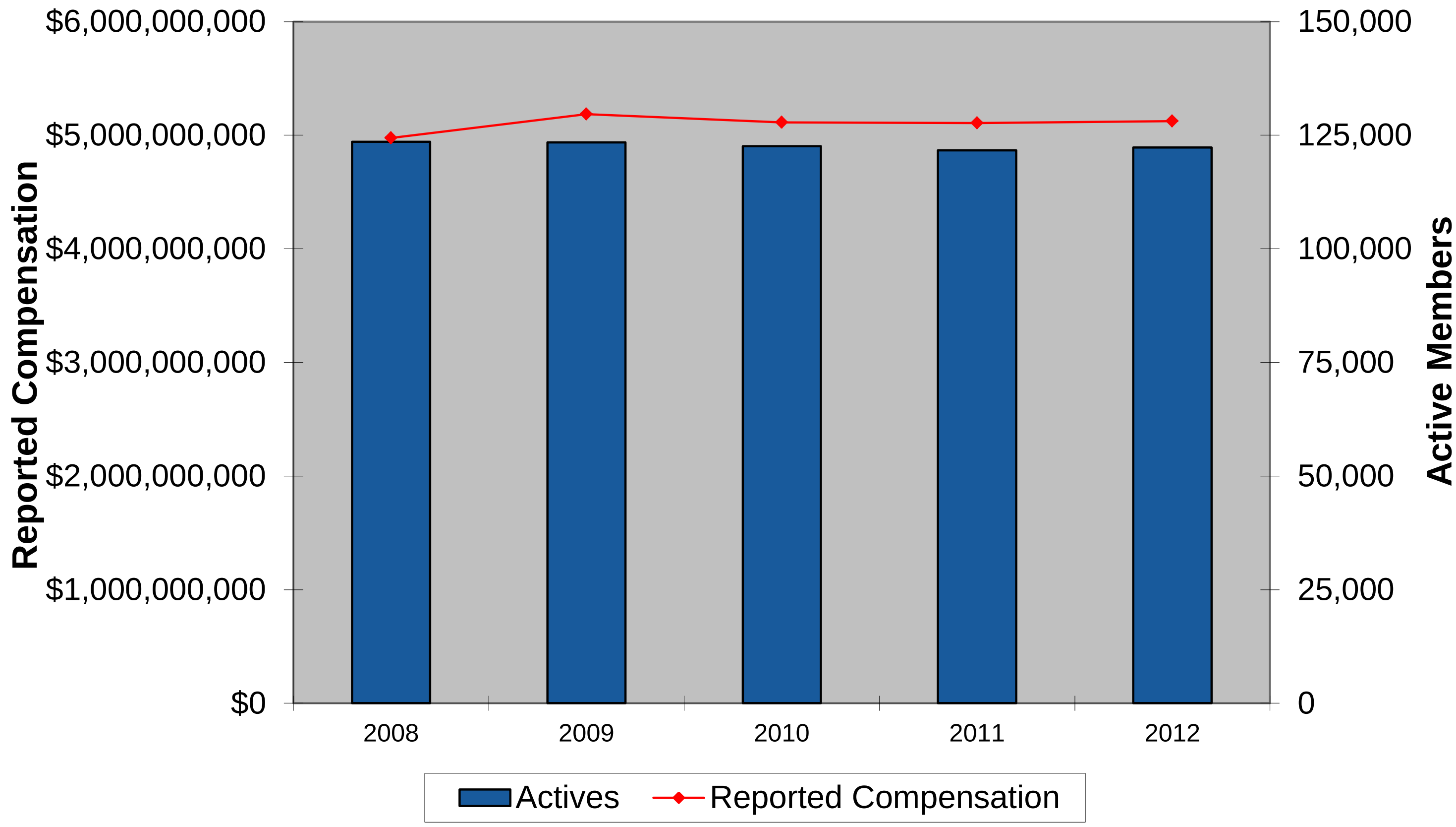
The increase in retiree population is consistent with expectations.

The increase in active population means more benefits accruing, but also more contributions supporting the System.

Refer to Tables on pages 4 and 5 of the actuarial valuation report for more information on the member data submitted for the valuation.

Active Members and Payroll

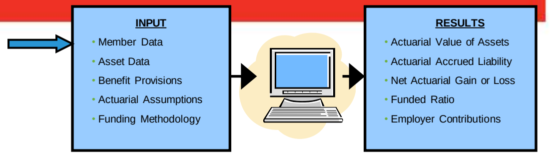


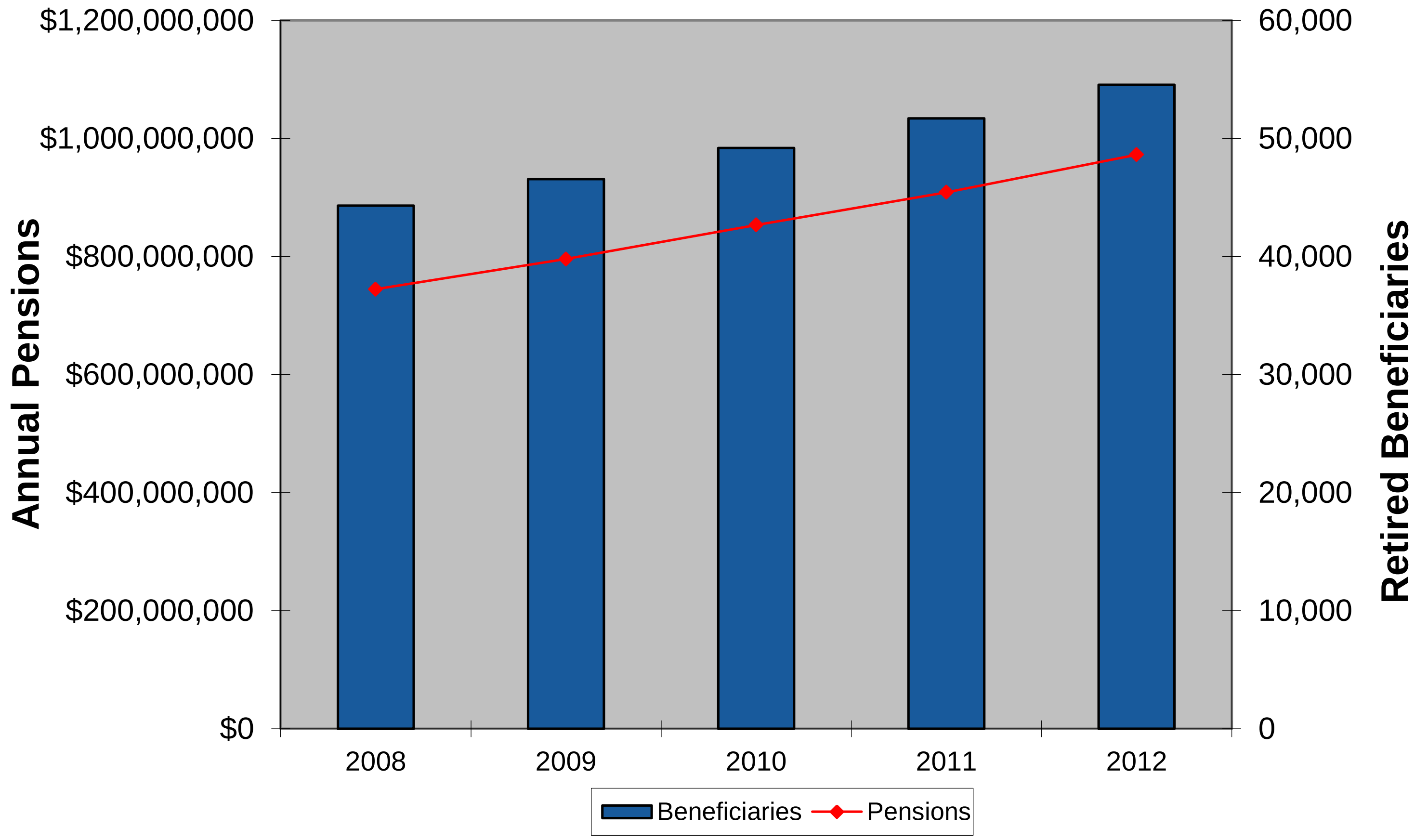


Slight increase in compensation and active population since prior year results in higher normal cost.

Refer to page 1 of the actuarial valuation report for a side-by-side comparison from the past two valuations.

Retired Members and Survivors of Deceased Members





Steady increase in amount of benefits paid out of fund, increasing as expected based on plan assumptions.

Refer to page 1 of the actuarial valuation report for a side-by-side comparison from the past two valuations.

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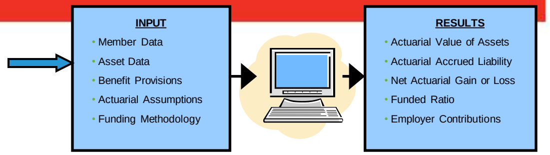
Asset Data

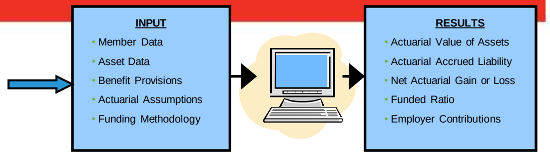


Transactions	December 31, 2012	December 31, 2011
Additions		
Contributions	722,864,146	712,937,950
Net Investment Income	2,094,466,028	377,556,093
Total	2,817,330,174	1,090,494,043
Deductions		
Benefits Payments	1,002,122,276	940,715,534
Net Increase / (Decrease)	1,815,207,898	149,778,509
Net Assets Held in Trust for Pension Benefits		
Beginning of Year	17,908,429,907	17,758,651,398
End of Year	19,723,637,805	17,908,429,907
Estimated net investment return	11.79%	2.14%

Returns were more than the 7.25% assumed rate of return, resulting in lower contributions than anticipated as of December 31, 2012 based on the baseline projections presented at the April 2013 board meeting.

Refer to Schedule A on page 13 of the actuarial valuation report, for more information on the plan assets submitted for the valuation.

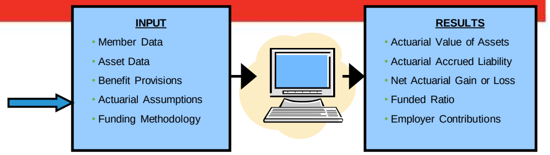
Benefit Provisions



- Benefit provisions are described in North Carolina General Statutes, Chapter 128
- There were no significant changes since the prior year's valuation

Refer to Schedule C of the actuarial valuation report, beginning on page 20, for a summary of the benefit provisions submitted for the valuation.

Actuarial Assumptions

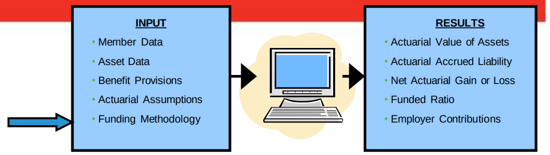


- Demographic (future events that relate to people)
  - Retirement
  - Termination
  - Disability
  - Death
- Economic (future events that relate to money)
  - Interest rate - 7.25% per year
  - Salary increase (individual, varies by service)
  - Real return – 4.25%
  - Payroll growth – 3.00%

The latest assumptions were adopted for use with the December 31, 2009 actuarial valuation, based on the experience study prepared as of December 31, 2009 and adopted by the Board of Trustees on October 21, 2010. Our next experience study will be prepared as of December 31, 2014 and presented to the Board in October 2015.

Refer to Schedule B of the actuarial valuation report, beginning on page 14, for more information on the actuarial assumptions used for the valuation.

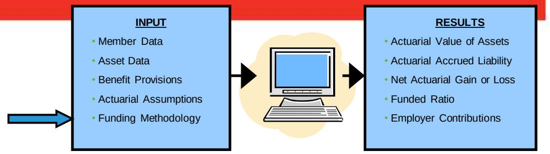
Funding Methodology



- The Funding Methodology is the payment plan for the Retirement System and is composed of the three following components:
  - Actuarial Cost Methods allocate costs to the actuarial accrued liability for past service and normal cost for current service
    - Board has adopted a frozen entry age cost method
    - Separate initial valuations for each employer to account for prior service
    - Normal cost captures payment for all other unfunded liability
    - Effective amortization period is dictated by demographics of active members and actuarial assumptions
    - See next slide for recent change in unfunded accrued liability methodology
  - Asset Valuation Methods smooth or average the market value returns over time to alleviate contribution volatility that results from market returns
    - 20% of market value plus 80% of expected actuarial value
    - Asset corridor: not greater than 120% of market value and not less than 80% of market value

Schedule B of the actuarial valuation report, beginning on page 14, provides more information on the funding methodology.

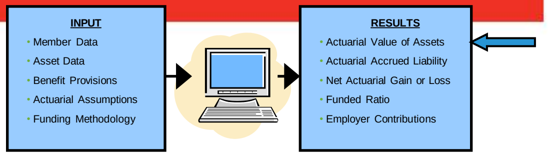
Change in Unfunded Accrued Liability (UAL) Methodology



- Recent methodology change for determining liquidation of UAL
  - Approved by LGERS Board of Trustees in January 2012
  - Six units provided relief on July 1, 2013
  - Eight additional units estimated for relief on July 1, 2014
- Valuation reflects this methodology
  - Contribution rates as of July 1, 2014 reflect relief, if estimated to occur
  - Estimated Date of Liquidation of UAL provided for each unit
    - Non-binding estimate
    - Will be recalculated annually and adjusted according to each unit’s actual experience

Refer to Schedule C of the actuarial valuation report, beginning on page 20, for a summary of the benefit provisions submitted for the valuation.

Actuarial Value of Assets



1.	Actuarial Value of Assets as of December 31, 2011	$ 19,326,359,293
2.	2012 Net Cash Flow	
	a. Contributions	722,864,146
	b. Disbursements	1,002,122,276
	c. Net Cash Flow: (a) - (b)	(279,258,130)
3.	Expected Investment Return: [(1) x .0725] + [(2)c x .03625]	1,391,037,942
4.	Expected Actuarial Value of Assets as of December 31, 2012: (1) + (2)c + (3)	20,438,139,105
5.	Market Value of Assets as of December 31, 2012	19,723,637,805
6.	Excess of Market Value over Expected Actuarial Value of Assets: (5) - (4)	(714,501,300)
7.	20% Adjustment towards Market Value: (6) x .20	(142,900,260)
8.	Preliminary Actuarial Value of Assets as of December 31, 2012: (4) + (7)	20,295,238,845
9.	Final Actuarial Value of Assets as of December 31, 2012 [(8) not less than 80% of (5) and not greater than 120% of (5)]	20,295,238,845
10.	Rate of investment return on actuarial value	6.51%
11.	Rate of investment return on market value	11.79%

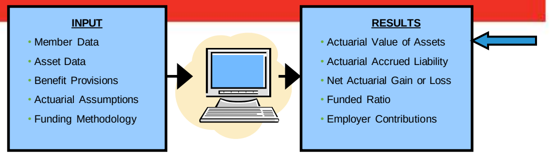
Historical returns

YE 12/31	AVA	MVA
2006	9.19%	11.41%
2007	9.03%	8.36%
2008	2.97%	(19.47%)
2009	4.92%	14.94%
2010	6.10%	11.53%
2011	5.33%	2.14%
2012	6.51%	11.79%
average	6.27%	5.17%
range	6.22%	34.41%

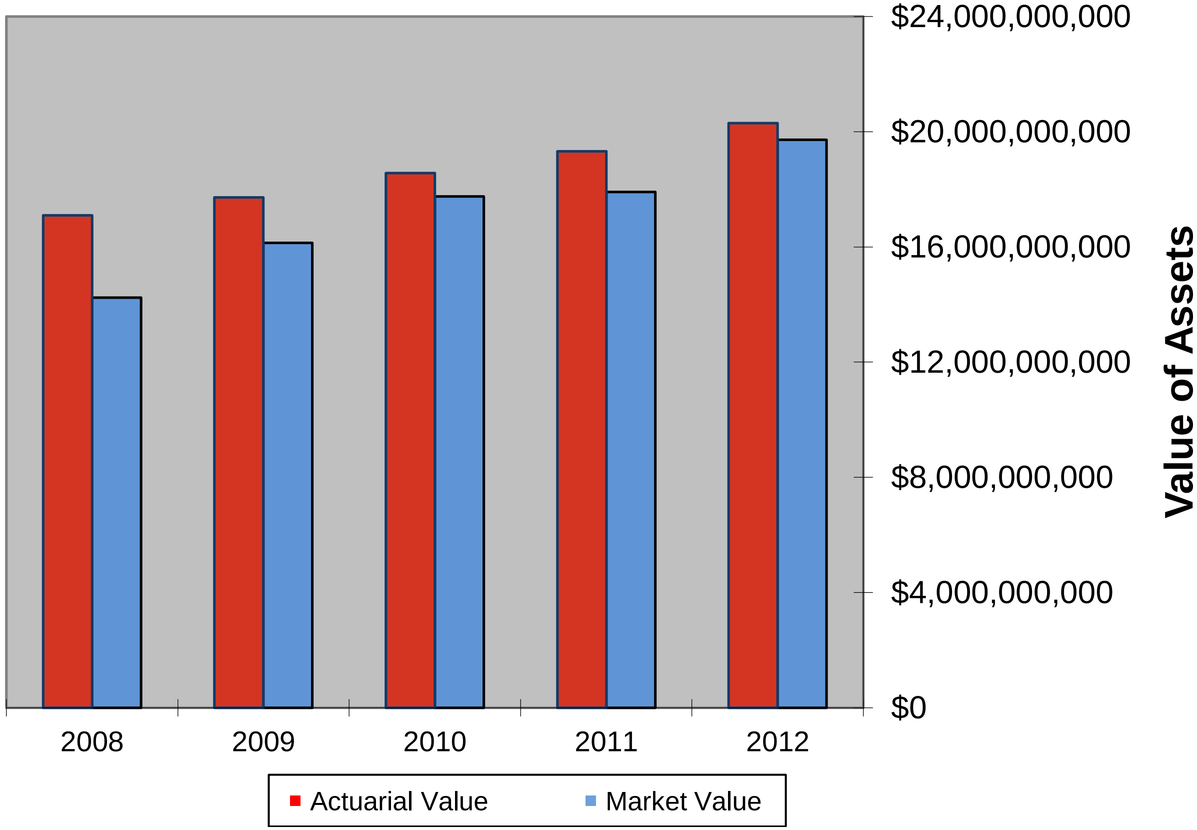
The actuarial value of assets smooths investment gains/losses, resulting in less volatility in the employer contribution. However, low returns in 2008 and 2011 result in $143 million asset loss recognition this year.

Refer to Schedule A on page 13 of the actuarial valuation report.

Assets



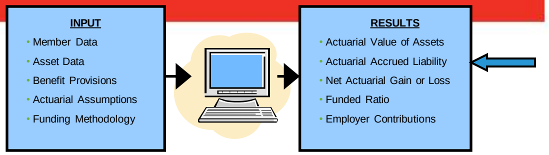
Actuarial Value Compared to Market Value

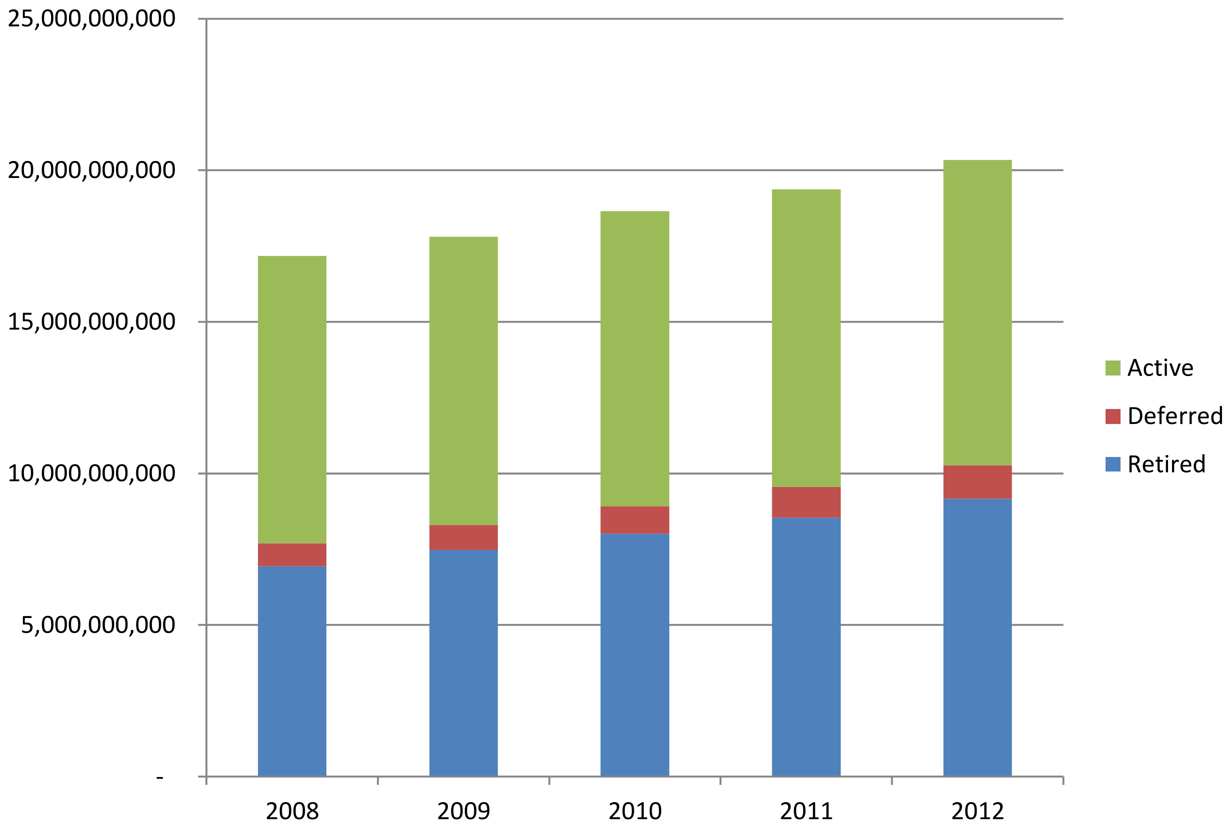


The actuarial value of assets compared to the market value was much less volatile over the last five years. Use of the actuarial value of assets is an industry standard for the purpose of dampening contribution volatility.

Refer to page 13 of the actuarial valuation report.

Actuarial Accrued Liability

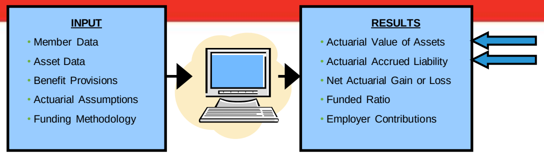




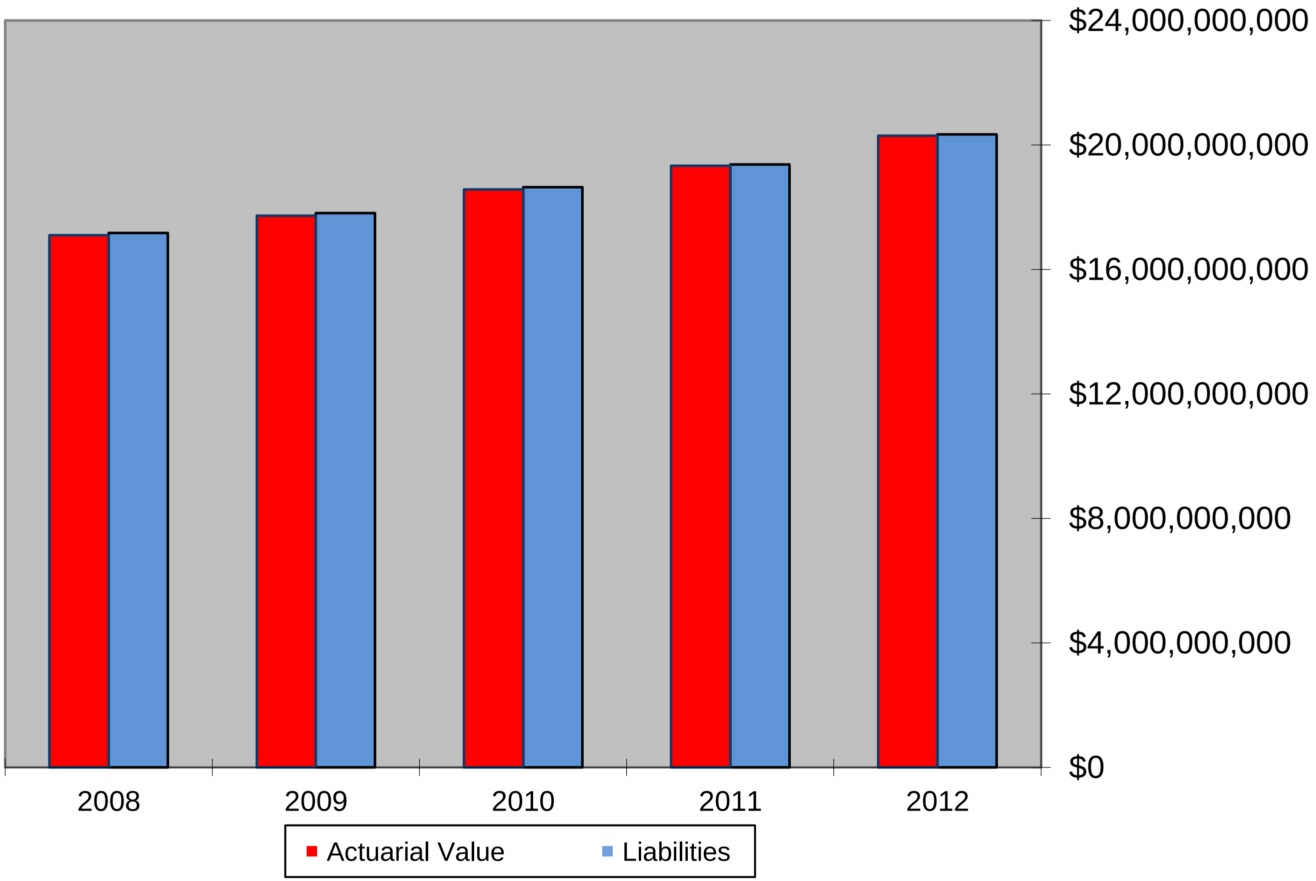
The actuarial accrued liability increased from $19.4 billion to $20.3 billion during the past year. In an open plan such as this, liabilities are expected to grow from one year to the next as more benefits accrue and the membership approaches retirement.

Refer to Section VIII, Schedule of Funding Progress, on page 11 of the actuarial valuation report for more information.

Accrued Liabilities and Actuarial Value of Assets

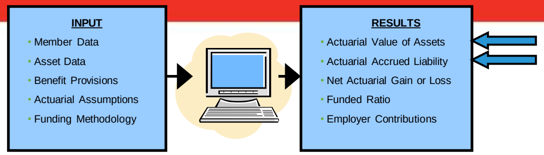


In a frozen entry age, cost-sharing plan like LGERS, liabilities will track closely to assets. All liability and asset gains and losses serve to directly increase or decrease the normal cost.



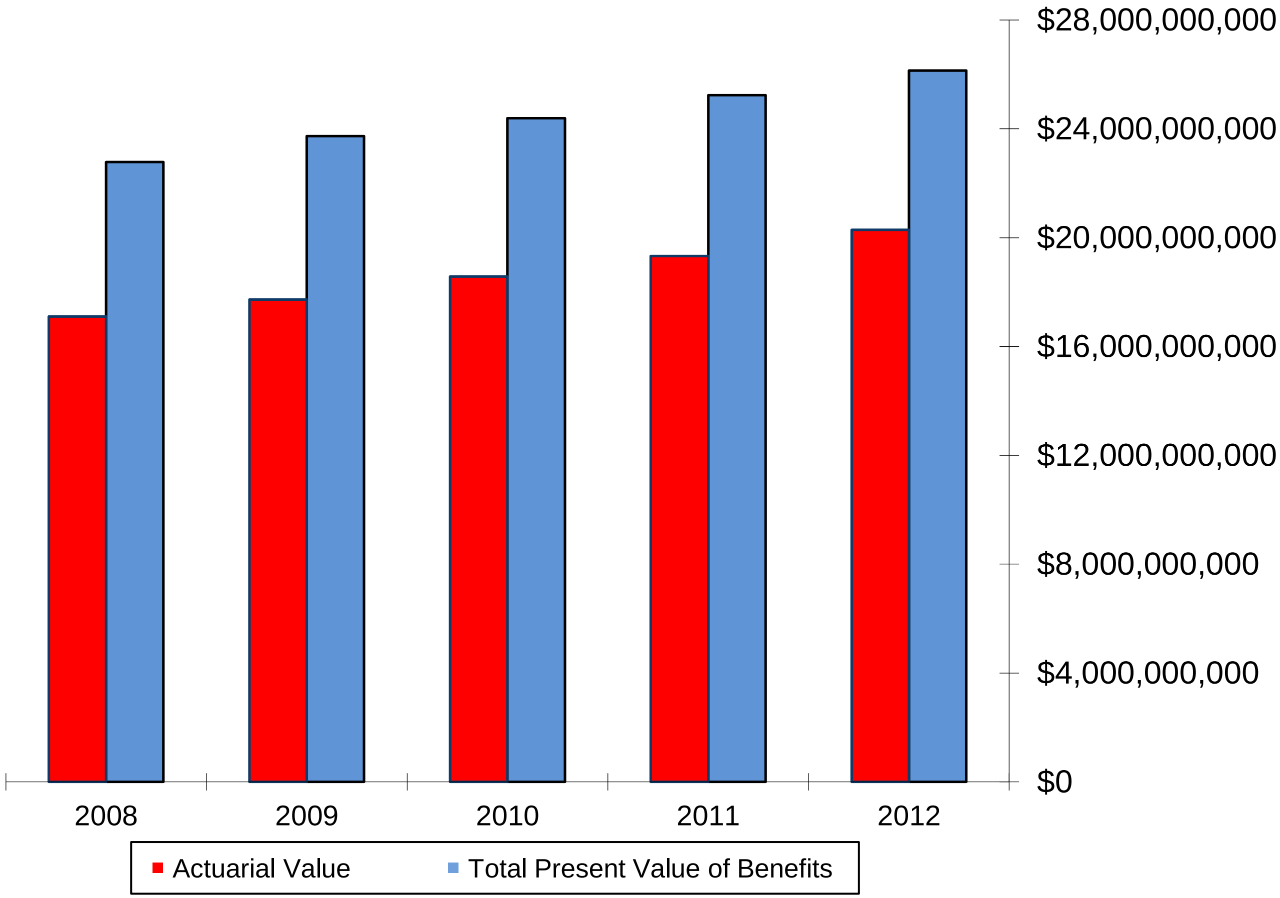
Refer Section VIII, Schedule of Funding Progress, on page 11 of the actuarial valuation report for more information.

Total Present Value of Benefits and Actuarial Value of Assets



The total present value of benefits has increased over the last 5 years.

However, the decrease in unfunded present value of future benefits resulted in the decrease in employer contribution rate this past year.



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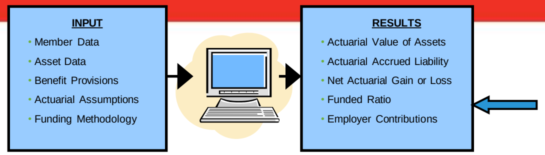
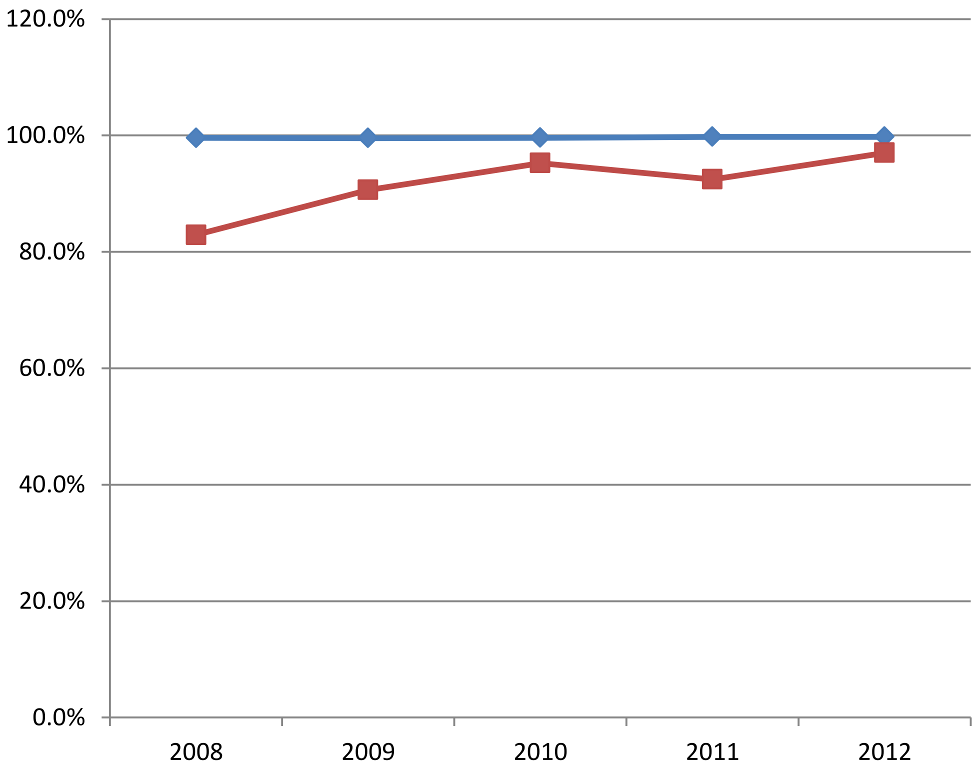
Funded Ratio



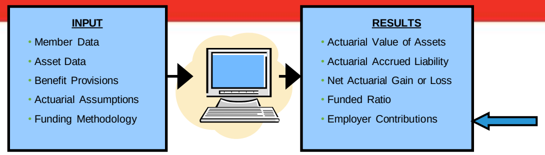
Actuarial and Market Funded Ratio

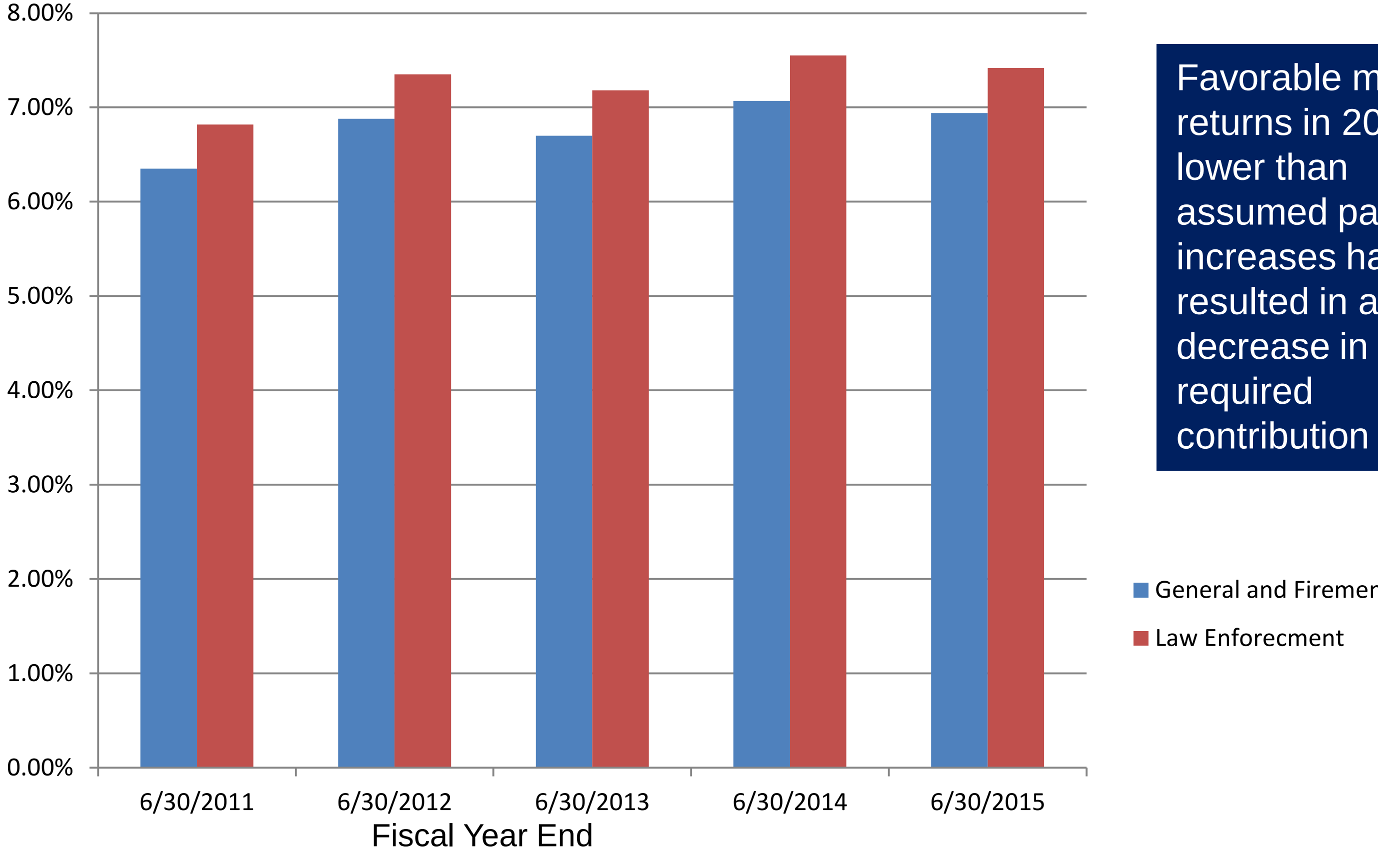


The funded ratio is shown on both a market and actuarial basis. The actuarial basis is used for computing contributions to alleviate contribution volatility.

Refer to Section VIII on page 11 of the actuarial valuation report for more information on the Funded Ratio and Schedule of Funding Progress.

Employer Required Contribution Rates

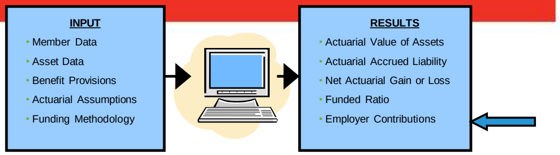




Favorable market returns in 2011 and lower than assumed payroll increases has resulted in a decrease in the required contribution rates.

Refer to page 1 of the actuarial valuation report for comparison of the past two valuations.

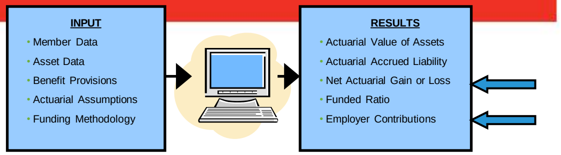
Employer Required Contribution Rates



Valuation Date	Fiscal Year Ending	Prior Rate General Employees and Firefighters	Prior Rate Law Enforcement Officers	Current ARC General Employees and Firefighters	Current ARC Law Enforcement Officers	Undistributed Gain/(Loss)
12/31/12	6/30/15	7.07%	7.55%	6.94%	7.42%	0.13%*
12/31/11	6/30/14	6.74%	7.22%	7.07%	7.55%	(0.33%)
12/31/10	6/30/13	6.88%	7.35%	6.74%	7.22%	0.14%
12/31/09	6/30/12	6.35%	6.82%	6.88%	7.36%	(0.53)%
12/31/08	6/30/11	4.80%	5.27%	6.35%	6.82%	(1.55)%

* The 0.13% undistributed gain is comprised of non-investment gains of 0.43% offset by investment gains of 0.30%. Each 1% COLA is equivalent to 0.23% of payroll and each 0.01% increase in benefit is equal to 0.32% of payroll.

Employer Required Contribution Rates



Reconciliation of Change in Annual Required Contribution

	General Employees and Firefighters	Law Enforcement Officers
Fiscal year ending June 30, 2014 Preliminary ARC (based on 12/31/11 valuation)	7.07%	7.55%
Impact of Legislative Changes	0.00%	0.00%
Fiscal year ending June 30, 2014 Final ARC	7.07%	7.55%
Non-Investment (Gains)/Losses	(0.43)%	(0.43)%
Changes Due to Investment (Gains)/Losses	0.30%	0.30%
Fiscal year ending June 30, 2015 Preliminary ARC (based on 12/31/12 valuation)	6.94%	7.42%

Non-investment (Gain)/Loss primarily due to salary increases less than assumed.

Investment Loss is a recognition of deferred asset losses from 2008 and 2011.

Refer to page 2 of the actuarial valuation report.

Key Takeaways

- Market value returns of 11.8%
  - Compared to 7.25% assumed
- Payroll increase of 0.3%
  - Compared to 3% assumed increase
- Lower ARC than expected (FYE 2015)
  - 6.94% in the valuation compared to 7.81% in the baseline projection for general employees and firefighters
  - 7.42% in the valuation compared to 8.29% in the baseline projection for law enforcement officers
- Overall, the ARC decreased by 0.13% of payroll

Key Takeaways

- The Retirement System is very well funded compared to peers. This is due to:
  - A history of appropriating and contributing the recommended contribution requirements
  - Assumptions that in aggregate are more conservative than peers
  - A funding policy that aggressively adjusts contribution rates to pay down unfunded liability

Questions?

THANK YOU