

Local Governmental Employees' Retirement System Principal Results of Actuarial Valuation as of December 31, 2015

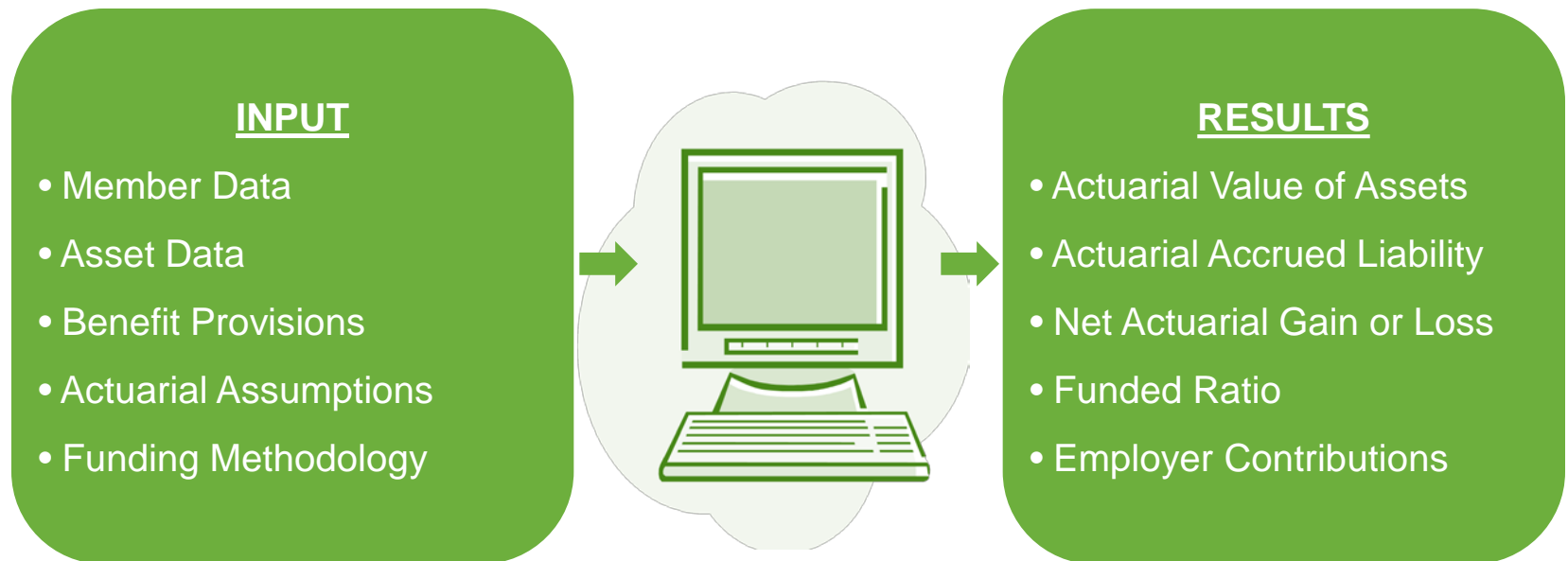
Board of Trustees Meeting
Larry Langer and Mike Ribble
October 27, 2016

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 progress on funding LGERS,
 - 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.



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, 2015 valuation as compared to the December 31, 2014 valuation were:

- Market value returns of 0.34% compared to 7.25% assumed
- Increase in covered payroll of 3.9% compared to approximately 3% expected
- Recent changes approved by the Board:
 - 0.105% cost-of-living adjustment at July 1, 2016
- Changes in actuarial assumptions and methods in accordance with the latest experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016
- The Employer Contribution Rate Stabilization Policy adopted by the Board of Trustees on January 21, 2016

When compared to the December 31, 2014 projections, the above resulted in:

- Higher actuarially determined employer contribution rates for fiscal year ending June 30, 2018
 - 6.25% in the valuation compared to 6.20% in the baseline projection for general employees and firefighters
 - 7.84% in the valuation compared to 6.68% in the baseline projection for law enforcement officers
- Higher projected benefit amounts being accrued by active members



Valuation Input

Valuation Input Membership Data



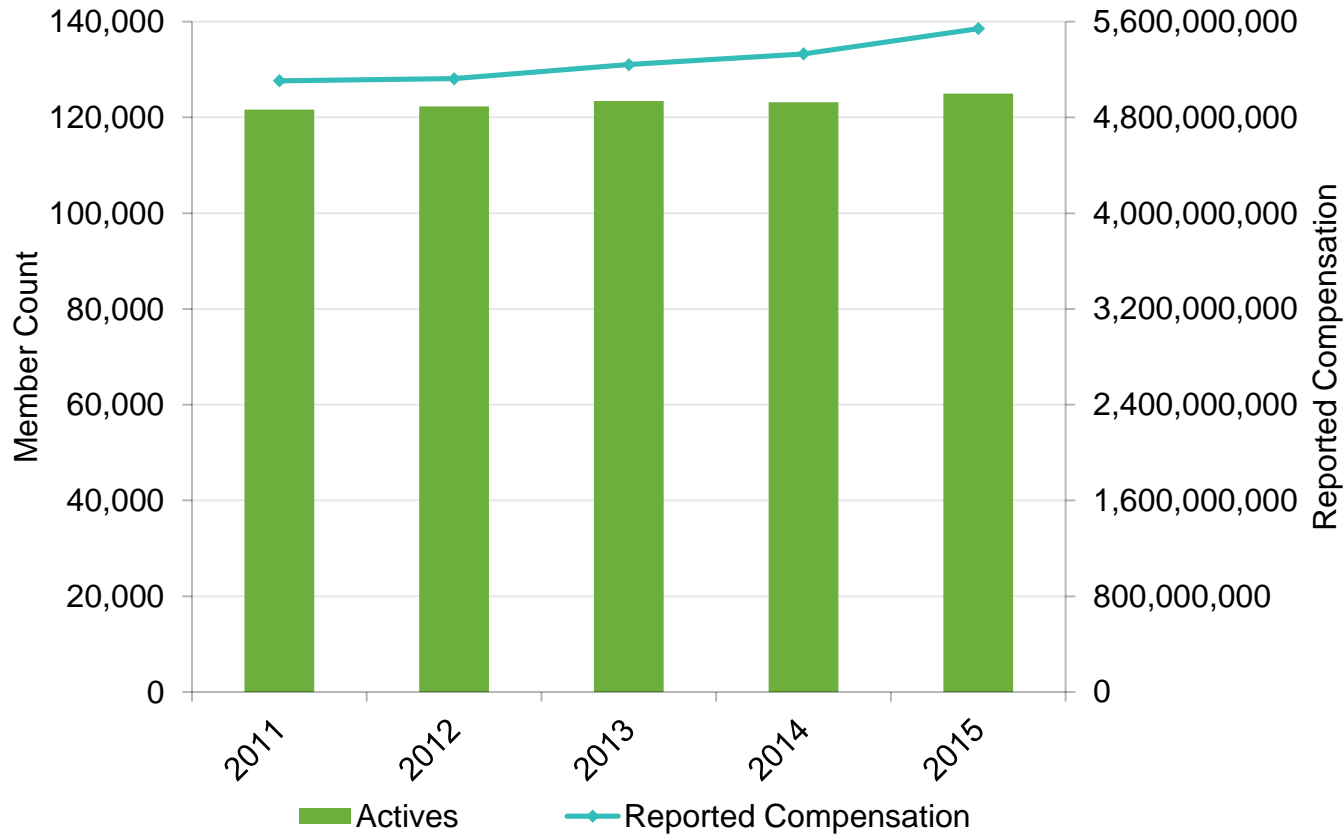
Number as of	12/31/2015	12/31/2014
Active members	124,974	123,184
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	59,289	55,298
Retired members and survivors of deceased members currently receiving benefits	<u>63,110</u>	<u>60,408</u>
Total	247,373	238,890

The number of active members increased by 1.5% 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 4.5% 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.

Membership Data: Active Members

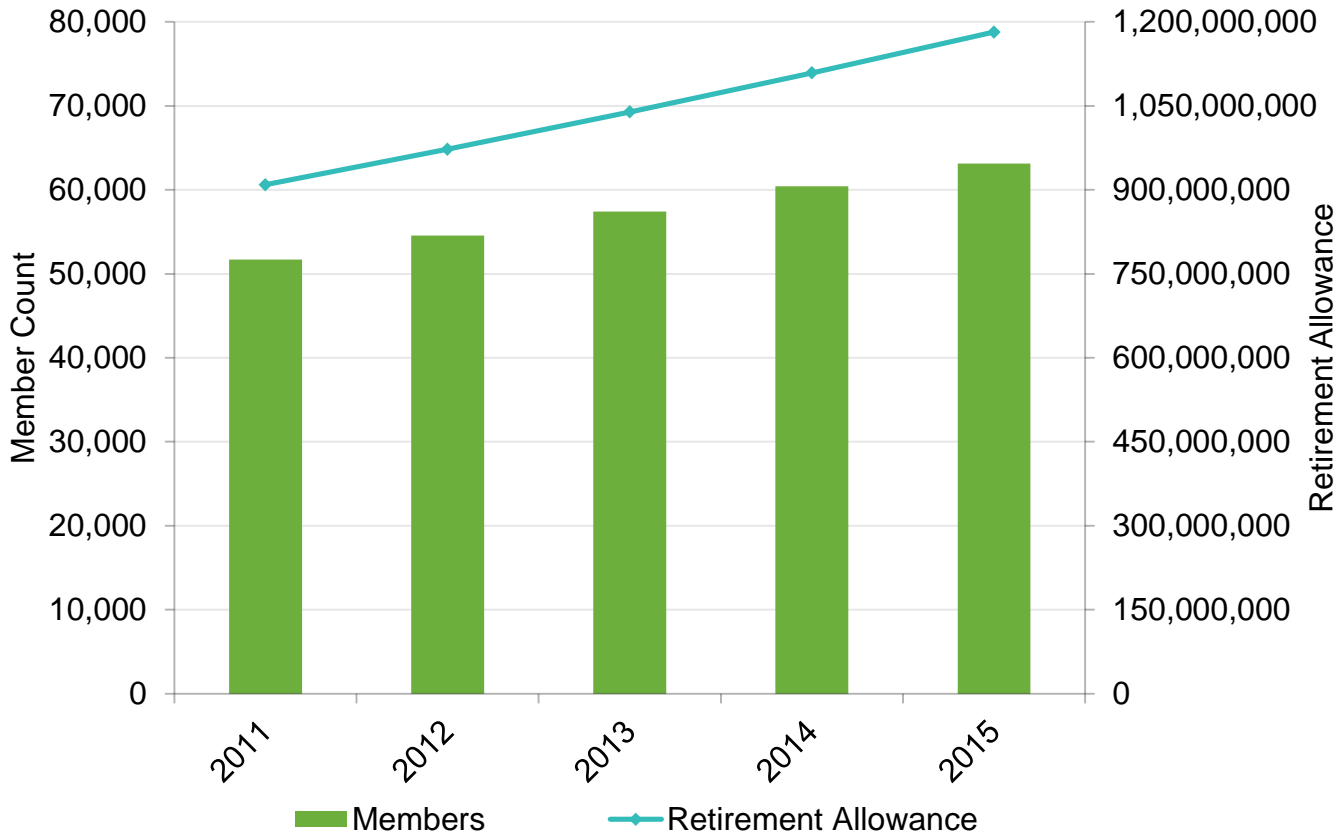


Reported compensation has increased by 3.9%. Covered payroll is expected to increase by approximately 3% annually in the future.

Payroll that is increasing faster than we assume results in more benefits accruing than we anticipate, but also more contributions supporting the system.

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

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

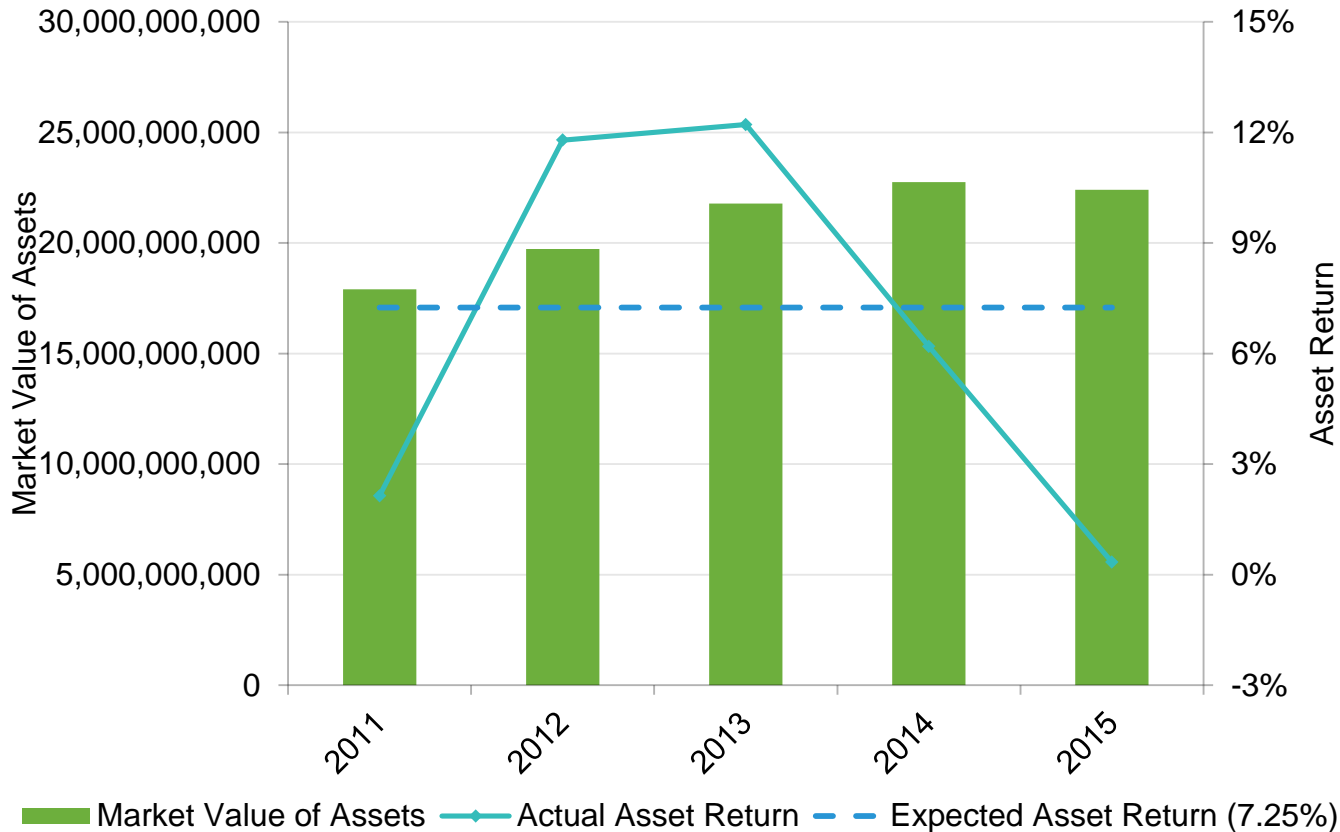


Asset Data as of	12/31/2015	12/31/2014
Beginning of Year Market Value of Assets	\$ 22,744,942,754	\$ 21,784,255,100
Contributions	795,382,032	769,285,248
Benefit Payments	(1,213,496,597)	(1,145,663,992)
Investment Income	<u>77,008,631</u>	<u>1,337,066,398</u>
Net Increase/(Decrease)	(341,105,934)	960,687,654
End of Year Market Value of Assets	\$ 22,403,836,820	\$ 22,744,942,754
Estimated Net Investment Return on Market Value	0.34%	6.19%

The market value of assets is \$22.4 billion as of December 31, 2015 and \$22.7 billion as of December 31, 2014. The investment return for the market value of assets for calendar year 2015 was 0.34%.

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

Asset Data: Market Value of Assets and Asset Returns

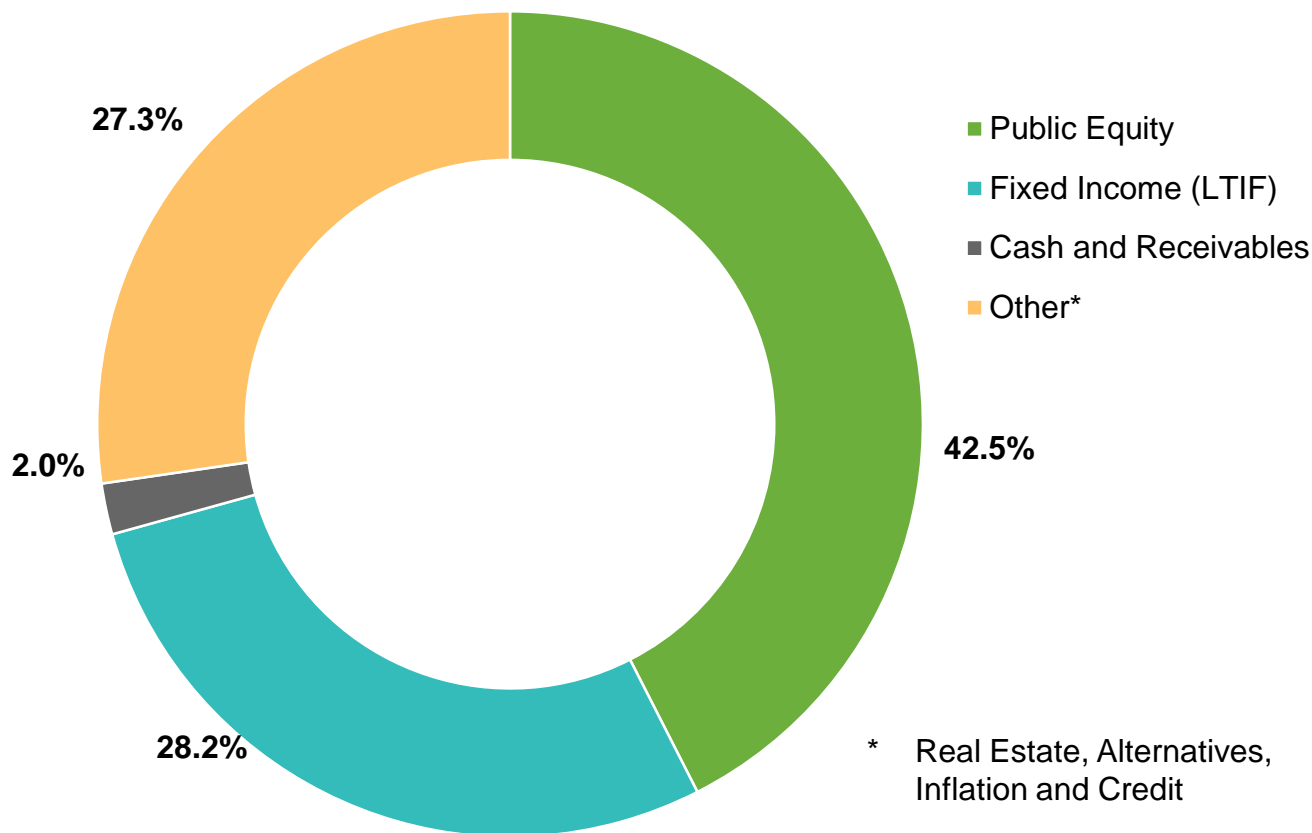


Returns were less than the 7.25% assumed rate of return, resulting in higher required contributions than anticipated as of December 31, 2015 based on the baseline projections presented in the December 31, 2014 actuarial report.

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

Valuation Input

Asset Data: Allocation of Investments by Category



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.

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 Statutes

The valuation reflects the following change in benefit provisions from the prior year's valuation:

- 0.105% cost-of-living adjustment at July 1, 2016

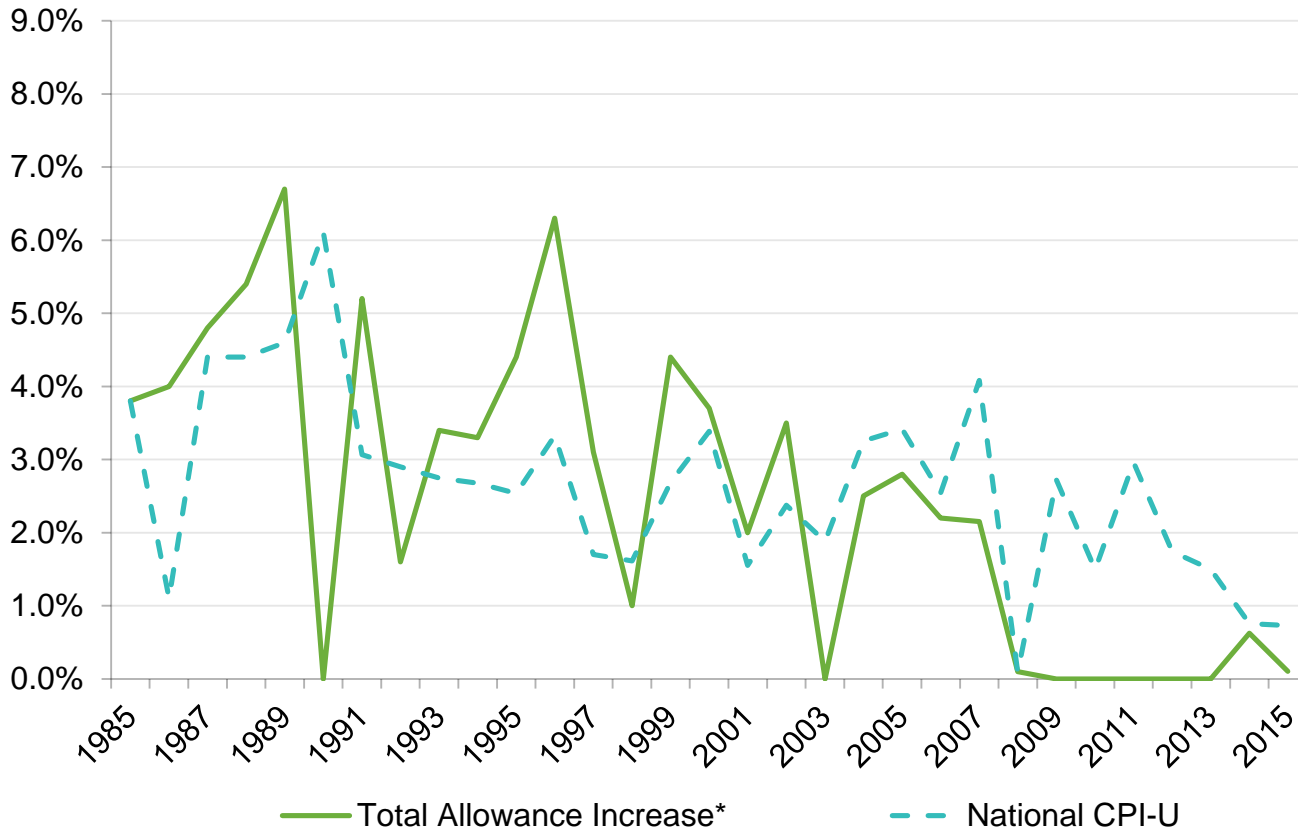
Many Public Sector Retirement Systems in the United States have undergone pension reform where the benefits of members (current retirees and active or future members) have been reduced.

Because of the well-funded status of LGERS due to the participating employers contributing the actuarially determined employer 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



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.

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

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%
- The actuarial assumptions, actuarial cost method, amortization method, and asset valuation method were updated since the prior year’s valuation in accordance with the latest experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016.

The latest assumptions were adopted for use with the December 31, 2015 actuarial valuation, based on the experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016.

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 three 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 Entry Age Normal as its actuarial cost method
 - Develops normal costs that stay level as a percent of payroll
- Asset Valuation Methods smooth or average the market value returns over time to alleviate contribution volatility that results from market returns.
 - Asset returns in excess of or less than the expected return on market value of assets reflected over a five-year period
 - 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.

Valuation Input Funding Methodology (continued)



- Amortization Methods determine the payment schedule for unfunded actuarial accrued liability (i.e. the difference between the actuarial accrued liability and actuarial value of assets)
 - Payment level: the payment is determined as a level dollar amount, similar to a mortgage payment
 - Payment period: a 12-year closed amortization period was adopted for fiscal year ending 2018. A new amortization base is created each year based on the prior year's experience

When compared to other Public Sector Retirement Systems in the United States, the funding policy for LGERS is quite aggressive in that the policy pays down the pension debt over a much shorter period of time (12 years) compared to the national average of around 24 years. As such it is a best practice in the industry.

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

Valuation Input Funding Methodology (continued)



- For employers who joined the System prior to November 1, 2015, the outstanding balance of the unfunded initial prior service liability and the date of liquidation of the 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.
- Seven (7) employers were granted relief at 7/1/2016
- Four (4) employers are expected to be granted relief at 7/1/2017 based on this valuation

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



Valuation Results

Valuation Results

Actuarial Value of Assets



Asset Data as of	12/31/2015
Beginning of Year Market Value of Assets	\$ 22,744,942,754
Contributions	795,382,032
Benefit Payments	<u>(1,213,496,597)</u>
Net Cash Flow	(418,114,565)
Expected Investment Return	1,633,851,697
Expected End of Year Market Value of Assets	23,960,679,886
End of Year Market Value of Assets	22,403,836,820
Excess of Market Value over Expected Market Value of Assets	(1,556,843,066)
80% of 2015 Asset Gain/(Loss)	(1,245,474,453)
60% of 2014 Asset Gain/(Loss)	N/A
40% of 2013 Asset Gain/(Loss)	N/A
20% of 2012 Asset Gain/(Loss)	<u>N/A</u>
Total Deferred Asset Gain/(Loss)	(1,245,474,453)
Preliminary End of Year Actuarial Value of Assets	23,649,311,273
Final End of Year Actuarial Value of Assets (not less than 80% and not greater than 120% of Market Value)	23,649,311,273
Estimated Net Investment Return on Actuarial Value	5.87%

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

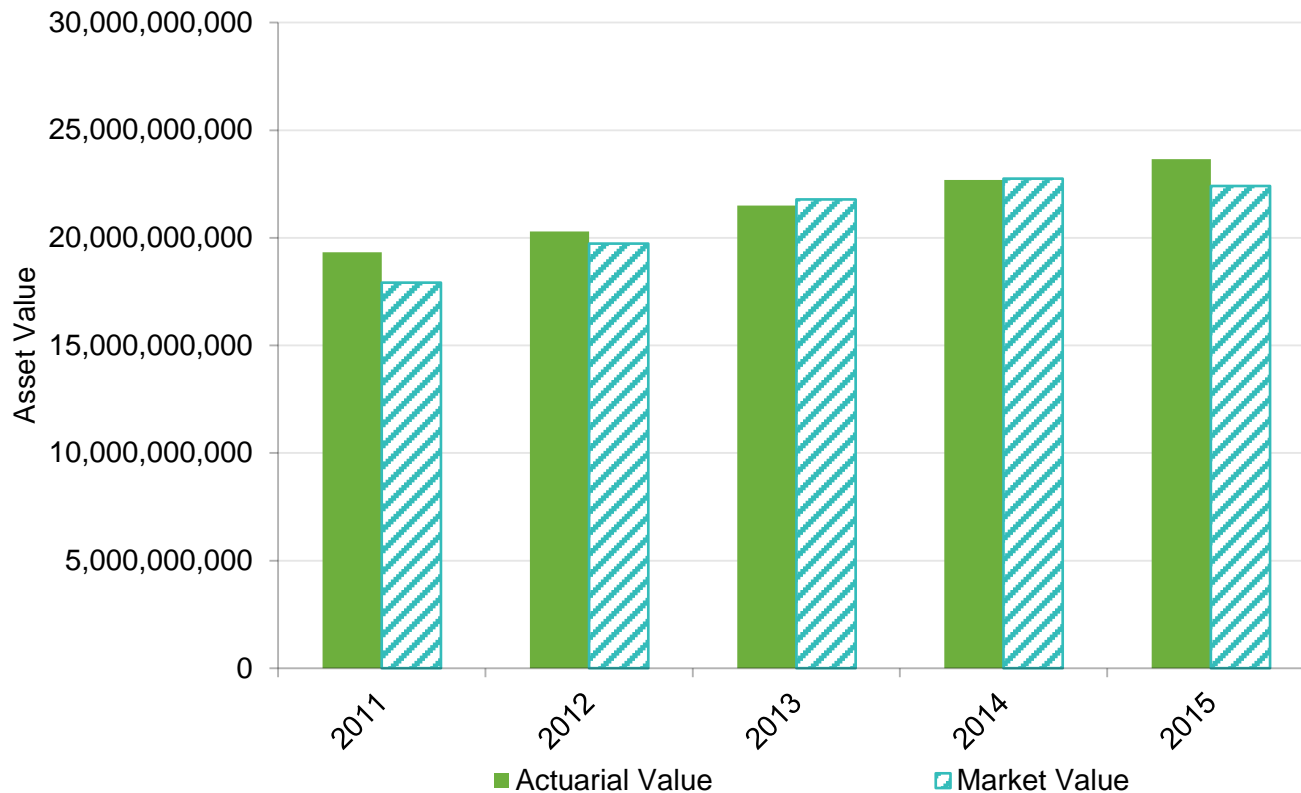
The new asset valuation method adopted with the experience study assumptions re-set the actuarial value of assets to the market value of assets at December 31, 2014, effective for the December 31, 2015 valuation.

Lower than expected returns in 2015 resulted in an actuarial value of asset return for calendar year 2015 of 5.87% and an asset loss of \$311 million during 2015.

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

Valuation Results

Actuarial Value of Assets: Compared to Market Value



The market value of assets is lower than the actuarial value of assets, which is used to determine employer contributions. This indicates that there are unrecognized asset losses to be recognized in future valuations.

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

Valuation Results

Historical Asset Returns



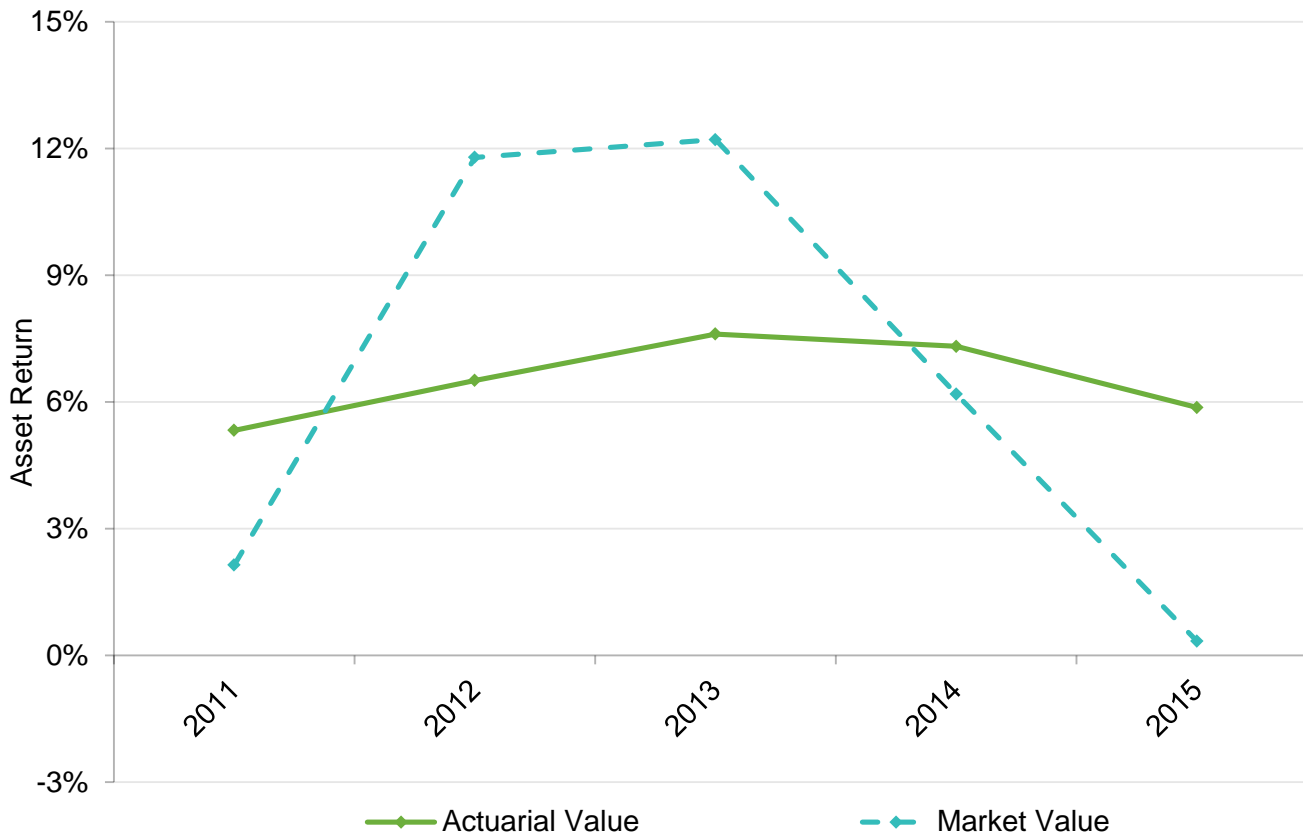
Calendar Year	Actuarial Value of Asset Return	Market Value of Asset Return
2006	9.19%	11.41%
2007	9.03%	8.36%
2008	2.97%	-19.47%
2009	4.92%	14.94%
2010	6.10%	11.53%
2011	5.33%	2.14%
2012	6.51%	11.79%
2013	7.61%	12.21%
2014	7.32%	6.19%
2015	5.87%	0.34%
Average	6.47%	5.46%
Range	6.22%	34.41%

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 6.47% tracks average market return of 5.46% 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

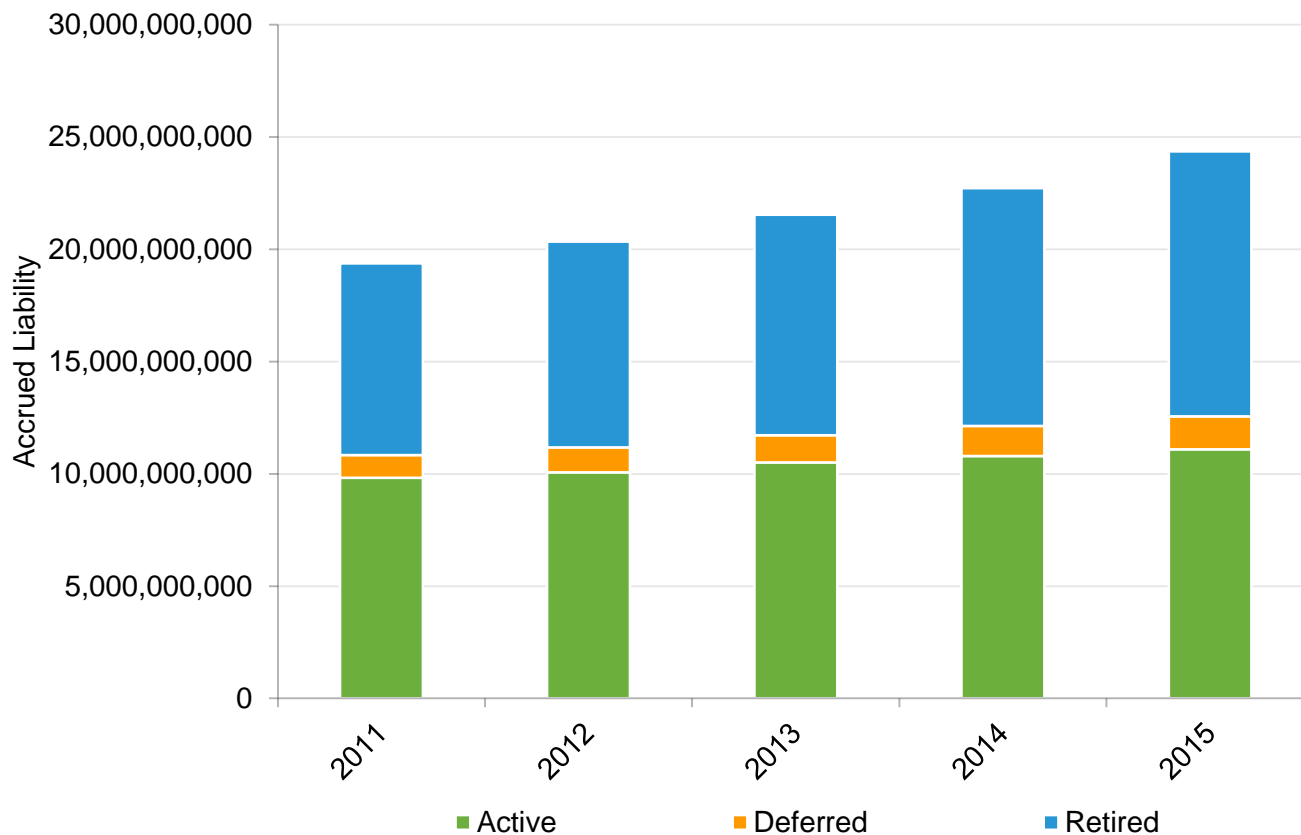


The actuarial value of assets smooths investment gains/losses, resulting in less volatility in the employer contribution.

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

Valuation Results

Actuarial Accrued Liability (AAL)



The AAL increased from \$22.7 billion to \$24.4 billion during 2015. 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.

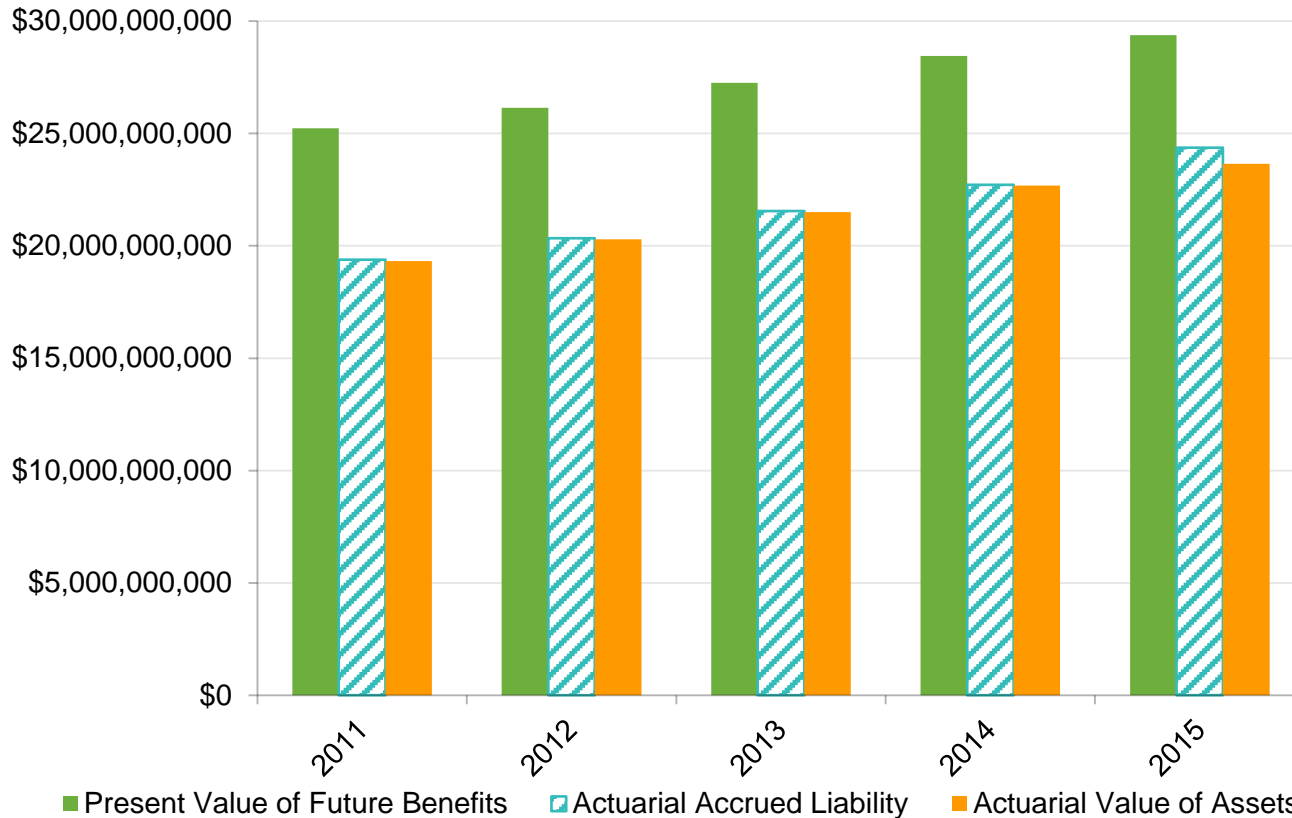
Assumption changes increased the AAL by \$406 million at December 31, 2014.

Legislation increased the AAL by \$13 million at December 31, 2015.

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

Valuation Results

Present Value of Future Benefits, Actuarial Accrued Liability (AAL), and Actuarial Value of Assets (AVA)



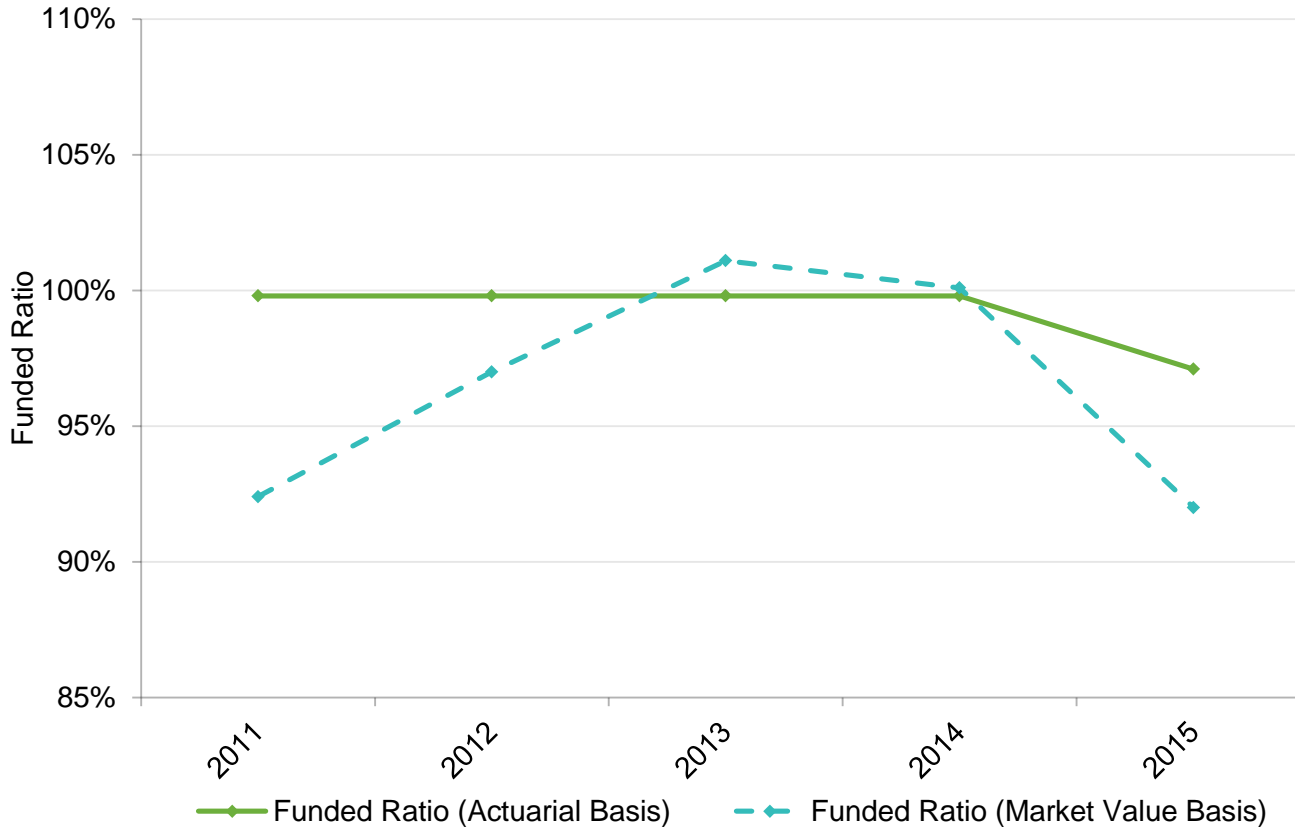
The present value of future benefits has increased over the past five years.

The present value of future benefits increased from \$28.5 billion at December 31, 2014 to \$29.4 billion at December 31, 2015.

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

Valuation Results

Funded Ratio: AAL Divided by AVA



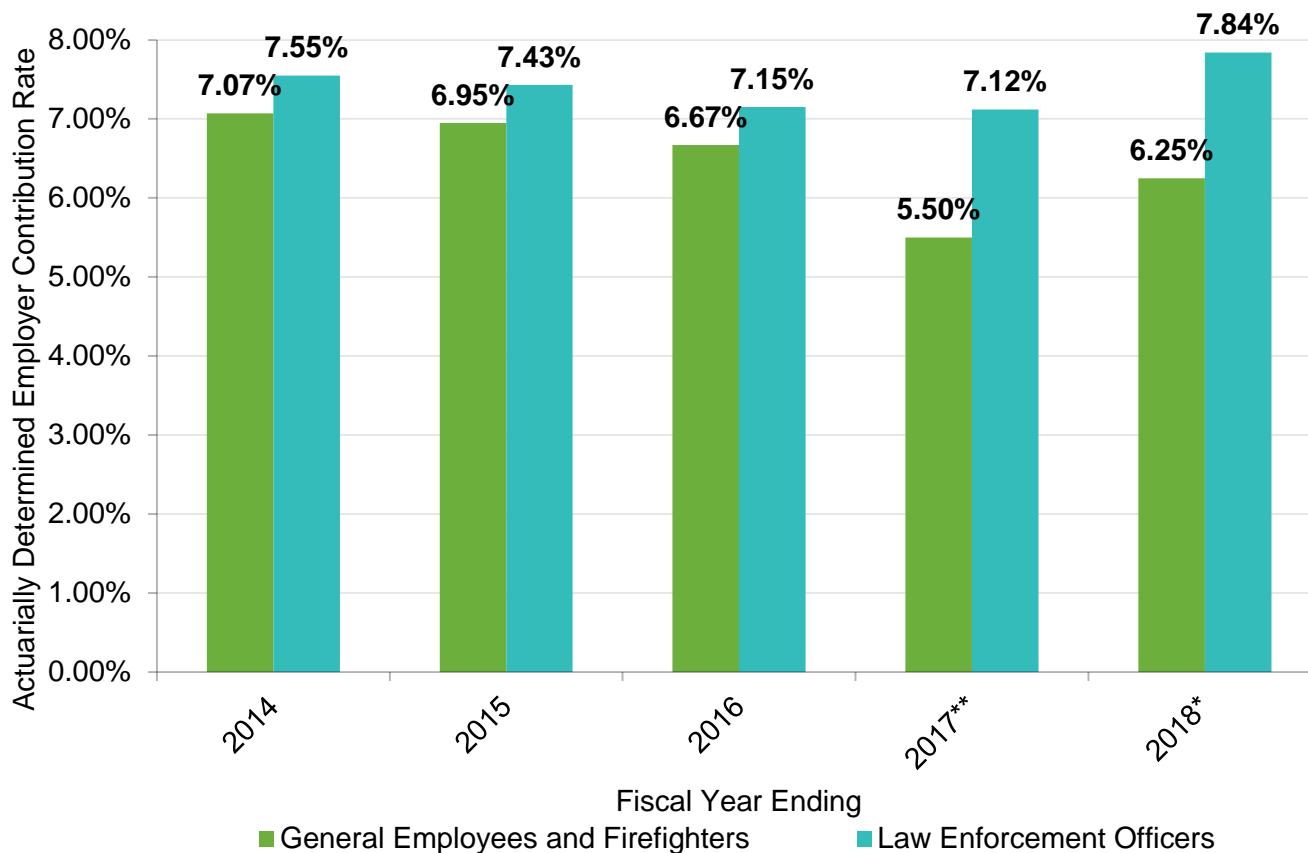
The ratio of assets to liabilities shows the health of the plan on an accrued basis.

The funded ratio on an actuarial basis decreased from 99.8% at December 31, 2014 to 97.1% at December 31, 2015.

Funded ratios for valuations prior to December 31, 2015 are based on accrued liabilities calculated under the frozen entry age cost method. Under this cost method, the AAL will track closely to assets.

Valuation Results

Actuarially Determined Employer Contributions



For contributions prior to fiscal year ending 2017, the actuarially determined employer contribution rates consisted of only a normal cost rate. All liability and asset gains (losses) served to directly decrease (increase) this rate.

Starting with the contribution for fiscal year ending 2017, the actuarially determined employer contribution rates are split into the normal cost rate and the accrued liability rate.

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

** Includes impact of the experience study.

A detailed summary of the actuarially determined employer contribution rates is provided in Section 6 of the actuarial report.

Employer Contribution Rate Stabilization Policy (ECRSP)



- The ECRSP was adopted by the Board of Trustees on January 21, 2016.
- The ECRSP sets recommended employer contributions for general employees and firefighters at 7.25% of payroll for fiscal year ending 2017 with 0.25% increases each fiscal year, with the following additional adjustments, if applicable:
 - If the underlying actuarially determined employer contribution rate (ADEC) for a given fiscal year is 50% higher than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal years increases 0.50%;
 - If the underlying ADEC for a given fiscal year is 50% lower than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal year decreases 0.50%;
 - If the General Assembly grants any additional COLA beyond the amount of COLA granted by the Board, increases the multiplier for active employees, or changes the benefit structure in a way that has a cost to the system, the schedule of contributions for the current and future fiscal years will be increased by the cost of the benefit enhancement. The cost of any COLA granted by the Board under the authority allowed by statute will not impact the scheduled contribution rates.

Employer Contribution Rate Stabilization Policy (ECRSP)



- Contribution rates for law enforcement officers will be 0.75% higher than contribution rates for general employees.
- The preliminary ADEC for fiscal year ending 2018 is 6.25% for general employees and firefighters and 7.84% for law enforcement officers based on this valuation.
- The ECRSP would result in a recommended contribution rate of 7.50% of payroll for general employees and firefighters and 8.25% of payroll for law enforcement officers for fiscal year ending 2018.

Actuarially Determined Employer Contribution (ADEC) Rates for General Employees and Firefighters



Valuation Date	Rate Effective	Preliminary ADEC	Change due to Legislation*	Final ADEC	Actual Contribution
12/31/2015	7/1/2017	6.25%	N/A	N/A	N/A
12/31/2014	7/1/2016	6.39%	-0.89%	5.50%	7.25%
12/31/2013	7/1/2015	6.52%	0.15%	6.67%	6.67%
12/31/2012	7/1/2014	6.94%	0.01%	6.95%	7.07%
12/31/2011	7/1/2013	7.07%	0.00%	7.07%	7.07%

* The change due to legislation for the contribution effective 7/1/2016 includes a 0.92% decrease in the ADEC due to the experience study and a 0.03% increase in the ADEC due to the cost-of-living adjustment at 7/1/2016.

For general employees and firefighters, the appropriated rate for fiscal year ending 2017 is 7.25% of payroll. The preliminary ADEC for fiscal year ending 2018 is 6.25% of payroll.

Each 1% COLA is equivalent to 0.30% of payroll and each 0.01% increase in benefit rate is equal to 0.36% of payroll.

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

Actuarially Determined Employer Contribution (ADEC) Rates for Law Enforcement Officers



Valuation Date	Rate Effective	Preliminary ADEC	Change due to Legislation*	Final ADEC	Actual Contribution
12/31/2015	7/1/2017	7.84%	N/A	N/A	N/A
12/31/2014	7/1/2016	6.87%	0.25%	7.12%	8.00%
12/31/2013	7/1/2015	7.00%	0.15%	7.15%	7.15%
12/31/2012	7/1/2014	7.42%	0.01%	7.43%	7.55%
12/31/2011	7/1/2013	7.55%	0.00%	7.55%	7.55%

* The change due to legislation for the contribution effective 7/1/2016 includes a 0.22% increase in the ADEC due to the experience study and a 0.03% increase in the ADEC due to the cost-of-living adjustment at 7/1/2016.

For law enforcement officers, the appropriated rate for fiscal year ending 2017 is 8.00% of payroll. The preliminary ADEC for fiscal year ending 2018 is 7.84% of payroll.

Each 1% COLA is equivalent to 0.30% of payroll and each 0.01% increase in benefit rate is equal to 0.36% of payroll.

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

Reconciliation of the Change in the Actuarially Determined Employer Contribution Rates



	General Employees and Firefighters	Law Enforcement Officers
Fiscal year ending June 30, 2017 Preliminary ADEC (based on December 31, 2014 valuation)	6.39%	6.87%
Impact due to Experience Study	(0.92%)	0.22%
Impact due to COLA	<u>0.03%</u>	<u>0.03%</u>
Fiscal year ending June 30, 2017 Final ADEC	5.50%	7.12%
Non-Investment (Gain)/Loss	0.02%	(0.01%)
Change Due to Investment (Gain)/Loss	<u>0.73%</u>	<u>0.73%</u>
Fiscal year ending June 30, 2018 Preliminary ADEC (based on December 31, 2015 valuation)	6.25%	7.84%

Investment loss is a recognition of asset losses form 2015.

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

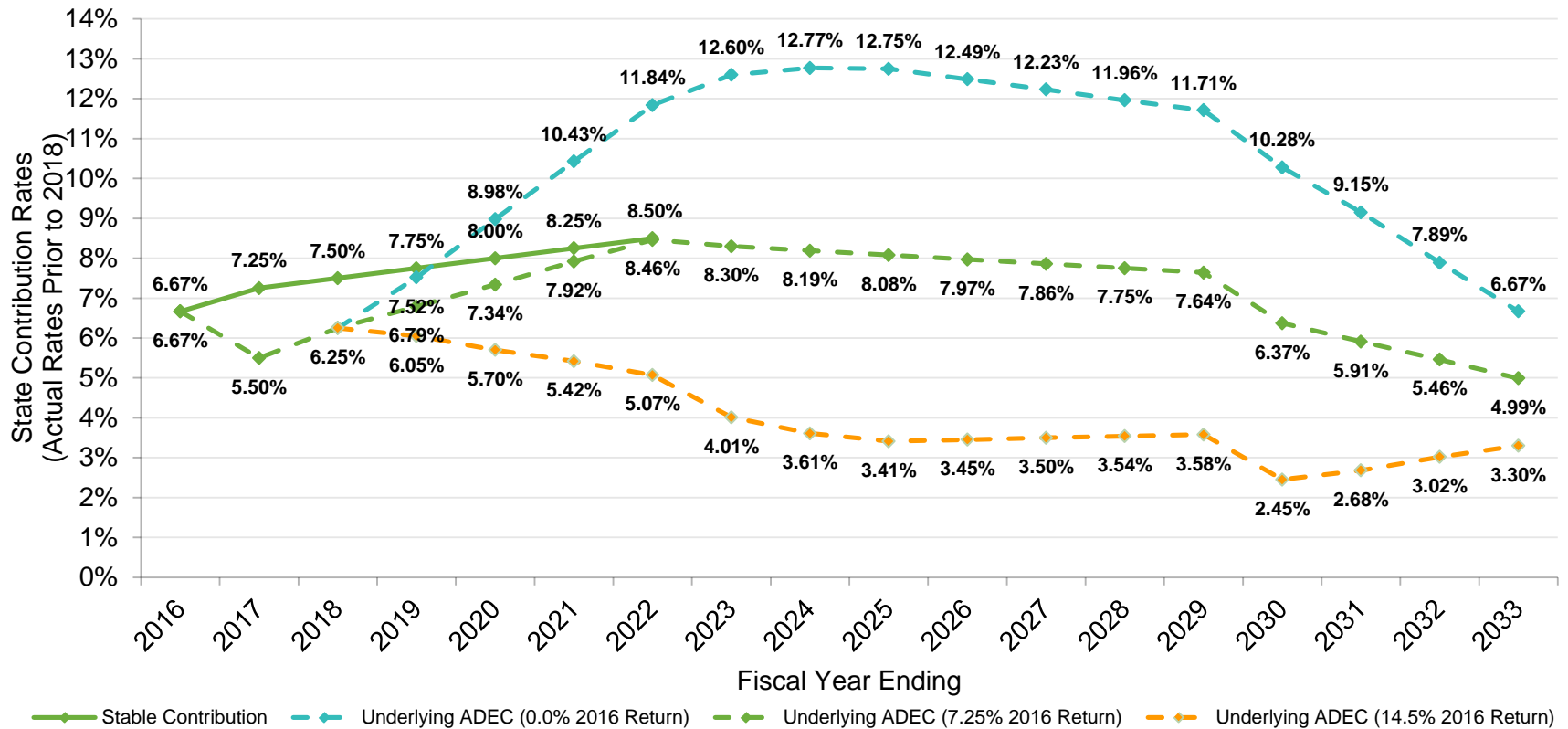


Projections

Projections: Actuarially Determined Employer Contribution Rates and Funded Status

- Projections of actuarially determined employer contribution (ADEC) rates 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, 2015 valuation results
 - December 31, 2015 valuation assumptions and methods to project future valuation results, including:
 - Valuation interest rate of 7.25% for all years
 - Investment return of 7.25% on market value of assets
 - The contribution rate under the Employer Contribution Rate Stabilization Policy is contributed until fiscal year ending 2022.
 - The ADEC is contributed for fiscal years ending 2023 and beyond.
 - 0% increase in total active member population
 - No cost-of-living adjustments granted
 - Future pay increases based on long-term salary increase assumptions
- 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 2016.
 - Second alternate deterministic projection assumes a 14.5% asset return for calendar year 2016.

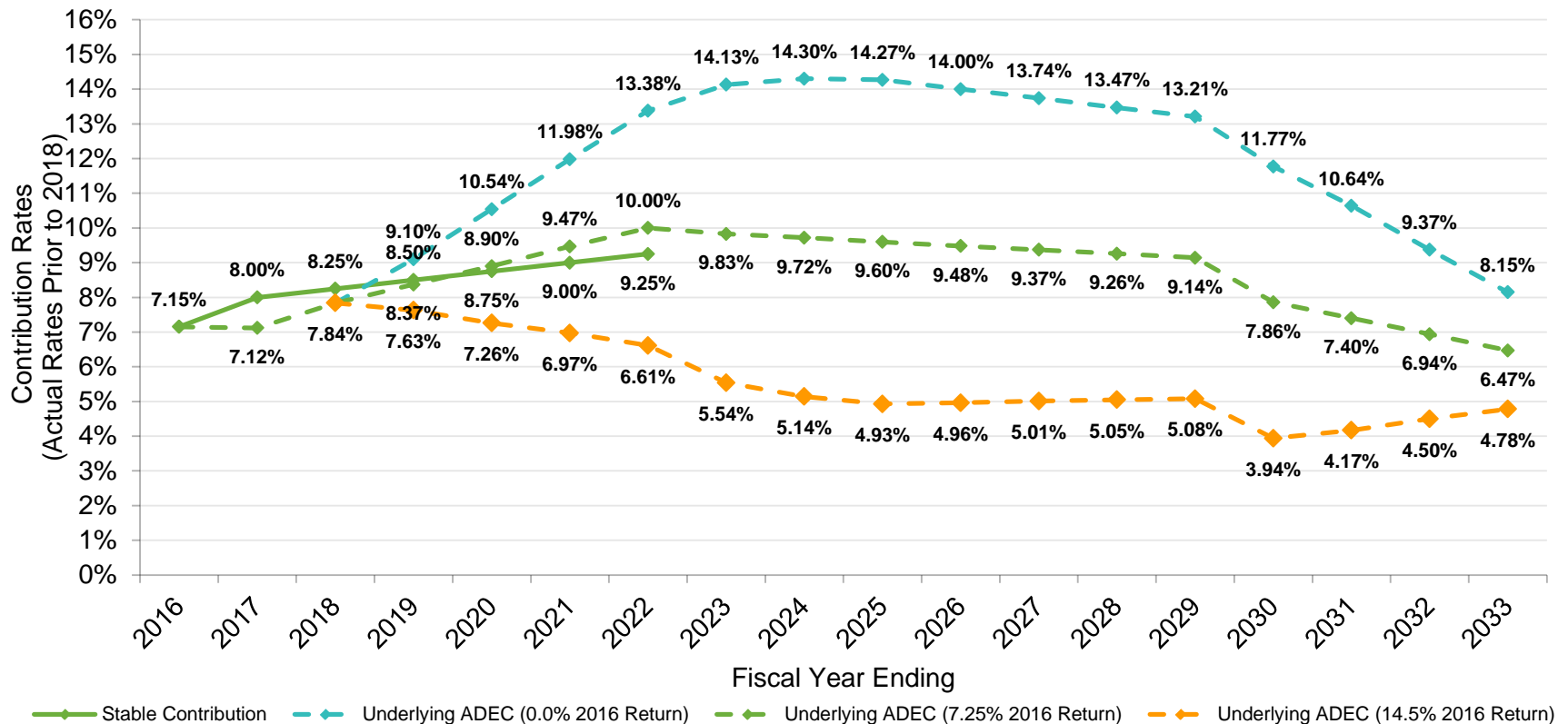
Projections: Projected Actuarially Determined Employer Contribution Rates for General Employees and Firefighters



The Actuarially Determined Employer Contribution Rate trends to around 5.0%, 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.

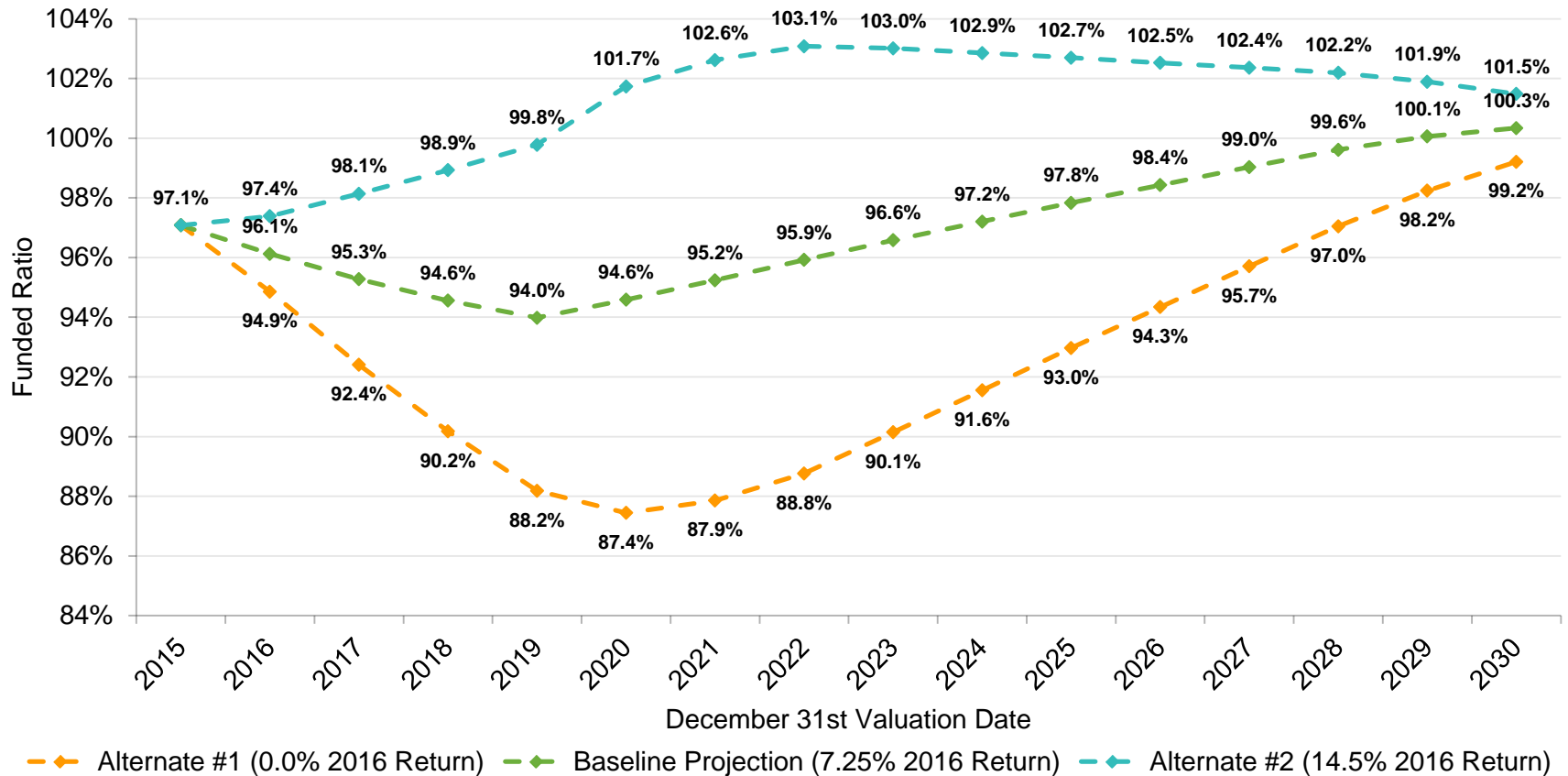
Projections: Projected Actuarially Determined Employer Contribution Rates for Law Enforcement Officers



The Actuarially Determined Employer Contribution Rate trends to around 6.5%, 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.

Projections: Projected Funded Ratio



Note that if the 7.25% return under the Baseline Projection is achieved, the funded ratio reaches the long term target of 100% within 15 years. This is a direct result of using a 12 year period to pay off the 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, 2015 valuation as compared to the December 31, 2014 valuation were:

- Market value returns of 0.34% compared to 7.25% assumed
- Increase in covered payroll of 3.9% compared to approximately 3% expected
- Recent changes approved by the Board:
 - 0.105% cost-of-living adjustment at July 1, 2016
- Changes in actuarial assumptions and methods in accordance with the latest experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016
- The Employer Contribution Rate Stabilization Policy adopted by the Board of Trustees on January 21, 2016

When compared to the December 31, 2014 projections, the above resulted in:

- Higher actuarially determined employer contribution rates for fiscal year ending June 30, 2018
 - 6.25% in the valuation compared to 6.20% in the baseline projection for general employees and firefighters
 - 7.84% in the valuation compared to 6.68% in the baseline projection for law enforcement officers
- Higher 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 pays 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 assumptions, methods, and plan provisions used in the results presented in this presentation were provided in October 2016 in the “Report on the Actuarial Valuation of the North Carolina Local Governmental Employees’ Retirement System prepared as of December 31, 2015.”

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.

Michael A. Ribble, FSA, EA, MAAA
Principal, Consulting Actuary

Larry Langer, ASA, EA, MAAA
Principal, Consulting Actuary

Questions?

THANK YOU

North Carolina Local Governmental Employees' Retirement System

Report on the Actuarial Valuation
Prepared as of December 31, 2015

October 2016



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Buck Consultants, LLC
A Xerox Company
14911 Quorum Drive
Suite 200
Dallas, TX 75254

P: 972.628.6800
F: 972.628.6801

www.xerox.com/hrconsulting

October 13, 2016

Board of Trustees
North Carolina Local Governmental
Employees' Retirement System
3200 Atlantic Avenue
Raleigh, NC 27604

Members of the Board:

We submit herewith our report on the actuarial valuation of the North Carolina Local Governmental Employees' Retirement System (referred to as "LGERS" or the "Local Plan") prepared as of December 31, 2015. The report has been prepared in accordance with North Carolina General Statute 128-28(p).

The primary purpose of the valuation report is to determine the required member and employer contribution rates, to describe the current financial condition of LGERS, and to analyze changes in such condition. In addition, the report provides information that the Office of the State Controller (OSC) requires for its Comprehensive Annual Financial Report (CAFR) and it summarizes census data. Use of this report for any other purposes or by anyone other than OSC and its auditors may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. The attached pages should not be provided without a copy of this cover letter. Because of the risk of misinterpretation of actuarial results, you should ask Buck to review any statement you wish to make on the results contained in this report. Buck will not accept any liability for any such statement made without prior review.

The valuation is based upon membership data and financial information as furnished by the Retirement Systems Division and the Financial Operations Division and as summarized in this report. Although reviewed for reasonableness and consistency with the prior valuation, these elements have not been audited by Buck and we cannot certify as to the accuracy and completeness of the data supplied. The valuation is also based on benefit and contribution provisions as presented in this report. If you have reason to believe that the plan provisions are incorrectly described, that important plan provisions relevant to this valuation are not described, or that conditions have changed since the calculations were made, you should contact the authors of this actuarial report prior to relying on this information.

The valuation is further based on the actuarial valuation assumptions, approved by the Board of Trustees, as presented in this report. We believe that these assumptions are appropriate and reasonable and also comply with the requirements of GASB Statement No. 67. We prepared this valuation in accordance with the requirements of this standard and in accordance with all applicable Actuarial Standards of Practice (ASOP).

The latest assumptions were adopted for use with the December 31, 2015 actuarial valuation, based on the experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016. The economic assumptions with respect to investment yield, salary increase and inflation have been based upon a review of the existing portfolio structure as well as recent and anticipated experience.

Where presented, references to “funded ratio” and “unfunded accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities. In various places in the report the results also show funded ratios and unfunded liabilities based upon varying sets of assumptions as well as market values of assets as that is required for certain disclosure information required per accounting rules or statutes. Where this has been done it has been clearly indicated.

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. Because of limited scope, Buck performed no analysis of the potential range of such future differences, except for some limited analysis in financial projections or required disclosure information.

The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about it.

Respectfully submitted,



Michael A. Ribble, FSA, EA, MAAA
Principal, Consulting Actuary



Larry Langer, ASA, EA, MAAA
Principal, Consulting Actuary

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Table of Contents

Executive Summary	1
Overview	1
Purpose	1
Key Takeaways	2
Section 1: Principal Results	3
Table 1 – Summary of Principal Results	3
Section 2: The Valuation Process	5
Valuation Input: Membership Data	5
Valuation Input: Asset Data.....	8
Valuation Input: Benefit Provisions.....	9
Valuation Input: Actuarial Assumptions.....	10
Valuation Input: Funding Methodology.....	11
Valuation Results: Actuarial Value of Assets.....	12
Valuation Results: Actuarial Accrued Liability	14
Valuation Results: Funded Ratio.....	15
Valuation Results: Employer Contributions	17
Valuation Results: Projections	19
Valuation Results: Accounting Information.....	21
Section 3: Membership Data	22
Table 2 – Active Member Data.....	22
Table 3 – Terminated Vested Member Data	22
Table 4 – Data for Members Currently Receiving Benefits.....	23
Section 4: Asset Data	24
Table 5 – Market Value of Assets	24
Table 6 – Allocation of Investments by Category of the Market Value of Assets.....	24
Table 7 – Actuarial Value of Assets	25
Table 8 – Historical Asset Returns.....	26

Table of Contents

Section 5: Liability Results	27
Table 9 – Liability Summary	27
Table 10 – Participating Employers	28
Section 6: Actuarially Determined Employer Contribution	29
Table 11 – Calculation of the Actuarially Determined Employer Normal Contribution	30
Table 12 – Reconciliation of the Change in the Employer Normal Contribution Rates	31
Table 13 – Calculation of the New Amortization Base	32
Table 14 – Amortization Schedule for Unfunded Accrued Liability	32
Table 15 – Actuarially Determined Employer Contributions Rates for General Employees and Firefighters	33
Table 16 – Actuarially Determined Employer Contributions Rates for Law Enforcement Officers	33
Table 17 – Cost of Benefits Enhancements	34
Section 7: Valuation Balance Sheet	35
Table 18 – Valuation Balance Sheet	35
Section 8: Accounting Results	36
Table 19 – Number of Active and Retired Members	36
Table 20 – Schedule of Changes in Net Pension Liability (Asset)	37
Table 21 – Net Pension Liability (Asset)	37
Table 22 – Sensitivity of the Net Pension Liability (Asset)	38
Table 23 – Additional Information for GASB Statement No. 67	38
Section 9: Projections	39
Key Projection Assumptions	39
Projected Actuarially Determined Employer Contribution Rates	40
Projected Funded Ratio	42

Table of Contents

Appendices.....	43
Appendix A – Valuation Process and Glossary of Actuarial Terms.....	43
Appendix B – Detailed Tabulations of Member Data.....	51
Appendix C – Summary of Main Benefit and Contribution Provisions	65
Appendix D – Actuarial Assumptions and Methods.....	72
Appendix E – GASB 67 Fiduciary Net Position Projection.....	79
Appendix F – Additional Disclosures.....	83
Appendix G – Data for Section 2 Graphs	85
Appendix H– Detailed Table of Rates of Contributions Payable by Employers	89
Appendix I – Prior Service Contribution Rates and Estimated Dates of Liquidation by Employer	119
Appendix J – Participating Employers.....	123

Executive Summary

Overview

The North Carolina Retirement Systems Division (RSD) was established in 1941 to provide retirement benefits for public servants in the State of North Carolina. Today, under the management of the Department of State Treasurer, RSD administers eight public pension plans (defined benefit plans), three supplemental retirement plans (voluntary defined contributions plans), a health trust fund, a disability income plan, death benefit funds and a number of other benefit programs. As of December 31, 2015, the Retirement Systems defined benefit plans cover about 980,000 current and prior public servants in the state of North Carolina. During the fiscal year ending June 30, 2016, the Systems paid \$5.7 billion in pensions to about 280,000 retirees. And as of June 30, 2016, the Systems' assets were valued at \$87 billion.

Under the supplemental retirement plans, the amount of contributions in any given year is defined by law. The amount of benefits derived is dependent on the investment returns the individual achieves. Conversely, under the pension plans, the amount of the benefit paid to a member upon retirement, termination, death or disability is defined by law. The amount of contributions needed to fund these benefits cannot be known with certainty. In North Carolina, like other states, these contributions are paid during a public servant's career so that upon retirement, termination, death, or disability, there are funds available to pay these benefits. These amounts are determined through an actuarial valuation. Actuarial valuations are performed for each of the pension plans administered by RSD and the results are contained in actuarial valuation reports like this.

The Local Governmental Employees' Retirement System (referred to as "LGERS" or the "Local Plan") was established in 1939 and began accepting participating employers in 1945. LGERS is maintained for the employees of cities, towns, counties, boards, commissions and other entities of local government in North Carolina. LGERS has over \$22 billion in assets and almost 250,000 members. This actuarial valuation report is our annual analysis of the financial health of LGERS. This report, prepared as of December 31, 2015, presents the results of the actuarial valuation of LGERS.

Purpose

An actuarial valuation is performed on LGERS annually as of the end of the calendar year. The actuary determines the amount of contributions to be made to LGERS during each member's career that, when combined with investment return, will 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.

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

Executive Summary

Key Takeaways

The actuarial valuation is performed each year to replace the estimates the actuary assumed for the prior valuation with the actual events that happened. This past year, as expected, some of the assumptions used in the prior valuation were not realized. Key results of the December 31, 2015 valuation as compared to the December 31, 2014 valuation were:

- Market value returns of 0.34% compared to 7.25% assumed
- Increase in covered payroll of 3.9% compared to approximately 3% expected
- Recent changes approved by the Board:
 - 0.105% cost-of-living adjustment at July 1, 2016
- Changes in actuarial assumptions and methods in accordance with the latest experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016
- The Employer Contribution Rate Stabilization Policy (ECRSP) adopted by the Board of Trustees on January 21, 2016 requires that recommended contributions for general employees be set at 7.25% of payroll for fiscal year ending 2017 and will increase each fiscal year by 0.25% per year, with the additional adjustments described later in this report.

When compared to the December 31, 2014 projections, the above resulted in:

- Higher actuarially determined employer contribution rates for fiscal year ending June 30, 2018
 - 6.25% in the valuation compared to 6.20% in the baseline projection for general employees and firefighters
 - 7.84% in the valuation compared to 6.68% in the baseline projection for law enforcement officers
- Higher projected benefit amounts being accrued by active members

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.

More details can be found later in this report. We encourage readers to start with Sections 1 and 2 and refer to other sections for additional details as needed.

Section 1: Principal Results

This report, prepared as of December 31, 2015, presents the results of the annual valuation of the system. The principal results of the valuation and a comparison with the preceding year's results are summarized below.

Table 1: Summary of Principal Results

Valuation results as of	12/31/2015	12/31/2014
Active Members		
Number	124,974	123,184
Reported Compensation	\$ 5,541,839,498	\$ 5,331,287,565
Valuation Compensation*	\$ 5,869,461,590	\$ 5,652,306,474
Retired Members and Survivors of Deceased Members Currently Receiving Benefits		
Number	63,110	60,408
Annual Allowances	\$ 1,181,580,927	\$ 1,108,688,628
Number of Participating Employers	886	884
Assets		
Actuarial Value (AVA)	\$23,649,311,273	\$22,682,380,725
Market Value	\$22,403,836,820	\$22,744,942,754
Actuarial Accrued Liability (AAL)	\$24,360,119,869	\$22,718,130,124
Unfunded Accrued Liability (AAL-AVA)	\$ 710,808,596	\$ 35,749,399
Funded Ratio (AVA/AAL)**	97.1%	99.8%
Unfunded Initial Prior Service Liability	\$ 33,440,798	\$ 35,749,399

* Reported compensation adjusted to reflect the assume rate of pay increase prior to the valuation date.

** The Funded Ratio on a Market Value of Assets basis is 92.0% at December 31, 2015.

Section 1: Principal Results

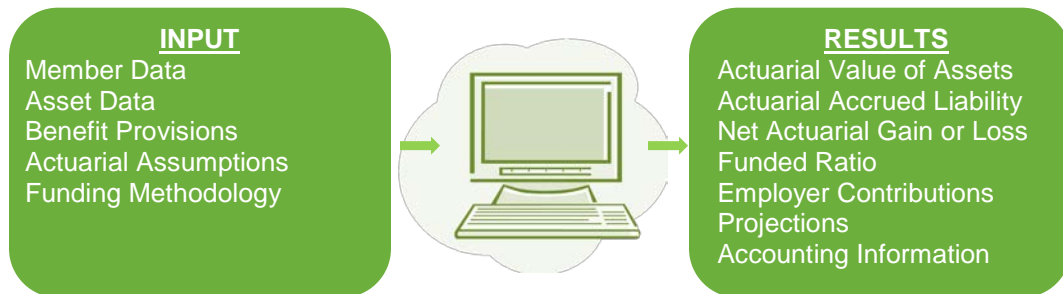
This report, prepared as of December 31, 2015, presents the results of the annual valuation of the system. The principal results of the valuation and a comparison with the preceding year's results are summarized below.

Table 1: Summary of Principal Results (continued)

Valuation results as of	12/31/2015	12/31/2014
Results for Fiscal Year Ending	6/30/2018	6/30/2017
Actuarially Determined Employer Contribution (ADEC), as a percentage of payroll		
General Employees and Firefighters		
Normal Cost	4.67%	N/A
Accrued Liability	<u>1.58%</u>	<u>N/A</u>
Total	6.25%	6.39%
Impact of Experience Study	N/A	-0.92%
Impact of Legislative Changes	<u>N/A</u>	<u>0.03%</u>
Final ADEC	N/A	5.50%
Law Enforcement Officers		
Normal Cost	6.26%	N/A
Accrued Liability	<u>1.58%</u>	<u>N/A</u>
Total	7.84%	6.87%
Impact of Experience Study	N/A	0.22%
Impact of Legislative Changes	<u>N/A</u>	<u>0.03%</u>
Final ADEC	N/A	7.12%
Board Approved Contribution under the Employer Contribution Rate Stabilization Policy (ECRSP)		
General Employees and Firefighters	7.50%	7.25%
Law Enforcement Officers	8.25%	8.00%
Current Funding in Effect at	7/1/2016	7/1/2015
Employer Contribution Rate as a percentage of payroll		
General Employees and Firefighters	7.25%	6.67%
Law Enforcement Officers	8.00%	7.15%
Preliminary Reserve for Undistributed Gains/(Losses)		
General Employees and Firefighters	1.00%	0.28%
Law Enforcement Officers	0.16%	0.28%

Section 2: The Valuation Process

The following diagram summarizes the inputs and results of the actuarial valuation process.



A more detailed description of the valuation process is provided in Appendix A.

Valuation Input: Membership Data

As with any estimate, the actuary collects information that we know now. Under the actuarial valuation process, current information about LGERS members is collected annually by the Retirement Systems Division staff at the direction of the actuary. Membership data will assist the actuary in estimating benefits that could be paid in the future. Information about benefit provisions and assets held in the trust as of the valuation date is also collected.

The member information the actuary collects includes data elements such as current service, salary and benefit group identifier for members that have not separated service, and actual benefit amounts and form of payment for members that have separated service. Data elements such as gender and date of birth are used to determine when a benefit might be paid and for how long.

Section 2: The Valuation Process

Valuation Input: Membership Data (continued)

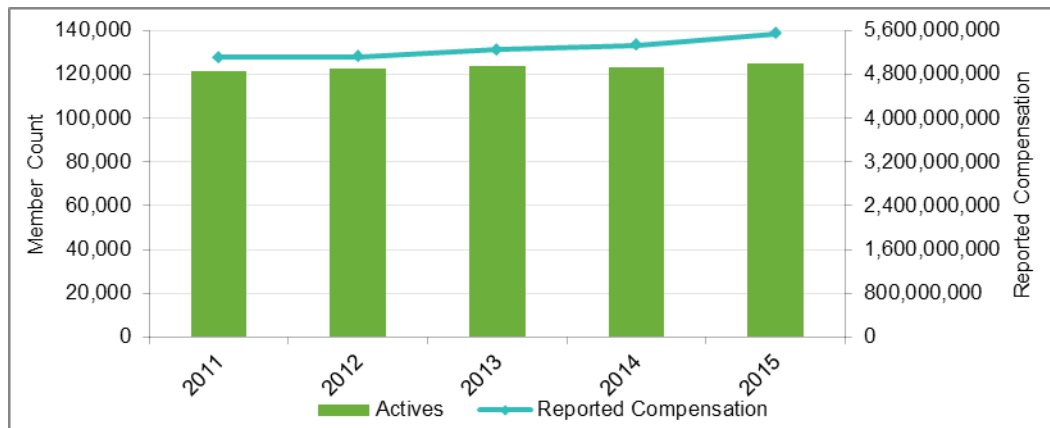
The table below provides a summary of the membership data used in this valuation compared to the prior valuation.

Number as of	12/31/2015	12/31/2014
Active members	124,974	123,184
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	59,289	55,298
Retired members and survivors of deceased members currently receiving benefits	<u>63,110</u>	<u>60,408</u>
Total	247,373	238,890

Commentary: The number of active members increased by 1.5% 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 4.5% from the previous valuation date. The increase in retiree population is consistent with expectations.

Graph 1: Active Members

The graph below provides a history of the number of active members and reported compensation over the past five years.



Commentary: Reported compensation has increased by 3.9%. Covered payroll is expected to increase by approximately 3% annually in the future. Payroll that is increasing faster than we assume results in more benefits accruing than we anticipate, but also more contributions supporting the system.

Section 2: The Valuation Process

Valuation Input: Membership Data (continued)

Graph 2: Retired Members and Survivors of Deceased Members

The graph below provides a history of the number of retired members and survivors of deceased members and benefit amounts payable over the past five years.



Commentary: 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 this report.

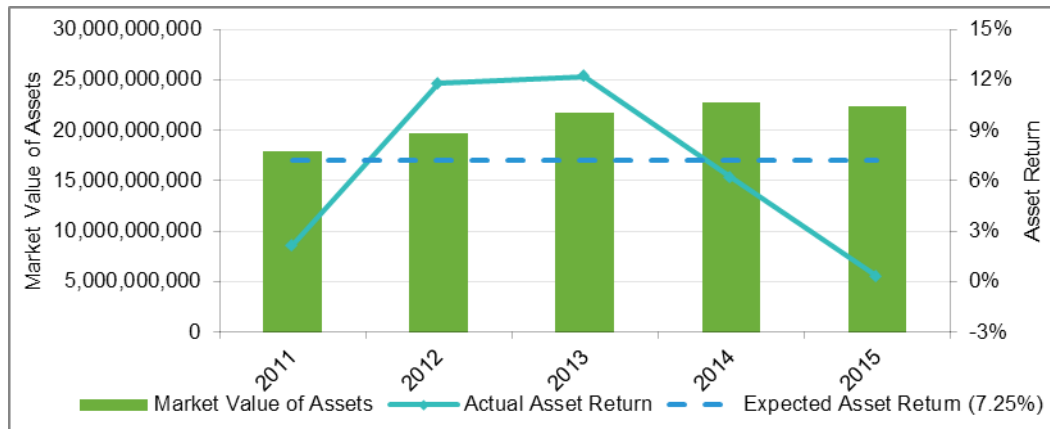
Section 2: The Valuation Process

Valuation Input: Asset Data

LGERS assets are held in trust and are invested for the exclusive benefit of plan members. The Market Value of Assets is \$22.4 billion as of December 31, 2015 and \$22.7 billion as of December 31, 2014. The investment return for the market value of assets for calendar year 2015 was 0.34%.

Graph 3: Market Value of Assets and Asset Returns

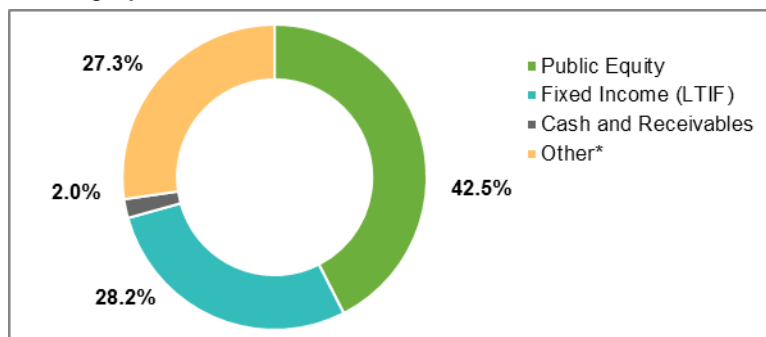
The graph below provides a history of the market value of assets and asset returns over the past five years.



Commentary: Returns were less than the 7.25% assumed rate of return, resulting in higher required contributions than anticipated as of the December 31, 2014 baseline projections presented in the December 31, 2014 actuarial report.

Graph 4: Allocation of Investments by Category

The graph below provides the breakdown of the market value of assets at December 31, 2015 by asset category.



* Real Estate, Alternatives, Inflation and Credit

Commentary: 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.

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

Section 2: The Valuation Process

Valuation Input: Benefit Provisions

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

The valuation reflects the following change in benefit provisions from the prior year's valuation:

- 0.105% cost-of-living adjustment at July 1, 2016

Highlights of the benefit provisions are described below.

- An unreduced retirement allowance is payable to non-law enforcement members who retire from service:
 - after attaining age 65 and five years of creditable service;
 - after attaining age 60 and 25 years of creditable service; or
 - after attaining 30 years of creditable service
- An unreduced retirement allowance is payable to law enforcement members who retire from service:
 - after attaining age 55 and five years of creditable service; or
 - after attaining 30 years of creditable service
- The unreduced retirement allowance is equal to 1.85% of a member's final average compensation multiplied by the number of years of creditable service.
- A reduced retirement allowance is payable to non-law enforcement members who retire from service:
 - after attaining age 60 and five years of creditable service; or
 - after attaining age 50 and 20 years of creditable service
- A reduced retirement allowance is payable to firefighters and rescue squad workers who retire from service after attaining age 55 and five years of creditable service.
- A reduced retirement allowance is payable to law enforcement members who retire from service after attaining age 50 and 15 years of creditable service.
- Ancillary benefits are also payable upon the death or disability of a member.
- LGERS does not provide for explicit cost of living increases as part of the benefit package. Instead, increases may be provided if certain financial conditions are met. More details on cost-of-living increases are provided in Graph 5.

Commentary: Many 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 Board of Trustees setting contributions equal to the actuarially required contribution, benefit cuts have not been needed in North Carolina.

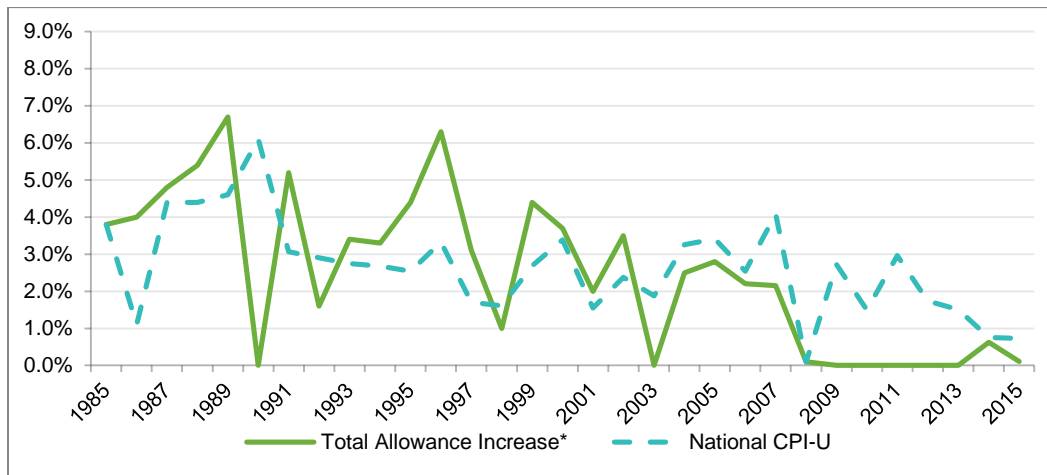
Section 2: The Valuation Process

Valuation Input: Benefit Provisions (continued)

As noted previously, cost-of-living increases are periodically considered by the Board of Trustees to the extent that certain financial conditions are met. Specifically, benefit allowance increases are generally considered when the trust experiences sufficient investment gains to cover the additional actuarial accrued liabilities created by providing the cost-of-living adjustment (generally, limited to the lesser of the CPI increase year-over-year or 4%). In addition to employers consistently contributing the actuary's recommended contribution, this benefit increase policy has helped keep costs manageable when compared to other public sector retirement systems in the United States. That being said, it is important to provide a benefit in retirement that does not get eroded by inflation.

Graph 5: Cost-of-Living Increase and CPI-U History

The graph below provides a 30-year history of the allowance increases for LGERS and the national CPI-U.



* Allowance increases are effective at July 1 the following year

Commentary: Generally this 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 this report.

Valuation Input: Actuarial Assumptions

Actuarial assumptions bridge the gap between the information that we know with certainty as of the valuation date (age, gender, service, pay, and benefits of the members) and what may happen in the future. The actuarial assumptions of LGERS are reviewed at least every five years. Based on this review, the actuary will make recommendations on the demographic and economic assumptions.

Demographic assumptions describe future events that relate to people such as retirement rates, termination rates, disability rates, and mortality rates. Economic assumptions

Section 2: The Valuation Process

describe future events that relate to the assets of LGERS such as the interest rate, salary increases, the real return, and payroll growth.

The latest assumptions were adopted for use with the December 31, 2015 actuarial valuation, based on the experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016.

Valuation Input: Funding Methodology

The Funding Methodology is the payment plan for LGERS and is composed of the following three 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 Entry Age Normal as its actuarial cost method
 - Develops normal costs that stay level as a percent of payroll
- Asset Valuation Methods smooth or average the market value returns over time to alleviate contribution volatility that results from market returns.
 - Asset returns in excess of or less than the expected return on market value of assets reflected over a five-year period
 - Assets corridor: not greater than 120% of market value and not less than 80% of market value
- Amortization Methods determine the payment schedule for unfunded actuarial accrued liability (i.e. the difference between the actuarial accrued liability and actuarial value of assets)
 - Payment level: the payment is determined as a level dollar amount, similar to a mortgage payment
 - Payment period: a 12-year closed amortization period was adopted for fiscal year ending 2018. A new amortization base is created each year based on the prior year's experience

The valuation reflects the change in methodology for determining liquidation of unfunded initial prior service accrued liability, approved by the Board of Trustees in January 2012. The outstanding balance of the unfunded initial prior service 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.

- Seven (7) employers were granted relief at 7/1/2016
- Four (4) employers are expected to be granted relief at 7/1/2017 based on this valuation

The actuarial assumptions, actuarial cost method, amortization method, and asset valuation method were updated since the prior year's valuation in accordance with the latest experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016. A detailed summary of the actuarial assumptions and methods is provided in Appendix D of this report.

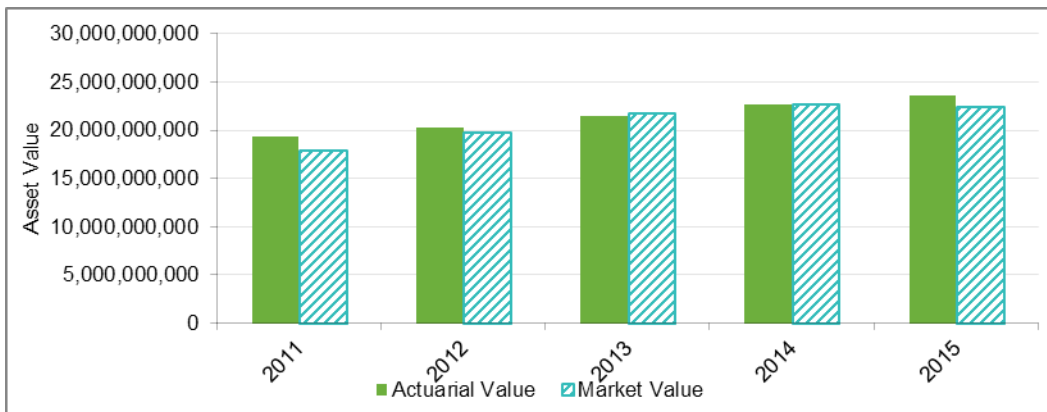
Section 2: The Valuation Process

Valuation Results: Actuarial Value of Assets

In order to reduce the volatility that investment gains and losses can have on required contributions and funded status of LGERS, the Board adopted an asset valuation method to determine the Actuarial Value of Assets used for funding purposes. The Actuarial Value of Assets is \$23.6 billion as of December 31, 2015 and \$22.7 billion as of December 31, 2014.

Graph 6: Actuarial Value and Market Value of Assets

The graph below provides a history of the market value and actuarial value of assets over the past five years.



Commentary: The market value of assets is lower than the actuarial value of assets, which is used to determine employer contributions. This indicates that there are unrecognized asset losses to be recognized in future valuations.

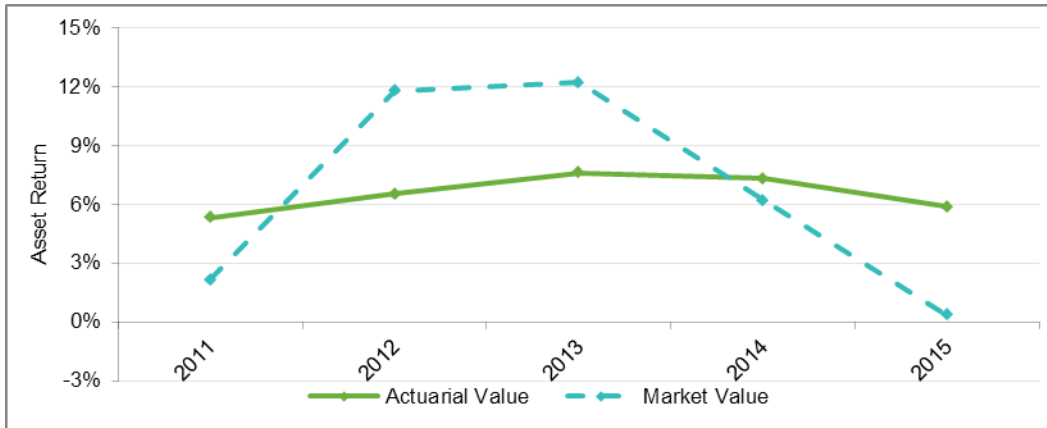
The actuarial value of assets would have been \$23.6 billion as of December 31, 2015 under the asset valuation method used in the prior valuation.

Section 2: The Valuation Process

Valuation Results: Actuarial Value of Assets (continued)

Graph 7: Asset Returns

The graph below provides a history of the market value and actuarial value of asset returns over the past five years.



Commentary: The investment return for the market value of assets for calendar year 2015 was 0.34%. The actuarial value of assets smooths investment gains and losses. The new asset valuation method adopted with the experience study assumptions re-set the actuarial value of assets to the market value of assets at December 31, 2014, effective for the December 31, 2015 valuation. Lower than expected market returns in 2015 resulted in an actuarial value of asset return for calendar year 2015 of 5.87% and an asset loss of \$311 million during 2015.

The actuarial value of asset return for calendar year 2015 prior to the asset valuation method change was 5.92%, which would have resulted in an asset loss of \$298 million during 2015.

A detailed summary of the Actuarial Value of Assets is provided in Section 4 of this report.

Section 2: The Valuation Process

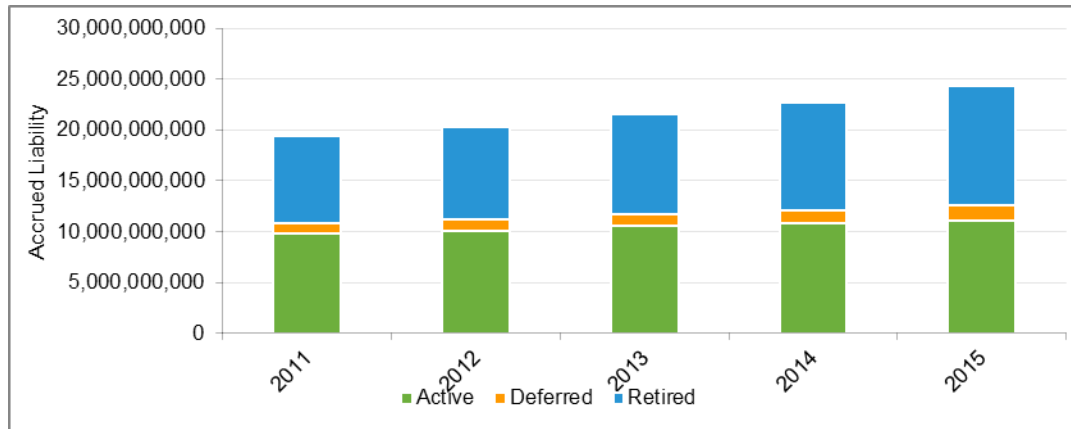
Valuation Results: Actuarial Accrued Liability

Using the provided membership data, benefit provisions, and actuarial assumptions, the future benefit payments of LGERS are estimated. These projected future benefit payments are discounted into today's dollars using the assumed rate of investment return assumption to determine the Present Value of Future Benefits (PVFB) of LGERS. The PVFB is an estimate of the current value of the benefits promised to all members as of a valuation date.

Once the PVFB is developed, an actuarial cost method is used to allocate the PVFB. Under the actuarial cost method, the PVFB is allocated to past, current and future service, respectively known as the actuarial accrued liability (AAL), normal cost (NC) and present value of future normal costs (PVFNC). The AAL is also referred to as the amount of money LGERS should ideally have in the trust. The NC is also referred to as the cost of benefits accruing during the year.

Graph 8: Actuarial Accrued Liability

The graph below provides a history of the actuarial accrued liability over the past five years.



Commentary: The AAL increased from \$22.7 billion to \$24.4 billion during 2015. 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 the next as more benefits accrue and the membership approaches retirement. Assumption changes increased the AAL by \$406 million at December 31, 2014. Legislation increased the AAL by \$13 million at December 31, 2015.

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

Section 2: The Valuation Process

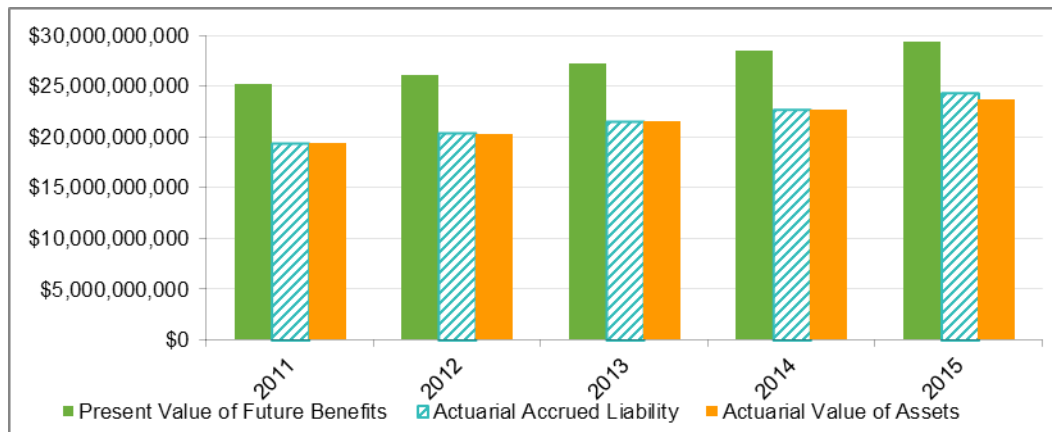
Valuation Results: Funded Ratio

The funded ratio is a measure of the progress that has been made in funding the plan as of the valuation date. It is the ratio of how much money LGERS actually has in the fund to the amount LGERS should have in the fund.

The actuarial cost method was changed to the entry age normal cost method from a frozen entry age cost method since the prior valuation. Separate initial unfunded prior service cost accrued liabilities will still be maintained for employers who join the system prior to November 1, 2015. Under the frozen entry age cost method, the funding target is the present value of future benefits, which includes the cost of service for past, current and future service. Under the entry age normal cost method, the funding target is the actuarial accrued liability, which includes the cost of service for only past service.

Graph 9: Present Value of Future Benefits, Actuarial Accrued Liability and Actuarial Value of Assets

The graph below provides a history of the present value of future benefits and actuarial accrued liability compared to the actuarial value of assets over the past five years.



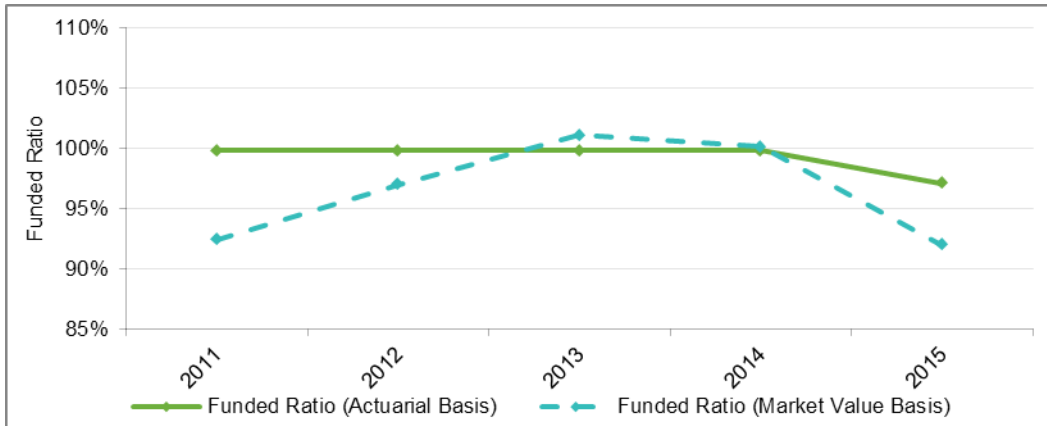
Commentary: The present value of future benefits has increased over the past five years. The present value of future benefits increased from \$28.5 billion at December 31, 2014 to \$29.4 billion at December 31, 2015.

Section 2: The Valuation Process

Valuation Results: Funded Ratio (continued)

Graph 10: Funded Ratios

The graph below provides a history of the funded ratio on a market and actuarial basis over the past five years.



Commentary: The actuarial value of assets basis is used for computing contributions to alleviate contribution volatility. The funded ratio on an actuarial basis decreased from 99.8% at December 31, 2014 to 97.1% at December 31, 2015. Funded ratios for valuations prior to December 31, 2015 are based on accrued liabilities calculated under the frozen entry age cost method. Under this cost method, the AAL will track closely to assets.

Section 2: The Valuation Process

Valuation Results: Employer Contributions

The North Carolina General Statutes provide that the contributions of employers shall consist of a normal contribution and an accrued liability contribution. An additional initial accrued liability contribution rate is to be set for each employer on the basis of the prior service credits allowable to the employees thereof, and is determined on the basis of separate initial valuations for each employer.

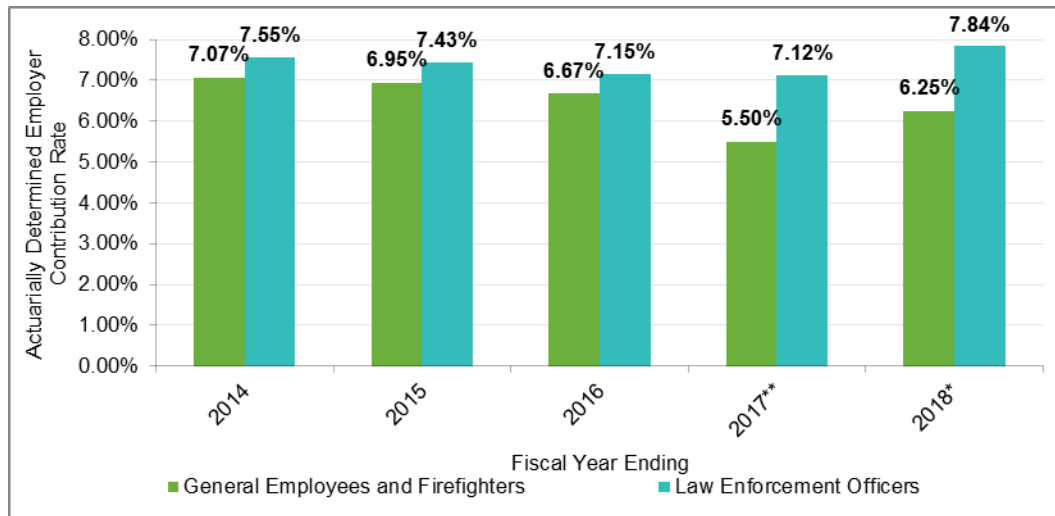
The December 31, 2014 valuation suggested that the preliminary employer contribution rate be set at 6.39% of payroll for general employees and firefighters and 6.87% of payroll for law enforcement officers at July 1, 2016. Subsequently, the Board of Trustees set contributions at 7.25% of payroll for general employees and firefighters and 8.00% of payroll for law enforcement officers at July 1, 2016, in order to account for the experience study recent legislation passed into law and the Employer Contribution Rate Stabilization Policy. As a result of the December 31, 2015 valuation, the preliminary actuarial determined employer contribution rate is 6.25% of payroll for general employees and firefighters and 7.84% of payroll for law enforcement officers.

Section 2: The Valuation Process

Valuation Results: Employer Contributions (continued)

Graph 11: Employer Actuarially Determined Contribution Rates

The graph below provides a history of actuarially determined employer contribution rates over the past five years.



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

** Includes impact of the experience study

Commentary: Starting with the contribution for fiscal year ending 2017, the actuarially determined employer contribution rates are split into the normal cost rate and the accrued liability rate. The normal cost rate is the employer's portion of the cost of benefits accruing after reducing for the member contribution, offset for the 6% of pay contribution the members make. The accrued liability rate is the payment toward the unfunded liability needed to pay off the pension debt over 12 years. The 12-year period is a short period for Public Sector Retirement Systems in the United States, with most Systems using a period of 30 years or more to pay off the pension debt. The shorter period results in higher contributions and more benefit security.

For contributions prior to fiscal year ending 2017, the actuarially determined employer contribution rates consisted of only a normal cost rate. All liability and asset gains (losses) served to directly decrease (increase) this rate.

These contribution rates do not include an employer's additional initial contribution for unfunded prior service cost accrued liability.

A detailed summary of the actuarially determined employer contribution rates is provided in Section 6 of this report.

Section 2: The Valuation Process

Valuation Results: Projections

Projections of contribution requirements and funded status into the future can be helpful planning tools for stakeholders. This section provides such projections. The projections of the actuarial valuation are known as deterministic projections. Deterministic projections are based on one scenario in the future. The baseline deterministic projection is based on December 31, 2015 valuation results as assumptions.

Key Projection Assumptions

- Valuation interest rate of 7.25% for all years
- 7.25% investment return on market value of assets
- Actuarial assumptions and methods as described in Appendix D. All future demographic experience is assumed to be exactly realized.
- The contribution rate under the Employer Contribution Rate Stabilization Policy (ECRSP) is contributed until fiscal year ending 2022.
- The actuarially determined contribution rate is contributed for fiscal years ending 2023 and beyond.
- 0% increase in the total active member population
- No cost-of-living adjustments granted
- Future pay increases based on long-term valuation

The ECRSP adopted by the Board of Trustees on January 21, 2016 requires that recommended contributions for general employees be set at 7.25% of payroll for fiscal year ending 2017 and will increase each fiscal year by 0.25% per year, with the following additional adjustments, if applicable:

- (1) If the underlying actuarially determined employer contribution rate (ADEC) for a given fiscal year is 50% higher than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal years increases 0.50%;
- (2) If the underlying ADEC for a given fiscal year is 50% lower than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal year decreases 0.50%;
- (3) If the General Assembly grants any additional COLA beyond the amount of COLA granted by the Board, increases the multiplier for active employees, or changes the benefit structure in a way that has a cost to the system, the schedule of contributions for the current and future fiscal years will be increased by the cost of the benefit enhancement. The cost of any COLA granted by the Board under the authority allowed by statute will not impact the scheduled contribution rates.

Contribution rates for law enforcement officers will be 0.75% higher than contribution rates for general employees.

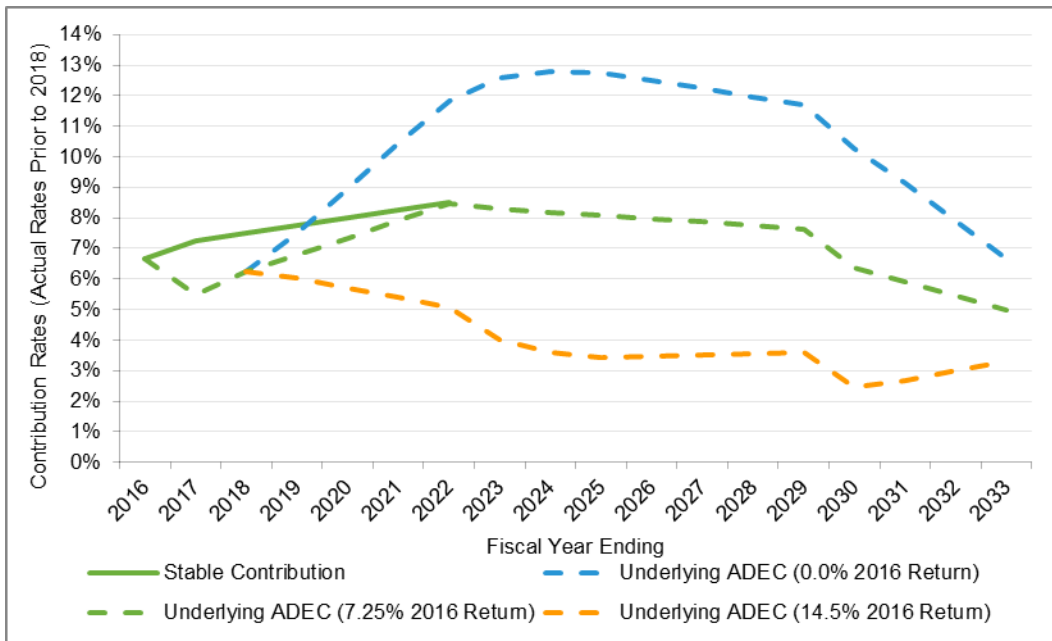
In addition, we have provided two alternate deterministic projections. The first alternate deterministic projection is based on the same assumptions as the baseline deterministic projection except that it assumes a 0.0% asset return for calendar year 2016. The second alternate deterministic projection is based on the same assumptions as the baseline deterministic projection except that it assumes a 14.50% asset return for calendar year 2016.

Section 2: The Valuation Process

Finally, stochastic projections, where hundreds of projections based on varying rates of return are performed and results are ordered, are periodically performed by the investment management division and shared with the Retirement Board and RSD staff.

Graph 12: Projected Actuarially Determined Employer Contribution Rates

The graph below provides the actuarially determined employer contributions rates for general employees and firefighters projected for 15 years, as well as the board approved stable contribution under the Employer Contribution Rate Stabilization Policy.



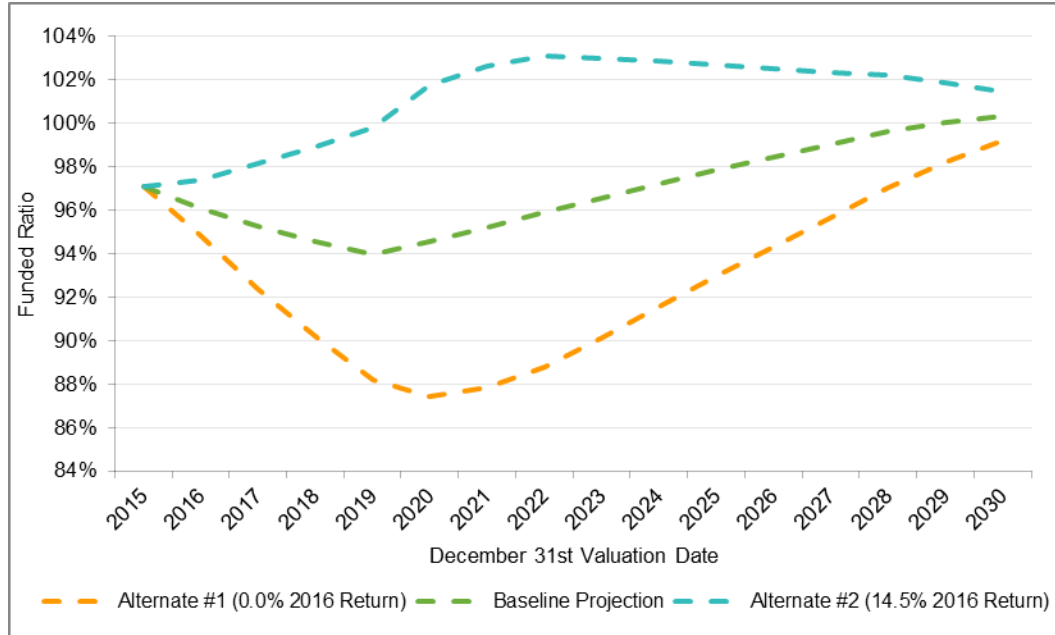
Commentary: The actuarially determined employer contribution rate trends to around 5%, which is the level of the cost of benefits accrued, or the long term employer cost of LGERS when there is no pension debt. The contribution rates shown in the graph above do not include an employer’s additional initial contribution for unfunded prior service cost accrued liability.

Section 2: The Valuation Process

Valuation Results: Projections (continued)

Graph 13: Projected Funded Ratio

The graph below provides the funded ratio projected for 15 years.



Commentary: Note that if the 7.25% return under the Baseline Projection is achieved, the funded ratio reaches the long term target of 100% within 15 years. This is a direct result of using a 12 year period to pay off the pension debt.

A detailed summary of the deterministic projections is provided in Section 9 of this report.

Valuation Results: Accounting Information

The Governmental Account Standards Board (GASB) issues statements which establish financial reporting standards for defined benefit pension plans and accounting for pension expenditures and expenses for governmental employers.

The valuation has been prepared in accordance with the parameters of Statement No. 67 of the GASB and all applicable Actuarial Standards of Practice. The Net Pension Liability (Asset) under GASB 67 for the fiscal year ending June 30, 2016, is \$2,122,335,000 (compared to \$(448,794,000) for fiscal year ending June 30, 2015). The required financial reporting information for LGERS under GASB No. 67 can be found in Section 8 of this report.

Section 3: Membership Data

The Retirement Systems Division provided membership data as of the valuation date for each member of LGERS. The membership data assists the actuary in estimating benefits that could be paid in the future. The tables below provide a summary of the membership data used in this valuation. Detailed tabulations of data are provided in Appendix B.

Table 2: Active Member Data

	Member Count	Average Age	Average Service	Reported Compensation
General Employees	92,808	45.86	9.97	\$ 3,978,088,211
Firefighters	11,387	38.44	10.38	537,638,844
Law Enforcement Officers	<u>20,779</u>	<u>39.29</u>	<u>11.24</u>	<u>1,026,112,443</u>
Total	124,974	44.09	10.22	\$ 5,541,839,498

The table above includes members not in receipt of benefits who had reported compensation in 2015.

Table 3: Terminated Vested Member Data

	Member Count	Average Age	Average Service	Accumulated Contributions
General Employees	50,264	45.33	3.92	\$ 593,212,951
Firefighters	2,598	37.16	4.18	31,621,594
Law Enforcement Officers	<u>6,427</u>	<u>40.17</u>	<u>5.36</u>	<u>104,800,064</u>
Total	59,289	44.41	4.09	\$ 729,634,609

The table above includes members not in receipt of benefits who did not have reported compensation in 2015.

Section 3: Membership Data

Table 4: Data for Members Currently Receiving Benefits

	Member Count	Average Age	Annual Retirement Allowances
<u>Retired Members (Healthy at Retirement)</u>			
General Employees	38,868	69.95	\$ 695,390,744
Firefighters	2,061	65.75	63,126,276
Law Enforcement Officers	<u>7,141</u>	<u>65.07</u>	<u>189,259,314</u>
Total	48,070	69.04	\$ 947,776,334
<u>Retired Members (Disabled at Retirement)*</u>			
General Employees	6,355	62.48	\$ 102,179,056
Firefighters	1,103	61.29	30,289,530
Law Enforcement Officers	<u>1,410</u>	<u>56.52</u>	<u>28,744,689</u>
Total	8,868	61.38	\$ 161,213,275
<u>Survivors of Deceased Members</u>			
General Employees	4,694	71.71	\$ 50,906,079
Firefighters	347	76.01	5,162,525
Law Enforcement Officers	<u>1,131</u>	<u>70.10</u>	<u>16,522,714</u>
Total	6,172	71.66	\$ 72,591,318
Grand Total	63,110	68.22	\$ 1,181,580,927

* Includes retired members reported as disabled in a prior valuation and not subsequently reported as returned to work.

Section 4: Asset Data

Assets are held in trust and are invested for the exclusive benefit of LGERS members. The tables below provide the details of the Market Value of Assets for the current and prior years' valuations.

Table 5: Market Value of Assets

Asset Data as of	12/31/2015	12/31/2014
Beginning of Year Market Value of Assets	\$ 22,744,942,754	\$ 21,784,255,100
Contributions	795,382,032	769,285,248
Benefit Payments	(1,213,496,597)	(1,145,663,992)
Investment Income	<u>77,008,631</u>	<u>1,337,066,398</u>
Net Increase/(Decrease)	(341,105,934)	960,687,654
End of Year Market Value of Assets	\$ 22,403,836,820	\$ 22,744,942,754
Estimated Net Investment Return on Market Value	0.34%	6.19%

Table 6: Allocation of Investments by Category of the Market Value of Assets

Asset Data as of	12/31/2015	12/31/2014
Allocation by Dollar Amount		
Public Equity	\$ 9,520,339,674	\$ 9,980,785,405
Fixed Income (LTIF)	6,307,373,789	6,768,539,963
Cash and Receivables	440,275,643	395,965,430
Other*	<u>6,135,847,714</u>	<u>5,599,651,956</u>
Total Market Value of Assets	\$ 22,403,836,820	\$ 22,744,942,754
Allocation by Percentage of Asset Value		
Public Equity	42.5%	43.9%
Fixed Income (LTIF)	28.2%	29.8%
Cash and Receivables	2.0%	1.7%
Other*	<u>27.3%</u>	<u>24.6%</u>
Total Market Value of Assets	100.0%	100.0%

* Real Estate, Alternatives, Inflation and Credit

Section 4: Asset Data

In order to reduce the volatility that investment gains and losses can have on the required contributions and funded status of LGERS, the Board adopted an asset valuation method to determine the Actuarial Value of Assets used for funding purposes. The table below provides the calculation of the Actuarial Value of Assets at the valuation date.

Table 7: Actuarial Value of Assets

Asset Data as of	12/31/2015
Beginning of Year Market Value of Assets	\$ 22,744,942,754
Contributions	795,382,032
Benefit Payments	<u>(1,213,496,597)</u>
Net Cash Flow	(418,114,565)
Expected Investment Return	1,633,851,697
Expected End of Year Market Value of Assets	23,960,679,886
End of Year Market Value of Assets	22,403,836,820
Excess of Market Value over Expected Market Value of Assets	(1,556,843,066)
80% of 2015 Asset Gain/(Loss)	(1,245,474,453)
60% of 2014 Asset Gain/(Loss)	N/A
40% of 2013 Asset Gain/(Loss)	N/A
20% of 2012 Asset Gain/(Loss)	<u>N/A</u>
Total Deferred Asset Gain/(Loss)	(1,245,474,453)
Preliminary End of Year Actuarial Value of Assets	23,649,311,273
Final End of Year Actuarial Value of Assets (not less than 80% and not greater than 120% of Market Value)	23,649,311,273
Estimated Net Investment Return on Actuarial Value	5.87%

Commentary: The actuarial value of assets smooths investment gains/losses, resulting in less volatility in the employer contribution. The asset valuation method was changed during the experience study from a method that calculated the actuarial value of assets as 20% of the market value of assets plus 80% of the expected actuarial value of assets to a method that recognizes asset returns in excess of or less than the expected return on the market value of assets over a five-year period.

The new asset valuation method re-set the actuarial value of assets to the market value of assets at December 31, 2014, effective for the December 31, 2015 valuation. Lower than expected market returns in 2015 resulted in an actuarial value of asset return for calendar year 2015 of 5.87% and an asset loss of \$311 million during 2015.

The actuarial value of assets would have been \$ 23,595,633,052 as of December 31, 2015 under the asset valuation method used in the prior valuation.

Section 4: Asset Data

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

Table 8: 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%
2014	7.32%	6.19%
2015	5.87%	0.34%
Average	6.47%	5.46%
Range	6.22%	34.41%

Commentary: 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 6.47% tracks average market return of 5.46% 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.

Section 5: Liability Results

Using the provided membership data, benefit provisions, and actuarial assumptions, the Retirement System's future benefit payments are estimated. These projected future benefit payments are discounted into today's dollars using the assumed rate of investment return assumption to determine the Present Value of Future Benefits. The Present Value of Future Benefits is allocated to past, current and future service, respectively known as the actuarial accrued liability, normal cost and present value of future normal costs. The table below provides these liability numbers for the current and prior years' valuations.

Table 9: Liability Summary

Valuation Results as of	12/31/2015	12/31/2014
(a) Present Value of Future Benefits		
(1) Active Members	\$ 16,119,533,334	\$ 16,532,382,356
(2) Terminated Members	1,459,269,218	1,345,626,216
(3) Members Currently Receiving Benefits	<u>11,802,159,195</u>	<u>10,578,753,552</u>
(4) Total	\$ 29,380,961,747	\$ 28,456,762,124
(b) Present Value of Future Normal Costs		
(1) Employee Future Normal Costs	\$ 2,783,789,343	
(2) Employer Future Normal Costs	<u>2,237,052,535</u>	
(3) Total	\$ 5,020,841,878	\$ 5,738,632,000
(c) Actuarial Accrued Liability: (a4) - (b3)	\$ 24,360,119,869	\$ 22,718,130,124
(d) Actuarial Value of Assets	\$ 23,649,311,273	\$ 22,682,380,725
(e) Unfunded Accrued Liability: (c) - (d)	\$ 710,808,596	\$ 35,749,399
(f) Unfunded Initial Prior Service Liability*	\$ 33,440,798	\$ 35,749,399
(g) Unfunded Accrued Liability to be Amortized over 12 Years (e) - (f)	\$ 677,367,798	N/A

*The unfunded initial prior service liability balance as of December 31, 2015 and the applicable employer contribution rate as of July 1, 2017 is provided in Appendix I, for participating employers with remaining initial prior service liability as of December 31, 2015. Appendix I also provides a non-binding estimated date of liquidation of the liability based on this valuation.

Commentary: The actuarial cost method was changed to the entry age normal cost method from a frozen entry age cost method since the prior valuation. Separate initial unfunded prior service accrued liabilities will still be maintained for employers who join the system prior to November 1, 2015.

Under the frozen entry age cost method, the funding target is the present value of future benefits, which includes the cost of service for past, current and future service. The present value of future normal costs at December 31, 2014 is equal to the portion of the present value of future benefits that is not currently funded and, therefore, the accrued liability is equal to the actuarial value of assets plus the remaining initial prior service liability. For the December 31, 2015 valuation, the funding target is the actuarial accrued liability calculated under the entry age normal cost method, which includes the cost of service for only past service.

Section 5: Liability Results

The “Estimated Date of Liquidation of Initial Prior Service Liability”, shown in Appendix I, must be recalculated annually and adjusted according to each unit’s actual experience. The estimated date for liquidation of the liability as of the valuation date does not constitute a guarantee that a local unit will complete the liquidation as of the estimated date, for the reason that actual experience may not match the projections used to create the estimate.

The table below provides a summary of the participating employers in the current and prior years’ valuations.

Table 10: Participating Employers

Valuation Date	12/31/2015	12/31/2014
Total Participating Employers	886	884
Total Participating Employers with an Unfunded Accrued Liability Balance at Valuation Date	96	101
Employers Granted Relief at 7/1/2016 based on Prior Valuation (7/1/2015 at 12/31/2014)	7	5
Employers with Expected Relief at 7/1/2017 based on Current Valuation (7/1/2016 at 12/31/2014)	4	7

Section 6: Actuarially Determined Employer Contribution

The actuarially determined employer contribution consists of a normal cost rate and an accrued liability rate. The normal cost rate is the employer's portion of the cost of benefits accruing during the year after reducing for the member contribution. The accrued liability rate is the payment toward the unfunded accrued liability in order to pay off the unfunded accrued liability over 12 years.

The Employer Contribution Rate Stabilization Policy (ECRSP) adopted by the Board of Trustees on January 21, 2016 requires that recommended contributions for general employees be set at 7.25% of payroll for fiscal year ending 2017 and will increase each fiscal year by 0.25% per year, with the following additional adjustments, if applicable:

- (1) If the underlying actuarially determined employer contribution rate (ADEC) for a given fiscal year is 50% higher than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal years increases 0.50%;
- (2) If the underlying ADEC for a given fiscal year is 50% lower than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal year decreases 0.50%;
- (3) If the General Assembly grants any additional COLA beyond the amount of COLA granted by the Board, increases the multiplier for active employees, or changes the benefit structure in a way that has a cost to the system, the schedule of contributions for the current and future fiscal years will be increased by the cost of the benefit enhancement. The cost of any COLA granted by the Board under the authority allowed by statute will not impact the scheduled contribution rates.

Contribution rates for law enforcement officers will be 0.75% higher than contribution rates for general employees. The ECRSP would result in a recommended contribution rate of 7.50% of payroll for general employees and firefighters and 8.25% of payroll for law enforcement officers for fiscal year ending 2018.

Section 6: Actuarially Determined Employer Contribution

The table below provides the calculation of the actuarially determined employer contribution for the current valuation. The contribution rates shown in the table below do not include an employer's additional initial contribution for unfunded prior service liability.

Table 11: Calculation of the Actuarially Determined Employer Contribution

Valuation Date	12/31/2015
ADEC for Fiscal Year Ending	6/30/2018
Normal Cost Rate Calculation	
(a) Employer Future Normal Cost	
General Employees and Firefighters	\$ 1,666,555,043
Law Enforcement Officers	570,497,492
(b) Present Value of Future Salary	
General Employees and Firefighters	\$ 37,283,110,575
Law Enforcement Officers	9,113,378,467
(c) Normal Cost Rate: (a) / (b)	
General Employees and Firefighters	4.47%
Law Enforcement Officers	6.26%
(d) Expenses	
General Employees and Firefighters	0.20%
Law Enforcement Officers	0.00%
(e) Total Normal Cost Rate: (c) + (d)	
General Employees and Firefighters	4.67%
Law Enforcement Officers	6.26%
Accrued Liability Rate Calculation	
(f) Total Annual Amortization Payments*	\$ 92,686,098
(g) Valuation Compensation	5,869,461,590
(h) Accrued Liability Rate: (f) / (g)	1.58%
Total ADEC (e) + (h)	
General Employees and Firefighters	6.25%
Law Enforcement Officers	7.84%

*See Table 14 for more detail

Section 6: Actuarially Determined Employer Contribution

A detailed table of contribution rates payable by participating employers is provided in Appendix H. In addition to the actuarially determined employer contribution, as determined by the December 31, 2015 valuation (see Table 11 for more details), the unfunded initial prior service liability contribution rate is reflected for those employers that have not liquidated this liability as of June 30, 2017 (see Appendix I for more details).

The table below provides a reconciliation of the current and prior years' actuarially determined employer contributions.

Table 12: Reconciliation of the Change in the Actuarially Determined Employer Contribution Rates

	General Employees and Firefighters	Law Enforcement Officers
Fiscal year ending June 30, 2017 Preliminary ADEC (based on December 31, 2014 valuation)	6.39%	6.87%
Impact due to Experience Study	(0.92%)	0.22%
Impact due to COLA	<u>0.03%</u>	<u>0.03%</u>
Fiscal year ending June 30, 2017 Final ADEC	5.50%	7.12%
Non-Investment (Gain)/Loss	0.02%	(0.01%)
Change Due to Investment (Gain)/Loss	<u>0.73%</u>	<u>0.73%</u>
Fiscal year ending June 30, 2018 Preliminary ADEC (based on December 31, 2015 valuation)	6.25%	7.84%

Section 6: Actuarially Determined Employer Contribution

Amortization methods determine the payment schedule for the unfunded actuarial accrued liability. LGERS adopted a 12-year closed amortization period for fiscal year ending 2018. A new amortization base is created each year based on the prior year's experience. The tables below provide the calculation of the new amortization base and the amortization schedule for the current year's valuation.

Table 13: Calculation of the New Amortization Base

Calculation as of	12/31/2015
(a) Unfunded Actuarial Accrued Liability*	\$ 677,367,798
(b) Prior Years' Outstanding Balances	\$ 0
(c) New Amortization Base: (a) - (b)	\$ 677,367,798
(d) New Amortization Payment	\$ 92,686,098

* Does not include the unfunded initial prior service liability

Table 14: Amortization Schedule for Unfunded Accrued Liability

Date Established	Original Balance	12/31/2015 Outstanding Balance	Annual Payment
December 31, 2015	\$ 677,367,798	\$ 677,367,798	\$ 92,686,098
Total		\$ 677,367,798	\$ 92,686,098

Section 6: Actuarially Determined Employer Contribution

The tables below provide a history of the actuarially determined employer contribution rates.

Table 15: Actuarially Determined Employer Contribution Rates for General Employees and Firefighters

Valuation Date	Rate Effective	Preliminary ADEC	Change due to Legislation*	Final ADEC	Actual Contribution
12/31/2015	7/1/2017	6.25%	N/A	N/A	N/A
12/31/2014	7/1/2016	6.39%	-0.89%	5.50%	7.25%
12/31/2013	7/1/2015	6.52%	0.15%	6.67%	6.67%
12/31/2012	7/1/2014	6.94%	0.01%	6.95%	7.07%
12/31/2011	7/1/2013	7.07%	0.00%	7.07%	7.07%

*The change due to legislation for the contribution in effect at 7/1/2016 includes a 0.92% decrease in the ADEC due to the experience study and a 0.03% increase in the ADEC due to the cost-of-living adjustment at 7/1/2016.

Table 16: Actuarially Determined Employer Contribution Rates for Law Enforcement Officers

Valuation Date	Rate Effective	Preliminary ADEC	Change due to Legislation*	Final ADEC	Actual Contribution
12/31/2015	7/1/2017	7.84%	N/A	N/A	N/A
12/31/2014	7/1/2016	6.87%	0.25%	7.12%	8.00%
12/31/2013	7/1/2015	7.00%	0.15%	7.15%	7.15%
12/31/2012	7/1/2014	7.42%	0.01%	7.43%	7.55%
12/31/2011	7/1/2013	7.55%	0.00%	7.55%	7.55%

*The change due to legislation for the contribution in effect at 7/1/2016 includes a 0.22% increase in the ADEC due to the experience study and a 0.03% increase in the ADEC due to the cost-of-living adjustment at 7/1/2016.

Section 6: Actuarially Determined Employer Contribution

The table below provides the cost of benefit enhancements calculated at the current and prior years' valuations.

Table 17: Cost of Benefits Enhancements

Calculation as of	12/31/2015	12/31/2014
Increase in the ADEC for a 1% COLA*	0.30%	0.25%
Increase in the ADEC for a 0.01% Increase in the Defined Benefit Formula**	0.36%	0.34%

* The 1% COLA calculated at the December 31, 2015 valuation would be effective July 1, 2017. The COLA would be paid in full to retired members and survivors of deceased members on the retirement roll on July 1, 2016 and would be prorated for retired members and survivors of deceased members who commence benefits after July 1, 2016 but before June 30, 2017.

** A corresponding increase in retirement allowances would be paid in the event of an increase in the defined benefit formula.

Section 7: Valuation Balance Sheet

The valuation balance sheet shows the assets and liabilities of LGERS. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date. The table below provides the valuation balance sheet for the current year and prior year.

Table 18: Valuation Balance Sheet

Balance Sheet as of	12/31/2015	12/31/2014
Assets		
Current Actuarial Value of Assets		
Annuity Savings Fund	\$ 4,783,077,870	\$ 4,593,484,091
Pension Accumulation Fund	<u>18,866,233,403</u>	<u>18,088,896,634</u>
Total	\$ 23,649,311,273	\$ 22,682,380,725
Future Member Contributions to the Annuity Savings Fund	\$ 2,783,789,343	\$ 2,792,586,773
Prospective Contributions to the Pension Accumulation Fund		
Normal Contributions	\$ 2,237,052,535	\$ 2,946,045,227
Unfunded Accrued Liability Contributions	710,808,596	35,749,399
Undistributed Gain Contributions	<u>363,720,791</u>	<u>129,070,646</u>
Total	\$ 3,311,581,922	\$ 3,110,865,272
Total Assets	\$ 29,744,682,538	\$ 28,585,832,770
Liabilities		
Annuity Savings Fund		
Past Member Contributions	\$ 4,783,077,870	\$ 4,593,484,091
Future Member Contributions	<u>2,783,789,343</u>	<u>2,792,586,773</u>
Total Contributions	\$ 7,566,867,213	\$ 7,386,070,864
Pension Accumulation Fund		
Benefits Currently in Payment	\$ 11,789,387,592	\$ 10,511,594,386
Benefits to be Paid to Current Active Members	10,011,935,339	10,491,937,708
Reserve for Increases in Retirement Allowances effective July 1, 2016 (July 1, 2015 for December 31, 2014)	12,771,603	67,159,166
Reserve for Undistributed Gains/(Losses)	<u>363,720,791</u>	<u>129,070,646</u>
Total Benefits Payable	\$ 22,177,815,325	\$ 21,199,761,906
Total Liabilities	\$ 29,744,682,538	\$ 28,585,832,770

Section 8: Accounting Results

This section contains the accounting information for Governmental Accounting Standards Board (GASB) Statement No. 67 for fiscal year ending June 30, 2016 based on a valuation date of December 31, 2015.

Please note that GASB Statement No. 67 (*Financial Reporting for Pension Plans*) is applicable for fiscal years ending 2014 and later.

The June 30, 2016 total pension liability presented in this section was determined by an actuarial valuation as of December 31, 2015, based on the assumptions, methods and plan provisions described in this report. The actuarial cost method used to develop the total pension liability is the Entry Age Normal Cost method, as required by GASB Statement No. 67.

GASB Statement No. 67 set forth certain items of information to be disclosed in the financial statements of the Plan. The tables below provide a distribution of the number of employees by type of membership.

Table 19: Number of Active and Retired Members as of December 31, 2015

Group	Number
Retired members and survivors of deceased members currently receiving benefits	63,110
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	59,289
Active members	<u>124,974</u>
Total	247,373

Section 8: Accounting Results

GASB Statement No. 67 set forth certain items of information to be disclosed in the financial statements of the Plan. The tables below provide the schedule of changes in Net Pension Liability (Asset).

Table 20: Schedule of Changes in Net Pension Liability (Asset)

Calculation as of	June 30, 2016
Total Pension Liability	
Service Cost	\$ 684,288,000
Interest	1,707,699,000
Changes of Benefit Terms	12,581,000
Difference between Expected and Actual Experience	50,205,000
Change of Assumptions	183,019,000
Benefit Payments, including Refund of Member Contributions	<u>(1,251,918,000)</u>
Net Change in Total Pension Liability	\$ 1,385,874,000
Total Pension Liability - Beginning of Year	\$ 23,496,136,000
Total Pension Liability - End of Year	\$ 24,882,010,000
Plan Fiduciary Net Position	
Employer Contributions	\$ 414,168,000
Member Contributions	375,572,000
Net Investment Income	175,189,000
Benefit Payments, including Refund of Member Contributions	(1,251,918,000)
Administrative Expenses	(3,926,000)
Other	<u>3,248,000</u>
Net Change in Fiduciary Net Position	\$ (287,667,000)
Plan Fiduciary Net Position - Beginning of Year	\$ 23,047,342,000
Plan Fiduciary Net Position - End of Year	\$ 22,759,675,000

Table 21: Net Pension Liability (Asset)

Calculation as of	June 30, 2016	June 30, 2015
Total Pension Liability	\$ 24,882,010,000	\$ 23,496,136,000
Plan Fiduciary Net Position	<u>22,759,675,000</u>	<u>23,047,342,000</u>
Net Pension Liability (Asset)	\$ 2,122,335,000	\$ 448,794,000
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	91.47%	98.09%

Section 8: Accounting Results

The table below is the sensitivity of the net pension liability to changes in the discount rate.

Table 22: Sensitivity of the Net Pension Liability (Asset) at June 30, 2016 to Changes in the Discount Rate

	1% Decrease	Current	1% Increase
Discount Rate	6.25%	7.25%	8.25%
Net Pension Liability (Asset)	5,037,291,000	2,122,335,000	(312,453,000)

The discount rate used to measure the total pension liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that for fiscal year ending 2017 to fiscal year ending 2022, System contributions will follow the Employer Contribution Rate Stabilization Policy as adopted by the Board of Trustees on January 21, 2016, and for fiscal years ending 2023 and beyond, System contributions will be based on the actuarially determined contribution rates. Based on those policies, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Please see Appendix E for additional detail.

The table below provides the methods and assumptions used to calculate the actuarially determined contribution rate.

Table 23: Additional Information for GASB Statement No. 67

Valuation Date	12/31/2015
Actuarial Cost Method	Entry Age
Amortization Method	Level dollar closed
Amortization Period	12 years
Asset Valuation Method	Asset returns in excess of or less than the expected return on market value of assets reflected over a five-year period (not greater than 120% of market value and not less than 80% of market value)
Actuarial Assumptions	
Investment Rate of Return*	7.25%
Projected Salary Increases**	3.50% - 7.75%
*Includes Inflation of	3.00%
**Includes Inflation and Productivity of	3.50%
Cost-of-living Adjustments	N/A

Section 9: Projections

Projections of contribution requirements and funded status into the future can be helpful planning tools for stakeholders. This section provides such projections. The projections of the actuarial valuation are known as deterministic projections. Deterministic projections are based on one scenario in the future. The baseline deterministic projection is based on December 31, 2015 valuation results as assumptions.

Key Projection Assumptions

- Valuation interest rate of 7.25% for all years
- 7.25% investment return on market value of assets
- Actuarial assumptions and methods as described in Appendix D. All future demographic experience is assumed to be exactly realized.
- The contribution rate under the Employer Contribution Rate Stabilization Policy (ECRSP) is contributed until fiscal year ending 2022.
- The actuarially determined contribution rate is contributed for fiscal years ending 2023 and beyond.
- 0% increase in the total active member population
- No cost-of-living adjustments granted
- Future pay increases based on long-term valuation

The ECRSP adopted by the Board of Trustees on January 21, 2016 requires that recommended contributions for general employees be set at 7.25% of payroll for fiscal year ending 2017 and will increase each fiscal year by 0.25% per year, with the following additional adjustments, if applicable:

- (4) If the underlying actuarially determined employer contribution rate (ADEC) for a given fiscal year is 50% higher than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal years increases 0.50%;
- (5) If the underlying ADEC for a given fiscal year is 50% lower than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal year decreases 0.50%;
- (6) If the General Assembly grants any additional COLA beyond the amount of COLA granted by the Board, increases the multiplier for active employees, or changes the benefit structure in a way that has a cost to the system, the schedule of contributions for the current and future fiscal years will be increased by the cost of the benefit enhancement. The cost of any COLA granted by the Board under the authority allowed by statute will not impact the scheduled contribution rates.

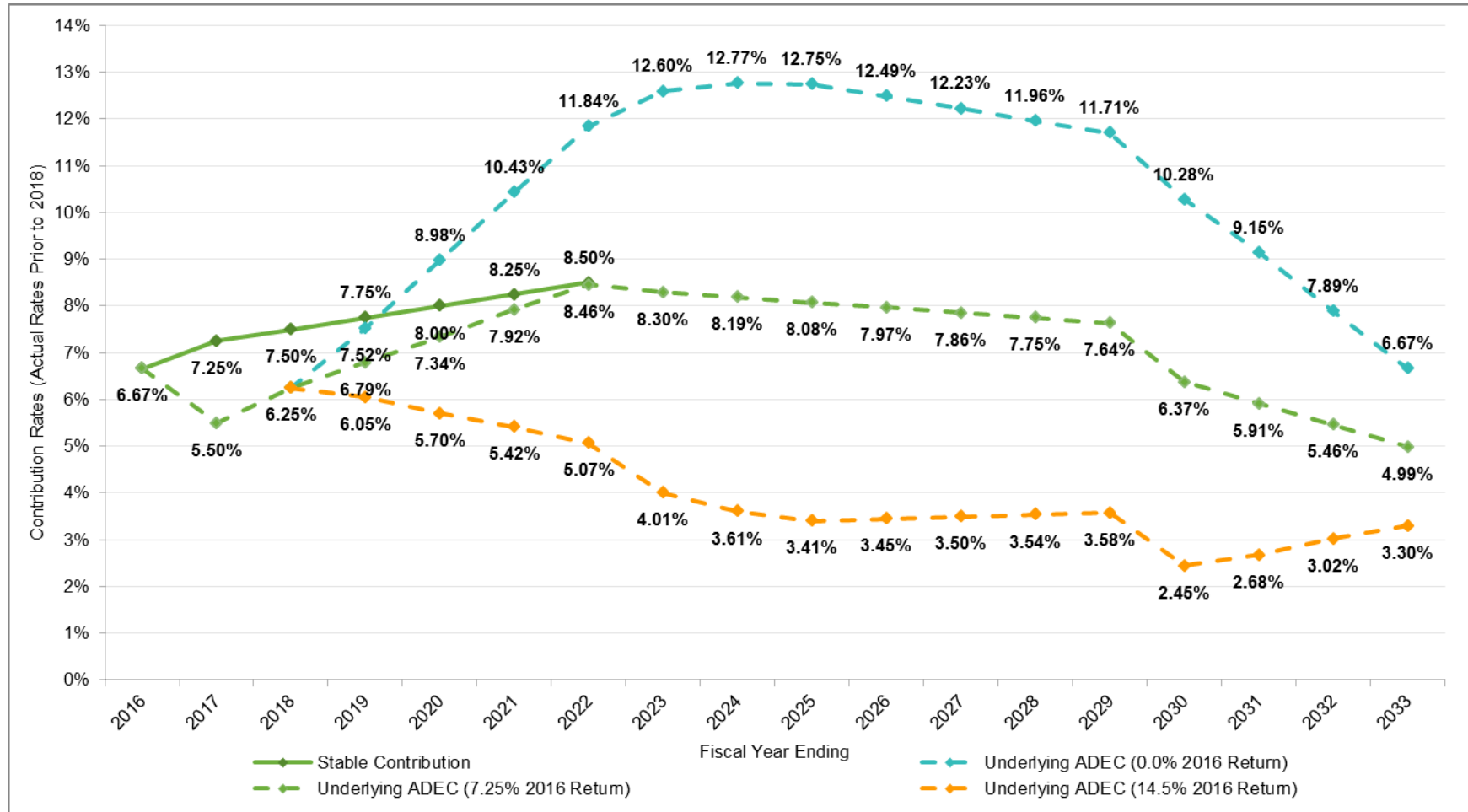
Contribution rates for law enforcement officers will be 0.75% higher than contribution rates for general employees.

In addition, we have provided two alternate deterministic projections. The first alternate deterministic projection is based on the same assumptions as the baseline deterministic projection except that it assumes a 0.0% asset return for calendar year 2016. The second alternate deterministic projection is based on the same assumptions as the baseline deterministic projection except that it assumes a 14.50% asset return for calendar year 2016.

Section 9: Projections

The graph below provides the actuarially determined employer contribution rates projected for 15 years, as well as the board approved stable contribution under the Employer Contribution Rate Stabilization Policy.

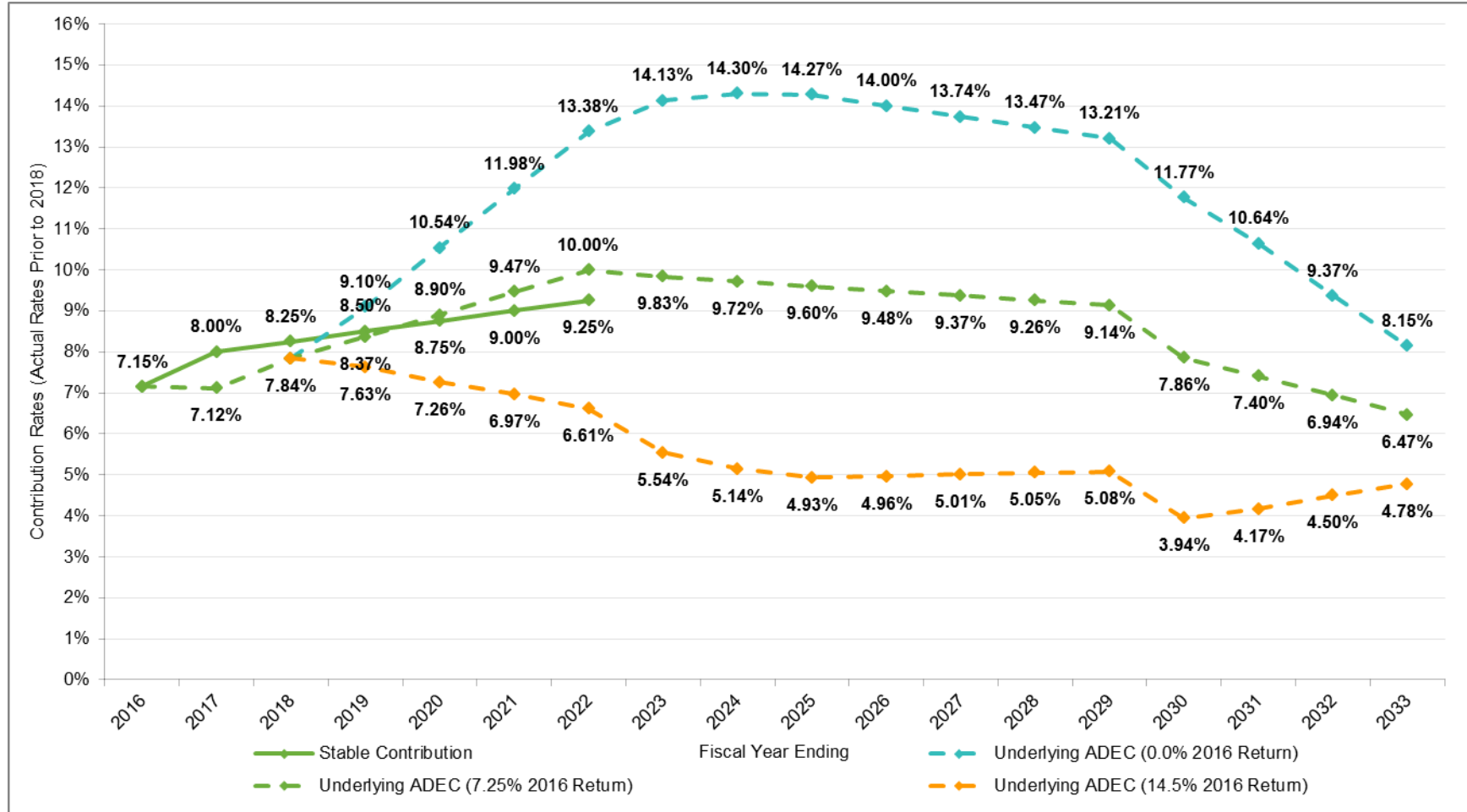
Projected Actuarially Determined Employer Contribution Rates for General Employees and Firefighters



Section 9: Projections

The graph below provides the actuarially determined employer contribution rates projected for 15 years, as well as the board approved stable contribution under the Employer Contribution Rate Stabilization Policy.

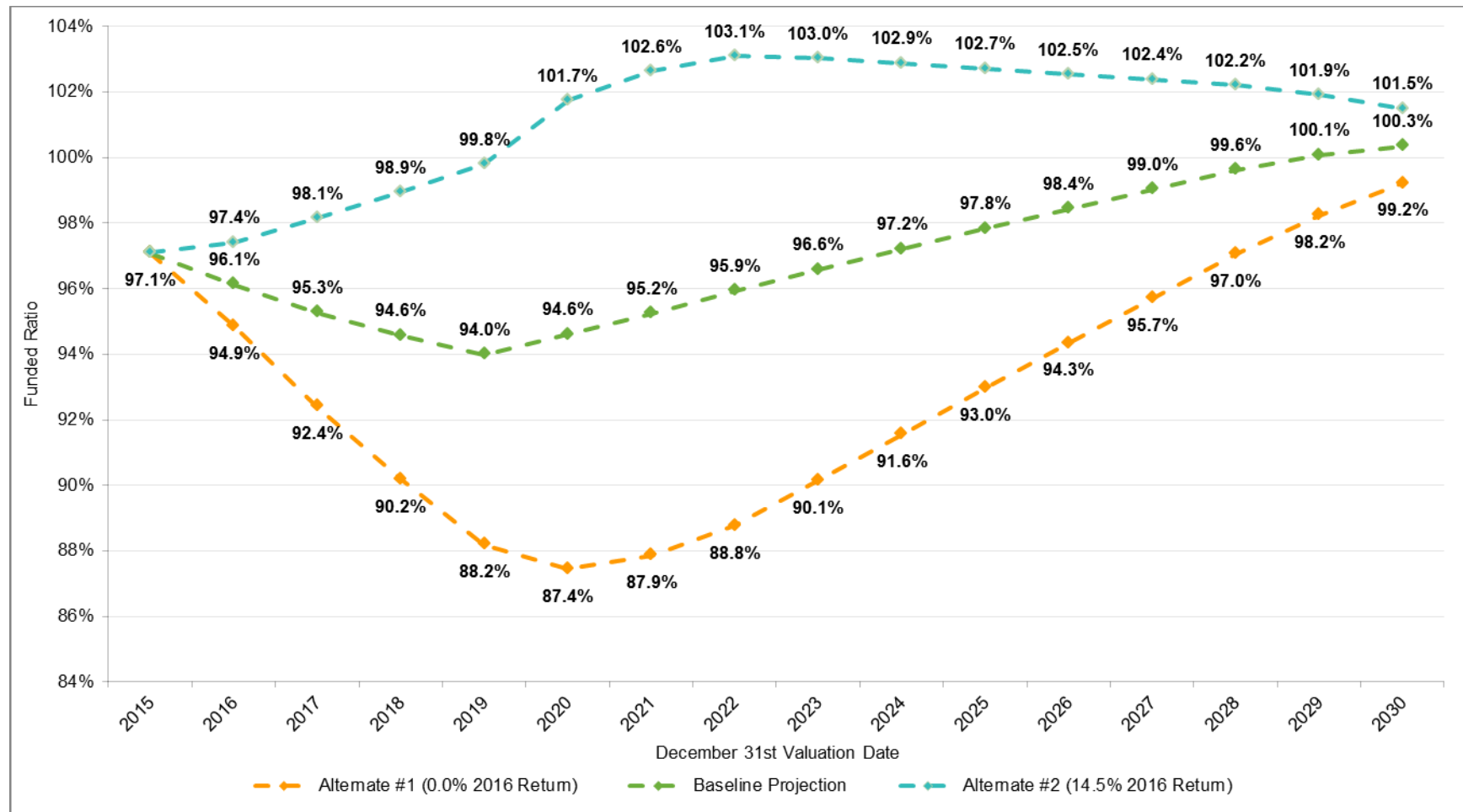
Projected Actuarially Determined Employer Contribution Rates for Law Enforcement Officers



Section 9: Projections

The graph below provides the funded ratio projected for 15 years.

Projected Funded Ratio



Appendix A: Valuation Process and Glossary of Actuarial Terms

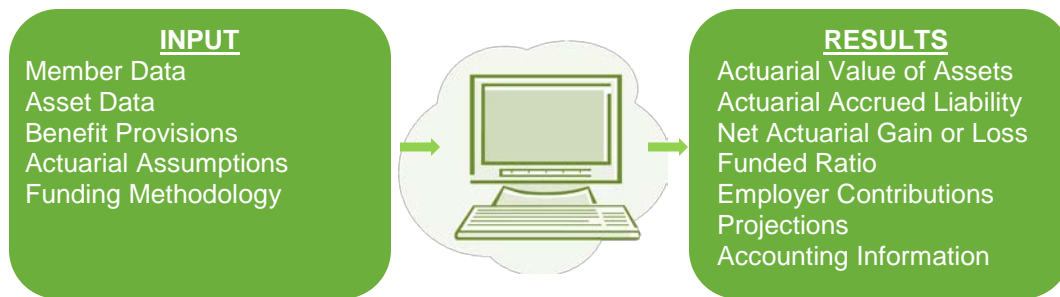
Purpose of an Actuarial Valuation

The majority of Public Sector Retirement Systems in the State of North Carolina are defined benefit (DB) retirement systems. Under a DB Retirement System, the amount of benefits payable to a member upon retirement, termination, death or disability is defined in various contracts and legal instruments and is based, in part, on the member's years of credited service and final compensation. The amount of contribution needed to fund these benefits cannot be known with certainty. A primary responsibility of the Board of Trustees of a Retirement System is to establish and monitor a funding policy for the contributions made to the Retirement System.

While somewhat uncommon, in some jurisdictions, contributions are made by the plan sponsor as benefits come due. This is known as pay-as-you-go financing. More commonly, contributions for benefits are made in advance during the course of active employment of the members. This is known as actuarial pre-funding. For example, the State of North Carolina mandates for the Teachers' and State Employees' Retirement System (the "State Plan") that "on account of each member there shall be paid into the pension accumulation fund by employers an amount equal to a certain percentage of the actual compensation of each member to be known as the 'normal contribution'..." and further "the normal rate of contribution shall be determined by the actuary after each valuation."

The Actuarial Valuation Process

The following diagram summarizes the inputs and results of the actuarial valuation process. A narrative of the process follows the diagram. The reader may find it worthwhile to refer to the diagram from time to time.



Under the actuarial valuation process, current information about Retirement System members is collected annually by staff at the direction of the actuary, namely member data, asset data and information on benefit provisions. Member data is collected for each member of the Retirement System. The member data will assist the actuary in estimating benefits that could be paid in the future. The member information the actuary collects to estimate the amount of benefit includes elements such as current service, salary and benefit group identifier for members that have not separated service; for those that have, the actual benefit amounts are collected. The actuary collects information such as gender and date of birth to determine when a benefit might be paid and for how long. The actuary collects summary information about assets as of the valuation date and information on cash flows for the year ending on the valuation date. Information about

Appendix A: Valuation Process and Glossary of Actuarial Terms

benefit provisions as of the valuation date is also collected. To bridge the gap between the information collected and potential benefits to be paid in the future, the actuary must make assumptions about future activities. These assumptions are recommended by the actuary to the Boards based on the results of an experience review. An experience review is a review of the Retirement System over a period of time, typically five years, where the actuary analyzes the demographic and economic assumptions of the Retirement System. Based on this review, the actuary will make recommendations on the demographic assumptions, such as when members will be projected to retire, terminate, become disabled and/or die in the future, as well as the economic assumptions, such as what rate of return is projected to be earned by the fund based on the Retirement System investment policy and what level of future salary increases is expected for members. To maintain the assumptions, the Board should adopt a prudent policy of having an experience review being performed every five years. The next experience review for the North Carolina Retirement Systems will be based on the five-year period ending on December 31, 2019 and will be presented during 2020. Using these assumptions, the actuary is able to use the member data, asset data and benefit provision information collected to project the benefits that will be paid from the Retirement System to current members. These projected future benefit payments are based not only on service and pay through the valuation date but includes future pay and service, which has not yet been earned by the members but is expected to be earned.

These projected future benefit payments are discounted into today's dollars using the assumed rate of investment return assumption to determine the Present Value of Future Benefits (PVFB) of the Retirement System. The PVFB is an estimate of the value of the benefits promised to all members as of a valuation date. If the Retirement System held assets equal to the PVFB and all the assumptions were realized, there would be sufficient funds to pay off all the benefits to be paid in the future for members in the Retirement System as of the valuation date.

The PVFB is a large sum of money, typically much larger than the amount of Retirement System assets held in the trust. The next step is for the actuary to apply the Funding Policy as adopted by the Board to determine the employer contributions to be made to the Retirement System so that the gap between the PVFB and assets is systematically paid off over time. The Funding Policy is adopted by the Board based on discussions with the actuary. When the Board develops a funding policy, a balance between contributions which are responsive to the needs of the Retirement System yet stable should be struck. There are many different funding policies for the Board to consider, and the actuary is responsible for discussing the various features of the funding policies under consideration. Funding Policies are generally reviewed during an experience review, but it is not uncommon to review a funding policy in between, particularly during period where large increases or decreases in contributions are expected. The Funding Policy is composed of three components: the actuarial cost method, the asset valuation method, and the amortization method.

Once the PVFB is developed, an actuarial cost method is used to allocate the PVFB. Under the actuarial cost method, the PVFB is allocated to past, current and future service, respectively known as the actuarial accrued liability (AAL), normal cost (NC) and present value of future normal costs (PVFNC). The actuary computes the liability components (PVFB, NC, AAL, and PVFNC) for each participant in the Retirement

Appendix A: Valuation Process and Glossary of Actuarial Terms

System at the valuation date. These liability components are then totaled for the Retirement System. There are many actuarial cost methods. Different actuarial methods will produce different contribution patterns, but do not change the ultimate cost of the benefits. The entry age normal cost method is the most prevalent method used for public sector plans in the United States, because the expected normal cost is calculated in such a way that it will tend to stay level as a percent of pay over a member's career.

The actuarial accrued liability (AAL) is also referred to as the amount of money the Retirement System should ideally have in the trust. The unfunded actuarial accrued liability (UAAL) is the portion of actuarial accrued liability that is not covered by the assets of the Retirement System. The UAAL can be a negative number, which means that the Retirement System has more assets than actuarial accrued liability. We refer to this condition as overfunded liability in this summary. Having UAAL does not indicate that the Retirement System is in failing actuarial health. UAAL is a common occurrence. Currently, many Retirement Systems in the United States have UAAL as a result of the Great Recession of 2008. Another related statistic of the Retirement System is the funded ratio. The funded ratio is the percent of the actuarial accrued liabilities covered by the actuarial value of assets. The assets used for these purposes are an actuarial value of assets (AVA), not market. The actuarial value of assets is based on the asset valuation method as recommended by the actuary and adopted by the Board. An actuarial value of assets is a smoothed, or averaged, value of assets, which is used to limit employer contribution volatility. Typically, assets are smoothed, or averaged, over a period of 3 to 5 years, although longer periods are becoming more common. By averaging returns, the UAAL is not as volatile, which we will see later results in contributions that are not as volatile as well. The North Carolina Retirement Systems use an actuarial value of assets with a smoothing period of 5 years.

While having UAAL is common, it is acceptable only if it is systematically being paid off. The method by which the UAAL is paid off is known as the amortization method. The concept is similar to that of a mortgage payment. The Board adopts the amortization method used to pay off the UAAL over a period of time. The amortization method is composed of the amortization period, the amount of payment increase, whether the period is open or closed and by the amount of amortization schedules. The amortization period is the amount of time over which the UAAL will be paid off. This is generally a period of thirty years or less, but actuaries are beginning to recommend shorter periods. The payments can be developed to stay constant from year to year like a mortgage, but often they are developed to increase each year at the same level payroll increases. Amortization type can be closed or open. Under a closed period, the UAAL is expected to be paid off over the amortization period. This is similar to a typical mortgage. Under an open period, the amortization period remains unchanged year after year. The concept is similar to re-mortgaging annually. In many instances, an amortization schedule is developed, whereby the UAAL is amortized over a closed period from the point the UAAL is incurred. Finally, some amortization methods are defined by a schedule of payments, where a new schedule of payments is added with each valuation. Regardless of the amortization type or period, the funding policy should generate a contribution that pays off the UAAL, which results in the funded ratio trending to 100% over time. Caution should be used when an open method is used, because typically an open amortization policy does not result in the UAAL being paid off. North Carolina pays off a much larger amount of UAAL compared to other states. While many states struggle to pay a 30-year

Appendix A: Valuation Process and Glossary of Actuarial Terms

level percent of pay UAAL contribution, which doesn't even reduce the amount of UAAL, North Carolina pays down the UAAL with level dollar payments over 12 years. This aggressive payment of UAAL results in North Carolina being home to many of the best funded Public Retirement Systems in the United States.

To satisfy the requirements of the State of North Carolina, the actuary calculates the total annual contribution to the Retirement System as the normal cost plus a contribution towards UAAL. Said another way, this contribution is sufficient to pay for the cost of benefits accruing during the year (normal cost) plus the mortgage payment (UAAL payment). The total contribution is reduced by the amount of member contributions, if any, to arrive at the employer contribution. For the aggressive North Carolina contribution policy to be effective, the amounts that Buck calculates need to be contributed. With very limited exception, North Carolina has contributed the amounts that Buck has calculated, which has resulted in the North Carolina Retirement Systems being among the best funded in the United States.

An actuarial valuation report is produced annually, which contains the contribution for the fiscal year as well as the funded ratio of the Retirement System. The primary purpose of performing an actuarial valuation annually is to replace the estimated activities from the previous valuation, which were based on assumptions, with the actual experience of the Retirement System for the prior year. The experience gain (loss) is the difference between the expected and the actual UAAL of the Retirement System. An experience loss can be thought of as the amount of additional UAAL over and above the amount that was expected from the prior year due to deviation of actual experience from the assumption. Similarly, an experience gain can be thought of as having less UAAL than that which was expected from the prior year assumptions. As an example, if the Retirement System achieves an asset return of 15% when the assumption was a 7.25% return, an actuarial gain is said to have happened, which typically results in lower contributions and higher funded ratio, all else being equal. Alternatively, a return of 2% under the same circumstances would result in an actuarial loss, requiring an increase in contributions and a funded ratio that is lower than anticipated. Experience gains and losses are common within the valuation process. Typically gains and losses offset each other over time. To the extent that does not occur, the reasons for the gains and losses should be understood, and appropriate recommendations should be made by the actuary after an experience review to adjust the assumptions.

The actuarial valuation report will contain histories of key statistics from prior actuarial valuation reports. In particular, a history of the funded ratio of the Retirement System is an important exhibit. Trustees should understand the reason for the trend of the funded ratio of the Retirement System over time. The actuary will discuss the reasons for changes in the funded ratio of the Retirement System with each valuation report. To the extent that there are unexplained changes in funded ratio corrective action should be explored and the actuary will make recommendations as to whether there should be changes in the assumptions, funding policy, or some other portion of the actuarial valuation process.

In addition to historical information, projections of contributions and funded ratio based on current assumptions can sometimes be found in an actuarial valuation report. Projections of contributions can allow the employer to plan their budget accordingly. Surprises in Retirement System contributions to be paid by the employer serve no one.

Appendix A: Valuation Process and Glossary of Actuarial Terms

A one-year projection based on “bad” asset returns can provide ample time for the employer to plan, or allow for a discussion of changing the funding policy to occur. Contribution surprises are a primary contributor to employers considering pension reform. It is important to keep the employer apprised of future contribution requirements. A projection of funded ratio can serve the Trustees by illustrating the trend of the funded ratio over time. The funded ratio, under a prudent funding policy, should trend to 100% over a period of less than 30 years. (It is worthwhile to note that while 30 years has served as an industry standard for the longest period over which 100% funding should be achieved, that period is coming under scrutiny by the actuarial community and will likely be shortened.) If a projection of funded ratio does not trend to 100% over time, consideration should be given to fixing the funding policy to achieve this goal. For the North Carolina Retirement Systems, projections are generally performed for the January Board meetings. While the projection period has tended to be limited to five years, a longer projection would show the funded ratio trend to 100% much faster than other Public Retirement Systems.

The actuarial report will contain schedules of information about the census, plan and asset information submitted by Retirement System staff upon which the actuarial valuation is based. It is important that the Board of Trustees review that information and determine if the information is consistent with their understanding of the Retirement System. If after questioning staff, the Board of Trustees is not comfortable that the information provided is correct, the actuary should be notified to determine if the actuarial valuation report should be corrected.

Finally, the valuation report and/or presentation should contain sufficient information in an understandable fashion to allow the Board to take action and adopt the contribution rate for the upcoming year. It should also allow stakeholders to understand key observations over the past year that resulted in contributions increasing (or decreasing) and where contributions are headed. The actuary is always open to making the results understandable. Buck works with the North Carolina Retirement Division to make your reports and presentations understandable and actionable. If something doesn't make sense – speak up!!

Appendix A: Valuation Process and Glossary of Actuarial Terms

Glossary

Note that the first definitions given are the “official” definitions of the term. For some terms there is a second definition, in italics, which is the unofficial definition.

Actuarial Accrued Liability (AAL). The portion of the Present Value of Projected Benefits (PVFB) allocated to past service. Also difference between (i) the actuarial present value of future benefits, and (ii) the present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability.” *The amount of money that should be in the Fund. The funding target.*

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, retirement, investment income and salary increases. Demographic (“people”) assumptions (rates of mortality, separation, and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic (“money”) assumptions (salary increases and investment income) consist of an underlying rate appropriate in an inflation-free environment plus a provision for a long-term average rate of inflation. *Estimates of future events used to project what we know now- current member data, assets, and benefit provisions – into an estimate of future benefits.*

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the Present Value of Projected Benefits (PVFB) between the normal costs to be paid in the future and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

Actuarial Methods. The collective term for the Actuarial Cost Method, the Amortization Payment for UAAL Method, and the Asset Valuation Method used to develop the contribution requirements for the Retirement System. *The Funding Policy.*

Actuarial Equivalent. Benefits whose actuarial present values are equal.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Actuarial Value of Assets (AVA). A smoothed value of assets which is used to limit contribution volatility. Also known as the funding value of assets. *Smoothed value of assets.*

Appendix A: Valuation Process and Glossary of Actuarial Terms

Amortization Payment for UAAL. Payment of the unfunded actuarial accrued liability by means of periodic contributions of interest and principal, as opposed to a lump sum payment. The components of the amortization payment for UAAL include:

- Amortization Period Length – Generally amortization periods up to 15 to 20 years (and certainly not longer than 25) are allowed. Similar to a mortgage, the shorter the amortization period, the higher the payment and the faster the UAAL is paid off.
- Amortization payment increases – Future payments can be level dollar, like a mortgage, or as a level percent of pay. Most Retirement Systems amortize UAAL as a level percent of pay which when combined with the employer normal cost that is developed as a level percent of pay can result in contributions that are easier to budget.
- Amortization type Amortization schedule can be closed or open. A closed amortization schedule is similar to a mortgage – at the end of the amortization period the UAAL is designed to be paid off. An open amortization period is similar to refinancing the UAAL year after year.
- Amortization schedule UAAL can be amortized over a single amortization period, or it can be amortized over a schedule.

The amortization payment for UAAL can be thought of as the UAAL mortgage payment.

Asset Valuation Method. The components of how the actuarial value of assets is to be developed.

Experience Gain Loss. A measure of the difference between actual experience and experience anticipated by a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used. *The experience Gain (Loss) represents how much the actuary missed the mark in a given year.*

Funded Ratio. The percent of the actuarial accrued liabilities covered by the actuarial value of assets. Also known as the funded status. *The ratio of how much money you actually have in the fund to the amount you should have in the fund.*

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” An amortization payment toward the unfunded actuarial accrued liability is paid in addition to the normal cost to arrive at the total contribution in a given year. *The cost of benefits accruing during the year.*

Present Value of Future Normal Cost (PVFNC). The portion of the Present Value of Projected Benefits (PVFB) allocated to future service. *The value in today's dollars of the amount of contribution to be made in the future for benefits accruing for members in the Retirement System as of the valuation date. Note that in practice, this number is rarely discussed.*

Appendix A: Valuation Process and Glossary of Actuarial Terms

Present Value of Future Benefits (PVFB). The projected future benefit payments of the plan are discounted into today's dollars using an assumed rate of investment return assumption to determine the Present Value of Future Benefits (PVFB) of the Retirement System. The PVFB is the discounted value of the projected benefits promised to all members as of a valuation date, including future pay and service for members which has not yet been earned. *If the Retirement System held assets equal to the PVFB and all the assumptions were realized, there would be sufficient funds to pay off all the benefits to be paid in the future for members in the Retirement System as of the valuation date.*

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability (UAAL). The difference between the actuarial accrued liability (AAL) and actuarial value of assets (AVA). The UAAL is sometimes referred to as "unfunded accrued liability." *Funding shortfall, or prefunded amount if negative.*

Valuation Date. The date that the actuarial valuation calculations are performed as of. *Also known as the "snapshot date".*

Appendix B: Detailed Tabulations of Member Data

Table B-1: The Number and Average Reported Compensation of Active Members Distributed by Age and Service as of December 31, 2015

Age	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	
Under 25	1,018	2,899	27	0	0	0	0	0	0	0	3,944
	7,219	29,481	36,583	0	0	0	0	0	0	0	23,783
25 to 29	1,180	8,146	2,581	67	0	0	0	0	0	0	11,974
	7,707	34,655	40,738	41,667	0	0	0	0	0	0	33,350
30 to 34	848	5,732	5,590	2,327	70	0	0	0	0	0	14,567
	7,964	36,575	43,312	46,271	47,612	0	0	0	0	0	39,097
35 to 39	645	4,355	4,132	4,178	1,809	31	0	0	0	0	15,150
	8,091	37,552	44,316	49,197	52,720	47,600	0	0	0	0	43,186
40 to 44	541	3,817	3,624	3,552	4,127	1,501	53	0	0	0	17,215
	8,069	37,573	44,286	49,345	55,512	59,768	59,625	0	0	0	46,792
45 to 49	489	3,496	3,375	3,165	3,353	3,334	1,648	36	0	0	18,896
	8,335	37,231	43,675	48,566	54,686	61,925	64,083	63,909	0	0	49,380
50 to 54	406	2,930	2,943	2,796	2,613	2,170	2,607	532	14	0	17,011
	8,223	37,797	43,627	46,927	51,112	57,829	65,816	65,274	59,905	0	49,373
55 to 59	287	2,339	2,447	2,358	2,183	1,660	1,634	744	197	9	13,858
	7,783	37,454	43,328	46,341	50,140	54,137	61,173	69,930	66,415	72,033	48,360
60 to 64	132	1,297	1,620	1,581	1,399	1,025	882	338	211	55	8,540
	7,781	38,115	43,840	46,556	48,585	52,641	57,414	69,741	69,331	72,088	47,988
65 to 69	51	466	536	568	468	280	184	106	81	66	2,806
	6,469	32,553	41,604	45,553	49,427	51,889	59,501	61,099	75,997	77,623	46,343
70 & Up	12	250	205	189	130	96	58	33	18	22	1,013
	5,447	20,808	29,177	38,744	44,019	45,253	51,656	51,276	66,157	86,333	35,949
Total	5,609	35,727	27,080	20,781	16,152	10,097	7,066	1,789	521	152	124,974
	7,818	35,902	43,315	47,749	52,687	58,020	62,962	67,521	68,902	76,550	44,344

Appendix B: Detailed Tabulations of Member Data

Table B-2: The Number and Reported Compensation of Active Members Distributed by Age as of December 31, 2015

Age	Men		Women	
	Number	Compensation	Number	Compensation
18	11	\$ 60,780	2	\$ 43,468
19	44	366,596	15	197,621
20	122	1,770,682	25	322,140
21	266	4,849,700	73	1,296,293
22	478	10,837,171	166	2,982,847
23	764	19,627,688	369	7,729,525
24	1,061	30,119,525	548	13,598,446
25	1,345	41,960,357	714	19,950,193
26	1,446	48,396,496	835	24,172,136
27	1,503	52,946,783	949	29,106,729
28	1,552	56,377,758	969	30,862,239
29	1,636	61,957,028	1,025	33,599,540
30	1,770	68,504,934	1,051	35,968,451
31	1,749	69,384,861	1,128	40,489,553
32	1,669	68,196,393	1,166	42,128,393
33	1,842	76,823,052	1,151	43,810,484
34	1,809	77,660,084	1,232	46,553,060
35	1,739	75,771,272	1,235	47,833,744
36	1,689	74,374,043	1,231	48,417,755
37	1,692	77,348,090	1,372	55,842,991
38	1,678	77,401,096	1,300	53,372,864
39	1,849	87,339,212	1,365	56,563,638
40	1,734	84,219,933	1,306	54,182,002
41	1,939	96,223,020	1,470	61,001,421
42	1,946	97,030,155	1,504	64,489,355
43	1,999	100,452,426	1,441	60,714,292
44	2,292	118,440,550	1,584	68,763,437
45	2,326	123,184,647	1,786	78,288,600
46	2,229	117,890,099	1,722	75,594,246
47	2,079	111,715,285	1,551	67,704,662
48	2,106	112,430,281	1,601	71,849,766
49	1,967	105,722,751	1,529	68,702,033
50	1,856	100,052,031	1,581	70,796,025
51	1,857	98,565,410	1,642	73,072,700
52	1,855	100,118,532	1,652	73,856,091
53	1,691	89,109,612	1,661	73,858,910
54	1,589	84,659,848	1,627	75,788,245
55	1,531	80,654,606	1,634	72,369,223
56	1,290	67,854,339	1,535	69,041,375
57	1,292	69,003,089	1,458	65,056,024

Appendix B: Detailed Tabulations of Member Data

Table B-2: The Number and Reported Compensation of Active Members Distributed by Age as of December 31, 2015 (continued)

Age	Men		Women	
	Number	Compensation	Number	Compensation
58	1,179	\$ 61,391,642	1,405	\$ 63,318,534
59	1,209	62,017,458	1,325	59,466,557
60	1,092	55,394,379	1,218	53,815,818
61	919	47,949,883	1,082	47,356,854
62	819	43,098,674	894	39,327,701
63	615	33,387,012	718	32,205,832
64	571	31,521,204	612	25,763,219
65	469	24,527,182	471	20,345,780
66	330	17,260,491	323	14,268,682
67	252	12,434,058	221	9,868,135
68	204	9,138,194	194	7,453,513
69	183	8,445,227	159	6,296,486
70	125	5,668,048	94	3,396,500
71	86	3,772,992	62	2,346,034
72	69	2,833,531	62	2,184,001
73	74	2,725,765	56	1,947,358
74	52	1,664,909	31	880,523
75	37	1,593,702	24	825,718
76	34	841,427	18	519,444
77	22	483,181	12	352,835
78	35	1,248,530	15	401,291
79	21	457,176	7	230,183
80	9	249,515	9	202,010
81	5	184,330	14	403,617
82	7	156,229	1	42,653
83	6	166,874	4	59,241
84	5	153,282	4	101,939
85	2	44,588		
86	2	59,811		
87	3	64,015	2	67,945
88	1	45,506		
89	1	15,828		
91	1	10,284	1	15,436
Total	69,731	\$ 3,268,405,142	55,243	\$ 2,273,434,356

Appendix B: Detailed Tabulations of Member Data

Table B-3: The Number and Reported Compensation of Active Members Distributed by Service as of December 31, 2015

Service	Men		Women	
	Number	Compensation	Number	Compensation
0	2,804	\$ 22,322,908	2,805	\$ 21,528,557
1	5,987	181,022,218	5,567	160,335,195
2	4,924	187,751,556	4,238	155,067,219
3	4,350	175,330,061	4,004	156,541,629
4	3,684	152,814,895	2,973	113,822,838
5	3,069	128,926,506	2,304	91,500,518
6	2,759	123,282,498	2,064	84,903,517
7	2,969	132,351,324	2,122	88,724,883
8	3,569	164,118,145	2,773	115,372,050
9	3,100	143,782,852	2,351	100,015,919
10	2,921	139,387,588	2,242	98,017,455
11	2,664	130,765,424	1,927	86,159,950
12	2,388	119,489,000	1,785	80,610,434
13	2,046	104,611,606	1,418	64,881,634
14	1,883	99,101,253	1,507	69,247,155
15	2,034	107,735,312	1,574	72,391,843
16	2,035	112,560,112	1,592	75,240,572
17	1,922	108,843,730	1,456	69,823,378
18	1,687	97,622,041	1,239	61,907,734
19	1,548	90,868,030	1,065	54,008,178
20	1,380	84,223,893	1,059	53,425,858
21	1,342	82,808,477	980	50,903,360
22	1,213	76,212,902	876	46,312,769
23	1,016	65,232,019	713	37,276,100
24	886	55,706,331	632	33,729,761
25	945	61,244,164	648	36,114,897
26	989	66,290,024	627	35,292,105
27	889	59,493,613	597	33,885,271
28	823	56,307,866	542	32,179,822
29	615	41,130,390	391	22,952,702
30	335	23,796,685	303	17,989,653
31	261	18,922,269	209	13,163,094
32	147	10,804,935	141	8,066,255
33	120	9,295,234	107	6,774,863
34	98	7,667,365	68	4,315,603
35	82	6,293,776	71	4,039,648
36	59	4,579,559	70	3,932,017
37	51	4,227,749	53	3,221,408
38	45	3,203,169	34	2,087,614
39	24	2,232,473	32	2,080,502

Appendix B: Detailed Tabulations of Member Data

Table B-3: The Number and Reported Compensation of Active Members Distributed by Service as of December 31, 2015 (continued)

Service	Men		Women	
	Number	Compensation	Number	Compensation
40	21	\$ 1,983,629	20	\$ 1,080,638
41	14	1,101,830	14	1,058,331
42	12	890,344	13	1,009,881
43	2	288,243	8	416,058
44	4	415,556	12	855,705
45	5	420,775	7	505,603
46	2	197,476	4	266,604
47	2	220,788		
48	2	187,331	2	173,999
49	3	289,434	1	88,076
50			1	43,741
52	1	49,784		
54			1	46,800
61			1	44,960
Total	69,731	\$ 3,268,405,142	55,243	\$ 2,273,434,356

Appendix B: Detailed Tabulations of Member Data

Table B-4: The Number and Accumulated Contributions of Terminated Vested Members Distributed by Age as of December 31, 2015

Age	Men		Women	
	Number	Contributions	Number	Contributions
18	1	\$ 23	1	\$ 895
19	3	540	2	184
20	18	12,714	4	4,045
21	53	40,477	17	13,821
22	98	125,780	38	36,234
23	136	219,449	76	91,336
24	225	404,248	115	184,110
25	320	815,983	225	422,364
26	445	1,315,763	279	665,677
27	527	1,820,225	377	1,032,717
28	582	2,272,779	496	1,584,545
29	698	2,919,193	576	2,274,550
30	672	3,347,376	615	2,891,919
31	810	4,711,171	739	3,607,646
32	777	4,814,740	744	4,263,110
33	839	5,582,690	853	5,570,765
34	798	6,242,695	824	6,015,893
35	791	6,179,889	902	6,472,588
36	786	7,018,431	986	7,495,987
37	722	6,912,539	964	8,170,143
38	754	7,851,208	974	8,497,105
39	786	8,558,738	935	8,959,657
40	722	8,496,176	924	9,452,368
41	753	9,866,570	1,033	10,997,032
42	794	10,415,995	1,007	11,382,289
43	812	11,345,552	994	12,117,232
44	842	11,186,499	989	12,722,222
45	965	13,870,198	1,149	14,682,000
46	869	14,247,655	1,069	14,058,983
47	777	12,317,806	999	14,194,949
48	731	12,569,168	893	12,686,162
49	728	12,775,844	857	13,079,650
50	691	11,678,147	889	14,782,853
51	716	12,625,634	828	14,039,472
52	608	11,738,661	857	14,099,320
53	586	10,230,053	866	14,374,706
54	597	11,185,066	851	15,131,568
55	552	9,334,646	818	14,841,885
56	500	9,841,232	780	14,704,892
57	439	8,466,525	773	14,755,199

Appendix B: Detailed Tabulations of Member Data

Table B-4: The Number and Accumulated Contributions of Terminated Vested Members Distributed by Age as of December 31, 2015 (continued)

Age	Men		Women	
	Number	Contributions	Number	Contributions
58	443	\$ 9,537,053	795	\$ 15,944,973
59	435	8,925,519	669	13,742,669
60	418	8,436,623	657	12,623,761
61	389	6,842,259	558	11,718,497
62	284	4,172,885	472	8,888,219
63	261	4,298,586	425	7,898,886
64	226	3,319,236	357	5,534,107
65	198	2,380,789	291	4,525,559
66	145	1,741,551	200	3,231,311
67	125	1,479,063	168	1,798,815
68	120	1,160,690	127	1,512,723
69	102	968,547	141	1,096,429
70	68	527,246	53	359,671
71	39	428,831	42	466,380
72	18	222,583	24	216,294
73	22	390,749	18	375,444
74	11	56,443	18	105,904
75	9	22,250	11	119,742
76	11	131,067	7	52,896
77	12	58,952	7	54,063
78	6	103,386	6	51,422
79	5	36,412	1	12,383
80	13	90,071	4	36,985
81	3	6,802	5	15,959
82	6	41,890	3	14,317
83	6	17,876	2	90,263
84	2	7,700	1	3,029
85			1	10,229
86	2	4,428		
88			1	121
89	1	43		
90	1	402		
91	1	6,878		
98	1	99		
99	1	498		
Total	26,907	\$ 328,775,485	32,382	\$ 400,859,124

Appendix B: Detailed Tabulations of Member Data

Table B-5: The Number and Annual Retirement Allowances of Retired Members (Healthy at Retirement) and Survivors of Deceased Members Distributed by Age as of December 31, 2015

Age	Men		Women	
	Number	Allowances	Number	Allowances
18	7	\$ 89,275		
21	1	7,863	1	\$ 26,632
22	1	11,715		
23	1	1,748	2	15,634
24	1	2,029	4	66,448
25	1	11,299	2	6,795
26	4	54,173	2	10,519
27			5	45,485
28	4	20,976	4	9,357
29	1	8,010	2	30,252
30	4	30,017	1	5,079
31	5	45,311	5	25,336
32	3	76,670	3	32,610
33	5	78,062	9	72,154
34	7	55,610	5	25,497
35	6	44,996	7	102,782
36	5	55,185	3	27,795
37	7	83,726	8	116,925
38	5	19,701	5	72,522
39	3	32,525	7	50,509
40	8	61,838	8	66,553
41	4	33,515	16	148,757
42	14	179,391	12	118,898
43	5	58,465	9	98,300
44	4	18,761	12	209,305
45	12	100,889	16	128,926
46	10	135,221	19	191,733
47	13	199,708	23	229,319
48	26	512,693	31	301,803
49	63	2,339,365	31	614,067
50	114	3,678,573	51	982,060
51	212	6,598,296	88	1,773,851
52	304	9,978,913	143	3,277,411
53	298	9,963,104	156	3,639,397
54	400	12,780,503	224	5,989,210

Appendix B: Detailed Tabulations of Member Data

Table B-5: The Number and Annual Retirement Allowances of Retired Members (Healthy at Retirement) and Survivors of Deceased Members Distributed by Age as of December 31, 2015 (continued)

Age	Men		Women	
	Number	Allowances	Number	Allowances
55	450	\$ 14,995,909	309	\$ 7,869,822
56	543	17,885,976	375	9,311,001
57	538	16,663,445	398	9,989,123
58	582	17,917,093	489	12,711,832
59	673	21,256,966	489	12,497,604
60	710	21,586,360	559	13,576,129
61	863	25,589,728	781	17,390,260
62	946	26,365,806	873	18,354,081
63	1,114	27,304,032	1,088	19,805,807
64	1,183	27,760,476	1,191	19,755,692
65	1,282	28,582,760	1,251	20,435,269
66	1,249	26,946,660	1,346	21,578,618
67	1,325	28,366,017	1,408	21,406,859
68	1,355	27,465,388	1,447	22,231,093
69	1,426	27,839,266	1,524	23,101,611
70	919	17,695,747	1,090	16,014,561
71	953	18,080,511	1,076	16,105,341
72	804	14,752,626	988	13,297,149
73	902	16,638,503	1,019	13,643,202
74	696	12,243,701	888	11,563,048
75	638	11,081,444	752	9,413,808
76	602	10,354,043	749	9,759,736
77	538	9,105,997	716	8,973,784
78	511	8,487,609	644	7,851,324
79	508	8,731,661	653	7,649,610
80	449	7,459,536	598	7,612,509
81	428	6,940,094	543	6,391,408
82	364	5,450,368	488	5,460,249
83	303	4,742,307	464	5,181,765
84	305	4,626,866	443	4,837,627
85	232	3,732,157	428	5,036,856
86	214	3,381,040	393	3,861,482
87	178	2,399,746	342	4,190,724
88	152	2,510,200	297	3,161,361
89	122	1,804,429	269	2,812,960

Appendix B: Detailed Tabulations of Member Data

Table B-5: The Number and Annual Retirement Allowances of Retired Members (Healthy at Retirement) and Survivors of Deceased Members Distributed by Age as of December 31, 2015 (continued)

Age	Men		Women	
	Number	Allowances	Number	Allowances
90	106	\$ 1,618,928	201	\$ 2,245,262
91	81	1,154,418	169	1,662,889
92	52	747,782	134	1,298,493
93	53	802,843	116	1,227,113
94	32	400,412	93	829,357
95	21	277,789	67	562,650
96	7	77,725	59	544,006
97	8	210,368	51	452,682
98	5	45,485	34	274,122
99	8	114,548	17	94,108
100	8	111,550	23	157,303
Total	25,996	\$ 579,674,441	28,246	\$ 440,693,211

Appendix B: Detailed Tabulations of Member Data

Table B-6: The Number and Annual Retirement Allowances of Retired Members (Healthy at Retirement) and Survivors of Deceased Members Distributed by Annuity Type as of December 31, 2015

Annuity Type	Men		Women	
	Number	Allowances	Number	Allowances
Maximum	8,600	\$ 173,949,622	14,405	\$ 219,780,968
Option 1	351	6,623,124	558	6,280,518
Option 2	5,440	119,692,276	1,238	16,850,220
Option 3	1,679	40,898,251	710	11,832,555
Option 4	2,445	61,062,389	2,888	60,288,990
Option 5-2	53	1,048,383	13	90,114
Option 5-3	25	572,721	20	280,091
Option 6-2	4,584	114,593,511	1,713	31,632,272
Option 6-3	1,926	51,964,825	1,408	30,027,022
Other	11	257,321	3	51,161
Survivors of Deceased Members	882	9,012,018	5,290	63,579,300
Total	25,996	\$ 579,674,441	28,246	\$ 440,693,211

Appendix B: Detailed Tabulations of Member Data

Table B-7: The Number and Annual Retirement Allowances of Retired Members (Disabled at Retirement) Distributed by Age of December 31, 2015

Age	Men		Women	
	Number	Allowances	Number	Allowances
28	2	\$ 42,837		
29			1	\$ 20,642
30	3	61,359	1	22,245
31	1	20,662		
32	4	66,676	3	53,910
33	8	149,315	3	68,903
34	9	164,168	3	59,043
35	15	315,252	7	177,122
36	16	312,604	5	105,509
37	20	385,345	5	117,720
38	15	296,713	12	217,969
39	15	317,419	15	260,684
40	34	697,714	12	242,913
41	25	535,045	12	234,578
42	33	736,945	11	202,877
43	38	755,889	23	431,855
44	63	1,324,358	29	615,618
45	74	1,668,711	25	493,084
46	79	1,615,790	50	961,589
47	89	1,957,259	44	777,561
48	73	1,520,065	51	1,084,486
49	103	2,208,350	63	1,227,600
50	112	2,222,379	67	1,212,991
51	103	2,313,285	67	1,335,873
52	135	2,809,208	94	1,860,826
53	154	3,058,873	86	1,544,362
54	178	3,293,537	112	2,082,040
55	151	2,798,671	114	2,029,191
56	164	3,102,112	121	2,232,207
57	147	2,863,433	153	2,539,841
58	155	2,764,168	119	2,020,830
59	189	3,588,947	130	2,151,932
60	184	3,506,672	151	2,509,306
61	216	4,269,123	137	2,348,979
62	212	4,178,781	140	2,289,348
63	196	3,854,669	133	2,155,657
64	250	5,296,419	157	2,435,871
65	216	4,223,085	109	1,760,351
66	222	4,717,172	116	1,694,367

Appendix B: Detailed Tabulations of Member Data

Table B-7: The Number and Annual Retirement Allowances of Retired Members (Disabled at Retirement) Distributed by Age of December 31, 2015 (continued)

Age	Men		Women	
	Number	Allowances	Number	Allowances
67	204	\$ 4,094,793	137	\$ 2,203,195
68	200	4,202,773	111	1,517,472
69	191	3,820,272	118	1,702,352
70	151	2,908,553	99	1,396,371
71	143	2,824,670	89	1,234,792
72	111	2,056,336	88	1,063,040
73	116	2,239,739	81	1,029,657
74	82	1,588,692	48	518,587
75	83	1,361,092	54	735,621
76	65	1,110,101	52	602,222
77	60	958,645	46	514,387
78	53	815,109	32	352,961
79	40	673,605	25	301,548
80	37	559,349	26	290,609
81	30	414,588	17	173,857
82	25	344,434	19	202,456
83	25	326,365	12	95,097
84	17	171,428	7	46,740
85	13	210,243	5	48,693
86	9	150,841	7	66,045
87	3	37,112	2	16,361
88	4	66,677	3	25,631
89	10	145,566	2	20,248
90	7	107,699	1	5,023
91	4	75,584	2	18,287
92	1	9,036	3	27,082
93	2	55,548	1	10,958
94			1	4,774
95	4	23,729	3	17,505
96			1	7,879
97	1	11,553		
98			1	6,803
Total	5,394	\$ 105,377,142	3,474	\$ 55,836,133

Appendix B: Detailed Tabulations of Member Data

Table B-8: The Number and Annual Retirement Allowances of Retired Members (Disabled at Retirement) Distributed by Annuity Type of December 31, 2015

Annuity Type	Men		Women	
	Number	Allowances	Number	Allowances
Maximum	3,881	\$ 80,873,495	3,025	\$ 49,555,750
Option 1	171	3,384,564	73	974,604
Option 2	319	4,095,506	62	712,069
Option 3	349	5,552,911	68	927,543
Option 4	9	254,007	9	217,829
Option 5-2	4	81,317		
Option 5-3	9	112,134	1	6,995
Option 6-2	239	3,583,453	83	1,110,289
Option 6-3	404	7,254,289	153	2,331,054
Other	9	185,466		
Total	5,394	\$ 105,377,142	3,474	\$ 55,836,133

Appendix C: Summary of Main Benefit and Contribution Provisions

The following summary presents the main benefit and contribution provisions of the system, as interpreted in preparing the actuarial valuation. Items in parentheses in the text are the provisions applicable only to law enforcement officers. As used in the summary, "average final compensation" means the average annual compensation of a member during the four consecutive calendar years of creditable service producing the highest such average. "Membership service" means service represented by regular contributions. "Prior service" means service prior to the date of participation of the employer for which credit is allowed. "Creditable service" means the sum of prior service plus membership service. "Creditable service" may also include certain special purchased service.

BENEFITS

Unreduced Retirement Allowance

Condition for Allowance	An unreduced retirement allowance is payable to any member who retires from service after he has attained age 65 (55), or after age 60 and completion of 25 years of creditable service, or after completion of 30 years of creditable service.
Amount of Allowance	1.85% of his average final compensation multiplied by the number of years of his creditable service.

Reduced Retirement Allowance

Condition for Allowance	A reduced retirement allowance is payable to any member who retires from service after he has attained age 60 (50) and completed 5 (15) years of creditable service (or in the case of a firefighter or rescue squad worker, after he has attained age 55 and five years of creditable service), but prior to becoming eligible for the unreduced retirement allowance.
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Appendix C: Summary of Main Benefit and Contribution Provisions

Amount of Allowance

The member's reduced retirement allowance is equal to 1.85% of his average final compensation multiplied by the number of years of his creditable service at his date of retirement reduced by 1/4 of 1% for each month by which the member's age at retirement is less than age 65 (55).

If a firefighter has not attained age 60 nor completed 30 or more years of service at the line of retirement, his allowance is the actuarial equivalent of the allowance payable at age 60.

Disability Retirement Allowance

Condition for Allowance

A disability retirement allowance may be granted to a member who becomes totally and permanently incapacitated for duty before becoming eligible for an unreduced retirement allowance, and who had five or more years of creditable service. A law enforcement officer who becomes totally and permanently disabled as the natural and proximate result of an accident occurring in the actual performance of duty may also be retired on a disability retirement allowance.

Amount of Allowance

On retirement for disability a member receives a service retirement allowance if he has attained age 65 (55) or attained age 60 and completed 25 years of creditable service or completed 30 years of creditable service; otherwise the allowance is equal to the retirement allowance calculated on the basis of his average final compensation at time of disability retirement and service projected to the earliest age at which he would have qualified for an unreduced retirement allowance except that any member who had five years of creditable service on or before July 1, 1982 shall have his service projected to age 65.

Deferred and Early Retirement Allowance

Deferred Allowance

Any member who separates from service prior to becoming eligible for an unreduced or reduced retirement allowance after completing five or more years of creditable service and who leaves his total accumulated contributions in the system may receive a deferred retirement allowance, beginning at age 60 (50 or 55), computed in the same way as a reduced retirement allowance on the basis of

Appendix C: Summary of Main Benefit and Contribution Provisions

	<p>his creditable service and compensation to the date of separation.</p>
Early Allowance	<p>If such a member other than a law enforcement officer has completed 20 or more years of creditable service, upon his attainment of age 50, he may elect to convert the deferred allowance into an allowance commencing immediately which is reduced by the lesser of:</p> <ul style="list-style-type: none">(i) 5/12 of 1% for each month by which his age is less than 60, plus 1/4 of 1% for each month by which his age is less than 65.(ii) 5% times the difference between 30 years and his creditable service at retirement.
Return of Contributions	<p>Upon the withdrawal of a member without a retirement allowance and upon his request, his accumulated contributions are returned to him, together with accumulated regular interest.</p> <p>Upon the death of a member before retirement, his accumulated contributions, together with the full accumulated regular interest thereon, are paid to his estate or to person(s) designated by the member provided no survivor's alternate benefit is payable.</p> <p>The current interest rate on member contributions is 4%.</p>
Survivor's Alternate Benefit	<p>Upon the death of a member in service who has attained age 60 (55) and completed five years of creditable service, or completed 20 years of creditable service (or attained age 50 and completed 15 years of creditable service), his designated beneficiary may elect to receive a benefit equal to that which would have been payable under the provisions of Option 2 had the member retired on the first day of the month following his death and elected such option, in lieu of the member's accumulated contributions, provided the member had not instructed the board of trustees in writing that he did not wish the alternate benefit to apply.</p>

Appendix C: Summary of Main Benefit and Contribution Provisions

	<p>Upon the death of a beneficiary, a benefit may be provided by the Retiree's Contributory Death Benefit Plan.</p>
Death After Retirement	<p>Upon the death of a beneficiary who did not retire under an effective election of Option 2 or Option 3, an amount equal to the excess, if any, of his accumulated contributions at retirement over the retirement allowance payments received is paid to a designated person or to the beneficiary's estate.</p> <p>Upon the death of the survivor of a beneficiary who retired under an effective election of Option 2 or Option 3, an amount equal to the excess, if any, of the beneficiary's accumulated contributions at retirement over the total retirement allowance payments received is paid to such other person designated by the beneficiary or to the beneficiary's estate.</p>
Other Death Benefits	<p>Upon the death of a member in service, other benefits may be provided by the Death Benefit Plan or Separate Insurance Benefit Plan for Law Enforcement Officers.</p>
Optional Arrangements at Retirement	<p>In lieu of the full retirement allowance any member may, until the first payment of his allowance becomes normally due, elect to receive a reduced retirement allowance equal in value to the full allowance with the provision that:</p> <p>Option 1 - A member retiring prior to July 1, 1993, may elect that at his death within 10 years from his retirement date, an amount equal to his accumulated contributions at retirement, less 1/120 for each month he has received a retirement allowance, is paid to his estate, or to person(s) designated by the member, or</p> <p>Option 2 - At the death of the member his allowance shall be continued throughout the life of such other person as the member shall have designated at the time of his retirement, or</p> <p>Option 3 - At the death of the member one-half of his allowance shall be continued throughout the life of such other person as the member shall have designated at the time of his retirement.</p>

Appendix C: Summary of Main Benefit and Contribution Provisions

Option 4 - A member may elect to receive a retirement allowance in such amount that, together with his Social Security benefit, he will receive approximately the same income per annum before and after the earliest age at which he becomes eligible to receive the Social Security benefit.

Option 5 - A member retiring prior to July 1, 1993 may elect to receive a reduced retirement allowance under the provisions of Option 2 or Option 3 in conjunction with the provisions of Option 1.

Option 6 - The member may elect Option 2 or 3 with the added provision that should the designated beneficiary predecease the member, the allowance which would have been payable to the member had he not elected the option will be payable thereafter.

Post-Retirement Increases
in Allowance

Future increases in allowances may be granted by the Board of Trustees or the State in accordance with G.S. 128-27(k).

Service Reciprocity

For the purpose of determining eligibility for a deferred, reduced or unreduced service retirement allowance, the membership and creditable service of a member shall include such prior service earned as a member of the Teachers' and State Employees' Retirement System (TSERS), the Consolidated Judicial Retirement System (CJRS), or the Legislative Retirement System (LRS). In addition, if the member's accumulated contributions and reserves are transferred from the prior System to this System, the creditable service earned as a member of the prior System may be included for purposes of determining the amount of benefits payable under this System.

Military Service

For periods of active duty in the United States military may be counted as creditable service if the member was an employee upon entering the military and returned to employment within two years of discharge or for a period of 10 additional years.

Service Purchases

Additional creditable service may include service that the member purchased to restore a period of service for which the member (1) received a

Appendix C: Summary of Main Benefit and Contribution Provisions

refund of contributions, (2) had a leave of absence for educational purposes, extended illness or parental or maternity reasons, (3) had full-time temporary or part-time local or State government employment, (4) was in a probationary or waiting period with a unit of the LGERS, (5) had a leave of absence under Workers' Compensation, (6) performed service with a unit of local government not covered by LGERS, (7) performed service with the federal government not covered by any other retirement system, (8) performed service with a public community service entity funded entirely with federal funds, (9) performed service as a member of the General Assembly, (10) performed service as a member of a charter school not participating in the system, (11) was employed by The University of North Carolina and participated in the Optional Retirement Program but not eligible to receive any benefits from that program, or (12) performed service which was omitted by reason of error.

Unused Sick Leave

Unused sick leave counts as creditable service at retirement. Sick leave which was converted from unused vacation leave is also creditable. One month of credit is allowed for each 20 days of unused sick leave, plus an additional month for any part of 20 days left over.

Transfer of Defined Contribution Balances (Special Retirement Allowances)

A member may make a one-time election to transfer any portion of their eligible accumulated contributions to this plan on or after retirement. Eligible accumulated contributions are those from the Supplemental Retirement Income Plan or Public Employee Deferred Compensation Plan, not including Roth after-tax contributions. The member may elect to convert the accumulated contributions to a life annuity with or without annual increases equal to the annual increase in the U.S. Consumer Price Index. Any ad-hoc COLA increases granted will not apply to benefits under this section. A member may elect Options 2, 3, or 6 under the Plan and may also elect either a guaranteed number of months of payments or a guarantee of total payments at least equal to the amount of contributions transferred to the Plan.

Appendix C: Summary of Main Benefit and Contribution Provisions

Contributions

By Members

Members contribute 6% of compensation.

By Employers

Participating employers make annual contributions consisting of a normal contribution and an accrued liability contribution. The normal contribution covers the liability on account of current service and is determined by the actuary after each valuation. The accrued liability contribution rate for each participating employer is set on the basis of a separate initial actuarial valuation to cover the cost of benefits provided by the employer for service rendered prior to the date of participation. Adjustments in such rates are made when required by amendments to the system.

Changes Since Prior Valuation

A 0.105% cost-of-living adjustment was granted at July 1, 2016.

Appendix D: Actuarial Assumptions and Methods

Assumptions are based on the experience investigation prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016 for use with the December 31, 2015 annual actuarial valuation.

Interest Rate: 7.25% per annum, compounded annually.

Inflation: Both general and wage inflation are assumed to be 3.00% per annum.

Real Wage Growth: 0.50% per annum.

Long-Term Payroll Growth: 3.50% per annum.

Separations From Active Service: Representative values of the assumed rates of separation from active service are as follows:

Service	Annual Rates of Withdrawal					
	General Employees		Firefighters & Rescue Squad Workers		Law Enforcement Officers	
	Male	Female	Male	Female	Male	Female
0	.1850	.2050	.1300	.1300	.1200	.1200
1	.1550	.1750	.1050	.1050	.0850	.0850
2	.1300	.1500	.0950	.0950	.0800	.0800
3	.1050	.1250	.0850	.0850	.0750	.0750
4	.0850	.1050	.0750	.0750	.0700	.0700

Age	General Employees Annual Rates of					
	Withdrawal and Vesting*		Base Mortality**		Disability	
	Male	Female	Male	Female	Male	Female
25	.0750	.1000	.0005	.0002	.0004	.0005
30	.0600	.0900	.0005	.0002	.0005	.0005
35	.0450	.0650	.0005	.0003	.0005	.0005
40	.0400	.0500	.0006	.0004	.0030	.0020
45	.0400	.0450	.0010	.0007	.0040	.0030
50	.0400	.0450	.0017	.0011	.0060	.0035
55	.0400	.0450	.0028	.0017	.0080	.0060
60	.0400	.0450	.0047	.0024	.0080	.0060
65			.0083	.0037		
69			.0125	.0057		

* These rates apply only after five years of membership in the system.

** Base mortality rates as of 2014.

Appendix D: Actuarial Assumptions and Methods

Firefighters & Rescue Squad Workers

Annual Rates of

Age	Withdrawal and Vesting*		Base Mortality**		Disability	
	Male	Female	Male	Female	Male	Female
	25	.0350	.0350	.0005	.0002	.0010
30	.0400	.0400	.0005	.0002	.0010	.0009
35	.0300	.0300	.0005	.0003	.0015	.0024
40	.0250	.0250	.0006	.0004	.0040	.0038
45	.0250	.0250	.0010	.0007	.0055	.0048
50	.0250	.0250	.0017	.0011	.0100	.0076
55	.0250	.0250	.0028	.0017	.0150	.0176
60	.0250	.0250	.0047	.0024	.0150	.0276
65			.0083	.0037		
69			.0125	.0057		

* These rates apply only after five years of membership in the system.

** Base mortality rates as 2014.

Law Enforcement Officers

Annual Rates of

Age	Withdrawal and Vesting*		Base Mortality**		Disability	
	Male	Female	Male	Female	Male	Female
	25	.0500	.0500	.0005	.0002	.0006
30	.0500	.0500	.0005	.0002	.0010	.0030
35	.0400	.0400	.0005	.0003	.0020	.0040
40	.0300	.0300	.0006	.0004	.0030	.0050
45	.0350	.0350	.0010	.0007	.0040	.0060
50	.0350	.0350	.0017	.0011	.0040	.0070
55	.0350	.0350	.0028	.0017	.0040	.0070
60	.0350	.0350	.0047	.0024	.0040	.0070
65			.0083	.0037		
69			.0125	.0057		

* These rates apply only after five years of membership in the system.

** Base mortality rates as of 2014.

Appendix D: Actuarial Assumptions and Methods

Retirements: Representative values of the assumed rates of retirement from active service are as follows:

General Employees - Male

Age	Service						
	5	10	15	20	25	30	35
50				0.0300	0.0700	0.2750	0.1500
55				0.0500	0.1000	0.2500	0.1500
60	0.1000	0.1000	0.1000	0.1000	0.2750	0.3000	0.2500
65	0.3000	0.3000	0.3000	0.3000	0.3500	0.3500	0.3500
70	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

General Employees - Female

Age	Service						
	5	10	15	20	25	30	35
50				0.0450	0.0600	0.3000	0.2000
55				0.0600	0.0850	0.3000	0.2000
60	0.1100	0.1100	0.1100	0.1100	0.3000	0.3500	0.2500
65	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500
70	0.1500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Firefighters & Rescue Squad Workers

Age	Service						
	5	10	15	20	25	30	35
50				0.0250	0.0850	0.3250	0.3250
55	0.0250	0.0250	0.0250	0.0250	0.1300	0.5000	0.2750
60	0.0575	0.0575	0.0575	0.0575	0.3250	0.3250	0.3250
65	0.3250	0.3250	0.3250	0.3250	0.3250	0.3250	0.3250
70	0.3250	0.3250	0.3250	0.3250	0.3250	0.3250	0.3250
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Law Enforcement Officers

Age	Service						
	5	10	15	20	25	30	35
50			0.0800	0.0800	0.0800	0.4000	0.4000
55	0.1000	0.3250	0.3250	0.3250	0.3250	0.7500	0.4000
60	0.1000	0.2000	0.2000	0.2000	0.2000	0.2250	0.2000
65	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
70	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Appendix D: Actuarial Assumptions and Methods

Salary Increases: Representative values of the assumed annual rates of salary increases are as follows:

Annual Rate of Salary Increase			
<u>Service</u>	<u>General Employees</u>	<u>Firefighters & Rescue Squad Workers</u>	<u>Law Enforcement Officers</u>
0	7.75%	7.75%	7.35%
5	6.00	6.00	6.15
10	4.95	4.85	5.15
15	4.20	4.10	4.45
20	3.75	3.50	4.02
25	3.50	3.50	3.90
30	3.50	3.50	3.80
35	3.50	3.50	3.70
40	3.50	3.50	3.50
45	3.50	3.50	3.50
50	3.50	3.50	3.50

Post-Retirement Mortality: Representative values of the assumed post-retirement mortality rates as of 2014 prior to any mortality improvements are as follows:

Annual Rate of Death after Retirement (Members Healthy at Retirement)						
<u>Age</u>	<u>General Employees</u>		<u>Firefighters & Rescue Squad Workers</u>		<u>Law Enforcement Officers</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	.0066	.0029	.0057	.0036	.0060	.0038
60	.0089	.0041	.0078	.0052	.0081	.0054
65	.0127	.0064	.0110	.0080	.0115	.0084
70	.0193	.0102	.0168	.0129	.0174	.0134
75	.0309	.0165	.0268	.0209	.0279	.0218
80	.0604	.0404	.0447	.0348	.0465	.0362

Appendix D: Actuarial Assumptions and Methods

Annual Rate of Death after Retirement (Survivors of Deceased Members and Members Disabled at Retirement)

Age	Male Survivors of Deceased Members	Female Survivors of Deceased Members	Male Retirees Disabled at Retirement	Female Retirees Disabled at Retirement
55	.0071	.0045	.0241	.0143
60	.0096	.0064	.0274	.0168
65	.0135	.0099	.0326	.0207
70	.0206	.0158	.0416	.0279
75	.0330	.0258	.0559	.0406
80	.0550	.0429	.0789	.0604

Deaths After Retirement (General Employees): Mortality rates are based on the RP-2014 Total Data Set for Healthy Annuitants Mortality Table. Rates for male members are multiplied by 115% for ages 50-78 and by 135% for ages greater than 78. Rates for female members are multiplied by 79% for ages 50-78 and by 116% for ages greater than 78. The RP-2014 annuitant tables have no rates prior to age 50. The RP-2014 Total Data Set Employee Mortality Table (with no adjustments) is used for ages less than 50.

Deaths After Retirement (Firefighters and Rescue Squad Workers): Mortality rates are based on the RP-2014 Total Data Set for Healthy Annuitants Mortality Table. The RP-2014 annuitant tables have no rates prior to age 50. The RP-2014 Total Data Set Employee Mortality Table (with no adjustments) is used for ages less than 50.

Deaths After Retirement (Law Enforcement Officers): Mortality rates are based on the RP-2014 Total Data Set for Healthy Annuitants Mortality Table. Rates for all members are multiplied by 104% for ages greater than 50. The RP-2014 annuitant tables have no rates prior to age 50. The RP-2014 Total Data Set Employee Mortality Table (with no adjustments) is used for ages less than 50.

Deaths After Retirement (Survivors of Deceased Members): Mortality rates are based on the RP-2014 Total Data Set for Healthy Annuitants Mortality Table. Rates for all members are multiplied by 123% for all ages. The RP-2014 annuitant tables have no rates prior to age 50. The RP-2014 Total Data Set Employee Mortality Table (with no adjustments) is used for ages less than 50.

Deaths After Retirement (Disabled Members at Retirement): Mortality rates are based on the RP-2014 Total Data Set for Disabled Annuitants Mortality Table. Rates for male members are multiplied by 103% for all ages. Rates for female members are multiplied by 99% for all ages.

Deaths Prior to Retirement: Mortality rates are based on the RP-2014 Total Data Set Employee Mortality Table.

Appendix D: Actuarial Assumptions and Methods

Line-of-Duty Deaths: 50% of deaths prior to retirement for firefighters, rescue squad workers and law enforcement officers are assumed to occur in the line-of-duty.

Mortality Projection: All mortality rates are projected from 2014 using generational improvement with Scale MP-2015.

Timing of Assumptions: All withdrawals, deaths, disabilities, retirements and salary increases are assumed to occur July 1 of each year.

Leave Conversions:

	General		Law Enforcement		Fire & Rescue Squad	
	Males	Females	Males	Females	Males	Females
Increase in AFC	1.50%	1.50%	1.50%	1.50%	1.75%	1.75%
Increase in Creditable Service (years)						
Credited	0.95	0.65	1.20	1.20	1.25	1.25
Eligibility	1.00	1.00	1.00	1.00	1.00	1.00

Liability for Inactive Members: The data provided for inactive members does not contain all the elements to calculate the member's deferred benefit. The liability for these members is estimated to be 200% of the member's accumulated contributions. The actuary is collecting data so that future members' deferred benefits can be estimated.

Administrative Expenses: 0.20% of payroll for general employees and firefighters.

Marriage Assumption: 100% married with male spouses four years older than female spouses.

Reported Compensation: Calendar year compensation as furnished by the system's office.

Valuation Compensation: Reported compensation adjusted to reflect the assumed rate of pay as of the valuation date.

Actuarial Cost Method: Entry age normal cost method. Entry age is established on an individual basis.

Amortization Period: 12-year closed, level-dollar amount. The first amortization base was created for the contribution payable for fiscal year ending 2018.

Appendix D: Actuarial Assumptions and Methods

Asset Valuation Method: Actuarial value, as developed in Table 7. The actuarial value of assets is based upon a smoothed market value method. Under this method, asset returns in excess of or less than the expected return on market value of assets will be reflected in the actuarial value of assets over a five-year period. The calculation of the Actuarial Value of Assets is based on the following formula:

$$MV - 80\% \times G/(L)_1 - 60\% \times G/(L)_2 - 40\% \times G/(L)_3 - 20\% \times G/(L)_4$$

MV = the market value of assets as of the valuation date

$G/(L)_i$ = the asset gain or (loss) for the i-th year preceding the valuation date

Changes Since Prior Valuation: The withdrawal rates, the retirement rates, the disability rates, the mortality assumption, the annual rate of salary increase, the leave conversion assumption, the asset valuation method, the actuarial cost method, and the amortization method were changed based on the experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on January 21, 2016.

Appendix E: GASB 67 Fiduciary Net Position Projection

Table E-1: Projection of Fiduciary Net Positions
(in thousands)

Calendar Year	Beginning Fiduciary Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	Ending Fiduciary Position
2016	\$ 22,403,837	\$ 352,168	\$ 412,240	\$ 1,324,283	\$ 9,943	\$ 1,603,983	\$ 23,438,002
2017	23,438,002	334,794	447,961	1,391,257	9,394	1,677,248	24,497,354
2018	24,497,354	319,601	458,693	1,460,387	8,927	1,751,448	25,557,782
2019	25,557,782	305,764	450,680	1,531,969	8,509	1,825,015	26,598,763
2020	26,598,763	292,683	443,762	1,605,254	8,126	1,897,178	27,619,006
2021	27,619,006	280,338	437,452	1,684,255	7,765	1,967,342	28,612,118
2022	28,612,118	268,222	443,682	1,767,834	7,412	2,036,531	29,585,307
2023	29,585,307	255,747	442,830	1,853,175	7,057	2,103,546	30,527,198
2024	30,527,198	243,100	432,724	1,941,659	6,701	2,167,885	31,422,547
2025	31,422,547	230,227	421,588	2,030,985	6,344	2,228,790	32,265,823
2026	32,265,823	217,433	410,036	2,118,810	5,991	2,285,944	33,054,435
2027	33,054,435	204,797	397,942	2,206,061	5,640	2,339,142	33,784,615
2028	33,784,615	192,275	386,126	2,293,363	5,294	2,388,117	34,452,476
2029	34,452,476	179,833	330,537	2,379,282	4,950	2,431,851	35,010,465
2030	35,010,465	167,627	256,552	2,463,544	4,609	2,465,794	35,432,285
2031	35,432,285	155,712	210,443	2,545,174	4,274	2,491,382	35,740,374
2032	35,740,374	144,203	165,038	2,622,208	3,949	2,508,983	35,932,441
2033	35,932,441	132,981	117,588	2,696,345	3,631	2,518,202	36,001,236
2034	36,001,236	121,809	90,256	2,769,250	3,320	2,518,870	35,959,601
2035	35,959,601	110,765	81,490	2,839,881	3,016	2,512,684	35,821,643
2036	35,821,643	100,003	70,749	2,900,329	2,720	2,499,769	35,589,115
2037	35,589,115	89,467	61,049	2,952,410	2,434	2,480,333	35,265,120
2038	35,265,120	79,007	52,749	2,998,857	2,153	2,454,531	34,850,397
2039	34,850,397	69,112	44,868	3,039,473	1,886	2,422,393	34,345,411
2040	34,345,411	59,663	37,505	3,072,719	1,633	2,384,006	33,752,233
2041	33,752,233	50,687	30,603	3,100,324	1,394	2,339,462	33,071,267
2042	33,071,267	42,084	24,122	3,122,900	1,169	2,288,759	32,302,163
2043	32,302,163	33,911	18,197	3,137,658	959	2,231,979	31,447,633
2044	31,447,633	26,347	12,833	3,143,091	763	2,169,378	30,512,337
2045	30,512,337	19,357	9,161	3,134,665	581	2,101,494	29,507,103
2046	29,507,103	14,268	6,806	3,106,687	435	2,029,354	28,450,409
2047	28,450,409	10,824	5,102	3,062,764	332	1,954,127	27,357,366
2048	27,357,366	8,288	3,808	3,008,492	255	1,876,681	26,237,396
2049	26,237,396	6,334	2,830	2,946,583	195	1,797,586	25,097,368
2050	25,097,368	4,817	2,091	2,877,878	148	1,717,302	23,943,552
2051	23,943,552	3,638	1,549	2,803,161	112	1,636,251	22,781,717
2052	22,781,717	2,730	1,135	2,722,211	84	1,554,855	21,618,142
2053	21,618,142	2,033	829	2,635,788	62	1,473,540	20,458,694
2054	20,458,694	1,505	592	2,544,685	46	1,392,697	19,308,757
2055	19,308,757	1,104	422	2,450,096	33	1,312,676	18,172,830
2056	18,172,830	805	293	2,279,033	24	1,236,399	17,131,270
2057	17,131,270	582	200	2,183,670	17	1,164,272	16,112,637
2058	16,112,637	417	137	2,087,647	12	1,093,833	15,119,365
2059	15,119,365	297	91	1,991,706	9	1,025,230	14,153,268
2060	14,153,268	210	58	1,896,177	6	958,588	13,215,941
2061	13,215,941	146	36	1,801,350	4	894,006	12,308,775
2062	12,308,775	101	21	1,707,487	3	831,577	11,432,984
2063	11,432,984	68	12	1,614,828	2	771,381	10,589,615
2064	10,589,615	45	6	1,523,603	1	713,484	9,779,546
2065	9,779,546	29	2	1,434,013	1	657,943	9,003,506

Appendix E: GASB 67 Fiduciary Net Position Projection

Table E-1: Projection of Fiduciary Net Positions (continued)
(in thousands)

Calendar Year	Beginning Fiduciary Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	Ending Fiduciary Position
2066	\$ 9,003,506	\$ 16	\$ 1	\$ 1,346,246	\$ 1	\$ 604,807	\$ 8,262,083
2067	8,262,083	8	0	1,260,455	0	554,110	7,555,746
2068	7,555,746	4	0	1,176,792	0	505,880	6,884,838
2069	6,884,838	2	0	1,095,406	0	460,136	6,249,570
2070	6,249,570	1	0	1,016,439	0	416,892	5,650,024
2071	5,650,024	0	0	940,023	0	376,147	5,086,148
2072	5,086,148	0	0	866,277	0	337,893	4,557,764
2073	4,557,764	0	0	795,307	0	302,112	4,064,569
2074	4,064,569	0	0	727,211	0	268,781	3,606,139
2075	3,606,139	0	0	662,077	0	237,866	3,181,928
2076	3,181,928	0	0	599,984	0	209,320	2,791,264
2077	2,791,264	0	0	541,005	0	183,099	2,433,358
2078	2,433,358	0	0	485,202	0	159,137	2,107,293
2079	2,107,293	0	0	432,634	0	137,370	1,812,029
2080	1,812,029	0	0	383,351	0	117,719	1,546,397
2081	1,546,397	0	0	337,395	0	100,096	1,309,098
2082	1,309,098	0	0	294,796	0	84,410	1,098,712
2083	1,098,712	0	0	255,569	0	70,555	913,698
2084	913,698	0	0	219,705	0	58,418	752,411
2085	752,411	0	0	187,175	0	47,883	613,119
2086	613,119	0	0	157,915	0	38,828	494,032
2087	494,032	0	0	131,835	0	31,122	393,319
2088	393,319	0	0	108,816	0	24,640	309,143
2089	309,143	0	0	88,717	0	19,253	239,679
2090	239,679	0	0	71,377	0	14,835	183,137
2091	183,137	0	0	56,611	0	11,261	137,787
2092	137,787	0	0	44,218	0	8,415	101,984
2093	101,984	0	0	33,978	0	6,183	74,189
2094	74,189	0	0	25,659	0	4,465	52,995
2095	52,995	0	0	19,023	0	3,165	37,137
2096	37,137	0	0	13,830	0	2,199	25,506
2097	25,506	0	0	9,850	0	1,498	17,154
2098	17,154	0	0	6,865	0	999	11,288
2099	11,288	0	0	4,678	0	653	7,263
2100	7,263	0	0	3,113	0	416	4,566
2101	4,566	0	0	2,021	0	258	2,803
2102	2,803	0	0	1,280	0	158	1,681
2103	1,681	0	0	791	0	94	984
2104	984	0	0	476	0	54	562
2105	562	0	0	279	0	31	314
2106	314	0	0	160	0	17	171
2107	171	0	0	89	0	8	90
2108	90	0	0	49	0	6	47
2109	47	0	0	26	0	2	23
2110	23	0	0	13	0	1	11
2111	11	0	0	7	0	1	5
2112	5	0	0	3	0	0	2
2113	2	0	0	1	0	0	1
2114	1	0	0	1	0	0	0
2115	0	0	0	0	0	0	0

Appendix E: GASB 67 Fiduciary Net Position Projection

Table E-2: Actuarial Present Value of Projected Benefit Payments
(in thousands)

Calendar Year	Beginning Fiduciary Position	Benefit Payments	Funded Benefit Payments	Unfunded Benefit Payments	Present Value of Benefit Payments		
					Funded Payments at 7.25%	Unfunded Payments at 2.71%	Using Single Discount Rate of 7.25%
2016	\$ 22,403,837	\$ 1,324,283	\$ 1,324,283	\$ 0	\$ 1,278,740	\$ 0	\$ 1,278,740
2017	23,438,002	1,391,257	1,391,257	0	1,252,597	0	1,252,597
2018	24,497,354	1,460,387	1,460,387	0	1,225,955	0	1,225,955
2019	25,557,782	1,531,969	1,531,969	0	1,199,111	0	1,199,111
2020	26,598,763	1,605,254	1,605,254	0	1,171,537	0	1,171,537
2021	27,619,006	1,684,255	1,684,255	0	1,146,100	0	1,146,100
2022	28,612,118	1,767,834	1,767,834	0	1,121,654	0	1,121,654
2023	29,585,307	1,853,175	1,853,175	0	1,096,318	0	1,096,318
2024	30,527,198	1,941,659	1,941,659	0	1,071,016	0	1,071,016
2025	31,422,547	2,030,985	2,030,985	0	1,044,558	0	1,044,558
2026	32,265,823	2,118,810	2,118,810	0	1,016,062	0	1,016,062
2027	33,054,435	2,206,061	2,206,061	0	986,390	0	986,390
2028	33,784,615	2,293,363	2,293,363	0	956,107	0	956,107
2029	34,452,476	2,379,282	2,379,282	0	924,874	0	924,874
2030	35,010,465	2,463,544	2,463,544	0	892,893	0	892,893
2031	35,432,285	2,545,174	2,545,174	0	860,121	0	860,121
2032	35,740,374	2,622,208	2,622,208	0	826,250	0	826,250
2033	35,932,441	2,696,345	2,696,345	0	792,178	0	792,178
2034	36,001,236	2,769,250	2,769,250	0	758,599	0	758,599
2035	35,959,601	2,839,881	2,839,881	0	725,359	0	725,359
2036	35,821,643	2,900,329	2,900,329	0	690,721	0	690,721
2037	35,589,115	2,952,410	2,952,410	0	655,594	0	655,594
2038	35,265,120	2,998,857	2,998,857	0	620,893	0	620,893
2039	34,850,397	3,039,473	3,039,473	0	586,762	0	586,762
2040	34,345,411	3,072,719	3,072,719	0	553,081	0	553,081
2041	33,752,233	3,100,324	3,100,324	0	520,326	0	520,326
2042	33,071,267	3,122,900	3,122,900	0	488,686	0	488,686
2043	32,302,163	3,137,658	3,137,658	0	457,804	0	457,804
2044	31,447,633	3,143,091	3,143,091	0	427,596	0	427,596
2045	30,512,337	3,134,665	3,134,665	0	397,622	0	397,622
2046	29,507,103	3,106,687	3,106,687	0	367,434	0	367,434
2047	28,450,409	3,062,764	3,062,764	0	337,752	0	337,752
2048	27,357,366	3,008,492	3,008,492	0	309,340	0	309,340
2049	26,237,396	2,946,583	2,946,583	0	282,494	0	282,494
2050	25,097,368	2,877,878	2,877,878	0	257,256	0	257,256
2051	23,943,552	2,803,161	2,803,161	0	233,638	0	233,638
2052	22,781,717	2,722,211	2,722,211	0	211,554	0	211,554
2053	21,618,142	2,635,788	2,635,788	0	190,990	0	190,990
2054	20,458,694	2,544,685	2,544,685	0	171,925	0	171,925
2055	19,308,757	2,450,096	2,450,096	0	154,344	0	154,344
2056	18,172,830	2,279,033	2,279,033	0	133,863	0	133,863
2057	17,131,270	2,183,670	2,183,670	0	119,591	0	119,591
2058	16,112,637	2,087,647	2,087,647	0	106,604	0	106,604
2059	15,119,365	1,991,706	1,991,706	0	94,829	0	94,829
2060	14,153,268	1,896,177	1,896,177	0	84,178	0	84,178
2061	13,215,941	1,801,350	1,801,350	0	74,563	0	74,563
2062	12,308,775	1,707,487	1,707,487	0	65,900	0	65,900
2063	11,432,984	1,614,828	1,614,828	0	58,110	0	58,110
2064	10,589,615	1,523,603	1,523,603	0	51,121	0	51,121
2065	9,779,546	1,434,013	1,434,013	0	44,863	0	44,863

Appendix E: GASB 67 Fiduciary Net Position Projection

Table E-2: Actuarial Present Value of Projected Benefit Payments
(continued)
(in thousands)

Calendar Year	Beginning Fiduciary Position	Benefit Payments	Funded Benefit Payments	Unfunded Benefit Payments	Funded Payments at 7.25%	Unfunded Payments at 2.71%	Using Single Discount Rate of 7.25%
2066	\$ 9,003,506	\$ 1,346,246	\$ 1,346,246	\$ 0	\$ 39,270	\$ 0	\$ 39,270
2067	8,262,083	1,260,455	1,260,455	0	34,282	0	34,282
2068	7,555,746	1,176,792	1,176,792	0	29,843	0	29,843
2069	6,884,838	1,095,406	1,095,406	0	25,901	0	25,901
2070	6,249,570	1,016,439	1,016,439	0	22,409	0	22,409
2071	5,650,024	940,023	940,023	0	19,324	0	19,324
2072	5,086,148	866,277	866,277	0	16,604	0	16,604
2073	4,557,764	795,307	795,307	0	14,213	0	14,213
2074	4,064,569	727,211	727,211	0	12,118	0	12,118
2075	3,606,139	662,077	662,077	0	10,287	0	10,287
2076	3,181,928	599,984	599,984	0	8,692	0	8,692
2077	2,791,264	541,005	541,005	0	7,307	0	7,307
2078	2,433,358	485,202	485,202	0	6,111	0	6,111
2079	2,107,293	432,634	432,634	0	5,080	0	5,080
2080	1,812,029	383,351	383,351	0	4,197	0	4,197
2081	1,546,397	337,395	337,395	0	3,444	0	3,444
2082	1,309,098	294,796	294,796	0	2,806	0	2,806
2083	1,098,712	255,569	255,569	0	2,268	0	2,268
2084	913,698	219,705	219,705	0	1,818	0	1,818
2085	752,411	187,175	187,175	0	1,444	0	1,444
2086	613,119	157,915	157,915	0	1,136	0	1,136
2087	494,032	131,835	131,835	0	884	0	884
2088	393,319	108,816	108,816	0	681	0	681
2089	309,143	88,717	88,717	0	517	0	517
2090	239,679	71,377	71,377	0	388	0	388
2091	183,137	56,611	56,611	0	287	0	287
2092	137,787	44,218	44,218	0	209	0	209
2093	101,984	33,978	33,978	0	150	0	150
2094	74,189	25,659	25,659	0	105	0	105
2095	52,995	19,023	19,023	0	73	0	73
2096	37,137	13,830	13,830	0	49	0	49
2097	25,506	9,850	9,850	0	33	0	33
2098	17,154	6,865	6,865	0	21	0	21
2099	11,288	4,678	4,678	0	14	0	14
2100	7,263	3,113	3,113	0	8	0	8
2101	4,566	2,021	2,021	0	5	0	5
2102	2,803	1,280	1,280	0	3	0	3
2103	1,681	791	791	0	2	0	2
2104	984	476	476	0	1	0	1
2105	562	279	279	0	1	0	1
2106	314	160	160	0	0	0	0
2107	171	89	89	0	0	0	0
2108	90	49	49	0	0	0	0
2109	47	26	26	0	0	0	0
2110	23	13	13	0	0	0	0
2111	11	7	7	0	0	0	0
2112	5	3	3	0	0	0	0
2113	2	1	1	0	0	0	0
2114	1	1	1	0	0	0	0
2115	0	0	0	0	0	0	0

Appendix F: Additional Disclosures

Table F-1 illustrates the sensitivity of certain valuation results to changes in the discount rate on a market value of assets basis. Table F-2 summarizes historical actuarial value and market value asset returns. Table F-3 provides an estimate of future market value of asset returns based on the current portfolio structure and summarized in our "TSERS Asset-Liability and Investment Strategy Project" report dated April 19th, 2016.

Section 6(c) of Session Law 2016-108 requires that the actuarial valuation report provide the valuation results using a 30-year treasury rate as of December 31 of the year of the valuation as the discount rate. This is 3.01% at December 31, 2015 and has been used as the lower bound of the sensitivity analysis presented. The range between the current discount rate (7.25%) and the 30-year treasury rate (3.01%) was used to establish an upper bound for sensitivity analysis (11.49%). The remaining rates illustrated represent mid-points between the selected rates. Table F-3 illustrates our best estimate of the plausibility of such rates. The lower bound of 3.01% falls below the 5th percentile of estimated future 30-year returns while the upper bound of 11.49% falls between the 75th and 95th percentiles of estimated future 30-year returns.

Table F-1: Sensitivity of Valuation Results as of December 31, 2015

Discount Rate	3.01%	5.13%	7.25%	9.37%	11.49%
Market Value of Assets	\$ 22,403,836,820	\$ 22,403,836,820	\$ 22,403,836,820	\$ 22,403,836,820	\$ 22,403,836,820
Actuarial Accrued Liability	\$ 41,366,417,489	\$ 31,124,942,395	\$ 24,360,119,869	\$ 19,730,593,103	\$ 16,453,928,813
Unfunded Accrued Liability (UAL)	\$ 18,962,580,669	\$ 8,721,105,575	\$ 1,956,283,049	\$ (2,673,243,717)	\$ (5,949,908,007)
Funded Ratio	54.2%	72.0%	92.0%	113.5%	136.2%
20-Year Amortization of UAL (as % of general state revenue)	\$ 1,314,160,521 4.7%	\$ 743,832,100 2.7%	\$ 201,909,862 0.7%	N/A N/A	N/A N/A

Table F-2: Historical Asset Returns

Calendar Year	Actuarial Value of Asset Return	Market Value of Asset Return	Calendar Year	Actuarial Value of Asset Return	Market Value of Asset Return	Calendar Year	Actuarial Value of Asset Return	Market Value of Asset Return
1996	10.20%	9.36%	2003	8.52%	18.63%	2010	6.10%	11.53%
1997	10.19%	18.10%	2004	9.00%	10.77%	2011	5.33%	2.14%
1998	9.93%	16.64%	2005	8.58%	7.00%	2012	6.51%	11.79%
1999	15.61%	9.99%	2006	9.19%	11.41%	2013	7.61%	12.21%
2000	12.27%	2.65%	2007	9.03%	8.36%	2014	7.32%	6.19%
2001	8.98%	-1.69%	2008	2.97%	-19.47%	2015	5.87%	0.34%
2002	6.13%	-4.44%	2009	4.92%	14.94%			

The average investment return recognized for the purposes of determining the annual change in contribution each year is the Actuarial Value of Asset Return. The Actuarial Value of Assets smooths investment gains and losses over a five-year period and is used to reduce volatility that investment gains and losses can have on required contributions and the funded status of the Plan.

Table F-3: Estimate of Future Asset Returns

Horizon	5th Percentile	25th Percentile	50th Percentile	75th Percentile	95th Percentile
10 Years	0.2%	4.0%	5.9%	8.0%	11.5%
20 Years	2.2%	4.8%	6.7%	8.5%	11.8%
30 Years	3.1%	5.3%	7.1%	8.7%	12.0%

Appendix F: Additional Disclosures

Other than the discount rate, these results are based on the other economic and demographic assumptions presented in the report. For purposes of simplicity in this disclosure, no adjustments to the valuation assumption for inflation were reflected in the sensitivities above. The statute also requires that the actuarial valuation report show the results using a market value of assets basis. The "funded ratio" and "unfunded accrued liability" in Table F-1 are based upon the market value of assets. In order to alleviate volatility, future employer contributions are determined based on the actuarial value of assets, which smooths market value returns.

None of the liability amounts shown are intended to imply the amount that might represent the cost of any settlement of the plan's obligations. The various caveats, constraints, and discussions presented earlier in the report apply to these results as well.

Appendix G: Data for Section 2 Graphs

The tables below provide the numbers associated with the graphs in Section 2 of this report.

Graph 1: Active Members

	Active Member Count	Reported Compensation
2011	121,638	\$ 5,106,766,025
2012	122,270	5,123,480,980
2013	123,455	5,241,857,680
2014	123,184	5,331,287,565
2015	124,974	5,541,839,498

Graph 2: Retired Members and Survivors of Deceased Members

	Retired and Survivors of Deceased Member Count	Retirement Allowance
2011	51,700	\$ 908,961,218
2012	54,547	972,478,821
2013	57,405	1,039,032,788
2014	60,408	1,108,688,628
2015	63,110	1,181,580,927

Graph 3: Market Value of Assets and Asset Returns

	Market Value of Assets	Asset Return
2011	\$ 17,908,429,907	2.14%
2012	19,723,637,805	11.79%
2013	21,784,255,100	12.21%
2014	22,744,942,754	6.19%
2015	22,403,836,820	0.34%

Appendix G: Data for Section 2 Graphs

Graph 5: Cost-of-Living Increase and CPI-U History

	Total Allowance Increase*	National CPI-U
1985	3.8%	3.8%
1986	4.0%	1.1%
1987	4.8%	4.4%
1988	5.4%	4.4%
1989	6.7%	4.6%
1990	0.0%	6.1%
1991	5.2%	3.1%
1992	1.6%	2.9%
1993	3.4%	2.7%
1994	3.3%	2.7%
1995	4.4%	2.5%
1996	6.3%	3.3%
1997	3.1%	1.7%
1998	1.0%	1.6%
1999	4.4%	2.7%
2000	3.7%	3.4%
2001	2.0%	1.6%
2002	3.5%	2.4%
2003	0.0%	1.9%
2004	2.5%	3.3%
2005	2.8%	3.4%
2006	2.2%	2.5%
2007	2.2%	4.1%
2008	0.1%	0.1%
2009	0.0%	2.7%
2010	0.0%	1.5%
2011	0.0%	3.0%
2012	0.0%	1.7%
2013	0.0%	1.5%
2014	0.625%	0.8%
2015	0.105%	0.7%

* Allowance increases are effective at July 1 the following year

Appendix G: Data for Section 2 Graphs

Graph 6: Actuarial Value and Market Value of Assets

	Actuarial Value of Assets	Market Value of Assets
2011	\$ 19,326,359,293	\$ 17,908,429,907
2012	20,295,238,845	19,723,637,805
2013	21,498,147,032	21,784,255,100
2014	22,682,380,725	22,744,942,754
2015	23,649,311,273	22,403,836,820

Graph 7: Asset Returns

	Actuarial Value Asset Return	Market Value Asset Return
2011	5.33%	2.14%
2012	6.51%	11.79%
2013	7.61%	12.21%
2014	7.32%	6.19%
2015	5.87%	0.34%

Graph 8: Actuarial Accrued Liability

	Liability for Active Members	Liability for Deferred Members	Liability for Retired Members	Total Liability
2011	\$ 9,827,110,906	\$ 1,007,382,754	\$ 8,539,306,057	\$ 19,373,799,717
2012	10,066,485,418	1,112,093,532	9,160,205,841	20,338,784,791
2013	10,509,988,484	1,213,557,282	9,814,267,515	21,537,813,281
2014	10,793,750,356	1,345,626,216	10,578,753,552	22,718,130,124
2015	11,098,691,456	1,459,269,218	11,802,159,195	24,360,119,869

Appendix G: Data for Section 2 Graphs

Graph 9: Present Value of Future Benefits, Actuarial Accrued Liability and Actuarial Value of Assets

	Present Value of Future Benefits	Actuarial Accrued Liability	Actuarial Value of Assets
2011	\$ 25,238,282,778	\$ 19,373,799,717	\$ 19,326,359,293
2012	26,141,234,157	20,338,784,791	20,295,238,845
2013	27,254,069,412	21,537,813,281	21,498,147,032
2014	28,456,762,124	22,718,130,124	22,682,380,725
2015	29,380,961,747	24,360,119,869	23,649,311,273

Graph 10: Funded Ratios

	Funded Ratio (Actuarial Basis)	Funded Ratio (Market Value Basis)
2011	99.8%	92.4%
2012	99.8%	97.0%
2013	99.8%	101.1%
2014	99.8%	100.1%
2015	97.1%	92.0%

Graph 11: Actuarially Determined Employer Contribution Rates

Fiscal Year Ending	General Employees and Firefighters	Law Enforcement Officers
2014	7.07%	7.55%
2015	6.95%	7.43%
2016	6.67%	7.15%
2017**	5.50%	7.12%
2018*	6.25%	7.84%

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

** Includes impact of the experience study

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
	70505	Eastern Band Of Cherokee Indians		8.39%		0.14%		
	71786	Misenheimer, Village Of	7.50%	8.39%		0.14%		
	72265	Piedmont Triad Airport Authority		8.39%		0.14%		
	72657	Sparta, Town Of		8.39%		0.14%		
90001	73190	Yancey County	7.59%	8.39%	0.09%	0.14%		
90002		Yancey Soil & Water Conservation District	7.50%					
90011	70330	Burnsville, Town Of	7.57%	8.39%	0.07%	0.14%		
90092		Martin-Tyrell-Washington D.H.D	7.56%		0.06%			
90096		Pas.-Per.-Camden-Chowan D.H.D.	7.57%		0.07%			
90098		Toe River District Health Department	7.56%		0.06%			
90099		Appalachian District Health Department	7.55%		0.05%			
90101	70020	Alamance County	7.56%	8.39%	0.06%	0.14%		
90111	70320	Burlington, City Of	7.58%	8.39%	0.08%	0.14%		
90114		Mebane, Town Of	18.00%	18.89%		0.14%	5,613,341	6/30/2027
90117		Burlington-Graham A.B.C. Board	7.74%		0.24%			
90121	71080	Graham, City Of	7.50%	8.39%		0.14%		
90131	70880	Elon College, Town Of	7.54%	8.39%	0.04%	0.14%		
90141	71245	Haw River, Town Of	7.50%	8.39%		0.14%		
90151		Alamance, Village Of	7.50%					
90161		Green Level, Town Of	7.50%					
90201	70032	Alexander County	7.58%	8.39%	0.08%	0.14%		
90203		Alexander County Health Department	7.55%		0.05%			
90205		Alexander County Library	7.58%		0.08%			
90206		Alexander County Welfare Department	7.55%		0.05%			
90211	72775	Taylorsville, Town Of	7.50%	8.39%		0.14%		
90301	70035	Alleghany County	7.57%	8.39%	0.07%	0.14%		
90305		Northwestern Regional Library	7.62%		0.12%			
90307		Sparta A.B.C. Board	8.03%				2,687	12/31/2028
90401	70040	Anson County	7.60%	8.39%	0.10%	0.14%		
90411	72930	Wadesboro, Town Of	7.58%	8.39%	0.08%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
90413		Wadesboro Housing Authority	7.57%		0.07%			
90417		Wadesboro A.B.C. Board	7.61%		0.11%			
90421	71584	Lilesville, Town Of	7.54%	8.39%	0.04%	0.14%		
90431	72345	Polkton, Town Of	7.68%	8.39%	0.18%	0.14%		
90441		Peachland, Town Of	7.50%					
90451		Ansonville, Town Of	7.50%					
90461		Morven, Town Of	11.98%	12.87%		0.14%	10,411	6/30/2019
90501	70065	Ashe County	7.57%	8.39%	0.07%	0.14%		
90507		West Jefferson Abc Board	10.72%				31,448	6/30/2029
90511	71447	Jefferson, Town Of	7.50%	8.39%		0.14%		
90521	73025	West Jefferson, Town Of	7.50%	8.39%		0.14%		
90601	70090	Avery County	7.65%	8.39%	0.15%	0.14%		
90602		Avery County Fire Commission	13.75%				239,494	12/31/2038
90605		Avery-Mitchell-Yancey Dist. Library	7.64%		0.14%			
90611	70110	Banner Elk, Town Of	7.50%	8.39%		0.14%		
90617		High Country Municipal A.B.C. Board	7.62%		0.12%			
90621	72032	Newland, Town Of	7.50%	8.39%		0.14%		
90631	70146	Beech Mountain, Town Of	7.50%	8.39%		0.14%		
90641	70860	Elk Park, Town Of	7.50%					
90651	72724	Sugar Mountain, Town Of	14.64%	15.53%		0.14%	355,239	6/30/2024
90701	70130	Beaufort County	7.56%	8.39%	0.06%	0.14%		
90704		Beaufort County A.B.C. Board	7.88%		0.38%			
90705		B.H.M. Regional Library	7.61%		0.11%			
90709		Midwest Economic Development Comm	7.55%		0.05%			
90711	72990	Washington, City Of	7.57%	8.39%	0.07%	0.14%		
90721	70085	Aurora, Town Of	7.64%	8.39%	0.14%	0.14%		
90731	70147	Belhaven, Town Of	7.50%	8.39%		0.14%		
90741		Washington Park, Town Of	7.50%					
90751	70525	Chocowinity, Town Of	7.50%	8.39%		0.14%		
90801	70180	Bertie County	7.50%	8.39%		0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
90804		Bertie County A.B.C. Board	7.61%		0.11%			
90805		Albemarle Regional Library	7.71%		0.21%			
90808		Bertie-Martin Regional Jail Comm	7.64%		0.14%			
90811	70082	Aulander, Town Of	7.53%		0.03%			
90812	73122	Windsor, Town Of	7.50%	8.39%		0.14%		
90813	70575	Colerain, Town Of	7.66%		0.16%			
90861	71556	Lewiston-Woodville, Town Of	8.54%				3,415	6/30/2024
90901	70210	Bladen County	7.57%	8.39%	0.07%	0.14%		
90911	70850	Elizabethtown, Town Of	7.60%	8.39%	0.10%	0.14%		
90917		Elizabethtown A.B.C. Board	7.50%					
90918		Southeastern Economic Develop. Com	7.51%		0.01%			
90921	73050	White Lake, Town Of	7.64%	8.39%	0.14%	0.14%		
90931	70537	Clarkton, Town Of	7.54%		0.04%			
90941	70215	Bladenboro, Town Of	7.50%	8.39%		0.14%		
91001	70280	Brunswick County	7.56%	8.39%	0.06%	0.14%		
91002	71540	Leland, Town Of	7.50%	8.39%		0.14%		
91003		Brunswick County Health Department	7.56%		0.06%			
91004		Brunswick County A.B.C. Board	7.50%					
91006		Brunswick County Welfare Department	7.54%		0.04%			
91007		Calabash A.B.C. Board	7.50%				6,932	6/30/2017
91008		Cape Fear Council Of Governments	7.50%					
91009		Brunswick County Tourism Develop. Authority	8.51%				9,876	6/30/2024
91010		Calabash, Town Of	7.50%					
91011	72650	Southport, City Of	7.59%	8.39%	0.09%	0.14%		
91012	72076	Northwest, City Of	7.50%	8.39%		0.14%		
91013		Southeast Brunswick Sanitary District	13.31%				167,470	9/30/2039
91014	71375	Holden Beach, Town Of	7.50%	8.39%		0.14%		
91017		Southport A.B.C. Board	7.97%		0.47%			
91020		Belville, Town Of	8.14%				7,564	6/30/2031
91021	71630	Oak Island, Town Of	7.58%	8.39%	0.08%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
91024		Carolina Shores, Town Of	7.50%					
91026		Town Of Navassa	14.77%	15.66%		0.14%	343,168	6/30/2035
91027		Oak Island A.B.C. Board	7.81%		0.31%			
91032		St. James, Town Of	7.50%					
91041	72723	Sunset Beach, Town Of	7.54%	8.39%	0.04%	0.14%		
91042		North Brunswick Sanitary District	7.50%					
91047		Sunset Beach A.B.C. Board	20.15%		0.51%		26,099	6/30/2018
91051	70405	Caswell Beach, Town Of	7.50%	8.39%		0.14%		
91057		Shallotte A.B.C. Board	7.77%		0.27%			
91061	72135	Ocean Isle Beach, Town Of	7.57%	8.39%	0.07%	0.14%		
91067		Ocean Isle A.B.C. Board	7.76%		0.26%			
91071	70225	Boiling Spring Lakes, City Of	7.59%	8.39%	0.09%	0.14%		
91077		Boiling Spring Lakes A.B.C. Board	7.50%					
91081	72597	Shallotte, Town Of	7.50%	8.39%		0.14%		
91091	70107	Bald Head Island, Village Of	7.56%	8.39%	0.06%	0.14%		
91101	70290	Buncombe County	7.54%	8.39%	0.04%	0.14%		
91102		Land-Of-Sky Regional Council	7.58%		0.08%			
91104		Woodfin Abc Commission	9.01%				11,361	9/30/2033
91107		Western Nc Regional Air Pollution Control	7.54%		0.04%			
91108		Metro Sewerage Dist Of Buncombe County	7.58%		0.08%			
91109		Woodfin Sanitary Water & Sewer District	7.56%		0.06%			
91111	70190	Biltmore Forest, Town Of	7.50%	8.39%		0.14%		
91120		West Buncombe Fire Department	7.50%					
91121	70070	Asheville, City Of	7.50%	8.39%		0.14%		
91127	70072	Asheville A.B.C. Board	7.60%	8.39%	0.10%	0.14%		
91128	70074	Asheville Regional Airport Authority	7.57%	8.39%	0.07%	0.14%		
91138		Skyland Volunteer Fire Department	7.50%					
91141	73016	Weaverville, Town Of	7.50%	8.39%		0.14%		
91147		Weaverville A.B.C. Board	8.43%				16,337	6/30/2034
91151	70200	Black Mountain, Town Of	7.55%	8.39%	0.05%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
91154		Black Mountain A.B.C. Board	7.57%		0.07%			
91161	71820	Montreat, Town Of	7.60%	8.39%	0.10%	0.14%		
91171	73160	Woodfin, Town Of	7.50%	8.39%		0.14%		
91201	70310	Burke County	7.57%	8.39%	0.07%	0.14%		
91202		Burke-Catawba Dist. Confinement Fa	8.18%				24,795	6/30/2019
91203		Burke County Health Department	7.59%		0.09%			
91206		Burke County Welfare Department	7.55%		0.05%			
91208		Burke County Tourism Development Authority	7.50%					
91211	72883	Valdese, Town Of	7.59%	8.39%	0.09%	0.14%		
91213		Valdese Housing Authority	7.50%					
91214		Rutherford College, Town Of	7.50%					
91217	71880	Morganton A.B.C. Board	7.70%		0.20%			
91221	70745	Drexel, Town Of	7.56%	8.39%	0.06%	0.14%		
91231	71870	Morganton, City Of	7.50%	8.39%		0.14%		
91233		Morganton Housing Authority	7.55%		0.05%			
91241	71065	Glen Alpine, Town Of	7.75%	8.39%	0.25%	0.14%		
91251		Hildebrand, Town Of	7.50%					
91261		Connelly Springs, Town Of	10.39%				2,750	6/30/2018
91301	70340	Cabarrus County	7.56%	8.39%	0.06%	0.14%		
91302		Water & Sewer Authority Of Cabarrus County	7.54%		0.04%			
91306		Cabarrus Co. Public Health Auth	7.54%		0.04%			
91308		Cabarrus Co. Tourism Auth	8.17%				63,858	6/30/2027
91311	70590	Concord, City Of	7.55%	8.39%	0.05%	0.14%		
91317		Concord A.B.C. Board	7.62%		0.12%			
91321		Mount Pleasant, Town Of	13.64%				80,627	6/30/2021
91327		Mt. Pleasant A.B.C. Board	7.68%		0.18%			
91331	71468	Kannapolis, Town Of	7.55%	8.39%	0.05%	0.14%		
91341		Midland, Town Of	7.50%					
91401	70350	Caldwell County	7.57%	8.39%	0.07%	0.14%		
91411	71090	Granite Falls, Town Of	7.57%	8.39%	0.07%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
91417		Granite Falls A.B.C. Board	7.66%		0.16%			
91421		Sawmills, Town Of	7.50%					
91423		Lenoir Housing Authority	7.61%		0.11%			
91431	71395	Hudson, Town Of	7.50%	8.39%		0.14%		
91441		Harrisburg, Town Of	7.50%					
91451	71552	Lenoir, City Of	7.50%	8.39%		0.14%		
91457		Lenoir A.B.C. Board	17.10%				106,377	3/31/2023
91461		Cajah'S Mountian, Town Of	7.50%					
91501	70357	Camden County	7.60%	8.39%	0.10%	0.14%		
91504		Camden County A.B.C. Board	7.70%		0.20%			
91601	70380	Carteret County	7.58%	8.39%	0.08%	0.14%		
91604	70385	Carteret County A.B.C. Board	7.63%	8.39%	0.13%	0.14%		
91608		Western Cartert Interlocal Agency	7.50%					
91611	71860	Morehead City, Town Of	7.56%	8.39%	0.06%	0.14%		
91621	72035	Newport, Town Of	7.50%	8.39%		0.14%		
91631	70145	Beaufort, Town Of	7.57%	8.39%	0.07%	0.14%		
91633		Beaufort Housing Authority	7.50%					
91641	72290	Pine Knoll Shores, Town Of	7.54%	8.39%	0.04%	0.14%		
91651	70890	Emerald Isle, Town Of	7.50%	8.39%		0.14%		
91661	71405	Indian Beach, Town Of	7.50%	8.39%		0.14%		
91671	70365	Cape Carteret, Town Of	7.59%	8.39%	0.09%	0.14%		
91681	70080	Atlantic Beach, Town Of	13.90%	14.62%	0.17%	0.14%	1,397,612	6/30/2026
91691		Cedar Point, Town Of	7.50%					
91701	70415	Caswell County	7.58%	8.39%	0.08%	0.14%		
91704		Caswell County A.B.C. Board	7.63%		0.13%			
91706		Caswell County Welfare Department	7.58%		0.08%			
91719	73192	Yanceyville, Town Of	7.55%		0.05%			
91801	70430	Catawba County	7.55%	8.39%	0.05%	0.14%		
91804	70440	Catawba County A.B.C. Board	7.76%		0.26%			
91811	71330	Hickory, City Of	7.56%	8.39%	0.06%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
91812		Hickory/Conover Tourism Dev. Authority	7.50%					
91813		Hickory Housing Authority	7.58%		0.08%			
91818		Western Piedmont Council Of Governments	18.23%				571,233	6/30/2018
91819		Western Piedmont Regional Transit Authority	7.78%		0.28%			
91821	70535	Claremont, Town Of	7.55%	8.39%	0.05%	0.14%		
91831	71700	Maiden, Town Of	7.59%	8.39%	0.09%	0.14%		
91841	71640	Long View, Town Of	7.58%	8.39%	0.08%	0.14%		
91851	70610	Conover, Town Of	7.59%	8.39%	0.09%	0.14%		
91861	70270	Brookford, Town Of	7.50%	8.39%		0.14%		
91871	72040	Newton, Town Of	7.58%	8.39%	0.08%	0.14%		
91881	70441	Catawba, Town Of	7.50%					
91901	70490	Chatham County	7.56%	8.39%	0.06%	0.14%		
91903		Chatham County Housing Authority	7.50%					
91904		Chatham County A.B.C. Board	8.08%				1,423	12/31/2017
91908		Goldston-Gulf Sanitary District	7.50%					
91911	72625	Siler City, Town Of	7.58%	8.39%	0.08%	0.14%		
91917		Siler City A.B.C. Board	7.61%		0.11%			
91921	72330	Pittsboro, Town Of	7.58%	8.39%	0.08%	0.14%		
92001	70500	Cherokee County	7.61%	8.39%	0.11%	0.14%		
92005		Nantahala Regional Library	7.73%		0.23%			
92011	71975	Murphy, Town Of	7.64%	8.39%	0.14%	0.14%		
92017		Murphy A.B.C. Board	7.55%		0.05%			
92021	70036	Andrews, Town Of	7.50%	8.39%		0.14%		
92101	70530	Chowan County	7.58%	8.39%	0.08%	0.14%		
92104		Chowan County A.B.C. Board	7.65%		0.15%			
92109		Albemarle Regional Plan. & Develop. Com	7.55%		0.05%			
92111	70817	Edenton, Town Of	7.62%	8.39%	0.12%	0.14%		
92113		The New Edenton Housing Authority	7.62%		0.12%		8,249	6/30/2016
92201	70538	Clay County	7.60%	8.39%	0.10%	0.14%		
92301	70550	Cleveland County	7.56%	8.39%	0.06%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
92302		Cleveland County Sanitary District	7.50%					
92311	72610	Shelby, City Of	7.57%	8.39%	0.07%	0.14%		
92317		Shelby A.B.C. Board	7.65%		0.15%			
92321	71490	Kings Mountain, City Of	7.50%	8.39%		0.14%		
92327		Kings Mountain A.B.C. Board	7.64%		0.14%			
92331	70230	Boiling Springs, Town Of	7.68%	8.39%	0.18%	0.14%		
92341	71532	Lawndale, Town Of	7.50%					
92351	71178	Grover, Town Of	9.58%	10.36%	0.11%	0.14%	8,305	9/30/2020
92401	70580	Columbus County	7.60%	8.39%	0.10%	0.14%		
92403		Whiteville Housing Authority	7.50%					
92411	73060	Whiteville, City Of	7.57%	8.39%	0.07%	0.14%		
92417		Whiteville A.B.C. Board	7.52%		0.02%			
92421		Brunswick, Town Of	7.50%				832	6/30/2016
92427		Lake Waccamaw A.B.C. Board	8.28%		0.78%			
92431	70908	Fair Bluff, Town Of	12.08%	12.97%		0.14%	10,503	9/30/2017
92441	70450	Chadbourn, Town Of	7.50%	8.39%		0.14%		
92444		Chadburn A.B.C. Board	7.50%					
92451	72760	Tabor City, Town Of	7.50%	8.39%		0.14%		
92461	71519	Lake Woccamaw, Town Of	7.50%	8.39%		0.14%		
92501	70650	Craven County	7.57%	8.39%	0.07%	0.14%		
92502		First Craven Sanitary District	7.50%					
92504		Craven County A.B.C. Board	7.67%		0.17%			
92505		Craven-Pamlico-Carteret Regional Library	7.66%		0.16%			
92506		Craven County Airport Authority	7.85%		0.35%			
92507		Neuse River Council Of Governments	7.55%		0.05%			
92508		Coastal Regional Waste Management Authority	7.58%		0.08%			
92511	72020	New Bern, City Of	7.57%	8.39%	0.07%	0.14%		
92513		Trillium Health Resources	7.54%		0.04%			
92521	72810	Trent Woods, Town Of	7.57%	8.39%	0.07%	0.14%		
92531	71240	Havelock, City Of	7.56%	8.39%	0.06%	0.14%		

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Appendix H: Detailed Table of Rates of Contributions Payable by Employer

The table below provides the total contribution rates payable for the year beginning July 1, 2017 by all participating employers.

Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
92541	72435	River Bend, Town Of	7.50%	8.39%		0.14%		
92551	72910	Vanceboro, Town Of	7.50%	8.39%		0.14%		
92561		Bridgeton, Town Of	7.50%	8.39%		0.14%	3,279	12/31/2016
92571		Cove City, Town Of	12.24%				7,002	6/30/2021
92601	70680	Cumberland County	7.56%	8.39%	0.06%	0.14%		
92602		Westarea Volunteer Fire Department	7.50%					
92604	70685	Cumberland County A.B.C. Board	7.58%	8.39%	0.08%	0.14%		
92607		Region M Council Of Governments	7.54%		0.04%			
92611	70940	Fayetteville, City Of	7.56%	8.39%	0.06%	0.14%		
92613		Fayetteville Metro. Housing Authority	7.58%		0.08%			
92614		Fayetteville Public Works Commission	12.73%				10,531,903	6/30/2022
92621	72715	Stedman, Town Of	7.50%	8.39%		0.14%		
92631	71390	Hope Mills, Town Of	7.56%	8.39%	0.06%	0.14%		
92641		Wade, Town Of	7.50%					
92651		Linden, Town Of	7.50%					
92661	72676	Spring Lake, Town Of	14.23%	15.01%	0.11%	0.14%	1,789,466	9/30/2024
92671		Falcon, Town Of	13.92%				20,032	6/30/2026
92681		Eastover, Town Of	8.10%		0.60%			
92701	70700	Currituck County	7.57%	8.39%	0.07%	0.14%		
92704		Currituck County A.B.C. Board	7.50%					
92801	70720	Dare County	7.57%	8.39%	0.07%	0.14%		
92802		Dare County Tourism Board	7.54%		0.04%			
92804	70721	Dare County A.B.C. Board	7.60%	8.39%	0.10%	0.14%		
92811	71980	Nags Head, Town Of	7.56%	8.39%	0.06%	0.14%		
92821	71480	Kill Devil Hills, Town Of	7.57%	8.39%	0.07%	0.14%		
92831	71705	Manteo, Town Of	7.69%	8.39%	0.19%	0.14%		
92841	72645	Southern Shores, Town Of	7.54%	8.39%	0.04%	0.14%		
92851	71507	Kitty Hawk, Town Of	7.67%	8.39%	0.17%	0.14%		
92861	70755	Duck, Town Of	7.50%	8.39%		0.14%		
92901	70723	Davidson County	7.58%	8.39%	0.08%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
92911	72780	Thomasville, City Of	7.59%	8.39%	0.09%	0.14%		
92913		Thomasville Housing Authority	23.93%				285,472	6/30/2024
92917		Lexington A.B.C. Board	8.49%		0.99%			
92921	70730	Denton, Town Of	7.50%	8.39%		0.14%		
92931	71570	Lexington, City Of	7.57%	8.39%	0.07%	0.14%		
92941		Midway, Town Of	9.79%				27,240	3/31/2038
93001	70725	Davie County	7.56%	8.39%	0.06%	0.14%		
93009		Davie Soil & Water Conservation District	7.50%					
93011	71790	Mocksville, Town Of	7.56%	8.39%	0.06%	0.14%		
93021		Bermuda Run, Town Of	7.50%					
93027		Cooleemee A.B.C. Board	7.50%					
93031	70624	Cooleemee, Town Of	13.70%	14.59%		0.14%	87,211	9/30/2027
93101	70770	Duplin County	7.59%	8.39%	0.09%	0.14%		
93103		Duplin County Tourism Development Authority	7.50%					
93108		Duplin-Sampson Area Mental Health	7.55%		0.05%			
93111	70160	Beulaville, Town Of	7.55%	8.39%	0.05%	0.14%		
93121	71469	Kenansville, Town Of	7.56%	8.39%	0.06%	0.14%		
93127		Kenansville A.B.C. Board	7.50%					
93131	72981	Warsaw, Town Of	7.50%	8.39%		0.14%		
93137		Warsaw A.B.C. Board	7.50%					
93141	70920	Faison, Town Of	7.58%		0.08%			
93151	72970	Wallace, Town Of	7.50%	8.39%		0.14%		
93157		Wallace A.B.C. Board	7.50%					
93161	72487	Rose Hill, Town Of	7.61%	8.39%	0.11%	0.14%		
93171		Calypso, Town Of	7.50%					
93181		Teachey, Town Of	7.50%					
93191	71690	Magnolia, Town Of	7.50%	8.39%		0.14%		
93201	70790	Durham County	7.55%	8.39%	0.05%	0.14%		
93204	70800	Durham County A.B.C. Board	7.58%	8.39%	0.08%	0.14%		
93209		Alliance Behavioral Healthcare	7.50%					

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Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
93211	70780	Durham, City Of	7.50%	8.39%		0.14%		
93212		Durham Convention And Visitors Bureau	13.21%				715,543	9/30/2028
93219		Triangle J Council Of Governments	7.55%		0.05%			
93301	70820	Edgecombe County	7.59%	8.39%	0.09%	0.14%		
93304		Edgecombe County A.B.C. Board	7.66%		0.16%			
93305		Edgecombe-Nash Memorial Library	7.57%		0.07%			
93309		Region L Council Of Governments	7.58%		0.08%			
93311	72770	Tarboro, Town Of	7.57%	8.39%	0.07%	0.14%		
93317		Tarboro Redevelopment Commission	7.58%		0.08%			
93321	72480	Rocky Mount, City Of	7.56%	8.39%	0.06%	0.14%		
93323		Rocky Mount-Wilson Airport Authority	7.63%		0.13%			
93331	72296	Pinetops, Town Of	7.59%	8.39%	0.09%	0.14%		
93333		Rocky Mount Housing Authority	7.50%				48,102	6/30/2016
93341		Macclesfield, Town Of	7.60%		0.10%			
93351	72351	Princeville, Town Of	7.50%					
93401	70951	Forsyth County	7.50%	8.39%		0.14%		
93402		Airport Commission Of Forsyth County	7.50%					
93406		Piedmont Triad Regional Council	7.65%		0.15%			
93408		Forsyth-Stokes Mental Health Authority	7.50%					
93411	73130	Winston-Salem, City Of	7.50%	8.39%		0.14%		
93413		Winston-Salem Housing Authority	7.57%		0.07%			
93417	73140	Winston-Salem A.B.C. Board	7.67%	8.39%	0.17%	0.14%		
93421	71470	Kernersville, Town Of	7.50%	8.39%		0.14%		
93431		Rural Hall, Town Of	7.59%		0.09%			
93441		Clemmons, Village Of	7.50%					
93442		Clemmons Fire Department	7.50%					
93451		Lewisville, Town Of	7.50%					
93461		Walkertown, Town Of	8.69%				4,049	12/31/2019
93471		Tobaccoville, Village Of	7.50%					
93501	70960	Franklin County	7.59%	8.39%	0.09%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
93511	70970	Franklinton, Town Of	7.50%	8.39%		0.14%		
93517		Franklinton A.B.C. Board	7.71%		0.21%			
93521	71650	Louisburg, Town Of	7.57%	8.39%	0.07%	0.14%		
93527		Louisburg A.B.C. Board	7.80%		0.30%			
93531	70295	Bunn, Town Of	7.50%	8.39%		0.14%		
93537		Bunn A.B.C. Board	7.50%					
93541	73200	Youngsville, Town Of	7.50%	8.39%		0.14%		
93601	71030	Gaston County	7.55%	8.39%	0.05%	0.14%		
93602	72682	Stanley, Town Of	7.57%	8.39%	0.07%	0.14%		
93609		Gaston-Lincoln Area Mental Health	7.55%		0.05%			
93610	71760	Mcadenville, Town Of	7.53%		0.03%			
93611	71040	Gastonia, City Of	7.50%	8.39%		0.14%		
93617		Gastonia A.B.C. Board	7.85%		0.35%			
93618		Gaston Co. Economic Dev. Commission	17.57%				76,570	6/30/2022
93621	70150	Belmont, City Of	7.50%	8.39%		0.14%		
93623		Belmont Housing Authority	11.09%				5,781	3/31/2018
93631	70640	Cramerton, Town Of	7.64%	8.39%	0.14%	0.14%		
93641	70520	Cherryville, City Of	7.60%	8.39%	0.10%	0.14%		
93647		Cherryville A.B.C. Board	20.71%				34,877	12/31/2023
93651	70705	Dallas, Town Of	7.50%	8.39%		0.14%		
93661	71655	Lowell, Town Of	7.50%	8.39%		0.14%		
93671		Bessemer City, City Of	7.67%	8.39%	0.17%	0.14%		
93681	72390	Ranlo, Town Of	7.50%	8.39%		0.14%		
93691	71930	Mt. Holly, City Of	7.56%	8.39%	0.06%	0.14%		
93701	71050	Gates County	7.57%	8.39%	0.07%	0.14%		
93704	71052	Gates County A.B.C. Board	7.69%		0.19%			
93801	71085	Graham County	7.50%	8.39%		0.14%	69,360	6/30/2016
93803		Graham County Health Department	7.54%		0.04%			
93806		Graham County Welfare Department	7.56%		0.06%			
93821		Robbinsville, Town Of	7.61%		0.11%		33,219	6/30/2017

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
93901	71110	Granville County	7.57%	8.39%	0.07%	0.14%		
93904		Granville County A.B.C. Board	7.70%		0.20%			
93906		Granville County Hospital	7.54%		0.04%			
93908		Granville-Vance Health District	7.55%		0.05%			
93910		South Granville Water And Sewer Authority	7.64%		0.14%			
93911	72200	Oxford, City Of	7.58%	8.39%	0.08%	0.14%		
93913		Oxford Housing Authority	7.56%		0.06%			
93914		Stovall, Town Of	8.09%		0.59%			
93921	70660	Creedmoor, City Of	7.50%	8.39%		0.14%		
93931		Butner, Town Of	7.65%	8.39%	0.15%	0.14%		
94001	71130	Greene County	7.62%	8.39%	0.12%	0.14%		
94002		Maury Sanitary Land District	8.39%				1,882	3/31/2020
94004		Greene County A.B.C. Board	7.64%		0.14%			
94005		Neuse Regional Library - Greene County	7.56%		0.06%			
94011		Hookerton, Town Of	7.52%		0.02%			
94021		Snow Hill, Town Of	7.50%	8.39%		0.14%		
94031		Walstonburg, Town Of	14.78%				51,048	9/30/2033
94101	71180	Guilford, County Of	7.55%	8.39%	0.05%	0.14%		
94102		Guil-Rand Fire Department	7.50%					
94108		Pinecroft-Sedgefield Fire District	7.50%					
94109		Alamance Community Fire Dist.,Inc	7.50%					
94111	71140	Greensboro, City Of	7.56%	8.39%	0.06%	0.14%		
94112		Piedmont Triad Regional Water Authority	7.54%	8.39%	0.04%	0.14%		
94117	71150	Greensboro A.B.C. Board	7.59%		0.09%			
94118		Guilford Fire District	7.50%					
94121	71340	High Point, City Of	7.57%	8.39%	0.07%	0.14%		
94127		High Point A.B.C. Board	7.61%		0.11%			
94131	71442	Jamestown, Town Of	7.57%		0.07%			
94151	71060	Gibsonville, Town Of	7.57%	8.39%	0.07%	0.14%		
94157		Gibsonville A.B.C. Board	7.50%					

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
94161		Oak Ridge, Town Of	7.50%					
94168		Colfax Volunteer Fire Department	7.50%					
94171		Summerfield, Town Of	7.50%					
94172		Summerfield Fire District	7.54%		0.04%			
94201	71200	Halifax County	7.56%	8.39%	0.06%	0.14%		
94204		Halifax County A.B.C. Board	7.63%		0.13%			
94205		Halifax County Tourism Development Authority	7.60%		0.10%			
94209		Roanoke Rapids Sanitary District	7.57%		0.07%			
94211	70895	Enfield, Town Of	7.71%	8.39%	0.21%	0.14%		
94221	72440	Roanoke Rapids, City Of	7.56%	8.39%	0.06%	0.14%		
94231	73017	Weldon, Town Of	7.63%	8.39%	0.13%	0.14%		
94241	72590	Scotland Neck, Town Of	7.64%	8.39%	0.14%	0.14%		
94251		Hobgood, Town Of	7.58%		0.08%			
94261	71615	Littleton, Town Of	7.50%	8.39%		0.14%		
94301	71230	Harnett County	7.56%	8.39%	0.06%	0.14%		
94311	70760	Dunn, Town Of	7.60%	8.39%	0.10%	0.14%		
94313		Dunn Housing Authority	7.86%		0.36%			
94317		Dunn A.B.C. Board	7.54%		0.04%			
94321	71585	Lillington, Town Of	7.55%	8.39%	0.05%	0.14%		
94331	70900	Erwin, Town Of	7.64%	8.39%	0.14%	0.14%		
94341	70570	Coats, Town Of	7.62%	8.39%	0.12%	0.14%		
94347		Angier A.B.C. Board	7.65%		0.15%			
94351	70038	Angier, Town Of	7.50%	8.39%		0.14%		
94401	71250	Haywood County	7.57%	8.39%	0.07%	0.14%		
94408		Junaluska Sanitary District	7.56%		0.06%			
94411	73010	Waynesville, Town Of	7.58%	8.39%	0.08%	0.14%		
94412	73015	Waynesville A.B.C. Board	7.74%		0.24%			
94421	71685	Maggie Valley, Town Of	7.50%	8.39%		0.14%		
94427		Maggie Valley A.B.C. Board	7.50%					
94428		Maggie Valley Sanitary District	7.50%					

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
94431	70362	Canton, Town Of	12.29%	13.12%	0.06%	0.14%	399,523	6/30/2020
94437		Canton A.B.C. Board	12.38%				42,190	12/31/2027
94501	71275	Henderson County	7.56%	8.39%	0.06%	0.14%		
94511	71280	Hendersonville, City Of	7.57%	8.39%	0.07%	0.14%		
94517		Hendersonville A.B.C. Board	7.50%					
94521	71525	Laurel Park, Town Of	7.67%	8.39%	0.17%	0.14%		
94527		Laurel Park A.B.C. Board	7.57%		0.07%			
94531		Flat Rock, Village Of	7.50%					
94532		Blue Ridge Fire Department	7.57%		0.07%			
94541	70943	Fletcher, Town Of	7.50%	8.39%		0.14%		
94547		Fletcher A.B.C. Board	7.50%					
94551		Mills River, Town Of	7.79%		0.29%		3,074	6/30/2017
94601	71310	Hertford County	7.59%	8.39%	0.09%	0.14%		
94604	71320	Hertford County A.B.C. Board	7.62%		0.12%			
94606		Hertford County Public Health Authority	7.61%		0.11%			
94611	70007	Ahoskie, Town Of	7.62%	8.39%	0.12%	0.14%		
94621	71970	Murfreesboro, Town Of	7.50%	8.39%		0.14%		
94631	73155	Winton, Town Of	7.77%		0.27%			
94641		Cofield, Town Of	7.50%					
94701	71370	Hoke County	7.57%	8.39%	0.07%	0.14%		
94704		Hoke County A.B.C. Board	7.67%		0.17%			
94711	72355	Raeford, Town Of	7.60%	8.39%	0.10%	0.14%		
94801	71400	Hyde County	7.60%	8.39%	0.10%	0.14%		
94804		Hyde County A.B.C. Board	7.50%					
94812		Ocracoke Sanitary District	7.62%		0.12%			
94901	71420	Iredell County	7.56%	8.39%	0.06%	0.14%		
94908		Greater Statesville Development Co	7.50%					
94911	72700	Statesville, City Of	7.57%	8.39%	0.07%	0.14%		
94917	72710	Statesville A.B.C. Board	7.67%		0.17%			
94921	71850	Mooresville, City Of	7.55%	8.39%	0.05%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
94923		Mooreville Housing Authority	7.57%		0.07%			
94927		Mooreville A.B.C. Board	7.58%		0.08%			
94931	72815	Troutman, Town Of	7.66%	8.39%	0.16%	0.14%		
94941		Mi Connection Communications System	7.50%					
95001	71430	Jackson County	7.58%	8.39%	0.08%	0.14%		
95002		Tuckasegee Water And Sewer Auth	7.58%		0.08%			
95005		Fontana Regional Library	7.61%		0.11%			
95008		Southwestern Plan. & Econ. Dev. Co	7.57%		0.07%			
95009		Smoky Mountain Mental Health Center	7.55%		0.05%			
95011	72750	Sylva, Town Of	7.57%	8.39%	0.07%	0.14%		
95017		Sylva A.B.C. Board	7.62%		0.12%		2,255	3/31/2016
95101	71460	Johnston County	7.56%	8.39%	0.06%	0.14%		
95103		Benson Housing Authority	11.43%				183,922	12/31/2036
95104		Johnston County A.B.C. Board	7.67%		0.17%			
95105		Johnston County Public Library	7.56%		0.06%			
95106		Archer Lodge, Town Of	8.03%				3,724	6/30/2028
95110		Johnston County Memorial Hospital Authority	7.60%		0.10%			
95111	72630	Smithfield, Town Of	7.57%	8.39%	0.07%	0.14%		
95113		Smithfield Housing Authority	18.18%				243,293	6/30/2023
95121	72594	Selma, Town Of	7.59%	8.39%	0.09%	0.14%		
95122		Micro, Town Of		10.86%		0.14%	8,921	3/31/2036
95123		Selma Housing Authority	7.57%		0.07%			
95131	70540	Clayton, Town Of	7.56%	8.39%	0.06%	0.14%		
95141	70170	Benson, Town Of	7.57%	8.39%	0.07%	0.14%		
95151	70954	Four Oaks, Town Of	7.50%	8.39%		0.14%		
95161	72295	Pine Level, Town Of	7.50%	8.39%		0.14%		
95171	71472	Kenly, Town Of	7.50%	8.39%		0.14%		
95181	72349	Princeton, Town Of	7.50%	8.39%		0.14%		
95191		Wilson'S Mills, Town Of	10.32%	11.21%		0.14%	44,753	6/30/2023
95201	71465	Jones County	7.58%	8.39%	0.08%	0.14%		

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Appendix H: Detailed Table of Rates of Contributions Payable by Employer

The table below provides the total contribution rates payable for the year beginning July 1, 2017 by all participating employers.

Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
95204		Jones County A.B.C. Board	7.69%		0.19%			
95205		Neuse Regional Library - Jones County	7.72%		0.22%			
95211		Pollocksville, Town Of	7.70%		0.20%			
95221	71745	Maysville, Town Of	7.50%	8.39%		0.14%		
95301	71535	Lee County	7.57%	8.39%	0.07%	0.14%		
95311	72565	Sanford, City Of	7.50%	8.39%		0.14%		
95317		Sanford A.B.C. Board	7.71%		0.21%			
95321	70265	Broadway, Town Of	7.60%	8.39%	0.10%	0.14%		
95401	71550	Lenoir County	7.58%	8.39%	0.08%	0.14%		
95404		Lenoir County A.B.C. Board	7.59%	8.39%	0.09%	0.14%		
95405		Neuse Regional Library	7.63%		0.13%			
95411	71500	Kinston, City Of	7.59%	8.39%	0.09%	0.14%		
95413		Kinston Housing Authority	7.56%		0.06%		236,083	6/30/2017
95415		Kinston-Lenoir County Library	7.59%		0.09%			
95421	72305	Pink Hill, Town Of	7.55%	8.39%	0.05%	0.14%		
95431	71517	Lagrange, Town Of	7.54%		0.04%			
95501	71590	Lincoln County	7.58%	8.39%	0.08%	0.14%		
95504		Lincoln County A.B.C. Board	8.64%				10,198	12/31/2028
95511	71600	Lincolnton, City Of	7.59%	8.39%	0.09%	0.14%		
95513		Lincolnton Housing Authority	7.60%		0.10%			
95517		Lincolnton A.B.C. Board	7.95%		0.45%			
95601	71680	Macon County	7.59%	8.39%	0.09%	0.14%		
95611	70955	Franklin, Town Of	7.58%	8.39%	0.08%	0.14%		
95617		Highlands A.B.C. Board	7.71%		0.21%			
95621	71335	Highlands, Town Of	7.50%	8.39%		0.14%		
95701	71684	Madison County	7.61%	8.39%	0.11%	0.14%		
95711	71718	Mars Hill, Town Of	7.58%	8.39%	0.08%	0.14%		
95721	71711	Marshall, Town Of	7.58%	8.39%	0.08%	0.14%		
95733		Hot Springs Housing Authority	7.50%					
95801	71730	Martin County	7.59%	8.39%	0.09%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
95802		Martin County Travel & Tourism Authority	7.96%		0.46%			
95804		Martin County A B C Board	7.54%		0.04%			
95811	73080	Williamston, City Of	7.50%	8.39%		0.14%		
95813		Williamston Housing Authority	19.19%		0.12%		114,027	3/31/2019
95821		Oak City, Town Of	7.50%					
95831		Hamilton, Town Of	12.90%		0.25%		16,456	6/30/2018
95841		Jamesville, Town Of	7.50%					
95851	72445	Robersonville, Town Of	17.13%	18.02%		0.14%	262,015	12/31/2019
95853		Robersonville Housing Authority	7.50%					
95901	71762	Mc Dowell County	7.59%	8.39%	0.09%	0.14%		
95908		Pleasant Garden Fire Department	7.50%					
95911	71710	Marion, Town Of	7.59%	8.39%	0.09%	0.14%		
95917		Marion A.B.C. Board	7.50%					
95921	72140	Old Fort, Town Of	7.50%	8.39%		0.14%		
96001	71770	Mecklenburg County	7.55%	8.39%	0.05%	0.14%		
96003		Charlott Housing Authority	7.50%					
96004	71780	Mecklenburg County A.B.C. Board	7.61%	8.39%	0.11%	0.14%		
96005		Charlotte-Mecklenburg Public Libra	7.55%		0.05%			
96008		Mecklenburg County Ems Agency	7.53%		0.03%			
96009		Centralina Council Of Governments	7.50%					
96011	70480	Charlotte, City Of	7.50%	8.39%		0.14%		
96012		Charlotte Auditorium-Coliseum	7.50%					
96018		Charlotte Fire Ret Sys Board Of Trust	7.50%					
96021	72300	Pineville, Town Of	7.55%	8.39%	0.05%	0.14%		
96031	71775	Mint Hill, Town Of	7.54%	8.39%	0.04%	0.14%		
96041	71397	Huntersville, Town Of	7.50%	8.39%		0.14%		
96051	70625	Cornelius, Town Of	7.50%	8.39%		0.14%		
96061	72679	Stallings, Town Of	7.74%	8.39%	0.24%	0.14%		
96071	71740	Matthews, Town Of	7.58%	8.39%	0.08%	0.14%		
96081	70724	Davidson, Town Of	7.59%	8.39%	0.09%	0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
96101	71788	Mitchell County	7.61%	8.39%	0.11%	0.14%		
96102		Mitchell Soil & Water Conserv. District	7.50%					
96111	72678	Spruce Pine, Town Of	7.64%	8.39%	0.14%	0.14%		
96121	70105	Bakersville, Town Of	7.50%	8.39%		0.14%		
96201	71815	Montgomery County	7.57%	8.39%	0.07%	0.14%		
96204		Montgomery-Municipal A.B.C. Board	7.62%		0.12%			
96211	72685	Star, Town Of	7.50%	8.39%		0.14%		
96221	72822	Troy, Town Of	7.50%	8.39%		0.14%		
96231	70192	Biscoe, Town Of	7.50%	8.39%		0.14%		
96241	70360	Candor, Town Of	7.50%	8.39%		0.14%		
96251	71920	Mount Gilead, Town Of	7.57%	8.39%	0.07%	0.14%		
96301	71830	Moore County	7.57%	8.39%	0.07%	0.14%		
96302	72776	Taylortown, Town Of	7.50%	8.39%		0.14%		
96304	71840	Moore County A.B.C. Board	7.71%		0.21%			
96305		Moore County Tourism Develop. Auth.	7.50%					
96310		Moore County Airport Authority	7.63%		0.13%			
96311	72640	Southern Pines, Town Of	7.56%	8.39%	0.06%	0.14%		
96312	70358	Cameron, Town Of	7.50%					
96318		Sandhills Center	7.50%					
96321	72920	Vass, Town Of	7.65%	8.39%	0.15%	0.14%		
96331	70005	Aberdeen, Town Of	7.60%	8.39%	0.10%	0.14%		
96341	72443	Robbins, Town Of	7.50%	8.39%		0.14%		
96351	72287	Pinehurst, Village Of	7.57%	8.39%	0.07%	0.14%		
96361	72285	Pinebluff, Town Of	7.68%	8.39%	0.18%	0.14%		
96371	73040	Whispering Pines, Village Of	7.58%	8.39%	0.08%	0.14%		
96381	70953	Foxfire Village	7.57%	8.39%	0.07%	0.14%		
96391	70390	Carthage, Town Of	7.50%	8.39%		0.14%		
96401	71990	Nash County	7.56%	8.39%	0.06%	0.14%		
96404	72000	Nash County A.B.C. Board	7.61%	8.39%	0.11%	0.14%		
96405		Braswell Memorial Library	8.70%				52,423	6/30/2020

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
96411	72675	Spring Hope, Town Of	7.50%	8.39%		0.14%		
96421	71995	Nashville, Town Of	7.58%	8.39%	0.08%	0.14%		
96431	71785	Middlesex, Town Of	7.63%	8.39%	0.13%	0.14%		
96441	73045	Whitakers, Town Of	7.50%	8.39%		0.14%		
96451	70104	Bailey, Town Of	7.50%	8.39%		0.14%		
96461	72600	Sharpsburg, Town Of	7.50%	8.39%		0.14%		
96501	72030	New Hanover County	7.56%	8.39%	0.06%	0.14%		
96502	72024	New Hanover Airport Authority	7.55%	8.39%	0.05%	0.14%		
96503		Wilmington Housing Authority	13.85%				1,047,552	6/30/2024
96504		New Hanover County A.B.C. Board	7.50%					
96507		Cape Fear Public Utility Authority	7.50%					
96508		Lower Cape Fear Water & Sewer Auth	8.02%		0.52%			
96511	73165	Wrightsville Beach, Town Of	7.58%	8.39%	0.08%	0.14%		
96512		Cape Fear Public Transportation Authority	7.50%					
96521	70375	Carolina Beach, Town Of	7.50%	8.39%		0.14%		
96531	73090	Wilmington, City Of	7.50%	8.39%		0.14%		
96541	71515	Kure Beach, Town Of	7.50%	8.39%		0.14%		
96601	72060	Northampton County	7.58%	8.39%	0.08%	0.14%		
96604		Northampton County A.B.C. Board	7.73%		0.23%			
96611	72432	Rich Square, Town Of	7.50%	8.39%		0.14%		
96612		Choanoke Public Transportation Authority	7.50%					
96621	73162	Woodland, Town Of	7.50%	8.39%		0.14%		
96631	71020	Garysburg, Town Of	7.50%	8.39%		0.14%		
96641	70620	Conway, Town Of	7.50%	8.39%		0.14%		
96651	71032	Gaston, Town Of	7.50%	8.39%		0.14%		
96661	71435	Jackson, Town Of	7.50%	8.39%		0.14%		
96671	72595	Severn, Town Of	7.50%				1,971	6/30/2016
96681	72591	Seaboard, Town Of	12.21%	13.10%		0.14%	84,685	12/31/2025
96701	72150	Onslow County	7.56%	8.39%	0.06%	0.14%		
96704	72160	Onslow County A.B.C. Board	7.62%		0.12%			

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
96708		Onslow Water & Sewage Authority	8.86%		0.14%		587,156	6/30/2028
96711	71440	Jacksonville, City Of	7.57%	8.39%	0.07%	0.14%		
96721	72745	Swansboro, Town Of	7.57%	8.39%	0.07%	0.14%		
96731	71380	Holly Ridge, Town Of	7.60%	8.39%	0.10%	0.14%		
96733		Holly Ridge Housing Authority	7.60%		0.10%			
96741	72420	Richlands, Town Of	7.50%	8.39%		0.14%		
96751	72789	North Topsail Beach, Town Of	7.66%	8.39%	0.16%	0.14%		
96801	72170	Orange County	7.56%	8.39%	0.06%	0.14%		
96804		Orange County A.B.C. Board	7.58%		0.08%			
96808		Orange Water & Sewer Authority	7.55%		0.05%			
96811	70470	Chapel Hill, Town Of	7.57%	8.39%	0.07%	0.14%		
96821	70372	Carrboro, Town Of	7.56%	8.39%	0.06%	0.14%		
96831	71360	Hillsborough, Town Of	7.55%	8.39%	0.05%	0.14%		
96901	72210	Pamlico County	7.59%	8.39%	0.09%	0.14%		
96911		Bayboro, Town Of	7.50%					
96912	72195	Oriental, Town Of	7.50%	8.39%		0.14%		
96918		Bay River Metro Sewerage District	7.65%		0.15%			
97001	72220	Pasquotank County	7.60%	8.39%	0.10%	0.14%		
97002		Pasquotank-Camden Ambulance Service	7.57%		0.07%			
97004		Pasquotank County A.B.C Board	7.69%		0.19%			
97005		East Albemarle Regional Library	7.59%		0.09%			
97008		Albemarle District Jail Commission	7.50%					
97011	70840	Elizabeth City	7.57%	8.39%	0.07%	0.14%		
97012		Elizabeth-Pasquotank Co Airport Au	10.30%				21,603	6/30/2022
97013		Elizabeth City - Pasquotank Co. Tourism Dev. Auth.	9.77%				35,134	6/30/2033
97015		Pasquotank-Camden Library	7.60%		0.10%			
97018		Elizabeth-Pasquotank Co Ind Dev Co	7.75%		0.25%			
97101	72235	Pender County	7.56%	8.39%	0.06%	0.14%		
97104		Pender County A.B.C. Board	7.61%		0.11%			
97111	70300	Burgaw, Town Of	7.50%	8.39%		0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
97121	72790	Topsail Beach, Town Of	7.61%	8.39%	0.11%	0.14%		
97131	72725	Surf City	7.57%	8.39%	0.07%	0.14%		
97201	72245	Perquimans County	7.60%	8.39%	0.10%	0.14%		
97211	71300	Hertford, Town Of	7.60%	8.39%	0.10%	0.14%		
97213		Hertford Housing Authority	7.50%					
97217	71305	Hertford A.B.C. Board	7.70%		0.20%			
97221	73124	Winfall, Town Of	7.50%	8.39%		0.14%		
97301	72250	Person County	7.58%	8.39%	0.08%	0.14%		
97304		Person County A.B.C. Board	7.70%		0.20%			
97311	72520	Roxboro, City Of	7.58%	8.39%	0.08%	0.14%		
97401	72310	Pitt County	7.56%	8.39%	0.06%	0.14%		
97402		Pitt-Greenville Convention & Visitors Authority	7.50%					
97404	72320	Pitt County A.B.C. Board	7.55%	8.39%	0.05%	0.14%		
97405		Sheppard Memorial Library	7.59%		0.09%			
97408		Contentnea Metro. Sewage District	7.60%		0.10%			
97411	71160	Greenville, City Of	7.55%	8.39%	0.05%	0.14%		
97412		Greenville Utilities Commission	7.54%		0.04%			
97413		Greenville Housing Authority	7.59%		0.09%			
97421	70930	Farmville, City Of	7.58%	8.39%	0.08%	0.14%		
97423		Farmville Housing Authority	14.44%				192,634	3/31/2028
97431	71170	Grifton, Town Of	7.61%	8.39%	0.11%	0.14%		
97441	70157	Bethel, Town Of	7.56%	8.39%	0.06%	0.14%		
97451	73150	Winterville, Town Of	7.55%	8.39%	0.05%	0.14%		
97461	70100	Ayden, Town Of	7.50%	8.39%		0.14%		
97463		Ayden Housing Authority	7.50%					
97471		Grimesland, Town Of	7.69%		0.19%			
97481	72626	Simpson, Village Of	7.50%	8.39%		0.14%		
97501	72340	Polk County	7.60%	8.39%	0.10%	0.14%		
97511	72823	Tryon, Town Of	7.60%	8.39%	0.10%	0.14%		
97521	70581	Columbus, Town Of	7.50%	8.39%		0.14%		

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			General Employees	Law Enforcement	General Employees	Law Enforcement		
97531	72560	Saluda, Town Of	7.56%	8.39%	0.06%	0.14%		
97601	72380	Randolph County	7.57%	8.39%	0.07%	0.14%		
97607		Asheboro A.B.C. Board	7.50%					
97611	70064	Asheboro, City Of	7.58%	8.39%	0.08%	0.14%		
97613		Asheboro Housing Authority	7.61%		0.11%			
97621	72377	Randleman, City Of	7.57%	8.39%	0.07%	0.14%		
97623		Randleman Housing Authority	7.57%		0.07%			
97627		Randleman A.B.C. Board	7.54%		0.04%			
97631	71582	Liberty, Town Of	7.60%	8.39%	0.10%	0.14%		
97637		Liberty A.B.C. Board	7.68%		0.18%			
97641	72375	Ramseur, Town Of	7.50%	8.39%		0.14%		
97651	70063	Archdale, City Of	7.60%	8.39%	0.10%	0.14%		
97661		Trinity, City Of	7.50%					
97701	72430	Richmond County	7.58%	8.39%	0.08%	0.14%		
97705		Sandhill Regional Library	7.55%		0.05%			
97711	72460	Rockingham, City Of	7.59%	8.39%	0.09%	0.14%		
97713		Rockingham Housing Authority	7.57%		0.07%			
97717		Hamlet A.B.C. Board	7.60%		0.10%			
97721	71220	Hamlet, City Of	7.59%	8.39%	0.09%	0.14%		
97727		Rockingham A.B.C. Board	7.60%		0.10%			
97731		Ellerbe, Town Of	7.50%					
97801	72450	Robeson County	7.56%	8.39%	0.06%	0.14%		
97802		Lumber River Council Of Governments	7.54%		0.04%			
97803		Robeson County Housing Authority	7.72%		0.22%			
97805		Robeson County Public Library	7.63%		0.13%			
97811	71670	Lumberton, City Of	7.59%	8.39%	0.09%	0.14%		
97817		Lumberton A.B.C. Board	7.50%					
97818		Lumberton Airport Commission	7.50%					
97821	70910	Fairmont, Town Of	7.69%	8.39%	0.19%	0.14%		
97823		Fairmont Housing Authority	7.57%		0.07%			

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** Based on the preliminary contribution rate approved by the Board based on the Employer Contribution Rate Stabilization Policy

Appendix H: Detailed Table of Rates of Contributions Payable by Employer

The table below provides the total contribution rates payable for the year beginning July 1, 2017 by all participating employers.

Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
97831	72540	St. Pauls, Town Of	7.62%	8.39%	0.12%	0.14%		
97837		Saint Paul'S A.B.C. Board	7.50%					
97840	71750	Maxton, Town Of	12.59%	13.36%	0.12%	0.14%	299,384	6/30/2024
97841		Town Of Parkton	9.55%				19,694	9/30/2035
97847		Maxton A.B.C. Board	7.69%		0.19%			
97851	72228	Pembroke, Town Of	7.61%	8.39%	0.11%	0.14%		
97853		Pembroke Housing Authority	7.50%					
97861	72510	Rowland, Town Of	7.75%	8.39%	0.25%	0.14%		
97871	72395	Red Springs, Town Of	14.19%	14.98%	0.10%	0.14%	693,774	6/30/2022
97877		Red Springs A.B.C. Board	7.50%					
97901	72470	Rockingham County	7.57%	8.39%	0.07%	0.14%		
97911	72400	Reidsville, Town Of	7.59%	8.39%	0.09%	0.14%		
97913		New Reidsville Housing Authority	8.61%		0.16%		6,994	6/30/2018
97917		Reidsville A.B.C. Board	7.57%		0.07%			
97921	71755	Mayodan, Town Of	7.68%	8.39%	0.18%	0.14%		
97931	72721	Stoneville, Town Of	7.50%	8.39%		0.14%		
97941	71683	Madison, Town Of	7.61%	8.39%	0.11%	0.14%		
97947		Madison A.B.C. Board	11.06%				27,819	12/31/2022
97948		Madison-Mayodan Recreation Comm	7.50%					
97951	70815	Eden, City Of	7.50%	8.39%		0.14%		
97957		Eden A.B.C. Board	7.50%					
98001	72490	Rowan County	7.57%	8.39%	0.07%	0.14%		
98002		Rowan County Tourism Development Board	7.59%				408	6/30/2026
98003		Rowan County Housing Authority	11.85%				118,201	6/30/2021
98004	72500	Rowan County A.B.C. Board	7.67%		0.17%			
98008		Rowan Soil And Water Conservation. Dist	8.54%				2,539	6/30/2023
98011	72550	Salisbury, City Of	7.57%	8.39%	0.07%	0.14%		
98013		Salisbury Housing Authority	14.01%				251,810	6/30/2020
98021	70812	East Spencer, Town Of	7.72%	8.39%	0.22%	0.14%		
98023		East Spencer Housing Authority	7.58%		0.08%			

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Appendix H: Detailed Table of Rates of Contributions Payable by Employer

The table below provides the total contribution rates payable for the year beginning July 1, 2017 by all participating employers.

Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
98031	72665	Spencer, Town Of	7.65%	8.39%	0.15%	0.14%		
98041	70522	China Grove, Town Of	7.56%	8.39%	0.06%	0.14%		
98051	71522	Landis, Town Of	7.50%	8.39%		0.14%		
98061	71105	Granite Quarry, Town Of	7.58%	8.39%	0.08%	0.14%		
98071	72475	Rockwell, Town Of	7.50%	8.39%		0.14%		
98081		Faith, Town Of	7.50%					
98091	70552	Cleveland, Town Of	7.61%	8.39%	0.11%	0.14%		
98101	72530	Rutherford County	7.59%	8.39%	0.09%	0.14%		
98102		Broad River Water Authority	7.73%		0.06%		5,428	6/30/2019
98103		Rutherford-Polk-Mc Dowell D.H.D	7.56%		0.06%			
98107		Forest City A.B.C. Board	7.50%					
98109		Isothermal Planning & Develop Comm	7.58%		0.08%			
98111	70950	Forest City	7.57%	8.39%	0.07%	0.14%		
98113		Forest City Housing Authority	7.50%					
98121	72670	Spindale, Town Of	7.55%	8.39%	0.05%	0.14%		
98131	71518	Lake Lure, Town Of	7.50%	8.39%		0.14%		
98141	72535	Rutherfordton, Town Of	7.62%	8.39%	0.12%	0.14%		
98147		Rutherfordton A.B.C. Board	7.50%					
98161		Ellenboro, Town Of	7.50%					
98201	72563	Sampson County	7.56%	8.39%	0.06%	0.14%		
98205		J.C. Holliday Memorial Library	7.60%		0.10%			
98211	70555	Clinton, City Of	7.58%	8.39%	0.08%	0.14%		
98218		Clinton A.B.C. Board	7.58%		0.08%			
98221	72547	Salemburg, Town Of	7.63%		0.13%			
98231	72050	Newton Grove, Town Of	7.93%	8.39%	0.43%	0.14%		
98237		Roseboro A.B.C. Board	7.50%					
98241	71000	Garland, Town Of	7.62%		0.12%			
98251		Turkey, Town Of	7.64%		0.14%			
98261	72486	Roseboro, Town Of	7.62%		0.12%			
98271		Autryville, Town Of	8.18%		0.68%			

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Appendix H: Detailed Table of Rates of Contributions Payable by Employer

The table below provides the total contribution rates payable for the year beginning July 1, 2017 by all participating employers.

Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
98301	72580	Scotland County	7.58%	8.39%	0.08%	0.14%		
98304		Scotland County A.B.C. Board	7.65%		0.15%			
98308		Laurinburg-Maxton Airport Commission	7.50%					
98311	71530	Laurinburg, City Of	7.56%	8.39%	0.06%	0.14%		
98313		Laurens Housing Authority	14.26%		0.11%		1,015,461	12/31/2026
98321	72935	Wagram, Town Of	7.71%	8.39%	0.21%	0.14%		
98331	71051	Gibson, Town Of	9.09%				8,541	3/31/2025
98401	72683	Stanly County	7.59%	8.39%	0.09%	0.14%		
98411	70030	Albemarle, City Of	7.57%	8.39%	0.07%	0.14%		
98417		Albemarle A.B.C. Board	8.79%				8,376	6/30/2020
98421	72110	Norwood, Town Of	7.70%	8.39%	0.20%	0.14%		
98427		Norwood A.B.C. Board	7.50%					
98431	71620	Locust, City Of	7.50%	8.39%		0.14%		
98441	72120	Oakboro, Town Of	7.50%	8.39%		0.14%		
98451	70103	Badin, Town Of	7.58%	8.39%	0.08%	0.14%		
98481	72680	Stanfield, Town Of	7.50%	8.39%		0.14%		
98501	72720	Stokes County	7.59%	8.39%	0.09%	0.14%		
98511	72975	Walnut Cove, Town Of	7.61%		0.11%			
98517		Walnut Cove A.B.C. Board	7.50%					
98521	71487	King, Town Of	7.56%	8.39%	0.06%	0.14%		
98601	72730	Surry County	7.56%	8.39%	0.06%	0.14%		
98604		Yadkin Valley Abc Board	7.50%					
98607		Pilot Mountain A.B.C. Board	7.50%					
98608		Yadkin Valley Sewer Authority	7.50%					
98611	72280	Pilot Mountain, Town Of	7.60%	8.39%	0.10%	0.14%		
98621	70735	Dobson, Town Of	7.59%	8.39%	0.09%	0.14%		
98627		Dobson A.B.C. Board	7.50%					
98631	71910	Mount Airy, Town Of	7.65%	8.39%	0.15%	0.14%		
98637		Mt. Airy Alcoholic Board Of Control	7.66%		0.16%			
98641	70855	Elkin, Town Of	7.58%	8.39%	0.08%	0.14%		

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Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
98701	72740	Swain County	7.58%	8.39%	0.08%	0.14%		
98711	70285	Bryson City, Town Of	7.59%	8.39%	0.09%	0.14%		
98717		Bryson City A.B.C. Board	7.64%		0.14%			
98801	72800	Transylvania County	7.57%	8.39%	0.07%	0.14%		
98811	70260	Brevard, City Of	7.58%	8.39%	0.08%	0.14%		
98817		Brevard A.B.C. Board	7.50%					
98901	72825	Tyrrell County	7.60%	8.39%	0.10%	0.14%		
98904		Tyrrell County A.B.C. Board	7.54%		0.04%			
98911		Columbia, Town Of	7.50%					
99001	72830	Union County	7.56%	8.39%	0.06%	0.14%		
99011	71800	Monroe, City Of	7.56%	8.39%	0.06%	0.14%		
99013		Monroe Housing Authority	7.55%		0.05%			
99014		Indian Trail Abc Board	9.22%				37,569	6/30/2033
99017		Monroe A.B.C. Board	7.76%		0.26%			
99021	71720	Marshville, Town Of	7.61%	8.39%	0.11%	0.14%		
99022		Town Of Mineral Springs	12.20%				57,624	9/30/2034
99031	73125	Wingate, Town Of	7.57%	8.39%	0.07%	0.14%		
99041	72995	Waxhaw, Town Of	7.54%	8.39%	0.04%	0.14%		
99047		Waxhaw A.B.C. Board	7.50%					
99051		Indian Trail, Town Of	7.54%		0.04%			
99061		Unionville, Town Of	13.41%				10,725	6/30/2019
99071		Weddington, Town Of	10.63%		0.12%		39,635	6/30/2024
99081		Marvin, Village Of	7.50%				1,054	6/30/2016
99091		Wesley Chapel, Village Of	7.50%					
99101	72890	Vance County	7.57%	8.39%	0.07%	0.14%		
99104		Vance County A.B.C. Board	7.50%					
99109		Kerr-Tar Regional Council Of Governments	7.55%		0.05%			
99110		Kerr-Area Transportation Authority	7.50%					
99111	71270	Henderson, City Of	7.63%	8.39%	0.13%	0.14%		
99201	72940	Wake County	7.55%	8.39%	0.05%	0.14%		

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Appendix H: Detailed Table of Rates of Contributions Payable by Employer

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Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
99202	71385	Holly Springs, Town Of	7.56%	8.39%	0.06%	0.14%		
99203	72485	Rolesville, Town Of	7.50%	8.39%		0.14%		
99204	72950	Wake County A.B.C. Board	7.58%	8.39%	0.08%	0.14%		
99206	71882	Morrisville, Town Of	12.89%	13.74%	0.04%	0.14%	1,504,562	6/30/2019
99207		Wake County Housing Authority	17.91%				1,236,752	6/30/2032
99208		Bayleaf Fire Department	7.50%					
99210		Electricities Of N.C., Inc	7.50%					
99211	72360	Raleigh, City Of	7.50%	8.39%		0.14%		
99212		Durham Highway Fire Protection Age	7.50%					
99213		Raleigh Housing Authority	7.57%		0.07%			
99218	72370	Raleigh-Durham Airport Authority	7.56%	8.39%	0.06%	0.14%		
99221	70400	Cary, Town Of	7.55%	8.39%	0.05%	0.14%		
99222		Centennial Authority, The	7.61%		0.03%		683	9/30/2020
99231	73020	Wendell, Town Of	7.54%	8.39%	0.04%	0.14%		
99241	73210	Zebulon, Town Of	7.53%	8.39%	0.03%	0.14%		
99251	71010	Garner, Town Of	7.56%	8.39%	0.06%	0.14%		
99252		Garner Fire Department	7.53%		0.03%			
99261	70990	Fuquay-Varina, Town Of	7.56%	8.39%	0.06%	0.14%		
99271	70050	Apex, Town Of	7.55%	8.39%	0.05%	0.14%		
99281	72960	Wake Forest, Town Of	7.61%	8.39%	0.11%	0.14%		
99291	71510	Knightdale, Town Of	7.53%	8.39%	0.03%	0.14%		
99301	72980	Warren County	7.58%	8.39%	0.08%	0.14%		
99304	72979	Warren County A.B.C. Board	7.50%					
99311	72055	Norlina, Town Of	7.50%	8.39%		0.14%		
99321	72991	Warrenton, Town Of	14.35%	15.24%		0.14%	684,580	6/30/2037
99401	72985	Washington County	7.60%	8.39%	0.10%	0.14%		
99404		Washington County A.B.C. Board	7.60%		0.10%			
99405		Pettigrew Regional Library	7.63%		0.13%			
99411	72335	Plymouth, Town Of	7.62%	8.39%	0.12%	0.14%		
99413		Plymouth Housing Authority	7.60%		0.10%			

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Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
99421		Roper, Town Of	7.50%	8.39%		0.14%		
99431		Creswell, Town Of	7.53%		0.03%			
99501	72983	Watauga County	7.59%	8.39%	0.09%	0.14%		
99502		Region D Council Of Governments	7.50%				18,824	6/30/2016
99508		Blowing Rock Tourism Development Authority	8.80%				7,860	6/30/2022
99509		Watauga County Tourism Develop. Auth.	7.50%					
99511	70240	Boone, Town Of	7.56%	8.39%	0.06%	0.14%		
99521	70220	Blowing Rock, Town Of	7.54%	8.39%	0.04%	0.14%		
99527		Blowing Rock A.B.C. Board	7.50%					
99531	72596	Seven Devils, Town Of	12.48%	13.37%		0.14%	214,806	6/30/2026
99601	72997	Wayne County	7.58%	8.39%	0.08%	0.14%		
99602		Fork Township Sanitary District	7.56%		0.06%			
99603		Eastern Carolina Reg. Housing Auth	7.50%				34,250	6/30/2016
99604		Wayne County A.B.C. Board	7.67%	8.39%	0.17%	0.14%		
99609		Southern Wayne Sanitary District	7.62%		0.12%			
99610		Eastern Wayne Sanitary District	7.63%		0.13%			
99611	71070	Goldsboro, City Of	7.58%	8.39%	0.08%	0.14%		
99613		Housing Auth. Of City Of Goldsboro	15.36%		0.07%		362,358	6/30/2018
99621	71940	Mount Olive, Town Of	7.50%	8.39%		0.14%		
99623		Mount Olive Housing Authority	7.50%					
99631	70980	Fremont, Town Of	7.50%	8.39%		0.14%		
99651	72270	Pikeville, Town Of	7.50%	8.39%		0.14%		
99661	72977	Walnut Creek, Village Of	14.56%	15.45%		0.14%	63,089	6/30/2019
99701	73075	Wilkes County	7.57%	8.39%	0.07%	0.14%		
99705		Appalachian Regional Library	7.50%					
99711	72105	North Wilkesboro, Town Of	7.62%	8.39%	0.12%	0.14%		
99717		North Wilkesboro A.B.C. Board	7.57%		0.07%			
99721	73072	Wilkesboro, Town Of	7.57%	8.39%	0.07%	0.14%		
99727		Wilkesboro A.B.C. Board	25.48%				200,964	6/30/2023
99801	73110	Wilson County	7.55%	8.39%	0.05%	0.14%		

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Employer Code	LEO Employer Code	Employer	Total Rate**		Death Benefit Rate		12/31/2015 Unfunded Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
			General Employees	Law Enforcement	General Employees	Law Enforcement		
99802		Wilson County Tourism Develop. Authority	7.50%					
99804		Wilson County A.B.C. Board	7.61%		0.11%			
99811	73100	Wilson, City Of	7.55%	8.39%	0.05%	0.14%		
99812		Wilson Economic Development Council	7.50%					
99818		City Of Wilson Cemetery Commission	7.50%					
99821	72684	Stantonsburg, Town Of	7.50%	8.39%		0.14%		
99831	70195	Black Creek, Town Of	7.50%	8.39%		0.14%		
99841	71660	Lucama, Town Of	7.56%		0.06%			
99851	70870	Elm City, Town Of	7.50%					
99901	73170	Yadkin County	7.57%	8.39%	0.07%	0.14%		
99911	73180	Yadkinville, Town Of	7.55%	8.39%	0.05%	0.14%		
99921	71467	Jonesville, Town Of	7.68%	8.39%	0.18%	0.14%		
99931	70805	East Bend, Town Of	7.61%	8.39%	0.11%	0.14%		
99941	70250	Boonville, Town Of	7.50%	8.39%		0.14%		
99991		N.C. Association Of County Comm	7.53%		0.03%			
99999		N.C. League Of Municipalities	7.55%		0.05%			

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Appendix I: Prior Service Contribution Rates and Estimated Dates of Liquidation by Employer

The table below provides the contribution rates payable for the year beginning July 1, 2017 by participating employers with an unfunded prior service liability balance at the valuation date.

Employer Code	LEO Employer Code	Employer	12/31/2015 Prior Service Liability	7/1/2017 Prior Service Rate	Original Date of Liquidation of Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
90114		Mebane, Town Of	5,613,341	10.50%	6/30/2033	6/30/2027
90307		Sparta A.B.C. Board	2,687	0.53%	12/31/2028	12/31/2028
90461		Morven, Town Of	10,411	4.48%	6/30/2019	6/30/2019
90507		West Jefferson Abc Board	31,448	3.22%	6/30/2035	6/30/2029
90602		Avery County Fire Commission	239,494	6.25%	12/31/2038	12/31/2038
90651	72724	Sugar Mountain, Town Of	355,239	7.14%	3/31/2027	6/30/2024
90861	71556	Lewiston-Woodville, Town Of	3,415	1.04%	6/30/2024	6/30/2024
91007		Calabash A.B.C. Board	6,932		3/31/2019	6/30/2017
91009		Brunswick County Tourism Develop. Authority	9,876	1.01%	9/30/2031	6/30/2024
91013		Southeast Brunswick Sanitary District	167,470	5.81%	9/30/2039	9/30/2039
91020		Belville, Town Of	7,564	0.64%	6/30/2031	6/30/2031
91026		Town Of Navassa	343,168	7.27%	6/30/2035	6/30/2035
91047		Sunset Beach A.B.C. Board	26,099	12.14%	9/30/2019	6/30/2018
91104		Woodfin Abc Commission	11,361	1.51%	9/30/2033	9/30/2033
91147		Weaverville A.B.C. Board	16,337	0.93%	9/30/2034	6/30/2034
91202		Burke-Catawba Dist. Confinement Fa	24,795	0.68%	3/31/2020	6/30/2019
91261		Connelly Springs, Town Of	2,750	2.89%	9/30/2027	6/30/2018
91308		Cabarrus Co. Tourism Auth	63,858	0.67%	9/30/2032	6/30/2027
91321		Mount Pleasant, Town Of	80,627	6.14%	12/31/2027	6/30/2021
91457		Lenoir A.B.C. Board	106,377	9.60%	3/31/2023	3/31/2023
91681	70080	Atlantic Beach, Town Of	1,397,612	6.23%	3/31/2028	6/30/2026
91818		Western Piedmont Council Of Governments	571,233	10.73%	3/31/2023	6/30/2018
91904		Chatham County A.B.C. Board	1,423	0.58%	12/31/2017	12/31/2017
92113		The New Edenton Housing Authority	8,249		6/30/2021	6/30/2016
92351	71178	Grover, Town Of	8,305	1.97%	9/30/2020	9/30/2020
92421		Brunswick, Town Of	832		6/30/2017	6/30/2016
92431	70908	Fair Bluff, Town Of	10,503	4.58%	9/30/2017	9/30/2017
92561		Bridgeton, Town Of	3,279		12/31/2016	12/31/2016
92571		Cove City, Town Of	7,002	4.74%	9/30/2026	6/30/2021
92614		Fayetteville Public Works Commission	10,531,903	5.23%	3/31/2027	6/30/2022

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Appendix I: Prior Service Contribution Rates and Estimated Dates of Liquidation by Employer

The table below provides the contribution rates payable for the year beginning July 1, 2017 by participating employers with an unfunded prior service liability balance at the valuation date.

Employer Code	LEO Employer Code	Employer	12/31/2015 Prior Service Liability	7/1/2017 Prior Service Rate	Original Date of Liquidation of Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
92661	72676	Spring Lake, Town Of	1,789,466	6.62%	9/30/2024	9/30/2024
92671		Falcon, Town Of	20,032	6.42%	6/30/2026	6/30/2026
92913		Thomasville Housing Authority	285,472	16.43%	6/30/2027	6/30/2024
92941		Midway, Town Of	27,240	2.29%	3/31/2038	3/31/2038
93031	70624	Cooleemee, Town Of	87,211	6.20%	9/30/2027	9/30/2027
93212		Durham Convention And Visitors Bureau	715,543	5.71%	9/30/2028	9/30/2028
93333		Rocky Mount Housing Authority	48,102		12/31/2020	6/30/2016
93461		Walkertown, Town Of	4,049	1.19%	12/31/2019	12/31/2019
93618		Gaston Co. Economic Dev. Commission	76,570	10.07%	12/31/2022	6/30/2022
93623		Belmont Housing Authority	5,781	3.59%	3/31/2018	3/31/2018
93647		Cherryville A.B.C. Board	34,877	13.21%	12/31/2023	12/31/2023
93801	71085	Graham County	69,360		6/30/2024	6/30/2016
93821		Robbinsville, Town Of	33,219		3/31/2023	6/30/2017
94002		Maury Sanitary Land District	1,882	0.89%	3/31/2020	3/31/2020
94031		Walstonburg, Town Of	51,048	7.28%	9/30/2033	9/30/2033
94431	70362	Canton, Town Of	399,523	4.73%	6/30/2020	6/30/2020
94437		Canton A.B.C. Board	42,190	4.88%	12/31/2027	12/31/2027
94551		Mills River, Town Of	3,074		9/30/2028	6/30/2017
95017		Sylva A.B.C. Board	2,255		3/31/2016	3/31/2016
95103		Benson Housing Authority	183,922	3.93%	12/31/2036	12/31/2036
95106		Archer Lodge, Town Of	3,724	0.53%	9/30/2037	6/30/2028
95113		Smithfield Housing Authority	243,293	10.68%	6/30/2023	6/30/2023
95122		Micro, Town Of	8,921	2.47%	3/31/2036	3/31/2036
95191		Wilson'S Mills, Town Of	44,753	2.82%	3/31/2032	6/30/2023
95413		Kinston Housing Authority	236,083		3/31/2022	6/30/2017
95504		Lincoln County A.B.C. Board	10,198	1.14%	12/31/2028	12/31/2028
95813		Williamston Housing Authority	114,027	11.57%	3/31/2019	3/31/2019
95831		Hamilton, Town Of	16,456	5.15%	9/30/2018	6/30/2018
95851	72445	Robersonville, Town Of	262,015	9.63%	12/31/2019	12/31/2019
96405		Braswell Memorial Library	52,423	1.20%	6/30/2026	6/30/2020

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96503		Wilmington Housing Authority	1,047,552	6.35%	6/30/2024	6/30/2024
96671	72595	Severn, Town Of	1,971		9/30/2021	6/30/2016
96681	72591	Seaboard, Town Of	84,685	4.71%	12/31/2025	12/31/2025
96708		Onslow Water & Sewage Authority	587,156	1.22%	12/31/2028	6/30/2028
97012		Elizabeth-Pasquotank Co Airport Au	21,603	2.80%	9/30/2024	6/30/2022
97013		Elizabeth City - Pasquotank Co. Tourism Dev. Auth.	35,134	2.27%	6/30/2033	6/30/2033
97423		Farmville Housing Authority	192,634	6.94%	3/31/2028	3/31/2028
97840	71750	Maxton, Town Of	299,384	4.97%	6/30/2027	6/30/2024
97841		Town Of Parkton	19,694	2.05%	9/30/2035	9/30/2035
97871	72395	Red Springs, Town Of	693,774	6.59%	6/30/2023	6/30/2022
97913		New Reidsville Housing Authority	6,994	0.95%	3/31/2019	6/30/2018
97947		Madison A.B.C. Board	27,819	3.56%	12/31/2022	12/31/2022
98002		Rowan County Tourism Development Board	408	0.09%	6/30/2026	6/30/2026
98003		Rowan County Housing Authority	118,201	4.35%	12/31/2021	6/30/2021
98008		Rowan Soil And Water Conservation. Dist	2,539	1.04%	6/30/2023	6/30/2023
98013		Salisbury Housing Authority	251,810	6.51%	12/31/2022	6/30/2020
98102		Broad River Water Authority	5,428	0.17%	3/31/2025	6/30/2019
98313		Laurenborg Housing Authority	1,015,461	6.65%	12/31/2026	12/31/2026
98331	71051	Gibson, Town Of	8,541	1.59%	3/31/2025	3/31/2025
98417		Albemarle A.B.C. Board	8,376	1.29%	12/31/2023	6/30/2020
99014		Indian Trail Abc Board	37,569	1.72%	6/30/2039	6/30/2033
99022		Town Of Mineral Springs	57,624	4.70%	9/30/2034	9/30/2034
99061		Unionville, Town Of	10,725	5.91%	3/31/2028	6/30/2019
99071		Weddington, Town Of	39,635	3.01%	3/31/2029	6/30/2024
99081		Marvin, Village Of	1,054		3/31/2029	6/30/2016
99206	71882	Morrisville, Town Of	1,504,562	5.35%	6/30/2027	6/30/2019
99207		Wake County Housing Authority	1,236,752	10.41%	12/31/2032	6/30/2032
99222		Centennial Authority, The	683	0.08%	9/30/2020	9/30/2020
99321	72991	Warrenton, Town Of	684,580	6.85%	9/30/2037	6/30/2037
99502		Region D Council Of Governments	18,824		6/30/2016	6/30/2016

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The table below provides the contribution rates payable for the year beginning July 1, 2017 by participating employers with an unfunded prior service liability balance at the valuation date.

Employer Code	LEO Employer Code	Employer	12/31/2015 Prior Service Liability	7/1/2017 Prior Service Rate	Original Date of Liquidation of Prior Service Liability	Estimated Date of Liquidation of Prior Service Liability*
99508		Blowing Rock Tourism Development Authority	7,860	1.30%	3/31/2029	6/30/2022
99531	72596	Seven Devils, Town Of	214,806	4.98%	6/30/2026	6/30/2026
99603		Eastern Carolina Reg. Housing Auth	34,250		3/31/2019	6/30/2016
99613		Housing Auth. Of City Of Goldsboro	362,358	7.79%	6/30/2020	6/30/2018
99661	72977	Walnut Creek, Village Of	63,089	7.06%	3/31/2026	6/30/2019
99727		Wilkesboro A.B.C. Board	200,964	17.98%	3/31/2024	6/30/2023

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Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Aberdeen, Town Of	96331	70005	Avery-Mitchell-Yancey Dist. Library	90605	
Ahoskie, Town Of	94611	70007	Ayden Housing Authority	97463	
Airport Commission Of Forsyth County	93402		Ayden, Town Of	97461	70100
Alamance Community Fire Dist.,Inc	94109		B.H.M. Regional Library	90705	
Alamance County	90101	70020	Badin, Town Of	98451	70103
Alamance, Village Of	90151		Bailey, Town Of	96451	70104
Albemarle A.B.C. Board	98417		Bakersville, Town Of	96121	70105
Albemarle District Jail Commission	97008		Bald Head Island, Village Of	91091	70107
Albemarle Regional Library	90805		Banner Elk, Town Of	90611	70110
Albemarle Regional Plan. & Develop. Com	92109		Bay River Metro Sewerage District	96918	
Albemarle, City Of	98411	70030	Bayboro, Town Of	96911	
Alexander County	90201	70032	Bayleaf Fire Department	99208	
Alexander County Health Department	90203		Beaufort County	90701	70130
Alexander County Library	90205		Beaufort County A.B.C. Board	90704	
Alexander County Welfare Department	90206		Beaufort Housing Authority	91633	
Alleghany County	90301	70035	Beaufort, Town Of	91631	70145
Alliance Behavioral Healthcare	93209		Beech Mountain, Town Of	90631	70146
Andrews, Town Of	92021	70036	Belhaven, Town Of	90731	70147
Angier A.B.C. Board	94347		Belmont Housing Authority	93623	
Angier, Town Of	94351	70038	Belmont, City Of	93621	70150
Anson County	90401	70040	Belville, Town Of	91020	
Ansonville, Town Of	90451		Benson Housing Authority	95103	
Apex, Town Of	99271	70050	Benson, Town Of	95141	70170
Appalachian District Health Department	90099		Bermuda Run, Town Of	93021	
Appalachian Regional Library	99705		Bertie County	90801	70180
Archdale, City Of	97651	70063	Bertie County A.B.C. Board	90804	
Archer Lodge, Town Of	95106		Bertie-Martin Regional Jail Comm	90808	
Ashe County	90501	70065	Bessemer City, City Of	93671	
Asheboro A.B.C. Board	97607		Bethel, Town Of	97441	70157
Asheboro Housing Authority	97613		Beulaville, Town Of	93111	70160
Asheboro, City Of	97611	70064	Biltmore Forest, Town Of	91111	70190
Asheville A.B.C. Board	91127	70072	Biscoe, Town Of	96231	70192
Asheville Regional Airport Authority	91128	70074	Black Creek, Town Of	99831	70195
Asheville, City Of	91121	70070	Black Mountain A.B.C. Board	91154	
Atlantic Beach, Town Of	91681	70080	Black Mountain, Town Of	91151	70200
Aulander, Town Of	90811	70082	Bladen County	90901	70210
Aurora, Town Of	90721	70085	Bladenboro, Town Of	90941	70215
Autryville, Town Of	98271		Blowing Rock A.B.C. Board	99527	
Avery County	90601	70090	Blowing Rock Tourism Development Authority	99508	
Avery County Fire Commission	90602		Blowing Rock, Town Of	99521	70220

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Blue Ridge Fire Department	94532		Caldwell County	91401	70350
Boiling Spring Lakes A.B.C. Board	91077		Calypso, Town Of	93171	
Boiling Spring Lakes, City Of	91071	70225	Camden County	91501	70357
Boiling Springs, Town Of	92331	70230	Camden County A.B.C. Board	91504	
Boone, Town Of	99511	70240	Cameron, Town Of	96312	70358
Boonville, Town Of	99941	70250	Candor, Town Of	96241	70360
Braswell Memorial Library	96405		Canton A.B.C. Board	94437	
Brevard A.B.C. Board	98817		Canton, Town Of	94431	70362
Brevard, City Of	98811	70260	Cape Carteret, Town Of	91671	70365
Bridgeton, Town Of	92561		Cape Fear Council Of Governments	91008	
Broad River Water Authority	98102		Cape Fear Public Transportation Authority	96512	
Broadway, Town Of	95321	70265	Cape Fear Public Utility Authority	96507	
Brookford, Town Of	91861	70270	Carolina Beach, Town Of	96521	70375
Brunswick County	91001	70280	Carolina Shores, Town Of	91024	
Brunswick County A.B.C. Board	91004		Carrboro, Town Of	96821	70372
Brunswick County Health Department	91003		Carteret County	91601	70380
Brunswick County Tourism Develop. Authority	91009		Carteret County A.B.C. Board	91604	70385
Brunswick County Welfare Department	91006		Carthage, Town Of	96391	70390
Brunswick, Town Of	92421		Cary, Town Of	99221	70400
Bryson City A.B.C. Board	98717		Caswell Beach, Town Of	91051	70405
Bryson City, Town Of	98711	70285	Caswell County	91701	70415
Buncombe County	91101	70290	Caswell County A.B.C. Board	91704	
Bunn A.B.C. Board	93537		Caswell County Welfare Department	91706	
Bunn, Town Of	93531	70295	Catawba County	91801	70430
Burgaw, Town Of	97111	70300	Catawba County A.B.C. Board	91804	70440
Burke County	91201	70310	Catawba, Town Of	91881	70441
Burke County Health Department	91203		Cedar Point, Town Of	91691	
Burke County Tourism Development Authority	91208		Centennial Authority, The	99222	
Burke County Welfare Department	91206		Centralina Council Of Governments	96009	
Burke-Catawba Dist. Confinement Fa	91202		Chadbourn, Town Of	92441	70450
Burlington, City Of	90111	70320	Chadburn A.B.C. Board	92444	
Burlington-Graham A.B.C. Board	90117		Chapel Hill, Town Of	96811	70470
Burnsville, Town Of	90011	70330	Charlott Housing Authority	96003	
Butner, Town Of	93931		Charlotte Auditorium-Coliseum	96012	
Cabarrus Co. Public Health Auth	91306		Charlotte Fire Ret Sys Board Of Trust	96018	
Cabarrus Co. Tourism Auth	91308		Charlotte, City Of	96011	70480
Cabarrus County	91301	70340	Charlotte-Mecklenburg Public Libra	96005	
Cajah'S Mountain, Town Of	91461		Chatham County	91901	70490
Calabash A.B.C. Board	91007		Chatham County A.B.C. Board	91904	
Calabash, Town Of	91010		Chatham County Housing Authority	91903	

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Cherokee County	92001	70500	Craven County A.B.C. Board	92504	
Cherryville A.B.C. Board	93647		Craven County Airport Authority	92506	
Cherryville, City Of	93641	70520	Craven-Pamlico-Carteret Regional Library	92505	
China Grove, Town Of	98041	70522	Creedmoor, City Of	93921	70660
Choanoke Public Transportation Authority	96612		Creswell, Town Of	99431	
Chocowinity, Town Of	90751	70525	Cumberland County	92601	70680
Chowan County	92101	70530	Cumberland County A.B.C. Board	92604	70685
Chowan County A.B.C. Board	92104		Currituck County	92701	70700
City Of Wilson Cemetery Commission	99818		Currituck County A.B.C. Board	92704	
Claremont, Town Of	91821	70535	Dallas, Town Of	93651	70705
Clarkton, Town Of	90931	70537	Dare County	92801	70720
Clay County	92201	70538	Dare County A.B.C. Board	92804	70721
Clayton, Town Of	95131	70540	Dare County Tourism Board	92802	
Clemmons Fire Department	93442		Davidson County	92901	70723
Clemmons, Village Of	93441		Davidson, Town Of	96081	70724
Cleveland County	92301	70550	Davie County	93001	70725
Cleveland County Sanitary District	92302		Davie Soil & Water Conservation District	93009	
Cleveland, Town Of	98091	70552	Denton, Town Of	92921	70730
Clinton A.B.C. Board	98218		Dobson A.B.C. Board	98627	
Clinton, City Of	98211	70555	Dobson, Town Of	98621	70735
Coastal Regional Waste Management Authority	92508		Drexel, Town Of	91221	70745
Coats, Town Of	94341	70570	Duck, Town Of	92861	70755
Cofield, Town Of	94641		Dunn A.B.C. Board	94317	
Colerain, Town Of	90813	70575	Dunn Housing Authority	94313	
Colfax Volunteer Fire Department	94168		Dunn, Town Of	94311	70760
Columbia, Town Of	98911		Duplin County	93101	70770
Columbus County	92401	70580	Duplin County Tourism Development Authority	93103	
Columbus, Town Of	97521	70581	Duplin-Sampson Area Mental Health	93108	
Concord A.B.C. Board	91317		Durham Convention And Visitors Bureau	93212	
Concord, City Of	91311	70590	Durham County	93201	70790
Connelly Springs, Town Of	91261		Durham County A.B.C. Board	93204	70800
Conover, Town Of	91851	70610	Durham Highway Fire Protection Age	99212	
Contentnea Metro. Sewage District	97408		Durham, City Of	93211	70780
Conway, Town Of	96641	70620	East Albemarle Regional Library	97005	
Cooleemee A.B.C. Board	93027		East Bend, Town Of	99931	70805
Cooleemee, Town Of	93031	70624	East Spencer Housing Authority	98023	
Cornelius, Town Of	96051	70625	East Spencer, Town Of	98021	70812
Cove City, Town Of	92571		Eastern Band Of Cherokee Indians	70505	70505
Cramerton, Town Of	93631	70640	Eastern Carolina Reg. Housing Auth	99603	
Craven County	92501	70650	Eastern Wayne Sanitary District	99610	

Appendix J: Participating Employers

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Eastover, Town Of	92681		Forest City A.B.C. Board	98107	
Eden A.B.C. Board	97957		Forest City Housing Authority	98113	
Eden, City Of	97951	70815	Fork Township Sanitary District	99602	
Edenton, Town Of	92111	70817	Forsyth County	93401	70951
Edgecombe County	93301	70820	Forsyth-Stokes Mental Health Authority	93408	
Edgecombe County A.B.C. Board	93304		Four Oaks, Town Of	95151	70954
Edgecombe-Nash Memorial Library	93305		Foxfire Village	96381	70953
Electricities Of N.C., Inc	99210		Franklin County	93501	70960
Elizabeth City	97011	70840	Franklin, Town Of	95611	70955
Elizabeth City - Pasquotank Co. Tourism Dev. Auth.	97013		Franklinton A.B.C. Board	93517	
Elizabeth-Pasquotank Co Airport Au	97012		Franklinton, Town Of	93511	70970
Elizabeth-Pasquotank Co Ind Dev Co	97018		Fremont, Town Of	99631	70980
Elizabethtown A.B.C. Board	90917		Fuquay-Varina, Town Of	99261	70990
Elizabethtown, Town Of	90911	70850	Garland, Town Of	98241	71000
Elk Park, Town Of	90641	70860	Garner Fire Department	99252	
Elkin, Town Of	98641	70855	Garner, Town Of	99251	71010
Ellenboro, Town Of	98161		Garysburg, Town Of	96631	71020
Ellerbe, Town Of	97731		Gaston Co. Economic Dev. Commission	93618	
Elm City, Town Of	99851	70870	Gaston County	93601	71030
Elon College, Town Of	90131	70880	Gaston, Town Of	96651	71032
Emerald Isle, Town Of	91651	70890	Gastonia A.B.C. Board	93617	
Enfield, Town Of	94211	70895	Gastonia, City Of	93611	71040
Erwin, Town Of	94331	70900	Gaston-Lincoln Area Mental Health	93609	
Fair Bluff, Town Of	92431	70908	Gates County	93701	71050
Fairmont Housing Authority	97823		Gates County A.B.C. Board	93704	71052
Fairmont, Town Of	97821	70910	Gibson, Town Of	98331	71051
Faison, Town Of	93141	70920	Gibsonville A.B.C. Board	94157	
Faith, Town Of	98081		Gibsonville, Town Of	94151	71060
Falcon, Town Of	92671		Glen Alpine, Town Of	91241	71065
Farmville Housing Authority	97423		Goldsboro, City Of	99611	71070
Farmville, City Of	97421	70930	Goldston-Gulf Sanitary District	91908	
Fayetteville Metro. Housing Authority	92613		Graham County	93801	71085
Fayetteville Public Works Commission	92614		Graham County Health Department	93803	
Fayetteville, City Of	92611	70940	Graham County Welfare Department	93806	
First Craven Sanitary District	92502		Graham, City Of	90121	71080
Flat Rock, Village Of	94531		Granite Falls A.B.C. Board	91417	
Fletcher A.B.C. Board	94547		Granite Falls, Town Of	91411	71090
Fletcher, Town Of	94541	70943	Granite Quarry, Town Of	98061	71105
Fontana Regional Library	95005		Granville County	93901	71110
Forest City	98111	70950	Granville County A.B.C. Board	93904	

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Granville County Hospital	93906		Hickory/Conover Tourism Dev. Authority	91812	
Granville-Vance Health District	93908		High Country Municipal A.B.C. Board	90617	
Greater Statesville Development Co	94908		High Point A.B.C. Board	94127	
Green Level, Town Of	90161		High Point, City Of	94121	71340
Greene County	94001	71130	Highlands A.B.C. Board	95617	
Greene County A.B.C. Board	94004		Highlands, Town Of	95621	71335
Greensboro A.B.C. Board	94117	71150	Hildebrand, Town Of	91251	
Greensboro, City Of	94111	71140	Hillsborough, Town Of	96831	71360
Greenville Housing Authority	97413		Hobgood, Town Of	94251	
Greenville Utilities Commission	97412		Hoke County	94701	71370
Greenville, City Of	97411	71160	Hoke County A.B.C. Board	94704	
Grifton, Town Of	97431	71170	Holden Beach, Town Of	91014	71375
Grimesland, Town Of	97471		Holly Ridge Housing Authority	96733	
Grover, Town Of	92351	71178	Holly Ridge, Town Of	96731	71380
Guilford Fire District	94118		Holly Springs, Town Of	99202	71385
Guilford, County Of	94101	71180	Hookerton, Town Of	94011	0
Guil-Rand Fire Department	94102		Hope Mills, Town Of	92631	71390
Halifax County	94201	71200	Hot Springs Housing Authority	95733	
Halifax County A.B.C. Board	94204		Housing Auth. Of City Of Goldsboro	99613	
Halifax County Tourism Development Authority	94205		Hudson, Town Of	91431	71395
Hamilton, Town Of	95831		Huntersville, Town Of	96041	71397
Hamlet A.B.C. Board	97717		Hyde County	94801	71400
Hamlet, City Of	97721	71220	Hyde County A.B.C. Board	94804	
Harnett County	94301	71230	Indian Beach, Town Of	91661	71405
Harrisburg, Town Of	91441		Indian Trail Abc Board	99014	
Havelock, City Of	92531	71240	Indian Trail, Town Of	99051	
Haw River, Town Of	90141	71245	Iredell County	94901	71420
Haywood County	94401	71250	Isothermal Planning & Develop Comm	98109	
Henderson County	94501	71275	J.C. Holliday Memorial Library	98205	
Henderson, City Of	99111	71270	Jackson County	95001	71430
Hendersonville A.B.C. Board	94517		Jackson, Town Of	96661	71435
Hendersonville, City Of	94511	71280	Jacksonville, City Of	96711	71440
Hertford A.B.C. Board	97217	71305	Jamestown, Town Of	94131	71442
Hertford County	94601	71310	Jamesville, Town Of	95841	
Hertford County A.B.C. Board	94604	71320	Jefferson, Town Of	90511	71447
Hertford County Public Health Authority	94606		Johnston County	95101	71460
Hertford Housing Authority	97213		Johnston County A.B.C. Board	95104	
Hertford, Town Of	97211	71300	Johnston County Memorial Hospital Authority	95110	
Hickory Housing Authority	91813		Johnston County Public Library	95105	
Hickory, City Of	91811	71330	Jones County	95201	71465

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Jones County A.B.C. Board	95204		Lewisville, Town Of	93451	
Jonesville, Town Of	99921	71467	Lexington A.B.C. Board	92917	
Junaluska Sanitary District	94408		Lexington, City Of	92931	71570
Kannapolis, Town Of	91331	71468	Liberty A.B.C. Board	97637	
Kenansville A.B.C. Board	93127		Liberty, Town Of	97631	71582
Kenansville, Town Of	93121	71469	Lilesville, Town Of	90421	71584
Kenly, Town Of	95171	71472	Lillington, Town Of	94321	71585
Kernersville, Town Of	93421	71470	Lincoln County	95501	71590
Kerr-Area Transportation Authority	99110		Lincoln County A.B.C. Board	95504	
Kerr-Tar Regional Council Of Governments	99109		Lincolnton A.B.C. Board	95517	
Kill Devil Hills, Town Of	92821	71480	Lincolnton Housing Authority	95513	0
King, Town Of	98521	71487	Lincolnton, City Of	95511	71600
Kings Mountain A.B.C. Board	92327		Linden, Town Of	92651	
Kings Mountain, City Of	92321	71490	Littleton, Town Of	94261	71615
Kinston Housing Authority	95413		Locust, City Of	98431	71620
Kinston, City Of	95411	71500	Long View, Town Of	91841	71640
Kinston-Lenoir County Library	95415		Louisburg A.B.C. Board	93527	
Kitty Hawk, Town Of	92851	71507	Louisburg, Town Of	93521	71650
Knightdale, Town Of	99291	71510	Lowell, Town Of	93661	71655
Kure Beach, Town Of	96541	71515	Lower Cape Fear Water & Sewer Auth	96508	
Lagrange, Town Of	95431	71517	Lucama, Town Of	99841	71660
Lake Lure, Town Of	98131	71518	Lumber River Council Of Governments	97802	
Lake Waccamaw A.B.C. Board	92427		Lumberton A.B.C. Board	97817	
Lake Woccamaw, Town Of	92461	71519	Lumberton Airport Commission	97818	
Landis, Town Of	98051	71522	Lumberton, City Of	97811	71670
Land-Of-Sky Regional Council	91102		Macclesfield, Town Of	93341	
Laurel Park A.B.C. Board	94527		Macon County	95601	71680
Laurel Park, Town Of	94521	71525	Madison A.B.C. Board	97947	
Laurenburg Housing Authority	98313		Madison County	95701	71684
Laurinburg, City Of	98311	71530	Madison, Town Of	97941	71683
Laurinburg-Maxton Airport Commission	98308		Madison-Mayodan Recreation Comm	97948	
Lawndale, Town Of	92341	71532	Maggie Valley A.B.C. Board	94427	
Lee County	95301	71535	Maggie Valley Sanitary District	94428	
Leland, Town Of	91002	71540	Maggie Valley, Town Of	94421	71685
Lenoir A.B.C. Board	91457		Magnolia, Town Of	93191	71690
Lenoir County	95401	71550	Maiden, Town Of	91831	71700
Lenoir County A.B.C. Board	95404		Manteo, Town Of	92831	71705
Lenoir Housing Authority	91423		Marion A.B.C. Board	95917	
Lenoir, City Of	91451	71552	Marion, Town Of	95911	71710
Lewiston-Woodville, Town Of	90861	71556	Mars Hill, Town Of	95711	71718

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Marshall, Town Of	95721	71711	Moore County Airport Authority	96310	
Marshville, Town Of	99021	71720	Moore County Tourism Develop. Auth.	96305	
Martin County	95801	71730	Mooresville A.B.C. Board	94927	
Martin County A B C Board	95804		Mooresville Housing Authority	94923	
Martin County Travel & Tourism Authority	95802		Mooresville, City Of	94921	71850
Martin-Tyrell-Washington D.H.D	90092	0	Morehead City, Town Of	91611	71860
Marvin, Village Of	99081		Morganton A.B.C. Board	91217	71880
Matthews, Town Of	96071	71740	Morganton Housing Authority	91233	
Maury Sanitary Land District	94002		Morganton, City Of	91231	71870
Maxton A.B.C. Board	97847		Morrisville, Town Of	99206	71882
Maxton, Town Of	97840	71750	Morven, Town Of	90461	
Mayodan, Town Of	97921	71755	Mount Airy, Town Of	98631	71910
Maysville, Town Of	95221	71745	Mount Gilead, Town Of	96251	71920
Mc Dowell County	95901	71762	Mount Olive Housing Authority	99623	
Mcadenville, Town Of	93610	71760	Mount Olive, Town Of	99621	71940
Mebane, Town Of	90114		Mount Pleasant, Town Of	91321	
Mecklenburg County	96001	71770	Mt. Airy Alcoholic Board Of Control	98637	
Mecklenburg County A.B.C. Board	96004	71780	Mt. Holly, City Of	93691	71930
Mecklenburg County Ems Agency	96008		Mt. Pleasant A.B.C. Board	91327	
Metro Sewerage Dist Of Buncombe County	91108		Murfreesboro, Town Of	94621	71970
Mi Connection Communications System	94941		Murphy A.B.C. Board	92017	
Micro, Town Of	95122		Murphy, Town Of	92011	71975
Middlesex, Town Of	96431	71785	N.C. Association Of County Comm	99991	
Mideast Economic Development Comm	90709		N.C. League Of Municipalities	99999	
Midland, Town Of	91341		Nags Head, Town Of	92811	71980
Midway, Town Of	92941		Nantahala Regional Library	92005	
Mills River, Town Of	94551		Nash County	96401	71990
Mint Hill, Town Of	96031	71775	Nash County A.B.C. Board	96404	72000
Misenheimer, Village Of	71786	71786	Nashville, Town Of	96421	71995
Mitchell County	96101	71788	Neuse Regional Library	95405	
Mitchell Soil & Water Conserv. District	96102		Neuse Regional Library - Greene County	94005	
Mocksville, Town Of	93011	71790	Neuse Regional Library - Jones County	95205	
Monroe A.B.C. Board	99017		Neuse River Council Of Governments	92507	
Monroe Housing Authority	99013		New Bern, City Of	92511	72020
Monroe, City Of	99011	71800	New Hanover Airport Authority	96502	72024
Montgomery County	96201	71815	New Hanover County	96501	72030
Montgomery-Municipal A.B.C. Board	96204		New Hanover County A.B.C. Board	96504	
Montreat, Town Of	91161	71820	New Reidsville Housing Authority	97913	
Moore County	96301	71830	Newland, Town Of	90621	72032
Moore County A.B.C. Board	96304	71840	Newport, Town Of	91621	72035

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Newton Grove, Town Of	98231	72050	Pender County	97101	72235
Newton, Town Of	91871	72040	Pender County A.B.C. Board	97104	
Norlina, Town Of	99311	72055	Perquimans County	97201	72245
North Brunswick Sanitary District	91042		Person County	97301	72250
North Topsail Beach, Town Of	96751	72789	Person County A.B.C. Board	97304	
North Wilkesboro A.B.C. Board	99717		Pettigrew Regional Library	99405	
North Wilkesboro, Town Of	99711	72105	Piedmont Triad Airport Authority	72265	72265
Northampton County	96601	72060	Piedmont Triad Regional Council	93406	
Northampton County A.B.C. Board	96604		Piedmont Triad Regional Water Authority	94112	
Northwest, City Of	91012	72076	Pikeville, Town Of	99651	72270
Northwestern Regional Library	90305		Pilot Mountain A.B.C. Board	98607	
Norwood A.B.C. Board	98427		Pilot Mountain, Town Of	98611	72280
Norwood, Town Of	98421	72110	Pine Knoll Shores, Town Of	91641	72290
Oak City, Town Of	95821		Pine Level, Town Of	95161	72295
Oak Island A.B.C. Board	91027		Pinebluff, Town Of	96361	72285
Oak Island, Town Of	91021	71630	Pinecroft-Sedgefield Fire District	94108	
Oak Ridge, Town Of	94161		Pinehurst, Village Of	96351	72287
Oakboro, Town Of	98441	72120	Pinetops, Town Of	93331	72296
Ocean Isle A.B.C. Board	91067		Pineville, Town Of	96021	72300
Ocean Isle Beach, Town Of	91061	72135	Pink Hill, Town Of	95421	72305
Ocracoke Sanitary District	94812		Pitt County	97401	72310
Old Fort, Town Of	95921	72140	Pitt County A.B.C. Board	97404	72320
Onslow County	96701	72150	Pitt-Greenville Convention & Visitors Authority	97402	
Onslow County A.B.C. Board	96704	72160	Pittsboro, Town Of	91921	72330
Onslow Water & Sewage Authority	96708		Pleasant Garden Fire Department	95908	
Orange County	96801	72170	Plymouth Housing Authority	99413	
Orange County A.B.C. Board	96804		Plymouth, Town Of	99411	72335
Orange Water & Sewer Authority	96808		Polk County	97501	72340
Oriental, Town Of	96912	72195	Polkton, Town Of	90431	72345
Oxford Housing Authority	93913		Pollocksville, Town Of	95211	
Oxford, City Of	93911	72200	Princeton, Town Of	95181	72349
Pamlico County	96901	72210	Princeville, Town Of	93351	72351
Pas.-Per.-Camden-Chowan D.H.D.	90096		Raeford, Town Of	94711	72355
Pasquotank County	97001	72220	Raleigh Housing Authority	99213	
Pasquotank County A.B.C Board	97004		Raleigh, City Of	99211	72360
Pasquotank-Camden Ambulance Service	97002	0	Raleigh-Durham Airport Authority	99218	72370
Pasquotank-Camden Library	97015		Ramseur, Town Of	97641	72375
Peachland, Town Of	90441		Randleman A.B.C. Board	97627	
Pembroke Housing Authority	97853		Randleman Housing Authority	97623	
Pembroke, Town Of	97851	72228	Randleman, City Of	97621	72377

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Randolph County	97601	72380	Rowland, Town Of	97861	72510
Ranlo, Town Of	93681	72390	Roxboro, City Of	97311	72520
Red Springs A.B.C. Board	97877		Rural Hall, Town Of	93431	
Red Springs, Town Of	97871	72395	Rutherford College, Town Of	91214	
Region D Council Of Governments	99502		Rutherford County	98101	72530
Region L Council Of Governments	93309		Rutherford-Polk-Mc Dowell D.H.D	98103	
Region M Council Of Governments	92607		Rutherfordton A.B.C. Board	98147	
Reidsville A.B.C. Board	97917		Rutherfordton, Town Of	98141	72535
Reidsville, Town Of	97911	72400	Saint Paul'S A.B.C. Board	97837	
Rich Square, Town Of	96611	72432	Salemburg, Town Of	98221	72547
Richlands, Town Of	96741	72420	Salisbury Housing Authority	98013	
Richmond County	97701	72430	Salisbury, City Of	98011	72550
River Bend, Town Of	92541	72435	Saluda, Town Of	97531	72560
Roanoke Rapids Sanitary District	94209		Sampson County	98201	72563
Roanoke Rapids, City Of	94221	72440	Sandhill Regional Library	97705	
Robbins, Town Of	96341	72443	Sandhills Center	96318	
Robbinsville, Town Of	93821		Sanford A.B.C. Board	95317	
Robersonville Housing Authority	95853		Sanford, City Of	95311	72565
Robersonville, Town Of	95851	72445	Sawmills, Town Of	91421	
Robeson County	97801	72450	Scotland County	98301	72580
Robeson County Housing Authority	97803		Scotland County A.B.C. Board	98304	
Robeson County Public Library	97805		Scotland Neck, Town Of	94241	72590
Rockingham A.B.C. Board	97727		Seaboard, Town Of	96681	72591
Rockingham County	97901	72470	Selma Housing Authority	95123	
Rockingham Housing Authority	97713		Selma, Town Of	95121	72594
Rockingham, City Of	97711	72460	Seven Devils, Town Of	99531	72596
Rockwell, Town Of	98071	72475	Severn, Town Of	96671	72595
Rocky Mount Housing Authority	93333		Shallotte A.B.C. Board	91057	
Rocky Mount, City Of	93321	72480	Shallotte, Town Of	91081	72597
Rocky Mount-Wilson Airport Authority	93323		Sharpsburg, Town Of	96461	72600
Rolesville, Town Of	99203	72485	Shelby A.B.C. Board	92317	0
Roper, Town Of	99421		Shelby, City Of	92311	72610
Rose Hill, Town Of	93161	72487	Sheppard Memorial Library	97405	
Roseboro A.B.C. Board	98237		Siler City A.B.C. Board	91917	
Roseboro, Town Of	98261	72486	Siler City, Town Of	91911	72625
Rowan County	98001	72490	Simpson, Village Of	97481	72626
Rowan County A.B.C. Board	98004	72500	Skyland Volunteer Fire Department	91138	
Rowan County Housing Authority	98003		Smithfield Housing Authority	95113	
Rowan County Tourism Development Board	98002		Smithfield, Town Of	95111	72630
Rowan Soil And Water Conservation. Dist	98008		Smoky Mountain Mental Health Center	95009	

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Snow Hill, Town Of	94021		Sylva A.B.C. Board	95017	
South Granville Water And Sewer Authority	93910		Sylva, Town Of	95011	72750
Southeast Brunswick Sanitary District	91013		Tabor City, Town Of	92451	72760
Southeastern Economic Develop. Com	90918		Tarboro Redevelopment Commission	93317	
Southern Pines, Town Of	96311	72640	Tarboro, Town Of	93311	72770
Southern Shores, Town Of	92841	72645	Taylorsville, Town Of	90211	72775
Southern Wayne Sanitary District	99609		Taylortown, Town Of	96302	72776
Southport A.B.C. Board	91017		Teachey, Town Of	93181	
Southport, City Of	91011	72650	The New Edenton Housing Authority	92113	
Southwestern Plan. & Econ. Dev. Co	95008		Thomasville Housing Authority	92913	
Sparta A.B.C. Board	90307		Thomasville, City Of	92911	72780
Sparta, Town Of	72657	72657	Tobaccoville, Village Of	93471	
Spencer, Town Of	98031	72665	Toe River District Health Department	90098	
Spindale, Town Of	98121	72670	Topsail Beach, Town Of	97121	72790
Spring Hope, Town Of	96411	72675	Town Of Mineral Springs	99022	
Spring Lake, Town Of	92661	72676	Town Of Navassa	91026	
Spruce Pine, Town Of	96111	72678	Town Of Parkton	97841	
St. James, Town Of	91032		Transylvania County	98801	72800
St. Pauls, Town Of	97831	72540	Trent Woods, Town Of	92521	72810
Stallings, Town Of	96061	72679	Triangle J Council Of Governments	93219	
Stanfield, Town Of	98481	72680	Trillium Health Resources	92513	
Stanley, Town Of	93602	72682	Trinity, City Of	97661	
Stanly County	98401	72683	Troutman, Town Of	94931	72815
Stantonsburg, Town Of	99821	72684	Troy, Town Of	96221	72822
Star, Town Of	96211	72685	Tryon, Town Of	97511	72823
Statesville A.B.C. Board	94917	72710	Tuckaseegee Water And Sewer Auth	95002	
Statesville, City Of	94911	72700	Turkey, Town Of	98251	
Stedman, Town Of	92621	72715	Tyrrell County	98901	72825
Stokes County	98501	72720	Tyrrell County A.B.C. Board	98904	
Stoneville, Town Of	97931	72721	Union County	99001	72830
Stovall, Town Of	93914		Unionville, Town Of	99061	
Sugar Mountain, Town Of	90651	72724	Valdese Housing Authority	91213	
Summerfield Fire District	94172		Valdese, Town Of	91211	72883
Summerfield, Town Of	94171		Vance County	99101	72890
Sunset Beach A.B.C. Board	91047		Vance County A.B.C. Board	99104	
Sunset Beach, Town Of	91041	72723	Vanceboro, Town Of	92551	72910
Surf City	97131	72725	Vass, Town Of	96321	72920
Surry County	98601	72730	Wade, Town Of	92641	
Swain County	98701	72740	Wadesboro A.B.C. Board	90417	
Swansboro, Town Of	96721	72745	Wadesboro Housing Authority	90413	

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Wadesboro, Town Of	90411	72930	Westarea Volunteer Fire Department	92602	
Wagram, Town Of	98321	72935	Western Cartert Interlocal Agency	91608	
Wake County	99201	72940	Western Nc Regional Air Pollution Control	91107	
Wake County A.B.C. Board	99204	72950	Western Piedmont Council Of Governments	91818	
Wake County Housing Authority	99207		Western Piedmont Regional Transit Authority	91819	
Wake Forest, Town Of	99281	72960	Whispering Pines, Village Of	96371	73040
Walkertown, Town Of	93461		Whitakers, Town Of	96441	73045
Wallace A.B.C. Board	93157		White Lake, Town Of	90921	73050
Wallace, Town Of	93151	72970	Whiteville A.B.C. Board	92417	
Walnut Cove A.B.C. Board	98517		Whiteville Housing Authority	92403	
Walnut Cove, Town Of	98511	72975	Whiteville, City Of	92411	73060
Walnut Creek, Village Of	99661	72977	Wilkes County	99701	73075
Walstonburg, Town Of	94031		Wilkesboro A.B.C. Board	99727	
Warren County	99301	72980	Wilkesboro, Town Of	99721	73072
Warren County A.B.C. Board	99304	72979	Williamston Housing Authority	95813	
Warrenton, Town Of	99321	72991	Williamston, City Of	95811	73080
Warsaw A.B.C. Board	93137		Wilmington Housing Authority	96503	
Warsaw, Town Of	93131	72981	Wilmington, City Of	96531	73090
Washington County	99401	72985	Wilson County	99801	73110
Washington County A.B.C. Board	99404		Wilson County A.B.C. Board	99804	
Washington Park, Town Of	90741		Wilson County Tourism Develop. Authority	99802	
Washington, City Of	90711	72990	Wilson Economic Development Council	99812	
Watauga County	99501	72983	Wilson, City Of	99811	73100
Watauga County Tourism Develop. Auth.	99509		Wilson'S Mills, Town Of	95191	
Water & Sewer Authority Of Cabarrus County	91302		Windsor, Town Of	90812	73122
Waxhaw A.B.C. Board	99047		Winfall, Town Of	97221	73124
Waxhaw, Town Of	99041	72995	Wingate, Town Of	99031	73125
Wayne County	99601	72997	Winston-Salem A.B.C. Board	93417	73140
Wayne County A.B.C. Board	99604		Winston-Salem Housing Authority	93413	
Waynesville A.B.C. Board	94412	73015	Winston-Salem, City Of	93411	73130
Waynesville, Town Of	94411	73010	Winterville, Town Of	97451	73150
Weaverville A.B.C. Board	91147		Winton, Town Of	94631	73155
Weaverville, Town Of	91141	73016	Woodfin Abc Commission	91104	
Weddington, Town Of	99071		Woodfin Sanitary Water & Sewer District	91109	
Weldon, Town Of	94231	73017	Woodfin, Town Of	91171	73160
Wendell, Town Of	99231	73020	Woodland, Town Of	96621	73162
Wesley Chapel, Village Of	99091		Wrightsville Beach, Town Of	96511	73165
West Buncombe Fire Department	91120		Yadkin County	99901	73170
West Jefferson Abc Board	90507		Yadkin Valley Abc Board	98604	
West Jefferson, Town Of	90521	73025	Yadkin Valley Sewer Authority	98608	

Appendix J: Participating Employers

Employer	Employer Code	LEO Employer Code	Employer	Employer Code	LEO Employer Code
Yadkinville, Town Of	99911	73180	Yanceyville, Town Of	91719	73192
Yancey County	90001	73190	Youngsville, Town Of	93541	73200
Yancey Soil & Water Conservation District	90002		Zebulon, Town Of	99241	73210