Local Governmental Employees' Retirement System
Principal Results of Actuarial Valuation
as of December 31, 2013

Board of Trustees Meeting

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October 23, 2014

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Purpose of the Annual Actuarial Valuation

- As of the end of each calendar year:
  - An annual actuarial valuation is performed on LGERS
  - The actuary determines the amount of employer contributions to be made to LGERS during each member's career that, when combined with investment return and member contributions, such contributions are expected to be sufficient to pay for retirement benefits.
- In addition, the annual actuarial valuation is performed to:
  - Determine the required contribution rates for LGERS employers,
  - Explore why the results of the current valuation differ from the results of the valuation of the previous year, and
  - Satisfy regulatory and accounting requirements.

The Valuation Process

The following diagram summarizes the inputs and results of the actuarial 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

A detailed summary of the valuation process and a glossary of actuarial terms are provided in Appendix A of the actuarial report.

Key Takeaways

Key results of the December 31, 2013 valuation as compared to the December 31, 2012 valuation were:

- Market value returns of 12.21% compared to 7.25% assumed
- Increase in covered payroll of 2.3% compared to 3% assumed increase
- Recent legislation signed into law including:
  - Return of contributions with interest to all members prior to meeting vesting requirements
- No significant changes in actuarial assumptions or funding methodology from the prior year's valuations

When compared to the December 31, 2012 baseline projections, the above resulted in:

- Lower employer required base contribution rates for fiscal year ending June 30, 2016
  - 6.52% in the valuation compared to 7.11% in the baseline projection for general employees and firefighters
  - 7.00% in the valuation compared to 7.59% in the baseline projection for law enforcement officers
- Lower projected benefit amounts being accrued by active members

Valuation Input

Valuation Input
Membership Data

Number as of	December 31, 2013	December 31, 2012
Active members	123,455	122,270
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	50,998	47,663
Retired members and survivors of deceased members currently receiving benefits	57,405	54,547
Total	231,858	224,480

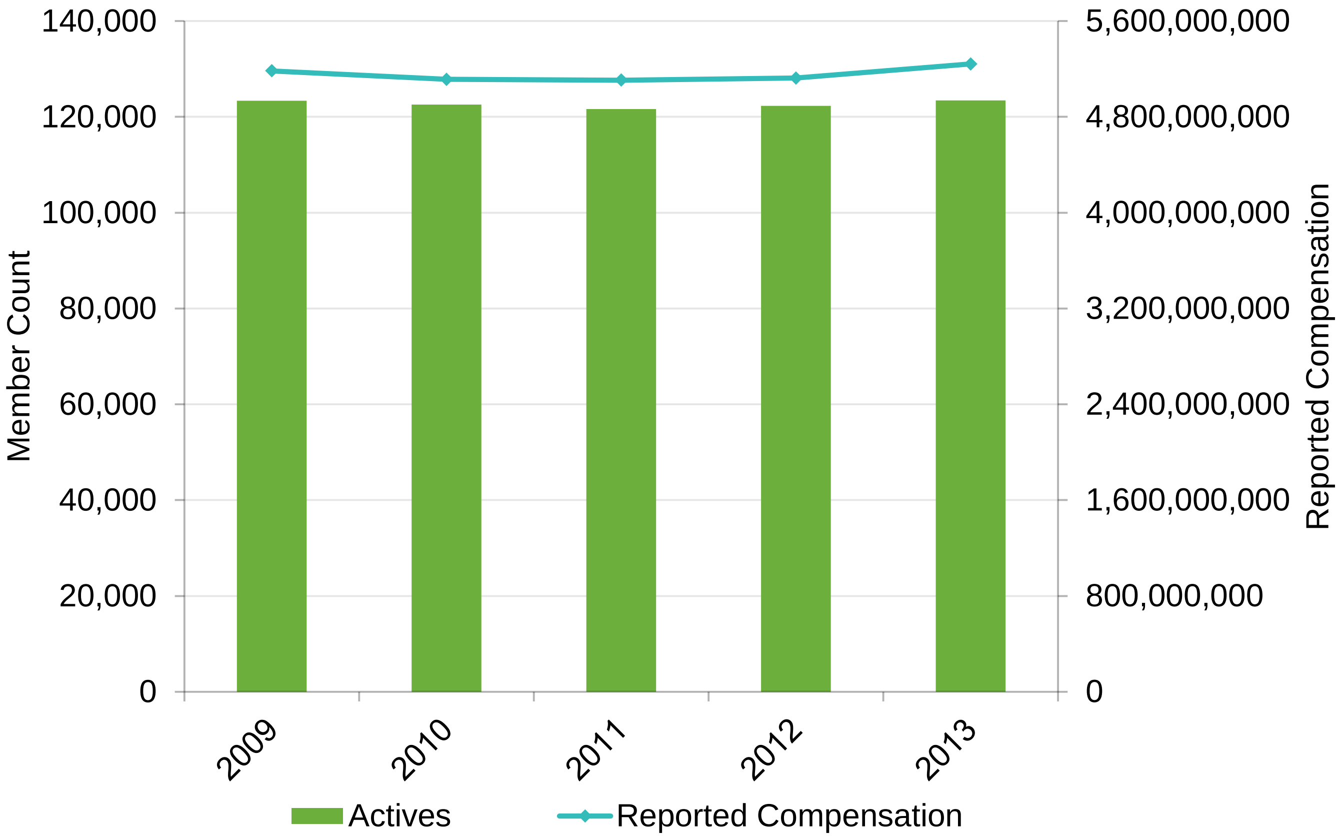
The number of active members increased by 1% from the previous valuation date. The increase in the active population results in more benefits accruing, but also more contributions supporting the system.

The number of retired members and survivors of deceased members currently receiving benefits increased by 5.2% from the previous valuation date. The increase in retiree population is consistent with expectations.

A detailed summary of the membership data used in this valuation is provided in Section 3 and Appendix B of the actuarial report.

Valuation Input

Membership Data: Active Members

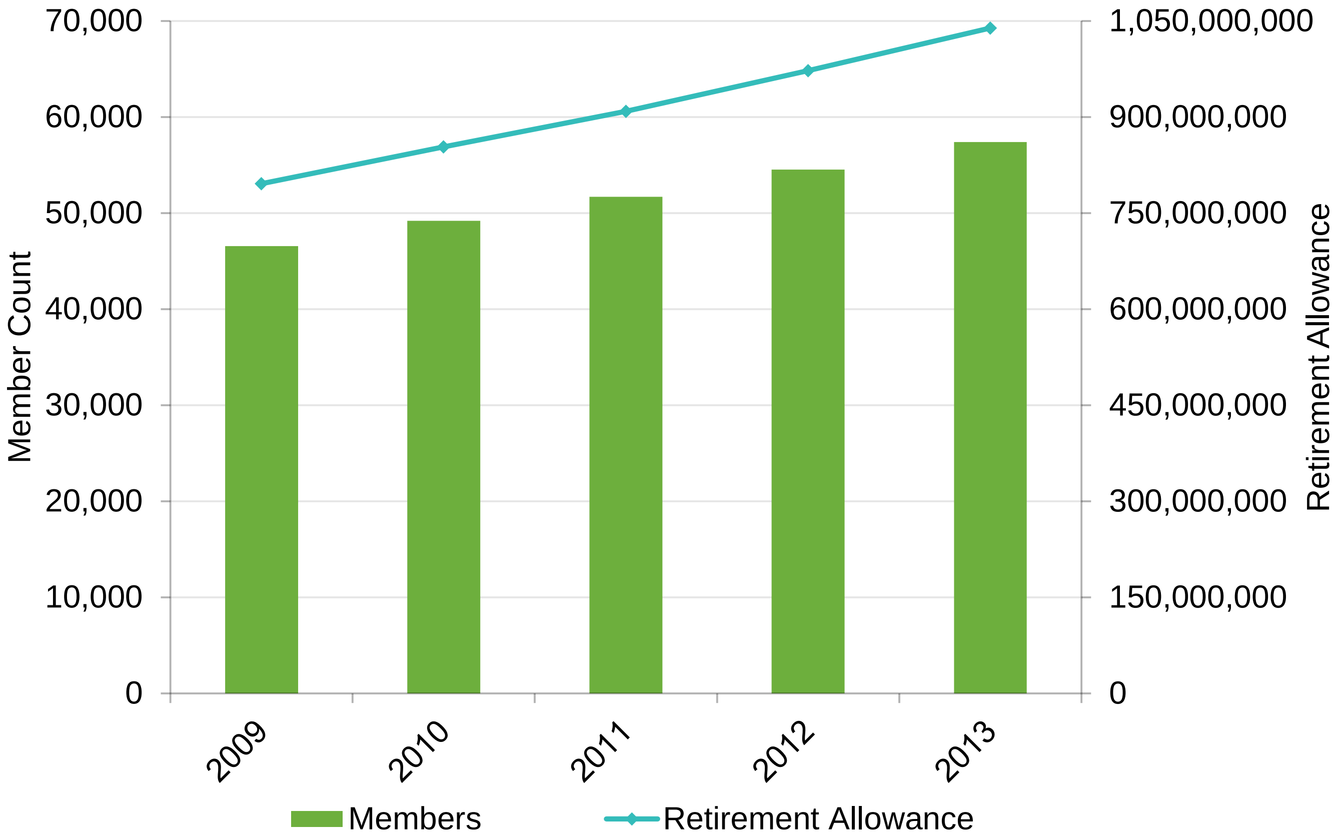


Slight increase in compensation and active population since prior year results in higher normal cost. The valuation assumes covered payroll will increase by 3% annually in the future.

A detailed summary of the membership data used in this valuation is provided in Section 3 and Appendix B of the actuarial report.

Valuation Input

Membership Data: Retired Members and Survivors of Deceased Members



The number of retired members and survivors of deceased members and the benefits paid to these members has been increasing steadily, as expected based on plan assumptions.

A detailed summary of the membership data used in this valuation is provided in Section 3 and Appendix B of the actuarial report.

Asset Data: Market Value of Assets

Asset Data as of	December 31, 2013	December 31, 2012
Beginning of Year Market Value of Assets	$19,723,637,805	$17,908,429,907
Contributions	745,536,605	722,864,146
Benefit Payments	(1,073,665,576)	(1,002,122,276)
Investment Income	2,388,746,266	2,094,466,028
Net Increase/(Decrease)	2,060,617,295	1,815,207,898
End of Year Market Value of Assets	$21,784,255,100	$19,723,637,805
Estimated Net Investment Return on Market Value	12.21%	11.79%

The Market Value of Assets is $21.8 billion as of December 31, 2013 and $19.7 billion as of December 31, 2012. The investment return for the market value of assets for calendar year 2013 was 12.21%.

The market value of assets is provided in Section 4 of the actuarial report.

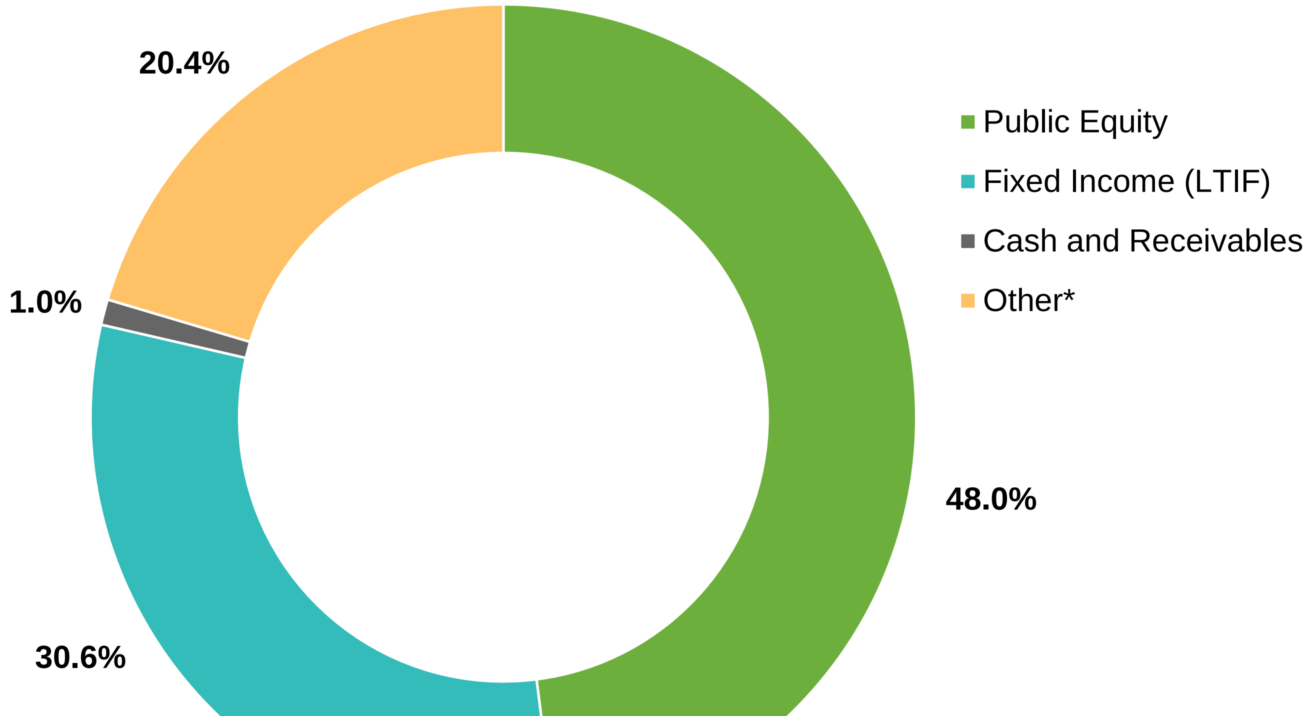
Valuation Input

Asset Data: Market Value of Assets and Asset Returns

Returns were more than the 7.25% assumed rate of return, resulting in lower contributions and higher funded ratio than anticipated as of December 31, 2012 based on the baseline projections presented at the January 2014 Board meeting.

A detailed summary of the market value of assets is provided in Section 4 of the actuarial report.

Asset Data: Allocation of Investments by Category



* Real Estate, Alternatives, Inflation and Credit

Based on historical market returns, the current asset allocation, the current investment policy, and the expectation of future asset returns, as reviewed in the last experience study, the 7.25% discount rate used in this valuation is reasonable and appropriate.

The discount rate will be reviewed at the next experience study to be presented to the Board in October 2015.

A detailed summary of the market value of assets is provided in Section 4 of the actuarial report.

Valuation Input

Benefit Provisions

Benefit provisions are described in North Carolina General Statues, Chapter 128.

Significant changes to the benefit provisions from the prior year's valuation were:

- Return of contributions with interest to all members prior to meeting vesting requirements

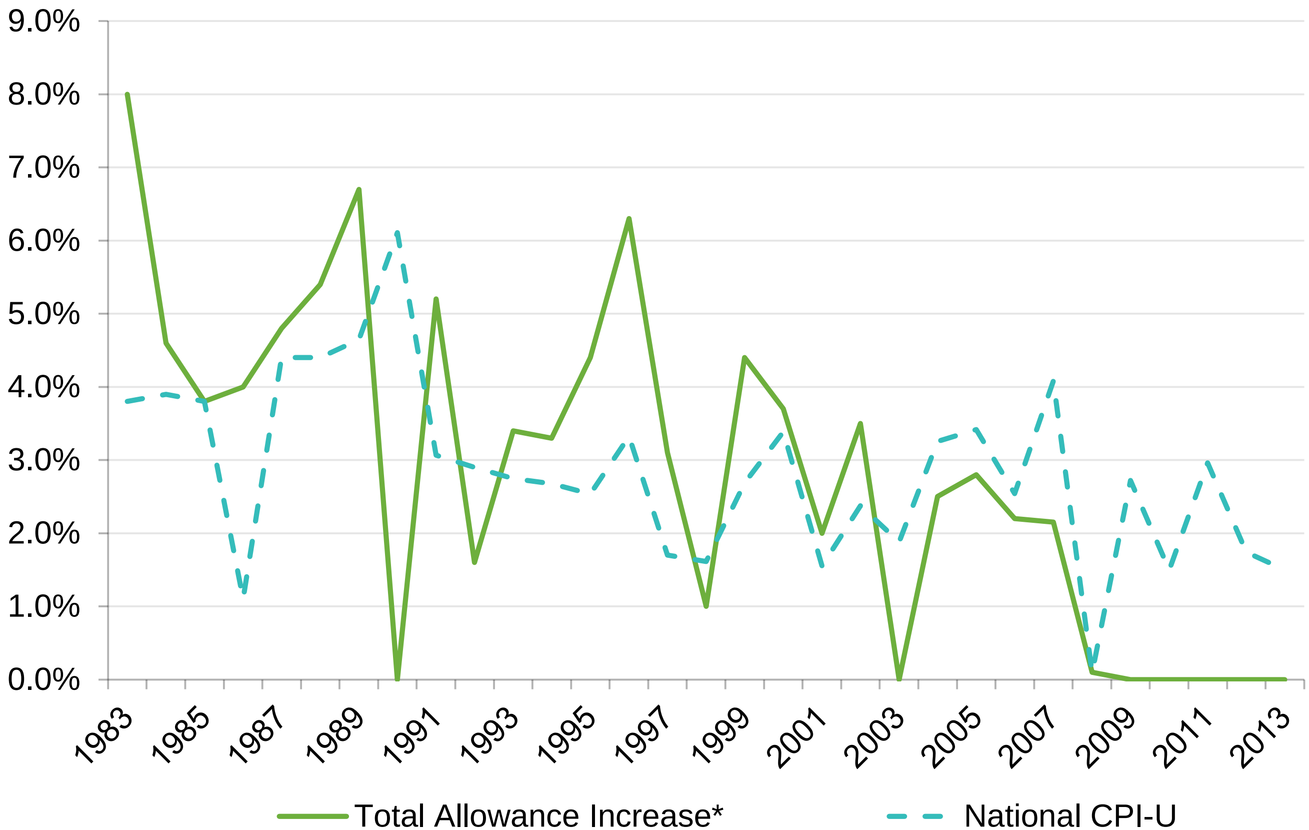
Most Public Sector Retirement Systems in the United States have undergone pension reform where the benefits of members (current retirees and active or future members) have been reduced

Because of the well-funded status of LGERS due to the participating employers contributing the actuarially required contribution, benefit cuts have not been needed in North Carolina.

A detailed summary of the benefit provisions is provided in Appendix C of the actuarial report.

Valuation Input

Benefit Provisions: Cost-of-Living Allowance Increase and CPI-U History



* Allowance increases are effective July 1 of the following year.

Generally the ad-hoc retirement allowance increase policy has helped retirees maintain purchasing power while helping to moderate contribution increases during times of down markets.

A detailed summary of the benefit provisions is provided in Appendix C of the actuarial report.

Valuation Input

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)
  - Inflation – 3.00%
  - Real wage growth – 0.50%
- There were no significant changes in actuarial assumptions from the prior year's valuation.

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.

The next experience study will be prepared as of December 31, 2014 and presented to the Board in October 2015. This policy of reviewing assumptions every five years is a best practice.

A detailed summary of the actuarial assumptions and methods is provided in Appendix D of the actuarial report.

Valuation Input

Funding Methodology

The Funding Methodology is the payment plan for LGERS and is composed of the following two components:

- Actuarial Cost Methods allocate costs to the actuarial accrued liability (i.e. the amount of money that should be in the LGERS fund) for past service and normal cost (i.e. the cost of benefits accruing during the year) for current service.
  - The Board of Trustees has adopted the frozen entry age cost method
  - Separate initial valuations for each employer to account for prior service. We have recommended the frozen entry age method to allow for each employer to pay for the initial cost of joining
  - Normal cost captures payment for all other unfunded liability. So for LGERS, normal cost effectively includes both the cost of benefits accruing during the year and the debt payment
  - Effective amortization period is dictated by demographics of active members and actuarial assumptions
- 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 the expected actuarial value
  - Assets corridor: not greater than 120% of market value and not less than 80% of market value

A detailed summary of the actuarial assumptions and methods is provided in Appendix D of the actuarial report.

Funding Methodology (continued)

- The valuation reflects the change in methodology for determining liquidation of unfunded accrued liability, approved by the Board of Trustees in January 2012.
- The outstanding balance of the unfunded accrued liability and the date of liquidation of accrued liability will be estimated as of June 30 each year. These estimates must be recalculated annually and adjusted according to each employer’s actual experience.
- Eight (8) employers were granted relief at 7/1/2014
- Five (5) employers are expected to be granted relief at 7/1/2015 based on this valuation

There were no significant changes in funding methodology from the prior year’s valuation.

A detailed summary of the actuarial assumptions and methods is provided in Appendix D of the actuarial report.

Valuation Results

Actuarial Value of Assets

Asset Data as of	December 31, 2013
(a) Beginning of Year Actuarial Value of Assets	$20,295,238,845
(b) Contributions	745,536,605
(c) Benefit Payments	(1,073,665,576)
(d) Net Cash Flow: (b) + (c)	(328,128,971)
(e) Expected Investment Return: [(a) x 7.25%] + [(d) x 3.625%]	1,459,510,141
(f) Expected End of Year Actuarial Value of Assets: (a) + (d) + (e)	21,426,620,015
(g) End of Year Market Value of Assets	21,784,255,100
(h) Excess of Market Value over Expected Actuarial Value of Assets: (g) – (f)	357,635,085
(i) 20% Adjustment toward Market Value of Assets: (h) x 20%	71,527,017
(j) Preliminary End of Year Actuarial Value of Assets: (f) + (i)	21,498,147,032
(k) Final End of Year Actuarial Value of Assets: (j) not less than 80% of (g) and not greater than 120% of (g)	21,498,147,032
(l) Estimated Net Investment Return on Actuarial Value	7.61%

The actuarial value of assets smooths investment gains/losses, resulting in less volatility in the employer contribution.

Higher than expected returns in 2009, 2010, 2012 and 2013 resulted in a $72 million asset gain recognition this year (item (i))

The Actuarial Value of Assets is provided in Section 4 of the actuarial report.

Historical Asset Returns

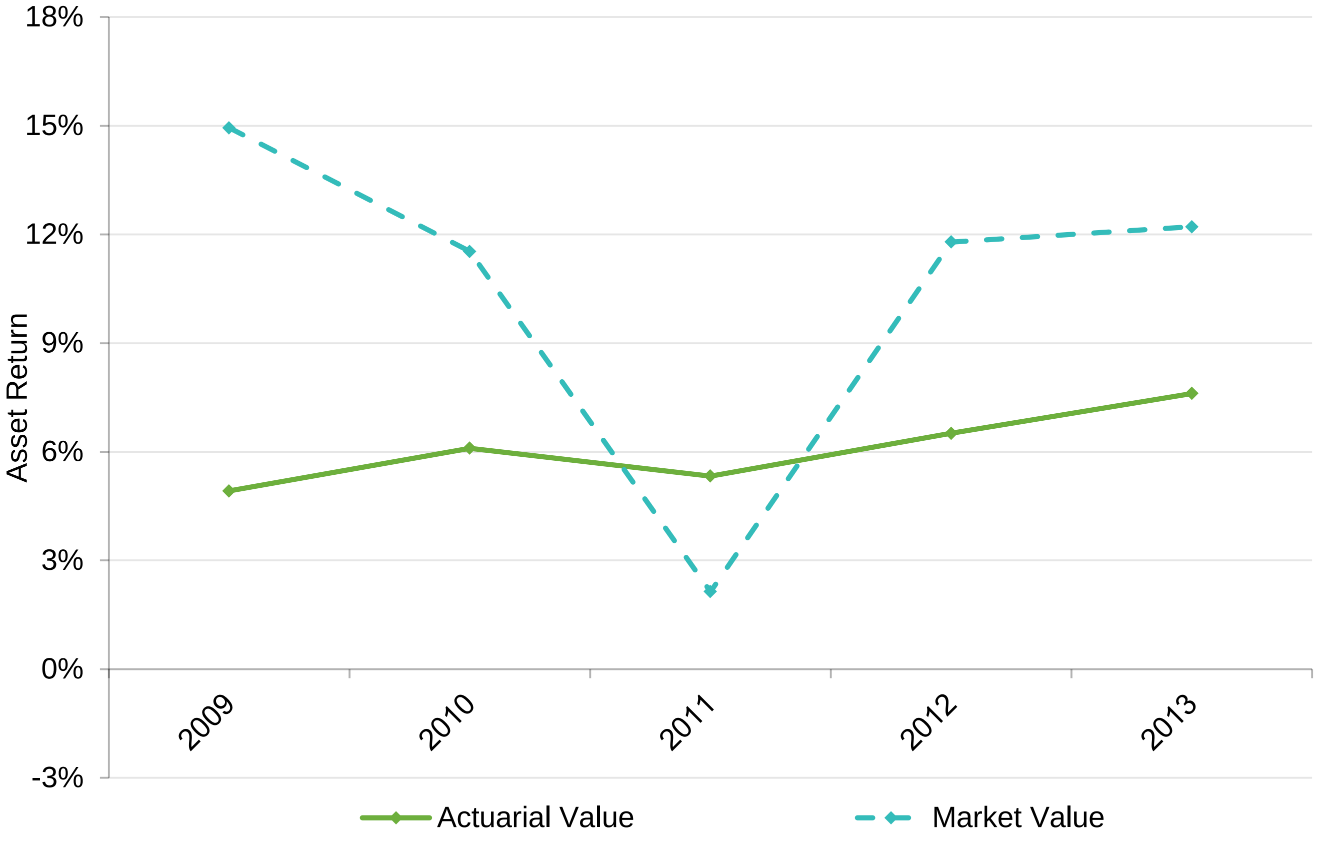
Calendar Year	Actuarial Value of Asset Return	Market Value of Asset Return
2006	9.19%	11.41%
2007	9.03%	8.36%
2008	2.97%	(19.47)%
2009	4.92%	14.94%
2010	6.10%	11.53%
2011	5.33%	2.14%
2012	6.51%	11.79%
2013	7.61%	12.21%
Average	6.44%	6.02%
Range	6.22%	34.41%

The average investment return recognized for purposes of determining the annual change in contribution each year is the actuarial value of assets return.

Currently, the average actuarial return of 6.44% tracks average market return of 6.02% rather well. But the range of returns is markedly less – 6.22% versus 34.41%. This results in much lower employer contribution volatility using the actuarial value of assets versus market, while ensuring that the actuarial needs of LGERS are met.

The valuation assumes that the funds will earn a 7.25% asset return. This table provides a history of the Actuarial Value and Market Value of Asset returns.

Asset Returns: Actuarial Value and Market Value



The actuarial value of assets smooths investment gains and losses.

A detailed summary of the asset values is provided in Section 4 of the actuarial report.

Actuarial Value of Assets: Compared to Market Value

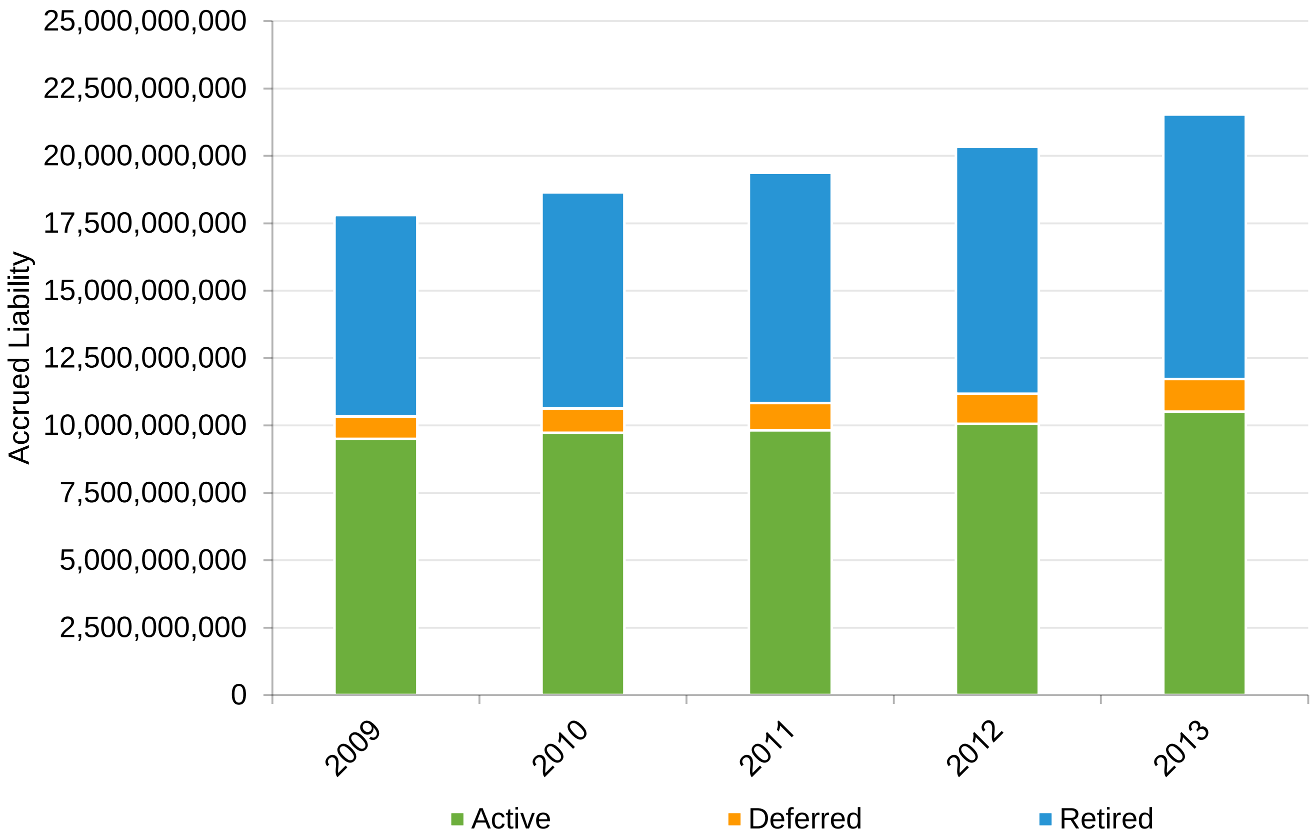
For the first time in several years the market value of assets is higher than the actuarial value of assets, which is used to determine employer contributions. This indicates that there are unrecognized asset returns to be recognized in future valuations which will mitigate the impact of asset returns that are less than the assumed return of 7.25%.

As a result, the upward pressure on contributions that we have seen since the Great Recession has been reversed, as seen in the projections of potentially higher funded ratios and lower employer contributions later in this presentation.

A detailed summary of the asset values is provided in Section 4 of the actuarial report.

Valuation Results

Actuarial Accrued Liability (AAL)

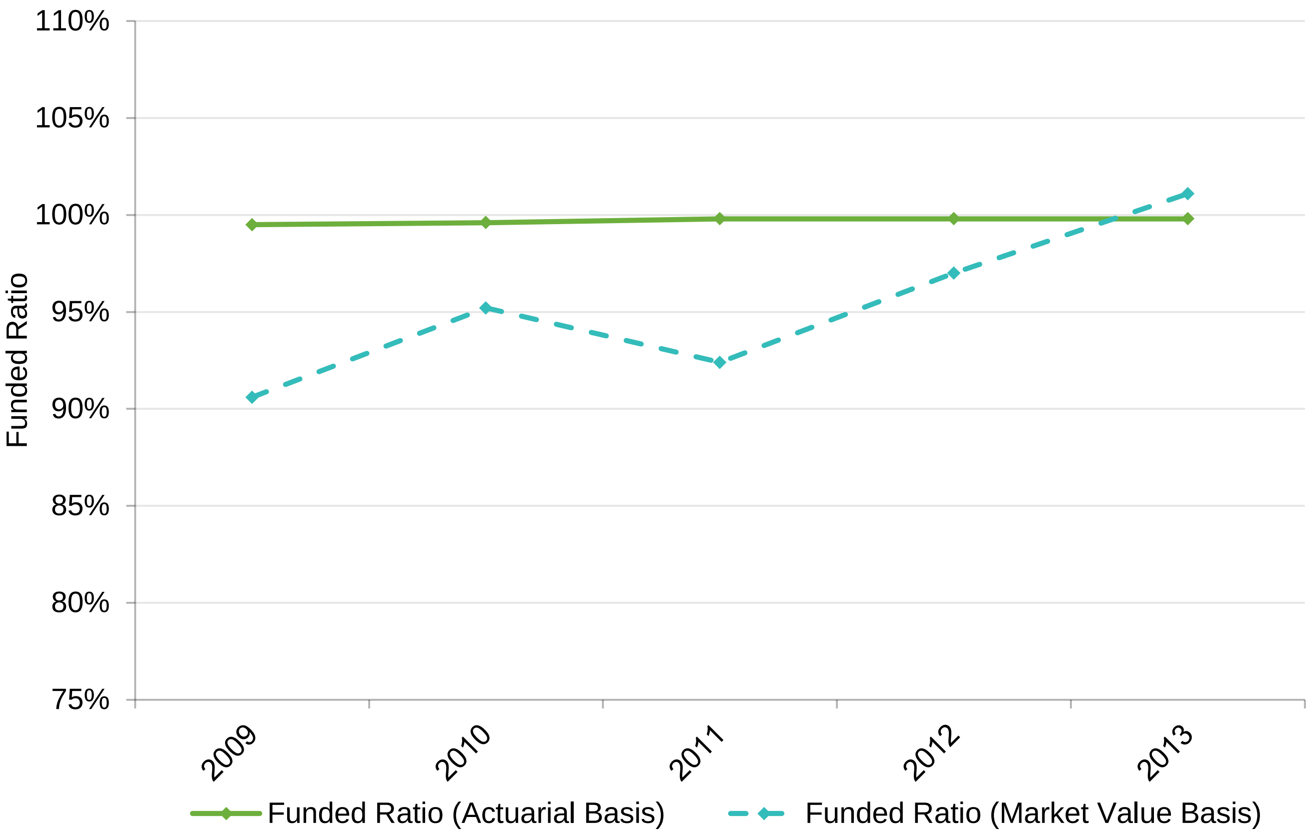


The AAL increased from $20.3 billion to $21.5 billion during 2013. In a frozen entry age, cost-sharing plan like LGERS, the AAL will track closely to assets. All liability and asset gains and losses serve to directly increase or decrease the normal cost.

A detailed summary of the AAL is provided in Section 5 of the actuarial report.

Valuation Results

Funded Ratio: AAL Divided by AVA



Again, in a frozen entry age, cost-sharing plan like LGERS, the AAL will track closely to assets.

The funded ratio on an actuarial basis remained at 99.8% at December 31, 2013.

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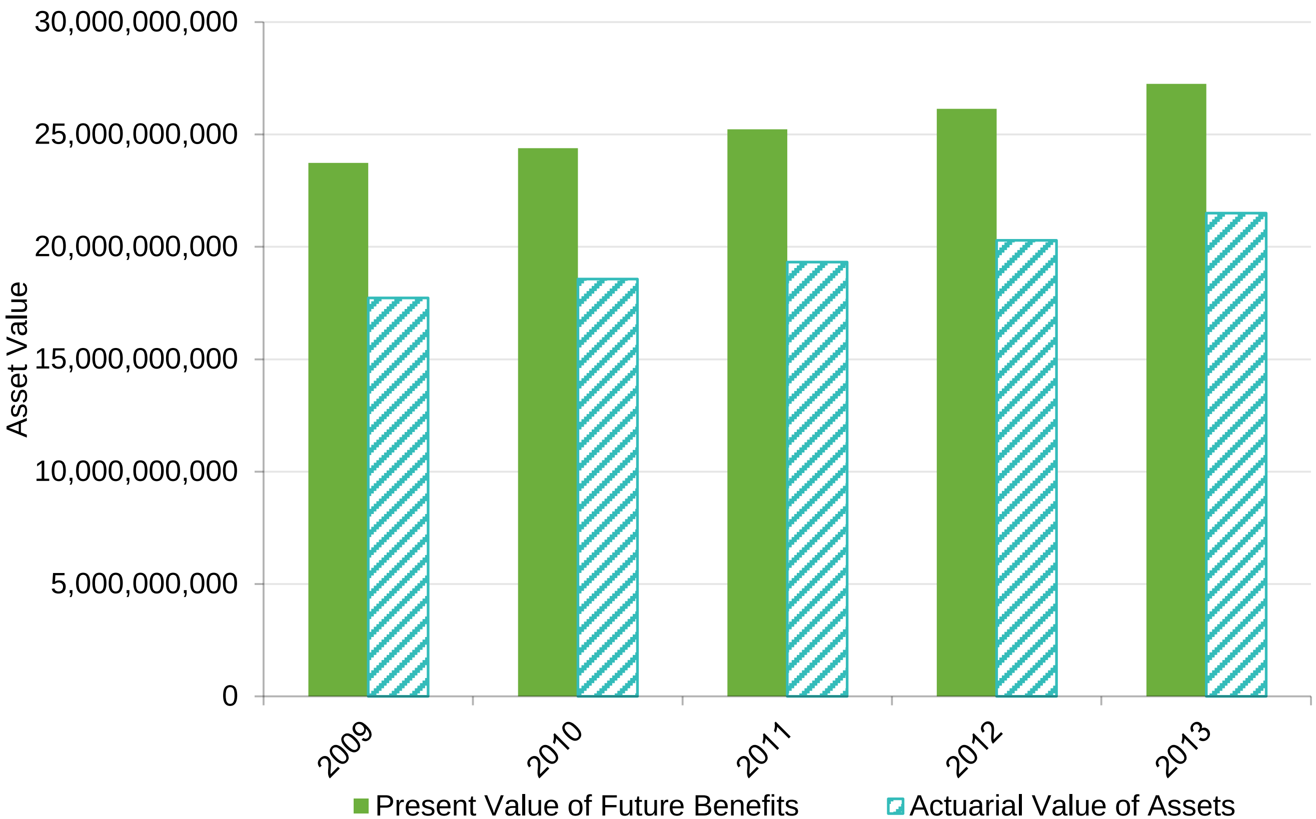
Present Value of Future Benefits and Actuarial Value of Assets (AVA)

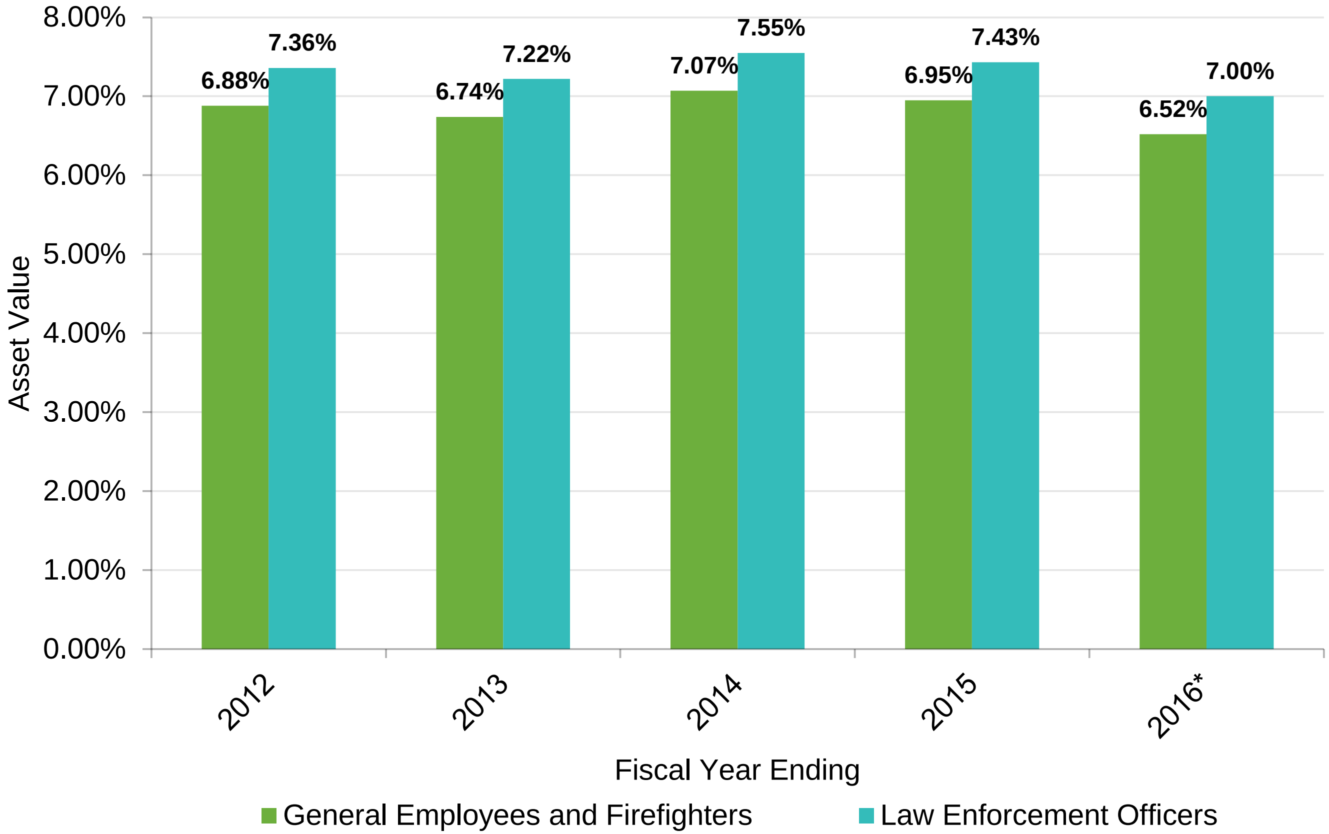


LGERS is an open plan, which means that new members enter the plan each year. In an open plan, liabilities are expected to grow from one year to next as more benefits accrue and the membership approaches retirement. The funded ratio on the present value of future benefits basis has steadily increased as the markets have recovered and the employers and members have consistently made the contributions under the funding policy.

A detailed summary of the AVA is provided in Section 4 of the actuarial report, and a detailed summary of the present value of future benefits is provided in Section 5 of the actuarial report.

Valuation Results

Employer Normal Required Contributions



* Subject to the impact of future legislative changes effective during that fiscal year.

All liability and asset gains (losses) serve to directly decrease (increase) the normal cost rate.

The downward trend in contribution rates is the combination of recent assets gains and salary increases less than assumed.

A detailed summary of the employer required contribution rates is provided in Section 5 of the actuarial report.

Employer Normal Contribution Rates for General Employees and Firefighters

Valuation Date	Rate Effective	Funding in Effect	Gain/(Loss)	Preliminary Employer Normal Rate	Change due to Legislation	Final Employer Normal Rate
12/31/13	7/1/15	7.07%	0.55%	6.52%	N/A	N/A
12/31/12	7/1/14	7.07%	0.13%	6.94%	0.01%	6.95%
12/31/11	7/1/13	6.74%	(0.33)%	7.07%	0.00%	7.07%
12/31/10	7/1/12	6.88%	0.18%	6.70%	0.04%	6.74%
12/31/09	7/1/11	6.35%	(0.53)%	6.88%	0.00%	6.88%

The employer required contribution rates are provided in Section 5 of the actuarial report.

Valuation Results

Reconciliation of the Change in the Employer Normal Contribution Rates

	General Employees and Firefighters	Law Enforcement Officers
Fiscal year ending June 30, 2015 Preliminary ARC (based on December 31, 2012 valuation)	6.94%	7.42%
Impact of Legislative Changes	0.01%	0.01%
Fiscal year ending June 30, 2015 Final ARC	6.95%	7.43%
Non-Investment (Gain)/Loss	(0.28)%	(0.28)%
Change Due to Investment (Gain)/Loss	(0.15)%	(0.15)%
Fiscal year ending June 30, 2016 Preliminary ARC (based on December 31, 2013 valuation)	6.52%	7.00%

Demographic gain primarily due to salary increases less than assumed

Investment gain is a recognition of deferred asset gains from 2009, 2010, 2012 and 2013.

The current normal contribution rate for fiscal year ending 2015 is 7.07% for general employees and firefighters and 7.55% for law enforcement officers. This rate would result in an undistributed gain of 0.55%.

Each 1% COLA is equivalent to 0.24% of payroll and each 0.01% increase in benefit rate is equal to 0.33% of payroll.

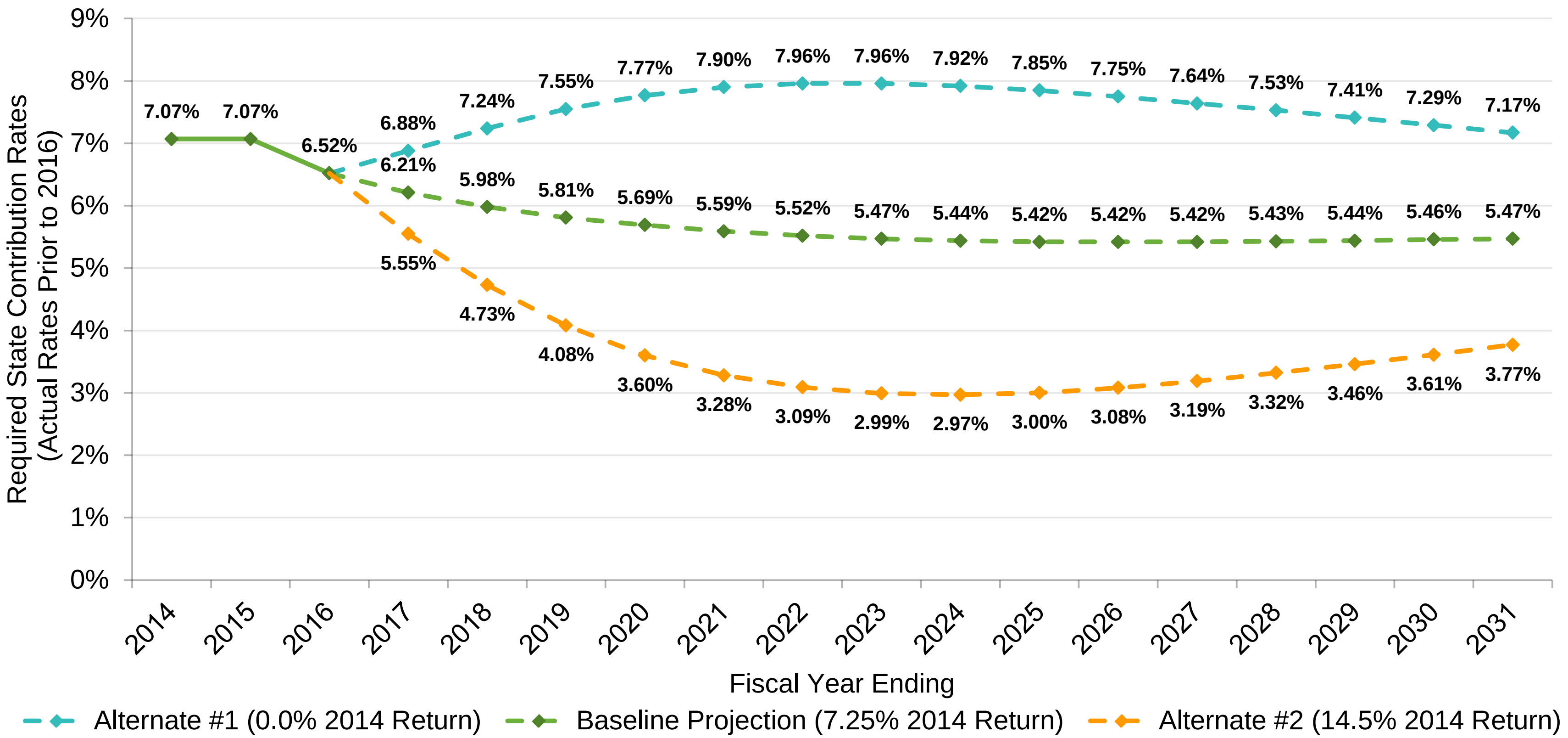
A detailed summary of the employer required contribution rates is provided in Section 5 of the actuarial report.

Projections

Projections: Employer Normal Required Contribution Rates

- Projections of employer contribution requirements and funded status into the future can be helpful planning tools for stakeholders.
- Projections of the actuarial valuation are known as deterministic projections. Deterministic projections are based on one scenario in the future.
- Baseline deterministic projection is based on:
  - December 31, 2013 valuation results
  - December 31, 2013 valuation assumptions to project future valuation results, including:
    - Valuation interest rate of 7.25% for all years
    - No cost-of-living adjustments granted
    - Assumes future pay increases based on long-term valuation
- Two alternate deterministic projections based on the same assumptions as the baseline deterministic projection, except
  - First alternate deterministic projection assumes a 0.0% asset return for calendar year 2014.
  - Second alternate deterministic projection assumes a 14.5% asset return for calendar year 2014.

Projections: Projected Employer Normal Required Contribution Rates for General Employees and Firefighters



The Employer Required Contribution Rate trends to around 5.5%, which is the level of the cost of benefits accrued, or the long term employer cost of LGERS when there is no pension debt.

A detailed summary of the deterministic projections is provided in Section 8 of the actuarial report.

Key Takeaways

Key results of the December 31, 2013 valuation as compared to the December 31, 2012 valuation were:

- Market value returns of 12.21% compared to 7.25% assumed
- Increase in covered payroll of 2.3% compared to 3% assumed increase
- Recent legislation signed into law including:
  - Return of contributions with interest to all members prior to meeting vesting requirements
- No significant changes in actuarial assumptions or funding methodology from the prior year's valuations

When compared to the December 31, 2012 baseline projections, the above resulted in:

- Lower employer required base contribution rates for fiscal year ending June 30, 2016
  - 6.52% in the valuation compared to 7.11% in the baseline projection for general employees and firefighters
  - 7.00% in the valuation compared to 7.59% in the baseline projection for law enforcement officers
- Lower projected benefit amounts being accrued by active members

Key Takeaways

LGERS is well funded compared to its peers. This is due to:

- Stakeholders working together to keep LGERS well-funded since inception
- A history of 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
- An ad hoc cost-of-living adjustment, which typically only provides benefit increases when certain financial conditions are met, that supports the health of the system
- Modest changes in benefits when compared to peers

Continued focus on these measures will be needed to maintain the solid status of LGERS well into the future.

Certification

The results were prepared under the direction of Michael Ribble and Larry Langer who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. These results have been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about them.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law.

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Questions?

THANK YOU