Consolidated Judicial 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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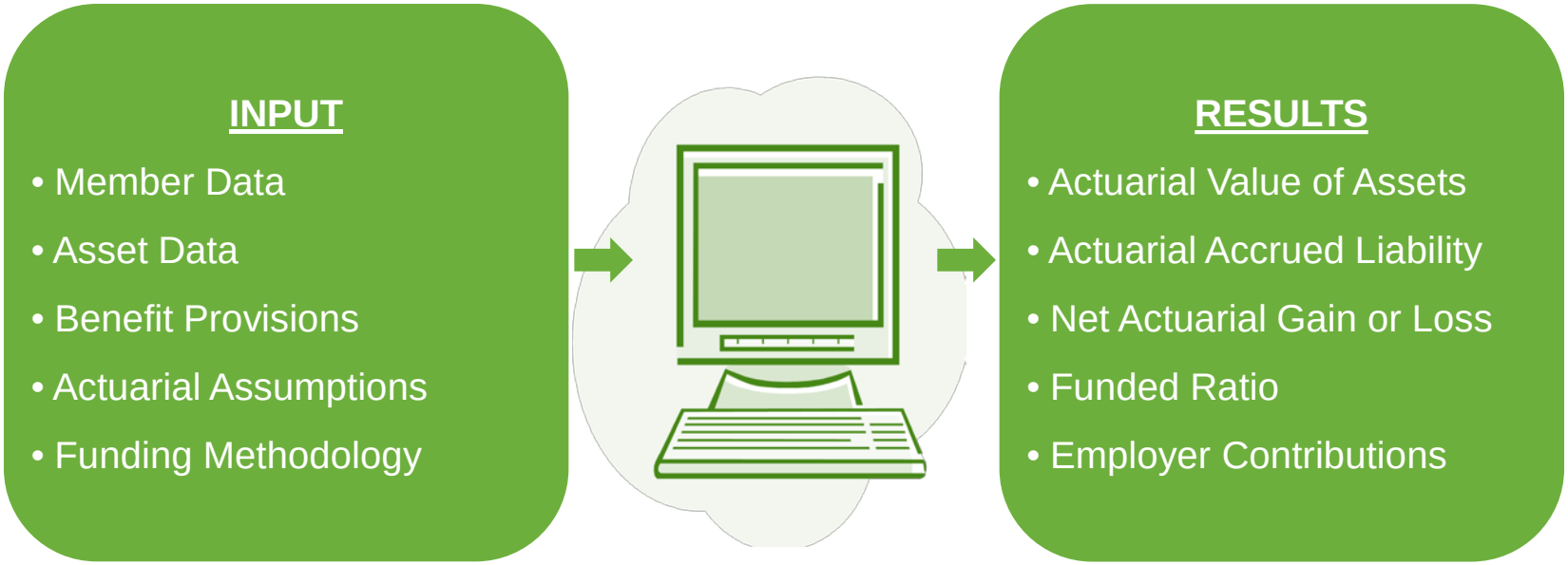
Purpose of the Annual Actuarial Valuation

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

The Valuation Process

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



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

Key Takeaways

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

- Market value returns of 6.19% compared to 7.25% assumed
- Decrease in covered payroll of 1.3% 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 valuation, the above resulted in:

- Higher funded ratio (94.3% in the December 31, 2014 valuation compared to 92.3% in the December 31, 2013 valuation)
- Lower employer required contribution rate (25.09% for fiscal year ending June 30, 2017 compared to 26.37% for fiscal year ending June 30, 2016)
- 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	566	566
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	50	53
Retired members and survivors of deceased members currently receiving benefits	610	584
Total	1,226	1,203

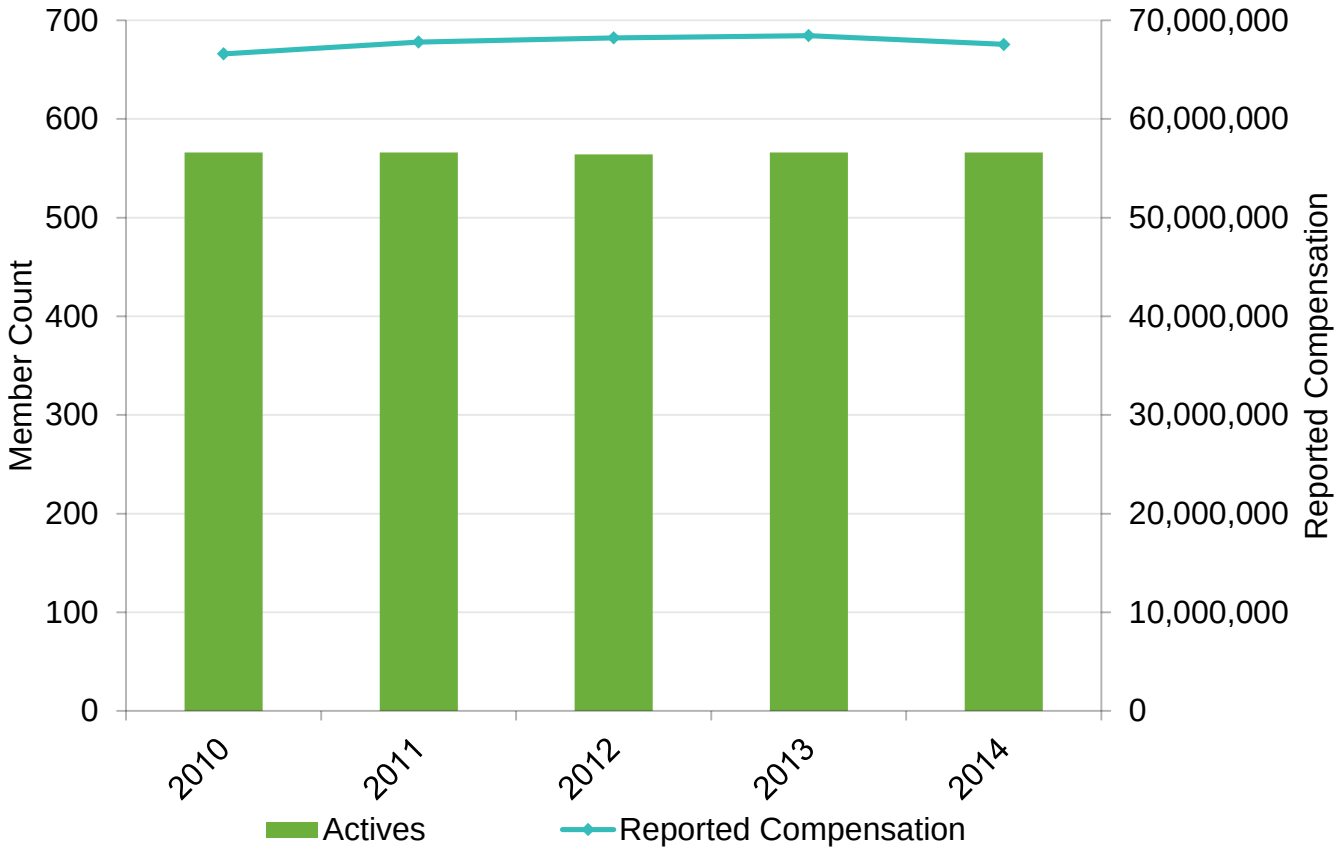
The number of active members remained the same.

The number of retired members and survivors of deceased members currently receiving benefits increased by 4.5% from the previous valuation date. The increase in retiree population is consistent with expectations.

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

Valuation Input

Membership Data: Active Members

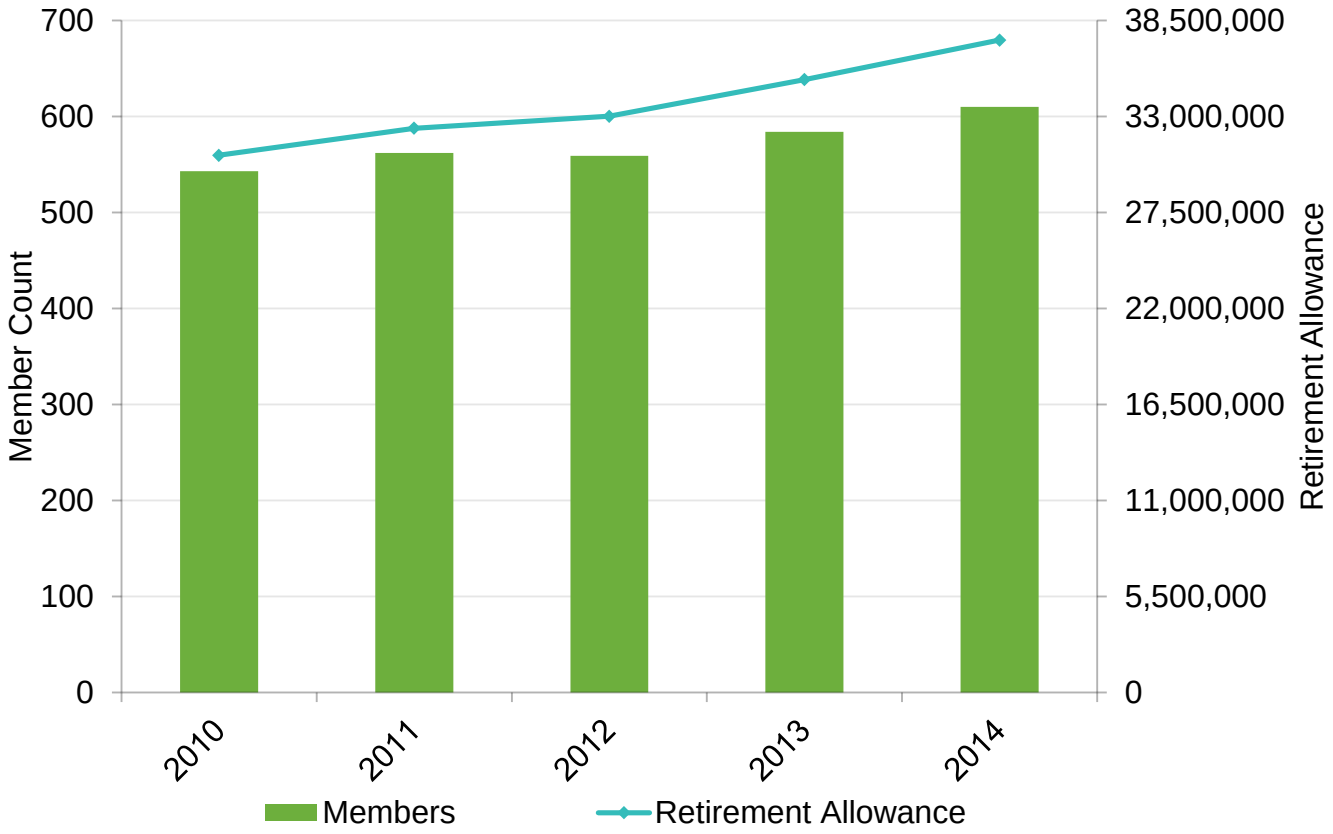


Reported compensation has decreased by 1.3% and has remained relatively stable over the past five years. Covered payroll is expected to increase by approximately 3% annually in the future.

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.

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	$511,969,020	$466,099,097
Contributions	27,157,042	24,646,461
Benefit Payments	(36,101,522)	(34,958,833)
Investment Income	51,428,255	56,182,295
Net Increase/(Decrease)	22,483,775	45,869,923
End of Year Market Value of Assets	$534,452,795	$511,969,020
Estimated Net Investment Return on Market Value	6.19%	12.19%

The Market Value of Assets is $534 million as of December 31, 2014 and $512 million as of December 31, 2013. The investment return for the market value of assets for calendar year 2014 was 6.19%.

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

Valuation Input

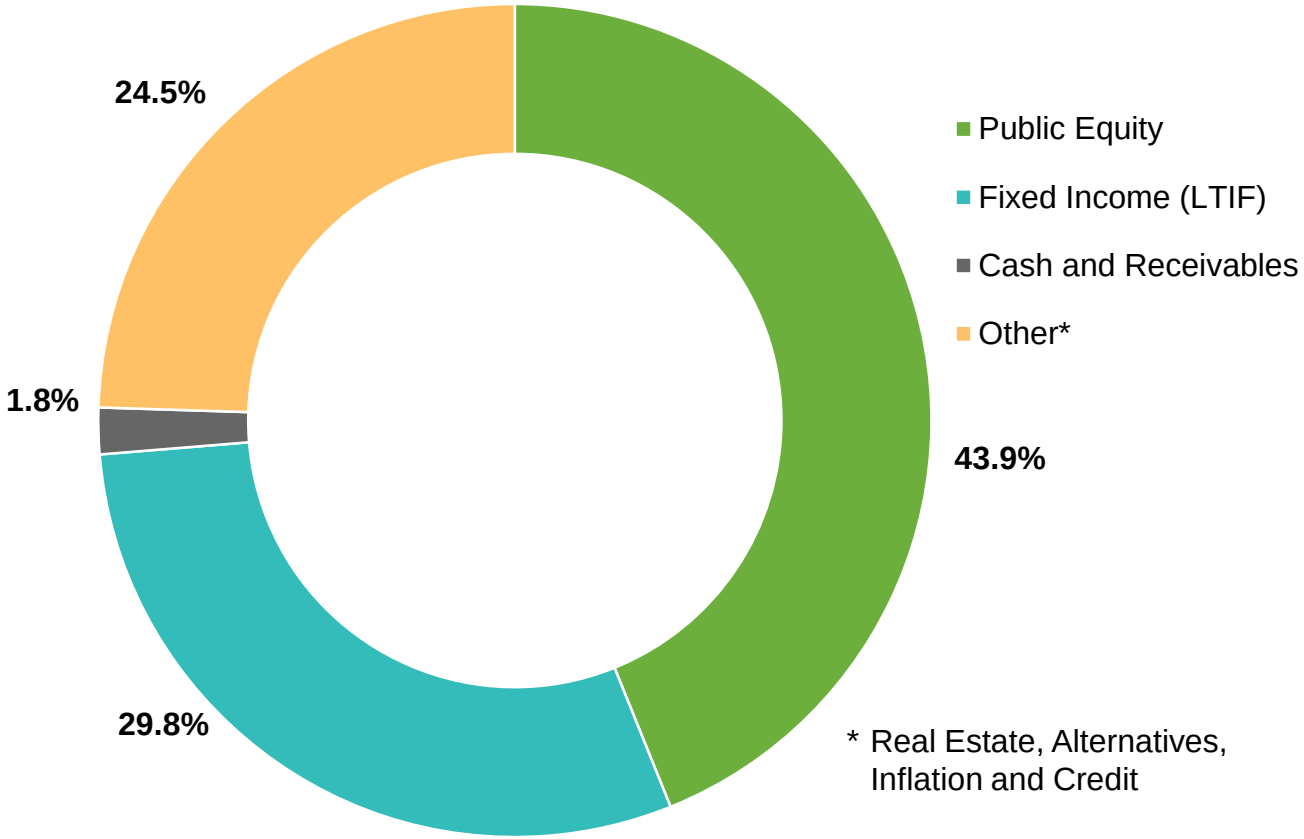
Asset Data: Market Value of Assets and Asset Returns

Returns were less than the 7.25% assumed rate of return, resulting in lower contributions and higher funded ratio than anticipated.

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 CJRS 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

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 CJRS 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 Projected Unit Credit as its actuarial cost method
- 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 previous valuation.

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

Actuarial Value of Assets

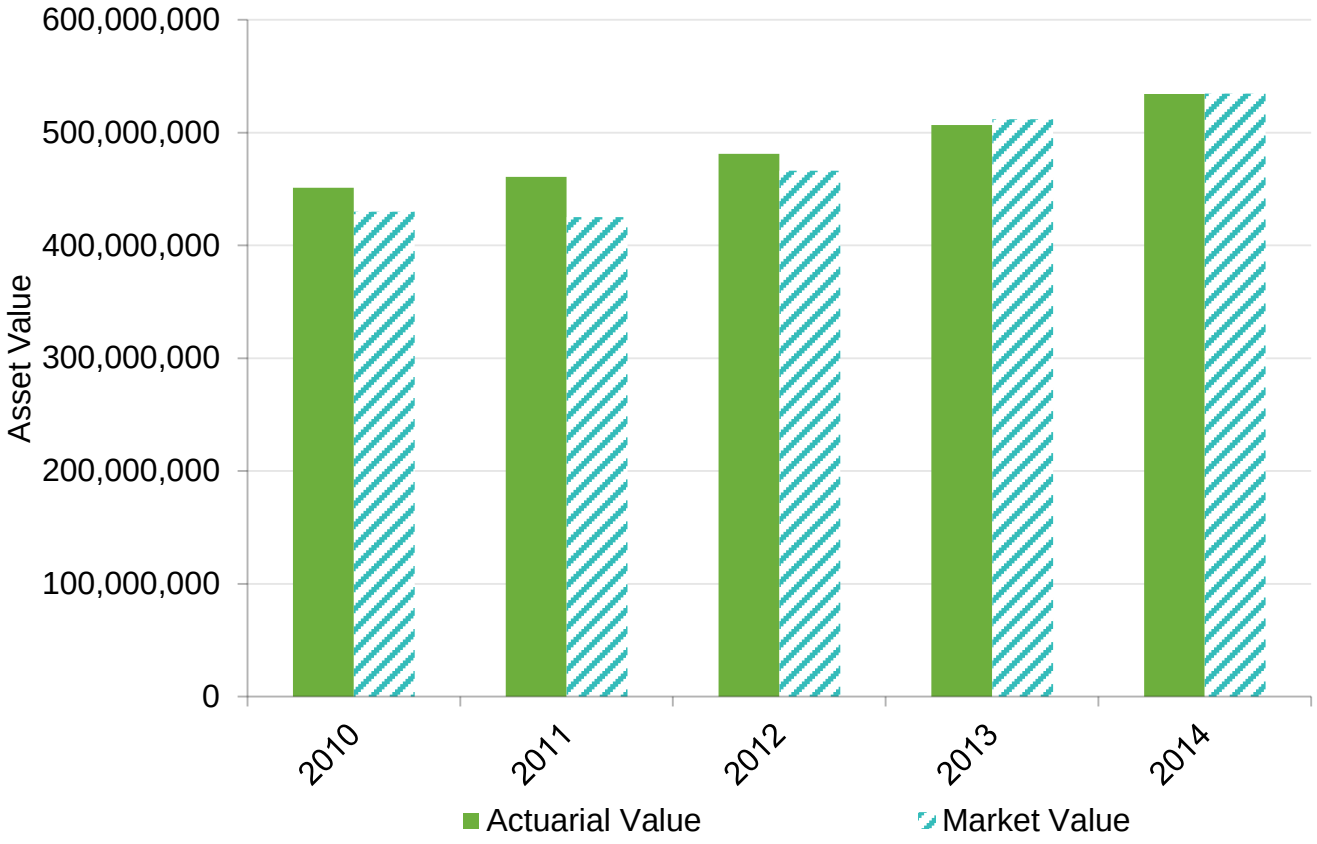
Asset Data as of	December 31, 2014
(a) Beginning of Year Actuarial Value of Assets	$506,787,899
(b) Contributions	27,157,042
(c) Benefit Payments	(36,101,522)
(d) Net Cash Flow: (b) + (c)	(8,944,480)
(e) Expected Investment Return: [(a) x 7.25%] + [(d) x 3.625%]	36,417,885
(f) Expected End of Year Actuarial Value of Assets: (a) + (d) + (e)	534,261,304
(g) End of Year Market Value of Assets	534,452,795
(h) Excess of Market Value over Expected Actuarial Value of Assets: (g) – (f)	191,491
(i) 20% Adjustment toward Market Value of Assets: (h) x 20%	38,298
(j) Preliminary End of Year Actuarial Value of Assets: (f) + (i)	534,299,602
(k) Final End of Year Actuarial Value of Assets: (j) not less than 80% of (g) and not greater than 120% of (g)	534,299,602
(l) Estimated Net Investment Return on Actuarial Value	7.26%

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

Higher than expected returns in 2010, 2012 and 2013 resulted in a $0.04 million asset gain 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 higher than the actuarial value of assets, which is used to determine employer contributions. This indicates that there are unrecognized asset returns to be recognized in future valuations, which will mitigate the impact of asset returns that are less than the assumed return of 7.25%.

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

Valuation Results

Historical Asset Returns

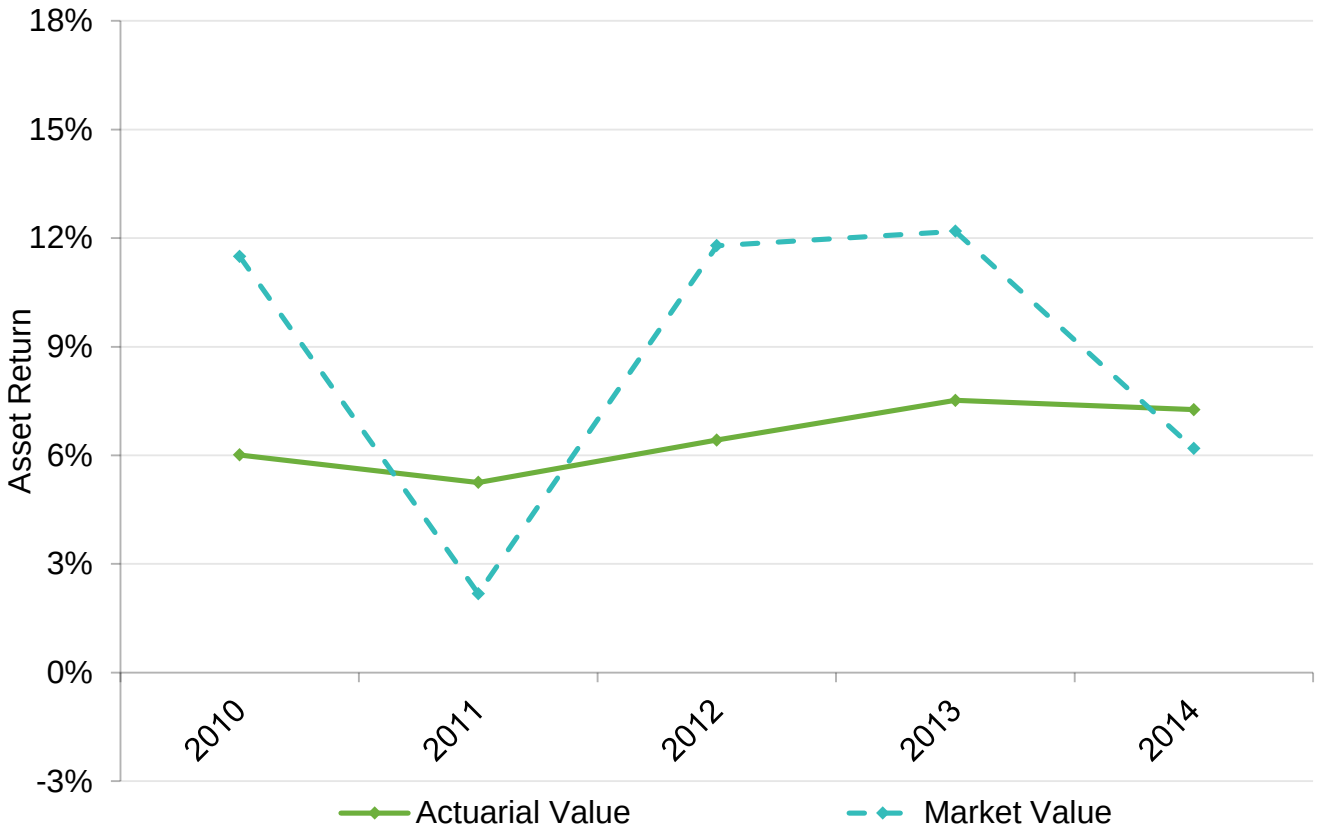
Calendar Year	Actuarial Value of Asset Return	Market Value of Asset Return
2006	9.17%	11.35%
2007	9.04%	8.35%
2008	3.01%	(19.39)%
2009	4.88%	14.83%
2010	6.01%	11.49%
2011	5.25%	2.18%
2012	6.42%	11.79%
2013	7.52%	12.19%
2014	7.26%	6.19%
Average	6.49%	6.03%
Range	6.16%	34.22%

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 6.49% tracks average market return of 6.03% rather well. But the range of returns is markedly less – 6.16% versus 34.22%. This results in much lower employer contribution volatility using the actuarial value of assets versus market, while ensuring that the actuarial needs of CJRS are met.

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

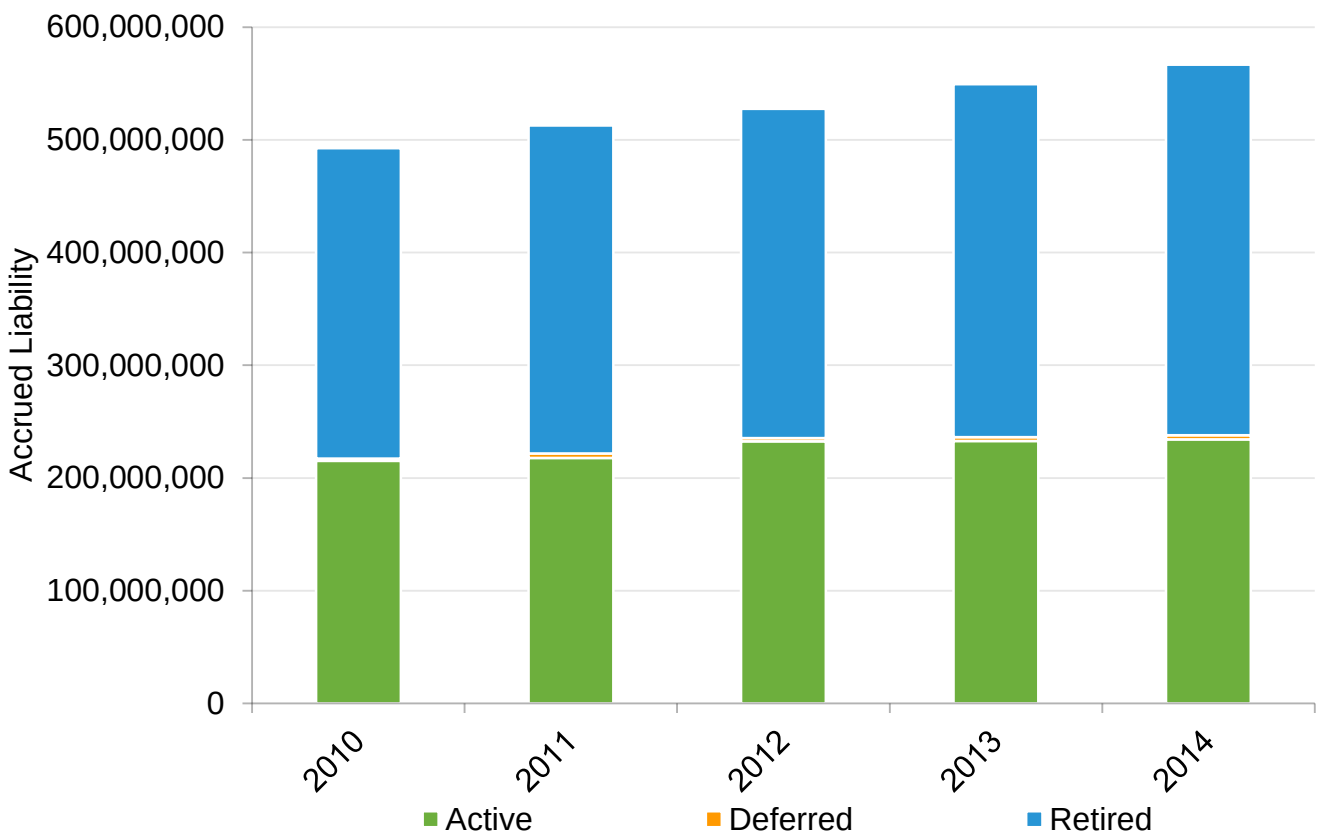
Asset Returns: Actuarial Value and Market Value



The actuarial value of assets smooths investment gains and losses.

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

Actuarial Accrued Liability (AAL)



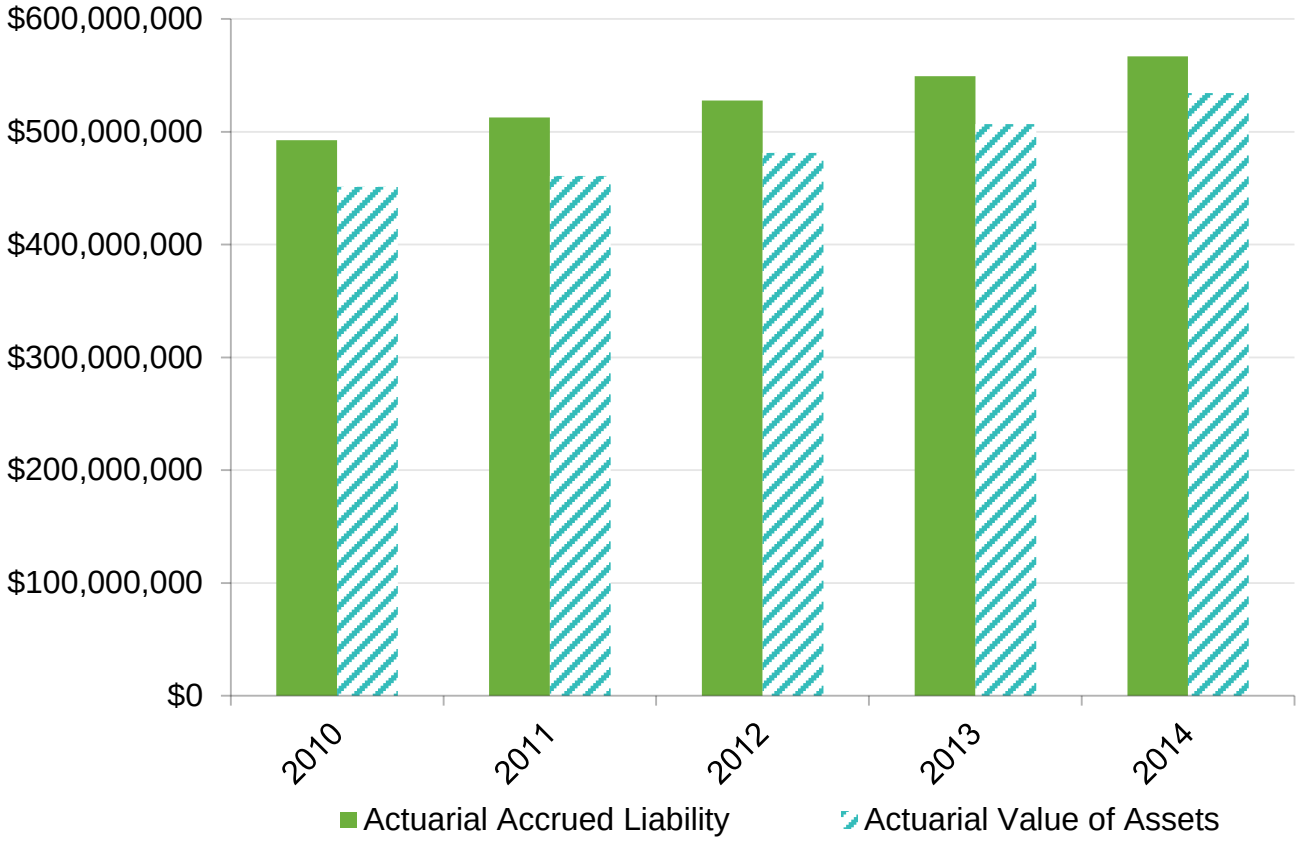
The AAL increased from $549 million to $567 million during 2014. CJRS is an open plan, which means that new members enter the plan each year. In an open plan, liabilities are expected to grow from one year to next as more benefits accrue and the membership approaches retirement.

The AAL was $3.0 million lower than expected, which resulted in a demographic gain of $3.0 million during 2014.

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

Valuation Results

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

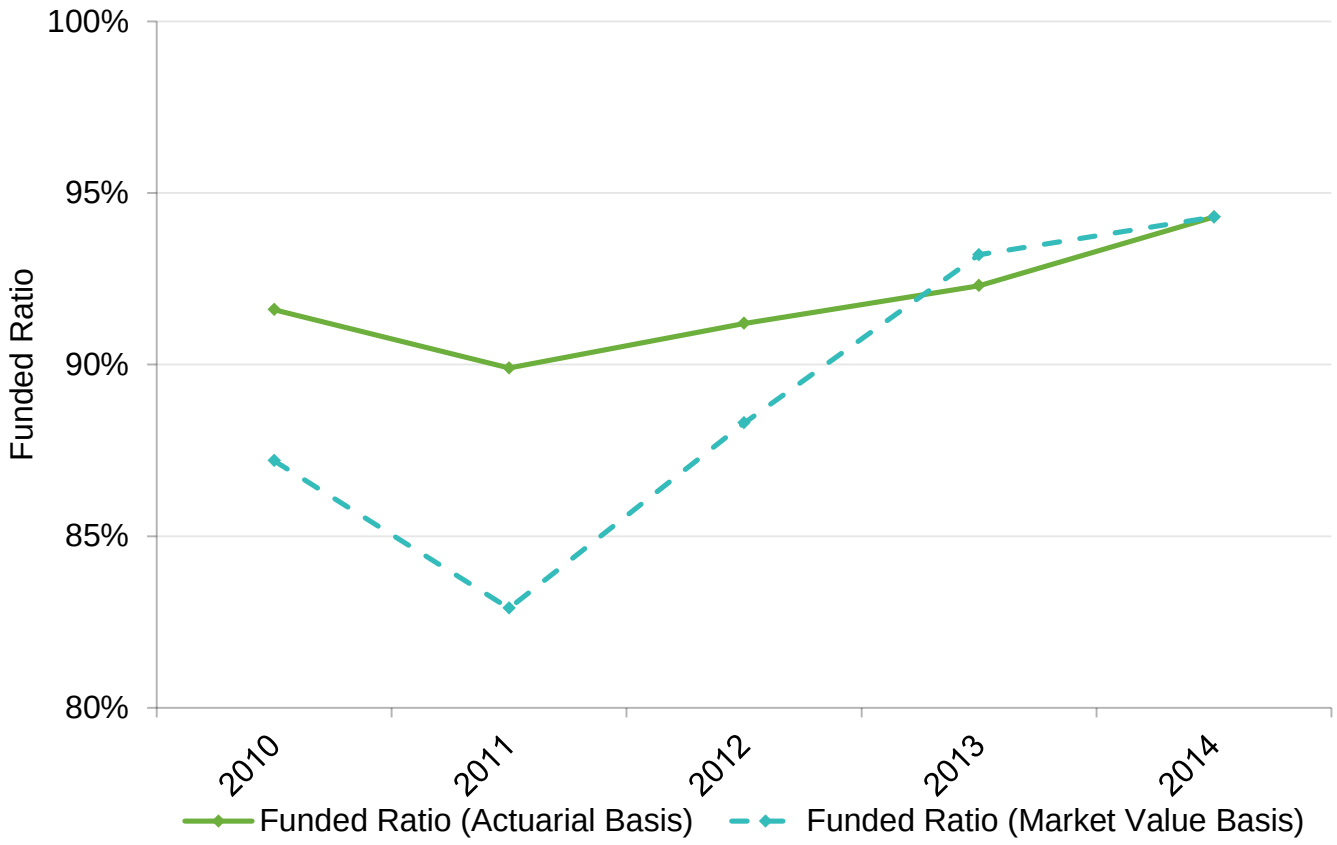


AVA is the basis used for computing contributions to alleviate contribution volatility.

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 92.3% at December 31, 2013 to 94.3% at December 31, 2014.

Valuation Results

Net Actuarial Gain or Loss

Reconciliation of Unfunded Actuarial Accrued Liability Since the Prior Valuation

(in Millions)

Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2013	$ 42.6
Normal Cost during 2014	16.8
Reduction due to Actual Contributions during 2014	(27.2)
Interest on UAAL, Normal Cost, and Contributions	3.3
Asset (Gain)/Loss	0.0
Actuarial Accrued Liability (Gain)/Loss	(3.0)
Impact of Legislative Changes	0.0
Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2014	$ 32.5

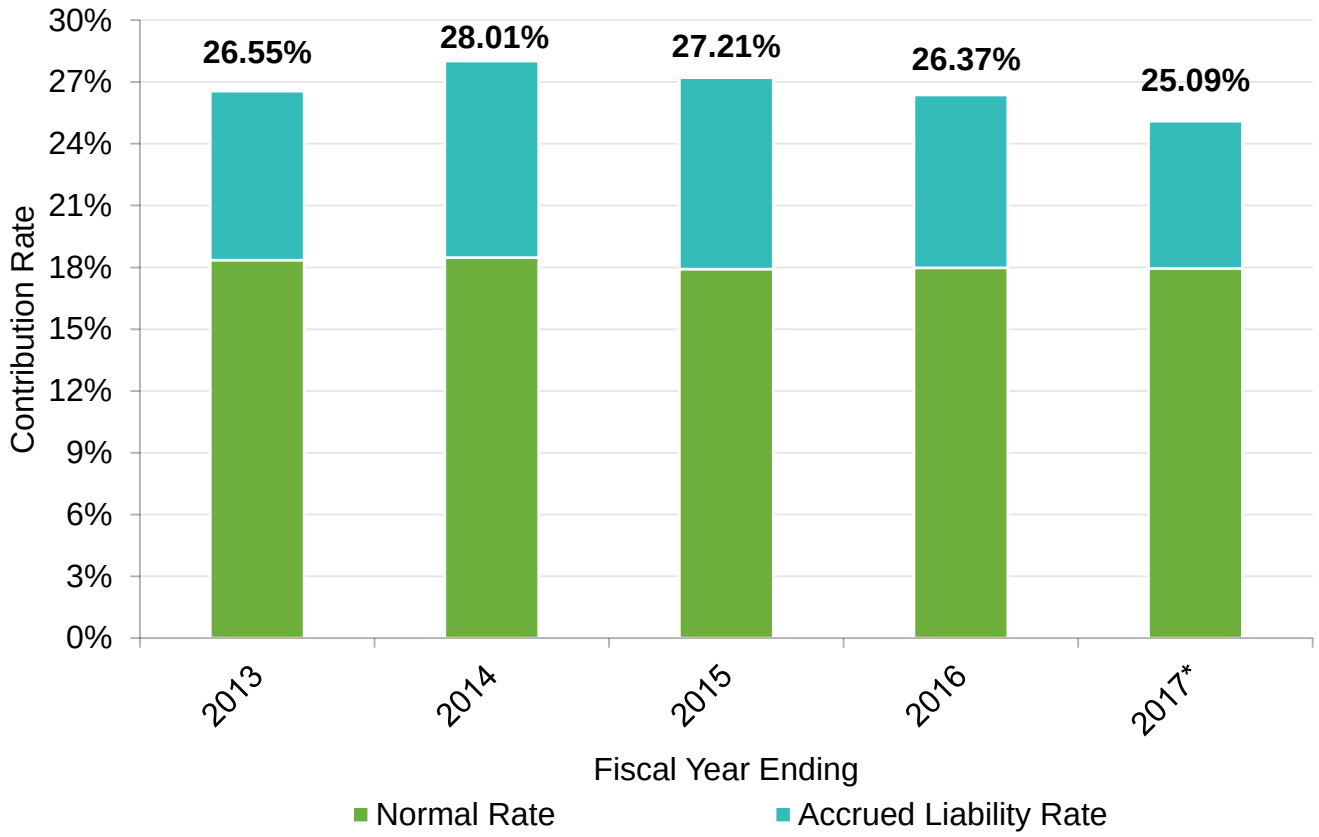
The accrued liability gain of $3.0 million means that the unfunded actuarial accrued liability was $3.0 million lower than we would have expected based on the assumptions.

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

The asset gain of $0.04 million means that the asset valuation method resulted in a recognition of $0.04 million of deferred asset gains from 2010, 2012 and 2013.

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.

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	17.95%	7.14%	N/A	N/A	N/A
12/31/13	6/30/16	17.97%	8.40%	0.00%	26.37%	27.21%
12/31/12	6/30/15	17.91%	8.64%	0.66%	27.21%	27.21%
12/31/11	6/30/14	18.48%	9.53%	0.00%	28.01%	28.01%
12/31/10	6/30/13	18.35%	7.62%	0.58%	26.55%	26.55%

* Includes Death Benefit rate

The current appropriation rate for fiscal year ending 2016 is 27.21%. This rate would result in an undistributed gain/(loss) of 2.12%.

Each 1% COLA is equivalent to 0.69% 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)	26.37%
Impact of Legislative Changes	0.00%
Fiscal year ending June 30, 2016 Final ARC	26.37%
Change Due to Demographic (Gain)/Loss	(1.36)%
Change Due to Investment (Gain)/Loss	(0.01)%
Change Due to Contributions Less (Greater) than ARC	0.09%
Fiscal year ending June 30, 2017 Preliminary ARC (based on December 31, 2014 valuation)	25.09%

Demographic gain primarily due to salary increases less than assumed

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

A detailed summary of the employer required contribution rates is provided in Section 6 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 6.19% compared to 7.25% assumed
- Decrease in covered payroll of 1.3% 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 valuation, the above resulted in:

- Higher funded ratio (94.3% in the December 31, 2014 valuation compared to 92.3% in the December 31, 2013 valuation)
- Lower employer required contribution rate (25.09% for fiscal year ending June 30, 2017 compared to 26.37% for fiscal year ending June 30, 2016)
- Lower projected benefit amounts being accrued by active members

Key Takeaways

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

- Stakeholders working together to keep CJRS 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 that supports the health of the system
- Modest changes in benefits when compared to peers

Continued focus on these measures will be needed to maintain the solid status of CJRS 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 Actuarial Valuation of the Consolidated Judicial 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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Consolidated Judicial Retirement System of North Carolina

Report on the Actuarial Valuation Prepared as of December 31, 2014

October 2015

Document Version: 1.0 (July 2014).

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October 7, 2015

Board of Trustees
Consolidated Judicial
Retirement System of North Carolina
3200 Atlantic Avenue
Raleigh, NC 27604

Members of the Board:

We submit herewith our report on the actuarial valuation of the Consolidated Judicial Retirement System of North Carolina (referred to as "CJRS" or the "Judicial Plan") prepared as of December 31, 2014. The report has been prepared in accordance with North Carolina General Statute 135-50 through 135-75.

The primary purpose of the valuation report is to determine the required member and employer contribution rates, to describe the current financial condition of CJRS, 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 1985, the Consolidated Judicial Retirement System (referred to as "CJRS" or the "Judicial Plan") was established. CJRS provides benefits to the elected judges and justices, district attorneys, clerks of superior court of the general court of justice and public defenders. CJRS has approximately $534 million in assets and over 1,200 members. This actuarial valuation report is our annual analysis of the financial health of CJRS. This report, prepared as of December 31, 2014, presents the results of the actuarial valuation of CJRS.

Purpose

An actuarial valuation is performed on CJRS annually as of the end of the calendar year. The actuary determines the amount of contributions to be made to CJRS 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 CJRS,
- 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 6.19% compared to 7.25% assumed
- Decrease in covered payroll of 1.3% compared to approximately 3% expected
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CJRS is well funded compared to its peers. This is due to:

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- 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 that supports the health of the system
- Modest changes in benefits when compared to peers

Continued focus on these measures will be needed to maintain the solid status of CJRS 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 CJRS 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)

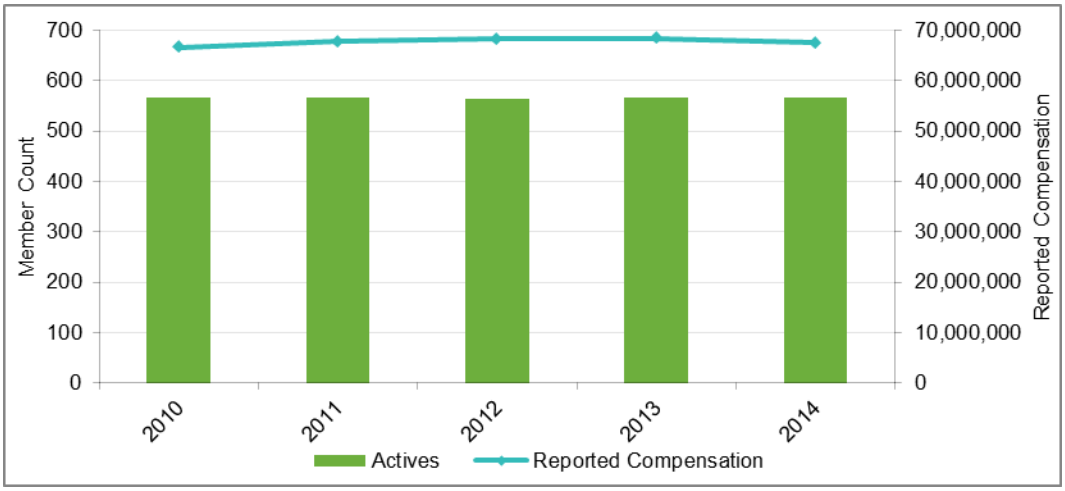
The table below provides a summary of the membership data used in this valuation compared to the prior valuation.

Number as of	12/13/2014	12/13/2013
Active members	566	566
Terminated members and survivors of decreased members entitled to benefits but not yet receiving benefits	50	53
Retired members and survivors of deceased members currently receiving benefits	610	584
Total	1,226	1,203

Commentary: The number of active members has remained the same since the previous valuation date. The number of retired members and survivors of deceased members currently receiving benefits increased by 4.5% from the previous valuation date. The increase in retiree population is consistent with expectations.

Graph 1: Active Members

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



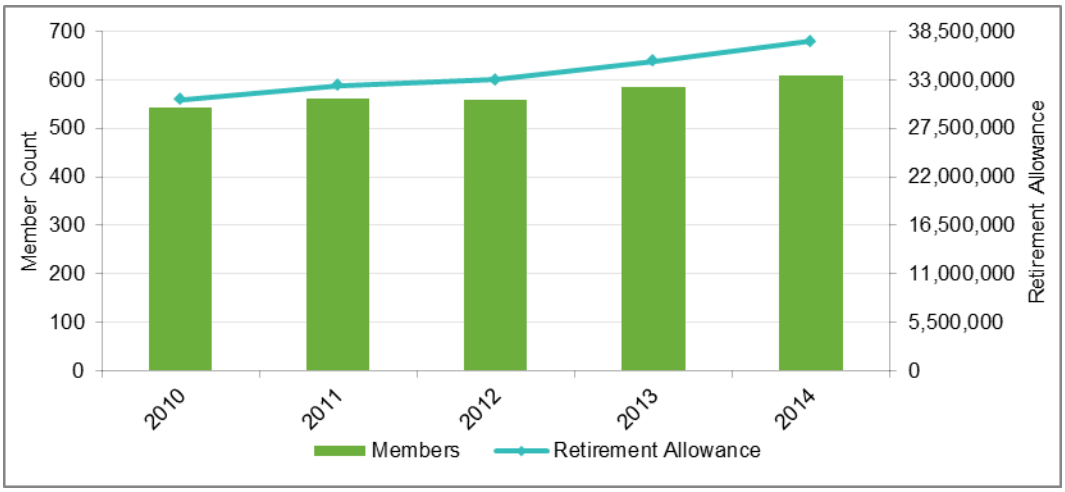
Commentary: Reported compensation has decreased by 1.3% and has remained relatively stable over the past five years. Payroll that is not increasing as fast as assumed results in less benefits accruing but also fewer contributions supporting the system. Covered payroll is expected to increase by approximately 3% annually in the future.

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.

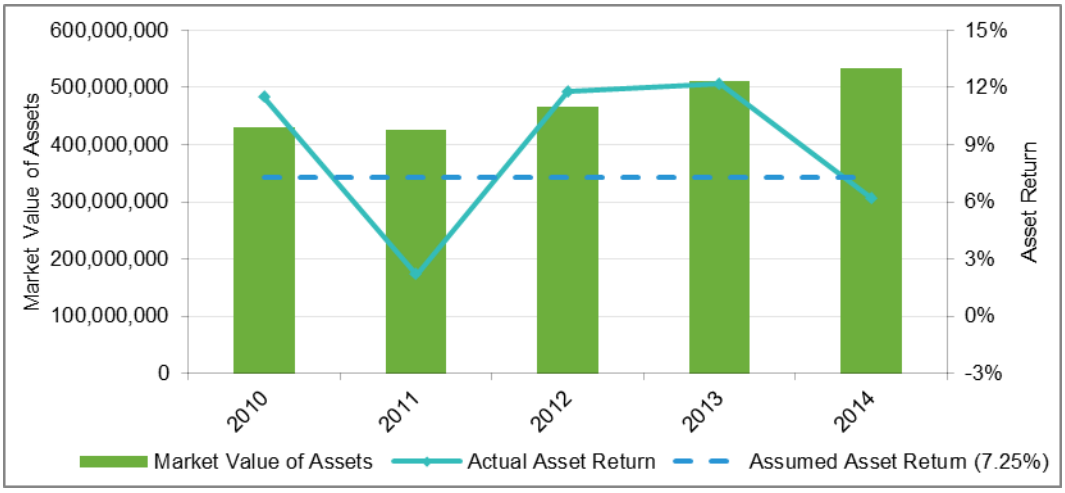
Section 1: The Valuation Process

Valuation Input: Asset Data

CJRS assets are held in trust and are invested for the exclusive benefit of plan members. The Market Value of Assets is $534 million as of December 31, 2014 and $512 million as of December 31, 2013. The investment return for the market value of assets for calendar year 2014 was 6.19%.

Graph 3: Market Value of Asset and Asset Returns

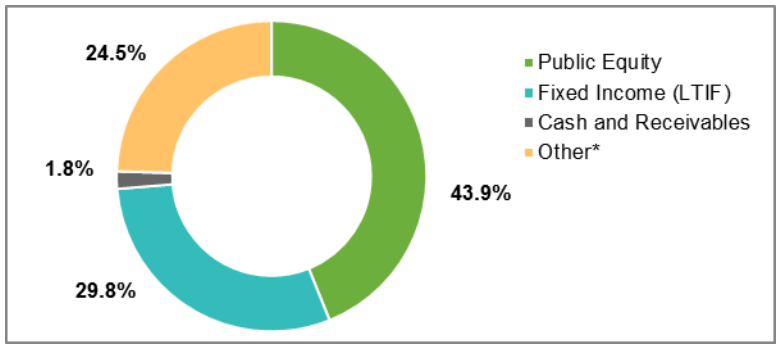
The graph below provides a history of the market value of assets and asset returns over the past five years.



Commentary: Returns were less than the 7.25% assumed rate of return, resulting in higher contributions and lower funded ratio than anticipated.

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 members who retire from service:
  - after attaining age 65 and five years of creditable service; or
  - after attaining age 50 and 24 years of creditable service
- The unreduced retirement allowance is equal to:
  - 4.02% of a member's final average compensation multiplied by the number of years of creditable service rendered as a Justice of the Supreme Court or Judge of the Court of Appeals, plus
  - 3.52% of a member's final average compensation multiplied by the number of years of creditable service rendered as a Judge of the Superior Court or as Administrative Officer of the Courts, plus
  - 3.02% of a member's final average compensation multiplied by the number of years of creditable service rendered as a Judge of the District Court, District Attorney, Public Defender, or Clerk of the Superior Court
- A reduced retirement allowance is payable to members who retire from service after attaining age 50 and five years of creditable service
- Ancillary benefits are also payable upon the death or disability of a member.
- CJRS 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.

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 CJRS 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 this report.

Section 1: The Valuation Process

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 CJRS are reviewed at least every five years. Based on this review, the actuary will make recommendations on the demographic and economic assumptions.

Demographic assumptions describe future events that relate to people such as retirement rates, termination rates, disability rates, and mortality rates. Economic assumptions describe future events that relate to the assets of CJRS 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 CJRS 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 Projected Unit Credit as its actuarial cost method
- 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 2012. A new amortization base is created each year based on the prior years' experience.

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

Section 1: The Valuation Process

Valuation Input: Funding Methodology (continued)

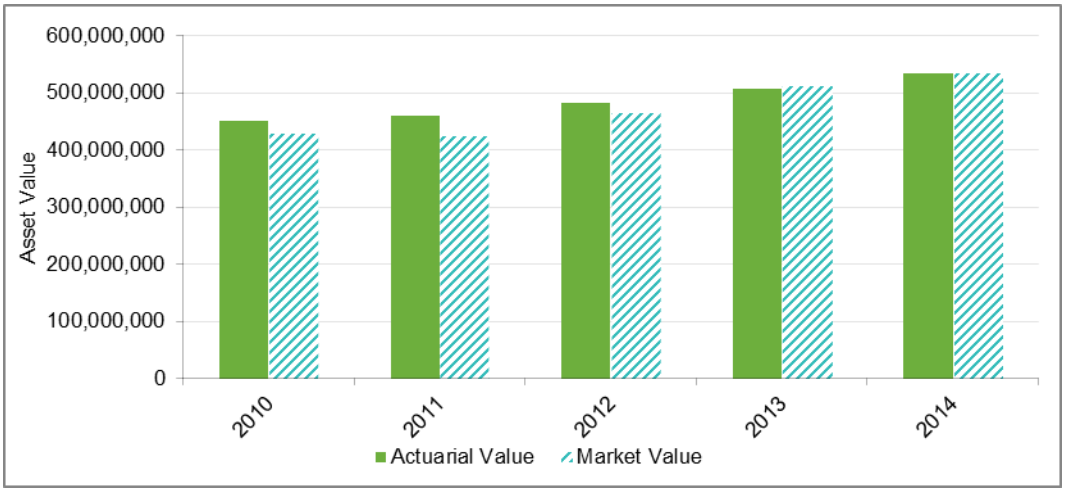
There were no changes in actuarial assumptions or funding method from the prior year's valuation. A detailed summary of the actuarial assumptions and methods is provided in Appendix D of this report.

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 CJRS, the Board adopted an asset valuation method to determine the Actuarial Value of Assets used for funding purposes. The Actuarial Value of Assets is $534 million as of December 31, 2014 and $507 million as of December 31, 2013.

Graph 5: 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.



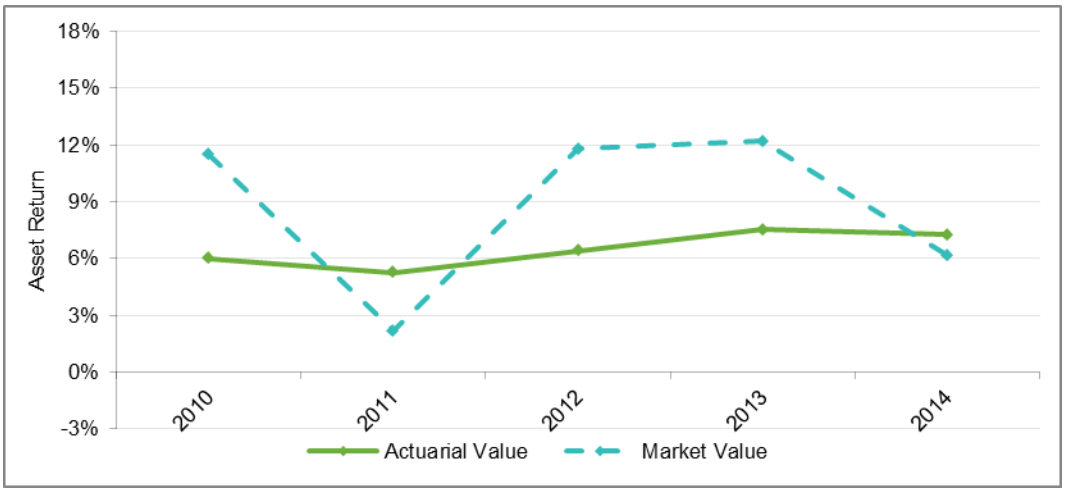
Commentary: The market value of assets is higher than the actuarial value of assets, which is used to determine employer contributions. This indicates that there are unrecognized asset returns to be recognized in future valuations, which will mitigate the impact of asset returns that are less than the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

Section 1: The Valuation Process

Valuation Results: Actuarial Value of Assets (continued)

Graph 6: 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 6.19%. The actuarial value of assets smooths investment gains and losses. Higher than expected market returns in 2010, 2012, and 2013 resulted in an actuarial value of asset return for calendar year 2014 of 7.26% which is higher than the assumed rate of 7.25%. Therefore, CJRS experienced an asset gain of $0.04 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

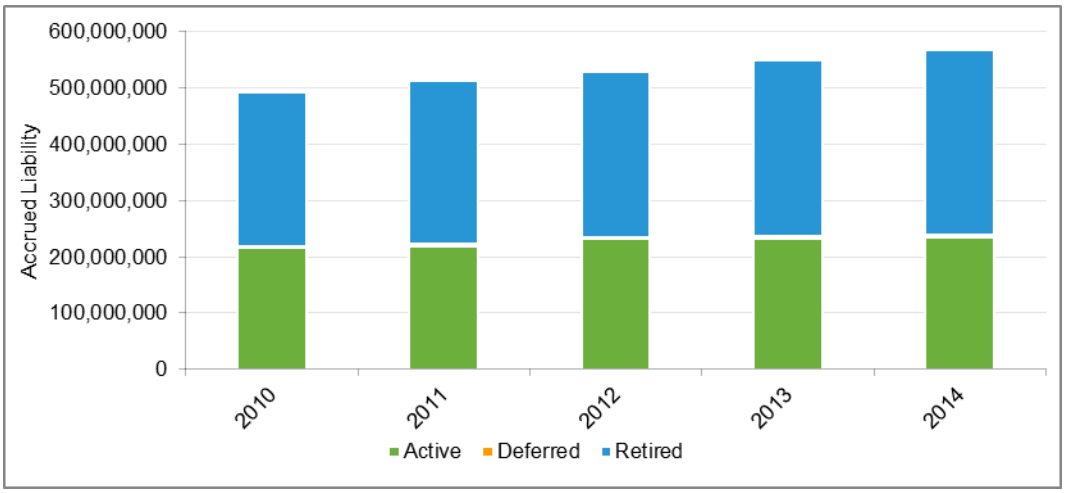
Valuation Results: Actuarial Accrued Liability

Using the provided membership data, benefit provisions, and actuarial assumptions, future benefit payments of CJRS 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 CJRS. 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 CJRS should ideally have in the trust. The NC is also referred to as the cost of benefits accruing during the year.

Graph 7: Actuarial Accrued Liability

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



Commentary: The AAL increased from $549 million to $567 million during 2014. CJRS 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 $3.0 million lower than expected, which resulted in a demographic gain of $3.0 million during 2014.

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

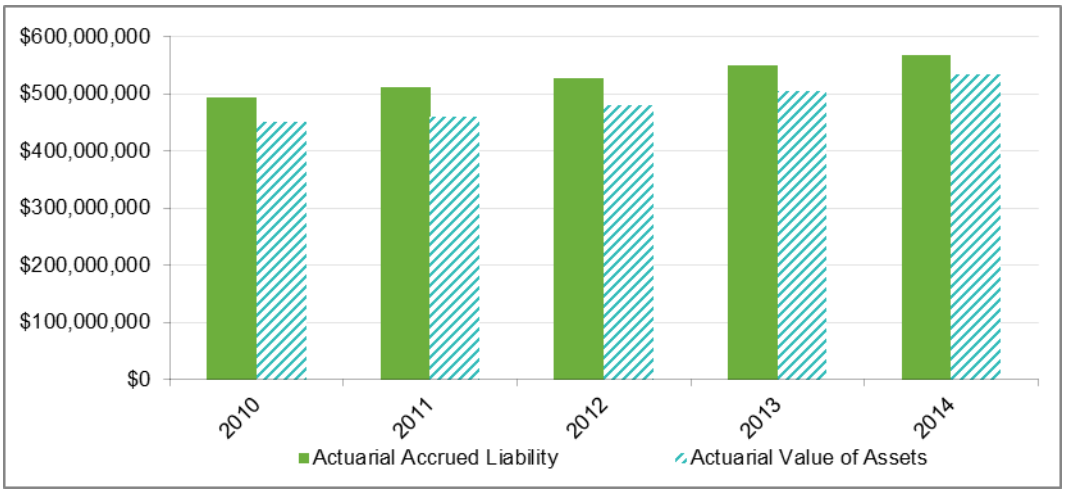
Section 1: The Valuation Process

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

Graph 8: Actuarial Accrued Liability and Actuarial Value of Assets

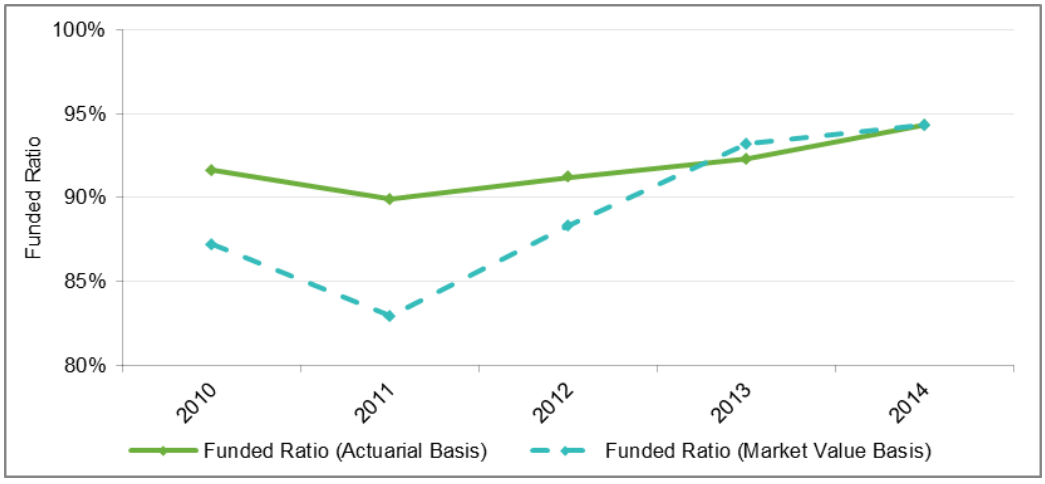
The graph below provides a history of the actuarial accrued liability and actuarial value of assets.



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.

Graph 9: 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 funded ratio on an actuarial basis increased from 92.3% at December 31, 2013 to 94.3% at December 31, 2014.

Section 1: The Valuation Process

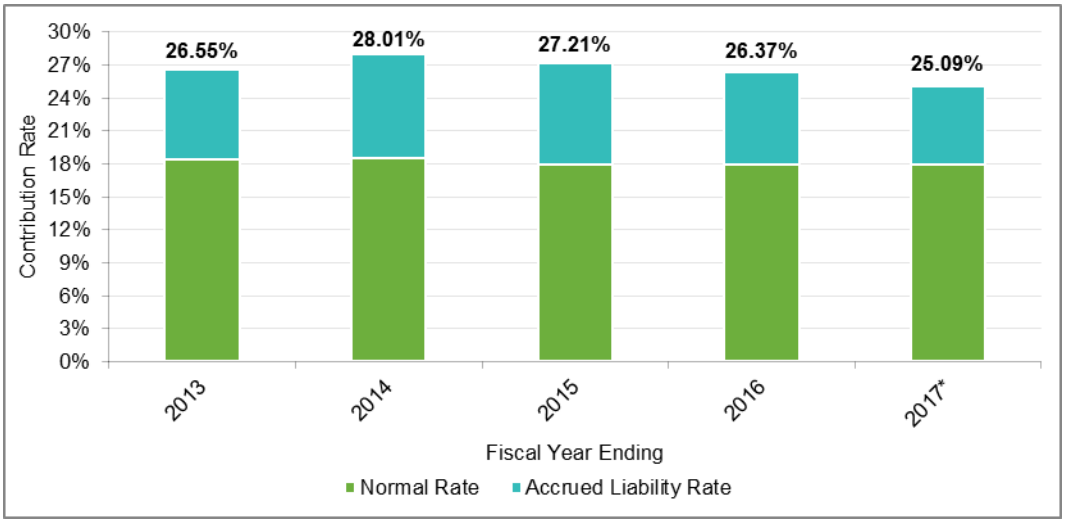
Valuation Results: Employer Contributions

G.S. 135-69 of the retirement act provides that the state shall make a normal contribution and an unfunded accrued liability contribution.

The December 31, 2013 valuation suggested that the preliminary total employer contribution rate be set at 26.37% of payroll for the fiscal year ending June 30, 2016. Subsequently, the 2015 Appropriations Act (Session Laws 2015-241) set contributions at 27.21% 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 25.09% 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 2.12% of payroll that could be used for a cost-of-living adjustment or other benefit improvements.

Graph 10: 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 contributions rates is provided in Section 6 of this report.

Section 1: The Valuation Process

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 $44,232,000 (compared to $26,197,000 for fiscal year ending June 30, 2014). The required financial reporting information for CJRS 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 actuarial 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	566	566
Reported Compensation	$ 67,562,225	$ 68,456,637
Valuation Compensation*	$ 71,429,321	$ 71,243,601
Retired Members and Survivors of Deceased Members Currently Receiving Benefits		
Number	610	584
Annual Allowances	$ 37,376,920	$ 35,111,390
Assets		
Actuarial Value (AVA)	$ 534,299,602	$ 506,787,899
Market Value	$ 534,452,795	$ 511,969,020
Actuarial Accrued Liability (AAL)	$ 566,830,508	$ 549,345,068
Unfunded Accrued Liability (AAL-AVA)	$ 32,530,906	$ 42,557,169
Funded Ratio (AVA/AAL)**	94.3%	92.3%
Results for Fiscal Year Ending	**6/30/2017**	**6/30/2016**
Annual Required Contribution (ARC) of employer, as a percentage of payroll		
Normal Cost	17.60%	17.62%
Death Benefit	0.35%	0.35%
Accrued Liability	7.14%	8.40%
Total	25.09%	26.37%
Impact of Legislative Changes	N/A	0.00%
Final Employer ARC	N/A	26.37%
Appropriations Act for Fiscal Year Ending	**6/30/2016**	**6/30/2015**
Employer Contribution Rate as a percentage of payroll		
Normal Cost	17.60%	17.62%
Death Benefit	0.35%	0.35%
Accrued Liability	9.26%	9.24%
Total	27.21%	27.21%
Preliminary Reserve for Undistributed Gains/(Losses)	2.12%	0.84%

* Reported compensation adjusted to reflect the assumed 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 CJRS. 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
Justices of Supreme Court and Judges of Court of Appeals	21	58.74	11.61	$ 3,011,669
Judges of the Superior Court and Administrative Officers of the Court	111	58.75	16.25	15,513,269
Judges of the District Court, District Attorneys, Clerks of the Superior Court, and Public Defenders	434	53.88	12.27	49,037,287
Total	566	55.02	13.03	$ 67,562,225

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

Section 3: Membership Data

Table 3: Terminated Vested Member Data

	Member Count	Average Age	Average Service	Accumulated Contributions	Final Reported Compensation
Justices of Supreme Court and Judges of Court of Appeals	2	63.21	3.21	$ 57,900	$ 262,091
Judges of the Superior Superior Court and Administrative Officers of the Court	4	54.38	9.27	319,512	524,641
Judges of the District Court, District Attorneys, Clerks of the Superior Court, and Public Defenders	44	54.65	4.35	1,610,796	3,430,675
Total	50	54.97	4.70	$ 1,988,208	$ 4,217,407

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

Section 3: Membership Data

Table 4: Data for Members Currently Receiving Benefits

	Member Count	Average Age	Annual Retirement Allowances
Retired Members (Healthy at Retirement)			
Male	332	71.75	$ 24,192,810
Female	137	69.21	8,025,559
Total	469	71.01	$ 32,218,369
Retired Members (Disabled at Retirement)*			
Male	3	64.31	$ 166,311
Female	2	70.46	83,437
Total	5	66.77	$ 249,748
Survivors of Deceased Members			
Male	11	72.74	$ 331,960
Female	125	78.24	4,576,843
Total	136	77.80	$ 4,908,803
Grand Total	610	72.49	$ 37,376,920

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

Table 5: Market Value of Assets

Asset Data as of	12/31/2014	12/31/2013
Beginning of Year Market Value of Assets	$ 511,969,020	$ 466,099,097
Contributions	27,157,042	24,646,461
Benefit Payments	(36,101,522)	(34,958,833)
Investment Income	31,428,255	56,182,295
Net Increase/(Decrease)	22,483,775	45,869,923
End of Year Market Value of Assets	$ 534,452,795	$ 511,969,020
Estimated Net Investment Return on Market Value	6.19%	12.19%

Table 6: 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	$ 234,492,032	$ 245,626,754
Fixed Income (LTIF)	159,022,137	156,350,627
Cash and Receivables	9,378,462	5,261,579
Other*	131,560,164	104,730,060
Total Market Value of Assets	$ 534,452,795	$ 511,969,020
Allocation by Percentage of Asset Value		
Public Equity	43.9%	48.0%
Fixed Income (LTIF)	29.8%	30.5%
Cash and Receivables	1.8%	1.0%
Other*	24.5%	20.5%
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 CJRS, the Board adopted an asset valuation method to determine the Actuarial Value of Assets used for funding purposes. The table below provides the calculation of the Actuarial Value of Assets at the valuation date.

Table 7: Actuarial Value of Assets

Asset Data as of	12/31/2014
(a) Beginning of Year Actuarial Value of Assets	$ 506,787,899
(b) Contributions	27,157,042
(c) Benefit Payments	(36,101,522)
(d) Net Cash Flow: (b) + (c)	(8,944,480)
(e) Expected Investment Return: [(a) x 7.25%] + [(d) x 3.625%]	36,417,885
(f) Expected End of Year Actuarial Value of Assets: (a) + (d) + (e)	534,261,304
(g) End of Year Market Value of Assets	534,452,795
(h) Excess of Market Value over Expected Actuarial Value of Assets: (g) - (f)	191,491
(i) 20% Adjustment toward Market Value: (h) x 20%	38,298
(j) Preliminary End of Year Actuarial Value of Assets: (f) + (i)	534,299,602
(k) Final End of Year Actuarial Value of Assets: (j) not less than 80% of (g) and not greater than 120% of (g)	534,299,602
(l) Estimated Net Investment Return on Actuarial Value	7.26%

Commentary: The actuarial value of assets smoothes investment gains/losses, resulting in less volatility in the employer contribution. Higher than expected returns in 2010, 2012 and 2013 resulted in a $0.04 million asset gain 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 8: Historical Asset Returns

Calendar Year	Actuarial Value of Asset Return	Market Value of Asset Return
2006	9.17%	11.35%
2007	9.04%	8.35%
2008	3.01%	-19.39%
2009	4.88%	14.83%
2010	6.01%	11.49%
2011	5.25%	2.18%
2012	6.42%	11.79%
2013	7.52%	12.19%
2014	7.26%	6.19%
Average	6.49%	6.03%
Range	6.16%	34.22%

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 6.49% tracks average market return of 6.03% rather well. But the range of returns is markedly less – 6.16% versus 34.22%. This results in much lower employer contribution volatility using the actuarial value of assets versus market, while ensuring that the actuarial needs of CJRS are met.

Section 5: Liability Results

Using the provided membership data, benefit provisions, and actuarial assumptions, future benefit payments of CJRS 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 9: Liability Summary

Valuation Results as of	12/31/2014	12/31/2013
(a) Present Value of Future Benefits		
(1) Active Members	$ 393,442,371	$ 392,144,662
(2) Terminated Members	3,507,279	3,393,117
(3) Members Currently Receiving Benefits	329,042,332	313,168,240
(4) Total	$ 725,991,982	$ 708,706,019
(b) Present Value of Future Normal Costs	$ 159,161,474	$ 159,360,951
(c) Actuarial Accrued Liability: (a4) - (b)	$ 566,830,508	$ 549,345,068
(d) Actuarial Value of Assets	$ 534,299,602	$ 506,787,899
(e) Unfunded Accrued Liability: (c) - (d)	$ 32,530,906	$ 42,557,169

Section 5: Liability Results

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

Table 10: Reconciliation of Unfunded Actuarial Accrued Liability

(in millions)	
Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2013	$ 42.6
Normal Cost during 2014	16.8
Reduction due to Actual Contributions during 2014	(27.2)
Interest on UAAL, Normal Cost, and Contributions	3.3
Asset (Gain)/Loss	0.0
Actuarial Accrued Liability (Gain)/Loss	(3.0)
Impact of Legislative Changes	0.0
Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2014	$ 32.5

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 death benefit normal rate is the rate necessary to provide the one year's compensation upon death in active service. This rate is calculated to provide the death benefit on a one-year term basis and is payable to the Death Benefit Fund. 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 table below provides the calculation of the annual required contribution for the current and prior years' valuations.

Table 11: 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) Normal Cost*	$ 16,855,751	$ 16,825,588
(b) Valuation Compenation	71,429,321	71,243,601
(c) Normal Cost Rate: (a) / (b)	23.60%	23.62%
(d) Employee Contribution Rate	6.00%	6.00%
(e) Total Normal Cost Rate: (c) - (d)	17.60%	17.62%
Death Benefit Rate Calculation		
(f) Death Benefit Normal Cost	$ 252,501	$ 248,877
(g) Valuation Compenation	71,429,321	71,243,601
(h) Death Benefit Rate: (f) / (g)	0.35%	0.35%
Accrued Liability Rate Calculation		
(i) Total Annual Amortization Payments**	$ 5,101,505	$ 5,987,959
(j) Valuation Compensation	71,429,321	71,243,601
(k) Accrued Liability Rate: (i) / (j)	7.14%	8.40%
Total ARC (e) + (h) + (k)	25.09%	26.37%

* Includes assumed administrative expenses.
** See Table 14 for more detail.

Section 6: Annual Required Contribution

The table below provides a reconciliation of the annual required contribution for the current and prior years' valuations.

Table 12: Reconciliation of the Change in the ARC

Fiscal year ending June 30, 2016 Preliminary ARC (based on December 31, 2013 valuation)	26.37%
Impact of Legislative Changes	0.00%
Fiscal year ending June 30, 2016 Final ARC	26.37%
Change Due to Demographic (Gain)/Loss	(1.36%)
Change Due to Investment (Gain)/Loss	(0.01%)
Change Due to Contributions Less (Greater) than ARC	0.09%
Fiscal year ending June 30, 2017 Preliminary ARC (based on December 31, 2014 valuation)	25.09%

Section 6: Annual Required Contribution

Amortization methods determine the payment schedule for the unfunded actuarial accrued liability. CJRS 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 13: Calculation of the New Amortization Base

Calculation as of	12/31/2014	12/31/2013
(a) Unfunded Actuarial Accrued Liability	$ 32,530,906	$ 42,557,169
(b) Prior Years' Outstanding Balances	$ 39,009,284	$ 43,449,834
(c) New Amortization Base: (a) - (b)	$ (6,478,378)	$ (892,665)
(d) New Amortization Payment	$ (886,454)	$ (122,146)

Table 14: Amortization Schedule for Unfunded Accrued Liability

Date Established	Original Balance	12/31/2014 Outstanding Balance	Annual Payment
December 31, 2009	$ 34,962,037	$ 30,642,033	$ 4,783,952
December 31, 2010	3,913,729	3,715,374	535,526
December 31, 2011	10,017,079	10,190,093	1,370,665
December 31, 2012	(4,239,030)	(4,580,833)	(580,038)
December 31, 2013	(892,665)	(957,383)	(122,146)
December 31, 2014	(6,478,378)	(6,478,378)	(886,454)
Total		$ 32,530,906	$ 5,101,505

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

Section 6: Annual Required Contribution

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

Table 15: 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	17.95%	7.14%	N/A	N/A	N/A
12/31/2013	6/30/2016	17.97%	8.40%	0.00%	26.37%	27.21%
12/31/2012	6/30/2015	17.91%	8.64%	0.66%	27.21%	27.21%
12/31/2011	6/30/2014	18.48%	9.53%	0.00%	28.01%	28.01%
12/31/2010	6/30/2013	18.35%	7.62%	0.58%	26.55%	26.55%

* Includes Death Benefit rate

Table 16: Cost of Benefit Enhancements

Calculation as of	12/31/2014	12/31/2013
Increase in ARC for a 1% COLA*	0.69%	0.64%

* 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.

Section 7: Valuation Balance Sheet

The valuation balance sheet shows the assets and liabilities of CJRS. 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 17: Valuation Balance Sheet

Balance Sheet as of	12/31/2014	12/31/2013
Assets		
Current Actuarial Value of Assets		
Annuity Savings Fund	$ 60,853,053	$ 59,221,482
Pension Accumulation Fund	473,446,549	447,566,417
Total	$ 534,299,602	$ 506,787,899
Future Member Contributions to the Annuity Savings Fund	$ 37,953,529	$ 38,109,595
Prospective Contributions to the Pension Accumulation Fund		
Normal Contributions	$ 121,207,945	$ 121,251,356
Unfunded Accrued Liability Contributions	32,530,906	42,557,169
Undistributed Gain Contributions	9,647,031	4,228,380
Total	$ 163,385,882	$ 168,036,905
Total Assets	$ 735,639,013	$ 712,934,399
Liabilities		
Annuity Savings Fund		
Past Member Contributions	$ 60,853,053	$ 59,221,482
Future Member Contributions	37,953,529	38,109,595
Total Contributions	$ 98,806,582	$ 97,331,077
Pension Accumulation Fund		
Benefits Currently in Payment	$ 329,042,332	$ 310,129,370
Benefits to be Paid to Current Active Members	298,143,068	298,206,702
Reserve for Increases in Retirement Allowances effective July 1, 2015 (July 1, 2014 for December 31, 2013)	0	3,038,870
Reserve for Undistributed Gains/(Losses)	9,647,031	4,228,380
Total Benefits Payable	$ 636,832,431	$ 615,603,322
Total Liabilities	$ 735,639,013	$ 712,934,399

Section 8: Accounting Results

This section contains the accounting information for Governmental Accounting Standards Board (GASB) Statement No. 67 for fiscal year ending June 30, 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 18: Number of Active and Retired Members as of December 31, 2014

Group	Number
Retired members and survivors of deceased members currently receiving benefits	610
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	50
Active members	566
Total	1,226

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 19: Schedule of Changes in Net Pension Liability (Asset)

Calculation as of	June 30, 2015
Total Pension Liability	
Service Cost	$ 16,812,000
Interest	40,846,000
Changes of Benefit Terms	0
Difference between Expected and Actual Experience	(2,289,000)
Change of Assumptions	0
Benefit Payments, including Refund of Member Contributions	(38,364,000)
Net Change in Total Pension Liability	$ 17,005,000
Total Pension Liability - Beginning of Year	$ 565,761,000
Total Pension Liability - End of Year	$ 582,766,000
Plan Fiduciary Net Position	
Employer Contributions	$ 18,949,000
Member Contributions	6,238,000
Net Investment Income	12,176,000
Benefit Payments, including Refund of Member Contributions	(38,364,000)
Administrative Expenses	(30,000)
Other	1,000
Net Change in Fiduciary Net Position	$ (1,030,000)
Plan Fiduciary Net Position - Beginning of Year	$ 539,564,000
Plan Fiduciary Net Position - End of Year	$ 538,534,000

Table 20: Net Pension Liability (Asset)

Calculation as of	June 30, 2015	June 30, 2014
Total Pension Liability	$ 582,766,000	$ 565,761,000
Plan Fiduciary Net Position	538,534,000	539,564,000
Net Pension Liability (Asset)	$ 44,232,000	$ 26,197,000
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	92.41%	95.37%

Section 8: Accounting Results

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

Table 21: Sensitivity of the Net Pension Liability 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)	99,695,000	44,232,000	(3,843,000)

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 22: Additional Information for GASB Statement No. 67

Valuation Date	12/31/2014
Actuarial Cost Method	Projected Unit Credit
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**	5.00% - 5.95%
*Includes Inflation of	3.00%
**Includes Inflation and Productivity of	3.50%
Cost-of-living Adjustments	N/A

Appendix A: Valuation Process and Glossary of Actuarial Terms

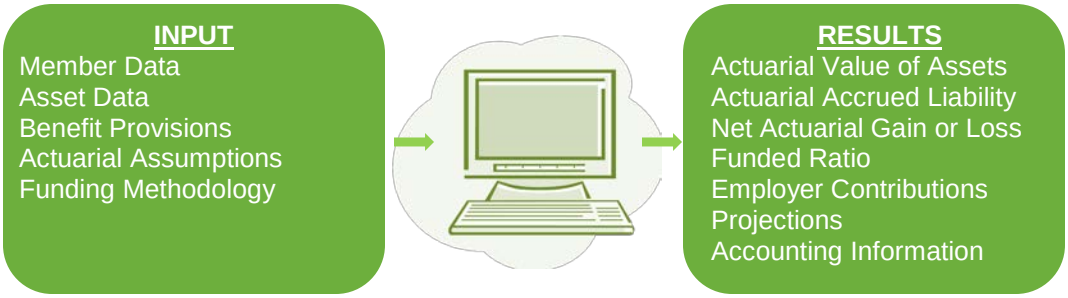
Purpose of an Actuarial Valuation

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

Appendix A: Valuation Process and Glossary of Actuarial Terms

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!!

Appendix A: Valuation Process and Glossary of Actuarial Terms

Glossary

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

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

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

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

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

Actuarial Equivalent. Benefits whose actuarial present values are equal.

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

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

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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

Age	Years of Service										
	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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	3	0	0	0	0	0	0	0	0	3
	0	93,942	0	0	0	0	0	0	0	0	93,942
35 to 39	2	11	6	0	0	0	0	0	0	0	19
	24,598	105,901	115,788	0	0	0	0	0	0	0	100,465
40 to 44	5	17	22	9	1	0	0	0	0	0	54
	19,665	112,062	117,829	122,118	119,278	0	0	0	0	0	107,666
45 to 49	5	25	23	23	14	6	2	0	0	0	98
	15,132	106,673	119,517	122,038	131,993	131,711	89,932	0	0	0	113,431
50 to 54	5	22	19	19	8	10	11	1	0	0	95
	12,786	113,141	119,479	122,792	129,141	141,900	119,063	91,942	0	0	115,894
55 to 59	1	19	17	14	12	19	9	4	2	0	97
	7,033	100,031	118,075	123,896	126,333	133,811	124,428	110,347	125,480	0	118,763
60 to 64	0	13	19	12	10	18	14	9	8	0	103
	0	106,882	118,672	128,692	131,376	135,373	142,370	148,424	121,124	0	128,515
65 to 69	0	8	12	14	12	14	3	9	6	2	80
	0	125,344	118,497	131,444	131,503	147,953	160,681	134,174	121,390	97,984	131,603
70 & Up	0	3	3	1	3	5	0	0	1	1	17
	0	123,267	105,196	116,524	135,743	138,118	0	0	142,353	104,026	126,242
Total	18	121	121	92	60	72	39	23	17	3	566
	16,341	108,846	118,228	124,724	130,255	138,199	130,375	133,770	122,979	99,998	119,368

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
33	1	$ 72,833		
34	2	208,994		
35	2	228,630		
36	2	222,368		
37	1	109,125	3	$ 280,845
38	3	269,871	2	197,332
39	2	118,217	4	482,449
40	3	251,769	1	7,033
41			4	466,755
42	5	493,617	5	568,284
43	13	1,538,561	4	386,653
44	8	862,980	11	1,238,300
45	6	640,147	7	696,922
46	10	1,057,216	13	1,406,807
47	10	1,117,284	7	797,710
48	12	1,515,278	9	1,106,400
49	16	1,864,995	8	913,532
50	7	854,942	9	916,019
51	6	713,098	8	917,241
52	14	1,749,539	10	1,150,425
53	10	1,140,166	11	1,245,248
54	11	1,375,045	9	948,220
55	14	1,713,905	9	956,769
56	8	849,355	7	789,813
57	13	1,611,706	4	365,895
58	16	2,159,626	10	1,017,617
59	10	1,313,371	6	741,972
60	18	2,392,895	7	847,008
61	12	1,561,915	5	585,583
62	21	2,672,071	4	429,566
63	19	2,513,521	2	303,415
64	13	1,648,659	2	282,370
65	17	2,153,995	4	475,093
66	18	2,458,573	4	482,641
67	12	1,543,886	2	280,037

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
68	14	$ 1,934,913		
69	8	1,095,068	1	$ 104,026
70	9	1,153,638	1	116,524
71	3	440,329		
72	1	127,192	1	116,524
76	1	87,878		
84			1	104,026
Total	371	$ 45,837,171	195	$ 21,725,054

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	10	$ 225,765	8	$ 68,381
1	17	1,590,687	5	389,977
2	21	2,420,608	18	1,943,095
3	3	379,048	5	532,640
4	32	3,756,665	20	2,157,617
5	9	1,092,269	5	546,355
6	17	2,073,200	18	2,085,524
7	9	1,064,087	8	957,644
8	30	3,538,893	12	1,370,118
9	10	1,232,970	3	344,463
10	18	2,204,788	10	1,243,980
11	2	211,754	2	212,041
12	15	1,935,100	12	1,447,866
13	6	816,687	2	238,378
14	16	2,000,772	9	1,163,215
15	9	1,131,137	2	272,569
16	15	1,951,280	3	402,147
17	4	577,473	4	508,768
18	8	1,056,308	6	770,676
19	6	764,593	3	380,381
20	24	3,225,990	2	299,569
21	9	1,315,100	4	485,565
22	8	1,167,329	3	438,038
23	3	406,689	2	223,680
24	15	2,141,873	2	246,498
25	5	613,596	3	340,986
26	13	1,889,925	5	556,239
28	7	964,525	1	116,524
29	3	390,389	2	212,442
30	6	880,138	2	208,466
31	2	311,529		
32	2	311,529	1	121,852
33	3	312,492	4	502,652
34	2	311,529	1	116,524
35	7	993,648	2	200,060

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
36	1	$ 150,337		
37	1	150,337		
38	1	96,268	1	$ 99,994
39	1	87,922	3	312,078
42	1	91,942		
43			1	$ 104,026
46			1	104,026
Total	371	$ 45,837,171	195	$ 21,725,054

Appendix B: Detailed Tabulations of Member Data

Table B-4: The Number and Accumulated Contributions of Terminated Vested Members Distributed by Age as of December 31, 2014

	Men		Women	
Age	Number	Contributions	Number	Contributions
32	1	$ 2,935		
38			1	$ 9,815
40			1	4,036
43	1	37,624		
44	2	22,080		
45	1	41,032	1	42,435
47	4	279,006		
48			2	77,240
49	1	5,141	1	4,345
50	1	30,194	2	166,485
51	2	101,396	1	4,655
52	1	32,058		
53			1	81,310
54	2	86,538		
55	1	36,686		
57	2	100,216	2	231,612
58	1	16,539		
60	1	6,694		
61	2	41,115	1	1,293
62	2	106,701	1	3,633
64	2	208,630	1	38,902
65	2	34,018		
67	1	16,225		
68	1	41,361		
70	1	56,711		
72	2	3,646		
77			1	15,901
Total	34	$ 1,306,546	16	$ 681,662

Appendix B: Detailed Tabulations of Member Data

Table B-5: The Number and Annual Retirement Allowances of Retired Members (Healthy at Retirement) and Survivors of Deceased Members Distributed by Age as of December 31, 2014

	Men		Women	
Age	Number	Allowances	Number	Allowances
50			1	$ 40,238
51	1	$ 60,085		
53			2	88,212
54	1	21,257	3	116,695
55	2	144,771		
56			3	163,694
57			2	155,707
58	4	269,502	10	557,462
59	1	94,095	8	518,954
60	9	573,332	5	368,534
61	10	687,929	6	330,858
62	7	495,732	3	180,337
63	15	844,039	8	437,907
64	12	859,348	8	646,169
65	20	1,527,187	7	359,662
66	13	781,920	7	463,476
67	16	1,168,447	6	404,657
68	21	1,577,160	10	470,519
69	24	1,772,381	12	728,849
70	12	840,906	2	119,534
71	16	1,169,096	9	260,538
72	20	1,543,825	11	796,507
73	12	935,133	6	307,305
74	10	864,235	3	71,204
75	13	1,210,461	6	349,491
76	9	832,641	7	517,284
77	9	625,308	3	134,863
78	14	992,421	5	309,139
79	11	644,866	5	225,304
80	4	244,367	4	175,368
81	7	510,668	3	153,183
82	6	421,431	6	213,805
83	5	331,423	4	93,084
84	6	442,432	7	275,620
85	9	484,307	5	216,973

Appendix B: Detailed Tabulations of Member Data

Table B-5: The Number and Annual Retirement Allowances of Retired Members (Healthy at Retirement) and Survivors of Deceased Members Distributed by Age as of December 31, 2014 (continued)

	Men		Women	
Age	Number	Allowances	Number	Allowances
86	6	$ 418,684	7	$ 320,438
87	2	46,774	9	345,575
88	2	80,575	8	228,885
89	3	248,144	6	159,405
90	2	155,635	2	73,282
91	1	99,760	10	246,502
92	3	197,561	7	293,259
93			5	164,080
94	2	105,585	2	69,898
95	2	192,072	4	116,389
96			1	35,205
97			3	57,618
98			1	11,214
99	1	9,275	6	168,135
100			4	61,385
Total	343	$ 24,524,770	262	$ 12,602,402

Appendix B: Detailed Tabulations of Member Data

Table B-6: The Number and Annual Retirement Allowances of Retired Members (Healthy at Retirement) and Survivors of Deceased Members Distributed by Annuity Type as of December 31, 2014

	Men		Women	
Annuity Type	Number	Allowances	Number	Allowances
Maximum	214	$ 16,061,077	111	$ 6,516,827
Option 1	4	329,866	1	20,854
Option 2	22	940,861	3	181,280
Option 3	34	2,920,614	2	109,278
Option 4	2	141,305	8	408,711
Option 5-2				
Option 5-3				
Option 6-2	11	413,564	1	90,360
Option 6-3	40	3,213,825	10	645,724
Other	5	171,698	1	52,525
Survivors of Deceased Members	11	331,960	125	4,576,843
Total	343	$ 24,524,770	262	$ 12,602,402

Appendix B: Detailed Tabulations of Member Data

Table B-7: The Number and Annual Retirement Allowances of Retired Members (Disabled at Retirement) Distributed by Age of December 31, 2014

	Men		Women	
Age	Number	Allowances	Number	Allowances
58	1	$ 69,006		
62	1	51,552		
66			1	$ 52,490
74	1	45,753		
75			1	30,947
Total	3	$ 166,311	2	$ 83,437

Appendix B: Detailed Tabulations of Member Data

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

	Men		Women	
Annuity Type	Number	Allowances	Number	Allowances
Maximum	1	$ 69,006	1	$ 30,947
Option 1	1	45,753		
Option 2	1	51,552		
Option 3			1	52,490
Option 4				
Option 5-2				
Option 5-3				
Option 6-2				
Option 6-3				
Other				
Total	3	$ 166,311	2	$ 83,437

Appendix C: Summary of Main Benefit and Contribution Provisions

All justices, judges, district attorneys, and public defenders of the General Court of Justice, and clerks of the Superior Court are eligible for membership.

"Final compensation" as used in the summary means the annual rate of compensation of the member at his date of termination or death. “Average final compensation” means the average annual compensation during the 48 consecutive calendar months of membership producing the highest average. "Creditable service" includes all service rendered as a justice of the Supreme Court, judge of the Court of Appeals, judge of the Superior Court, judge of the District Court Division of the General Court of Justice, Administrative Officer of the Courts, District Attorney, Public Defender or as a Clerk of the Superior Court.

BENEFITS

Service Retirement Allowance

Conditions for Allowance

A service retirement allowance is payable to any member who retires from service and:

(a) had attained age 50 and was in service on October 8, 1981; or

(b) has attained age 50 and completed five or more years of creditable service; or

Retirement is compulsory at age 72 if the member is a justice or judge of the Appellate, Superior, or District Divisions of the General Court of Justice and at age 70 for each other member.

Unreduced Allowance

An unreduced annual service retirement allowance is payable to a member who:

(a) has attained age 65 and completed five years of creditable service; or

(b) has attained age 50 and completed 24 years of creditable service.

The Service Retirement Allowance is equal to:

(i) 4.02% of final compensation multiplied by the number of years of creditable service rendered as a justice of the Supreme Court or judge of the Court of Appeals, plus

(ii) 3.52% of final compensation multiplied by the number of years of creditable service rendered

Appendix C: Summary of Main Benefit and Contribution Provisions

as a judge of the Superior Court or as Administrative Officer of the Courts, plus

(iii) 3.02% of final compensation multiplied by the number of years of creditable service rendered as a judge of the District Court, District Attorney, Public Defender, or Clerk of the Superior Court, plus

(iv) A service retirement allowance computed on average final compensation, service transferred from the Teachers' and State Employees' Retirement System or the Local Governmental Employees' Retirement System and the applicable formula accrual rate from the previous system.

Reduced Allowance	A reduced annual service retirement allowance is payable to a member who retires: (a) prior to the earlier of attainment of age 65 and completion of five years of creditable service; (b) prior to attainment of age 50 or the completion of 24 years of creditable service. The reduced amount is an allowance as computed above reduced by 3% for each year that the member's retirement date precedes the date upon which the member would have attained age 65 or completed 24 years of service had he remained in service, whichever is earlier.
Maximum Amount	The maximum annual service retirement allowance (on an unreduced basis) is the amount which, when added to the member's benefit payable from the Teachers' and State Employees' Retirement System, Local Governmental Employees' Retirement System, or Legislative Retirement System (all on an unreduced basis) would total 75% of the member's final compensation.

Appendix C: Summary of Main Benefit and Contribution Provisions

Minimum Amount	In no event will a member whose creditable service commenced prior to January 1, 1974 as a justice of the Supreme Court, as a judge of the Court of Appeals, as an Administrative Officer of the courts, or as a judge of the Superior Court, receive a smaller retirement allowance than he would have received under Chapter 7-A of the General Statutes.
Disability Retirement Allowance	
Condition for Allowance	Any member who becomes permanently and totally disabled prior to the attainment of age 65 and who has completed at least five years of creditable service may be retired by the Board of Trustees on a disability retirement allowance. Any retired member may also apply for a disability retirement allowance within the first three years of retirement.
Amount of Allowance	The disability retirement allowance is computed as a service retirement allowance based on the number of years of creditable service the member would have had had he remained in service to the earliest date he could have retired on an unreduced service retirement allowance.
Deferred Allowance	Any member who separates from service prior to age 50 and completion of five years of creditable service and who leaves his total accumulated contributions in the system may receive a deferred allowance, beginning at age 50, computed in the same way as a service retirement allowance on the basis of his creditable service and compensation to the date of separation.
Spouse Benefit	
Conditions for Benefit	Upon the death of a member in active service after his attainment of age 50 and completion of five years of creditable service a death benefit is payable to his surviving spouse.
Amount of Benefit	The surviving spouse receives a lump sum payment equal to the member's final compensation. In addition the surviving spouse receives an annual retirement allowance, until death or remarriage, equal to 50% of the service retirement allowance to which the member would have been entitled had he retired on the first day

Appendix C: Summary of Main Benefit and Contribution Provisions

	of the calendar month coincident with or next following his date of death reduced by 2% for each year that the member's age exceeds that of his spouse.
Lump Sum Death Benefit	Upon the death of a member in active service prior to his attainment of age 50 a lump sum payment equal to his accumulated contributions plus his final compensation is made to his designated beneficiary or estate.
Death after Retirement	Upon the death of a retired member while in receipt of a service retirement allowance or after age 65 if in receipt of a disability retirement allowance an allowance is paid to his spouse, until death or remarriage, equal to one-half the allowance which was payable to the member prior to his death reduced by 2% for each year that the member's age exceeds that of his spouse. Upon the death of a member in receipt of a disability retirement allowance prior to age 65, an allowance is paid to his spouse, until death or remarriage, equal to one-half the service retirement allowance he would have received had he remained in service up to his date of death reduced by 2% for each year that the member's age exceeds that of his spouse.
Other Death Benefits	Upon the death of a member in service, other benefits may be provided by the Death Benefit Plan.
Return of Contributions	Any member who terminates service other than by retirement or death is entitled to the return of his accumulated contributions. If the total retirement allowance payments to a retired member, spouse and/or beneficiary under option are less than the member's accumulated contributions at retirement, the excess is paid to the designated beneficiary or legal representatives. The current interest rate on member contributions is 4%.

Appendix C: Summary of Main Benefit and Contribution Provisions

Optional Allowances	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 - At the death of the member 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 payment, is paid to his estate, or to a person designated by the member, or Option 2 - At the death of the member his allowance shall be continued throughout the life of such other person as the member shall have designated at the time of his retirement, or 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, or Option 4 - At retirement, any 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. A member who elects to receive his allowance under this option is deemed to have elected Option 1 also, or Option 5 - At retirement, the member may elect to receive a reduced retirement allowance during his life with some other benefit approved by the Board of Trustees payable after he dies, or he 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, or 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.

Appendix C: Summary of Main Benefit and Contribution Provisions

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.
Post-Retirement Increases in Allowance	Future increases in allowances may be granted at the discretion of the State.
Contributions	
Member Contributions	Each member contributes 6% of his annual compensation.
Employer Contributions	The State makes 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 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.

Withdrawal: No termination of employment is assumed to occur prior to retirement, other than death or disability.

Separations Before Retirement and Salary Increases: Representative values of the assumed annual rates of separation and annual rate of salary increases are as follows:

		Annual Rate of			
Age	Disability	Base Mortality*		Service	Salary Increase
		Male	Female		
25	.0001	.0004	.0002	0	.0595
30	.0001	.0005	.0003	5	.0570
35	.0003	.0008	.0005	10	.0545
40	.0007	.0011	.0008	15	.0525
45	.0014	.0016	.0012	20	.0520
50	.0023	.0023	.0018	25	.0500
55	.0047	.0033	.0028	30	.0500
60	.0077	.0054	.0043	35	.0500
64	.0098	.0076	.0058	40	.0500

* Base mortality rates as of December 31, 2003.

Service Retirement: Representative values of the assumed annual rates of service retirement are as follows:

	Service					
Age	5	10	15	20	25	30
50					.075	.075
55	.030	.030	.030	.030	.075	.075
60	.030	.030	.030	.030	.075	.075
65	.100	.100	.100	.100	.250	.250
70	1.000	1.000	1.000	1.000	1.000	1.000

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 (Retired Members and Survivors of Deceased Members)

	Retirees (Healthy at Retirement)		Survivors of Deceased Members		Retirees (Disabled at Retirement)	
Age	Male	Female	Male	Female	Male	Female
55	.0061	.0039	.0061	.0044	.0277	.0176
60	.0090	.0069	.0090	.0077	.0342	.0229
65	.0149	.0114	.0149	.0125	.0407	.0296
70	.0246	.0186	.0246	.0207	.0483	.0401
75	.0422	.0310	.0422	.0341	.0596	.0558
80	.0720	.0508	.0720	.0563	.0775	.0771

Mortality Improvements: Representative values of the assumed mortality improvement rates (applied to pre-retirement mortality rate 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

Deaths After Retirement (Non-Disabled): According to the RP-2000 Mortality tables for retirees. These tables are set forward one year for males and females. 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.

Appendix D: Actuarial Assumptions and Methods

Death After Disability: RP-2000 Mortality tables for disabled annuitants 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 forward one year for males and females. 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 ages 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 July 1 of each year.

Liability For Inactive Members: The liability for members who terminated prior to five years of creditable service is estimated to be 100% of the member's accumulated contributions. The liability for members who terminated after completing five years of creditable service is estimated based on the member's current age and the service and reported compensation at termination of employment.

Administrative Expenses: 0.75% of normal cost.

Marriage Assumption: 90% of male members married and 50% of female members married with the 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: Projected unit credit. Projected benefits and the corresponding liabilities are allocated based on proration by creditable service.

Asset Valuation Method: Actuarial value, as developed in Schedule A. 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	$ 534,453	$ 4,286	$ 18,461	$ 39,759	$ 130	$ 38,138	$ 555,449
2016	555,449	4,131	17,673	41,162	127	39,586	575,550
2017	575,550	4,047	16,828	43,030	124	40,933	594,204
2018	594,204	3,950	16,618	44,745	121	42,213	612,119
2019	612,119	3,849	16,381	46,527	118	43,438	629,142
2020	629,142	3,739	16,192	48,139	115	44,603	645,422
2021	645,422	3,638	16,073	49,521	113	45,726	661,225
2022	661,225	3,554	15,859	51,058	110	46,807	676,277
2023	676,277	3,445	13,262	52,707	106	47,785	687,956
2024	687,956	3,328	10,565	53,946	103	48,450	696,250
2025	696,250	3,232	9,368	55,326	100	48,963	702,387
2026	702,387	3,113	8,758	56,466	97	49,326	707,021
2027	707,021	2,998	8,734	57,831	93	49,613	710,442
2028	710,442	2,859	9,022	58,984	88	49,816	713,067
2029	713,067	2,717	9,141	60,165	84	49,974	714,650
2030	714,650	2,573	8,609	61,459	79	50,018	714,312
2031	714,312	2,419	8,041	62,626	74	49,928	712,000
2032	712,000	2,252	7,379	63,907	68	49,684	707,340
2033	707,340	2,057	6,649	65,384	61	49,263	699,864
2034	699,864	1,853	6,026	66,320	55	48,657	690,025
2035	690,025	1,667	5,345	67,221	49	47,881	677,648
2036	677,648	1,482	4,567	68,213	42	46,914	662,356
2037	662,356	1,269	3,832	68,980	35	45,745	644,187
2038	644,187	1,055	3,185	69,326	28	44,385	623,458
2039	623,458	869	2,536	69,485	22	42,846	600,202
2040	600,202	696	2,092	68,860	18	41,162	575,274
2041	575,274	566	1,621	68,116	13	39,359	548,691
2042	548,691	433	1,253	66,960	10	37,455	520,862
2043	520,862	321	1,001	65,271	7	35,486	492,392
2044	492,392	242	842	63,128	6	33,488	463,830
2045	463,830	193	669	60,897	4	31,490	435,281
2046	435,281	148	504	58,641	3	29,492	406,781
2047	406,781	103	364	56,271	2	27,504	378,479
2048	378,479	65	262	53,750	1	25,536	350,591
2049	350,591	39	203	51,050	1	23,609	323,391
2050	323,391	25	151	48,307	0	21,732	296,992
2051	296,992	14	102	45,566	0	19,913	271,455
2052	271,455	5	77	42,782	0	18,160	246,915
2053	246,915	0	61	39,956	0	16,481	223,501
2054	223,501	0	47	37,164	0	14,882	201,266
2055	201,266	0	36	34,412	0	13,368	180,258
2056	180,258	0	27	31,706	0	11,940	160,519
2057	160,519	0	21	29,057	0	10,603	142,086
2058	142,086	0	15	26,477	0	9,359	124,983
2059	124,983	0	11	23,976	0	8,208	109,226
2060	109,226	0	8	21,568	0	7,151	94,817
2061	94,817	0	5	19,270	0	6,189	81,741
2062	81,741	0	4	17,094	0	5,318	69,969
2063	69,969	0	2	15,050	0	4,537	59,458
2064	59,458	0	2	13,147	0	3,842	50,155

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	$ 50,155	$ 0	$ 1	$ 11,396	$ 0	$ 3,230	$ 41,990
2066	41,990	0	1	9,803	0	2,696	34,884
2067	34,884	0	1	8,366	0	2,230	28,749
2068	28,749	0	1	7,083	0	1,832	23,499
2069	23,499	0	0	5,947	0	1,492	19,044
2070	19,044	0	0	4,951	0	1,205	15,298
2071	15,298	0	0	4,085	0	964	12,177
2072	12,177	0	0	3,340	0	765	9,602
2073	9,602	0	0	2,704	0	600	7,498
2074	7,498	0	0	2,167	0	466	5,797
2075	5,797	0	0	1,719	0	359	4,437
2076	4,437	0	0	1,350	0	274	3,361
2077	3,361	0	0	1,049	0	207	2,519
2078	2,519	0	0	805	0	154	1,868
2079	1,868	0	0	611	0	114	1,371
2080	1,371	0	0	458	0	83	996
2081	996	0	0	340	0	60	716
2082	716	0	0	250	0	44	510
2083	510	0	0	181	0	30	359
2084	359	0	0	130	0	21	250
2085	250	0	0	93	0	15	172
2086	172	0	0	65	0	9	116
2087	116	0	0	45	0	7	78
2088	78	0	0	31	0	4	51
2089	51	0	0	21	0	3	33
2090	33	0	0	14	0	2	21
2091	21	0	0	9	0	1	13
2092	13	0	0	6	0	1	8
2093	8	0	0	4	0	1	5
2094	5	0	0	2	0	0	3
2095	3	0	0	1	0	0	2
2096	2	0	0	1	0	0	1
2097	1	0	0	1	0	1	1
2098	1	0	0	0	0	0	0
2099	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0
2101	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0
2109	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0
2112	0	0	0	0	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	$ 534,453	$ 39,759	$ 39,759	$ 0	$ 38,392	$ 0	$ 38,392
2016	555,449	41,162	41,162	0	37,060	0	37,060
2017	575,550	43,030	43,030	0	36,123	0	36,123
2018	594,204	44,745	44,745	0	35,023	0	35,023
2019	612,119	46,527	46,527	0	33,956	0	33,956
2020	629,142	48,139	48,139	0	32,758	0	32,758
2021	645,422	49,521	49,521	0	31,420	0	31,420
2022	661,225	51,058	51,058	0	30,205	0	30,205
2023	676,277	52,707	52,707	0	29,073	0	29,073
2024	687,956	53,946	53,946	0	27,745	0	27,745
2025	696,250	55,326	55,326	0	26,531	0	26,531
2026	702,387	56,466	56,466	0	25,247	0	25,247
2027	707,021	57,831	57,831	0	24,110	0	24,110
2028	710,442	58,984	58,984	0	22,928	0	22,928
2029	713,067	60,165	60,165	0	21,806	0	21,806
2030	714,650	61,459	61,459	0	20,770	0	20,770
2031	714,312	62,626	62,626	0	19,733	0	19,733
2032	712,000	63,907	63,907	0	18,776	0	18,776
2033	707,340	65,384	65,384	0	17,911	0	17,911
2034	699,864	66,320	66,320	0	16,939	0	16,939
2035	690,025	67,221	67,221	0	16,009	0	16,009
2036	677,648	68,213	68,213	0	15,147	0	15,147
2037	662,356	68,980	68,980	0	14,282	0	14,282
2038	644,187	69,326	69,326	0	13,383	0	13,383
2039	623,458	69,485	69,485	0	12,507	0	12,507
2040	600,202	68,860	68,860	0	11,557	0	11,557
2041	575,274	68,116	68,116	0	10,659	0	10,659
2042	548,691	66,960	66,960	0	9,770	0	9,770
2043	520,862	65,271	65,271	0	8,880	0	8,880
2044	492,392	63,128	63,128	0	8,008	0	8,008
2045	463,830	60,897	60,897	0	7,202	0	7,202
2046	435,281	58,641	58,641	0	6,467	0	6,467
2047	406,781	56,271	56,271	0	5,786	0	5,786
2048	378,479	53,750	53,750	0	5,153	0	5,153
2049	350,591	51,050	51,050	0	4,563	0	4,563
2050	323,391	48,307	48,307	0	4,026	0	4,026
2051	296,992	45,566	45,566	0	3,541	0	3,541
2052	271,455	42,782	42,782	0	3,100	0	3,100
2053	246,915	39,956	39,956	0	2,700	0	2,700
2054	223,501	37,164	37,164	0	2,341	0	2,341
2055	201,266	34,412	34,412	0	2,021	0	2,021
2056	180,258	31,706	31,706	0	1,736	0	1,736
2057	160,519	29,057	29,057	0	1,484	0	1,484
2058	142,086	26,477	26,477	0	1,261	0	1,261
2059	124,983	23,976	23,976	0	1,064	0	1,064
2060	109,226	21,568	21,568	0	893	0	893
2061	94,817	19,270	19,270	0	744	0	744
2062	81,741	17,094	17,094	0	615	0	615
2063	69,969	15,050	15,050	0	505	0	505
2064	59,458	13,147	13,147	0	411	0	411

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	$ 50,155	$ 11,396	$ 11,396	$ 0	$ 332	$ 0	$ 332
2066	41,990	9,803	9,803	0	267	0	267
2067	34,884	8,366	8,366	0	212	0	212
2068	28,749	7,083	7,083	0	167	0	167
2069	23,499	5,947	5,947	0	131	0	131
2070	19,044	4,951	4,951	0	102	0	102
2071	15,298	4,085	4,085	0	78	0	78
2072	12,177	3,340	3,340	0	60	0	60
2073	9,602	2,704	2,704	0	45	0	45
2074	7,498	2,167	2,167	0	34	0	34
2075	5,797	1,719	1,719	0	25	0	25
2076	4,437	1,350	1,350	0	18	0	18
2077	3,361	1,049	1,049	0	13	0	13
2078	2,519	805	805	0	9	0	9
2079	1,868	611	611	0	7	0	7
2080	1,371	458	458	0	5	0	5
2081	996	340	340	0	3	0	3
2082	716	250	250	0	2	0	2
2083	510	181	181	0	1	0	1
2084	359	130	130	0	1	0	1
2085	250	93	93	0	1	0	1
2086	172	65	65	0	0	0	0
2087	116	45	45	0	0	0	0
2088	78	31	31	0	0	0	0
2089	51	21	21	0	0	0	0
2090	33	14	14	0	0	0	0
2091	21	9	9	0	0	0	0
2092	13	6	6	0	0	0	0
2093	8	4	4	0	0	0	0
2094	5	2	2	0	0	0	0
2095	3	1	1	0	0	0	0
2096	2	1	1	0	0	0	0
2097	1	1	1	0	0	0	0
2098	1	0	0	0	0	0	0
2099	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0
2101	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0
2109	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0
2113	0	0	0	0	0	0	0
2114	0	0	0	0	0	0	0