

The Judicial Retirement System of New Jersey Annual Report of the Actuary

Prepared as of July 1, 2015



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February 19, 2016

State House Commission
The Judicial Retirement System
of New Jersey
Trenton, New Jersey 08625

Members of the Commission:

The law governing the operation of The Judicial Retirement System of New Jersey provides for annual actuarial valuations of the System. The results of the July 1, 2015 valuation are submitted in this report, which also includes a comparison with the results of the July 1, 2014 valuation.

The valuation provides information concerning the financial condition of the Plan as of July 1, 2015, and sets forth the basis for determining the recommended annual contribution for the plan year beginning July 1, 2015.

The valuation reflects Chapter 78, P.L. 2011, which increased member contributions by 9% of salary phased-in over a period of seven years, beginning October 2011. The increase in member contributions will be fully phased-in in July 2017.

As required under Chapter 140, P.L. 1973, experience studies are performed once in every three year period. The valuation was prepared using demographic assumptions recommended on the basis of the July 1, 2011 – June 30, 2014 Experience Study and approved by the State House Commission on October 26, 2015. These assumptions will be reviewed in a June 30, 2017 experience study and will remain in effect for valuation purposes until such time as the State House Commission adopts revised assumptions.

The valuation reflects economic assumptions which include a rate of investment return of 7.90% per annum and assumed future salary increases of 2.50% per annum through fiscal year ending 2021 and 3.50% per annum for fiscal years ending 2022 and thereafter. These assumptions will remain in effect for valuation purposes until such time the State House Commission or the Treasurer recommends revised assumptions.

In my opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably related to the experience of the System and to reasonable long-term expectations. These assumptions were selected in accordance with applicable Actuarial Standards of Practice published by the Actuarial Standards Board.

The valuation reflects actual fiscal year 2015 State contributions of \$16,506,000, which have been reduced from the recommended pension contribution of \$44,334,504. In addition, the fiscal year 2016 recommended pension contribution of \$46,502,819 has been reduced to \$12,929,472. This amount reflects the State's planned fiscal year 2016 contribution of \$13,950,900, 30% of the recommended employer contribution, discounted to the valuation date. This amount may be subject to change per the requirements of the State's fiscal year 2016 spending plan.

Reporting requirements of Statements No. 67 and No. 68 are effective as of the June 30, 2014 and June 30, 2015 reporting dates, respectively. These requirements are addressed in separate reports.

The State of New Jersey's Division of Pensions and Benefits reported the individual data for members of the Judicial Retirement System of New Jersey as of the valuation date for use in the preparation of this report. While we did not verify the data at their source, we did perform tests for internal consistency and reasonableness. The amount of assets in the trust fund taken into account in the valuation was based on statements prepared for us by the Division of Pensions and Benefits. The accuracy of the results presented in this report is dependent on the accuracy of the data.

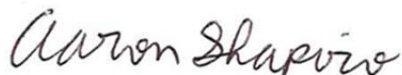
Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Any Statements regarding funded ratios have no specific relevance to any funded position that might be determined in the event a settlement is contemplated. An analysis of the potential range of future results is beyond the scope of this valuation.

Use of this report for any other reason or by anyone other than the State House Commission or staff of the State of New Jersey's Division of Pensions and Benefits 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. You should ask Buck to review any statement you wish to make on the results contained in this report. Buck will accept no liability for any such statement made without prior review by Buck.

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the Academy to render the actuarial opinions contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions concerning it.

The Table of Contents, which follows, highlights the Sections of the Report.

Respectfully submitted,

A handwritten signature in cursive script that reads "Aaron Shapiro".

Aaron Shapiro, FSA, EA, MAAA
Principal, Consulting Actuary

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Section I – Summary of Key Results

The Judicial Retirement System of New Jersey became effective June 1, 1973. This report, prepared as of July 1, 2015, presents the results of the annual actuarial valuation of the Fund.

For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized on the following pages.

Valuation Date	July 1, 2015	July 1, 2014
Number of Members	404	397
Annual Compensation	\$ 67,097,166	\$ 66,028,491
Number of Retirees and Beneficiaries	586	561
Annual Allowances	\$ 52,965,770	\$ 49,946,393
Number of Vested Terminated Members	4	4
Annual Allowances	\$ 183,500	\$ 183,500
Assets		
Market Value of Assets	\$ 225,712,843 ¹	\$ 244,567,822
Valuation Assets	\$ 243,864,022 ¹	\$ 258,101,497
Contribution Rates		
Recommended Pension Contribution		
Normal Contribution	18.80%	20.51%
Accrued Liability Contribution	47.01	49.92
Total Pension Contribution	65.81%	70.43%
Non-Contributory Group Insurance Premium	0.97%	1.22%
Contribution Amounts		
Recommended Pension Contribution		
Normal Contribution	\$ 12,612,089	\$ 13,543,400
Accrued Liability Contribution	31,544,682	32,959,419
Total Pension Contribution	\$ 44,156,771	\$ 46,502,819
Non-Contributory Group Insurance Premium	\$ 651,000	\$ 803,000

¹ The fiscal year 2016 recommended pension contribution of \$ 46,502,819 has been reduced to \$12,929,472. This amount reflects the State's planned fiscal year 2016 contribution of \$13,950,900, 30% of the total recommended pension contribution, discounted to the valuation date. This amount may be subject to change per the requirements of the State's fiscal year 2016 spending plan.

The major benefit and contribution provisions of the statute as reflected in the valuation are summarized in Appendix A.

For purposes of the valuation, the fiscal year 2016 recommended pension contribution of \$46,502,819 has been reduced to \$12,929,472. This amount reflects the State's planned fiscal year 2016 contribution of \$13,950,900, 30% of the recommended employer contribution, discounted at the valuation interest rate of 7.90% from the expected payment date of June 30, 2016 to the valuation date. This amount may be subject to change per the requirements of the State's fiscal year 2016 spending plan.

There were no other changes to the benefit and contribution provisions.

The valuation reflects Chapter 78, P.L. 2011, which increased member contributions by 9% of salary phased-in over a period of seven years, beginning October 2011. The increase in member contributions will be fully phased-in in July 2017.

Effective June 30, 1996, Chapter 113, P.L. 1997 provided that the amount of compensation used for employer and member contributions and benefits under the program cannot exceed the compensation limitation of Section 401(a)(17) of the Internal Revenue Code. The compensation limit for the 2015 valuation is \$265,000. The compensation limit is assumed to increase annually at a rate of 3% per annum.

As required under Chapter 140, P.L. 1973, experience studies are performed once in every three year period. The valuation was prepared using demographic assumptions recommended on the basis of the July 1, 2011 – June 30, 2014 Experience Study and approved by the State House Commission on October 26, 2015. The new assumptions are outlined in Appendix B.

The valuation reflects economic assumptions which include a rate of investment return of 7.90% per annum and assumed future salary increases of 2.50% per annum through fiscal year ending 2021 and 3.50% per annum for fiscal years ending 2022 and thereafter. These assumptions will remain in effect for valuation purposes until such time the State House Commission or the Treasurer recommends revised assumptions.

There were no other changes to the actuarial assumptions and methods from those used in the prior valuation. The actuarial assumptions and methods used in this valuation are summarized in Appendix B.

The combination of the plan provisions, actuarial assumptions and member and beneficiary data is used to generate the overall required level of State contributions. These contributions are composed of two separate portions, an “accrued liability contribution” and a “normal contribution”. The recommended contribution is developed in Section III F.

The valuation generates a balance sheet which summarizes in some detail the total present and prospective assets and liabilities of the Fund. A summary comparison of the balance sheets as of July 1, 2014 and July 1, 2015 is set forth in the following table.

Table I

Comparative Balance Sheet

	2015	2014
Assets		
Actuarial value of assets of Fund	\$ 243,864,022	\$ 258,101,497
Unfunded accrued liability/(surplus)	<u>358,500,178</u>	<u>374,578,440</u>
Total Assets	\$ 602,364,200	\$ 632,679,937
Accrued Liabilities		
Present value of benefits to present beneficiaries payable from the Retirement Reserve Fund	\$ 430,541,499	\$ 444,577,573
Present value of benefits to present active members and terminated vested members	<u>171,822,701</u>	<u>188,102,364</u>
Total Accrued Liabilities	\$ 602,364,200	\$ 632,679,937

Section II – Employee Data

The data employed for the valuations were furnished to the actuary by the Division of Pensions and Benefits. The following summarizes and compares the Fund membership as of July 1, 2014 and July 1, 2015 by various categories.

Active Membership

Group	2015		2014	
	Number	Annual Compensation	Number	Annual Compensation
Men	253	\$ 42,008,938	270	\$ 44,872,464
Women	151	\$ 25,088,228	127	\$ 21,156,027

Retired Members and Beneficiaries

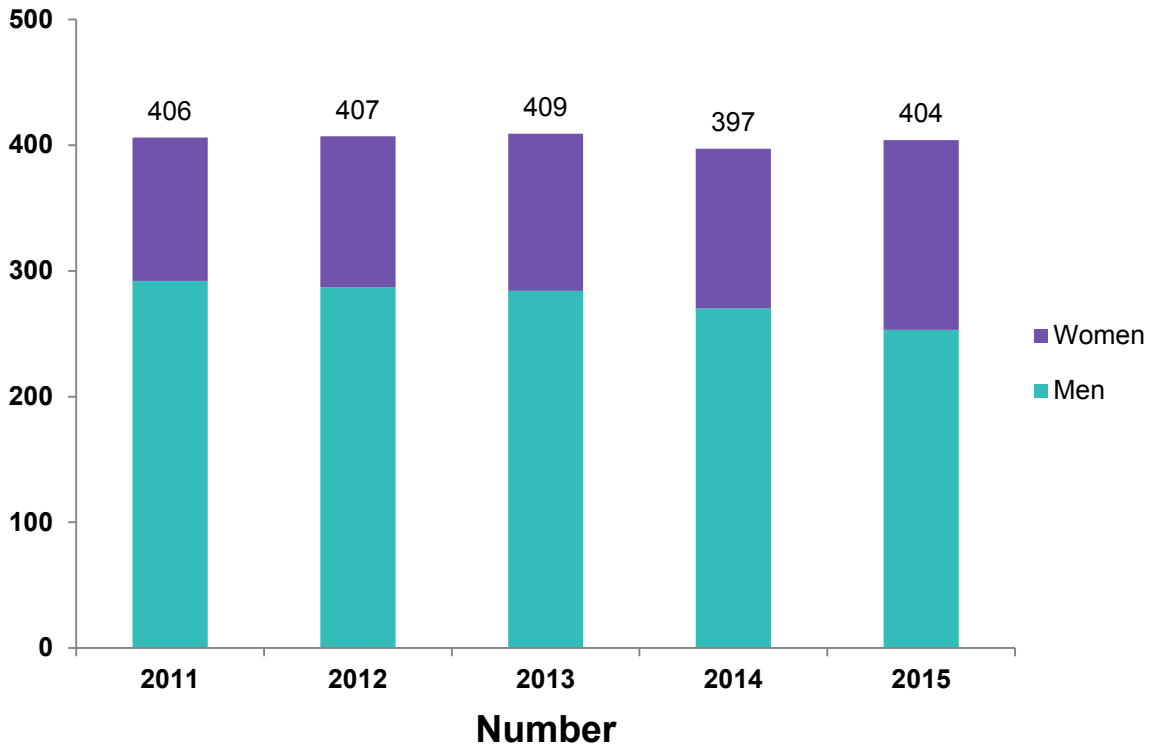
Group	2015		2014	
	Number	Annual Allowances	Number	Annual Allowances
Deferred Terminated Vesteds	4	\$ 183,500	4	\$ 183,500
Service Retirements	427	\$ 44,201,394	402	\$ 41,297,731
Disability Retirements	7	\$ 818,564	7	\$ 818,564
Beneficiaries	152	\$ 7,945,812	152	\$ 7,830,098

Appendix C provides a detailed distribution between groups.

Graphic presentations of the statistical data on membership for the five preceding years are shown on the following pages.

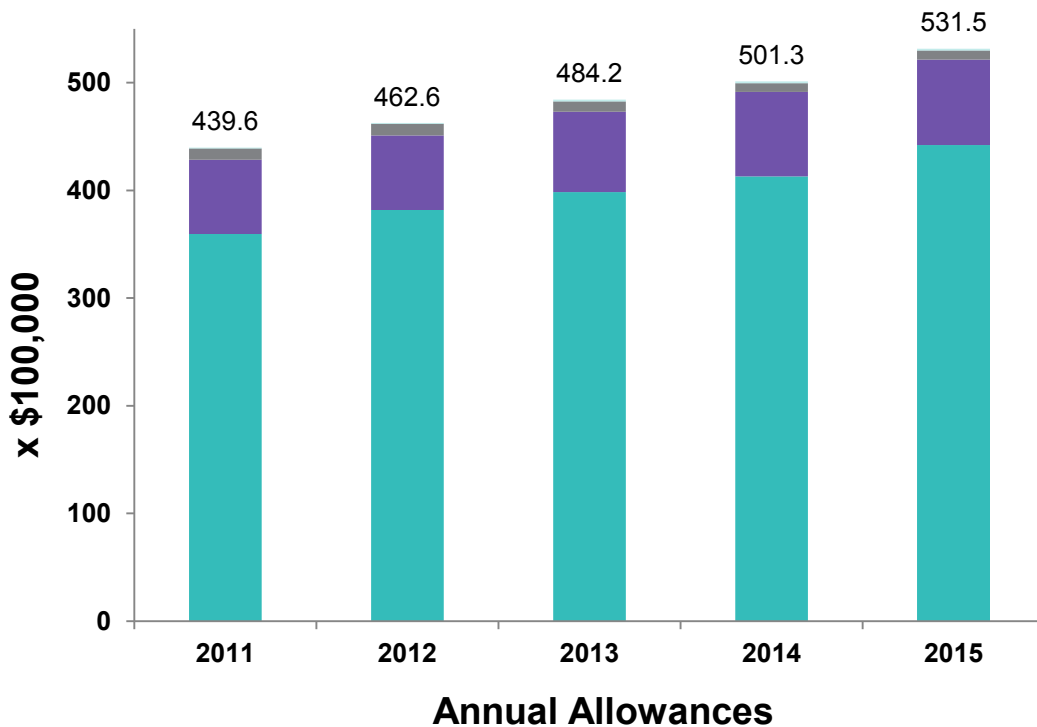
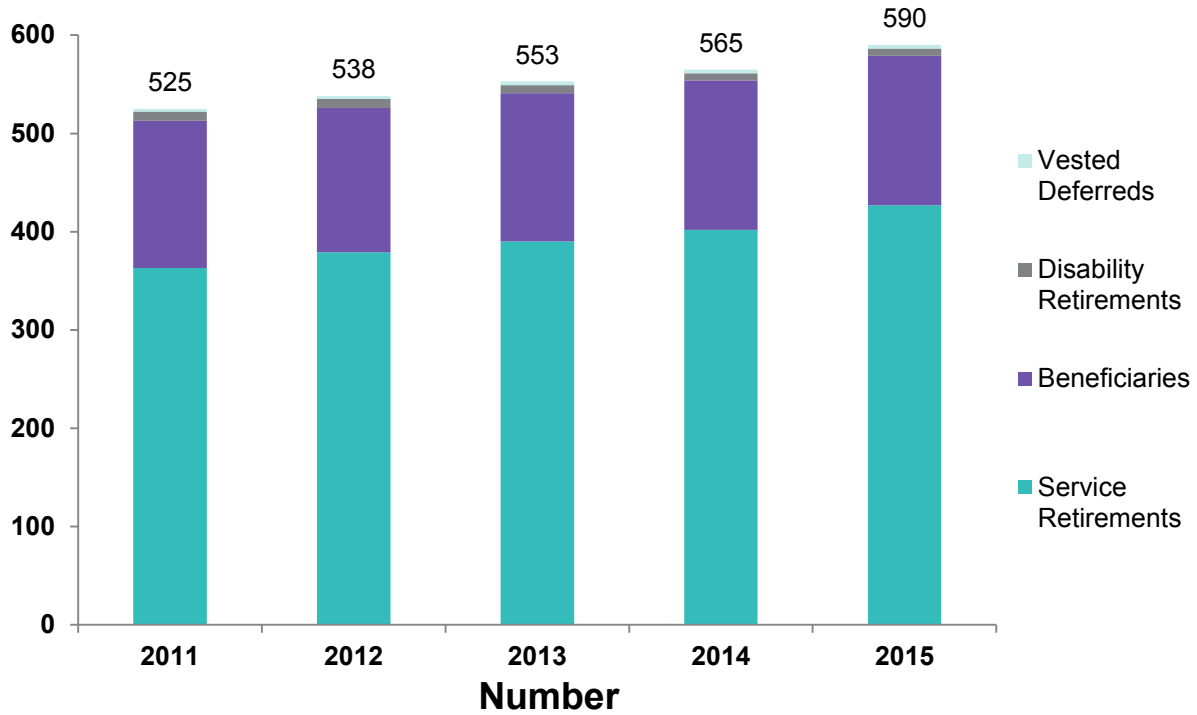
The Judicial Retirement System of New Jersey

Summary of Active Participation



The Judicial Retirement System of New Jersey

Summary of Retired Participation



Section III - Assets, Liabilities and Contributions

A. Market Value of Assets as of June 30, 2015

1.	Assets		
	a.	Cash	\$ 129,439
	b.	Securities Lending Collateral	2,801,022
	c.	Investment Holdings	213,714,885
	d.	Interest Receivable on Investments	146
	e.	Employer Contribution Receivable – NCGI	49,025
	f.	Members Contribution Receivable	315,037
	g.	Accounts Receivable	2,247,577
	h.	Dividends Receivable	0
	i.	Loans Receivable	838,263
	j.	Interest Receivable – Member Loans	0
	k.	Total	\$ 220,095,394
2.	Liabilities		
	a.	Pension Payroll Payable	\$ 3,162,094
	b.	Pension Adjustment Payroll Payable	312,263
	c.	Withholdings Payable	939,562
	d.	Securities Lending Collateral and Rebates Payable	2,797,452
	e.	Accounts Payable – Other	51,627
	f.	Securities Purchased in Transit	0
	g.	Death Benefits Payable	49,025
	h.	Total	\$ 7,312,023
3.	Preliminary Market Value of Assets as of June 30, 2015: 1(k) - 2(h)		\$ 212,783,371
4.	Discounted State Appropriations Receivable		<u>12,929,472</u> ¹
5.	Market Value of Assets as of June 30, 2015: 3. + 4.		\$ 225,712,843 ²

¹ The fiscal year 2016 recommended pension contribution of \$ 46,502,819 has been reduced to \$12,929,472. This amount reflects the State's planned fiscal year 2016 contribution of \$13,950,900, 30% of the total recommended pension contribution, discounted to the valuation date. This amount may be subject to change per the requirements of the State's fiscal year 2016 spending plan.

² Excludes assets held in the Non-Contributory Group Insurance Fund.

B. Reconciliation of Market Value of Assets: June 30, 2014 to June 30, 2015

1.	Market Value of Assets as of June 30, 2014	\$	231,483,835
2.	Increases		
	a. Pension Contributions		
	Members' Contributions	\$	5,348,760
	Transfer from Other Systems		579,598
	b. Accumulative Interest		
	Transfer from Other Systems		381,766
	c. Employers' Contributions		
	State Appropriations		16,506,000
	Non-Contributory Group Insurance		525,026
	Transfer from Other Systems		2,081,523
	Administrative Fee Loans		128
	d. Income		
	Per Statement		<u>8,475,641</u>
	e. Total	\$	<u>33,898,442</u>
3.	Decreases		
	a. Benefits Provided by Members		
	Withdrawals – Members' Contributions		
	Regular	\$	0
	Transfer		0
	Withdrawals – Member Interest		
	Regular		0
	Transfer		0
	b. Benefits Provided by Employers and Members		
	Retirement Allowances		48,077,475
	c. Benefits Provided by Employers		
	Benefit Expense – Pension Adjustment – State		3,827,515
	Administrative Expense		168,714
	Transfer Withdrawal – Employer Benefits		0
	Administrative Expense Loans		176
	NCGI Premium Expense		<u>525,026</u>
	d. Total	\$	<u>52,598,906</u>
4.	Preliminary Market Value of Assets as of June 30, 2015: 1 + 2(e) – 3(d)	\$	212,783,371
5.	Discounted State Appropriations Receivable		<u>12,929,472</u> ¹
6.	Market Value of Assets as of June 30, 2015: 4. + 5.	\$	225,712,843 ²

¹ The fiscal year 2016 recommended pension contribution of \$ 46,502,819 has been reduced to \$12,929,472. This amount reflects the State's planned fiscal year 2016 contribution of \$13,950,900, 30% of the total recommended pension contribution, discounted to the valuation date. This amount may be subject to change per the requirements of the State's fiscal year 2016 spending plan.

² Excludes assets held in the Non-Contributory Group Insurance Fund.

C. Development of Actuarial Value of Assets as of July 1, 2015

The actuarial value of plan assets is determined using a five-year average of market value with write-up. The following summary shows the development of the actuarial value of plan assets for the current valuation.

1.	Actuarial Value of Assets as of July 1, 2014 (without State Appropriations Receivable)	\$ 245,017,510
2.	Net Cash Flow excluding investment income	(27,176,105)
3.	Expected Investment Income at 7.90%	
a.	Interest on assets as of July 1, 2014	\$ 19,356,383
b.	Interest on Net Cash Flow	(1,725,443)
c.	Total	\$ 17,630,940
4.	Expected Actuarial Value of Assets as of July 1, 2015: 1. + 2. + 3.(c)	\$ 235,472,345
5.	20% of Difference from Preliminary Market Value of Assets	(4,537,795)
6.	Discounted State Appropriations Receivable	12,929,472 ¹
7.	Actuarial Value of Assets as of July 1, 2015 = 4. + 5. + 6.	\$ 243,864,022 ²

¹ The fiscal year 2016 recommended pension contribution of \$ 46,502,819 has been reduced to \$12,929,472. This amount reflects the State's planned fiscal year 2016 contribution of \$13,950,900, 30% of the total recommended pension contribution, discounted to the valuation date. This amount may be subject to change per the requirements of the State's fiscal year 2016 spending plan.

² Excludes assets held in the Non-Contributory Group Insurance Fund.

D. Accrued Liabilities as of July 1, 2015

1.	Retirees and Beneficiaries	
a.	Service Retirement	\$ 373,893,908
b.	Disability Retirement	6,016,984
c.	Beneficiaries	50,630,607
d.	Total	\$ 430,541,499
2.	Terminated Vested Members	\$ 1,598,430
3.	Active Participants	
a.	Service Retirement	\$ 160,453,837
b.	Disability Retirement	5,634,437
c.	Spousal Annuity Death Benefit	4,135,997
d.	Total	\$ 170,224,271
4.	Total Actuarial Accrued Liability ¹ : 1(d) + 2 + 3(d)	\$ 602,364,200

¹ Excludes lump sum death benefits payable from the Non-Contributory Group Insurance Premium Fund.

E. Development of Normal Cost as of July 1, 2015

1.	Service Retirement	\$	15,939,120
2.	Disability Retirement		959,423
3.	Spousal Annuity Death Benefit		<u>675,714</u>
4.	Total Pension Normal Cost ¹ = 1. + 2. + 3.	\$	17,574,257

¹ Excludes lump sum death benefits payable from the Non-Contributory Group Insurance Premium Fund.

F. Development of Recommended State Pension Contributions

1.	Accrued Liability	\$	602,364,200
2.	Actuarial Value of Assets		<u>243,864,022</u>
3.	Unfunded Actuarial Accrued Liability/ (Surplus) = 1. - 2.	\$	358,500,178
4.	Amortization Period		30
5.	Amortization of Unfunded Actuarial Accrued Liability payable July 1, 2016 (Level Dollar)	\$	31,544,682
6. (a)	Gross Normal Cost (excluding Non-Contributory Group Insurance Premium)	\$	17,574,257
(b)	Expected Member Contributions		<u>5,885,574</u>
(c)	State Normal Cost = (a) - (b)	\$	11,688,683
(d)	State Normal Cost payable July 1, 2016 = (c) * 1.0790	\$	12,612,089
7.	Total Recommended Pension Contribution as of July 1, 2016 = 5. + 6.(d)	\$	44,156,771

G. Non-Contributory Group Insurance Premium (one-year term cost)

\$ 651,000

Section IV – Comments Concerning the Valuation

The variation in liabilities and contributions reflects the System's actual experience during the year. The System experienced a net actuarial loss during the year that ended June 30, 2015.

The System experienced a net liability gain among active and retired members. There was an offsetting loss due to an actual return on System assets less than expected. For valuation purposes, a 7.90% per annum rate of return was assumed for the period July 1, 2014 through June 30, 2015. The actual return on the Fund's actuarial value of assets was approximately 5.66% for the period from July 1, 2014 through June 30, 2015.

The following shows the development of the actuarial experience, identifies the major experience components, and discusses the impact of the unfunded liability on various funded ratios:

A. Calculation of Actuarial Experience for the Year Ended June 30, 2015

1.	Unfunded Accrued Liability as of July 1, 2014	\$	374,578,440
2.	Gross Normal Cost as of July 1, 2014		17,619,466
3.	Interest on (1) and (2) at 7.90%		30,983,635
4.	Actual Members' Contributions Received		5,348,760
5.	Employers' Contributions (including discounted receivable)		12,929,472
6.	Interest on Contributions (excluding receivables) at 7.90%		<u>211,276</u>
7.	Expected Unfunded Accrued Liability as of July 1, 2015 = (1) + (2) + (3) - (4) - (5) - (6)	\$	404,692,033
8.	Change in Unfunded Accrued Liability due to the revised fiscal year 2015 State contribution ¹		(2,388,378)
9.	Change in Unfunded Accrued Liability due to change in assumptions per the adopted experience study		(46,435,820)
10.	Actual Unfunded Accrued Liability as of July 1, 2015		<u>358,500,178</u>
11.	Actuarial (Gain)/Loss = (10) – (7) – (8) – (9)	\$	2,632,343

¹ The anticipated fiscal year 2015 contribution of \$14,117,622 has been increased to \$16,506,000 to reflect the actual State contribution made during fiscal year 2015.

B. Components of Actuarial Experience

1.	Investment (Gain)/Loss	\$	4,537,795
2.	Other (Gain)/Loss, including mortality, salary increases different than expected, and changes in employee data		<u>(1,905,452)</u>
3.	Total Actuarial (Gain)/Loss	\$	2,632,343

C. Funded Ratios

The following table presents the System's funded ratio based on the actuarial value of assets (including receivables) and market value basis (including receivables).

	June 30, 2015	June 30, 2014	Change
Actuarial Value of Assets¹	40.5%	40.8%	(.3)%
Market Value of Assets	37.5%	38.7%	(1.2)%

¹Statutory funded ratio.

The System's statutory funded ratio is 40.8% and 40.5% as of June 30, 2014 and June 30, 2015, respectively. For purposes of Chapter 78, P.L. 2011, the "target funded ratio" is 77.857% and 78.572% for June 30, 2014 and June 30, 2015, respectively. Therefore, the System's statutory funded ratio did not reach the "target funded ratio" for June 30, 2014 and remained below the "target funded ratio" for June 30, 2015.

There is a difference on a market value basis since the actuarial value smoothes the investment gains and losses over time. Since July 1, 2000, the funded ratio on a market value basis has decreased by 81.5%. This decrease is primarily due to investment losses experienced over the period, State contributions less than the statutorily determined amounts, and the strengthening of actuarial assumptions.

As of June 30, 2015, the market value of assets is less than the actuarial liability attributable to retirees. Furthermore, if the assets contained in the Annuity Savings Fund (ASF) of \$53,742,671 are excluded, the funded ratio of the remaining market value of assets to the actuarial accrued liability for retirees is 39.9%.

As of June 30, 2015, the ratio of market value of assets to the prior year's benefit payment is 4.3. This is a simplistic measure of the number of years that the assets can cover benefit payments, excluding future increases in those payments, State and member contributions, and investment income. This ratio decreased by 14.0% from the previous year's ratio of 5.0. If ASF assets are excluded, since they represent accumulated contributions from active and inactive members, the ratio is 3.3.

D. Schedule of Assets and Liabilities

The following presents a ten-year schedule of the System's assets, liabilities and funded ratio. The System's assets and funded ratio are provided on a market value (including receivables) basis and actuarial value of assets (including receivables) basis.

Actuarial Valuation Date	Market Value of Assets ² (a)	Actuarial Value of Assets ² (b)	Actuarial Accrued Liability (c)	Funded Ratio	
				Market Value (a)/(c)	Actuarial Value (b)/(c)
6/30/2015	\$ 225,712,843	\$ 243,864,022	\$ 602,364,200	37.5%	40.5%
6/30/2014	\$ 244,567,822	\$ 258,101,497	\$ 632,679,937	38.7%	40.8%
6/30/2013	\$ 244,280,889	\$ 276,966,331	\$ 620,376,292	39.4%	44.6%
6/30/2012	\$ 243,679,037	\$ 290,191,842	\$ 605,180,634	40.3%	48.0%
6/30/2011	\$ 270,183,306	\$ 310,724,782	\$ 585,700,787	46.1%	53.1%
6/30/2010	\$ 261,523,992	\$ 329,030,387	\$ 554,540,403	47.2%	59.3%
6/30/2009	\$ 261,751,336	\$ 355,522,646	\$ 594,043,375	44.1%	59.8%
6/30/2008	\$ 352,989,790	\$ 383,958,713	\$ 553,284,647	63.8%	69.4%
6/30/2007	\$ 384,497,896	\$ 391,321,939	\$ 524,970,330	73.2%	74.5%
6/30/2006	\$ 351,647,844	\$ 382,849,386	\$ 493,778,007	71.2%	77.5%

2. The information in the above tables has been taken directly from the final valuation reports for each plan year and does not reflect subsequent changes in actual employer contribution amounts from the reported receivable contribution after the valuation reports were issued.

E. Schedule of Employer Pension Contributions

The following table presents a ten-year schedule that provides information about the System's actuarially determined contribution and the percentage of the actuarially determined contribution recognized by the System as contributed.

Fiscal Year Ending June 30	Actuarially Determined Contribution ¹ (a)	Actual Pension Contribution (b)	Contribution Deficiency (a) – (b)	Percentage of Contribution Made	
				Annual (b)/(a)	Five-Year Average
2016	\$ 46,502,819	\$ 13,950,900	\$ 32,551,919	30.00%	29.14%
2015	\$ 44,334,504	\$ 16,506,000	\$ 27,828,504	37.23%	23.14%
2014	\$ 43,050,167	\$ 15,334,000	\$ 27,716,167	35.62%	15.70%
2013	\$ 40,751,804	\$ 11,643,000	\$ 29,108,804	28.57%	9.46%
2012	\$ 38,352,572	\$ 5,479,000	\$ 32,873,572	14.29%	13.75%
2011	\$ 34,653,737	\$ 0	\$ 34,653,737	0.00%	22.26%
2010	\$ 28,857,945	\$ 0	\$ 28,857,945	0.00%	29.48%
2009	\$ 26,089,212	\$ 1,157,000	\$ 24,932,212	4.43%	
2008	\$ 23,907,860	\$ 11,957,000	\$ 11,950,860	50.01%	
2007	\$ 22,154,128	\$ 12,596,255	\$ 9,557,873	56.86%	

1. The information in the above tables has been taken directly from the final valuation reports for each plan year and does not reflect subsequent changes in actual employer contribution amounts from the reported receivable contribution after the valuation reports were issued.

Section V – Level of Funding

The tables below present the liabilities determined on a Financial Accounting Standards Board ASC 715 (formerly Statement No. 87) Accumulated Benefit Obligation (ABO) basis. This is the same approach as was used under GASB Statement No. 5 except that no assumption is made as to future salary increases and assets are at market value with receivables.

ASC 715 ABO Funded Ratios

Actuarial present value of accumulated benefits:	June 30, 2015	June 30, 2014
Vested benefits		
Participants currently receiving payments	\$ 430,541,499	\$ 444,577,573
Other participants	<u>109,295,990</u>	<u>118,028,961</u>
	\$ 539,837,489	\$ 562,606,534
Non-vested benefits	<u>41,352,557</u>	<u>46,677,135</u>
Total	\$ 581,190,046	\$ 609,283,669
Assets at market value	\$ 212,783,371 ¹	\$ 244,567,822
Ratio of assets to total present value	36.6%	40.1%

1. Assets at market value do not include any receivable contributions.

As in the case of the Governmental Accounting Standard Board Statement No. 25, the actuarial present value of vested and non-vested accrued benefits was based on an interest rate of 7.90% for 2015 and 2014.

Appendix A

Brief Summary of the Benefit and Contribution Provisions as Interpreted for Valuation Purposes

Eligibility for Membership

Chief Justice and associate justices of the Supreme Court, judges of the Superior Court and tax courts of the State of New Jersey.

1. Definitions

Plan Year

The 12-month period beginning on July 1 and ending on June 30.

Service

A year is credited for each year of service as a public employee in the State of New Jersey. Any service, for which member did not receive annual salary of at least \$500, shall be excluded.

Final Salary

Annual salary received by the member at the time of retirement or other termination of service. (Effective June 30, 1996, Chapter 113, P.L. 1997 provided that the amount of compensation used for employer and member contributions and benefits under the program cannot exceed the compensation limitation of Section 401(a)(17) of the Internal Revenue Code.)

Accumulated Deductions

The sum of all amounts deducted from the compensation of a member or contributed by him or on his behalf.

Retirement Allowance

Pension derived from contributions of the State plus the annuity derived from employee contributions.

2. Benefits

Service Retirement

A. Mandatory retirement at age 70. Voluntary retirement prior to age 70 as follows:

- i. Age 70 and 10 years of judicial service;
- ii. Age 65 and 15 years of judicial service; or
- iii. Age 60 and 20 years of judicial service.

Benefit is an annual retirement allowance equal to 75% of final salary.

B. Age 65 while serving as a judge, 5 consecutive years of judicial service and 15 years in the aggregate of public service; or

Age 60 while serving as a judge, 5 consecutive years of judicial service and 20 years in the aggregate of public service.

Benefit is an annual retirement allowance equal to 50% of final salary.

C. Age 60 while serving as a judge, 5 consecutive years of judicial service and 15 years in the aggregate of public service. Benefit is an annual retirement allowance equal to 2% of final salary for each year of public service up to 25 years plus 1% of final salary for each year in excess of 25 years.

- D. Age 60 while serving as a judge. Benefit is an annual retirement allowance equal to 2% of final salary for each year of judicial service up to 25 years plus 1% for each year in excess of 25 years.

Early Retirement

Prior to age 60 while serving as a judge, 5 consecutive years of judicial service and 25 or more years in the aggregate of public service. Benefit is an annual retirement allowance equal to 2% of final salary for each year of public service up to 25 years plus 1% of final salary for each year of public service in excess of 25 years, actuarially reduced for commencement prior to age 60.

Vested Termination

Termination of service prior to age 60, with 5 consecutive years of judicial service and 10 years in the aggregate of public service. Benefit is a refund of accumulated deductions, or a deferred life annuity beginning at age 60 equal to 2% of final salary for each year of public service up to 25 years, plus 1% for service in excess of 25 years.

Death Benefits

Before Retirement

Death of an active member of the plan. Benefit is equal to:

- A. Lump sum payment equal to 1-1/2 times final salary, plus
- B. Spousal life annuity of 25% of final salary payable until spouse's remarriage plus 10% (15%) to one (two or more) dependent child (children). If there is no surviving spouse, or upon death or remarriage, a total of 15% (20%, 30%) of final salary payable to one (two, three or more) dependent child (children). If there is no surviving spouse (or dependent children), 20% or 30% of final salary to one or two dependent parents.

After Retirement

Death of a retired member of the plan. Benefit is equal to:

- A. Lump sum of 25% of final salary for a member retired under normal or early retirement. If a member were receiving a disability benefit, a lump sum 1-1/2 times final salary if death occurred before the member attained age 60 and 1/4 times final salary if death occurred after age 60, plus
- B. Spousal life annuity of 25% of final salary payable until spouse's remarriage plus 10% (15%) to one (two or more) dependent child (children). If there is no surviving spouse, or upon death or remarriage, a total of 15% (20%, 30%) of final salary payable to one (two, three or more) dependent child (children).

Disability Retirement

Physically or otherwise incapacitated for the full and efficient service to State in his judicial capacity and such incapacity is likely to be permanent. Benefit is an annual retirement allowance of 75% of final salary.

Member Contributions

Any member enrolled prior to January 1, 1996 contributes 3% of the difference between current salary and salary for that position on January 18, 1982. Members enrolled on and after January 1, 1996 contribute 3% of their full salary.

Chapter 78, P.L. 2011 increased Member Contributions by 9% of salary phased-in over a period of seven years beginning October 2011. (The additional 9% of salary will be fully phased-in in July 2017.)

- A. For members enrolled prior to January 1, 1996:
 - i. Member Contributions of 9% (phased-in over a period of seven years beginning October 2011) of the salary for that position on January 18, 1982.
 - ii. Member Contributions increase from 3% to 12% (phased-in over a period of seven years beginning October 2011) of the difference between current salary and salary for that position on January 18, 1982.
- B. For members enrolled on or after January 1, 1996, Member Contributions increase from 3% to 12% of full salary phased-in over a period of seven years beginning October 2011.

Appendix B

Outline of Actuarial Assumptions and Methods

Valuation Interest Rate

7.90% per annum, compounded annually.

COLA

No future COLA is assumed.

Salary Increase

Salaries are assumed to increase by 2.50% per year through fiscal year ending 2021 and 3.50% per year for fiscal years ending 2022 and thereafter.

401(a)(17) Pay Limit

\$265,000 for 2015 increasing 3.00% per annum, compounded annually.

Separations from Service

Representative mortality and disability rates are as follows:

Age	Lives per Thousand		
	Death ¹		Disability
	Male	Female	
30	0.43	0.38	0.22
35	0.74	0.58	0.26
40	1.04	0.90	0.33
45	1.45	1.38	0.64
50	2.06	2.12	1.14
55	3.49	3.68	1.97
60	6.16	6.71	3.26
65	10.89	11.49	4.73

¹ RP-2000 Combined Healthy Male and RP-2000 Combined Healthy Female Mortality Tables (unadjusted for males and set forward 3 years for females) projected on a generational basis from the base year of 2000 to 2013 using Projection Scale BB for the base tables. The base tables are projected beyond the base year using the Buck Modified MP-2014 Projection scale. The above rates are unadjusted for the Buck Modified MP-2014 Projection Scale.

Deaths after Retirement

RP-2000 Combined Healthy Mortality Tables (unadjusted for males and set forward 3 years for females) for service retirement and beneficiaries of former members projected on a generational basis from the base year of 2000 to 2013 using Projection Scale BB for the base tables. The base tables are projected beyond the base year using the Buck Modified MP-2014 Projection scale. The RP-2000 Disability Mortality Tables (set forward 2 years for males and females) are used to value disabled retirees. Representative values of the annual rates of mortality unadjusted for the Buck Modified MP-2014 Projection Scale are as follows:

Age	Lives Per Thousand			
	Retired Members & Beneficiaries of Deceased Members		Disabled Members	
	Males	Females	Males	Females
55	3.49	3.68	38.03	18.65
60	6.16	6.71	44.98	24.08
65	10.89	11.49	54.45	31.32
70	18.25	19.63	69.41	42.85
75	31.09	32.13	92.15	59.54
80	52.89	53.43	121.88	82.30
85	91.00	91.72	155.23	114.51
90	158.84	147.61	216.61	159.92

Retirement

Age	Age 60 with 20 Years Judicial Service or Age 65 with 15 Years Judicial Service	After Age 59 with Less than 12 Years Judicial Service	After Age 59 with 12 or More Years of Judicial Service (but have not attained 60/20JS or 65/15JS)	Prior to age 60 with 5 Years Judicial Service and 25 Years Public Service
50	0.00000	0.00000	0.00000	0.00000
51	0.00000	0.00000	0.00000	0.00000
52	0.00000	0.00000	0.00000	0.00000
53	0.00000	0.00000	0.00000	0.00000
54	0.00000	0.00000	0.00000	0.00000
55	0.00000	0.00000	0.00000	0.00000
56	0.00000	0.00000	0.00000	0.00000
57	0.00000	0.00000	0.00000	0.00000
58	0.00000	0.00000	0.00000	0.00000
59	0.00000	0.00000	0.00000	0.00000
60	0.30000	0.02500	0.00000	0.00000
61	0.20000	0.02500	0.00000	0.00000
62	0.20000	0.02500	0.00000	0.00000
63	0.30000	0.02500	0.00000	0.00000
64	0.30000	0.02500	0.00000	0.00000
65	0.37500	0.02500	0.10000	0.00000
66	0.24000	0.02500	0.00000	0.00000
67	0.24000	0.02500	0.00000	0.00000
68	0.24000	0.02500	0.00000	0.00000
69	0.24000	0.02500	0.00000	0.00000

Marriage

Husbands are assumed to be 3 years older than wives. Among the active population, 90% of participants are assumed married. No children are assumed. Neither the percentage married nor the number of children assumption is individually explicit but are considered reasonable as a single combined assumption.

Valuation Method

Projected Unit Credit Method. This method essentially funds the System's benefits accrued to the valuation date. Experience gains and losses are recognized in future accrued liability contributions. In accordance with Chapter 78, P.L. 2011, beginning with the July 1, 2010 actuarial valuation, the accrued liability contribution shall be computed so that if the contribution is paid annually in level dollars, it will amortize the unfunded accrued liability over an open 30 year period. Beginning with the July 1, 2019 actuarial valuation, the accrued liability contribution shall be computed so that if the contribution is paid annually in level dollars, it will amortize the unfunded accrued liability over a closed 30 year period (i.e., for each subsequent actuarial valuation the amortization period shall decrease by one year.) Beginning with the July 1, 2029 actuarial valuation, when the remaining amortization period reaches 20 years, any increase or decrease in the unfunded accrued liability as a result of actuarial basis or gains for subsequent valuation years shall serve to increase or decrease, respectively, the amortization period for the unfunded accrued liability, unless an increase in the amortization period will cause it to exceed 20 years. If an increase in the amortization period as a result of actuarial losses for a valuation year would exceed 20 years, the accrued liability contribution shall be computed for the valuation year using a 20 year amortization period.

Receivable Contributions

State contributions expected to be paid the June 30th following the valuation date are discounted by the valuation interest rate of 7.90% to the valuation date.

Asset Valuation Method

A five year average of market values with write-up was used. (This method takes into account appreciation (depreciation) in investments in order to smooth asset values by averaging the excess of the actual over the expected income, on a market value basis, over a five-year period).

Appendix C

Tabulations Used as a Basis for the 2015 Valuation

The following table gives a reconciliation of data from July 1, 2014 to June 30, 2015. Tables are also given showing the distribution of active members' salaries by age and length of service as of July 1, 2015 and showing the number and retirement allowances of beneficiaries classified by age as of July 1, 2015.

Table 1

Reconciliation Of Data From July 1, 2014 To June 30, 2015

	Actives		Deferred Vested	Retirees				Beneficiaries	Dependents	Domestic Relations Beneficiaries	Total
	Contrib.	Noncontrib.		Service	Special	Deferred	Disabled				
Members as of July 1, 2014	391	6	4	385	3	4	7	148	4	10	962
Status Change:											
To Contributing	4	(4)									0
To Noncontributing	(1)	1									0
New Deferred Vested											
New Terminated Non-Vested											
New Service Retirement	(30)	(1)		31							0
New Special Retirement											
New Deferred Vested Now Payable											
New Disabled											
New Death	(1)			(8)				(9)		(1)	(19)
New Beneficiaries								9		2	11
End of Payments											
New Actives	39										39
Rehires											0
Data Corrections				1							1
Members as of June 30, 2015	402	2	4	409	3	4	7	148	4	11	994

Table 2

Distribution Of Active Members By Age And Service

Age	Service	1	5	10	15	20	25	30	35	Total
20	Number									
	Salary									
25	Number									
	Salary									
30	Number									
	Salary									
35	Number									
	Salary									
40	Number	1	1							2
	Salary	165,000	165,000							330,000
45	Number	16	10	1						27
	Salary	2,640,000	1,650,000	165,000						4,455,000
50	Number	14	23	4						41
	Salary	2,310,000	3,795,000	660,000						6,765,000
55	Number	20	33	23	18	1				95
	Salary	3,300,000	5,465,482	3,843,863	2,997,799	165,000				15,772,144
60	Number	19	32	20	26	14	5			116
	Salary	3,135,000	5,290,534	3,338,333	4,334,478	2,348,333	842,265			19,288,943
63	Number	3	14	12	15	14	6			64
	Salary	495,000	2,310,000	1,997,265	2,527,084	2,348,333	1,007,265			10,684,947
66 and over	Number	1	16	20	15		6	1		59
	Salary	165,000	2,640,000	3,331,602	2,485,534		1,003,462	175,534		9,801,132
Total	Number	74	129	80	74	29	17	1		404
	Salary	12,210,000	21,316,016	13,336,063	12,344,895	4,861,666	2,852,992	175,534		67,097,166

Table 3

The Number And Annual Compensation Of
Active Members Distributed By Age
As Of June 30, 2015

Age	Men		Women	
	Number	Amount	Number	Amount
41	1	\$ 165,000		
42	1	165,000		
43	1	165,000	2	\$ 330,000
44	1	165,000	2	330,000
45	1	165,000	5	825,000
46	4	660,000	5	825,000
47	4	660,000	2	330,000
48	4	660,000	4	660,000
49	5	825,000	2	330,000
50	4	660,000	4	660,000
51	8	1,320,000	4	660,000
52	4	660,000	2	330,000
53	9	1,485,000	8	1,320,000
54	3	495,000	9	1,495,534
55	18	3,008,329	8	1,320,000
56	8	1,320,000	7	1,192,747
57	15	2,485,534	10	1,650,000
58	13	2,155,534	3	495,000
59	11	1,832,265	10	1,656,731
60	12	1,980,000	13	2,155,534
61	17	2,832,799	8	1,347,213
62	17	2,826,068	12	2,007,799
63	19	3,172,747	9	1,495,534
64	16	2,682,136	2	330,000
65	10	1,673,996	8	1,330,534
66	11	1,821,731	3	505,534
67	15	2,481,731	4	660,000
68	12	1,990,534	3	505,534
69	7	1,165,534		
70 and over	2	330,000	2	340,534
Total	253	\$ 42,008,938	151	\$ 25,088,228

Of the 404 active members included in the June 30, 2015 valuation data, 269 are vested and 135 have not yet completed the vesting service requirement.

Table 4

The Number And Annual Compensation Of
Active Members Distributed By Service
As Of June 30, 2015

Service	Men		Women	
	Number	Amount	Number	Amount
0	4	\$ 660,000	10	\$ 1,650,000
1	10	1,650,000	25	4,125,000
2	14	2,310,000	11	1,815,000
3	12	1,980,000	6	990,000
4	19	3,145,534	11	1,835,482
5	16	2,640,000	7	1,155,000
6	20	3,300,000	11	1,815,000
7	19	3,135,000	8	1,320,000
8	13	2,183,329	5	825,000
9	8	1,330,534	1	165,000
10	17	2,815,534	5	835,534
11	12	2,014,530	4	670,534
12	9	1,506,068	6	990,000
13	16	2,677,747	4	670,534
14	18	2,980,534	6	1,000,534
15	8	1,320,000	6	1,023,944
16	5	835,534	2	330,000
17	6	1,000,534	3	505,534
18	7	1,172,265	4	681,068
19	1	165,000	2	330,000
20	7	1,165,534	2	336,731
21			1	165,000
22	2	340,534	3	505,534
23	3	505,534	2	330,000
24	3	501,731	2	336,731
25	1	171,731	1	165,000
26	3	501,731	2	340,534
28			1	175,534
Total	253	\$ 42,008,938	151	\$ 25,088,228

Of the 404 active members included in the June 30, 2015 valuation data, 269 are vested and 135 have not yet completed the vesting service requirement.

Table 5

Average Age And Annual Benefit at Retirement

	Service Retirement		Disability Retirement		Survivors	
	Average Age At Retirement	Average Annual Benefit At Retirement ¹	Average Age At Retirement	Average Annual Benefit At Retirement ¹	Average Age At Retirement ²	Average Annual Benefit At Retirement
All Retirees	66.0	\$ 96,800	61.6	\$ 110,798	59.0	\$ 46,756
New Retirees	66.5	\$ 109,487	N/A	N/A	60.4	\$ 56,278

	All Retirements (excluding Survivors)	
	Average Age At Retirement	Average Annual Benefit At Retirement
All Retirees	65.6	\$ 98,063

¹The Average Annual Benefit at Retirement does not reflect COLA's granted after retirement.

²Calculated as of Member's Date of Retirement

Table 6

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of June 30, 2015

Service Retirements

Age	Men		Women	
	Number	Amount	Number	Amount
58			1	\$ 12,375
60			1	39,432
61	1	\$ 91,965	1	72,956
62	1	79,860	1	128,798
63	3	339,254	1	131,651
64	2	193,749	1	51,102
65	9	1,041,634	2	173,679
66	8	922,053	10	1,194,527
67	14	1,599,754	3	215,007
68	15	1,675,221	3	241,321
69	8	780,300	4	386,363
70	25	2,763,884	5	548,597
71	23	2,470,180	3	364,196
72	19	2,058,560	5	385,538
73	21	2,380,137	6	684,619
74	21	2,283,440	1	117,925
75	18	1,936,777	1	123,750
76	15	1,503,064	1	46,212
77	10	1,146,784	4	430,997
78	20	1,984,084		
79	17	1,605,643	2	183,012
80	10	994,756	3	240,232
81	16	1,602,230	1	126,528
82	11	1,106,781	2	47,063
83	12	1,175,022		
84	8	902,944	2	160,453
85	10	1,024,803		
86	10	1,008,733	1	104,422
87	5	465,408	1	103,503
88	4	394,946		
89	5	469,373		
90	3	293,984		
91	7	659,634		
92	4	372,235		
93	2	198,674	1	101,350
94			1	91,935
95	1	88,639		
100	1	79,346		
Total	359	\$ 37,693,851	68	\$ 6,507,543

Table 7

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of June 30, 2015

Disability Retirements

Age	Men		Women	
	Number	Amount	Number	Amount
59			1	\$ 115,531
65	1	\$ 124,922		
67			1	123,750
68	1	123,750		
70	1	123,750		
72	1	111,746		
95	1	95,115		
Total	5	\$ 579,283	2	\$ 239,281

Table 8

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of June 30, 2015

Active Members' Death Benefits

Age	Men		Women	
	Number	Amount	Number	Amount
73			1	\$ 39,703
76	1	\$ 34,807		
78			3	99,266
79			2	69,737
80			1	33,783
81			2	67,285
82			2	66,353
84			2	61,673
86			1	33,783
91			1	27,915
Total	1	\$ 34,807	15	\$ 499,498

Table 9

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of June 30, 2015

Retired Members' Death Benefits

Age	Men		Women	
	Number	Amount	Number	Amount
19			1	\$ 19,081
48	1	\$ 21,252		
61	1	19,082	1	39,628
63			2	164,967
64			3	139,074
65			1	136,039
66			1	128,955
67	1	11,761	4	196,466
68			3	200,799
69			3	158,701
70			3	143,632
71			5	397,732
72			2	80,711
73	1	41,250	6	551,980
74	1	43,239	4	337,923
75			4	284,272
76			1	114,313
77	1	44,093	3	187,467
78			6	345,098
79			5	304,883
80			2	113,858
81			4	240,717
82			5	186,848
83			5	285,958
84			5	363,121
85	2	108,339	1	41,250
86			7	298,656
87			3	90,686
88			9	395,821
89			6	299,207
90			1	35,250
91			5	181,913
92			5	285,499
93			2	67,791
94			1	33,783
95			3	84,779
96			1	30,139
97			4	127,323
99			1	28,171
Total	8	\$ 289,016	128	\$ 7,122,491

Table 10

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of June 30, 2015

Deferred Terminated Vesteds

Age	Men		Women	
	Number	Amount	Number	Amount
53			1	\$ 39,875
54			1	66,000
56	1	\$ 56,375		
70	1	21,250		
Total	2	\$ 77,625	2	\$ 105,875