Teachers' and State Employees' Retirement System
Principal Results of Actuarial Valuation
as of December 31, 2014

Board of Trustees Meeting

Larry Langer and Mike Ribble

October 22, 2015

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Purpose of the Annual Actuarial Valuation

- As of the end of each calendar year:
  - An annual actuarial valuation is performed on TSERS
  - The actuary determines the amount of employer contributions to be made to TSERS 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 TSERS,
  - Explore why the results of the current valuation differ from the results of the valuation of the previous year, and
  - Satisfy regulatory and accounting requirements.

The Valuation Process

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

INPUT

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

RESULTS

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

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

Key Takeaways

Key results of the December 31, 2014 valuation as compared to the December 31, 2013 valuation were:

- Market value returns of 6.21% compared to 7.25% assumed
- Increase in covered payroll of 0.8% compared to approximately 3% expected
- No significant legislation signed into law since the prior year's valuation
- No changes in actuarial assumptions or funding methodology from the prior year's valuations

When compared to the December 31, 2013 baseline projections, the above resulted in:

- A funded ratio as expected as of December 31, 2014 (95.6% in the valuation compared to 95.6% in the baseline projection)
- Slightly higher employer required contribution rate for fiscal year ending June 30, 2017 (8.47% in the valuation compared to 8.44% in the baseline projection)
- Lower projected benefit amounts being accrued by active members

Valuation Input

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Valuation Input

Membership Data

Number as of	December 31, 2014	December 31, 2013
Active members	307,313	310,370
Members currently receiving Disability Income Plan benefits	7,643	7,639
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	134,871	125,513
Retired members and survivors of deceased members currently receiving benefits	194,607	187,448
Total	644,434	630,970

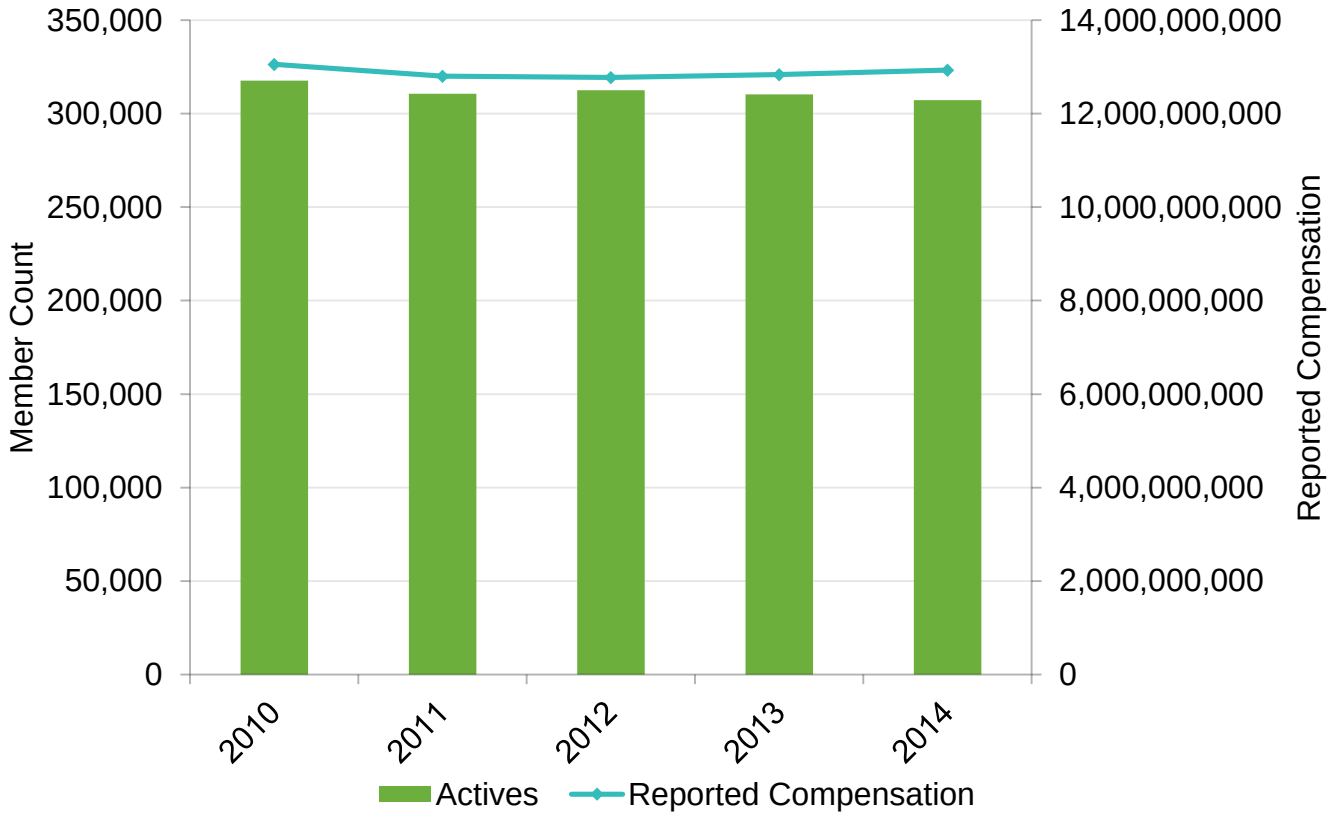
The number of active members decreased by 1.0% from the previous valuation date. The decrease in active members results in less benefits accruing, but also fewer contributions supporting the system.

The number of retired members and survivors of deceased members currently receiving benefits increased by 3.8% from the previous valuation. The increase in retiree population is consistent with expectations.

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

Valuation Input

Membership Data: Active Members



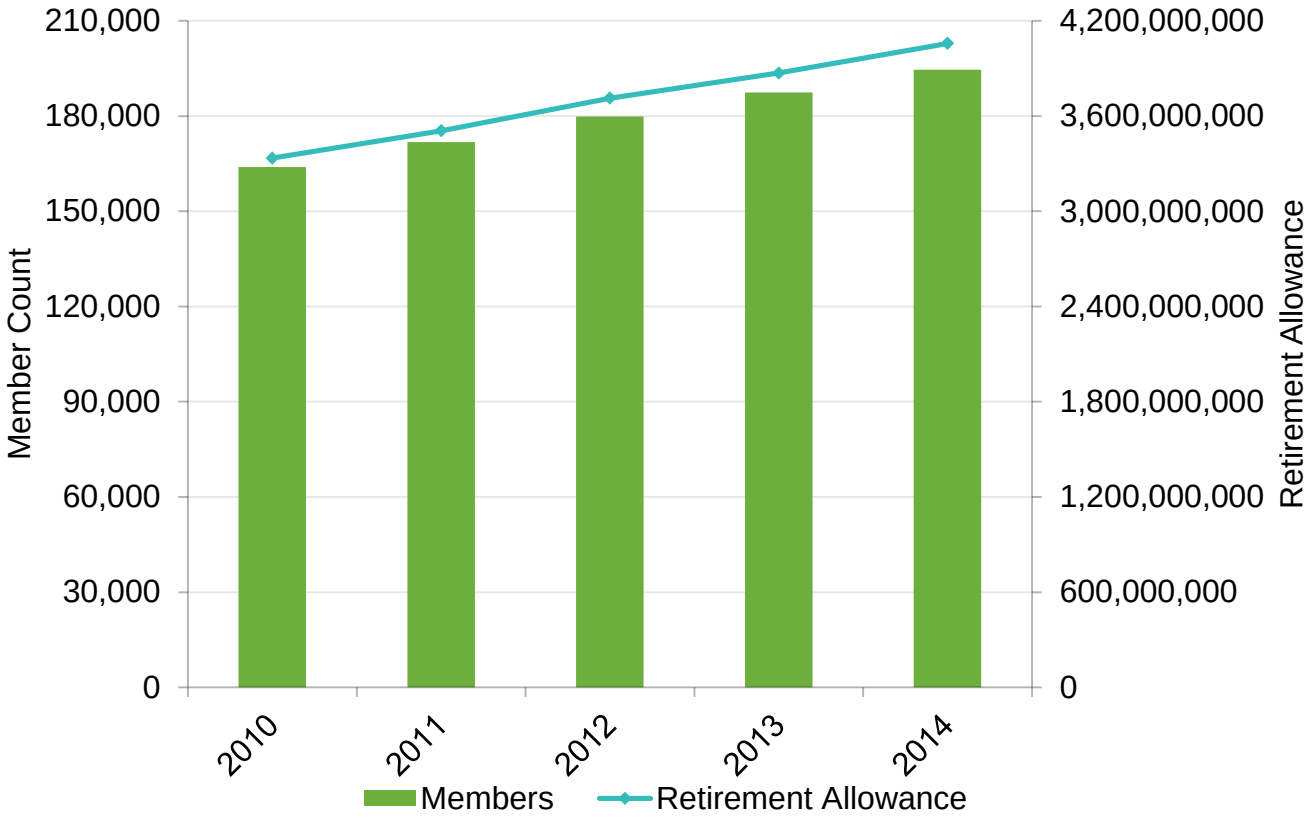
Reported compensation has increased by 0.8% and has remained relatively stable over the past five years. Covered payroll is expected to increase by approximately 3% annually in the future.

Payroll that is not increasing as fast as we assume results in less benefits accruing than we anticipate, but also fewer 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.

Valuation Input

Membership Data: Retired Members and Survivors of Deceased Members



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

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

Valuation Input

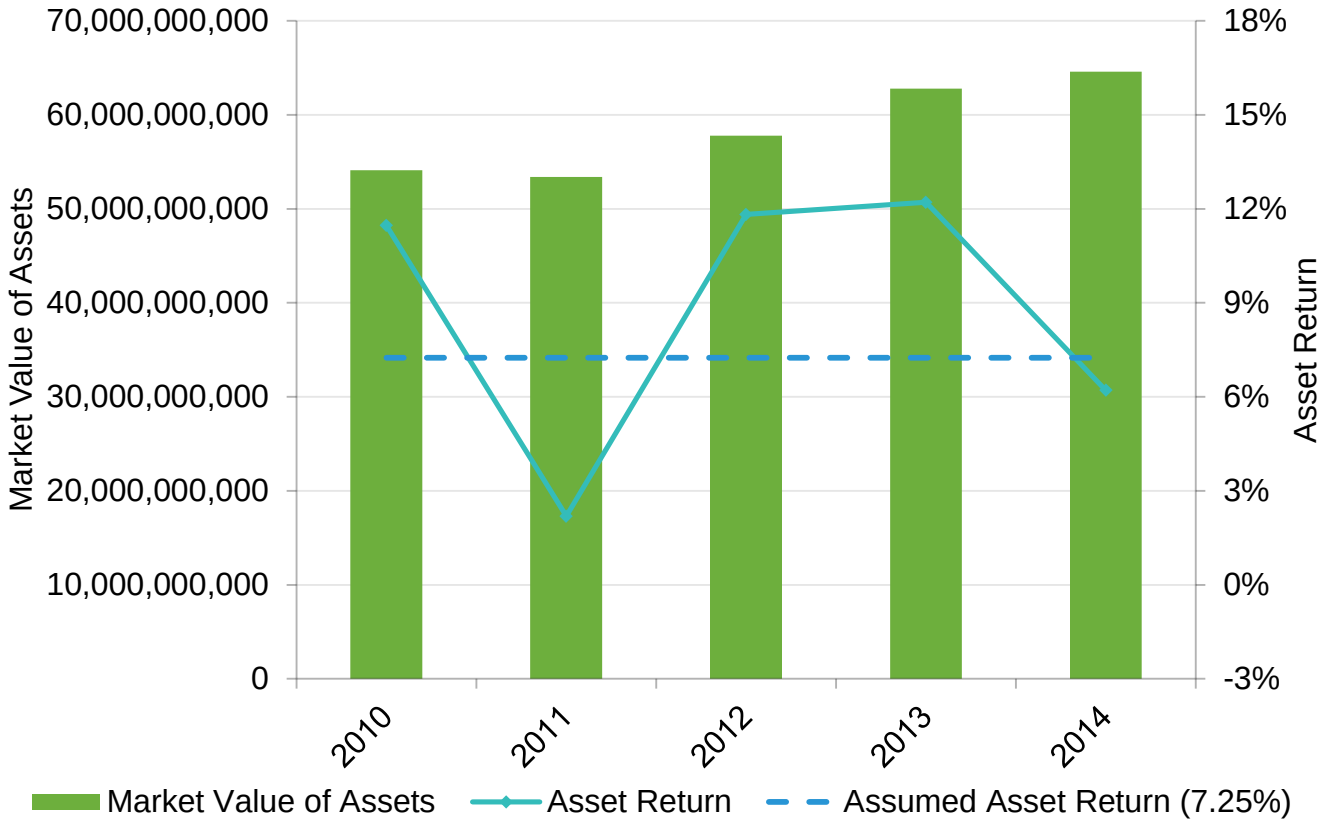
Asset Data: Market Value of Assets

Asset Data as of	December 31, 2014	December 31, 2013
Beginning of Year Market Value of Assets	$62,789,451,194	$57,780,471,482
Contributions	2,057,963,297	1,985,865,560
Benefit Payments	(4,098,385,865)	(3,914,014,907)
Investment Income	3,838,389,353	6,937,129,059
Net Increase/(Decrease)	1,797,966,785	5,008,979,712
End of Year Market Value of Assets	$64,587,417,979	$62,789,451,194
Estimated Net Investment Return on Market Value	6.21%	12.21%

The Market Value of Assets is $64.6 billion as of December 31, 2014 and $62.8 billion as of December 31, 2013. The investment return for the market value of assets for calendar year 2014 was 6.21%.

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

Asset Data: Market Value of Assets and Asset Returns

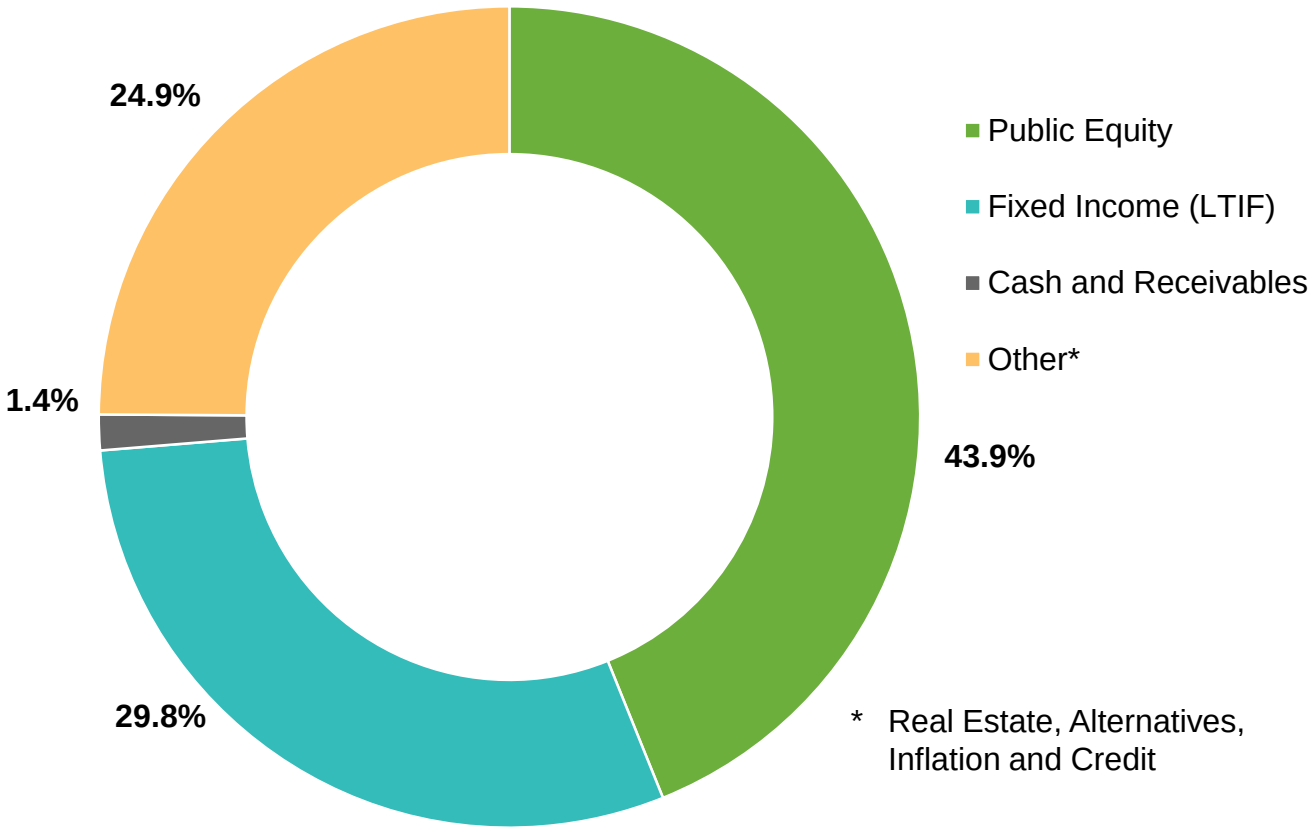


Returns were less than the 7.25% assumed rate of return, resulting in a slightly higher required contribution than anticipated as of December 31, 2014 based on the baseline projections presented in the December 31, 2013 actuarial report.

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.

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

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

Valuation Input

Benefit Provisions

Benefit provisions are described in North Carolina General Statues, Chapter 135.

There were no significant changes in benefit provisions from the prior year's valuation.

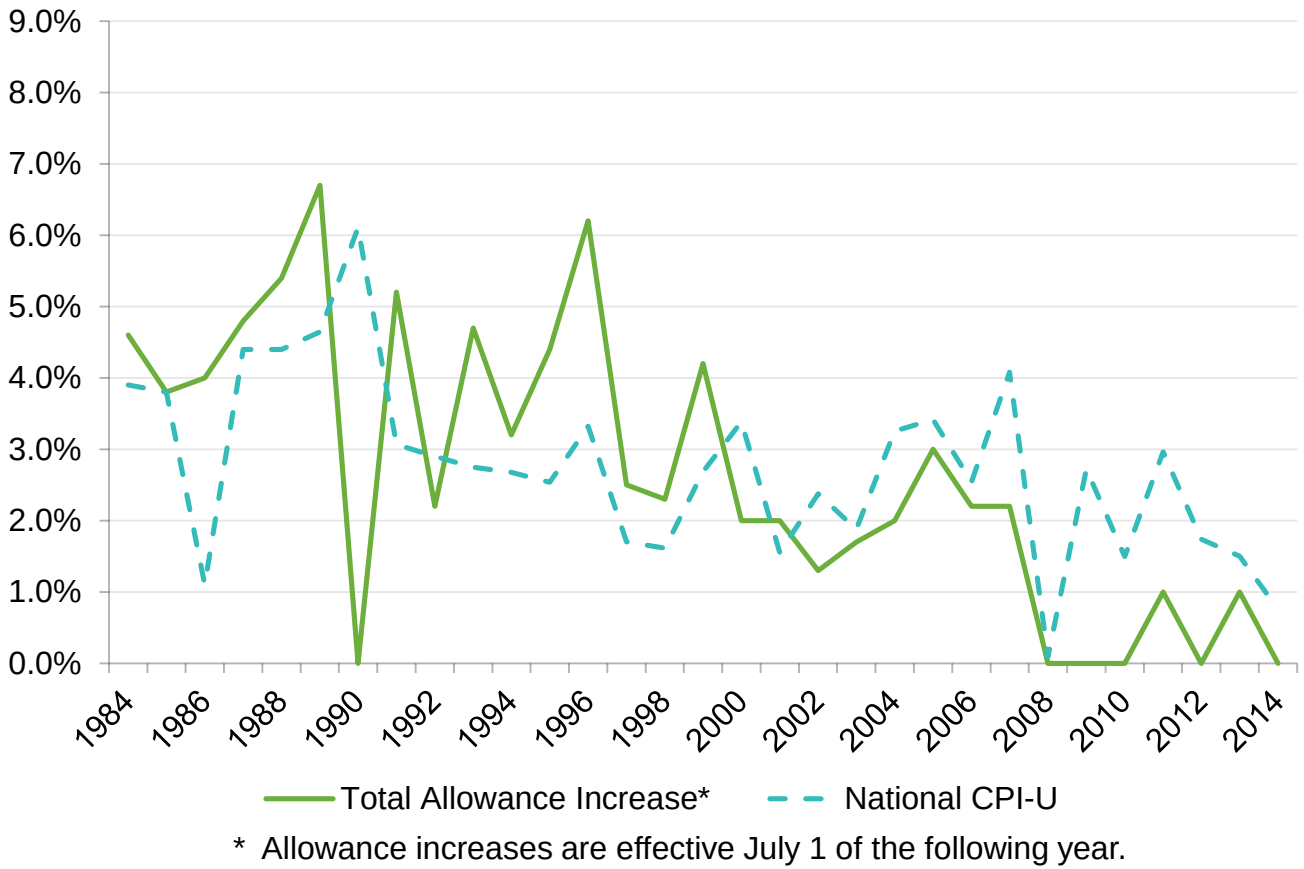
Many Public Sector Retirement Systems in the United States have undergone pension reform where the benefits of members (current retirees and active or future members) have been reduced

Because of the well-funded status of TSERS due to the legislature contributing the actuarially required contribution, benefit cuts have not been needed in North Carolina. Instead, we have seen a modest expansion of benefits in recent years based on sound plan design.

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

Valuation Input

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



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

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

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

Valuation Input

Actuarial Assumptions

- Demographic (future events that relate to people)
  - Retirement
  - Termination
  - Disability
  - Death
- Economic (future events that relate to money)
  - Interest rate – 7.25% per year
  - Salary increase (individual, varies by service)
  - Inflation – 3.00%
  - Real wage growth – 0.50%
- There were no changes in actuarial assumptions from the prior year's valuation.

The latest assumptions were adopted for use with the December 31, 2009 actuarial valuation, based on the experience study prepared as of December 31, 2009 and adopted by the Board of Trustees on October 21, 2010.

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

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

Valuation Input

Funding Methodology

The Funding Methodology is the payment plan for the TSERS 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 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 stays 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.
  - 20% of market value plus 80% of the expected actuarial value
  - Assets corridor: not greater than 120% of market value and not less than 80% of market value

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

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 2012. A new amortization base is created each year based on the prior years' experience.
- There were no changes in funding methodology from the prior year's valuation.

When compared to other Public Sector Retirement Systems in the United States, the funding policy for TSERS 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 Results

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Actuarial Value of Assets

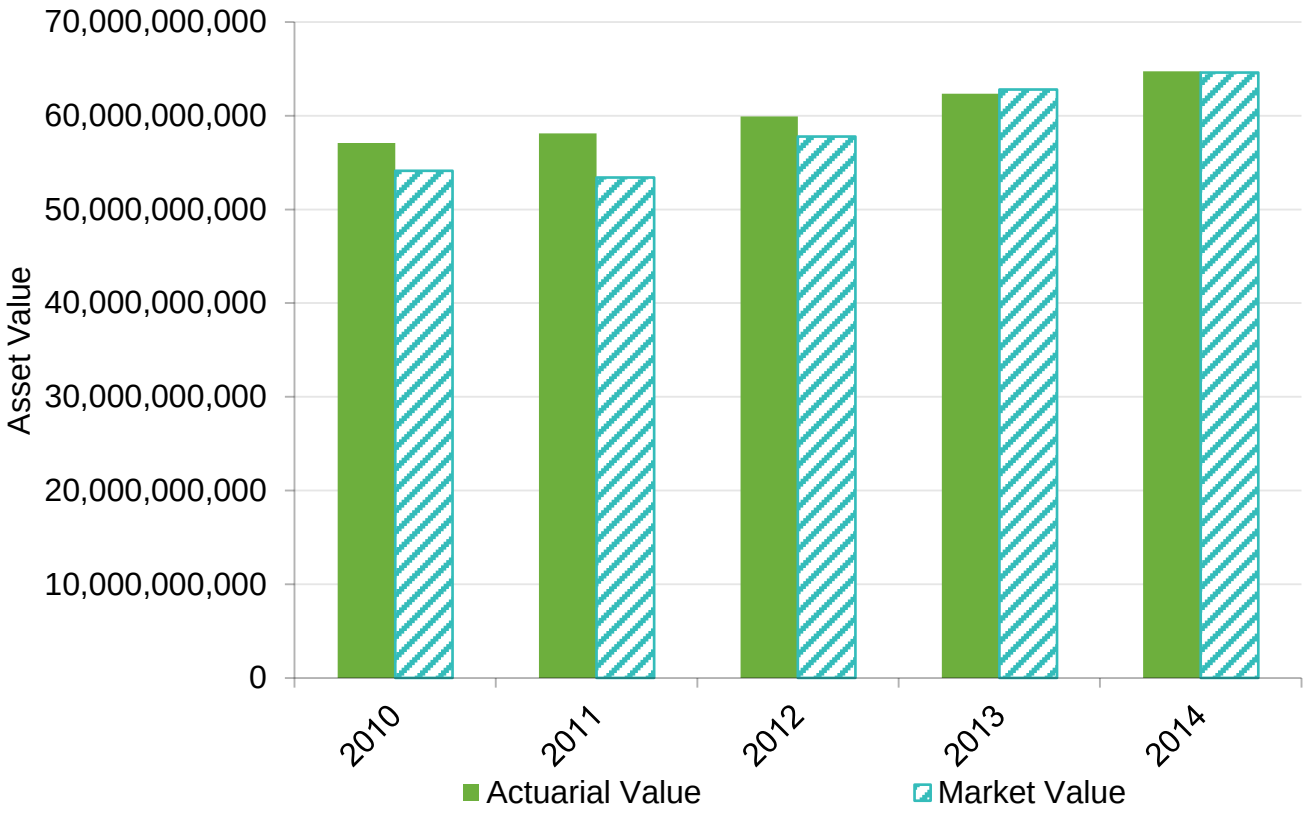
Asset Data as of	December 31, 2014
(a) Beginning of Year Actuarial Value of Assets	$62,363,807,168
(b) Contributions	2,057,963,297
(c) Benefit Payments	(4,098,385,865)
(d) Net Cash Flow: (b) + (c)	(2,040,422,568)
(e) Expected Investment Return: [(a) x 7.25%] + [(d) x 3.625%]	4,447,410,702
(f) Expected End of Year Actuarial Value of Assets: (a) + (d) + (e)	64,770,795,302
(g) End of Year Market Value of Assets	64,587,417,979
(h) Excess of Market Value over Expected Actuarial Value of Assets: (g) – (f)	(183,377,323)
(i) 20% Adjustment toward Market Value of Assets: (h) x 20%	(36,675,465)
(j) Preliminary End of Year Actuarial Value of Assets: (f) + (i)	64,734,119,837
(k) Final End of Year Actuarial Value of Assets: (j) not less than 80% of (g) and not greater than 120% of (g)	64,734,119,837
(l) Estimated Net Investment Return on Actuarial Value	7.19%

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

Lower than expected returns in 2011 and 2014 resulted in a $37 million asset loss recognition this year (item (i)).

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

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

Valuation Results

Historical Asset Returns

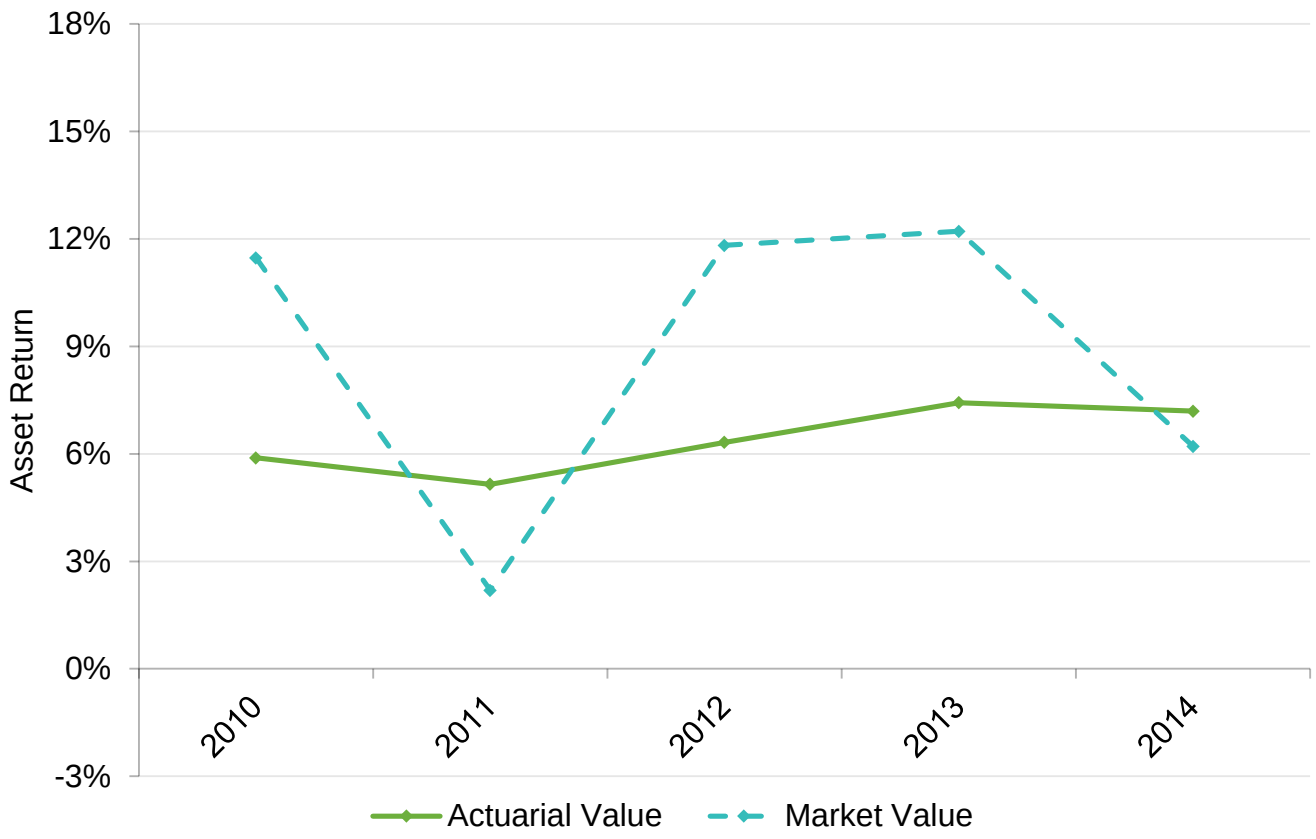
Calendar Year	Actuarial Value of Asset Return	Market Value of Asset Return
2006	8.94%	11.41%
2007	8.87%	8.38%
2008	2.89%	(19.50)%
2009	4.74%	14.84%
2010	5.89%	11.47%
2011	5.15%	2.19%
2012	6.32%	11.82%
2013	7.43%	12.21%
2014	7.19%	6.21%
Geometric Average	6.36%	6.04%
Range	6.05%	34.34%

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 6.36% tracks average market return of 6.04% rather well. But the range of returns is markedly less – 6.05% versus 34.34%. This results in much lower employer contribution volatility using the actuarial value of assets versus market, while ensuring that the actuarial needs of TSERS 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

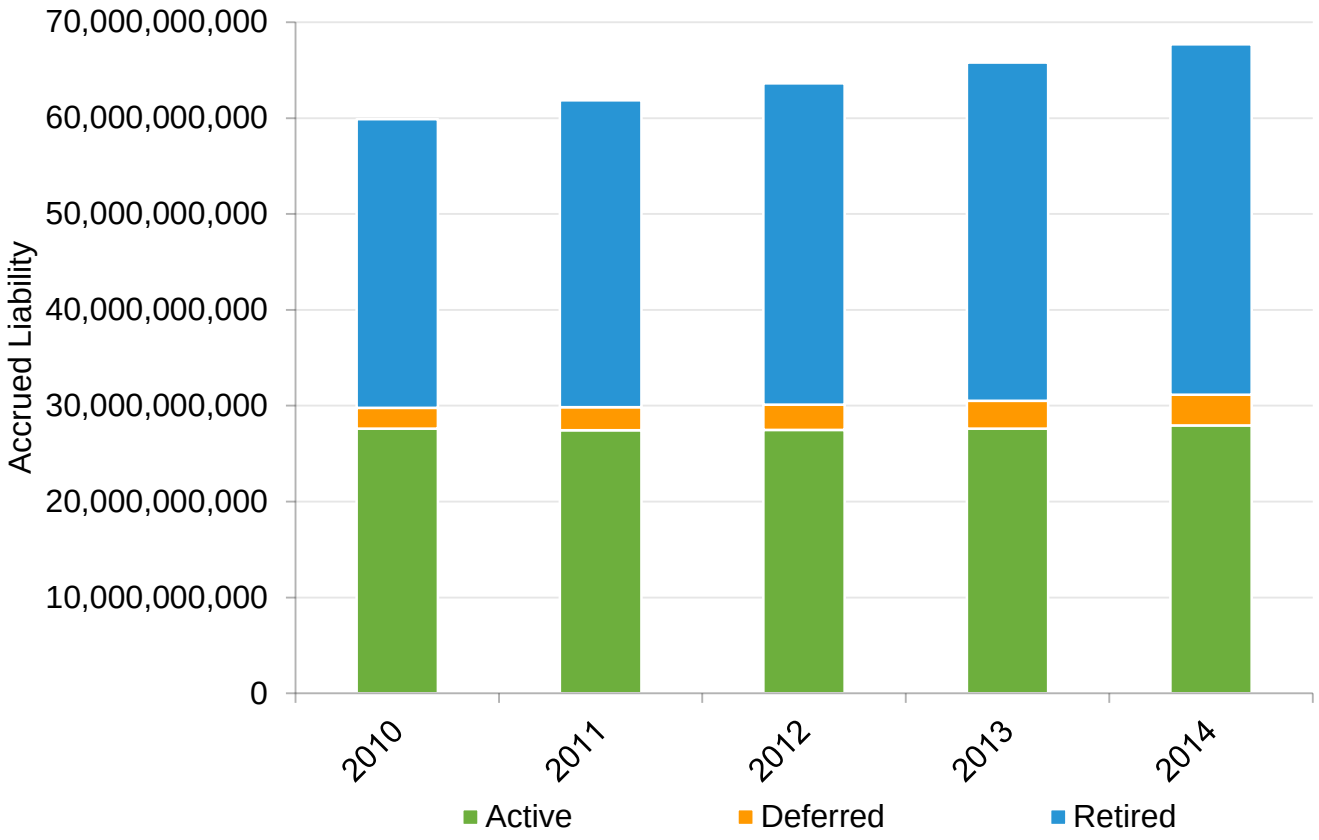


The actuarial value of assets smoothes investment gains and losses.

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

Valuation Results

Actuarial Accrued Liability (AAL)

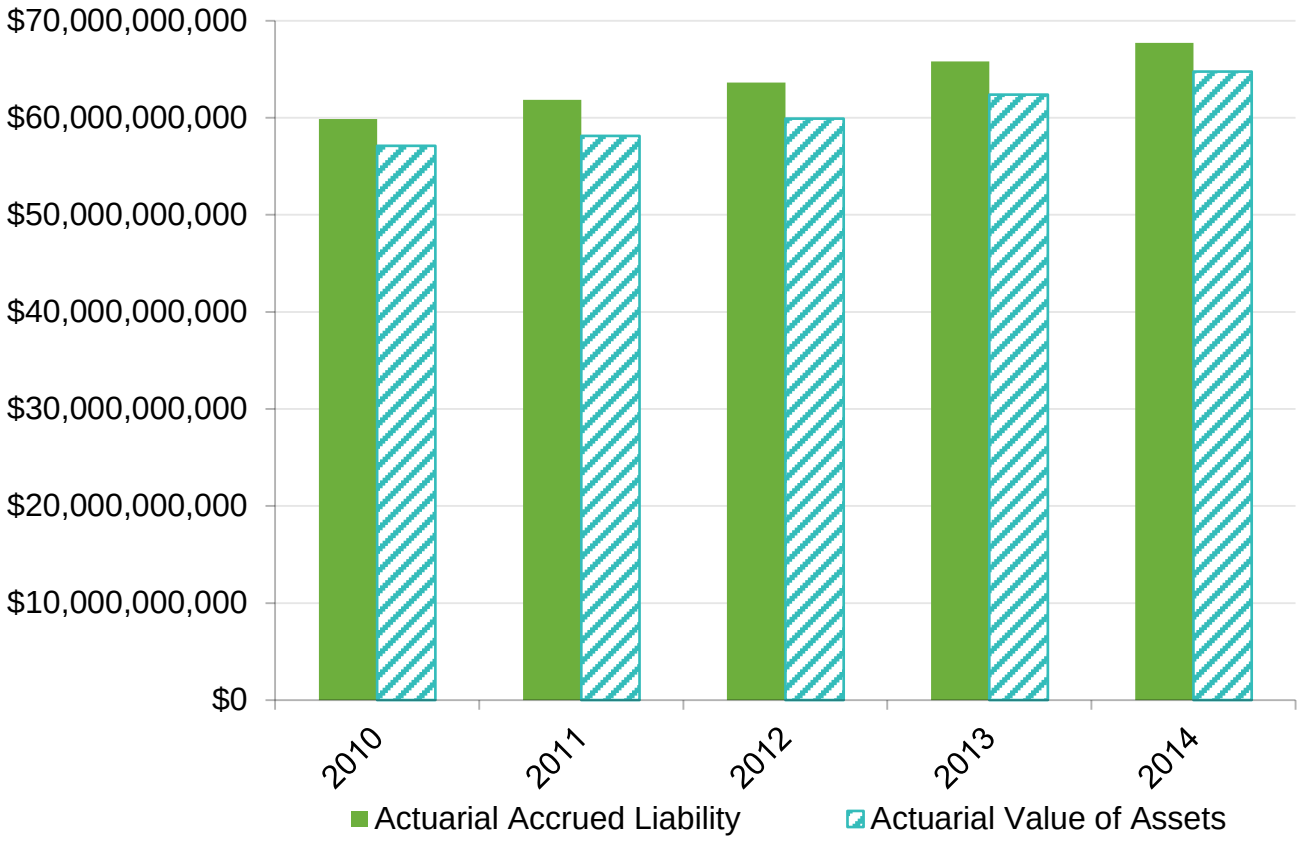


The AAL increased from $65.8 billion to $67.7 billion during 2014. TSERS is an open plan, which means that new members enter the plan each year. In an open plan, liabilities are expected to grow from one year to next as more benefits accrue and the membership approaches retirement.

The AAL was $247 million lower than expected, which resulted in a demographic gain of $247 million during 2014.

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

Actuarial Accrued Liability (AAL) and Actuarial Value of Assets (AVA)

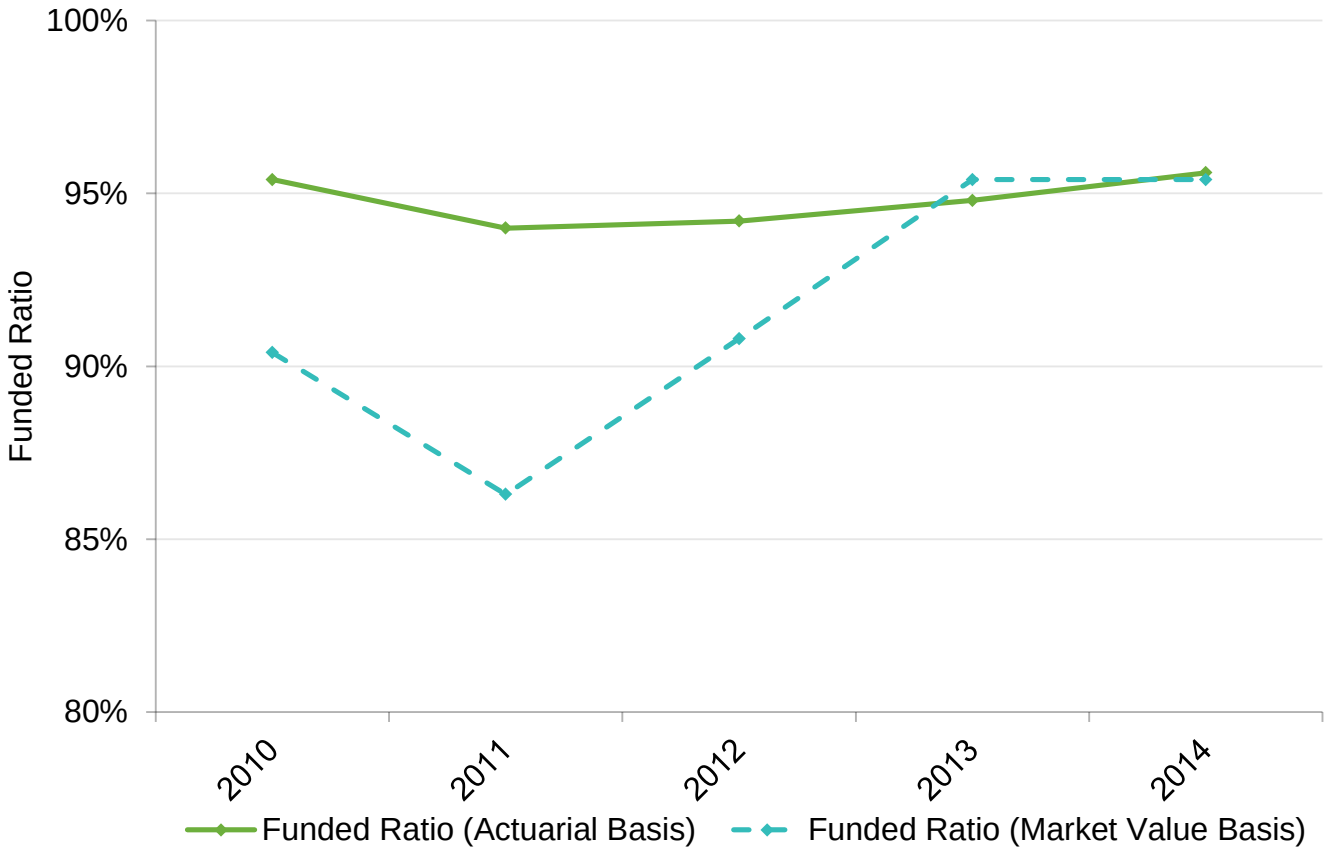


AVA is the basis used for computing contributions to alleviate contribution volatility.

The difference in the AAL and the AVA is the amount of pension debt (to be paid off in 12 years).

A detailed summary of the AVA is provided in Section 4 of the actuarial report, and a detailed summary of the AAL is provided in Section 5 of the actuarial report.

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 increased from 94.8% at December 31, 2013 to 95.6% at December 31, 2014.

Net Actuarial Gain or Loss

Reconciliation of Unfunded Actuarial Accrued Liability Since the Prior Valuation

Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2013	$ 3,442
Normal Cost during 2014	1,522
Reduction due to Actual Contributions during 2014	(2,058)
Interest on UAAL, Normal Cost, and Contributions	285
Asset (Gain)/Loss	37
Actuarial Accrued Liability (Gain)/Loss	(247)
Impact of Legislative Changes	0
Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2014	$ 2,981

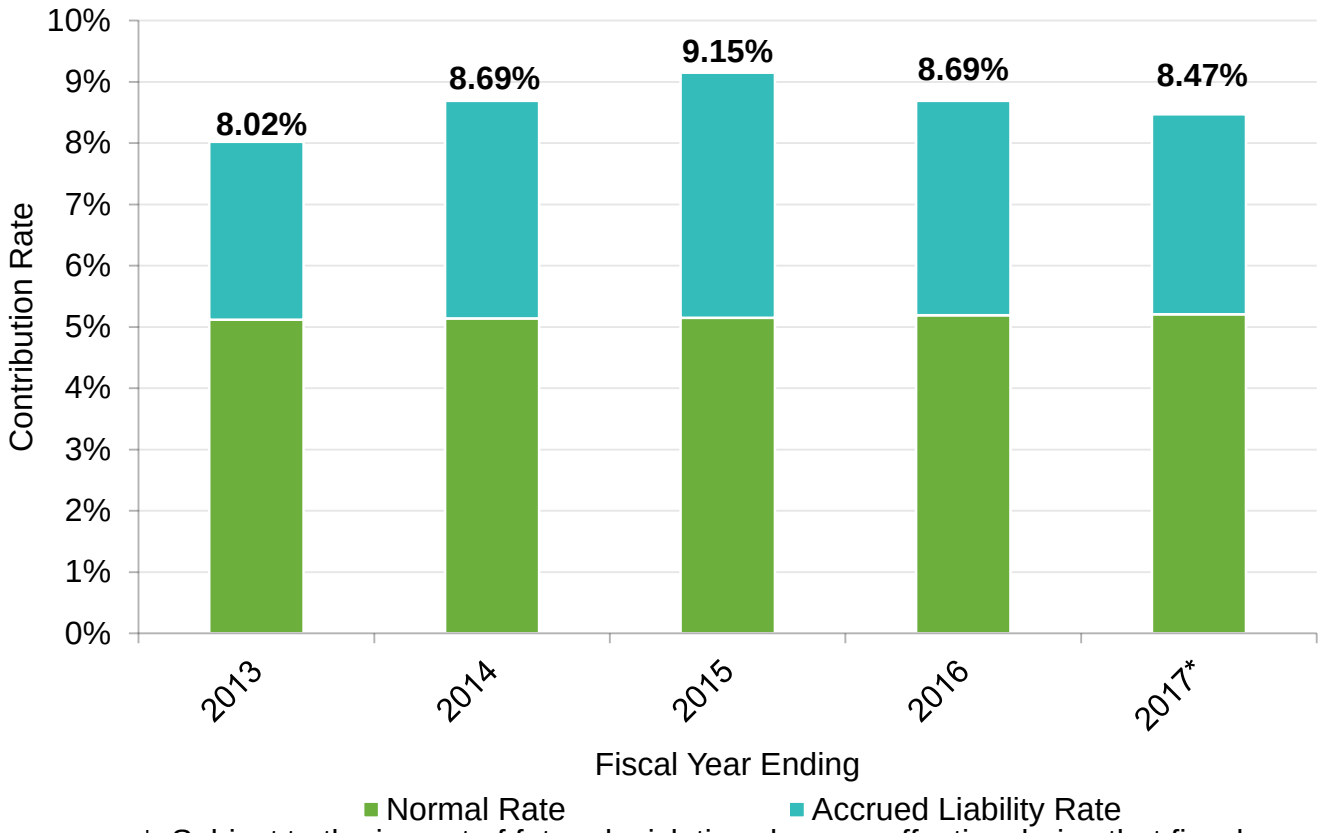
The accrued liability gain of $247 million means that the unfunded actuarial accrued liability was $247 million lower than we would have expected based on the assumptions.

The primary source of the accrued liability gain was lower reported compensation than assumed based on the prior valuation.

The asset loss of $37 million means that the asset valuation method resulted in a recognition of $37 million of deferred asset losses from 2011 and 2014.

The net actuarial gain/(loss) is provided in Section 5 of the actuarial report.

Employer Required Contributions



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

The employer required contribution rate is the amount needed to pay for the cost of the benefits accruing and to pay off the pension debt over 12 years, offset for the 6% of pay contribution the members make.

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.

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

Valuation Results

Employer Required Contribution Rates

Valuation Date	Fiscal Year Ending	Normal Rate	Accrued Liability Rate	Change Due to Legislation	Final ARC	Appropriated Rate
12/31/14	6/30/17	5.21%	3.26%	N/A	N/A	N/A
12/31/13	6/30/16	5.19%	3.50%	0.00%	8.69%	9.15%
12/31/12	6/30/15	5.15%	3.61%	0.39%	9.15%	9.15%
12/31/11	6/30/14	5.14%	3.55%	0.00%	8.69%	8.69%
12/31/10	6/30/13	5.12%	2.57%	0.33%	8.02%	8.33%

The current appropriation rate for fiscal year ending 2016 is 9.15%. This rate would result in an undistributed gain of 0.68%.

Each 1% COLA is equivalent to 0.40% of payroll and each 0.01% increase in benefit rate is equal to 0.43% of payroll.

The employer required contribution rates are provided in Section 6 of the actuarial report.

Reconciliation of the Change in the Annual Required Contribution

Fiscal year ending June 30, 2016 Preliminary ARC (based on December 31, 2013 valuation)	8.69%
Impact of Legislative Changes	0.00%
Fiscal year ending June 30, 2016 Final ARC	8.69%
Change Due to Demographic (Gain)/Loss	(0.26)%
Change Due to Investment (Gain)/Loss	0.04%
Change Due to Contributions Greater than ARC	0.00%
Fiscal year ending June 30, 2017 Preliminary ARC (based on December 31, 2014 valuation)	8.47%

Demographic gain primarily due to salary increases less than assumed

Investment loss is a recognition of deferred asset losses from 2011 and 2014.

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

Projections

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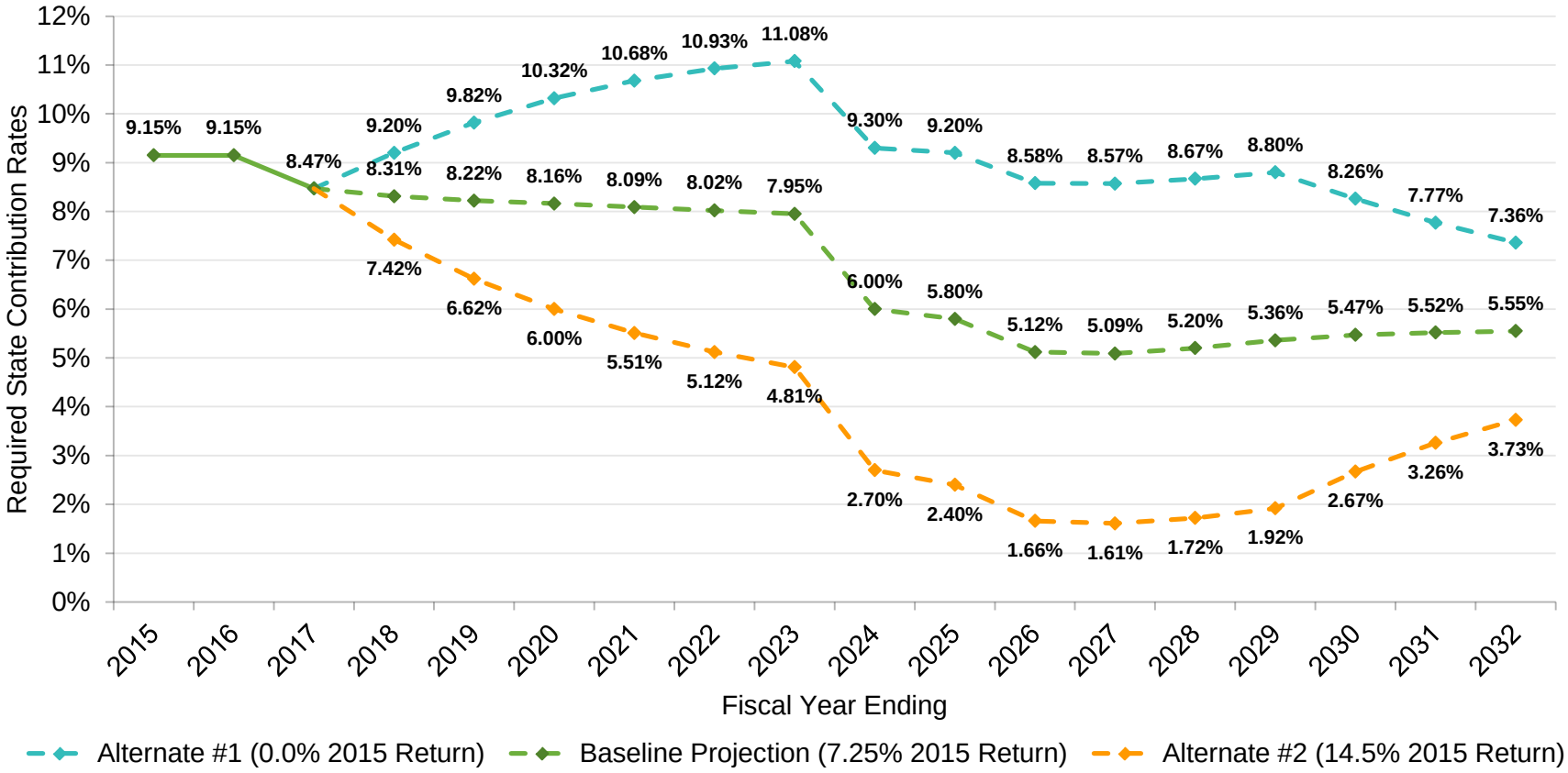
Projections: Employer Contribution Rates and Funded Status

- Projections of employer contribution requirements and funded status into the future can be helpful planning tools for stakeholders.
- Projections of the actuarial valuation are known as deterministic projections. Deterministic projections are based on one scenario in the future.
- Baseline deterministic projection is based on:
  - December 31, 2014 valuation results
  - December 31, 2014 valuation assumptions to project future valuation results, including:
    - Valuation interest rate of 7.25% for all years
    - No cost-of-living adjustments granted
    - Assumes future pay increases based on long-term valuation
- Two alternate deterministic projections based on the same assumptions as the baseline deterministic projection, except
  - First alternate deterministic projection assumes a 0.0% asset return for calendar year 2015.
  - Second alternate deterministic projection assumes a 14.5% asset return for calendar year 2015.

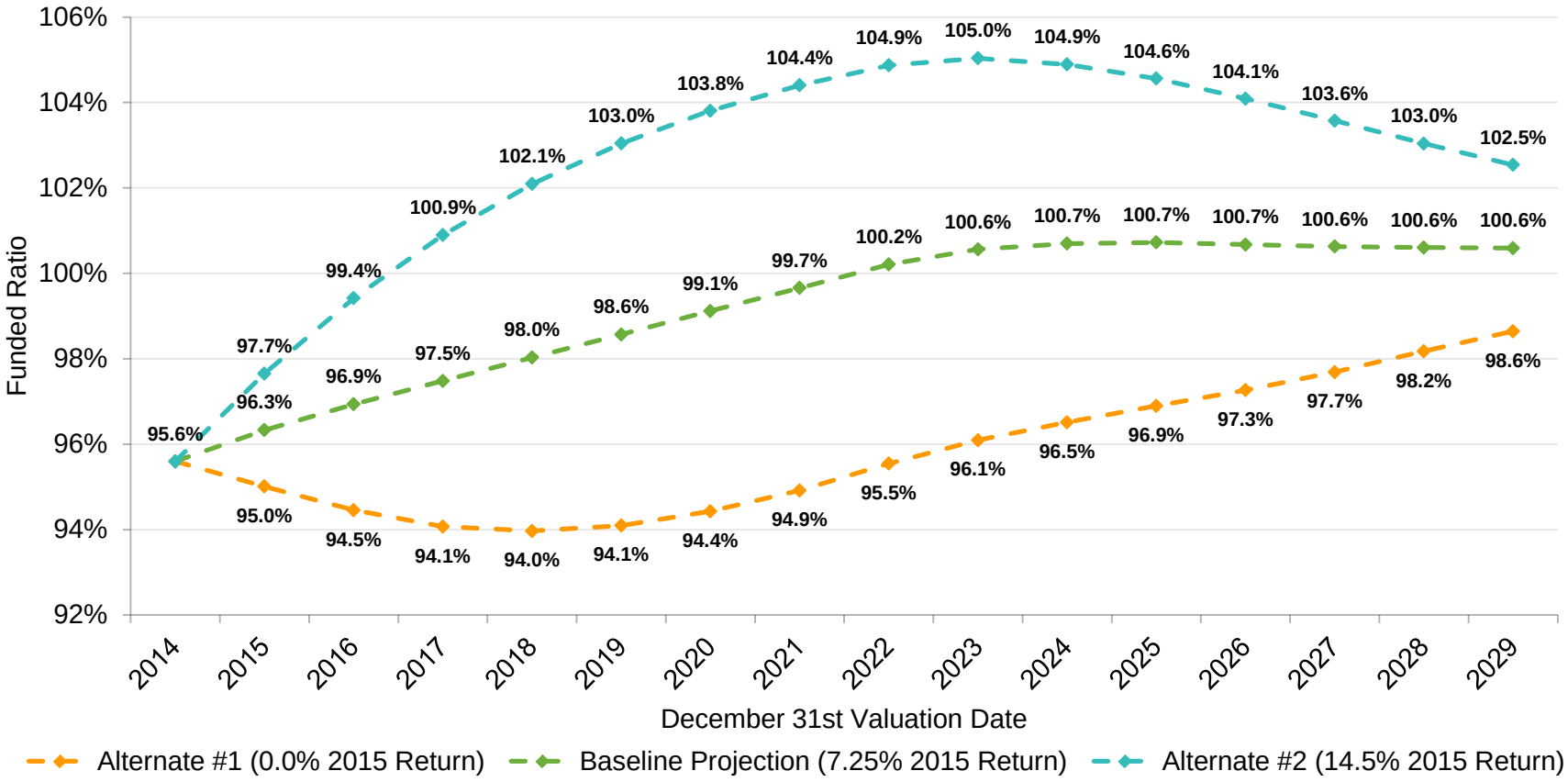
Projections: Projected Employer Required Contribution Rates



The Employer Required Contribution Rate trends to around 5%, which is the level of the cost of benefits accrued, or the long term employer cost of TSERS when there is no pension debt.

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

Key Takeaways

Key results of the December 31, 2014 valuation as compared to the December 31, 2013 valuation were:

- Market value returns of 6.21% compared to 7.25% assumed
- Increase in covered payroll of 0.8% compared to approximately 3% expected
- No significant legislation signed into law since the prior year's valuation
- No changes in actuarial assumptions or funding methodology from the prior year's valuations

When compared to the December 31, 2013 baseline projections, the above resulted in:

- A funded ratio as expected as of December 31, 2014 (95.6% in the valuation compared to 95.6% in the baseline projection)
- Slightly higher employer required contribution rate for fiscal year ending June 30, 2017 (8.47% in the valuation compared to 8.44% in the baseline projection)
- Lower projected benefit amounts being accrued by active members

Key Takeaways

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

- Stakeholders working together to keep TSERS well-funded since inception
- A history of appropriating and contributing the recommended contribution requirements
- Assumptions that in aggregate are more conservative than peers
- A funding policy that aggressively pays down unfunded liability over a 12-year period
- An ad hoc cost-of-living adjustment, which typically only provides benefit increases when certain financial conditions are met, supports the health of the system
- Modest changes in benefits when compared to peers

As has been done over the past 70 years, continued focus on these measures will be needed to maintain the solid status of TSERS well into the future.

Certification

The assumptions, methods, and plan provisions used in the results presented in this presentation were provided in October 2015 in the "Report on the Seventy-Second Annual Valuation of the Teachers' and State Employees' Retirement System of North Carolina prepared as of December 31, 2014."

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

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Teachers' and State Employees' Retirement System of North Carolina

Report on the Seventy-Second Annual Valuation

Prepared as of December 31, 2014

October 2015

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October 7, 2015

Board of Trustees
Teachers' and State Employees'
Retirement System of North Carolina
3200 Atlantic Avenue
Raleigh, NC 27604

Members of the Board:

We submit herewith our report on the seventy-second annual valuation of the Teachers' and State Employees' Retirement System of North Carolina (referred to as “TSERS” or the “State Plan”) prepared as of December 31, 2014. The report has been prepared in accordance with North Carolina General Statute 135-6(o).

The primary purpose of the valuation report is to determine the required member and employer contribution rates, to describe the current financial condition of TSERS, 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. No one may make any representations or warranties based on any statements or conclusions contained in this report without Buck Consultants’ written consent.

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 ASOPs.

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

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.

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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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, 2014, the Retirement Systems' defined benefit plans cover about 960,000 current and prior public servants in the state of North Carolina. During the fiscal year ending June 30, 2015, the Systems paid $5.4 billion in pensions to about 270,000 retirees. And as of June 30, 2015, the Systems' assets were valued at $89 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.

In 1941, the Teachers' and State Employees' Retirement System (referred to as "TSERS" or the "State Plan") was established. TSERS provides benefits to all full-time teachers and state employees in all public school systems, universities, departments, institutions and agencies of the state. With almost $65 billion in assets and over 640,000 members as of December 31, 2014, it is the largest pension plan within the System. This actuarial valuation report is our annual analysis of the financial health of TSERS. This report, prepared as of December 31, 2014, presents the results of the seventy-second annual valuation of TSERS.

Purpose

An actuarial valuation is performed on TSERS annually as of the end of the calendar year. The actuary determines the amount of contributions to be made to TSERS 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 progress on funding TSERS,
- 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, 2014 valuation as compared to the December 31, 2013 valuation were:

- Market value returns of 6.21% compared to 7.25% assumed
- Increase in covered payroll of 0.8% compared to approximately 3% expected
- No significant legislation signed into law since the prior valuation
- No changes in actuarial assumptions or funding methodology from the prior year's valuations

When compared to the December 31, 2013 baseline projections, the above resulted in:

- A funded ratio as expected as of December 31, 2014 (95.6% in the valuation compared to 95.6% in the baseline projection)
- Slightly higher employer required contribution rate for fiscal year ending June 30, 2017 (8.47% in the valuation compared to 8.44% in the baseline projection)
- Lower projected benefit amounts being accrued by active members

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

- Stakeholders working together to keep TSERS well-funded since inception
- A history of appropriating and contributing the recommended contribution requirements
- Assumptions that in aggregate are more conservative than peers
- A funding policy that aggressively pays down unfunded liability over a 12-year period
- An ad hoc cost-of-living adjustment, which typically only provides benefit increases when certain financial conditions are met, supports the health of the system
- Modest changes in benefits when compared to peers

As has been done over the past 70 years, continued focus on these measures will be needed to maintain the solid status of TSERS well into the future.

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

Section 1: 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 TSERS 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 1: The Valuation Process

Valuation Input: Membership Data (continued)

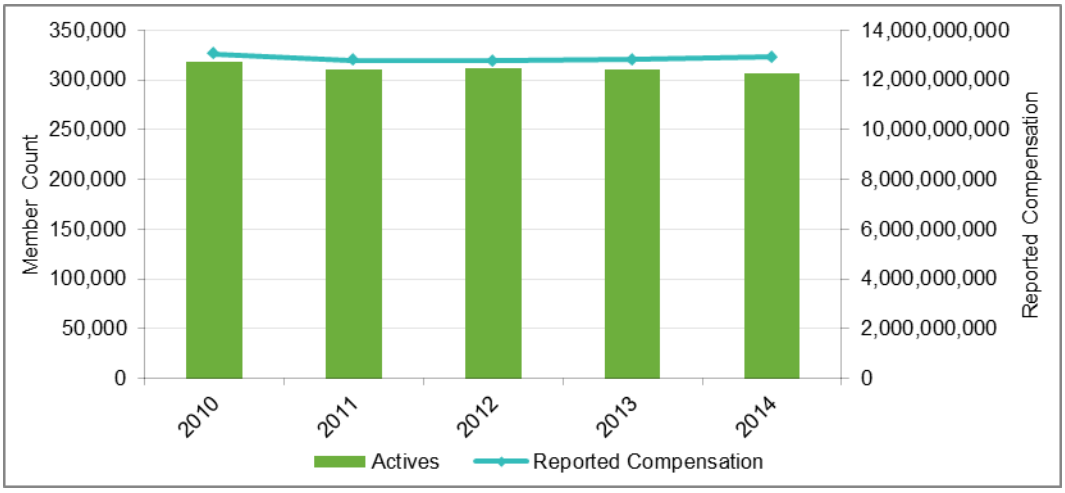
The table below provides a summary of the membership data used in this valuation compared to the prior valuation.

Number as of	12/31/2014	12/31/2013
Active members	307,313	310,370
Members currently receiving Disability Income Plan benefits	7,643	7,639
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	134,871	125,513
Retired members and survivors of deceased members currently receiving benefits	194,607	187,448
Total	644,434	630,970

Commentary: The number of active members decreased by 1.0% from the previous valuation date. The decrease in active members results in less benefits accruing, but also fewer contributions supporting the system. The number of retired members and survivors of deceased members currently receiving benefits increased by 3.8% from the previous valuation. 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.



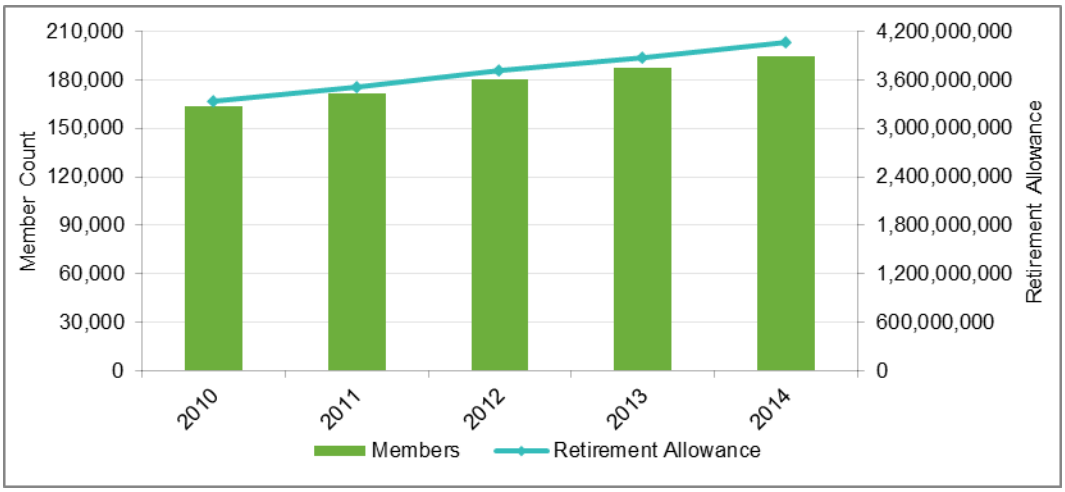
Commentary: Reported compensation has increased by 0.8% and has remained relatively stable over the past five years. Covered payroll is expected to increase by approximately 3% annually in the future. Payroll that is not increasing as fast as we assume results in less benefits accruing than we anticipate, but also fewer contributions supporting the system.

Section 1: 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.

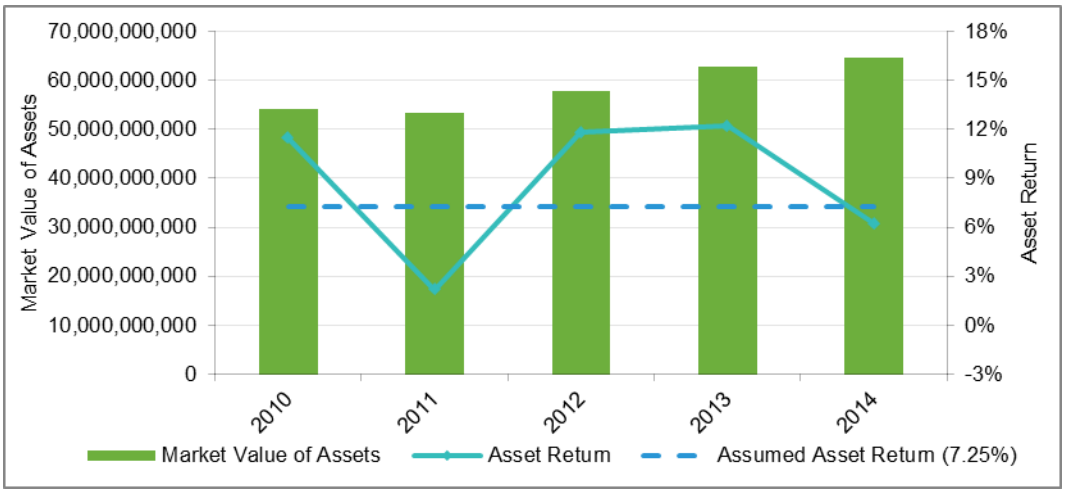
Section 1: The Valuation Process

Valuation Input: Asset Data

TSERS assets are held in trust and are invested for the exclusive benefit of plan members. The Market Value of Assets is $64.6 billion as of December 31, 2014 and $62.8 billion as of December 31, 2013. The investment return for the market value of assets for calendar year 2014 was 6.21%.

Graph 3: Market Value of Asset and Asset Returns

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



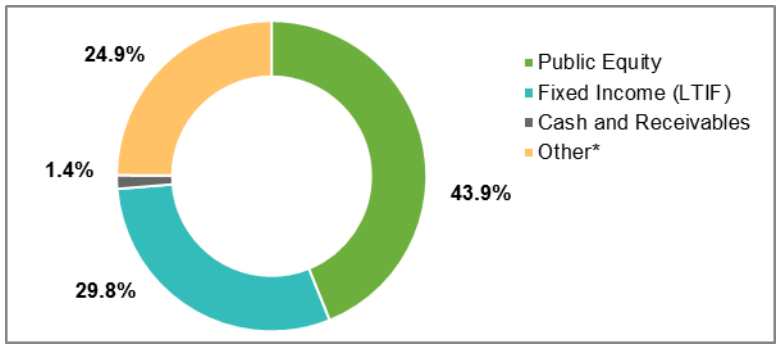
Commentary: Returns were less than the 7.25% assumed rate of return, resulting in a slightly higher required contribution than anticipated as of the December 31, 2013 baseline projections presented in the December 31, 2013 actuarial report.

Section 1: The Valuation Process

Valuation Input: Asset Data (continued)

Graph 4: Allocation of Investments by Category

The graph below provides the breakdown of the market value of assets at December 31, 2014 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. The discount rate will be reviewed at the next experience study to be presented to the Board in October 2015.

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

Section 1: The Valuation Process

Valuation Input: Benefit Provisions

Benefit provisions are described in North Carolina General Statues, Chapter 135.

There were no significant changes in benefit provisions from the prior year's valuation.

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 1.82% 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 membership service; or
  - after attaining age 50 and 20 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.
- TSERS 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 and/or the legislature passes a budget that provides for a cost-of-living adjustment. 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 TSERS due to the legislature contributing the actuarially required contribution, benefit cuts have not been needed in North Carolina. Instead, we have seen a modest expansion of benefits in recent years based on sound plan design.

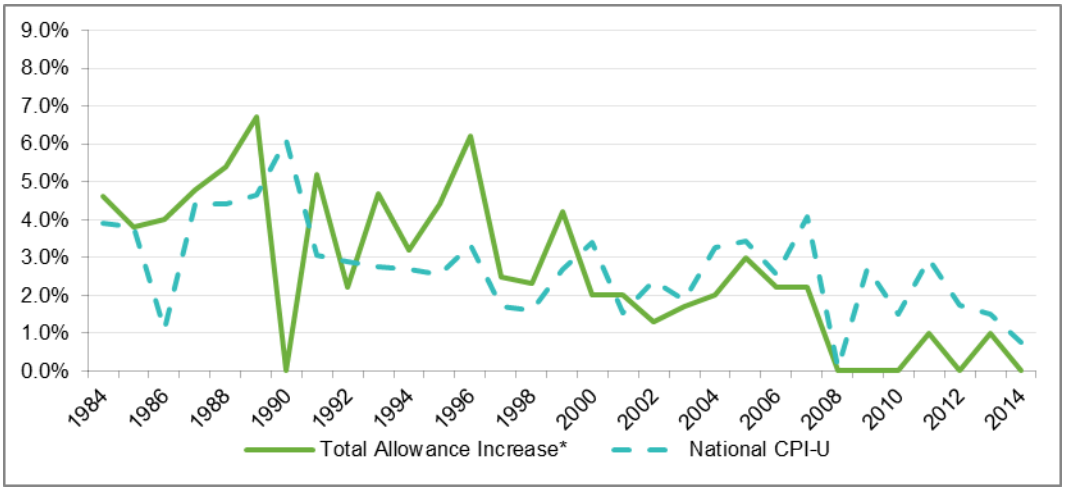
Section 1: The Valuation Process

Valuation Input: Benefit Provisions (continued)

As noted previously, cost-of-living increases are periodically considered to the extent that certain financial conditions are met and/or the legislature passes a budget that provides for a cost-of-living adjustment. Specifically, benefit allowance increases are generally considered when the employer contribution rate would not need to increase to pay for a cost-of-living adjustment (generally, limited to the lesser of the CPI increase year-over-year or 4%) Active member pay increases are also considered. In any case, the legislature makes the final decision. In addition to the legislature consistently appropriating 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 allowance increases for TSERS and the national CPI-U.



* Allowance increases are effective at July 1 the following year

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

A detailed summary of the benefit provisions is provided in Appendix C of 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 TSERS are reviewed at least every five years. Based on this review, the actuary will make recommendations on the demographic and economic assumptions.

Section 1: The Valuation Process

Valuation Input: Actuarial Assumptions (continued)

Demographic assumptions describe future events that relate to people such as retirement rates, termination rates, disability rates, and mortality rates. Economic assumptions describe future events that relate to the assets of TSERS such as the interest rate, salary increases, the real return, and payroll growth.

The latest assumptions were adopted for use with the December 31, 2009 actuarial valuation, based on the experience study prepared as of December 31, 2009 and adopted by the Board of Trustees on October 21, 2010. The next experience study will be prepared as of December 31, 2014 and presented to the Board in October 2015. Assumptions and methods based on the next experience study, as adopted by the Board, will be used with the December 31, 2015 valuation. This policy of reviewing assumptions every five years is a best practice.

Valuation Input: Funding Methodology

The Funding Methodology is the payment plan for the TSERS 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 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 stays 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.
  - 20% of market value plus 80% of the expected actuarial value
  - Assets corridor: not greater than 120% of market value and not less than 80% of market value
- 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 2013. A new amortization base is created each year based on the prior years' experience.

When compared to other Public Sector Retirement Systems in the United States, the funding policy for TSERS 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.

There were no changes in actuarial assumptions or funding method from the prior year's valuation. A detailed summary of the actuarial assumptions and methods is provided in Appendix D of this report.

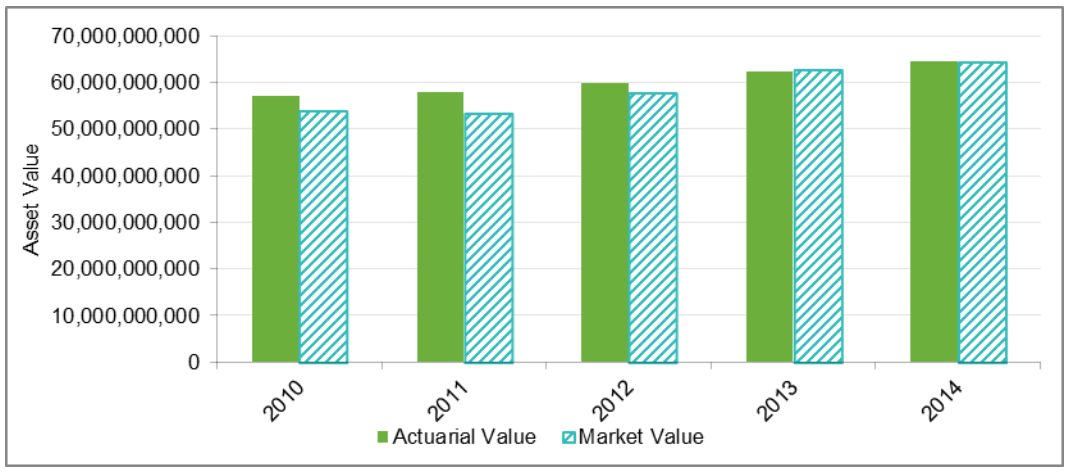
Section 1: The Valuation Process

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 TSERS, the Board adopted an asset valuation method to determine the Actuarial Value of Assets used for funding purposes. The Actuarial Value of Assets is $64.7 billion as of December 31, 2014 and $62.4 billion as of December 31, 2013.

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.



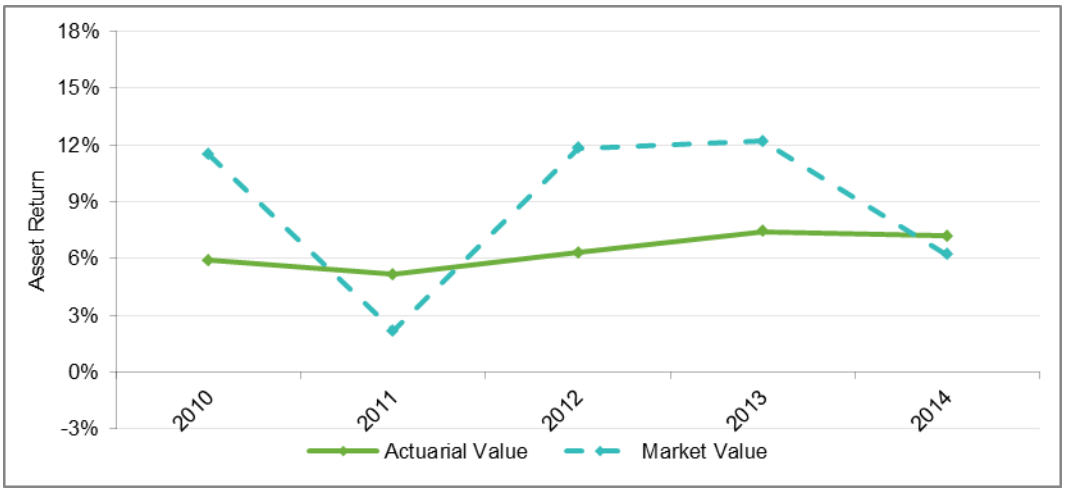
Commentary: The market value of assets is lower than the actuarial value of assets, which is used to determine employer contributions. This indicates that there are unrecognized asset losses to be recognized in future valuations.

Section 1: 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 2014 was 6.21%. The actuarial value of assets smooths investment gains and losses. Lower than expected market returns in 2011 and 2014 resulted in an actuarial value of asset return for calendar year 2014 of 7.19% which is lower than the assumed rate of 7.25%. Therefore, TSERS experienced an asset loss of $37 million during 2014.

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

Section 1: The Valuation Process

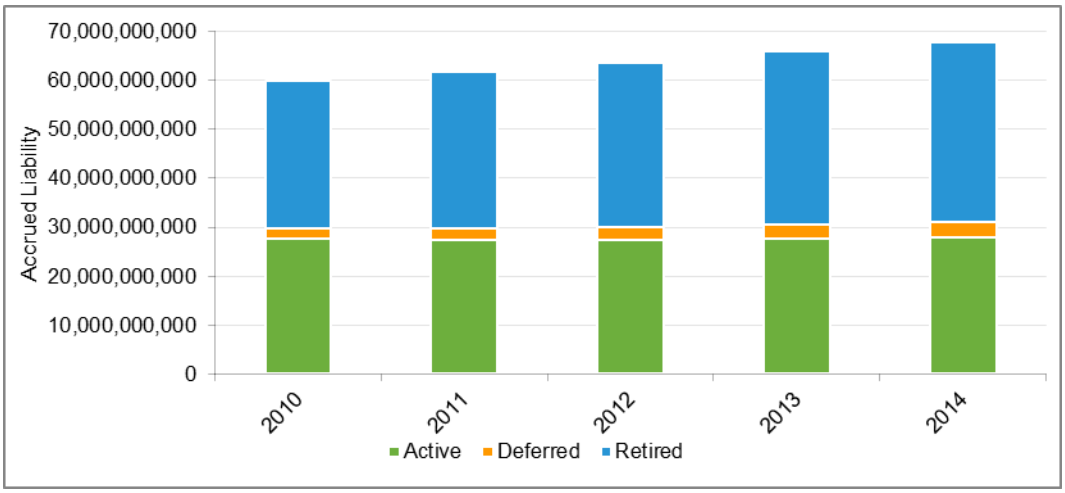
Valuation Results: Actuarial Accrued Liability

Using the provided membership data, benefit provisions, and actuarial assumptions, the future benefit payments of TSERS 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 TSERS. 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 TSERS 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 $65.8 billion to $67.7 billion during 2014. The Retirement System is an open plan, which means that new members enter the plan each year. In an open plan, liabilities are expected to grow from one year to next as more benefits accrue and the membership approaches retirement. The AAL was $247 million lower than expected, which resulted in a demographic gain of $247 million during 2014.

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

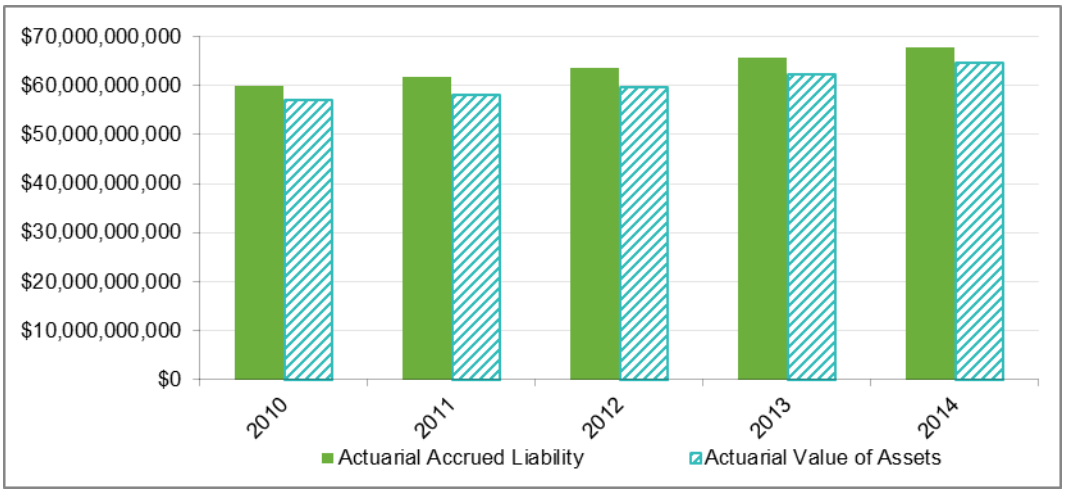
Section 1: The Valuation Process

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 TSERS actually has in the fund to the amount TSERS should have in the fund.

Graph 9: Actuarial Accrued Liability and Actuarial Value of Assets

The graph below provides a history of the actuarial accrued liability and actuarial value of assets.



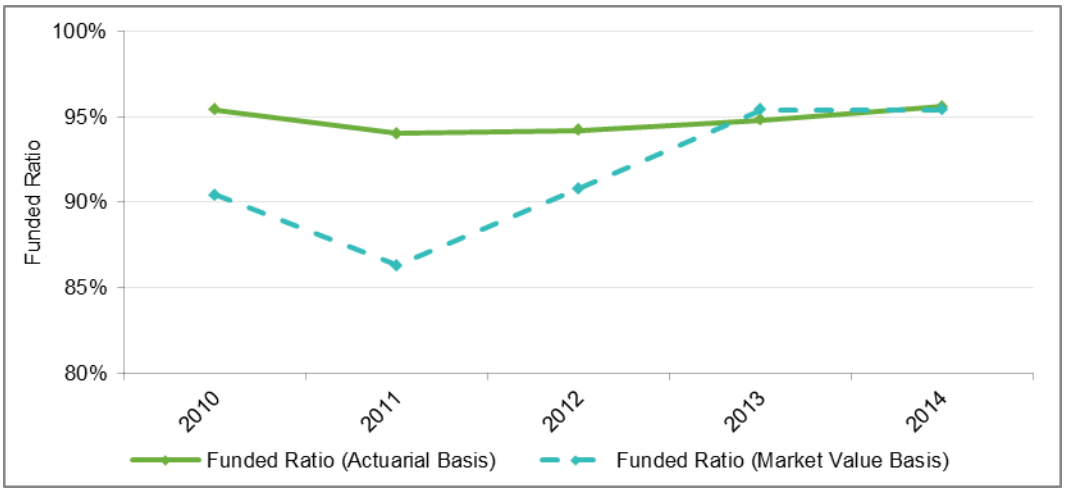
Commentary: The actuarial value of assets basis is used for computing contributions to alleviate contribution volatility. The difference in the actuarial accrued liability and the actuarial value of assets is the amount of pension debt to be paid off in 12 years.

Section 1: 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 ratio of assets to liabilities shows the health of the plan on an accrued basis. The funded ratio on an actuarial basis increased from 94.8% at December 31, 2013 to 95.6% at December 31, 2014.

Section 1: The Valuation Process

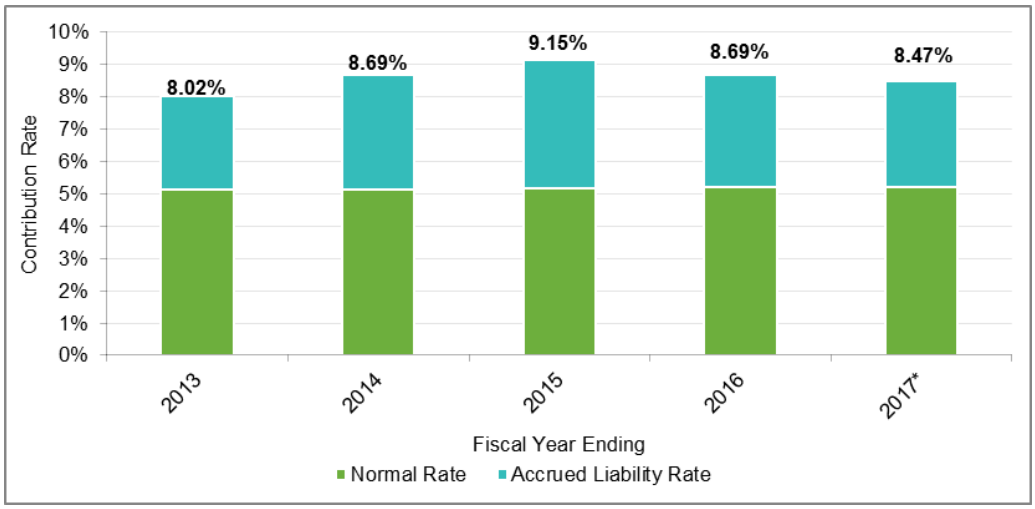
Valuation Results: Employer Contributions

The retirement act provides that the contributions of employers shall consist of a normal contribution and an accrued liability contribution. G.S. 135-8(g) allows for the Board of Trustees of TSERS to make changes to accounting methods and procedures that, in its opinion, are in the interest of sound and proper administration of TSERS.

The December 31, 2013 valuation suggested that the preliminary total employer contribution rate be set at 8.69% of payroll for the fiscal year ending June 30, 2016. Subsequently, the 2015 Appropriations Act (Session Laws 2015-241) set contributions at 9.15% of payroll effective for the fiscal year ending June 30, 2016. As a result of this December 31, 2014 valuation, the preliminary total employer contribution rate should be set at 8.47% of payroll for the fiscal year ending June 30, 2017, subject to the impact of any future legislative changes effective during that fiscal year. On this basis, these contributions would provide a preliminary reserve from undistributed gains equivalent to 0.68% of payroll that could be used for a cost-of-living adjustment or other benefit improvements.

Graph 11: Employer Required Contribution Rates

The graph below provides a history of employer required contribution rates over the past five years. The rates are split into the normal rate and the accrued liability rate. The normal rate is the employer's portion of the cost of benefits accruing after reducing for the member contribution. The accrued liability rate is the payment toward the unfunded liability.



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

Commentary: The employer required contribution rate is the amount needed to pay for the cost of the benefits accruing and to pay off the pension debt over 12 years, offset for the 6% of pay contribution the members make. 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.

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

Section 1: The Valuation Process

Valuation Results: Projections

Projections of contribution requirements and funded status into the future can be helpful planning tools for stakeholders. We provide such projections in this valuation report. 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, 2014 valuation results
- December 31, 2014 valuation assumptions to project future valuation results, including:
  - Valuation interest rate of 7.25% for all years
  - No cost-of-living adjustments granted
  - Assumes future pay increases based on long-term valuation

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 2015. The second alternate deterministic projection is based on the same assumptions as the baseline deterministic projection except that it assumes a 14.5% asset return for calendar year 2015.

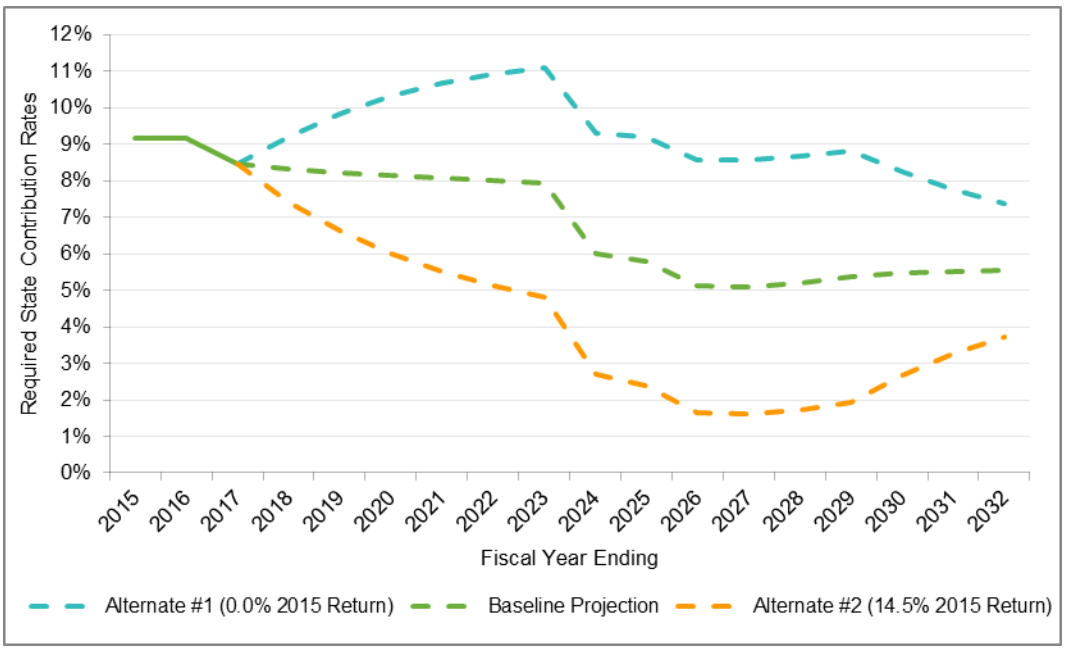
Finally, stochastic projections, where hundreds of projections based on varying rates of return are performed and results are ordered, are periodically performed by the investment management division and shared with the Retirement Board and RSD staff.

Section 1: The Valuation Process

Valuation Results: Projections (continued)

Graph 12: Projected Required Employer Contribution Rates

The graph below provides the required employer contributions rates projected for 15 years.



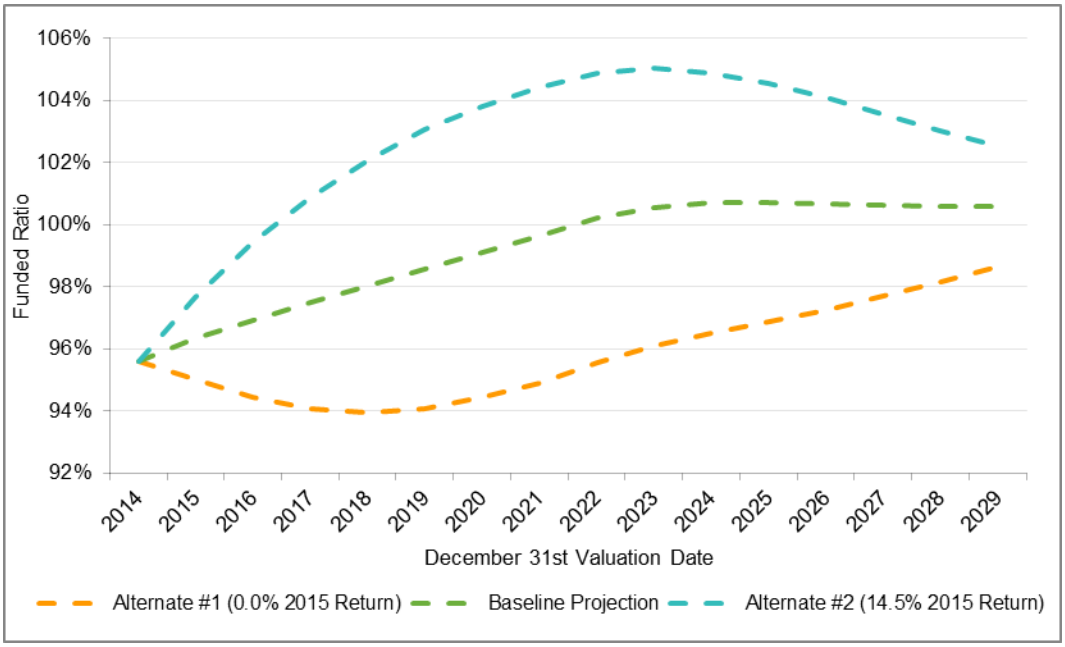
Commentary: The employer required contribution rate trends to around 5%, which is the level of the cost of benefits accrued, or the long term employer cost of TSERS when there is no pension debt.

Section 1: 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, 2015, is $3,685,198,000 (compared to $1,172,421,000 for fiscal year ending June 30, 2014). The required financial reporting information for TSERS under GASB No. 67 can be found in Section 8 of this report.

Section 2: Principal Results

This report, prepared as of December 31, 2014, presents the results of the seventy-second 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	12/31/2014	12/31/2013
Active Members		
Number	307,313	310,370
Reported Compensation	$12,932,045,817	$12,834,121,020
Valuation Compensation*	$13,737,065,885	$13,607,743,917
Retired Members and Survivors of Deceased Members Currently Receiving Benefits		
Number	194,607	187,448
Annual Allowances	$ 4,057,596,822	$ 3,870,867,895
Assets		
Actuarial Value (AVA)	$64,734,119,837	$62,363,807,168
Market Value	$64,587,417,979	$62,789,451,194
Actuarial Accrued Liability (AAL)	$67,715,066,544	$65,805,555,491
Unfunded Accrued Liability (AAL-AVA)	$ 2,980,946,707	$ 3,441,748,323
Funded Ratio (AVA/AAL)**	95.6%	94.8%
Results for Fiscal Year Ending	**6/30/2017**	**6/30/2016**
Annual Required Contribution (ARC) of employer, as a percentage of payroll		
Normal Cost	5.21%	5.19%
Accrued Liability	3.26%	3.50%
Total	8.47%	8.69%
Impact of Legislative Changes	N/A	0.00%
Final Employer ARC	N/A	8.69%
Appropriations Act for Fiscal Year Ending	**6/30/2016**	**6/30/2015**
Employer Contribution Rate as a percentage of payroll		
Normal Cost	5.21%	5.19%
Accrued Liability	3.94%	3.96%
Total	9.15%	9.15%
Preliminary Reserve for Undistributed Gains/(Losses)	0.68%	0.46%

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

** The System's Funded Ratio is not intended to measure the adequacy of funding in any analysis of a possible settlement of plan liabilities, nor is it intended to assess the need for or the amount of future contributions. Additionally, the measurement of a Funded Ratio using the Market Value of Assets would not be materially different.

Section 3: Membership Data

The Retirement Systems Division provided membership data as of the valuation date for each member of TSERS. 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
Classroom Teachers	151,831	43.06	10.39	$ 6,307,610,435
Other Education	46,696	49.18	11.23	1,772,744,339
General Employees	105,414	46.49	10.75	4,668,232,844
Law Enforcement Officers	3,372	40.40	12.79	183,458,199
Total	307,313	45.14	10.67	$ 12,932,045,817

The table above includes members not in receipt of benefits who had reported compensation in 2014.

Table 3: Disabled Member Data

	Member Count	Average Age	Average Service	Valuation Compensation
Classroom Teachers	1,935	54.16	12.76	$ 67,609,507
Other Education	685	55.12	12.08	17,010,033
General Employees	4,974	55.61	11.63	160,414,644
Law Enforcement Officers	49	50.70	14.03	5,548,936
Total	7,643	55.17	11.97	$ 250,583,120

The table above includes members not in receipt of benefits who did not have reported compensation in 2014 and who were reported as disabled in the current or prior valuations and not subsequently reported as returned to work.

Section 3: Membership Data

Table 4: Terminated Vested Member Data

	Member Count	Average Age	Average Service	Accumulated Contributions
Classroom Teachers	45,357	39.82	4.30	$ 524,197,654
Other Education	10,015	45.82	4.37	111,104,055
General Employees	78,539	45.58	3.91	940,111,464
Law Enforcement Officers	960	41.53	5.86	18,867,079
Total	134,871	43.63	4.09	$ 1,594,280,252

The table above includes members not in receipt of benefits who did not have reported compensation in 2014 and who were not valued as disabled members.

Table 5: Data for Members Currently Receiving Benefits

	Member Count	Average Age	Annual Retirement Allowances
Retired Members (Healthy at Retirement)			
Classroom Teachers and Other Education	91,510	69.54	$ 2,270,195,857
General Employees	74,710	71.26	1,304,821,820
Law Enforcement Officers	2,633	64.91	82,490,747
Total	168,853	70.23	$ 3,657,508,424
Retired Members (Disabled at Retirement)*			
Classroom Teachers and Other Education	4,044	68.78	$ 83,019,795
General Employees	7,582	68.90	115,821,049
Law Enforcement Officers	183	67.64	4,425,311
Total	11,809	68.84	$ 203,266,155
Survivors of Deceased Members			
Classroom Teachers and Other Education	4,377	73.02	$ 77,905,288
General Employees	9,162	73.64	110,570,616
Law Enforcement Officers	406	72.12	8,346,339
Total	13,945	73.40	$ 196,822,243
Grand Total	194,607	70.37	$ 4,057,596,822

* 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 TSERS members. The tables below provide the details of the Market Value of Assets for the current and prior year's valuations.

Table 6: Market Value of Assets

Asset Data as of	12/31/2014	12/31/2013
Beginning of Year Market Value of Assets	$ 62,789,451,194	$ 57,780,471,482
Contributions	2,057,963,297	1,985,865,560
Benefit Payments	(4,098,385,865)	(3,914,014,907)
Investment Income	3,838,389,353	6,937,129,059
Net Increase/(Decrease)	1,797,966,785	5,008,979,712
End of Year Market Value of Assets	$ 64,587,417,979	$ 62,789,451,194
Estimated Net Investment Return on Market Value	6.21%	12.21%

Table 7: Allocation of Investments by Category of the Market Value of Assets

Asset Data as of	12/31/2014	12/31/2013
Allocation by Dollar Amount		
Public Equity	$ 28,376,457,498	$ 30,167,583,072
Fixed Income (LTIF)	19,243,626,779	19,202,205,036
Cash and Receivables	891,718,536	436,110,529
Other*	16,075,615,166	12,983,552,557
Total Market Value of Assets	$ 64,587,417,979	$ 62,789,451,194
Allocation by Percentage of Asset Value		
Public Equity	43.9%	48.0%
Fixed Income (LTIF)	29.8%	30.6%
Cash and Receivables	1.4%	0.7%
Other*	24.9%	20.7%
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 TSERS, 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 8: Actuarial Value of Assets

Asset Data as of	12/31/2014
(a) Beginning of Year Actuarial Value of Assets	$ 62,363,807,168
(b) Contributions	2,057,963,297
(c) Benefit Payments	(4,098,385,865)
(d) Net Cash Flow: (b) + (c)	(2,040,422,568)
(e) Expected Investment Return: [(a) x 7.25%] + [(d) x 3.625%]	4,447,410,702
(f) Expected End of Year Actuarial Value of Assets: (a) + (d) + (e)	64,770,795,302
(g) End of Year Market Value of Assets	64,587,417,979
(h) Excess of Market Value over Expected Actuarial Value of Assets: (g) - (f)	(183,377,323)
(i) 20% Adjustment toward Market Value: (h) x 20%	(36,675,465)
(j) Preliminary End of Year Actuarial Value of Assets: (f) + (i)	64,734,119,837
(k) Final End of Year Actuarial Value of Assets: (j) not less than 80% of (g) and not greater than 120% of (g)	64,734,119,837
(l) Estimated Net Investment Return on Actuarial Value	7.19%

Commentary: The actuarial value of assets smooths investment gains/losses, resulting in less volatility in the employer contribution. Lower than expected returns in 2011 and 2014 resulted in a $37 million asset loss recognition this year (item (i) above).

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 9: Historical Asset Returns

Calendar Year	Actuarial Value of Asset Return	Market Value of Asset Return
2006	8.94%	11.41%
2007	8.87%	8.38%
2008	2.89%	-19.50%
2009	4.74%	14.84%
2010	5.89%	11.47%
2011	5.15%	2.19%
2012	6.32%	11.82%
2013	7.43%	12.21%
2014	7.19%	6.21%
Average	6.36%	6.04%
Range	6.05%	34.34%

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 6.36% tracks average market return of 6.04% rather well. But the range of returns is markedly less – 6.05% versus 34.34%. This results in much lower employer contribution volatility using the actuarial value of assets versus market, while ensuring that the actuarial needs of TSERS are met.

Section 5: Liability Results

Using the provided membership data, benefit provisions, and actuarial assumptions, the future benefit payments of TSERS 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 year's valuations.

Table 10: Liability Summary

Valuation Results as of	12/31/2014	12/31/2013
(a) Present Value of Future Benefits		
(1) Active Members	$ 40,655,820,416	$ 40,204,306,593
(2) Terminated Members	3,188,560,504	2,890,559,796
(3) Members Currently Receiving Benefits	36,577,507,863	35,291,243,666
(4) Total	$ 80,421,888,783	$ 78,386,110,055
(b) Present Value of Future Normal Costs		
(1) Employee Future Normal Costs	$ 6,862,370,246	$ 6,806,431,685
(2) Employer Future Normal Costs	5,844,451,993	5,774,122,879
(3) Total	$ 12,706,822,239	$ 12,580,554,564
(c) Actuarial Accrued Liability: (a4) - (b3)	$ 67,715,066,544	$ 65,805,555,491
(d) Actuarial Value of Assets	$ 64,734,119,837	$ 62,363,807,168
(e) Unfunded Accrued Liability: (c) - (d)	$ 2,980,946,707	$ 3,441,748,323

Section 5: Liability Results

The table below provides a reconciliation of the prior year's unfunded actuarial accrued liability to the current year's actuarial accrued liability.

Table 11: Reconciliation of Unfunded Actuarial Accrued Liability

(in millions)	
Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2013	$ 3,442
Normal Cost during 2014	1,522
Reduction due to Actual Contributions during 2014	(2,058)
Interest on UAAL, Normal Cost, and Contributions	285
Asset (Gain)/Loss	37
Actuarial Accrued Liability (Gain)/Loss	(247)
Impact of Legislative Changes	0
Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2014	$ 2,981

Commentary: The unfunded actuarial accrued liability, or pension debt, shrank faster than expected during the past year primarily due to lower reported compensation than assumed based on the prior valuation.

Section 6: Annual Required Contribution

The annual required 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 tables below provide the calculation and a reconciliation of the annual required contribution for the current and prior years' valuations.

Table 12: Calculation of the Annual Required Contribution (ARC)

Valuation Date ARC for Fiscal Year Ending	12/31/2014 6/30/2017	12/31/2013 6/30/2016
Normal Cost Rate Calculation		
(a) Employer Future Normal Cost	$ 5,844,451,993	$ 5,774,122,879
(b) Present Value of Future Salary	114,372,837,433	113,440,528,084
(c) Normal Cost Rate: (a) / (b)	5.11%	5.09%
(d) Expenses Rate	0.10%	0.10%
(e) Total Normal Cost Rate: (c) + (d)	5.21%	5.19%
Accrued Liability Rate Calculation		
(f) Total Annual Amortization Payments*	$ 447,592,310	$ 475,910,160
(g) Valuation Compensation	13,737,065,885	13,607,743,917
(h) Accrued Liability Rate: (f) / (g)	3.26%	3.50%
Total ARC (e) + (h)	8.47%	8.69%

***** See Table 15 for more detail.

Table 13: Reconciliation of the Change in the ARC

Fiscal year ending June 30, 2016 Preliminary ARC (based on December 31, 2013 valuation)	8.69%
Impact of Legislative Changes	0.00%
Fiscal year ending June 30, 2016 Final ARC	8.69%
Change Due to Demographic (Gain)/Loss	(0.26%)
Change Due to Investment (Gain)/Loss	0.04%
Change Due to Contributions Greater than ARC	0.00%
Fiscal year ending June 30, 2017 Preliminary ARC (based on December 31, 2014 valuation)	8.47%

Section 6: Annual Required Contribution

Amortization methods determine the payment schedule for the unfunded actuarial accrued liability. TSERS adopted a 12-year closed amortization period for fiscal year ending 2012. 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 14: Calculation of the New Amortization Base

Calculation as of	12/31/2014	12/31/2013
(a) Unfunded Actuarial Accrued Liability	$ 2,980,946,707	$ 3,441,748,323
(b) Prior Years' Outstanding Balances	$ 3,187,898,989	$ 3,555,776,186
(c) New Amortization Base: (a) - (b)	$ (206,952,282)	$ (114,027,863)
(d) New Amortization Payment	$ (28,317,850)	$ (15,602,746)

Table 15: Amortization Schedule for Unfunded Accrued Liability

Date Established	Original Balance	12/31/2014 Outstanding Balance	Annual Payment
December 31, 2009	$ 2,360,173,025	$ 2,068,543,730	$ 322,948,963
December 31, 2010	242,581,914	230,287,360	33,193,150
December 31, 2011	911,037,989	926,773,316	124,659,832
December 31, 2012	78,277,759	84,589,466	10,710,961
December 31, 2013	(114,027,863)	(122,294,883)	(15,602,746)
December 31, 2014	(206,952,282)	(206,952,282)	(28,317,850)
Total		$ 2,980,946,707	$ 447,592,310

Commentary: This is the payment schedule for the pension debt of TSERS.

Section 6: Annual Required Contribution

The table below provides a history of the annual required contribution and the corresponding appropriated rate.

Table 16: History of Annual Required Contributions and Appropriated Rates

Valuation Date	Fiscal Year Ending	Normal Rate	Accrued Liability Rate	Change due to Legislation	Final ARC	Appropriated Rate
12/31/2014	6/30/2017	5.21%	3.26%	N/A	N/A	N/A
12/31/2013	6/30/2016	5.19%	3.50%	0.00%	8.69%	9.15%
12/31/2012	6/30/2015	5.15%	3.61%	0.39%	9.15%	9.15%
12/31/2011	6/30/2014	5.14%	3.55%	0.00%	8.69%	8.69%
12/31/2010	6/30/2013	5.12%	2.57%	0.33%	8.02%	8.33%

Table 17: Cost of Benefit Enhancements

Calculation as of	12/31/2014	12/31/2013
Increase in ARC for a 1% COLA*	0.40%	0.39%
Increase in ARC for a 0.01% Increase in the Defined Benefit Formula**	0.43%	0.42%

* The 1% COLA calculated at the December 31, 2014 valuation would be effective July 1, 2016. The COLA would be paid in full to retired members and survivors of deceased members on the retirement roll on July 1, 2015 and would be prorated for retired members and survivors of deceased members who commence benefits after July 1, 2015 but before June 30, 2016.

** 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 TSERS. 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	12/31/2014	12/31/2013
Assets		
Current Actuarial Value of Assets		
Annuity Savings Fund	$ 11,810,134,073	$ 11,476,585,329
Pension Accumulation Fund	52,923,985,764	50,887,221,839
Total	$ 64,734,119,837	$ 62,363,807,168
Future Member Contributions to the Annuity Savings Fund	$ 6,862,370,246	$ 6,806,431,685
Prospective Contributions to the Pension Accumulation Fund		
Normal Contributions	$ 5,844,451,993	$ 5,774,122,879
Unfunded Accrued Liability Contributions	2,980,946,707	3,441,748,323
Undistributed Gain Contributions	623,692,680	455,297,096
Total	$ 9,449,091,380	$ 9,671,168,298
Total Assets	$ 81,045,581,463	$ 78,841,407,151
Liabilities		
Annuity Savings Fund		
Past Member Contributions	$ 11,810,134,073	$ 11,476,585,329
Future Member Contributions	6,862,370,246	6,806,431,685
Total Contributions	$ 18,672,504,319	$ 18,283,017,014
Pension Accumulation Fund		
Benefits Currently in Payment	$ 36,577,507,863	$ 34,929,957,617
Benefits to be Paid to Current Active Members	25,171,876,601	24,811,849,375
Reserve for Increases in Retirement Allowances effective July 1, 2015 (July 1, 2014 for December 31, 2013)	0	361,286,049
Reserve for Undistributed Gains/(Losses)	623,692,680	455,297,096
Total Benefits Payable	$ 62,373,077,144	$ 60,558,390,137
Total Liabilities	$ 81,045,581,463	$ 78,841,407,151

Section 8: Accounting Results

The section contains the accounting information for Governmental Accounting Standards Board (GASB) Statement No. 67 for fiscal year ending June 30, 2015 based on a valuation date of December 31, 2014.

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

The June 30, 2015 total pension liability presented in this section was determined by an actuarial valuation as of December 31, 2014, 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, 2014

Group	Number
Retired members and survivors of deceased members currently receiving benefits	194,607
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	134,871
Active members*	314,956
Total	644,434

* Includes current recipients of DIP benefits.

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, 2015
Total Pension Liability	
Service Cost	$ 1,562,846,000
Interest	4,803,766,000
Changes of Benefit Terms	0
Difference between Expected and Actual Experience	(278,170,000)
Change of Assumptions	0
Benefit Payments, including Refund of Member Contributions	(4,184,410,000)
Net Change in Total Pension Liability	$ 1,904,032,000
Total Pension Liability - Beginning of Year	$ 66,788,196,000
Total Pension Liability - End of Year	$ 68,692,228,000
Plan Fiduciary Net Position	
Employer Contributions	$ 1,262,988,000
Member Contributions	854,306,000
Net Investment Income	1,468,624,000
Benefit Payments, including Refund of Member Contributions	(4,184,410,000)
Administrative Expenses	(10,646,000)
Other	393,000
Net Change in Fiduciary Net Position	$ (608,745,000)
Plan Fiduciary Net Position - Beginning of Year	$ 65,615,775,000
Plan Fiduciary Net Position - End of Year	$ 65,007,030,000

Table 21: Net Pension Liability (Asset)

Calculation as of	June 30, 2015	June 30, 2014
Total Pension Liability	$ 68,692,228,000	$ 66,788,196,000
Plan Fiduciary Net Position	65,007,030,000	65,615,775,000
Net Pension Liability (Asset)	$ 3,685,198,000	$ 1,172,421,000
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	94.64%	98.24%

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, 2015 to Changes in the Discount Rate

	1% Decrease	Current	1% Increase
Discount Rate	6.25%	7.25%	8.25%
Net Pension Liability (Asset)	11,091,429,000	3,685,198,000	(2,599,843,000)

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 System contributions will continue to follow the current funding policy. Based on those assumptions, 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	12/31/2014
Actuarial Cost Method	Entry Age
Amortization Method	Level dollar closed
Amortization Period	12 years
Asset Valuation Method	20% of market value plus 80% of expected actuarial value (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**	4.25% - 9.10%
*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, 2014 valuation results as assumptions.

Key Projection Assumptions

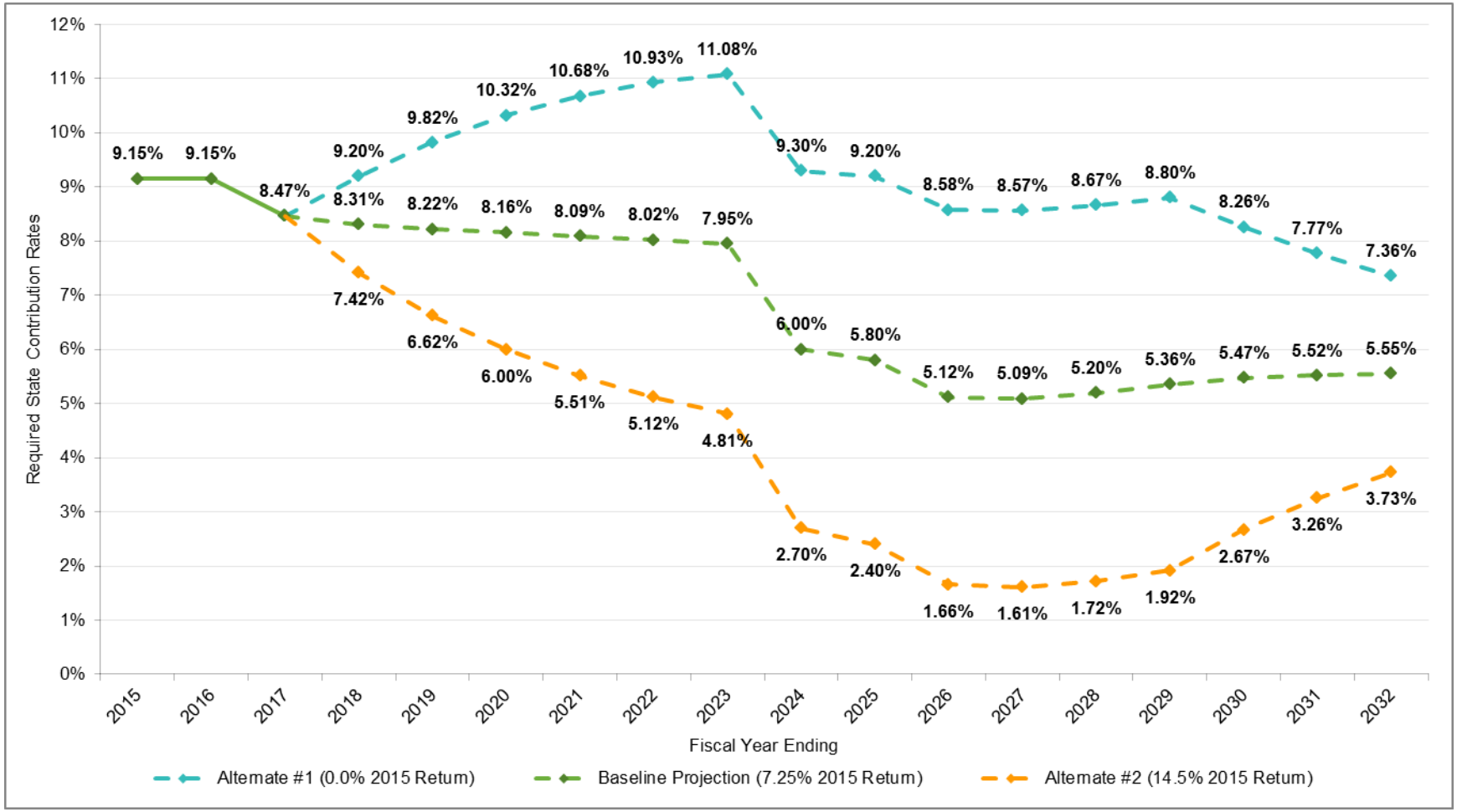
- Valuation interest rate of 7.25% for all years
- 7.25% investment return on market value of assets
- Actuarial assumptions and methods as described in Appendix D. All future demographic experience is assumed to be exactly realized.
- The actuarially calculated contribution rate is contributed each year.
- 0% increase in the total active member population
- No cost-of-living adjustments granted
- Future pay increases based on long-term salary increase assumptions

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 2015. The second alternate deterministic projection is based on the same assumptions as the baseline deterministic projection except that it assumes a 14.5% asset return for calendar year 2015.

Section 9: Projections

The graph below provides the required employer contribution rates projected for 15 years.

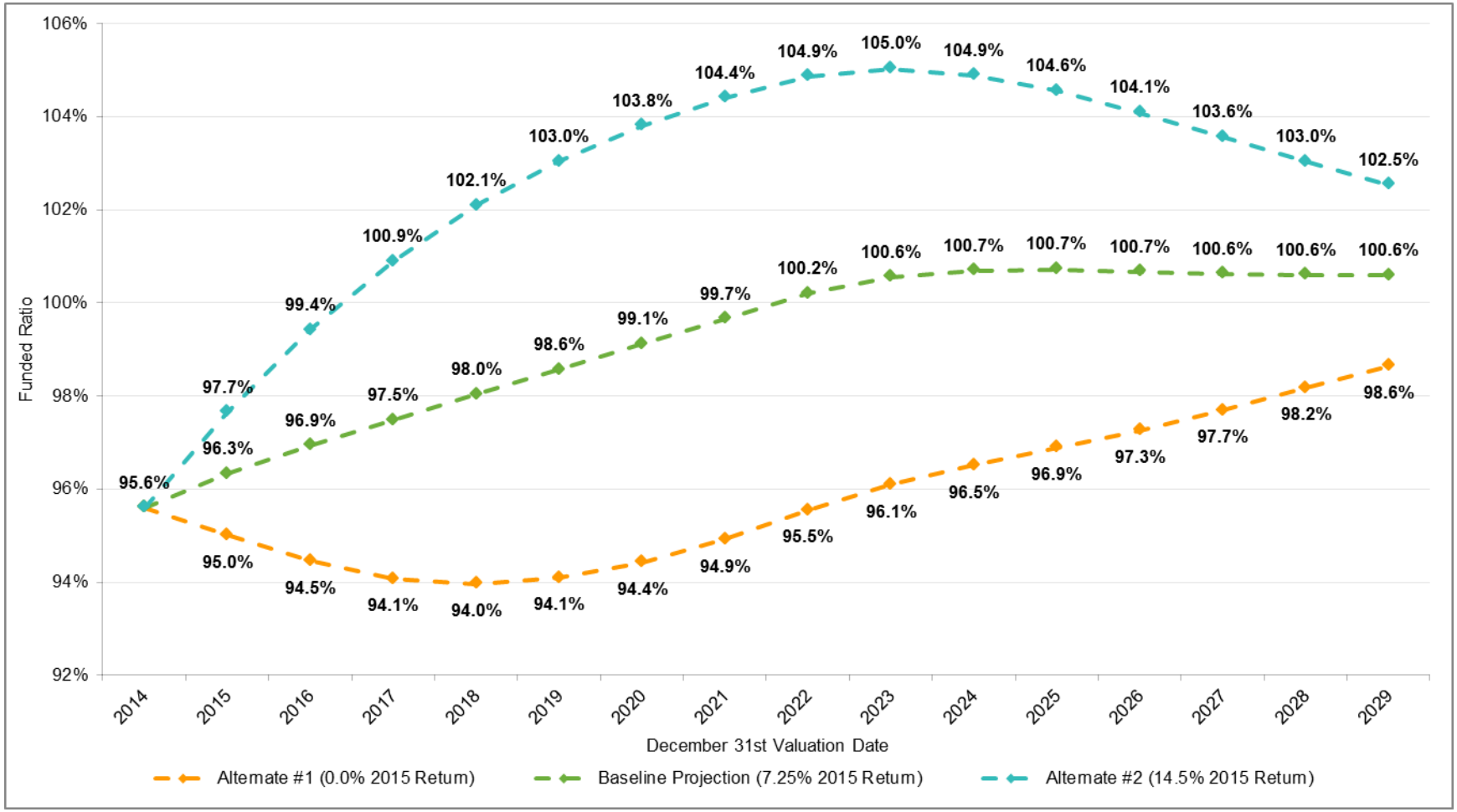
Projected Required Employer Contribution Rates



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

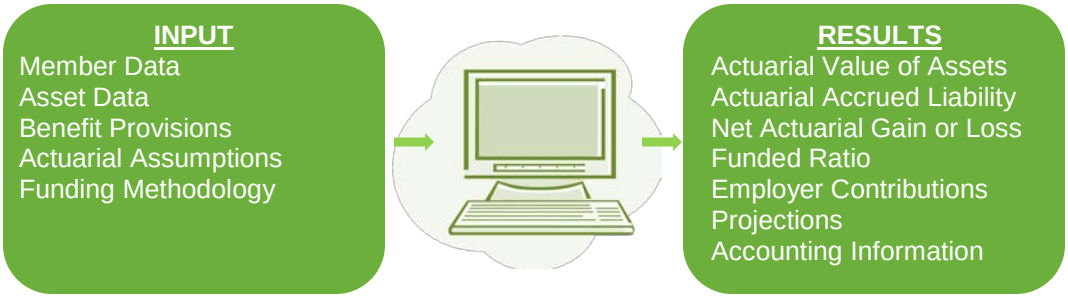
Purpose of an Actuarial Valuation

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, 2014 and will be presented during 2015. 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

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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. Most of the North Carolina Retirement Systems use the entry age normal cost method; LGERS uses a method known as frozen initial liability, which is similar to entry age normal but allows for the individualized payments for local employers when they enter LGERS.

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

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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 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 Retirements 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.

Appendix A: Valuation Process and Glossary of Actuarial Terms

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. 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!!

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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.*

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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 includes:

- Amortization Period Length – Generally amortization periods up to 30 years 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, 2014

	Years of Service										
Age	**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**	**Total**
Under 25	3,343	4,487	14	0	0	0	0	0	0	0	7,844
	13,462	29,728	30,611	0	0	0	0	0	0	0	22,797
25 to 29	3,474	19,018	4,466	40	0	0	0	0	0	0	26,998
	12,290	33,807	36,943	35,936	0	0	0	0	0	0	31,560
30 to 34	1,880	10,940	13,372	5,148	63	0	0	0	0	0	31,403
	11,727	35,266	39,582	43,056	36,119	0	0	0	0	0	36,973
35 to 39	1,704	8,739	9,288	11,071	4,082	17	0	0	0	0	34,901
	11,679	36,410	41,568	46,586	49,054	44,294	0	0	0	0	41,286
40 to 44	1,543	8,326	9,337	8,952	10,368	3,253	47	0	0	0	41,826
	11,222	36,107	41,033	45,352	51,331	53,671	49,840	0	0	0	43,423
45 to 49	1,352	7,634	9,242	8,772	7,635	7,597	2,893	46	0	0	45,171
	11,036	36,133	40,355	43,774	48,153	56,136	56,459	51,321	0	0	44,443
50 to 54	1,029	6,559	8,289	8,558	7,497	5,390	6,058	1,325	19	0	44,724
	11,060	36,929	39,772	42,145	44,291	51,979	59,150	61,276	51,429	0	44,644
55 to 59	818	4,896	7,057	7,483	7,223	5,336	4,494	2,002	542	12	39,863
	11,665	37,595	40,579	42,320	44,964	50,435	56,312	64,389	65,277	48,188	45,367
60 to 64	339	2,847	4,936	4,945	4,393	3,557	2,536	1,001	635	161	25,350
	12,553	39,015	42,624	44,412	46,557	51,456	57,472	69,734	74,186	69,205	47,601
65 to 69	124	723	1,591	1,603	1,135	811	532	291	193	145	7,148
	14,230	41,744	44,870	47,539	50,622	56,917	63,403	77,279	74,458	78,466	51,080
70 & Up	40	253	421	470	318	215	126	78	59	105	2,085
	12,681	34,858	37,601	43,008	43,504	52,556	61,867	66,446	90,810	92,016	47,243
Total	15,646	74,422	68,013	57,042	42,714	26,176	16,686	4,743	1,448	423	307,313
	12,101	35,381	40,441	44,217	47,642	53,163	57,794	65,345	71,266	77,446	42,081

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, 2014

	Men		Women	
Age	Number	Compensation	Number	Compensation
19	21	$ 210,808	6	$ 58,506
20	36	398,811	29	276,372
21	111	1,770,793	88	1,297,454
22	295	5,453,644	559	8,840,963
23	727	15,506,062	2,007	40,260,759
24	1,064	27,335,043	2,898	77,359,526
25	1,362	38,620,319	3,585	104,930,628
26	1,470	43,737,104	3,753	115,515,664
27	1,510	46,303,454	3,922	124,397,314
28	1,627	52,645,368	3,934	128,030,012
29	1,784	61,578,797	4,051	136,299,323
30	1,820	64,966,041	4,062	141,162,440
31	1,839	66,479,930	4,187	149,414,784
32	1,961	73,550,158	4,355	157,789,018
33	1,984	77,565,454	4,495	168,016,149
34	2,102	85,158,856	4,598	176,975,786
35	2,192	90,369,036	4,676	181,649,627
36	2,118	91,324,983	4,707	188,549,679
37	2,168	94,588,285	4,840	195,289,129
38	2,223	99,257,959	4,945	200,201,879
39	2,173	99,434,864	4,859	200,250,564
40	2,252	105,807,931	5,256	217,411,488
41	2,367	109,181,542	5,225	218,243,331
42	2,453	115,575,468	5,595	231,861,229
43	2,735	130,095,478	6,114	258,229,596
44	3,053	145,618,194	6,776	284,174,256
45	2,862	142,935,294	6,702	284,424,683
46	2,850	141,524,119	6,453	274,664,359
47	2,745	136,472,779	6,063	252,086,168
48	2,653	133,751,642	6,124	255,881,529
49	2,714	135,830,183	6,008	250,000,750
50	2,734	135,055,528	6,230	263,259,538
51	2,784	139,065,447	6,208	262,002,259
52	2,751	138,039,699	6,231	264,147,314
53	2,695	133,357,231	6,321	268,976,453
54	2,652	131,962,208	6,118	260,793,318
55	2,482	120,803,637	5,920	255,584,755
56	2,487	120,918,050	5,680	244,192,471
57	2,441	120,825,794	5,620	246,404,168
58	2,417	120,833,717	5,441	239,048,482

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, 2014 (continued)

	Men		Women	
Age	Number	Compensation	Number	Compensation
59	2,346	$ 116,781,840	5,029	$ 223,087,762
60	2,218	114,108,324	4,678	205,496,603
61	2,054	105,226,447	4,113	183,473,824
62	1,723	88,623,569	3,470	156,632,009
63	1,345	72,474,245	2,548	119,575,900
64	1,154	64,678,825	2,047	96,403,377
65	875	48,763,579	1,548	70,588,388
66	694	42,065,875	1,038	48,877,318
67	524	33,015,087	732	33,005,173
68	486	27,889,210	620	28,546,763
69	282	16,865,871	349	15,502,920
70	238	13,193,246	266	11,213,774
71	182	9,358,838	189	8,007,044
72	159	8,573,046	165	6,603,269
73	111	6,152,399	114	4,465,046
74	92	4,761,119	83	3,228,208
75	73	4,282,711	56	2,420,088
76	62	2,894,287	44	1,537,557
77	37	1,830,863	33	1,142,544
78	30	1,440,197	20	737,426
79	19	907,389	18	738,210
80	15	1,187,284	13	466,193
81	13	619,192	5	188,262
82	5	390,339	9	285,525
83	8	540,880	5	148,724
84	5	374,010	3	69,339
85	3	188,307	1	45,142
86	1	30,604		
87	2	269,317	1	69,150
88			2	77,335
89			1	21,515
90	2	43,096		
Total	95,472	$ 4,381,439,706	211,841	$ 8,550,606,111

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, 2014

	Men		Women	
Service	Number	Compensation	Number	Compensation
0	4,468	$ 53,021,735	11,178	$ 136,313,301
1	7,541	237,576,823	14,982	451,771,967
2	6,886	266,959,407	14,220	497,927,201
3	5,634	224,320,856	11,249	411,078,869
4	4,685	197,224,733	9,225	346,291,692
5	4,022	170,453,442	7,637	294,840,693
6	3,241	146,089,668	6,673	255,333,546
7	5,062	217,560,570	11,085	423,638,414
8	4,544	206,558,368	10,475	407,372,931
9	4,472	203,716,028	10,802	424,959,632
10	3,990	184,698,676	9,492	383,769,334
11	3,719	176,156,024	8,744	366,098,107
12	3,310	162,124,634	7,679	331,007,444
13	2,793	141,405,601	6,890	301,723,280
14	2,906	148,989,535	7,519	326,239,420
15	2,822	144,107,746	7,209	316,551,866
16	2,652	140,212,743	6,813	302,196,027
17	2,423	129,214,546	6,091	277,865,562
18	2,228	120,829,021	5,402	250,363,628
19	2,112	118,154,976	4,962	235,509,831
20	1,913	105,889,725	4,452	216,753,929
21	1,999	113,869,451	4,053	203,205,117
22	1,578	93,904,351	3,612	186,100,691
23	1,587	93,140,260	3,222	167,740,720
24	1,177	72,171,353	2,583	138,806,478
25	1,404	83,298,450	2,769	148,585,125
26	1,211	72,423,453	2,628	142,571,250
27	1,179	74,071,832	2,406	132,769,514
28	979	64,143,749	1,932	111,686,855
29	660	45,184,202	1,518	89,614,974
30	554	38,774,001	1,238	72,427,898
31	423	30,285,733	810	49,563,866
32	267	20,307,140	463	29,831,993
33	188	14,951,727	358	23,554,365
34	171	13,253,821	271	16,982,763
35	137	11,409,220	296	18,529,299
36	130	10,548,610	234	15,311,605
37	103	9,341,532	191	12,279,333
38	81	6,093,275	132	8,964,272
39	49	4,064,604	95	6,651,821

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, 2014 (continued)

	Men		Women	
Service	Number	Compensation	Number	Compensation
40	41	$ 3,236,286	65	$ 4,958,907
41	36	2,809,769	61	3,785,037
42	16	1,286,650	37	2,557,425
43	25	1,972,128	26	1,897,993
44	14	1,267,177	17	1,216,240
45	10	1,033,590	18	1,338,601
46	6	592,065	10	883,493
47	11	1,190,190	5	337,078
48	3	295,200	1	86,898
49	3	607,626		
50	1	77,979	1	64,409
51	2	164,961		
52	2	253,580	6	463,483
53			1	41,354
54	1	94,037	1	48,865
55	1	56,847	1	67,849
59			1	73,866
Total	95,472	$ 4,381,439,706	211,841	$ 8,550,606,111

Appendix B: Detailed Tabulations of Member Data

Table B-4: The Number and Valuation Compensation of Disabled Members Distributed by Age as of December 31, 2014

	Men		Women	
Age	Number	Compensation	Number	Compensation
27	1	$ 26,230		
29	2	60,069	1	$ 15,804
30			4	37,061
31	4	93,157	11	310,450
32	2	71,397	8	203,777
33	4	121,512	16	505,761
34	6	177,885	8	224,397
35	3	80,312	15	435,471
36	9	299,648	22	745,568
37	10	324,360	28	821,809
38	14	347,095	37	1,204,133
39	15	447,317	48	1,639,705
40	19	664,537	45	1,319,312
41	26	935,179	38	1,126,521
42	23	802,487	61	1,841,651
43	28	845,106	76	2,270,908
44	22	646,403	92	2,850,724
45	33	923,220	111	3,421,935
46	49	1,579,031	103	3,313,034
47	65	2,155,158	124	4,109,597
48	60	5,105,297	130	4,161,579
49	74	2,677,286	161	5,039,083
50	79	2,712,807	183	5,800,637
51	75	2,628,781	187	6,002,186
52	106	3,478,395	198	6,748,791
53	95	3,229,467	235	7,371,670
54	89	2,846,577	273	8,171,892
55	108	3,799,828	262	8,432,423
56	136	4,402,637	285	8,800,284
57	132	4,436,859	284	8,896,000
58	164	5,854,008	288	9,084,114
59	144	4,988,995	318	10,353,402
60	137	4,446,412	304	9,641,942
61	125	4,322,907	282	9,302,977
62	122	4,215,637	244	7,677,467
63	128	4,310,170	263	8,623,945
64	145	4,783,472	232	8,055,544
65	88	2,989,608	129	4,125,428
66	16	436,498	15	436,966
67	7	177,693	12	373,393

Appendix B: Detailed Tabulations of Member Data

Table B-4: The Number and Valuation Compensation of Disabled Members Distributed by Age as of December 31, 2014 (continued)

	Men		Women	
Age	Number	Compensation	Number	Compensation
68	8	$ 329,965	22	$ 607,373
69	10	352,484	16	517,772
70	6	179,141	14	564,527
71	4	122,100	11	320,660
72	9	244,628	7	195,146
73	1	30,525	5	264,260
74	2	61,050	5	125,262
75	3	81,861	4	101,037
76			1	47,342
77	2	52,034	2	61,050
78			1	30,525
79	1	30,525	1	30,525
80	2	61,050		
81	2	61,050	1	30,525
83	1	30,525	2	61,050
89			1	17,825
94	1	30,525		
Total	2,417	$ 84,110,900	5,226	$ 166,472,220

Appendix B: Detailed Tabulations of Member Data

Table B-5: The Number and Accumulated Contributions of Terminated Vested Members Distributed by Age as of December 31, 2014

	Men		Women	
Age	Number	Contributions	Number	Contributions
18			1	$ 2,250
19	3	$ 12,260		
20	6	1,872	7	4,893
21	22	15,571	10	11,965
22	56	64,295	45	36,778
23	93	125,016	155	217,550
24	235	325,492	457	820,775
25	357	739,865	888	2,255,954
26	545	1,390,545	1,212	3,790,565
27	642	1,836,626	1,546	5,688,084
28	836	3,042,865	1,753	7,575,701
29	897	3,493,255	2,214	11,445,178
30	1,056	4,897,803	2,674	15,321,248
31	1,033	5,337,271	2,959	19,092,956
32	1,224	6,957,228	3,184	22,727,111
33	1,233	8,255,239	3,420	26,247,851
34	1,191	8,208,883	3,326	28,629,484
35	1,234	9,291,021	3,380	29,562,379
36	1,193	10,034,161	3,265	30,171,917
37	1,213	10,625,872	3,172	30,975,047
38	1,191	10,975,875	3,116	32,498,058
39	1,071	11,824,247	2,857	30,531,907
40	1,205	14,152,009	2,915	32,395,383
41	1,155	14,212,489	2,748	32,044,895
42	1,212	15,211,733	2,746	33,495,078
43	1,228	16,533,026	2,723	33,057,996
44	1,337	18,128,679	2,986	39,007,618
45	1,219	17,838,614	2,907	36,957,330
46	1,108	16,497,614	2,620	35,955,601
47	1,055	17,021,597	2,439	34,049,139
48	1,049	18,191,719	2,241	32,203,760
49	1,046	17,369,629	2,189	32,235,563
50	1,003	17,581,584	2,255	31,168,690
51	923	16,676,386	2,183	32,434,875
52	941	16,458,323	2,128	32,285,348
53	867	16,263,365	2,115	32,027,450
54	905	16,167,673	2,119	33,392,466
55	847	17,331,795	1,932	33,019,054
56	806	16,875,135	1,942	32,627,748
57	823	15,796,765	1,908	34,041,499

Appendix B: Detailed Tabulations of Member Data

Table B-5: The Number and Accumulated Contributions of Terminated Vested Members Distributed by Age as of December 31, 2014 (continued)

	Men		Women	
Age	Number	Contributions	Number	Contributions
58	794	$ 16,088,861	1,858	$ 34,368,366
59	780	15,434,422	1,793	35,141,761
60	721	14,280,855	1,629	31,475,746
61	566	10,762,654	1,314	23,238,452
62	549	10,272,158	1,137	19,871,064
63	442	7,606,868	868	13,536,127
64	441	7,516,296	778	11,874,045
65	424	4,478,581	691	8,427,902
66	281	3,496,661	457	4,872,165
67	239	2,309,990	386	4,001,829
68	210	3,476,086	323	3,354,474
69	124	1,052,982	204	1,961,162
70	125	1,199,858	154	1,463,435
71	65	609,237	103	1,325,728
72	67	667,096	73	652,500
73	44	226,068	66	575,078
74	40	548,875	39	309,269
75	32	240,112	27	334,420
76	23	230,136	27	116,002
77	26	175,792	13	73,364
78	12	46,119	17	146,763
79	16	53,627	15	148,817
80	13	118,167	14	127,156
81	7	30,973	4	28,483
82	6	28,712	5	7,195
83	7	9,396	4	16,116
84	1	5,040	2	26,375
85	4	16,467	1	25
86	3	16,341	1	3
87	2	93		
88	1	16,418	1	2,802
90	2	37		
91	1	1,998		
96			2	16,111
Total	40,128	$ 496,780,373	94,743	$ 1,097,499,879

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 Age as of December 31, 2014

	Men		Women	
Age	Number	Allowances	Number	Allowances
18			1	$ 15,360
19	2	$ 19,188	2	53,952
20	3	32,760	1	9,312
21	3	19,812		
22			4	61,380
23	1	34,812	2	17,292
24	2	7,248	4	42,120
25	4	56,904	3	48,216
26	6	52,320	2	31,152
27	5	67,512	5	85,860
28	2	26,496	5	70,308
29	3	24,108	7	71,424
30	7	100,332	8	114,144
31	5	47,484	8	83,448
32	6	95,868	12	144,564
33	10	58,236	11	161,148
34	14	244,128	14	81,288
35	4	59,796	8	105,984
36	6	49,092	9	119,916
37	9	148,260	17	199,848
38	20	291,540	18	223,608
39	11	165,132	19	271,524
40	13	139,680	18	211,632
41	10	121,164	15	131,580
42	13	147,336	17	200,880
43	20	209,340	26	236,712
44	20	227,160	25	288,504
45	21	130,284	31	382,932
46	26	286,620	42	451,212
47	24	285,300	35	341,544
48	45	873,612	41	437,052
49	69	1,622,412	59	944,556
50	124	3,394,236	110	1,868,700
51	232	6,036,000	227	4,932,432
52	311	8,497,284	389	9,251,508

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 Age as of December 31, 2014 (continued)

	Men		Women	
Age	Number	Allowances	Number	Allowances
53	395	$ 11,484,240	535	$ 13,854,324
54	479	14,446,788	792	21,834,936
55	541	16,548,660	998	28,075,056
56	642	19,634,364	1,204	34,009,656
57	709	22,478,736	1,571	47,268,180
58	836	26,385,948	2,001	61,345,440
59	902	29,426,688	2,301	71,617,920
60	1,147	36,386,904	2,873	85,968,312
61	1,455	42,137,076	4,044	109,014,888
62	1,833	50,052,936	4,809	118,941,156
63	2,349	56,717,904	5,616	121,472,952
64	2,478	57,387,720	5,853	125,184,852
65	2,665	62,658,132	6,073	125,129,928
66	2,948	67,436,772	6,520	128,108,052
67	3,123	70,956,384	6,726	129,001,788
68	3,483	81,141,036	7,237	139,033,560
69	2,445	55,372,884	5,033	93,050,736
70	2,470	55,875,461	4,862	88,529,446
71	2,284	51,943,728	4,832	88,587,492
72	2,354	56,316,348	4,831	87,594,720
73	1,957	45,065,472	4,019	71,619,864
74	1,813	41,982,288	3,725	64,931,964
75	1,667	38,281,476	3,413	58,213,104
76	1,617	37,667,832	3,154	53,830,656
77	1,458	33,397,116	3,074	51,304,920
78	1,329	32,382,072	2,824	46,961,172
79	1,318	30,814,968	2,740	44,857,092
80	1,179	27,258,600	2,720	44,004,588
81	1,123	26,655,096	2,232	34,792,476
82	999	23,058,240	2,196	34,646,760
83	922	21,497,472	2,075	31,469,940
84	846	20,304,060	1,988	31,227,552
85	803	19,499,856	1,766	26,944,320
86	604	14,384,832	1,664	24,751,932
87	545	12,687,504	1,486	21,936,504

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 Age as of December 31, 2014 (continued)

	Men		Women	
Age	Number	Allowances	Number	Allowances
88	470	$ 10,725,000	1,262	$ 18,725,172
89	368	8,574,240	1,156	16,201,368
90	313	6,815,316	984	13,394,052
91	223	4,739,868	797	10,551,876
92	198	3,963,552	650	8,832,072
93	120	3,426,156	594	7,689,444
94	133	2,777,748	481	5,916,192
95	58	1,125,612	359	4,687,860
96	56	1,137,084	261	3,128,148
97	31	465,924	191	2,394,216
98	19	364,272	132	1,874,892
99	13	326,976	99	1,265,112
100	10	188,280	69	935,856
Total	56,781	$ 1,377,927,077	126,017	$ 2,476,403,590

Appendix B: Detailed Tabulations of Member Data

Table B-7: 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, 2014

	Men		Women	
Annuity Type	Number	Allowances	Number	Allowances
Maximum	19,386	$ 449,657,091	67,852	$ 1,299,929,699
Option 1	1,096	28,530,612	4,591	71,405,413
Option 2	9,159	219,523,762	4,536	71,937,075
Option 3	3,299	97,032,058	2,744	54,301,642
Option 4	8,869	226,826,220	22,182	522,262,865
Option 5-2	187	5,383,903	73	735,453
Option 5-3	124	4,134,602	121	2,028,162
Option 6-2	7,668	189,900,394	6,756	138,752,157
Option 6-3	3,974	120,856,008	6,217	153,683,364
Other	13	488,903	6	139,041
Survivors of Deceased Members	3,006	35,593,524	10,939	161,228,719
Total	56,781	$ 1,377,927,077	126,017	$ 2,476,403,590

Appendix B: Detailed Tabulations of Member Data

Table B-8: The Number and Annual Retirement Allowances of Retired Members (Disabled at Retirement) Distributed by Age of December 31, 2014

	Men		Women	
Age	Number	Allowances	Number	Allowances
50	5	$ 80,400	1	$ 22,605
51	6	135,187	5	104,134
52	9	186,896	8	120,036
53	22	419,322	22	433,979
54	15	319,551	34	655,979
55	21	468,828	26	529,902
56	30	646,338	62	1,204,020
57	50	1,175,886	54	1,249,932
58	51	1,126,660	83	1,744,054
59	67	1,457,852	124	2,782,704
60	94	2,045,273	181	4,096,970
61	124	2,718,492	279	6,028,369
62	143	3,087,667	353	7,632,709
63	164	3,391,009	412	8,488,640
64	156	3,388,229	455	9,014,724
65	229	4,142,300	494	8,844,342
66	307	5,059,285	594	10,540,448
67	341	6,033,473	572	9,703,500
68	312	5,775,511	584	9,887,183
69	223	3,749,399	434	6,966,664
70	183	2,972,527	423	6,683,467
71	190	2,944,625	389	5,554,723
72	184	3,192,187	386	6,083,648
73	127	2,192,006	309	4,542,619
74	136	1,974,542	252	3,373,301
75	141	2,145,634	197	2,696,228
76	75	973,444	214	2,735,316
77	90	1,301,636	197	2,604,367
78	51	748,363	105	1,415,910
79	45	817,459	90	1,139,437
80	47	747,627	65	977,314
81	30	508,847	62	847,575
82	22	460,593	54	668,528
83	22	318,808	43	592,946
84	27	429,056	45	551,686
85	21	317,142	43	572,699
86	11	200,997	46	462,818
87	9	126,003	34	361,850
88	9	126,494	48	500,481

Appendix B: Detailed Tabulations of Member Data

Table B-8: The Number and Annual Retirement Allowances of Retired Members (Disabled at Retirement) Distributed by Age of December 31, 2014 (continued)

	Men		Women	
Age	Number	Allowances	Number	Allowances
89	16	$ 279,006	36	$ 390,870
90	16	267,478	34	197,156
91	8	173,056	24	265,744
92	16	279,431	26	268,778
93	3	49,819	15	148,874
94	3	37,654	10	121,321
95	1	14,457	14	109,978
96	3	100,285	3	66,196
97	1	29,947	4	36,486
98			2	4,359
99			4	76,890
100			2	27,015
Total	3,856	$ 69,136,681	7,953	$ 134,129,474

Appendix B: Detailed Tabulations of Member Data

Table B-9: The Number and Annual Retirement Allowances of Retired Members (Disabled at Retirement) Distributed by Annuity Type of December 31, 2014

	Men		Women	
Annuity Type	Number	Allowances	Number	Allowances
Maximum	2,066	$ 39,289,464	5,774	$ 100,219,186
Option 1	116	2,162,338	389	5,483,308
Option 2	590	7,825,950	437	5,309,056
Option 3	244	4,538,980	212	3,249,821
Option 4	158	3,727,512	402	7,904,265
Option 5-2	3	44,311	3	9,608
Option 5-3	2	31,344	2	18,609
Option 6-2	437	6,595,719	386	5,553,013
Option 6-3	240	4,921,063	347	6,361,854
Other			1	20,754
Total	3,856	$ 69,136,681	7,953	$ 134,129,474

Appendix C: Summary of Main Benefit and Contribution Provisions

A summary of the main benefit provisions of the Retirement System and of the sources of revenue from which benefits are paid is presented in the following digest. Items in parentheses in the text are the provisions applicable to law enforcement officers.

"Average final compensation" as used in the summary means the average annual compensation during the four consecutive years of membership service which afford the highest such average. "Membership service" means service represented by regular contributions. "Creditable service" means membership service and 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: (a) after age 65 (55) and completion of five years of creditable service; (b) after age 60 and completion of 25 years of creditable service (not applicable to law enforcement officers); or (c) after completion of 30 years of creditable service.
Amount of Allowance	1.82% of average final compensation multiplied by the number of years of creditable service. In no event will a member whose creditable service commenced on or before June 30, 1963 receive a smaller retirement allowance than he would have received under the benefit provisions of the system in effect on that date.

Appendix C: Summary of Main Benefit and Contribution Provisions

Reduced Retirement Allowance

Condition for Allowance	A reduced retirement allowance is payable to any member who retires from service prior to becoming eligible for an unreduced retirement allowance but after age 60 and completion of five years of membership service (age 55 and five years of creditable service).
Amount of Allowance	The member's reduced retirement allowance is equal to 1.82% of average final compensation multiplied by the number of years of creditable service at 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. In no event will a member whose creditable service commenced on or before June 30, 1963 receive a smaller retirement allowance than he would have received under the benefit provisions of the system in effect on that date.
	OR
Condition for Allowance	A reduced retirement allowance is payable to any member who retires from service after age 50 and completion of 20 (15) years of creditable service but prior to becoming eligible for a reduced or unreduced retirement allowance.
Amount of Allowance	The member's reduced retirement allowance is equal to 1.82% of average final compensation multiplied by the number of years of creditable service at date of retirement reduced by the lesser of: (i) 5/12 (1/3) of 1% for each month by which his age is less than 60 (55), plus, if the member is not a law enforcement officer, 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.

Appendix C: Summary of Main Benefit and Contribution Provisions

Deferred Retirement Allowance	Any member who separates from service after completing five or more years of membership service prior to becoming eligible for an unreduced or reduced retirement allowance and who leaves his total accumulated contributions in the system may receive a deferred retirement allowance, beginning at age 60 (55), computed in the same way as a reduced retirement allowance, or, if the member has 20 or more years of service, at age 50 computed in the same way as a reduced service retirement allowance, on the basis of his creditable service and compensation to the date of separation.
Return of Contributions	Upon the withdrawal of a member without a retirement allowance and upon his request, the member's contributions are returned, together with accumulated regular interest. Upon the death of a member before retirement, his contributions, together with the full accumulated regular interest thereon, are paid to his estate or to person(s) designated by the member unless the designated beneficiary, if eligible, elects the survivor's alternate benefit described below. The current interest rate on member contributions is 4%.
Survivor's Alternate Benefit	Upon the death of a member in service who has met conditions (a) or (b) below, 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.

Appendix C: Summary of Main Benefit and Contribution Provisions

	(a) age 60 (55) and completion five years of membership (creditable) service; or (b) completion of 20 years of creditable service. Members receiving a benefit from the Disability Income Plan are eligible for this benefit.
Death After Retirement	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. 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. Upon the death of a beneficiary, a benefit may be provided by the Retirees' Contributory Death Benefit Plan.
Other Death Benefits	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.
Optional Arrangements at Retirement	In lieu of the full retirement allowance, any member may elect to receive a reduced retirement allowance equal in value to the full allowance, with the provision that: 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 a person(s) designated by the member, or Option 2 - At the death of the member his allowance shall be continued throughout the life of

Appendix C: Summary of Main Benefit and Contribution Provisions

	such other person as the member shall have designated at the time of his retirement, or 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. 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 - A member may elect either Option 2 or Option 3 with the added provision that in the event the designated beneficiary predeceases the member, the retirement allowance payable to the member after the designated beneficiary's death shall be equal to the retirement allowance which would have been payable had the member not elected the option.
Post-Retirement Increases in Allowances	Future increases in allowances may be granted at the discretion of the State.
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 Local Governmental Employees' Retirement System (LGERS), 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.

Appendix C: Summary of Main Benefit and Contribution Provisions

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 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. A member who became a member of the Supplemental Retirement Income Plan prior to

Appendix C: Summary of Main Benefit and Contribution Provisions

retirement and who remains a member of the Supplemental Retirement Income Plan may also make a one-time election to transfer eligible balances, not including any Roth after-tax contributions, from any of the following plans to the Supplemental Retirement Income Plan, subject to the applicable requirements of the Supplemental Retirement Income Plan, and then through the Supplemental Retirement Income Plan to this Retirement System:

(1) A plan participating in the North Carolina Public School Teachers' and Professional Educators' Investment Plan.

(2) A plan described in section 403(b) of the Internal Revenue Code.

(3) A plan described in section 457(b) of the Internal Revenue Code that is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state.

(4) An individual retirement account or annuity described in Section 408(a) or 408(b) of the Internal Revenue Code that is eligible to be rolled over and would otherwise be includible in gross income.

(5) A tax-qualified plan described in section 401(a) or 403(a) of the Internal Revenue Code.

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

Member Contributions	Each member contributes 6% of his compensation.
Employer Contributions	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 covers the liability on account of service rendered before the establishment of the retirement system and the liability on account of increases in benefits for service rendered prior to the effective date of any amendment.
Changes Since Prior Valuation	None.

Appendix D: Actuarial Assumptions and Methods

Assumptions are based on the experience investigation prepared as of December 31, 2009 and adopted by the Board of Trustees on October 21, 2010. The next experience investigation will be based on the five-year period ending December 31, 2014. The actuary will present this investigation during the fall of 2015 for adoption by the Board of Trustees with the intent of using the assumptions recommended in the December 31, 2014 experience review beginning 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.

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

Annual Rates of Withdrawal

	General Employees and Other Education		Classroom Teachers		Law Enforcement Officers	
Service	Male	Female	Male	Female	Male	Female
0	.270	.270	.260	.220	.180	.180
1	.180	.185	.180	.170	.090	.090
2	.120	.120	.130	.130	.070	.070
3	.080	.100	.100	.100	.070	.070
4	.070	.090	.080	.080	.060	.060

General Employees and Other Education

Annual Rates of

	Withdrawal and Vesting*		Base Mortality**		Disability	
Age	Male	Female	Male	Female	Male	Female
25	.0650	.0900	.0004	.0002	.0002	.0002
30	.0650	.0800	.0005	.0003	.0004	.0004
35	.0500	.0600	.0008	.0005	.0010	.0010
40	.0400	.0400	.0011	.0008	.0030	.0018
45	.0350	.0400	.0016	.0012	.0050	.0032
50	.0350	.0400	.0023	.0018	.0084	.0050
55	.0350	.0400	.0033	.0028	.0144	.0088
60	.0350	.0400	.0054	.0043	.0240	.0138
65			.0081	.0062		
69			.0099	.0076		

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

** Base mortality rates as of December 31, 2003.

Appendix D: Actuarial Assumptions and Methods

Classroom Teachers

Age	Annual Rates of Withdrawal and Vesting*		Base Mortality**		Disability	
	Male	Female	Male	Female	Male	Female
25	.0600	.0700	.0004	.0002	.0001	.0002
30	.0550	.0600	.0004	.0003	.0001	.0003
35	.0400	.0450	.0007	.0005	.0003	.0006
40	.0350	.0300	.0010	.0007	.0007	.0010
45	.0350	.0300	.0014	.0011	.0014	.0018
50	.0350	.0300	.0020	.0017	.0023	.0032
55	.0350	.0300	.0028	.0025	.0047	.0055
60	.0350	.0300	.0044	.0039	.0077	.0102
65			.0070	.0058		
69			.0091	.0073		

* These rates apply only after five years of membership in the system.
** Base mortality rates as of December 31, 2003.

Law Enforcement Officers

Age	Annual Rates of Withdrawal and Vesting*		Base Mortality**		Disability	
	Male	Female	Male	Female	Male	Female
25	.0400	.0400	.0004	.0002	.0033	.0033
30	.0350	.0350	.0004	.0003	.0043	.0043
35	.0300	.0300	.0008	.0005	.0060	.0060
40	.0300	.0300	.0011	.0007	.0079	.0079
45	.0300	.0300	.0015	.0011	.0110	.0110
50	.0300	.0300	.0021	.0017	.0176	.0176
55	.0300	.0300	.0030	.0025		
60	.0300	.0300	.0049	.0039		
65			.0076	.0058		
69			.0095	.0073		

* These rates apply only after five years of membership in the system.
** Base mortality rates as of December 31, 2003.

Appendix D: Actuarial Assumptions and Methods

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

General Employees and Other Education - Males

	Service						
Age	5	10	15	20	25	30	35
50				0.0370	0.1000	0.3500	0.3500
55				0.0550	0.1000	0.3000	0.2000
60	0.1000	0.1000	0.1000	0.1000	0.3500	0.3000	0.2250
65	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500
70	0.2250	0.2250	0.2250	0.2250	0.2250	0.2250	0.2250
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

General Employees and Other Education - Females

	Service						
Age	5	10	15	20	25	30	35
50				0.0400	0.0350	0.3500	0.3500
55				0.0550	0.0900	0.3500	0.2250
60	0.1400	0.1400	0.1400	0.1400	0.4500	0.3500	0.2500
65	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500
70	0.2500	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

Classroom Teachers - Males

	Service						
Age	5	10	15	20	25	30	35
50				0.0300	0.0900	0.3000	0.3000
55				0.0450	0.0900	0.3750	0.3000
60	0.1200	0.1200	0.1200	0.1200	0.4000	0.3750	0.3000
65	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500
70	0.2500	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

Classroom Teachers - Females

	Service						
Age	5	10	15	20	25	30	35
50				0.0350	0.0900	0.3000	0.3000
55				0.0550	0.1000	0.4500	0.2750
60	0.1500	0.1500	0.1500	0.1500	0.5000	0.4500	0.2750
65	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
70	0.2750	0.2750	0.2750	0.2750	0.2750	0.2750	0.2750
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Appendix D: Actuarial Assumptions and Methods

Law Enforcement Officers

	Service						
Age	5	10	15	20	25	30	35
50			0.0600	0.0600	0.0600	0.5000	0.5000
55	0.3000	0.3000	0.3000	0.3000	0.3000	0.5000	0.5000
60	0.2500	0.2500	0.2500	0.2500	0.2500	0.5000	0.5000
65	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
70	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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

	Annual Rate of Salary Increase		
Service	Classroom Teachers	General Employees and Other Education	Law Enforcement Officers
0	7.55%	5.50%	9.10%
5	6.55	5.50	7.10
10	5.70	5.45	5.40
15	5.45	5.25	4.95
20	5.25	5.25	4.65
25	5.25	5.25	4.25
30	5.25	5.25	4.25
35	5.25	5.25	4.25
40	4.75	4.75	4.25
45	4.25	4.25	4.25
50	4.25	4.25	4.25

Appendix D: Actuarial Assumptions and Methods

Representative values of the assumed post-retirement mortality rates as of December 31, 2003 prior to any mortality improvements are as follows:

Annual Rate of Death after Retirement (Members Healthy at Retirement)

	Classroom Teachers		General Employees and Other Education		Law Enforcement Officers	
Age	Male	Female	Male	Female	Male	Female
55	.0058	.0035	.0061	.0039	.0059	.0035
60	.0075	.0062	.0090	.0069	.0082	.0062
65	.0121	.0104	.0149	.0114	.0134	.0104
70	.0201	.0167	.0246	.0186	.0222	.0167
75	.0339	.0281	.0422	.0310	.0378	.0281
80	.0579	.0459	.0720	.0508	.0644	.0459

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 Retired Members Disabled at Retirement	Female Retired Members Disabled at Retirement
55	.0061	.0044	.0277	.0176
60	.0090	.0077	.0342	.0229
65	.0149	.0125	.0407	.0296
70	.0246	.0207	.0483	.0401
75	.0422	.0341	.0596	.0558
80	.0720	.0563	.0775	.0771

Mortality Improvements: Representative values of the assumed mortality improvement rates (applied to pre-retirement mortality rates for active members and post-retirement mortality rates for retirees (healthy at retirement) and survivors of deceased members after such tables have been set back or set forward) are as follows:

Age	Male Projection Scale	Female Projection Scale
25	0.010	0.014
30	0.005	0.010
35	0.005	0.011
40	0.008	0.015
45	0.013	0.016
50	0.018	0.017
55	0.019	0.008
60	0.016	0.005
65	0.014	0.005
70	0.015	0.005
75	0.014	0.008
80	0.010	0.007

Appendix D: Actuarial Assumptions and Methods

Deaths After Retirement (Non-Disabled): According to the RP-2000 Mortality tables for retirees. These tables are set back one year for male teachers, set forward one year for all general employees and unadjusted for female teachers and all law enforcement officers. These tables are also set forward one year for male survivors of deceased members and set forward two years for female survivors of deceased members. The base retiree RP-2000 tables have no rates prior to age 50. The active employee rates of RP-2000 are used for ages less than 50 prior to any adjustments for set back or set forward.

Death After Retirement (Disabled): According to the RP-2000 Mortality tables for retirees disabled at retirement set back six years for males and set forward one year for females.

Deaths Prior to Retirement: According to the RP-2000 Mortality tables for active employees. These tables are set back one year for male teachers, set forward one year for all general employees and unadjusted for female teachers and all law enforcement officers. The base RP-2000 tables for active employees have no rates after age 70. The rates from ages 71 to 79 are smoothed based on the active rate at age 70 and the retiree rate at age 80. Retiree rates are used for age 80 and beyond.

Mortality Projection (Non-Disabled): All mortality rates are projected from December 31, 2003 using generational improvement with Scale AA.

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

Leave Conversions: Sick leave can be converted to increase creditable service and used to meet the eligibility requirements for retirement. Unused vacation leave can be converted to increase creditable service or compensation, but does not add to the eligibility service. The assumed impact of these conversions is shown in the table below.

	Classroom Teachers		General		Law Enforcement		Other Education	
	Males	Females	Males	Females	Males	Females	Males	Females
Increase in AFC	2.25%	2.25%	2.25%	2.25%	1.50%	1.50%	3.50%	3.50%
Increase in Creditable Service (years)								
Credited	1.25	1.00	0.90	0.65	1.50	1.50	1.25	1.00
Eligibility	1.00	1.00	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: 0.10% of payroll.

Appendix D: Actuarial Assumptions and Methods

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.

Asset Valuation Method: Actuarial value, as developed in Table 8. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The actuarial value of assets is not allowed to be greater than 120% of the market value of assets or less than 80% of the market value of assets.

Changes Since Prior Valuation: None.

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
2015	$ 64,587,418	$ 824,224	$ 1,120,098	$ 4,372,484	$ 14,226	$ 4,595,738	$ 66,740,768
2016	66,740,768	783,549	1,058,415	4,494,929	13,524	4,744,242	68,818,521
2017	68,818,521	752,650	1,014,361	4,612,323	12,991	4,887,408	70,847,626
2018	70,847,626	725,992	1,006,539	4,729,294	12,531	5,029,151	72,867,483
2019	72,867,483	701,523	998,599	4,850,451	12,108	5,170,146	74,875,192
2020	74,875,192	677,984	990,544	4,980,492	11,702	5,309,967	76,861,493
2021	76,861,493	655,304	981,396	5,120,487	11,311	5,447,873	78,814,268
2022	78,814,268	632,096	970,900	5,268,496	10,910	5,582,996	80,720,854
2023	80,720,854	608,038	804,165	5,421,920	10,495	5,711,834	82,412,476
2024	82,412,476	583,088	620,661	5,580,269	10,064	5,818,873	83,844,765
2025	83,844,765	557,666	531,436	5,741,834	9,625	5,913,711	85,096,119
2026	85,096,119	531,668	451,090	5,909,661	9,177	5,993,693	86,153,732
2027	86,153,732	504,870	436,981	6,081,713	8,714	6,062,575	87,067,731
2028	87,067,731	477,520	454,534	6,257,713	8,242	6,121,877	87,855,707
2029	87,855,707	449,544	456,291	6,437,920	7,759	6,172,315	88,488,178
2030	88,488,178	420,850	423,151	6,620,599	7,264	6,209,468	88,913,784
2031	88,913,784	391,478	390,755	6,802,944	6,757	6,231,643	89,117,959
2032	89,117,959	361,891	358,729	6,979,055	6,246	6,237,996	89,091,274
2033	89,091,274	332,065	327,268	7,147,496	5,732	6,227,895	88,825,274
2034	88,825,274	302,368	296,847	7,304,915	5,219	6,200,879	88,315,234
2035	88,315,234	273,442	267,098	7,437,041	4,720	6,157,123	87,571,136
2036	87,571,136	245,000	238,237	7,542,206	4,229	6,097,407	86,605,345
2037	86,605,345	217,355	210,241	7,636,369	3,752	6,022,060	85,414,880
2038	85,414,880	190,077	185,371	7,709,988	3,281	5,931,281	84,008,340
2039	84,008,340	165,333	162,204	7,759,835	2,854	5,825,835	82,399,023
2040	82,399,023	141,987	140,074	7,795,623	2,451	5,706,276	80,589,286
2041	80,589,286	119,312	119,062	7,820,874	2,059	5,572,628	78,577,355
2042	78,577,355	97,462	98,402	7,835,674	1,682	5,424,738	76,360,601
2043	76,360,601	75,955	79,056	7,835,987	1,311	5,262,569	73,940,883
2044	73,940,883	56,005	62,660	7,806,954	967	5,086,890	71,338,517
2045	71,338,517	39,598	50,919	7,731,260	683	4,899,921	68,597,012
2046	68,597,012	28,732	41,991	7,610,148	496	4,704,777	65,761,868
2047	65,761,868	21,388	34,574	7,458,664	369	4,504,100	62,862,897
2048	62,862,897	15,811	28,412	7,289,255	273	4,299,541	59,917,133
2049	59,917,133	11,600	23,290	7,104,847	200	4,092,208	56,939,184
2050	56,939,184	8,454	19,003	6,907,650	146	3,883,065	53,941,910
2051	53,941,910	6,102	15,423	6,693,847	105	3,673,165	50,942,648
2052	50,942,648	4,353	12,423	6,464,351	75	3,463,723	47,958,721
2053	47,958,721	3,063	9,945	6,215,836	53	3,256,103	45,011,943
2054	45,011,943	2,140	7,892	5,959,251	37	3,051,493	42,114,180
2055	42,114,180	1,491	6,206	5,538,137	26	2,856,318	39,440,032
2056	39,440,032	1,045	4,841	5,284,149	18	2,671,422	36,833,173
2057	36,833,173	735	3,755	5,029,968	13	2,491,426	34,299,108
2058	34,299,108	516	2,916	4,776,482	9	2,316,695	31,842,744
2059	31,842,744	362	2,279	4,524,362	6	2,147,559	29,468,576
2060	29,468,576	253	1,786	4,274,279	4	1,984,316	27,180,648
2061	27,180,648	173	1,398	4,026,924	3	1,827,234	24,982,526
2062	24,982,526	115	1,095	3,782,889	2	1,676,548	22,877,393
2063	22,877,393	74	857	3,542,802	1	1,532,466	20,867,987
2064	20,867,987	46	669	3,307,242	1	1,395,166	18,956,625

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
2065	$ 18,956,625	$ 25	$ 523	$ 3,076,786	$ 0	$ 1,264,795	$ 17,145,182
2066	17,145,182	10	412	2,851,997	0	1,141,465	15,435,072
2067	15,435,072	3	323	2,633,380	0	1,025,266	13,827,284
2068	13,827,284	1	254	2,421,414	0	916,247	12,322,372
2069	12,322,372	0	200	2,216,642	0	814,432	10,920,362
2070	10,920,362	0	158	2,019,586	0	719,803	9,620,737
2071	9,620,737	0	125	1,830,706	0	632,306	8,422,462
2072	8,422,462	0	100	1,650,405	0	551,851	7,324,008
2073	7,324,008	0	80	1,479,056	0	478,316	6,323,348
2074	6,323,348	0	64	1,317,010	0	411,539	5,417,941
2075	5,417,941	0	51	1,164,562	0	351,326	4,604,756
2076	4,604,756	0	41	1,021,968	0	297,449	3,880,278
2077	3,880,278	0	33	889,475	0	249,642	3,240,478
2078	3,240,478	0	27	767,323	0	207,607	2,680,789
2079	2,680,789	0	22	655,720	0	171,004	2,196,095
2080	2,196,095	0	18	554,804	0	139,458	1,780,767
2081	1,780,767	0	15	464,547	0	112,560	1,428,795
2082	1,428,795	0	12	384,759	0	89,885	1,133,933
2083	1,133,933	0	10	315,087	0	70,989	889,845
2084	889,845	0	9	255,001	0	55,431	690,284
2085	690,284	0	7	203,866	0	42,785	529,210
2086	529,210	0	6	160,979	0	32,635	400,872
2087	400,872	0	5	125,529	0	24,593	299,941
2088	299,941	0	4	96,628	0	18,305	221,622
2089	221,622	0	4	73,404	0	13,453	161,675
2090	161,675	0	3	55,029	0	9,762	116,411
2091	116,411	0	3	40,713	0	6,989	82,690
2092	82,690	0	2	29,705	0	4,937	57,924
2093	57,924	0	2	21,354	0	3,439	40,011
2094	40,011	0	2	15,123	0	2,362	27,252
2095	27,252	0	1	10,557	0	1,600	18,296
2096	18,296	0	1	7,263	0	1,068	12,102
2097	12,102	0	1	4,920	0	702	7,885
2098	7,885	0	1	3,281	0	455	5,060
2099	5,060	0	1	2,152	0	290	3,199
2100	3,199	0	1	1,389	0	182	1,993
2101	1,993	0	1	883	0	112	1,223
2102	1,223	0	0	552	0	69	740
2103	740	0	0	341	0	42	441
2104	441	0	0	208	0	26	259
2105	259	0	0	125	0	15	149
2106	149	0	0	74	0	8	83
2107	83	0	0	43	0	5	45
2108	45	0	0	25	0	2	22
2109	22	0	0	14	0	2	10
2110	10	0	0	7	0	1	4
2111	4	0	0	3	0	0	1
2112	1	0	0	1	0	0	0
2113	0	0	0	0	0	0	0
2114	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%	Present Value of Benefit Payments: Unfunded Payments at 3.73%	Present Value of Benefit Payments: Using Single Discount Rate of 7.25%
2015	$ 64,587,418	$ 4,372,484	$ 4,372,484	$ 0	$ 4,222,110	$ 0	$ 4,222,110
2016	66,740,768	4,494,929	4,494,929	0	4,046,941	0	4,046,941
2017	68,818,521	4,612,323	4,612,323	0	3,871,921	0	3,871,921
2018	70,847,626	4,729,294	4,729,294	0	3,701,739	0	3,701,739
2019	72,867,483	4,850,451	4,850,451	0	3,539,927	0	3,539,927
2020	74,875,192	4,980,492	4,980,492	0	3,389,121	0	3,389,121
2021	76,861,493	5,120,487	5,120,487	0	3,248,844	0	3,248,844
2022	78,814,268	5,268,496	5,268,496	0	3,116,785	0	3,116,785
2023	80,720,854	5,421,920	5,421,920	0	2,990,722	0	2,990,722
2024	82,412,476	5,580,269	5,580,269	0	2,869,993	0	2,869,993
2025	83,844,765	5,741,834	5,741,834	0	2,753,461	0	2,753,461
2026	85,096,119	5,909,661	5,909,661	0	2,642,370	0	2,642,370
2027	86,153,732	6,081,713	6,081,713	0	2,535,477	0	2,535,477
2028	87,067,731	6,257,713	6,257,713	0	2,432,496	0	2,432,496
2029	87,855,707	6,437,920	6,437,920	0	2,333,376	0	2,333,376
2030	88,488,178	6,620,599	6,620,599	0	2,237,377	0	2,237,377
2031	88,913,784	6,802,944	6,802,944	0	2,143,589	0	2,143,589
2032	89,117,959	6,979,055	6,979,055	0	2,050,425	0	2,050,425
2033	89,091,274	7,147,496	7,147,496	0	1,957,960	0	1,957,960
2034	88,825,274	7,304,915	7,304,915	0	1,865,812	0	1,865,812
2035	88,315,234	7,437,041	7,437,041	0	1,771,151	0	1,771,151
2036	87,571,136	7,542,206	7,542,206	0	1,674,775	0	1,674,775
2037	86,605,345	7,636,369	7,636,369	0	1,581,057	0	1,581,057
2038	85,414,880	7,709,988	7,709,988	0	1,488,391	0	1,488,391
2039	84,008,340	7,759,835	7,759,835	0	1,396,750	0	1,396,750
2040	82,399,023	7,795,623	7,795,623	0	1,308,337	0	1,308,337
2041	80,589,286	7,820,874	7,820,874	0	1,223,846	0	1,223,846
2042	78,577,355	7,835,674	7,835,674	0	1,143,275	0	1,143,275
2043	76,360,601	7,835,987	7,835,987	0	1,066,033	0	1,066,033
2044	73,940,883	7,806,954	7,806,954	0	990,287	0	990,287
2045	71,338,517	7,731,260	7,731,260	0	914,392	0	914,392
2046	68,597,012	7,610,148	7,610,148	0	839,224	0	839,224
2047	65,761,868	7,458,664	7,458,664	0	766,918	0	766,918
2048	62,862,897	7,289,255	7,289,255	0	698,833	0	698,833
2049	59,917,133	7,104,847	7,104,847	0	635,108	0	635,108
2050	56,939,184	6,907,650	6,907,650	0	575,740	0	575,740
2051	53,941,910	6,693,847	6,693,847	0	520,205	0	520,205
2052	50,942,648	6,464,351	6,464,351	0	468,410	0	468,410
2053	47,958,721	6,215,836	6,215,836	0	419,956	0	419,956
2054	45,011,943	5,959,251	5,959,251	0	375,403	0	375,403
2055	42,114,180	5,538,137	5,538,137	0	325,292	0	325,292
2056	39,440,032	5,284,149	5,284,149	0	289,392	0	289,392
2057	36,833,173	5,029,968	5,029,968	0	256,850	0	256,850
2058	34,299,108	4,776,482	4,776,482	0	227,418	0	227,418
2059	31,842,744	4,524,362	4,524,362	0	200,853	0	200,853
2060	29,468,576	4,274,279	4,274,279	0	176,924	0	176,924
2061	27,180,648	4,026,924	4,026,924	0	155,417	0	155,417
2062	24,982,526	3,782,889	3,782,889	0	136,129	0	136,129
2063	22,877,393	3,542,802	3,542,802	0	118,872	0	118,872
2064	20,867,987	3,307,242	3,307,242	0	103,466	0	103,466

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	Present Value of Benefit Payments: Funded Payments at 7.25%	Present Value of Benefit Payments: Unfunded Payments at 3.73%	Present Value of Benefit Payments: Using Single Discount Rate of 7.25%
2065	$ 18,956,625	$ 3,076,786	$ 3,076,786	$ 0	$ 89,750	$ 0	$ 89,750
2066	17,145,182	2,851,997	2,851,997	0	77,569	0	77,569
2067	15,435,072	2,633,380	2,633,380	0	66,781	0	66,781
2068	13,827,284	2,421,414	2,421,414	0	57,255	0	57,255
2069	12,322,372	2,216,642	2,216,642	0	48,870	0	48,870
2070	10,920,362	2,019,586	2,019,586	0	41,516	0	41,516
2071	9,620,737	1,830,706	1,830,706	0	35,089	0	35,089
2072	8,422,462	1,650,405	1,650,405	0	29,495	0	29,495
2073	7,324,008	1,479,056	1,479,056	0	24,646	0	24,646
2074	6,323,348	1,317,010	1,317,010	0	20,462	0	20,462
2075	5,417,941	1,164,562	1,164,562	0	16,870	0	16,870
2076	4,604,756	1,021,968	1,021,968	0	13,804	0	13,804
2077	3,880,278	889,475	889,475	0	11,202	0	11,202
2078	3,240,478	767,323	767,323	0	9,011	0	9,011
2079	2,680,789	655,720	655,720	0	7,179	0	7,179
2080	2,196,095	554,804	554,804	0	5,664	0	5,664
2081	1,780,767	464,547	464,547	0	4,422	0	4,422
2082	1,428,795	384,759	384,759	0	3,415	0	3,415
2083	1,133,933	315,087	315,087	0	2,607	0	2,607
2084	889,845	255,001	255,001	0	1,968	0	1,968
2085	690,284	203,866	203,866	0	1,467	0	1,467
2086	529,210	160,979	160,979	0	1,080	0	1,080
2087	400,872	125,529	125,529	0	785	0	785
2088	299,941	96,628	96,628	0	564	0	564
2089	221,622	73,404	73,404	0	399	0	399
2090	161,675	55,029	55,029	0	279	0	279
2091	116,411	40,713	40,713	0	192	0	192
2092	82,690	29,705	29,705	0	131	0	131
2093	57,924	21,354	21,354	0	88	0	88
2094	40,011	15,123	15,123	0	58	0	58
2095	27,252	10,557	10,557	0	38	0	38
2096	18,296	7,263	7,263	0	24	0	24
2097	12,102	4,920	4,920	0	15	0	15
2098	7,885	3,281	3,281	0	10	0	10
2099	5,060	2,152	2,152	0	6	0	6
2100	3,199	1,389	1,389	0	3	0	3
2101	1,993	883	883	0	2	0	2
2102	1,223	552	552	0	1	0	1
2103	740	341	341	0	1	0	1
2104	441	208	208	0	0	0	0
2105	259	125	125	0	0	0	0
2106	149	74	74	0	0	0	0
2107	83	43	43	0	0	0	0
2108	45	25	25	0	0	0	0
2109	22	14	14	0	0	0	0
2110	10	7	7	0	0	0	0
2111	4	3	3	0	0	0	0
2112	1	1	1	0	0	0	0
2113	0	0	0	0	0	0	0
2114	0	0	0	0	0	0	0

Appendix F: Participating Employers

Employer	Employer Code
A Childs Garden Charter (Aka Cross Creek Charter)	33501
Academy Of Moore County	36301
Administrative Office Of The Courts	10800
Alamance Community College	30105
Alamance County Schools	30100
Alexander County Schools	30200
Alleghany County Schools	30300
American Renaissance Middle Sch	34901
Anson County Schools	30400
Appalachian State University	20100
Arapahoe Charter School	36901
Arts Based Elementary Charter	33402
Ashe County Schools	30500
Asheboro City Schools	37610
Asheville City Schools	31110
Asheville-Buncombe Technical College	31105
Avery County Schools	30600
Barber Examiners, State Board Of	18600
Bear Grass Charter School	33206
Beaufort County Community College	30705
Beaufort County Schools	30700
Bertie County Schools	30800
Bethany Community Middle School	37901
Bladen Community College	30905
Bladen County Schools	30900
Blue Ridge Community College	34505
Brevard Academy Charter School	38801
Bridges Charter Schools	38601
Brunswick Community College	31005
Brunswick County Schools	31000
Buncombe County Schools	31100
Burke County Schools	31200
Cabarrus County Schools	31300
Caldwell Community College	31405
Caldwell County Schools	31400
Camden County Schools	31500
Cape Fear Community College	36505
Cape Fear Ctr For Inquiry	36501
Carolina International School	31301
Carteret Community College	31605
Carteret County Schools	31600
Casa Esperanza Montessori	39209
Caswell County Schools	31700
Catawba County Schools	31800
Catawba Valley Community College	31805
Central Carolina Community College	35305
Central Park Sch For Children	33202
Central Piedmont Community College	36005
Chapel Hill - Carboro City Schools	36810
Charlotte Secondary Charter	36009
Charlotte-Mecklenburg County Schools	36000
Chatham County Schools	31900
Cherokee County Schools	32000
Childrens Village Academy	35401
Clay County Schools	32200
Cleveland County Schools	32300
Cleveland Technical College	32305
Clinton City Schools	38210
Clover Garden Charter School	30102
Coastal Carolina Community College	36705
College Of The Albemarle	37005
Columbus County Schools	32400
Community Charter School	36001
Community Colleges Administration	19005
Community School Of Davidson	36003
Cornerstone Academy	33027
Corvian Community School	36004
Craven Community College	32505
Cumberland County Schools	32600
Currituck County Schools	32700
Dare County Schools	32800
Davidson County Community College	32905
Davidson County Schools	32900
Davie County Schools	33000
Department Of Administration	10900
Department Of Agriculture	18400
Department Of Commerce	12510
Department Of Cultural Resources	10700
Department Of Justice	10400
Department Of Public Instruction	22000

Appendix F: Participating Employers

Employer	Employer Code
Department Of Public Safety	19100
Duplin County Schools	33100
Durham Public Schools	33200
Durham Technical Institute	33205
East Carolina University	20300
East Wake Academy	39208
Edenton-Chowan County Schools	32100
Edgecombe County Schools	33300
Edgecombe Technical College	33305
Elizabeth City And Pasquotank County Schools	37000
Elizabeth City State University	20400
Elkin City Schools	38620
Endeavor Charter School	39201
Environment And Natural Resources	11300
Evergreen Community Charter School	31102
F Delany New School For Children	31101
Fayetteville State University	20600
Fayetteville Technical Community College	32605
Forsyth Technical Institute	33405
Franklin County Schools	33500
Gaston College	33605
Gaston College Preparatory Charter	36601
Gaston County Schools	33600
Gates County Schools	33700
General Assembly	12160
Governor'S Office	12100
Graham County Schools	33800
Grandfather Academy	30601
Granville County Schools And Oxford Orphanage	33900
Gray Stone Day School	38402
Greene County Schools	34000
Guilford County Schools	34100
Guilford Technical Community College	34105
Halifax Community College	34205
Halifax County Schools	34200
Haliwa-Saponi Tribal Charter	39301
Harnett County Schools	34300
Haywood County Schools	34400
Haywood Technical College	34405
Health & Human Svcs	12220

Employer	Employer Code
Healthy Start Academy	33203
Henderson Collegiate Charter School	39401
Henderson County Schools	34500
Hertford County Schools	34600
Hickory City Schools	31810
Highway - Administrative	51000
Hoke County Schools	34700
Hyde County Schools	34800
Information Technology Services	10930
Insurance Department	12600
Invest Collegiate Charter (Buncombe)	33207
Invest Collegiate Charter School	32901
Iredell County Schools	34900
Isothermal Community College	38105
Jackson County Schools	35000
James Sprunt Technical College	33105
Johnston County Schools	35100
Johnston Technical College	35105
Jones County Schools	35200
Kannapolis City Schools	31320
Kennedy Charter	36002
Kipp Charlotte Charter	36102
Kipp Halifax College Prep Charter	33208
Labor Department	12700
Lake Norman Charter School	36006
Lenoir County Community College	35405
Lenoir County Schools	35400
Lexington City Schools	32910
Lincoln County Schools	35500
Lt Governor'S Office	12150
Macon County Schools	35600
Madison County Schools	35700
Martin Community College	35805
Martin County Schools	35800
Mayland Technical College	36105
Mcdowell County Schools	35900
Mcdowell Technical College	35905
Millennium Charter Academy	38602
Mitchell Community College	34905
Mitchell County Schools	36100

Appendix F: Participating Employers

Employer	Employer Code
Montgomery Community College	36205
Montgomery County Schools	36200
Moore County Schools	36300
Mooresville City Schools	34910
Mount Airy City Schools	38610
Mountain Community School	34501
Mtn Discovery Charter	38701
N C Auctioneers Licensing Board	18740
N C Central University	20800
N C Department Of Correction	18300
N C Real Estate Commission	18690
N C School Of Science & Mathematics	10950
N C School Of The Arts	20200
N C State Board Of Examiners Of Practicing Psychol	18780
N C State University	21300
N.E. Regional School For Biotechnology	33001
Nash Technical College	36405
Nash-Rocky Mount Schools	36400
Nc A&T University	20700
Nc Housing Finance Agency	11310
Neuse Charter School	35106
New Bern/Craven County Board Of Education	32500
New Hanover County Schools	36500
Newton-Conover City Schools	31820
North Carolina Education Lottery	10200
Northampton County Schools	36600
Office Of Administrative Hearing	10850
Office Of State Budget & Management	10910
Office Of State Controller	10940
Onslow County Schools	36700
Orange Charter School	36802
Orange County Schools	36800
Pace Academy	36801
Pamlico Community College	36905
Pamlico County Schools	36900
Pender County Schools	37100
Perquimans County Schools	37200
Person County Schools	37300
Piedmont Community College	37305
Pine Lake Prep Charter	36008

Employer	Employer Code
Pinnacle Classical Academy	39703
Pioneer Springs Community Charter	33209
Pitt Community College	37405
Pitt County Schools	37400
Polk County Schools	37500
Randolph Community College	37605
Randolph County Schools	37600
Revenue Department	13500
Richmond County Schools	37700
Richmond Technical College	37705
River Mill Academy Charter	30103
Roanoke Rapids City Schools	34220
Roanoke-Chowan Community College	34605
Robeson Community College	37805
Robeson County Schools	37800
Rockingham Community College	37905
Rockingham County Schools	37900
Rowan-Cabarrus Community College	38005
Rowan-Salisbury School System	38000
Roxboro Community School	37301
Rutherford County Schools	38100
Sampson Community College	38205
Sampson County Schools	38200
Sandhills Community College	36305
Sanford-Lee County Board Of Education	35300
Scotland County Schools	38300
Secretary Of State	13700
Segs Academy	32420
Socrates Academy	36007
South Piedmont Community College	30405
Southeastern Academy Charter School	37801
Southeastern Community College	32405
Southern Wake Academy	39204
Southwestern Community College	35005
Stanly Community College	38405
Stanly County Schools	38400
Stars Charter School	36302
State Auditor	10500
State Board Of Elections	11900
State Division Of Health Services	12200

Appendix F: Participating Employers

Employer	Employer Code
State Treasurer	14300
Stokes County Schools	38500
Success Institute	34903
Surry Community College	38605
Surry County Schools	38600
Swain County Schools	38700
The Hawbridge School	30104
Thomasville City Schools	32920
Transylvania County Schools	38800
Tri-County Community College	32005
Two Rivers Comm School	39501
Tyrrell County Schools	38900
Unc - Pembroke	21200
Unc Health Care System	21550
Unc-Ch Cb 1260	21520
Unc-General Administration	21525
Union County Schools	39000
University Of North Carolina At Asheville	23000
University Of North Carolina At Charlotte	23100
University Of North Carolina At Greensboro	20900
University Of North Carolina At Wilmington	23200
University Of North Carolina Press	21570
Uwharrie Charter Academy	37601
Vance Charter School	39101
Vance County Schools	39100
Vance-Granville Community College	39105
Voyager Academy	33204
Wake County Schools	39200
Wake Technical College	39205
Warren County Schools	39300
Washington County Schools	39400
Watauga County Schools	39500
Wayne Community College	39605
Wayne County Schools	39600
Weldon City Schools	34230
Western Carolina University	21800
Western Piedmont Comm College	31205
Whiteville City Schools	32410
Wildlife Resources Commission	11600
Wilkes Community College	39705
Wilkes County Schools	39700
Wilmington Prep Academy	36502
Wilson Community College	39805
Wilson County Schools	39800
Winston-Salem State University	21900
Winston-Salem-Forsyth County Schools	33400
Yadkin County Schools	39900
Yancey County Schools	30000
Zeca School Of The Arts And Technology	36701