TEACHERS' PENSION AND ANNUITY FUND OF NEW JERSEY

June 30, 2012 Actuarial Valuation Report
Prepared as of July 1, 2012

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February 15, 2013

Board of Trustees
Teachers' Pension and Annuity Fund of New Jersey
State of New Jersey
Department of the Treasury
Division of Pensions and Benefits, CN 295
Trenton, NJ 08625-0295

Ladies and Gentlemen:

This report presents the results of the actuarial valuation of Teachers' Pension and Annuity Fund of New Jersey as of June 30, 2012. Section I contains highlights of the valuation including a general discussion and comments on the various schedules included in the report. The subsequent Sections contain schedules summarizing the underlying calculations, asset information, participant data, plan benefits and actuarial assumptions.

Purpose

The main purposes of this report are:

- to provide the annual state contribution in accordance with N.J. Statutes to be made in the Fiscal Year ending June 30, 2014 which represents the contribution for the valuation year beginning July 1, 2012;

- to determine the Target Funded Ratio as of July 1, 2012 in accordance with N.J. Statutes to potentially provide for the formation of a special pension committee;

- to determine the Annual Required Contribution in accordance with Governmental Accounting Standards Board Statement No. 27 for the Fiscal Year ending June 30, 2014 and,

- to review the experience under the plan for the valuation year ending June 30, 2012.

Actuarial computations presented in this report are for purposes of determining the statutory contribution amounts and Target Funded Ratio for TPAF. Actuarial

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computations under GASB Statement No. 27 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the N.J. statutes and GASB Statement No. 27. Determinations for purposes other than these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

Data Reliance

In performing this analysis, we relied, without audit, on census data, plan provisions, asset statements and other information (both written and oral) provided by the State of New Jersey Division of Pensions and Benefits. We have not audited or verified the census data, asset statements or other information. To the extent any of these are inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that

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are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

Future Measurements

Future actuarial measurements may differ significantly from the current measurements presented in this analysis due to actual plan experience deviating from the actuarial assumptions, and changes in plan provisions, actuarial assumptions, and applicable law. An assessment of the potential range and cost effect of such differences is beyond the scope of this analysis.

Certification

We hereby certify that, to the best of our knowledge, this report, including all costs and liabilities based on actuarial assumptions and methods adopted by the Board or mandated by statute, is complete and accurate and determined in conformance with generally recognized and accepted actuarial principles and practices, which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions and supporting Recommendations of the American Academy of Actuaries.

In compliance with New Jersey statute, this actuarial valuation is based on an investment return assumption of 7.90%. The investment return assumption is specified by the State Treasurer. Based on our most recent analysis, this assumption is outside our reasonable range. If the investment return was lowered, the actuarial accrued liability and statutory contributions would increase and the funded ratio would decrease. Determining results at an alternative investment return assumption is outside the scope of our assignment.

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We are members of the American Academy of Actuaries and meet its Qualification Standard to render this actuarial opinion.

Respectfully submitted,

By:

Richard L. Gordon, F.S.A.
Member American Academy of Actuaries

Scott F. Porter, F.S.A.
Member American Academy of Actuaries

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TEACHERS' PENSION AND ANNUITY FUND OF NEW JERSEY

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TEACHERS' PENSION AND ANNUITY FUND OF NEW JERSEY

SECTION I - SUMMARY

A. Summary of Principal Results

PARTICIPANT DATA

	June 30, 2012 Valuation	June 30, 2011 Valuation	June 30, 2010 Valuation	Percentage Change 2011 to 2012	Percentage Change 2010 to 2011
Active Contributing Members					
Number	136,797	136,899	144,492	(0.1) %	(5.3) %
Number of Veteran Members	564	664	832	(15.1)	(20.2)
Average Pay	$ 71,510	$ 70,746	$ 69,402	1.1	1.9
Total Payroll	9,782,353,518	9,685,002,389	10,028,081,042	1.0	(3.4)
Total Appropriation Payroll	9,779,212,916	9,682,318,739	10,025,401,658	1.0	(3.4)
Avg. Member Accumulated Contributions	65,707	62,623	60,230	4.9	4.0
Total Member Accumulated Contributions	8,988,504,623	8,573,010,328	8,702,691,849	4.8	(1.5)
Active Non-Contributing Members					
Number	13,403	14,216	12,531	(5.7) %	13.4 %
Number of Veteran Members	60	69	57	(13.0)	21.1
Average Pay	$ 52,715	$ 51,453	$ 50,368	2.5	2.2
Total Payroll	706,537,322	731,452,411	631,160,554	(3.4)	15.9
Avg. Member Accumulated Contributions	33,095	29,143	29,900	13.6	(2.5)
Total Member Accumulated Contributions	443,569,158	414,290,577	374,678,724	7.1	10.6

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SECTION I - SUMMARY
(continued)

A. Summary of Principal Results (continued)

PARTICIPANT DATA

		June 30, 2012 Valuation		June 30, 2011 Valuation		June 30, 2010 Valuation	Percentage Change 2011 to 2012	Percentage Change 2010 to 2011
Service Retirees, Including Domestic Relations Beneficiaries								
Number		81,209		78,140		72,797	3.9 %	7.3 %
Average Annual Pension	$	40,104	$	39,551	$	38,142	1.4	3.7
Total Annual Pensions	$	3,256,792,847	$	3,090,549,345	$	2,776,654,267	5.4	11.3
Average Retirement Age of New Retirees		61.6		61.4		61.3	0.3	0.2
Average Annual Pension of New Retirees	$	48,904	$	50,555	$	47,975	(3.3)	5.4
Disabled Retirees								
Number		2,946		2,855		2,741	3.2 %	4.2 %
Average Annual Pension	$	27,267	$	26,848	$	26,278	1.6	2.2
Total Annual Pensions	$	80,328,020	$	76,650,196	$	72,028,971	4.8	6.4
Beneficiaries and Dependents								
Number		5,153		4,917		4,699	4.8 %	4.6 %
Average Annual Pension	$	24,424	$	24,043	$	23,161	1.6	3.8
Total Annual Pensions	$	125,854,873	$	118,220,158	$	108,834,906	6.5	8.6
Terminated Vested Participants								
Number		392		420		477	(6.7) %	(11.9) %
Average Annual Pension	$	14,224	$	13,816	$	12,960	3.0	6.6
Total Annual Pensions	$	5,575,788	$	5,802,852	$	6,181,944	(3.9)	(6.1)

SECTION I - SUMMARY
(continued)

A. Summary of Principal Results (continued)

STATUTORY PENSION CONTRIBUTIONS WITH BUDGET ADJUSTMENTS

	June 30, 2012 Valuation (State's Fiscal Year 2014 Contributions)	Revised June 30, 2011 Valuation (State's Fiscal Year 2013 Contributions)	Revised June 30, 2010 Valuation (State's Fiscal Year 2012 Contributions)	Percentage Change 2011 to 2012	Percentage Change 2010 to 2011
Normal Contribution (1/60th formula) **	$ 442,476,575	$ 469,288,099	$ 525,052,954	(5.7) %	(10.6) %
Additional Formula Normal Cost	74,231,802	81,664,185	95,200,632	(9.1) %	(14.2) %
Benefit Enhancement Fund (BEF) Balance	0	0	0	0.0 %	0.0 %
Additional Formula Contribution	74,231,802 *	81,664,185 *	95,200,632 *	(9.1) %	(14.2) %
Accrued Liability Contribution	1,788,448,757 *	1,597,232,717 *	1,389,556,743 *	12.0 %	14.9 %
Total Pension Contribution by Statute	**$ 2,305,157,134 ***	**$ 2,148,185,001 ***	**$ 2,009,810,329 ***	**7.3 %**	**6.9 %**
State Appropriation for Pension ***	(987,924,486)	(613,767,143)	(287,115,915)	61.0 %	113.8 %
Pension Contribution Not Appropriated	**$ 1,317,232,648 ***	**$ 1,534,417,858 ***	**$ 1,722,694,414 ***	**(14.2) %**	**(10.9) %**
Percentage of Statutory Pension Contribution Appropriated	**42.9%**	**28.6%**	**14.3%**	**14.3 %**	**14.3 %**

* These amounts should be increased for assumed interest at the rate of 7.90%, 7.95% or 8.25% per annum if payment is delayed beyond June 30, 2013, June 30, 2012 and June 30, 2011, respectively.

** Excludes the non-contributory group life insurance term cost and member contributions in excess of 5.5%.

*** Chapter 1, P.L. 2010 requires payment of the statutory pension contribution to be phased-in over a 7-year period from the fiscal year ending June 30, 2012 to the fiscal year ending June 30, 2018.

SECTION I - SUMMARY
(continued)

A. Summary of Principal Results (continued)

ANNUAL REQUIRED CONTRIBUTION PER GASB 25 AND 27

	June 30, 2012 Valuation (State's Fiscal Year 2014)	Revised June 30, 2011 Valuation (State's Fiscal Year 2013)	Revised June 30, 2010 Valuation (State's Fiscal Year 2012)	Percentage Change 2011 to 2012	Percentage Change 2010 to 2011
Normal Cost *	$ 394,080,352	$ 470,005,770	$ 616,659,815	(16.2) %	(23.8) %
Amortization Payment **	1,885,038,871	1,690,078,894	1,480,175,260	11.5 %	14.2 %
Subtotal	2,279,119,223	2,160,084,664	2,096,835,075	5.5 %	3.0 %
Interest Adjustment ***	180,050,418	171,726,731	172,988,893	4.8 %	(0.7) %
Annual Required Contribution	**$ 2,459,169,641**	**$ 2,331,811,395**	**$ 2,269,823,968**	**5.5 %**	**2.7 %**

This information does not reflect the new GASB Standards: No. 67 Financial Reporting for Pension Plans effective fiscal year 2014 and No. 68 Accounting and Financial Reporting for Pensions effective fiscal year 2015.

* Reflects all expected member contributions, additional formula normal cost, full cost of pension adjustment benefits, and an actuarial determination of the cost of the non-contributory and contributory group life insurance benefits.

** Benefit Enhancement Fund is excluded from the actuarial accrued liabilities.

*** Additional one year of interest is included to reflect payment of contributions at end of fiscal year.

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SECTION I - SUMMARY
(continued)

A. Summary of Principal Results (continued)

TOTAL STATUTORY CONTRIBUTIONS (INCLUDING NCGI AND ERI)

	June 30, 2012 Valuation (State's Fiscal Year 2014 Contributions)		Revised June 30, 2011 Valuation (State's Fiscal Year 2013 Contributions)		Revised June 30, 2010 Valuation (State's Fiscal Year 2012 Contributions)		Percentage Change 2011 to 2012	Percentage Change 2010 to 2011
Total Pension Contribution by Statute	$ 2,305,157,134	*	$ 2,148,185,001	*	$ 2,009,810,329	*	7.3 %	6.9 %
Est. Non-contributory Group Life Insurance (NCGI)	32,880,000		32,043,901	***	30,811,443	**	2.6 %	4.0 %
Early Retirement Incentive (ERI-3 and ERI-5) ^	2,992,322	*	2,853,205	*	2,751,595	*	4.9 %	3.7 %
Total State Contribution for Pension, NCGI and ERI	**$ 2,341,029,456**		**$ 2,183,082,107**		**$ 2,043,373,367**		**7.2 %**	**6.8 %**
Total Certain State College Contribution (Included Above)	**$ 464,514**		**$ 550,298**		**$ 663,865**	**	**(15.6) %**	**(17.1) %**
Expected member contributions in excess of 5.5% of payroll #	**$ N/A**		**115,570,000**		**75,250,000**		**N/A**	**53.6 %**

* These amounts should be increased for assumed interest at the rate of 7.90%, 7.95% or 8.25% per annum if payment is delayed beyond June 30, 2013, June 30, 2012 and 2011, respectively.

** Actual NCGI claims paid and actual allocation of costs for certain State colleges for fiscal year 2012.

*** Amount shown reflects estimate of NCGI claims. Actual claim amount will be appropriated.

^ Appropriation for ERI contributions is or is expected to be $1,282,424, $815,201, and $393,085 for fiscal year ending June 30, 2014, 2013 and 2012, respectively.

\# Member contributions increase to 6.64% effective July 1, 2012 and 6.5% effective October 1, 2011. Amounts in excess of 5.5% do not reduce State normal cost but rather pay down the unfunded liability.

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SECTION I - SUMMARY
(continued)

A. Summary of Principal Results (continued)

LOCAL EMPLOYER CONTRIBUTIONS

		June 30, 2012 Valuation		Revised June 30, 2011 Valuation		Revised June 30, 2010 Valuation	Percentage Change 2011 to 2012	Percentage Change 2010 to 2011
Early Retirement Incentive Contributions payable April 1, 2014 April 1, 2013 and April 1, 2012, respectively								
ERI 1 - Local Employers	$	909,373	$	911,475	$	936,034	(0.2) %	(2.6) %
ERI 2 - Local Employers		973,334		974,708		1,020,139	(0.1) %	(4.5) %
ERI 4 - Local Employers		2,812,522		2,831,739		2,874,148	(0.7) %	(1.5) %
Unauthorized ERIs - Local Employers *		14,352,700		14,352,700		0	0.0 %	N/A %
Total	$	19,047,929	$	19,070,622	$	4,830,321	(0.1) %	294.8 %

* There have been no contributions from Local Employers for unauthorized ERIs. A receivable has been included in the 2011 and 2012 valuations.

Terminal Funding Contributions payable April 1, 2014, April 1, 2013 and April 1, 2012, respectively								
No Locations	$	0	$	0	$	0	N/A	N/A

SECTION I - SUMMARY
(continued)

A. Summary of Principal Results (continued)

ASSETS AND LIABILITIES

	June 30, 2012 Valuation	Revised June 30, 2011 Valuation	Revised June 30, 2010 Valuation	Percentage Change 2011 to 2012	Percentage Change 2010 to 2011
Market Value of Pension Assets	$ 26,037,983,392	$ 27,654,006,602	$ 25,763,644,836	(5.8) %	7.3 %
Actuarial Value of Pension Assets	$ 31,079,212,983	$ 32,156,229,300	$ 33,136,475,630	(3.3) %	(3.0) %
Ratio of Actuarial Value to Market Value	119.4 %	116.3 %	128.6 %	3.1 %	(12.3) %
Actuarial Accrued Pension Liability	$ 51,404,642,737	$ 50,222,688,750	$ 48,417,932,345	2.4 %	3.7 %
Unfunded Pension Liability					
Based on Market Value	$ 25,366,659,345	$ 22,568,682,148	$ 22,654,287,509	12.4 %	(0.4) %
Based on Actuarial Value	$ 20,325,429,754	$ 18,066,459,450	$ 15,281,456,715	12.5 %	18.2 %
Funded Ratio					
Based on Market Value	**50.65 %**	**55.06 %**	**53.21 %**	**(4.41) %**	**1.85 %**
Based on Actuarial Value	**60.46 %**	**64.03 %**	**68.44 %**	**(3.57) %**	**(4.41) %**
Target Funded Ratio	**76.429 %**	**75.714 %**	**75.000 %**	**0.71 %**	**0.71 %**
Change in Funded Ratio since June 30, 2002, 2001 and 2000, respectively					
Based on Market Value	**(26.6) %**	**(39.1) %**	**(76.0) %**	**12.6 %**	**36.8 %**
Based on Actuarial Value	**(39.5) %**	**(44.0) %**	**(41.8) %**	**4.4 %**	**(2.2) %**

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SECTION I - SUMMARY
(continued)

A. Summary of Principal Results (continued)

RISK MEASURES

	June 30, 2012 Valuation	Revised June 30, 2011 Valuation	Revised June 30, 2010 Valuation	Percentage Change 2011 to 2012	Percentage Change 2010 to 2011
Market Value of Pension Assets	$ 26,037,983,392	$ 27,654,006,602	$ 25,763,644,836	(5.8) %	7.3 %
Annuity Savings Fund **	9,493,983,997	9,065,132,234	9,151,924,963	4.7 %	(0.9) %
Net Market Value of Pension Assets	16,543,999,395	18,588,874,368	16,611,719,873	(11.0) %	11.9 %
Actuarial Accrued Liability (AAL) for Retirees	32,364,738,715	30,714,824,113	27,385,028,540	5.4 %	12.2 %
% of AAL for Retirees Covered by Assets *	80.5%	90.0%	94.1%	(9.5) %	(4.1) %
% of AAL for Retirees Covered by Net Assets *	51.1%	60.5%	60.7%	(9.4) %	(0.2) %
Prior Year's Benefit Payments for Retirees	3,470,573,026	3,278,676,346	2,951,495,528	5.9 %	11.1 %
Ratio of Assets to Benefit Payments for Retirees ^	7.5	8.4	8.7	(10.7) %	(3.4) %
Ratio of Net Assets to Benefit Payments for Retirees ^	4.8	5.7	5.6	(15.8) %	1.8 %
Ratio of AAL to Benefit Payments for Retirees ^	9.3	9.4	9.3	(1.1) %	1.1 %

* Percentage is limited to 100%.
** Accumulated active and inactive member contributions.
^ Does not include impact of future investment income, member and State contributions, and increases in benefit payments.

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SECTION I - SUMMARY
(continued)

B. General Comments

This report summarizes the results of the actuarial valuation of the Teacher's Pension and Annuity Fund (TPAF) as of June 30, 2012. This valuation reflects changes to two key actuarial assumptions since the prior (revised) valuation: 1) a decrease in the investment return assumption from 7.95% per year to 7.90% per year and 2) a change to the salary increase assumption to better reflect recent experience and expected long-term trends.

Assumptions

This valuation reflects the actuarial assumptions based on the July 1, 2006 – June 30, 2009 Experience Study, with modifications to the investment return assumption and the salary increase assumption. The investment return assumption of 7.90% is set by the State Treasurer. The selected assumption of 7.90%, although reduced from the prior valuation, is outside our reasonable range. We recommend a further reduction in the assumption. A further decrease in the investment return assumption would result in higher actuarial liabilities and contribution requirements.

The primary differences in the salary increase assumption and the assumption used in the Revised June 30, 2011 Actuarial Valuation are:

- For the 4-year select period ending June 30, 2016, a decrease of 0.4% on average (this is a 2.4% decrease from the assumption used in the 2010 actuarial valuation)
- For the 5-year select period ending June 30, 2021, a slight difference resulting in no change in the average salary increase (this is a 2.0% decrease from the assumption used in the 2010 actuarial valuation)
- For the years after June 30, 2021, a decrease of approximately 0.65% on average (this is a 1.4% decrease from the assumption used in the 2010 actuarial valuation)

In addition, the inflation assumption and the Social Security Taxable Wage Base increase assumption were lowered from 3% to 2.75% per year and from 4% to 3.75% per year, respectively.

These changes resulted in a slight decrease in the actuarial accrued liability of $337.7 million or 0.7%. The funded ratio of the system on an actuarial value basis increased from 60.1% to 60.5%. These changes resulted in a reduction in the full

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B. General Comments (continued)

statutory contribution for the fiscal year ending June 30, 2014 of $80.2 million or 3.4%. Reflecting the Chapter 1, P.L. 2010 phase-in, the reduction in the State contribution is $34.4 million.

Funding Methods

The actuarial funding method for determining the statutory contributions is the Projected Unit Credit method. This method determines the actuarial accrued liability for each member based on service accrued as of the valuation date and projected compensation increases. The normal cost is equal to the present value of the benefit based on projected compensation assumed to be earned in the upcoming year. For statutory contribution purposes, the normal cost is divided between the portion based on the 1/60th benefit formula and the additional formula component. The State portion of the normal cost is reduced by expected member contributions during the upcoming year up to 5.5% of payroll. Therefore, member contributions in excess of 5.5% will serve to reduce the unfunded actuarial accrued liability. As of October 1, 2011, member contributions increased to 6.5% and will increase by 1/7 of 1% each following July 1 over the next 7 years until 7.5% is attained. For the 2013 fiscal year, the amount of member contributions in excess of 5.5% of payroll is estimated to be $115.6 million.

The asset valuation method determines the actuarial value of assets which is used in the development of the statutory contributions. The actuarial value of assets reflects 20% of the difference between the expected actuarial value of assets and the market value of assets. As of July 1, 2012, the actuarial value of assets is 119.4% of the market value of assets, which is an increase from the prior year of 116.3%.

The unfunded liability equals the difference in the actuarial accrued liability and the actuarial value of assets. For purposes of determining the statutory contributions, the unfunded liability is amortized over 30 years on a level dollar basis. Since a level dollar method is used, the full amount of interest on the unfunded liability plus a principal portion of the unfunded liability is expected to be paid each year. The amortization period will remain at 30 years until the June 30, 2019 valuation (2021 fiscal year). At that time, the period will be reduced by 1 each year until 20 years is attained with the June 30, 2028 valuation (2030 fiscal year).

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B. General Comments (continued)

Statutory Contributions

The statutory pension contribution consists of the Normal Contribution, the Additional Formula Contribution and the Accrued Liability Contribution. Chapter 133 P.L. 2001 allows the Additional Formula Contribution to be reduced based on the balance in the Benefit Enhancement Fund (BEF). As of July 1, 2012, there are no assets in the BEF. Furthermore, since there are no Excess Assets as of July 1, 2012, no assets will be transferred to the BEF.

Chapter 1, P.L. 2010 allows the State to phase-in to full funding of the statutory contribution over 7 years beginning with the 2012 fiscal year. This valuation determines the statutory contribution for the 2014 fiscal year, which is the third year of the phase-in. As shown on page 3, the statutory pension contribution for the 2014 fiscal year is $2,305.2 million and the phased-in portion is $987.9 million (42.9%).

For the 2013 fiscal year, it is anticipated that the State will contribute the phased-in portion of the statutory contribution. The total statutory contribution for the 2013 fiscal year is $2,148.2 and the phase-in portion is $613.8 million. The phase-in portion is held as a receivable in the plan assets for this valuation. The difference of $1,534.4 million between the statutory contribution and the phased-in portion increases the Unfunded Actuarial Liability by this amount. This results in an increase in the statutory contribution for the 2014 fiscal year of $135.0 million.

The statutory contribution increased 7.3% from $2,148.2 million for the 2013 fiscal year to $2,305.2 million for the 2014 fiscal year. This increase is due to the increase in the Accrued Liability Contribution offset by the decrease in the Normal Contribution and the Additional Formula Normal Cost. The increase in the Accrued Liability Contribution of 12.0% from $1,597.2 million for the 2013 fiscal year to $1,788.4 million for the 2014 fiscal year is due to the increase in the unfunded liability discussed in detail below. The Normal Contribution and the Additional Formula Normal Cost have decreased 5.7% from $469.3 million for the 2013 fiscal year to $442.5 million for the 2014 fiscal year and 9.1% from $81.7 million for the 2013 fiscal year to $74.2 million for the 2014 fiscal year, respectively. The primary reasons for the decrease in the normal cost components is due to the modification of the salary scale assumption, offset by the decrease in the investment return assumption.

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B. General Comments (continued)

In addition to the pension contributions, the State contributes the actual amount of non-contributory group insurance claims and segregates the costs for past ERI programs. As shown on page 5, for the 2013 and 2014 fiscal years, the estimated non-contributory group insurance claims are $32.0 million and $32.9 million, respectively. For ERI contributions, the State applies the same amortization method and Chapter 1 phase-in percentages. For the 2014 fiscal year, the total contribution is $3.0 million and the phase-in amount is $1.3 million.

Per Chapter 78, P.L. 2011, each member of TPAF has a contractual right to the annual required contribution made by the employer requiring the contribution to be made timely to help ensure the retirement system is securely funded.

GASB Annual Required Contribution

GASB has issued two new statements on how pensions are accounted for on the pension plan's statements as well as the employer's financial statements. Statement No. 67 Financial Reporting for Pension Plans is effective for the plan year ending June 30, 2014 and replaces Statement No. 25. Statement No. 68 Accounting and Financial Reporting for Pensions is effective for the fiscal year ending June 30, 2015 and replaces Statement No. 27. These standards are vastly different than the prior standards, but like the prior standards, do not dictate the funding of the pension plan.

Chapter 92, P.L. 2007 states that the System shall use consistent and generally accepted actuarial standards as established by GASB for the purpose of determining asset values, obligations and employer contributions. However, the System's contribution requirements, which are defined in NJ State statute, differ from the GASB compliant figures that are shown in this report. Also, current budgetary practices do not assess interest on contributions to reflect payment after the start of the fiscal year to the date paid. GASB 27 does not (1) exclude the Benefit Enhancement Fund from the Actuarial Value of Assets, (2) permit a portion of the normal cost to be paid by the BEF, (3) permit only a portion of member contributions to offset the plan's normal cost or 4) allow the use of a term cost funding method for the non-contributory group life insurance (NCGI). Furthermore, since the contributory group life insurance is provided through TPAF, an actuarial cost for these benefits is included in the ARC. Expected employee contributions of 0.4% of pay offset the normal cost portion of the contributory group life insurance. For the

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SECTION I - SUMMARY
(continued)

B. General Comments (continued)

2007 and later fiscal years, the ARC includes an actuarial determination of the cost of the non-contributory and contributory group life insurance. The ARC in prior years included the term cost for the non-contributory group life insurance.

As shown on page 4, the ARC for the 2014 fiscal year is $2,459.2 million, which is $121.1 million or 5.2% higher than the sum of the required statutory pension contribution of $2,305.2 million and the estimated non-contributory group life insurance term cost of $32.9 million for a total of $2,338.1 million.

Plan Provisions
There have been several changes to TPAF over the past several years modifying the retirement conditions, determination of final average compensation, disability benefits, and the benefit accrual rate for newly hired members. This has resulted in many new tiers of members. The effect of these tiers will take many years to have a significant impact on the normal cost portions of the contribution. Section VIII outlines the plan provisions of TPAF in detail.

In addition, Chapter 78, P.L. 2011 eliminated additional pension adjustment benefits (COLAs) effective July 1, 2011 for all members of TPAF. However, upon attainment of the Target Funded Ratio (TFR), a new pension committee will be formed to review possible changes to member contributions, retirement benefits including eligibility conditions, and with priority consideration, reactivation of pension adjustment benefits. The committee may modify the basis for the calculation of the adjustment and set the duration and extent of the reactivation. No decision of the committee will be implemented if the system's funded ratio falls below the TFR in any projected valuation period during the 30 years following implementation.

The Target Funded Ratio (TFR) is defined as the ratio of the Actuarial Value of Assets to the Actuarially Accrued Liability and equals 75% for fiscal year 2012 (June 30, 2010 actuarial valuation) increasing to 80% in equal increments over the following 7 years. As shown on page 7, the funded ratio as of July 1, 2012 is 60.46%, which is lower than the TFR of 76.429%. Thus, no changes in benefits can be contemplated for the 2014 fiscal year.

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B. General Comments (continued)

Unfunded Actuarial Accrued Liability

The unfunded Actuarial Accrued Liability increased by $2,258.9 million from $18,066.5 million as of July 1, 2011 to $20,325.4 million as of July 1, 2012. This increase in the unfunded liability, offset by the change in the investment return assumption, resulted in an increase in the Accrued Liability Contribution of $191.2 million from $1,597.2 million for 2013 fiscal year to $1,788.4 million for 2014 fiscal year. The following table summarizes the reasons for the increase in the unfunded liability.

Unfunded Liability as of June 30, 2011	$18,066.5
State Appropriation Less than Statutorily Required Contribution due to Chapter 1, P.L. 2010 phase-in	1,534.4
Amortization Payment Less/(More) than Interest Accrual	(160.9)
Actuarial Loss/(Gain)	1,344.6
Assumption Changes	(337.7)
Interest accrual on unauthorized ERI payment not made	1.0
Member Contributions Less/(More) than 5.5% level anticipated	(122.5)
Total Change in Unfunded Liability	$2,258.9
Unfunded Liability as of June 30, 2012	$20,325.4

Funded Ratio

As a result of the increase in the unfunded liability, the funded ratio based on the actuarial value of assets was reduced 3.5% from 64.0% as of June 30, 2011 to 60.5% as of June 30, 2012. Due to the asset valuation method, investment losses are expected on an actuarial value basis as the actuarial value of assets was 116.3% of market value as of the beginning of the year. Investment losses have occurred each year since the July 1, 2000 actuarial valuation on an actuarial value of asset basis.

On a market value basis, the funded ratio was reduced 4.4% from 55.1% to 50.7%. The ratio decreased on a market value basis due to poor investment performance during the prior year and the phase-in of the State contribution for the 2013 fiscal

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SECTION I - SUMMARY
(continued)

B. General Comments (continued)

year, offset slightly due to the change in the economic assumptions. Since July 1, 2002, the funded ratio on a market value basis has been reduced 26.6%. This decrease is primarily due to investment losses experienced over the period, State contributions less than the GASB Annual Required Contribution and the strengthening of actuarial assumptions.

As of June 30, 2012, the market value of assets is significantly below the actuarial liability attributable to retirees primarily due to significant investment losses, State contributions significantly less than the statutorily required contribution and other factors. Furthermore, if the assets contained in the Annuity Savings Fund (ASF) are excluded, the funded ratio of the remaining market value of assets to the actuarial accrued liability for retirees is 51.1%.

As of June 30, 2012, the ratio of market value of assets to the prior year's benefit payments is 7.5, which is significantly less than the ratio of 8.4 from the prior year. This is a simplistic measure of the number of years that the assets can cover benefit payments, excluding: investment income, State and member contributions, and future increases in those payments. If ASF assets are excluded, since they represent accumulated contributions from active and inactive members, the ratio is 4.8. The ratio for the prior year is 5.7.

Actuarial Gain/(Loss) Analysis

TPAF experienced an actuarial loss of $1,344.6 million during the period July 1, 2011 to June 30, 2012 based on the actuarial assumptions adopted in the 2009 Experience Study with modifications to the investment return and salary increase assumptions effective with the revised June 30, 2011 actuarial valuation. This loss is approximately 2.6% of the Actuarial Accrued Liability as of June 30, 2012. The major factors contributing to this loss are summarized below and are compared to the experience for the prior two plan years.

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TEACHERS' PENSION AND ANNUITY FUND OF NEW JERSEY

SECTION I - SUMMARY
(continued)

B. General Comments (continued)

	Gain/(Loss) *(Amounts in Millions)* June 30, 2012	June 30, 2011	June 30, 2010*
Economic Factors:			
Investment Return	($1,260.3)	($1,125.6)	$(1,843.2)
Salary Increases	119.5	330.0	188.3
Pension Adjustments (COLA)	N/A**	251.3	587.5
Expenses	(11.8)	(12.7)	(12.2)
Demographic Factors:			
Active Members	(100.8)	(272.3)	(78.9)
New Entrants	(35.5)	(26.5)	(47.7)
Non-Contributing Members	(15.6)	(17.1)	(28.0)
Retirees and Beneficiaries	(40.1)	(52.9)	(10.0)
Total	(1,344.6)	(925.8)	(1,244.2)

* 2010 analysis based on 2006 experience study
** Some very small increases were provided during the year to offset negative adjustments from prior years. These increases are included in the demographic factors for retirees and beneficiaries.

Total pension assets earned investment returns of approximately 2.46% on a market value basis and 3.85% on an actuarial value basis for the period ending June 30, 2012. The determination of the approximate rate of return on the market value of assets is based on all assets of the fund including receivables and payables in addition to the investment holdings. This will result in a different rate of return than reported by the Division of Investments. The resulting loss to the plan of $1,260.3 million represents the shortfall in the actuarial value of assets relative to the 7.95% assumed investment return.

Salary increases for contributory members who were active on both July 1, 2011 and July 1, 2012 averaged 3.30% versus expected salary increases of 4.05% resulting in an actuarial gain of $119.5 million. Salaries for new entrants averaged $52,380, which is significantly below the average salary of all contributory members of $71,510. This resulted in the average salary of all contributory members increasing by 1.1% over last year. Combined with the number of active contributing members decreasing by 0.1%, total contributory payroll increased by 1.0%.

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SECTION I - SUMMARY
(continued)

B. General Comments (continued)

Actuarial losses among active members include the impact of changes in participant data, including changes in service due service purchases. Actuarial losses among retirees include the impact of participant data changes, including changes in benefit amounts and beneficiaries who appear in the valuation for the first time where a prior member record was not determined.

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SECTION I - SUMMARY
(continued)

C. Discussion of Supporting Exhibits

Assets

Section II summarizes the System assets taken into account in the preparation of the actuarial valuation. Subsection A summarizes the market value of System assets as of June 30, 2012 and includes the present value of expected contributions from State and local employers for ERI and Terminal Funding retirements as of June 30, 2012.

Subsection B reconciles the development of the market value of pension assets starting from the market values as of June 30, 2011. Subsection C summarizes the development of the actuarial value of pension assets as of July 1, 2012. The exhibit reflects the growth in the pension assets based on the expected investment income at an assumed rate of 7.95% adjusted to reflect 20% of the difference between the market value of pension assets as of the valuation date and the expected actuarial value.

Subsection D estimates the annual rate of return for the year ending June 30, 2012 on the actuarial value and the market value of pension assets. Subsection E summarizes the estimated annual rates of return for the five previous plan years. The 5-year compounded annual return on the actuarial value of assets and the market value of assets are 3.58% and 2.38%, respectively.

Actuarial Liabilities and Contributions

Section III summarizes the actuarial liabilities and the development of the required State contribution for the plan year beginning July 1, 2012, which reflect the assumptions developed in the 2009 Experience Study, with changes to the salary increase assumption effective with the 2012 valuation, and the economic assumptions prescribed by the Treasurer.

Subsection A summarizes the development of the Actuarial Accrued Liability as of July 1, 2012 for all current members and indicates the portion of those present values attributable to active participants, retirees and beneficiaries, and terminated vested participants. The non-contributory lump sum death benefits payable from active service, terminated vested status and retiree status have been excluded from the Actuarial Accrued Liability since those benefits are funded on a term cost basis.

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SECTION I - SUMMARY
(continued)

C. Discussion of Supporting Exhibits (continued)

Projected benefits based on compensation in excess of the 401(a)(17) compensation cap for a group of grandfathered employees for certain School Districts under Chapter 113, P.L. 1997 have been included in the determination of the Accrued Liability.

Subsection B summarizes the development of the pension Normal Cost under the 1/60 and 1/55 formulas payable July 1, 2012. The schedule shows the portion of the Normal Cost attributable to: (1) the basic allowances and (2) pension adjustment benefits for active members (which had been eliminated in the 2010 valuation) and (3) expected member contributions up to 5.5% of payroll. Contributions in excess of 5.5% of payroll are not used to reduce the State's Normal Cost, but rather will be used to reduce the unfunded liability. The Normal Cost as of July 1, 2012 was developed based on the Projected Unit Credit Method. Projected benefits based on compensation in excess of the 401(a)(17) compensation cap for a group of grandfathered employees for certain School Districts under Chapter 113, P.L. 1997 have been included in the determination of the Normal Cost.

Subsection C summarizes the Actuarial Accrued Liability and Gross Pension Normal Cost (1/55 formula; 1/60 formula for Class F and G employees) for active contributory members by employee type as of July 1, 2012.

Subsection D summarizes the development of the Excess Valuation Assets which are $0 as of July 1, 2012. The Excess Valuation Assets are determined by subtracting the Actuarial Accrued Liability for basic allowances and pension adjustment benefits, the Post Retirement Medical Premium Fund, the present value of the total projected normal cost in excess of the projected phased-in normal cost for pension adjustment benefits of active members and the BEF (prior to reduction for the additional formula normal contribution for fiscal year 2014) from the Valuation Assets.

Subsection E summarizes the development of the BEF as of July 1, 2012 and the Additional Formula Normal Contribution. Chapter 133, P.L. 2001 established the BEF as of June 30, 1999. The BEF is $0 as of June 30, 2012. The BEF is credited with excess assets not to exceed actual member contributions made to the system nor the present value of expected additional normal costs due to the formula

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SECTION I - SUMMARY
(continued)

C. Discussion of Supporting Exhibits (continued)

change. Since there are no excess assets, there is no contribution to the BEF. Since the BEF is $0, there is no offset to the additional formula normal cost.

Subsection F summarizes the development of the State's estimated fiscal year 2014 Statutory Required Contributions to TPAF comprising three components: pension, non-contributory group life insurance, and ERI. The total pension contribution of $2,305,157,134 equals the Normal Contribution of $442,476,575 based on the 1/60 formula plus the Additional Formula Normal Contribution of $74,231,802 plus the Accrued Liability Contribution of $1,788,448,757. The non-contributory group life insurance contribution represents a one year term cost of lump sum death benefits payable during active service, terminated vested status and retiree status and is estimated to be $32,880,000. The State's combined ERI-3 and ERI-5 contributions are $2,992,322. The total Statutory Required Contribution for the State's fiscal year 2014 is estimated to be $2,341,029,456. This is an estimate because the State will contribute the actual 2014 fiscal year non-contributory group life insurance benefits, not the estimated amount shown above. For the 2014 fiscal year, Chapter 1, P.L. 2010 requires the State to contribute 3/7th of the pension and ERI portions of the contribution. Combined with the estimated contribution for the non-contributory group life insurance benefits, the expected amount to be appropriated is $1,022,086,910.

We also include an estimate of the member contributions expected to be made during the 2013 fiscal year in excess of 5.5%. The member contribution rate will increase to 6.65% effective July 1, 2012. This estimated amount of $115,570,000 will be applied to the unfunded liability.

Subsection G shows the Statutory Required Contribution as a percentage of appropriation payroll on two bases: (1) on a statutory basis – 23.91% and (2) if the Market Value of Assets were used to determined the Accrued Liability Contribution and the full amount of member contributions were used in determining the State normal cost – 27.27%. The latter figure is an estimate of the percentage of payroll that would need to be contributed each year for the next 30 years in order to fully amortize the unfunded actuarial pension liability assuming no gains or losses and a closed (amortization period is reduced by one year each year) amortization method.

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C. Discussion of Supporting Exhibits (continued)

Subsection H summarizes these contributions as a percentage of appropriation pay for the five previous fiscal years.

Subsection I shows the fiscal year 2014 Statutory Required Contribution based on the 1/60 formula, the Additional Formula Contribution after application of the BEF, the Accrued Liability Contribution and the estimated non-contributory group life insurance contribution payable by the State and certain State Colleges. It does not reflect the phase-in under Chapter 1, P.L. 2010. The State's contribution is allocated between the Department of Higher Education, Department of Education, County Colleges, Charter Schools and other.

Subsection J shows the calculation of the total actuarial gain (loss). The general comments section outlines the areas where experience differed from that expected.

Actuarial Balance Sheet

Section IV provides the actuarial balance sheet summarizing the assets and liabilities by Fund as of June 30, 2012. The assets credited to the various funds include the portion of the investment income allocated to each fund for the year and ending June 30, 2012. The actuarial value of assets is used as the basis for the balance sheet. Note that the actuarial value of assets is 19% higher than market value. The liabilities presented are based on the actuarial accrued liabilities summarized in Section III.

The actuarial balance sheet indicates the following transfers should be made:

(1) Retirement Reserve Fund

When a member retires, or when he dies and an allowance is payable to his beneficiary, the allowance including cost-of-living adjustments is paid from the Retirement Reserve Fund. The member's own contributions with interest are transferred from the Annuity Savings Fund, and the balance of the reserve on the total allowance is transferred from the Contingent Reserve Fund. As of June 30, 2012, the Retirement Reserve Fund has present assets of $31,971,715,494 including accrued interest. The liabilities of the fund amount to $32,364,672,117 so that there is a deficit of $392,956,623 in the fund as of

C. Discussion of Supporting Exhibits (continued)

the valuation date. New Jersey statute states that the fund be put in balance as of June 30, 2012 by a transfer of assets from the Contingent Reserve Fund, and this transfer is shown in the balance sheet. Note that the balance in the Contingent Reserve Fund is negative so that the Retirement Reserve fund remains in balance.

(2) Pension Fund

The reserves held in the Pension Fund represent the reserves on retirement allowances payable to non-veteran members who retired prior to 1956. As of June 30, 2012, the Pension Fund has assets credited to it amounting to $71,411 including accrued interest. The liabilities of the fund amount to $66,598 so that there is a surplus of $4,813 in the fund as of the valuation date. It is recommended that the fund be put in balance as of June 30, 2012 by a transfer of assets to the Contingent Reserve Fund, and this transfer is shown in the balance sheet.

(3) Annuity Savings Fund and Contingent Reserve Fund

The Annuity Savings Fund, which is the fund to which members' contributions with interest are credited, has assets amounting to $9,493,983,997 as of June 30, 2012 after accrued interest has been added. The Contingent Reserve Fund is the fund to which contributions made by the State and local employers to provide the benefits paid from retirement fund monies are credited. The assets creditable on an actuarial value basis to the Contingent Reserve Fund amount to $(10,779,509,729) as of June 30, 2012 after adjustment is made on account of accrued interest and the amounts transferable to the Retirement Reserve Fund and from the Pension Fund. If a market value basis was used, assets creditable to the Contingent Reserve Fund after transfers would amount to $(15,820,739,320).

If a member withdraws from active service before qualifying for retirement, the amount of his accumulated deductions is paid to him from the Annuity Savings Fund. If he dies before retirement and no survivorship benefit is payable, his accumulated deductions are paid to his beneficiary from the Annuity Savings Fund. If he retires, or if he dies leaving a beneficiary eligible for a survivorship

C. Discussion of Supporting Exhibits (continued)

benefit, his accumulated deductions are transferred from the Annuity Savings Fund to the Retirement Reserve Fund, and the reserve on the allowance which is not provided by his own deductions is transferred from the Contingent Reserve Fund to the Retirement Reserve Fund. Any lump sum benefit payable upon the death of a member before or after retirement is paid by The Prudential Insurance Company of America.

(4) Benefit Enhancement Fund

The reserves held in the BEF are used to fund the additional formula normal contributions. The BEF is credited with excess assets not to exceed actual member contributions made to the system nor the present value of the expected additional formula normal contributions. No additional excess assets will be credited to the BEF after the maximum amount is attained. If excess assets permit, monies are transferred from the Contingent Reserve Fund. As of June 30, 2012, the BEF has no assets.

(5) Special Reserve Fund

The Special Reserve Fund is the fund to which any excess interest earnings are transferred and against which any losses from the sale of securities are charged. The maximum limit on the accumulations in this fund is set at one percent of the market value of the investments of the retirement fund; any amounts in excess of this limit are creditable to the Contingent Reserve Fund. The Special Reserve Fund is considered as an asset of the retirement fund. This fund has assets amounting to $0 as of June 30, 2012.

Accounting Information

Section V presents the accounting information required under Governmental Accounting Standards Statement No. 27 (GASB 27). Schedule A outlines the development of the Annual Required Contribution (ARC). The ARC comprises the employer's normal cost (based on all expected member contributions) plus a specified amortization of the unfunded actuarial accrued liability (UAAL). For 2012 and later fiscal years (2010 and subsequent valuations), the amortization method selected for this system is an open level dollar method (level percentage of projected

C. Discussion of Supporting Exhibits (continued)

payroll based on an assumed payroll growth rate of 4.0% was used prior to the 2012 fiscal year) for 30 years. For fiscal years 2021 and later (2019 and subsequent valuations), the amortization period will close until the period reaches 20 years.

For 2007 and later fiscal years (the 2005 and subsequent valuations), an actuarial determination of the cost for non-contributory and contributory group life insurance benefits is included in the calculation since these benefits are paid from TPAF. Prior years included a term cost for the non-contributory group life insurance and excluded the contributory group life insurance. The portion of the ARC for the 2014 fiscal year attributable to group life insurance benefits is $96.6 million. The total ARC for the 2014 fiscal year is $2,459.2 million.

Schedule B shows the projection of the Estimated Net Pension Obligation (NPO) as of June 30, 2013 and June 30, 2014. The NPO represents the cumulative difference between the Annual Pension Costs for the system and the contributions made. After the expected contributions of $645.8 million for fiscal year 2013 and $1,020.8 million for fiscal year 2014, the NPO as of June 30, 2014 is expected to be $14,866.4 million.

Schedule C is the Schedule of Funding Progress. This schedule presents the Actuarial Accrued Liability, the Actuarial Value of Assets, the Unfunded Accrued Liability, the funded ratio (assets as a percentage of Actuarial Accrued Liability), and the Unfunded Accrued Liability as a percentage of covered payroll. Six years of historical information are shown.

Schedule D is the Schedule of Employer Contributions. This schedule presents the ARC for the fiscal year, the employer contributions made for that fiscal year and the percentage of the ARC those contributions represent. For the fiscal year ending June 30, 2013 the employer contributions are 27.7% of the ARC and for the fiscal year ending June 30, 2014, the expected employer contributions are 41.5% of the ARC. Six years of historical information are shown. Schedule E presents the funding policy for the fiscal year. This disclosure includes the valuation date, the Actuarial Cost Method, the amortization period and method, the Asset Valuation Method, and certain key actuarial assumptions.

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SECTION I - SUMMARY
(continued)

C. Discussion of Supporting Exhibits (continued)

Census Data

Section VI summarizes the census data provided by the Division of Pensions and Benefits and utilized in the preparation of the actuarial valuation. Subsection A provides a reconciliation of the current year participant counts from the prior valuation. Subsection B shows the appropriation count and salary information by group. Subsection C shows the number and annual retirement allowances with pension adjustments by beneficiary type. Subsection D shows information on members who retired since the last valuation split between those who retired with less than and more than 25 years of service. Subsections E and F present a profile of Contributory and Non-contributory members split by gender, summarized by 5-year age and service groupings. Subsection G provides a profile of terminated vested members, retired members, disabled members, and beneficiaries broken down into 5-year age categories. The census data represents the status of plan participants as of June 30, 2012.

In performing this analysis, we relied, without audit, on census data, plan provisions, asset statements and other information (both written and oral) provided by the State of New Jersey Division of Pensions and Benefits. We have not audited or verified the census data, asset statements or other information. To the extent any of these are inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

Actuarial Assumptions and Methods

Section VII summarizes the actuarial assumptions and methods utilized in the preparation of this actuarial valuation. Subsection A identifies the various assumptions. These assumptions are based on the assumptions developed in the Experience Study from July 1, 2006 to June 30, 2009 with modifications to the salary

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SECTION I - SUMMARY
(continued)

C. Discussion of Supporting Exhibits (continued)

increase assumption effective with the 2012 valuation and the economic assumptions prescribed by the Treasurer. Subsection B summarizes the actuarial valuation methodology set forth in Chapter 62, P.L. 1994 as modified by Chapters 115, P.L. 1997, 133, P.L. 2001 and 92 P.L. 2007.

Future actuarial measurements may differ significantly from the current measurements presented in this analysis due to actual plan experience deviating from the actuarial assumptions, and changes in plan provisions, actuarial assumptions, and applicable law. An assessment of the potential range and cost effect of such differences is beyond the scope of this analysis.

Summary of Principal Plan Provisions

Section VIII summarizes the principal plan provisions as of the valuation date and denotes any changes from the previous valuation.

Early Retirement Incentive Contribution Schedule

Appendix I displays the contribution schedule for the early retirement incentive programs (ERI-1, ERI-2, ERI-3, ERI-4 and ERI-5) by location for the 2014 fiscal year. It also provides the present value of the future contributions as of June 30, 2012. This list reflects locations which paid off their ERI liabilities through June 2012 as a result of Chapter 42, P.L. 2002.

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SECTION II - ASSETS

A. Market Value of Assets as of June 30, 2012

1. Assets		
Cash	$	297,561,120
Investment Holdings		25,072,613,642
Employers' Contributions Receivable - NCGI		3,669,847
Employers' Contributions Receivable - State		32,272,892
Employers' Contributions Receivable - Local		31,921,949
Employers' Contributions Receivable - Delayed Enrollments		309,485
Employers' Contributions Receivable - Delayed Appropriations		4,874,067
Members' Contributions Receivable		75,493,466
Accrued Interest on Investments		3,196
Accounts Receivable		3,360,296
Loans Receivable		233,473,666
Dividends Receivable		0
Total	$	25,755,553,626
2. Liabilities		
Pension Payroll Payable	$	226,522,152
Pension Adjustment Payroll Payable		32,489,411
Withholdings Payable		35,544,022
Death Benefits Payable		3,669,847
Net Securities Lending Collateral		(670,099)
Accounts Payable - Other		48,134,744
Total	$	345,690,077
3. Market Value of Assets as of June 30, 2012: (1) - (2)	$	25,409,863,549
4. Unauthorized Local ERI Receivable Contributions		14,352,700
5. FY 2013 Receivable Contributions from State		613,767,143
6. Adjusted Market Value of Assets as of June 30, 2012: (3) + (4) + (5)	$	26,037,983,392

SECTION II - ASSETS
(continued)

B. Reconciliation of Market Value of Assets from June 30, 2011 to June 30, 2012

		Pension
1. Market Value of Assets as of June 30, 2011	$	27,654,006,602
2. Increases		
Member Contributions excluding transfers from Other Systems	$	640,250,026
Member Transfer Contributions		4,907,929
Other Employer Contributions including Transfers From Other Systems, Delayed Appropriations and Delayed Enrollments		3,942,694
State and Local Appropriations (adjusted by unauthorized ERI receivable)		16,502,083
Investment Income		643,919,271
Total	$	1,309,522,003
3. Decreases		
Withdrawal of Member Contributions and Transfer Contributions	$	40,911,454
Retirement Allowances		3,089,099,919
Pension Adjustment Benefits		381,473,107
Death Benefit Claims		30,811,443
Administrative Expense		11,369,133
Medical Benefits and Expenses		0
Total	$	3,553,665,056
4. Market Value of Assets as of June 30, 2012: (1) + (2) - (3)	$	25,409,863,549
5. FY 2013 Receivable Contributions from State and Local Employers		628,119,843
6. Adjusted Market Value of Assets as of June 30, 2012: (4) + (5)	$	26,037,983,392

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SECTION II - ASSETS
(continued)

C. Development of Actuarial Value of Assets as of July 1, 2012

1. Actuarial Value of Pension Assets as of July 1, 2011	$ 32,156,229,300
2. Net Cash Flow without Investment Income	(2,888,062,324)
3. Investment Income at Actuarially Assumed Rate @ 7.95%	2,443,233,562
4. Receivable Contributions from State and Local Employers	628,119,843
5. Expected Actuarial Value of Pension Assets: (1) + (2) + (3) + (4)	32,339,520,381
6. Adjusted Market Value of Pension Assets as of June 30, 2012	26,037,983,392
7. Excess Market Value over Expected Actuarial Value Assets: (6) - (5)	(6,301,536,989)
8. 20% mark-up to reflect growth in Market Value: 20% x (7)	(1,260,307,398)
9. Actuarial Value of Pension Assets as of July 1, 2012: (5) + (8)	$ 31,079,212,983
10. Pension Actuarial/Market Value Ratio: (9) / (6)	119.4%

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SECTION II - ASSETS
(continued)

D. Estimated Annual Rate of Return for year ending June 30, 2012

	Pension Actuarial Value	Pension Market Value
1. Value of Assets as of July 1, 2011	$ 32,156,229,300	$ 27,654,006,602
2. Employee Contributions	649,100,649	649,100,649
3. State and Local Appropriations	16,502,083	16,502,083
4. Receivable Contributions - State and Local Employers	628,119,843	628,119,843
5. Benefit Payments and Expenses	3,553,665,056	3,553,665,056
6. Value of Assets as of June 30, 2012	31,079,212,983	26,037,983,392
7. Non-Investment Increment: (2) + (3) - (5)	(2,888,062,324)	(2,888,062,324)
8. Investment Increment: (6) - (1) - (4) - (7)	1,182,926,164	643,919,271
9. Time Weighted Value: (1) +.5 x (7)	30,705,021,865	26,209,975,440
10. Estimated Annual Rate of Return: (8) / (9)	3.85%	2.46%

E. Estimated Historical Rates of Return

Plan Year Ending	Actuarial Value	Market Value
June 30, 2012	3.85%	2.46%
June 30, 2011	4.71%	17.91%
June 30, 2010	2.74%	13.83%
June 30, 2009	1.36%	-16.29%
June 30, 2008	5.31%	-2.27%
5-Year Compounded Annual Rate of Return	3.58%	2.38%

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SECTION III - LIABILITIES AND CONTRIBUTIONS

A. Actuarial Accrued Liability as of July 1, 2012 - 1/55th Formula

1. Projected Benefits Payable to Beneficiaries and Retirees	
Service Retirees (Including ERI Benefits)	$ 30,713,095,006
Disability Retirees	662,094,973
Beneficiaries	989,548,736
Total	$ 32,364,738,715
2. Projected Benefits for Vested Terminated Members	47,117,235
3. Projected Benefits for Non-Contributory Members	$ 628,118,774
4. Projected Benefits for Active Members	
Service Retirement	$ 17,281,392,537
Ordinary Disability Retirement	412,349,494
Accidental Disability Retirement	22,398,697
Return of Members' Contributions - Death	104,742,173
Return of Members' Contributions - Withdrawal	130,344,639
Deferred Retirement	413,440,473
Pension Adjustment Benefits	0
Total	$ 18,364,668,013
5. Total Pension Accrued Liability: (1) + (2) + (3) + (4)	$ 51,404,642,737

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SECTION III - LIABILITIES AND CONTRIBUTIONS
(continued)

B. Development of Normal Cost payable July 1, 2012

	1/60th Formula	1/55th Formula
1. Basic Allowances	$ 925,493,108	$ 994,289,959
2. Pension Adjustment Benefits for active members		
a. Full Amount of Pension Adjustment Benefits	0	0
b. Phase-in Percentage	67.60%	N/A
c. Phased-in Amount of Pension Adjustment Benefits	0	N/A
3. Gross Pension Normal Cost		
a. Full Amount of Pension Normal Cost: (1) + (2a)	$ 925,493,108	$ 994,289,959
b. Phased-in Amount of Pension Normal Cost for Contribution Purposes: (1) + (2c)	925,493,108	N/A
4. Expected Member Contributions (5.5% of payroll) *	515,412,872	515,412,872
5. Net Pension Normal Cost		
a. Full Amount of Net Pension Normal Cost: (3a) - (4)	410,080,236	478,877,087
b. Net Phased-in Amount of Pension Normal Cost for Contribution Purposes: (3b) - (4)	410,080,236	N/A

* Member contributions in excess of 5.5% are not used to reduce the State's Normal Cost

C. Summary of Active Member Actuarial Accrued Liability & Normal Cost payable July 1, 2012

Employee Type	Number of Members	Total Appropriation Salary	Actuarial Accrued Liability	Gross Pension Normal Cost (1/55th Formula) *
Class A & B	110,160	$8,351,195,479	$18,009,865,989	$892,992,503
Class D	11,653	637,709,873	238,990,313	48,817,756
Class E	5,743	305,436,686	72,673,136	22,340,213
Class F	3,502	184,833,312	23,795,439	11,741,209
Class G	5,739	300,037,566	19,343,136	18,398,278
Total	136,797	$9,779,212,916	$18,364,668,013	$994,289,959

* 1/60th formula for Class F and G employees

SECTION III - LIABILITIES AND CONTRIBUTIONS
(continued)

D. Development of Excess Valuation Assets as of July 1, 2012

1. Valuation Assets	$	31,079,212,983
2. Actuarial Accrued Liability for Basic Allowances & Pension Adjustment Benefits		51,404,642,737
3. Post Retirement Medical Premium Fund		0
4. Present Value of Total Projected Normal Cost in Excess of the Projected Phased-in Normal Cost for Pension Adjustment Benefits		0
5. Benefit Enhancement Fund (prior to reduction for additional formula normal cost)		0
6. Excess Valuation Assets as of July 1, 2012: (1)-(2)-(3)-(4)-(5), not less than $0	$	0

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SECTION III - LIABILITIES AND CONTRIBUTIONS
(continued)

E. Development of Benefit Enhancement Fund and Additional Formula Contribution As of July 1, 2012

1. Benefit Enhancement Fund as of July 1, 2011	$	0
2. Accrued Interest		0
3. Benefit Enhancement Fund as of July 1, 2012		0
4. Additional Formula Normal Cost to be paid by Benefit Enhancement Fund		
a. Gross Normal Cost payable July 1, 2012 - 1/55th Formula (B)(3)(a)		994,289,959
b. Gross Normal Cost payable July 1, 2012 - 1/60th Formula (B)(3)(a)		925,493,108
c. Additional Formula Normal Cost: (a) - (b)		68,796,851
5. Net Benefit Enhancement Fund Balance as of July 1, 2012 before Fiscal Year 2014 Contribution: (3) - (4c), not less than $0		0
6. State Additional Formula Contribution as of July 1, 2012: (4c) - (3), not less than $0		68,796,851
7. Estimated Fiscal Year 2014 Employee Contributions as of July 1, 2012		612,940,504
8. Limit on Fiscal Year 2014 Contribution to Benefit Enhancement Fund		
a. Present Value of Future Normal Costs as of June 30, 2012 - 1/55th Formula		9,717,430,667
b. Present Value of Future Normal Costs as of June 30, 2012 - 1/60th Formula		8,989,481,435
c. Limit: (a) - (b) - (5)		727,949,232
9. Excess Assets Available (D6)		0
10. Fiscal Year 2014 Allowable Contribution to Benefit Enhancement Fund: Lesser of (7), (8c), (9)	$	0

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SECTION III - LIABILITIES AND CONTRIBUTIONS
(continued)

F. Development of State's Fiscal Year 2014 Statutory Required Contributions

1. Net Pension Normal Contribution as of July 1, 2012: B(5)(b)		$ 410,080,236
2. Net Pension Normal Contribution as of June 30, 2013		442,476,575
3. Additional Formula Contribution as of July 1, 2012: E(6)		68,796,851
4. Additional Formula Contribution as of June 30, 2013		74,231,802
5. Accrued Liability Contribution		
a. Actuarial Accrued Liability for Basic Allowances & Pension Adjustment Benefits	$ 51,404,642,737	
b. Adjusted Actuarial Value of Assets (excluding BEF)	31,079,212,983	
c. Unfunded Pension Accrued Liability: (a) - (b)	$ 20,325,429,754	
d. 30 - Year Level Dollar Amortization with payments of Unfunded Pension Accrued Liability payable June 30, 2013		1,788,448,757
6. Total Pension Contribution for State's Fiscal Year 2014: (2) + (4) + (5d)		$ 2,305,157,134
7. State's FY 2014 Est. Non-contributory Group Life Insurance Contribution (NCGI)		32,880,000
8. State's Fiscal Year 2014 ERI-3 and ERI-5 Contributions		2,992,322
9. Total State's Fiscal Year 2014 Contribution for Pension, NCGI and ERI: (6) + (7) + (8)		$ 2,341,029,456
10. Expected Fiscal Year 2013 member contributions in excess of 5.5% as an additional payment towards the unfunded liability as of June 30, 2013		115,570,000

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SECTION III - LIABILITIES AND CONTRIBUTIONS
(continued)

G. Statutory Required Contribution as a Percentage of Appropriation Payroll

	Percent of Payroll
Basic Allowances Net of Member Cont's (5.5% of payroll) - 1/60th Formula	4.52%
Active COLA (Phase-in percentage of 67.60%)-1/60th Formula	0.00%
Additional Formula Normal Cost (after any BEF reductions)	0.76%
Accrued Liability Contribution	18.29%
Total Pension Contribution for State's Fiscal Year 2014	23.57%
Estimated Non-contributory Group Life Insurance Benefits (NCGI)	0.34%
Total State's Fiscal Year 2014 Contribution for Pension and NCGI	**23.91%**
Increases in contribution if:	
COLA fully phased-in	0.00%
No BEF reductions existed	0.00%
All member contributions used to offset State portion of Normal Cost	-1.18%
Market Value of Assets used to determine the Accrued Liability Contribution	4.54%
Total Increases as a percent of payroll	3.36%
Total Contribution with these increases as a percent of payroll	**27.27%**

H. Historical Statutory Required Contributions as a Percentage of Appropriation Payroll

Fiscal Year Ending	Statutory Pension and NCGI	With Increases Above Included
June 30, 2014	23.91%	27.27%
June 30, 2013	22.53%	25.86%
June 30, 2012	20.41%	27.10%
June 30, 2011	19.10%	25.88%
June 30, 2010	16.56%	20.02%

SECTION III - LIABILITIES AND CONTRIBUTIONS
(continued)

I. Fiscal Year 2014 Statutory Required Contributions Payable by the State and Certain State Colleges (excluding Ch. 1 phase-in)

Group	Normal Contribution (1/60 Formula)	Additional Formula Contribution (After BEF reductions)	Accrued Liability Contribution	Estimated Non-Contributory Group Life Insurance	Total
Certain State Colleges					
NJ Institute of Technology	$6,792	$1,140	$27,454	$505	$35,891
Rowan University	0	0	0	0	$0
New Jersey University	9,940	1,668	40,176	739	$52,523
Kean University	15,393	2,582	62,217	1,144	$81,336
William Patterson University	22,825	3,829	92,256	1,696	$120,606
Montclair State U. (Group 4)	11,466	1,924	46,345	852	$60,587
The College of NJ	5,379	902	21,741	400	$28,422
Stockton State College	16,115	2,703	65,134	1,197	$85,149
Total for Certain State Colleges	**$87,910**	**$14,748**	**$355,323**	**$6,533**	**$464,514**
State					
Dept of Higher Education	0	0	0	0	$0
Dept of Education	711,103	119,298	2,874,211	52,841	$3,757,453
County Colleges	86,273	14,473	348,706	6,411	$455,863
Charter Schools	5,997,163	1,006,110	24,239,971	445,643	$31,688,887
Other	435,594,126	73,077,173	1,760,630,546	32,368,572	$2,301,670,417
Total for State	**$442,388,665**	**$74,217,054**	**$1,788,093,434**	**$32,873,467**	**$2,337,572,620**
Total for System	**$442,476,575**	**$74,231,802**	**$1,788,448,757**	**$32,880,000**	**$2,338,037,134**

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SECTION III - LIABILITIES AND CONTRIBUTION
(continued)

J. Analysis of Actual Experience for the Year Ended June 30, 2012

1. Unfunded Accrued Liability as of June 30, 2011	$	18,066,459,450
2. Gross Normal Cost as of June 30, 2011		1,021,598,285
3. Interest: ((1) + (2)) * 7.95%		1,517,500,590
4. Employee and Employer Contributions Made with Interest		1,287,080,154
5. Expected Unfunded Accrued Liability as of June 30, 2012: (1) + (2) + (3) - (4)	$	19,318,478,171
6. Increase/(Decrease) in liability due to assumption changes		(337,666,242)
7. Increase/(Decrease) in liability due to statutory changes		0
8. Expected Unfunded Accrued Liability after changes as of June 30, 2012: (5) + (6) + (7)	$	18,980,811,929
9. Actual Unfunded Accrued Liability as of June 30, 2012		20,325,429,754
10. Gain/(Loss): (8) - (9)	$	(1,344,617,825)

SECTION IV - ACTUARIAL BALANCE SHEET AS OF JUNE 30, 2012

Assets		Liabilities	
Retirement Reserve Fund (RRF)		Payable from Retirement Reserve Fund	
Credited to Fund w/ Distribution of Income	$31,971,715,494	Retirees, Disableds and Beneficiaries	
Add/(deduct) reserve transferable from/(to) CRF	392,956,623	currently receiving benefits	$32,364,672,117
Adjusted Total	32,364,672,117		
Pension Fund (PF)		Payable from Pension Fund	
Credited to Fund w/ Distribution of Income	71,411	Retirees, Disableds and Beneficiaries	
Add/(deduct) reserve transferable from/(to) CRF	(4,813)	currently receiving benefits	66,598
Adjusted Total	66,598		
Annuity Savings Fund (ASF) w/ Distribution of Income	9,493,983,997	Payable from Annuity Savings Fund	
		and Contingent Reserve Fund	
Contingent Reserve Fund (CRF)		Active Members	18,992,786,787
Credited to Fund w/ Distribution of Income	(10,386,557,919)	Term Vested Members	47,117,235
Add/(Deduct) from/(to) RRF, PF & SRF	(392,951,810)	Total	19,039,904,022
Adjusted Total	(10,779,509,729)		
Benefit Enhancement Fund (BEF)	0		
Special Reserve Fund (SRF)	0		
Add/(deduct) reserve transferable from/(to) CRF	0		
Adjusted Total	0		
Total Actuarial Value of Assets as of June 30, 2012	$31,079,212,983		
Present Value of Prospective Contributions to the CRF and BEF for service accrued as of July 1, 2012	20,325,429,754		
Total Assets	$51,404,642,737	Total Liabilities	$51,404,642,737

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SECTION V - GASB NO. 27 ACCOUNTING INFORMATION FOR STATE'S FISCAL YEAR 2014

A. Development of Annual Required Contribution as of June 30, 2014

1. Actuarial Value of Assets as of July 1, 2012		
a. Actuarial Value of Pension Assets	$31,079,212,983	
b. Market Value of Contributory Group Insurance Premium Fund	134,972,700	
c. Actuarial Value of Assets for GASB purposes: (a) + (b)		$31,214,185,683
2. Actuarial Accrued Liability as of July 1, 2012		
a. Actuarial Accrued Liability for pension benefits	$51,404,642,737	
b. Non-contributory and Contributory Group Insurance Benefits	1,232,703,659	
c. Accrued Liability for GASB purposes: (a) + (b)		52,637,346,396
3. Unfunded Accrued Liability as of July 1, 2012: (2c) - (1c)		$21,423,160,713
4. Amortization Payment payable July 1, 2012		1,747,023,977
5. Net Normal Cost as of July 1, 2012		
a. Basic Allowances and pension adjustments (including full cost of pension adjustment benefits)	$994,289,959	
b. Non-contributory and Contributory Group Insurance Benefits	30,529,642	
c. Expected Employee Contributions for pension benefits	622,525,038	
d. Expected Employee Contributions for Contributory Group Insurance Benefits	37,067,175	
e. Net Normal Cost as of July 1, 2012: (a) + (b) - (c) - (d)		365,227,388
6. Annual Required Contribution as of June 30, 2014		
a. Annual Required Contribution as of July 1, 2012: (4) + (5e)		$2,112,251,365
b. Interest to Expected Payment Date		346,918,276
c. Annual Required Contribution: (a) + (b)		$2,459,169,641

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SECTION V - ACCOUNTING INFORMATION FOR STATE'S FISCAL YEAR 2014
(continued)

B. Projection of Net Pension Obligation as of June 30, 2013 and June 30, 2014

1. Net Pension Obligation as of June 30, 2012 *		$11,970,529,849
2. Annual Pension Cost for Fiscal Year 2013		
a. Annual Required Contribution	$2,331,811,395	
b. Interest on Net Pension Obligation	951,657,123	
c. Adjustment to ARC	1,058,299,329	
d. Annual Pension Cost: (a) + (b) - (c)		2,225,169,189
3. Fiscal Year 2013 Contributions (28.6% of pension contribution plus actual NCGI)		645,811,044
4. Net Pension Obligation as of June 30, 2013: (1) + (2d) - (3)		$13,549,887,994
5. Annual Pension Cost for Fiscal Year 2014		
a. Annual Required Contribution	$2,459,169,641	
b. Interest on Net Pension Obligation	1,070,441,152	
c. Adjustment to ARC	1,192,264,106	
d. Annual Pension Cost: (a) + (b) - (c)		2,337,346,687
6. Expected Fiscal Year 2014 Contributions (42.9% of pension contribution plus est. NCGI)		1,020,804,486
7. Estimated Net Pension Obligation as of June 30, 2014: (4) + (5d) - (6)		$14,866,430,195

* The NPO as of June 30, 2012 has been updated from the estimated amount shown in the prior valuation to reflect actual employer contributions for the year ending June 30, 2012

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SECTION V - ACCOUNTING INFORMATION FOR STATE'S FISCAL YEAR 2014
(continued)

C. Schedule of Funding Progress

Valuation Year	(1) Actuarial Value of Assets for GASB Purposes	(2) Accrued Liability for GASB Purposes	(3) Unfunded Accrued Liability (2) - (1)	(4) Funded Ratio (1) / (2)	(5) Appropriation Payroll	(6) Unfunded Accrued Liability as a % of Payroll: (3) / (5)
2007	$36,714,578,745	$49,161,247,363	$12,446,668,618	74.68%	$9,077,628,813	137.11%
2008	36,664,627,629	51,754,814,521	15,090,186,892	70.84%	9,419,083,203	160.21%
2009	34,838,211,259	54,576,061,024	19,737,849,765	63.83%	9,747,020,060	202.50%
2010	33,265,326,627	49,543,347,849	16,278,021,222	67.14%	10,025,401,658	162.37%
2011	32,289,888,420	51,406,540,290	19,116,651,870	62.81%	9,682,318,739	197.44%
2012	31,214,185,683	52,637,346,396	21,423,160,713	59.30%	9,779,212,916	219.07%

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SECTION V - ACCOUNTING INFORMATION FOR STATE'S FISCAL YEAR 2014
(continued)

D. Schedule of Employer Contributions

State's Fiscal Year	Annual Required Contribution	Employer Contributions		Percentage of ARC Contributed
2009	$1,601,478,508	$95,863,972		5.99%
2010	1,796,358,016	33,199,655		1.85%
2011	2,123,175,950	30,655,332		1.44%
2012	2,269,823,968	317,927,358	*	14.01%
2013	2,331,811,395	645,811,044	**	27.70%
2014	2,459,169,641	1,020,804,486	**	41.51%

* Updated from prior valuation reflecting actual contributions for fiscal year ending June 30, 2012
** Estimated based on current understanding of state budget resolutions

E. Funding Policy for State's Fiscal Year 2014

Valuation Date	July 1, 2012
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level Dollar, Open until 2018 valuation
Remaining Amortization Period	30 years
Asset Valuation Method	Actuarial Value
<u>Actuarial Assumptions</u>	
Investment Rate of Return	7.90%
Projected Salary Increases***	3.51%

*** Variable scale, with 4 year select period beginning 2012, and 5 year select period beginning 2016, and ultimate period beginning 2021, averaging approximately 3.51%, 3.86%, and 4.47%, respectively, thereafter

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SECTION VI - CENSUS DATA

A. Reconciliation with Prior Year

	Active Contrib	Active NonContrib	Deferred Vested	Retirees	Disableds	Beneficiaries	Domestic Relation Beneficiaries	Total
Members as of June 30, 2011	136,899	14,216	420	77,512	2,855	4,917	628	237,447
Terminated Vested	(32)	(70)	102	-	-	-	-	0
Terminated with Refund	(418)	(2,269)	(1)	-	-	-	-	(2,688)
Retired	(4,370)	(270)	(127)	4,767	-	-	-	0
Disabled	(128)	(42)	-	-	170	-	-	0
Died with Beneficiary	-	-	-	(386)	(23)	410	-	1
Died without Beneficiary	(49)	(35)	(1)	(1,376)	(65)	(230)	-	(1,756)
Payments Began	-	-	-	-	-	-	86	86
Payments Ceased	-	-	-	-	-	-	(20)	(20)
New Actives and Rehires	6,668	113	(1)	-	-	-	-	6,780
Changed to Contributing	2,606	(2,606)	-	-	-	-	-	0
Changed to Noncontributing	(4,368)	4,368	-	-	-	-	-	0
Data Corrections	(11)	(2)	-	(3)	9	56	1	50
Members as of June 30, 2012	136,797	13,403	392	80,514	2,946	5,153	695	239,900

SECTION VI - CENSUS DATA
(continued)

B. Appropriation Number and Salary by Group *

Group	Number of Employers	Number of Members		Salaries
Department of Higher Education	0	0	$	0
Department of Education	2	170		15,716,145
New Jersey Institute of Technology	1	1		150,117
State Colleges	5	12		1,436,630
County Colleges	5	16		1,906,720
Charter Schools	73	2,368		132,543,822
Other	599	134,230		9,627,459,482
Total	685	136,797	$	9,779,212,916

* Excludes salary in excess of Taxable Wage Base for members hired after June 30, 2007

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SECTION VI - CENSUS DATA
(continued)

C. Number and Annual Benefits Including Pension Adjustments of Retirees, Beneficiaries, and Dependents on Roll

Group	Number	Annual Benefit
Service and Early Retirements (incl Domestic Relation Beneficiaries)	81,209	$ 3,256,792,847
Ordinary Disability Retirements	2,709	70,573,069
Accidental Disability Retirements	237	9,754,951
Ordinary Death Benefits	1	394
Accidental Death Benefits	1	41,390
Dependents of Deceased Beneficiaries	5,075	124,302,870
Dependents of Deceased Beneficiaries who elected to receive annuities certain instead of lump sum	76	1,510,219
Total	89,308	$ 3,462,975,740

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SECTION VI - CENSUS DATA
(continued)

D. New* Retirees from Active Contributory Status

	Less than 25 years of service	At least 25 years of service	Total
Number of Retirements	581	3,770	4,351
Total Annual Pension	$13,881,102	$198,900,908	$212,782,010
Average Annual Pension	$23,892	$52,759	$48,904
Average Age at Retirement	64.7	61.1	61.6
Average Service at Retirement	15.8	32.3	30.1

* Members indicated as retired since last actuarial valuation and have not subsequently died prior to the valuation date.

E. Average Age and Average Annual Pension at Retirement

	Average Age at Retirement	Average Annual Pension at Retirement	Count
New Retirees from Active Contributory Status			
Service Retirement	63.8	$47,944	2,908
Early Retirement	57.1	50,827	1,443
Ordinary Disability	57.5	31,730	123
Accidental Disability	60.0	48,456	5
Survivors **	57.5	31,265	15
All Retirees			
Service Retirement	62.9	$34,031	47,004
Early Retirement	56.2	39,335	33,510
Ordinary Disability	53.9	22,927	2,709
Accidental Disability	51.6	35,125	237
Survivors	55.8	19,070	5,153

** Members indicated as retired since last actuarial valuation and have subsequently died prior to the valuation date.

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SECTION VI - CENSUS DATA
(continued)

F. Age, Service and Salary Profile of Active Contributing Participants

Males

Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total	Average Annual Salary
	Years of Service										
15-19	1	0	0	0	0	0	0	0	0	1	$45,040
20-24	249	0	0	0	0	0	0	0	0	249	49,575
25-29	2,061	715	0	0	0	0	0	0	0	2,776	51,845
30-34	1,051	3,083	777	1	0	0	0	0	0	4,912	58,892
35-39	535	1,462	2,771	305	0	0	0	0	0	5,073	68,836
40-44	339	804	1,804	1,631	217	1	0	0	0	4,796	78,602
45-49	235	548	848	933	839	161	0	0	0	3,564	82,806
50-54	201	457	639	505	506	735	205	0	0	3,248	85,838
55-59	146	386	566	443	411	504	856	303	0	3,615	90,212
60-64	114	307	397	319	326	252	314	663	185	2,877	94,260
65 & Up	18	109	217	114	130	94	57	68	216	1,023	97,222
Total	4,950	7,871	8,019	4,251	2,429	1,747	1,432	1,034	401	32,134	

Average Age	=	44.1
Average Service	=	13.7
Average Age at Entry	=	30.4
Average Annual Salary	=	$76,008

Females

Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total	Average Annual Salary
	Years of Service										
15-19	1	0	0	0	0	0	0	0	0	1	$22,520
20-24	1,067	0	0	0	0	0	0	0	0	1,067	49,432
25-29	7,513	3,024	2	0	0	0	0	0	0	10,539	51,989
30-34	3,157	10,072	2,313	4	0	0	0	0	0	15,546	57,419
35-39	1,612	4,038	7,444	689	1	0	0	0	0	13,784	64,372
40-44	1,471	2,578	4,548	3,963	564	0	0	0	0	13,124	70,639
45-49	1,181	2,323	2,602	1,871	2,500	615	1	0	0	11,093	73,233
50-54	726	2,085	2,999	1,746	1,854	2,664	557	3	0	12,634	76,660
55-59	405	1,355	2,802	2,340	2,348	1,977	2,318	536	0	14,081	80,903
60-64	131	554	1,347	1,404	2,261	1,738	1,005	1,236	235	9,911	86,181
65 & Up	26	154	361	364	623	597	272	185	301	2,883	87,608
Total	17,290	26,183	24,418	12,381	10,151	7,591	4,153	1,960	536	104,663	

Average Age	=	44.5
Average Service	=	13.4
Average Age at Entry	=	31.1
Average Annual Salary	=	$70,077

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SECTION VI - CENSUS DATA
(continued)

G. Age, Service and Salary Profile of Non-Contributing Participants

Males

Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total	Average Annual Salary
15-19	0	0	0	0	0	0	0	0	0	0	$0
20-24	3	0	0	0	0	0	0	0	0	3	49,128
25-29	277	6	0	0	0	0	0	0	0	283	47,569
30-34	216	89	9	0	0	0	0	0	0	314	50,679
35-39	132	92	56	2	0	0	0	0	0	282	57,419
40-44	111	45	114	20	1	0	0	0	0	291	62,004
45-49	92	40	98	29	13	1	0	0	0	273	61,128
50-54	73	31	90	34	17	8	0	0	0	253	62,075
55-59	63	38	114	49	18	3	8	1	0	294	59,503
60-64	68	21	73	35	17	1	3	1	1	220	53,753
65 & Up	141	26	21	20	12	12	5	4	2	243	46,949
Total	1,176	388	575	189	78	25	16	6	3	2,456	

Average Age	=	46.4
Average Service	=	7.5
Average Age at Entry	=	38.9
Average Annual Salary	=	$55,733

Females

Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total	Average Annual Salary
15-19	0	0	0	0	0	0	0	0	0	0	$0
20-24	29	0	0	0	0	0	0	0	0	29	46,949
25-29	1,074	96	0	0	0	0	0	0	0	1,170	47,391
30-34	1,018	1,112	97	0	0	0	0	0	0	2,227	52,925
35-39	477	563	620	13	0	0	0	0	0	1,673	55,579
40-44	379	238	744	86	4	0	0	0	0	1,451	54,837
45-49	343	161	547	120	31	1	0	0	0	1,203	52,328
50-54	281	125	438	122	37	15	1	0	0	1,019	51,448
55-59	229	112	511	198	67	8	7	0	0	1,132	51,108
60-64	135	74	252	111	37	11	10	7	0	637	48,827
65 & Up	189	37	75	50	20	11	9	11	4	406	44,587
Total	4,154	2,518	3,284	700	196	46	27	18	4	10,947	

Average Age	=	42.8
Average Service	=	7.8
Average Age at Entry	=	35.1
Average Annual Salary	=	$52,038

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TEACHERS' PENSION AND ANNUITY FUND OF NEW JERSEY

SECTION VI - CENSUS DATA
(continued)

H. Age and Benefit Profiles

Terminated Vested Participants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 35	0	$0	1	$9,168	1	$9,168
35-39	1	$22,092	4	$40,968	5	63,060
40-44	4	$80,568	16	$204,672	20	285,240
45-49	5	$79,068	24	$326,196	29	405,264
50-54	13	$251,940	36	$473,148	49	725,088
55-59	23	$284,124	186	$2,672,868	209	2,956,992
60 & Up	11	$171,024	68	$959,952	79	1,130,976
Total	57	$888,816	335	$4,686,972	392	$5,575,788

Average Age = 55.6
Average Annual Pension = $14,224

Service Retired Participants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 50	3	$120,542	19	$329,550	22	$450,092
50-54	65	2,438,624	180	5,824,927	245	8,263,551
55-59	794	38,569,515	2,537	113,416,215	3,331	151,985,730
60-64	4,717	232,037,533	11,867	508,842,236	16,584	740,879,769
65-69	7,552	363,450,592	14,930	606,628,787	22,482	970,079,379
70-74	5,104	235,716,935	9,421	356,466,539	14,525	592,183,474
75-79	3,462	151,614,863	5,951	207,882,181	9,413	359,497,044
80-84	2,733	108,787,809	4,808	146,578,863	7,541	255,366,672
85-89	1,415	48,134,877	3,055	74,515,115	4,470	122,649,992
90-94	445	12,283,265	1,489	30,800,591	1,934	43,083,856
95-99	79	1,693,484	479	8,664,321	558	10,357,805
100 & Up	8	234,048	96	1,761,435	104	1,995,483
Total	26,377	$1,195,082,087	54,832	$2,061,710,760	81,209	$3,256,792,847

Average Age = 70.9
Average Annual Pension = $40,104

SECTION VI - CENSUS DATA
(continued)

H. Age and Benefit Profiles (continued)

Disabled Retired Participants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 35	0	$0	1	$20,951	1	$20,951
35-39	2	48,321	11	252,675	13	300,996
40-44	5	113,321	28	708,656	33	821,977
45-49	16	423,984	63	1,709,289	79	2,133,273
50-54	29	878,175	149	4,282,792	178	5,160,967
55-59	85	2,399,736	281	8,272,642	366	10,672,378
60-64	157	4,627,259	491	13,998,676	648	18,625,935
65-69	179	5,135,453	540	15,304,755	719	20,440,208
70-74	82	2,214,999	337	8,993,829	419	11,208,828
75-79	65	1,639,966	195	4,858,076	260	6,498,042
80-84	28	508,387	109	2,256,911	137	2,765,298
85 & Up	19	364,469	74	1,314,698	93	1,679,167
Total	667	$18,354,070	2,279	$61,973,950	2,946	$80,328,020

Average Age = 65.7
Average Annual Pension = $27,267

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SECTION VI - CENSUS DATA
(continued)

H. Age and Benefit Profiles (continued)

Beneficiaries and Dependents

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 25	7	$110,753	5	$65,354	12	$176,107
25-29	6	18,441	6	74,690	12	93,131
30-34	10	147,548	18	197,987	28	345,535
35-39	6	116,650	10	190,007	16	306,657
40-44	13	258,835	18	321,285	31	580,120
45-49	16	289,760	23	421,073	39	710,833
50-54	25	512,161	61	1,385,884	86	1,898,045
55-59	71	1,749,753	109	2,784,017	180	4,533,770
60-64	160	3,679,651	300	8,838,373	460	12,518,024
65-69	262	6,433,837	461	14,122,867	723	20,556,704
70-74	191	4,601,971	556	15,645,018	747	20,246,989
75-79	168	3,833,858	655	18,571,400	823	22,405,258
80-84	154	3,071,389	676	17,300,829	830	20,372,218
85-89	96	1,494,343	556	11,665,534	652	13,159,877
90-94	54	757,476	328	5,336,331	382	6,093,807
95-99	9	97,020	108	1,612,947	117	1,709,967
100 & Up	1	7,642	14	140,189	15	147,831
Total	1,249	27,181,088	3,904	98,673,785	5,153	125,854,873

Average Age	=	75.1
Average Annual Pension	=	$24,424

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TEACHERS' PENSION AND ANNUITY FUND OF NEW JERSEY

SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

A. Actuarial Assumptions

Interest: 7.90% per annum, compounded annually (as prescribed by the State Treasurer).

Salary Scale: Salary increases vary by years of employment averaging 3.51% for a four year select period (June 30, 2012 – June 30, 2016), averaging 3.86% for a five year select period (June 30, 2016 – June 30, 2021) and averaging 4.47% thereafter. Schedule of annual rates are shown below.

Years of	Select Period Ending		
Employment	June 30, 2016	June 30, 2021	Ultimate Period
0-8	4.10%	4.50%	5.40%
9-12	4.85	5.25	5.95
13	4.80	5.20	5.80
14	4.35	4.85	5.45
15	4.15	4.55	5.05
16	3.70	4.10	4.50
17	3.45	3.85	4.15
18	3.15	3.55	3.95
19	2.90	3.30	3.70
20	2.80	3.10	3.60
21	2.55	2.95	3.25
22	2.30	2.60	3.10
23-25	2.20	2.60	2.95
26-30	2.20	2.40	2.80
31+	2.15	2.25	2.50

Increases in Compensation Limits: The IRC Section 401(a)(17) limit is assumed to increase 2.75% per annum, compounded annually. The Social Security Taxable Wage Base is assumed to increase 3.75% per annum, compounded annually.

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SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

A. Actuarial Assumptions (Continued)

Termination: Withdrawal rates vary by age, years of employment and gender. Illustrative rates are shown below:

Less Than 10 Years of Employment

Years of Employment	Male	Female	
		<40	40+
0	8.19%	7.61%	7.61%
1	6.72	7.00	7.00
2	5.90	6.09	6.09
3	4.17	5.89	3.80
4	3.39	5.65	2.59
5	2.68	5.54	2.19
6	2.36	5.54	1.80
7	2.12	5.36	1.68
8	1.59	5.32	1.43
9	1.52	4.07	1.28

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SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

A. Actuarial Assumptions (Continued)

Annual Rates for Those With Deferred Annuity Benefits*

	10-14 Years of Employment		15-19 Years of Employment		20-24 Years of Employment	
Age	Male	Female	Male	Female	Male	Female
30	0.81%	4.30%	0.59%	3.52%	0.39%	2.35%
35	0.85	3.21	0.61	2.63	0.41	1.75
40	0.71	1.50	0.51	1.22	0.34	0.82
45	0.59	0.69	0.42	0.57	0.28	0.38
50	0.71	0.70	0.51	0.58	0.34	0.38
55	1.36	1.34	0.98	1.10	0.65	0.73

*Members must have attained 10 years of service or 60 years of age (62 years of age for Class E and F members, 65 years of age for Class G members) in order to receive an annuity benefit.

Annual Rates for Those Receiving Return of Contributions

	10-14 Years of Employment		15-19 Years of Employment		20-24 Years of Employment	
Age	Male	Female	Male	Female	Male	Female
30	0.55%	0.47%	0.40%	0.39%	0.26%	0.26%
35	0.51	0.34	0.37	0.28	0.25	0.19
40	0.34	0.18	0.24	0.14	0.16	0.10
45	0.21	0.07	0.15	0.05	0.10	0.04
50	0.15	0.07	0.11	0.05	0.07	0.04
55	0.10	0.09	0.07	0.07	0.05	0.05

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SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

A. Actuarial Assumptions (Continued)

Retirement: Rates of retirement vary by age, gender and eligibility for an unreduced pension and post-retirement medical benefits.

The rates listed below are for members hired prior to July 1, 2007 (Class A and B employees). Illustrative rates are shown below.

	Less than Age 55 or Less than 25 Years of Service		Attainment of Age 55 and 25 Years of Service			
			First Eligibility		After First Eligibility	
Age	Male	Female	Male	Female	Male	Female
<47	1.2%	1.2%	N/A	N/A	N/A	N/A
48	1.5	1.5	N/A	N/A	N/A	N/A
49	1.7	1.7	N/A	N/A	N/A	N/A
50	2.0	2.0	N/A	N/A	N/A	N/A
51	2.4	2.4	N/A	N/A	N/A	N/A
52	2.8	2.8	N/A	N/A	N/A	N/A
53	3.8	3.8	N/A	N/A	N/A	N/A
54	4.8	4.8	N/A	N/A	N/A	N/A
55	N/A	N/A	15.0%	16.0%	N/A	N/A
56	N/A	N/A	22.0	19.0	12.0%	13.0%
57	N/A	N/A	22.0	19.0	13.0	14.0
58	N/A	N/A	25.0	25.0	14.0	14.0
59	N/A	N/A	25.0	25.0	15.0	15.0
60	10.0	7.0	27.0	30.0	21.0	20.0
61	10.0	7.0	30.0	32.0	23.0	22.0
62	11.0	10.0	40.0	46.0	36.0	32.0
63	11.0	10.0	40.0	44.0	30.0	26.5
64	11.0	10.0	40.0	44.0	30.0	26.5
65	17.0	15.0	50.0	50.0	38.0	35.0
66-70	17.0	15.0	50.0	50.0	30.0	30.0
71+	20.0	20.0	50.0	50.0	30.0	30.0

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SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

A. Actuarial Assumptions (Continued)

The rates listed below are for members hired on or after July 1, 2007 and before November 2, 2008 (Class D employees). Illustrative rates are shown below.

	Less than Age 60 or Less than 25 Years of Service		Attainment of Age 60 and 25 Years of Service — First Eligibility		Attainment of Age 60 and 25 Years of Service — After First Eligibility	
Age	Male	Female	Male	Female	Male	Female
<47	0.6%	0.6%	N/A	N/A	N/A	N/A
48	0.8	0.8	N/A	N/A	N/A	N/A
49	0.9	0.9	N/A	N/A	N/A	N/A
50	1.0	1.0	N/A	N/A	N/A	N/A
51	1.2	1.2	N/A	N/A	N/A	N/A
52	1.4	1.4	N/A	N/A	N/A	N/A
53	1.9	1.9	N/A	N/A	N/A	N/A
54	2.4	2.4	N/A	N/A	N/A	N/A
55	11.5	11.5	N/A	N/A	N/A	N/A
56	12.0	12.0	N/A	N/A	N/A	N/A
57	12.5	12.5	N/A	N/A	N/A	N/A
58	13.5	13.5	N/A	N/A	N/A	N/A
59	14.0	14.0	N/A	N/A	N/A	N/A
60	10.0	7.0	29.0%	30.0%	N/A	N/A
61	10.0	7.0	30.0	32.0	23.0%	22.0%
62	11.0	10.0	40.0	46.0	36.0	32.0
63	11.0	10.0	40.0	44.0	30.0	26.5
64	11.0	10.0	40.0	44.0	30.0	26.5
65	17.0	15.0	50.0	50.0	38.0	35.0
66-70	17.0	15.0	50.0	50.0	30.0	30.0
71+	20.0	20.0	50.0	50.0	30.0	30.0

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SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

A. Actuarial Assumptions (Continued)

The rates listed below are for members hired after November 1, 2008 and before June 28, 2011 (Class E and Class F employees). Illustrative rates are shown below.

Less than Age 62 or Less than 25 Years of Service			Attainment of Age 62 and 25 Years of Service			
			First Eligibility		After First Eligibility	
Age	Male	Female	Male	Female	Male	Female
<47	0.6%	0.6%	N/A	N/A	N/A	N/A
48	0.7	0.7	N/A	N/A	N/A	N/A
49	0.8	0.8	N/A	N/A	N/A	N/A
50	0.9	0.9	N/A	N/A	N/A	N/A
51	1.1	1.1	N/A	N/A	N/A	N/A
52	1.3	1.3	N/A	N/A	N/A	N/A
53	1.7	1.7	N/A	N/A	N/A	N/A
54	2.2	2.2	N/A	N/A	N/A	N/A
55	10.5	10.5	N/A	N/A	N/A	N/A
56	10.8	10.8	N/A	N/A	N/A	N/A
57	11.0	11.0	N/A	N/A	N/A	N/A
58	12.0	12.0	N/A	N/A	N/A	N/A
59	12.5	12.5	N/A	N/A	N/A	N/A
60	17.0	19.0	N/A	N/A	N/A	N/A
61	18.5	20.5	N/A	N/A	N/A	N/A
62	29.5	24.0	50.0%	46.0%	N/A	N/A
63	11.0	10.0	40.0	44.0	30.0%	26.5%
64	11.0	10.0	40.0	44.0	30.0	26.5
65	17.0	15.0	50.0	50.0	38.0	35.0
66-70	17.0	15.0	50.0	50.0	30.0	30.0
71+	20.0	20.0	50.0	50.0	30.0	30.0

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SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

A. Actuarial Assumptions (Continued)

The rates listed below are for members hired on or after June 28, 2011 (Class G employees). Illustrative rates are shown below.

Less than Age 65 or Less than 30 Years of Service			Attainment of Age 65 and 30 Years of Service			
			First Eligibility		After First Eligibility	
Age	Male	Female	Male	Female	Male	Female
<47	0.3%	0.3%	N/A	N/A	N/A	N/A
48	0.4	0.4	N/A	N/A	N/A	N/A
49	0.4	0.4	N/A	N/A	N/A	N/A
50	0.5	0.5	N/A	N/A	N/A	N/A
51	0.6	0.6	N/A	N/A	N/A	N/A
52	0.7	0.7	N/A	N/A	N/A	N/A
53	0.9	0.9	N/A	N/A	N/A	N/A
54	1.1	1.1	N/A	N/A	N/A	N/A
55	5.0	5.0	N/A	N/A	N/A	N/A
56	6.0	6.0	N/A	N/A	N/A	N/A
57	7.0	7.0	N/A	N/A	N/A	N/A
58	8.0	8.0	N/A	N/A	N/A	N/A
59	9.0	9.0	N/A	N/A	N/A	N/A
60	13.0	14.0	N/A	N/A	N/A	N/A
61	14.0	15.0	N/A	N/A	N/A	N/A
62	35.0	32.0	N/A	N/A	N/A	N/A
63	25.0	25.0	N/A	N/A	N/A	N/A
64	25.0	25.0	N/A	N/A	N/A	N/A
65	40.0	40.0	50.0%	50.0	N/A	N/A
66-70	17.0	15.0	50.0	50.0	30.0	30.0
71+	20.0	20.0	50.0	50.0	30.0	30.0

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SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

A. Actuarial Assumptions (Continued)

Disability: Incidence of ordinary disabilities among active members apply upon the attainment of 10 years of service until the attainment of first eligibility for retirement. For members eligible for early retirement, the greater of the early retirement and disability benefit is valued. The rates vary by age, gender and type of disability. Illustrative rates are shown below:

	Ordinary		Accidental	
Age	Male	Female	Male	Female
25	0.0301%	0.0379%	0.0060%	0.0060%
30	0.0473	0.0550	0.0060	0.0060
35	0.0609	0.0674	0.0060	0.0060
40	0.0701	0.0893	0.0060	0.0060
45	0.1023	0.1317	0.0060	0.0060
50	0.1421	0.1759	0.0060	0.0060
55	0.3732	0.3506	0.0060	0.0060

For Class F and G members assumed to receive a disability benefit under Chapter 3, P.L. 2010, it is assumed that Class F members will begin receiving their retirement benefit at the earlier of age 70 or 36 years of service and Class G members will begin receiving their retirement benefit at age 70. The valuation excludes benefits paid from any disability income policy prior to retirement since these benefits are not paid from TPAF.

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SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

A. Actuarial Assumptions (Continued)

Pre-retirement Mortality: Illustrative rates of mortality of active members which vary by age and gender are shown below. A generational approach is applied using Scale AA to account for future mortality improvement. The base year is 2000. Illustrative rates for the base year are shown below. No accidental deaths are assumed.

	Ordinary	
Age	Male	Female
25	0.0345%	0.0170%
30	0.0376	0.0191
35	0.0353	0.0207
40	0.0591	0.0284
45	0.0890	0.0466
50	0.1342	0.0645
55	0.1978	0.1016
60	0.2747	0.1589
65	0.4263	0.2374
70	0.6725	0.3754

Post-retirement Mortality: Rates of mortality vary by age, gender and type of retirement. A generational approach is applied using Scale AA to account for future mortality improvement for non-disabled annuitants. The base year is 2000 for males and 2003 for females. Illustrative rates for the base year and Scale AA are shown below:

	Service Retirements and Beneficiaries		Scale AA		Disability Retirement	
Age	Male	Female	Male	Female	Male	Female
45	0.3573%	0.1375%	1.3%	1.6%	1.8057%	0.7078%
50	0.5265	0.2151	1.8	1.7	2.3180	1.0958
55	0.4781	0.3066	1.9	0.8	2.8354	1.5717
60	0.5813	0.4937	1.6	0.6	3.3634	2.0747
65	1.0238	0.6602	1.4	0.5	4.0139	2.6625
70	1.6962	1.0497	1.5	0.6	5.0066	3.5753
75	2.9598	1.7342	1.4	0.8	6.5654	4.9619
80	5.2282	3.0118	1.0	0.7	8.7498	6.8696
85	9.2106	6.4019	0.7	0.6	11.3282	9.5193

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A. Actuarial Assumptions (Continued)

Non-contributory Members: 30% are assumed to return to contributory status.

Beneficiaries: 100% of active members are assumed to have a beneficiary for receipt of the lump sum death benefit or employee contribution refund upon death.

Form of Payment: Modified Cash Refund Annuity.

Special Data Adjustments: Determination of employee type is based on Class Code and was used as provided by the Division. Active members where no salary was provided, no date of birth was provided, or ASF was negative were excluded from the valuation. A liability equal to the ASF was held. For beneficiaries where no gender code or date of birth was provided, reasonable assumptions were made based on records provided in prior years or the deceased retiree's records. For retirees with a joint annuitant option code that was missing a spouse's date of birth, husbands are assumed to be 3 years older than wives. All such records were included in the valuation. Retiree members where no benefit and monthly allowance was provided, or no cause, class, or option was provided were excluded from the valuation.

B. Actuarial Valuation Method

The Projected Unit Credit Method was used as required by Chapter 62, P.L. 1994 as modified by Chapters 115, P.L. 1997 and 133, P.L. 2001. Non-contributory life insurance benefits are funded on a term cost basis.

C. Asset Valuation Method

A five year average of market value 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. Cash flows are based on an accrual accounting approach. This method is prescribed by statute. The market value of assets is used for the Contributory Group Insurance Premium Fund for GASB purposes.

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SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2012

D. Changes in Actuarial Assumptions

The interest rate has been decreased from 7.95% to 7.90% per the State Treasurer and the salary increase assumption has been modified to better reflect recent experience.

The IRC Section 401(a)(17) limit increase assumption has been decreased from 3.00% to 2.75% per annum, compounded annually. The Social Security Taxable Wage Base increase assumption has been decreased from 4.00% to 3.75% per annum, compounded annually.

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TEACHERS' PENSION AND ANNUITY FUND OF NEW JERSEY

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2012

This summary of plan provisions is intended only to describe the essential features of the plan. All eligibility requirements and benefit amounts shall be determined in strict accordance with the plan document itself.

1. Type of Plan

   The Plan is a contributory, defined benefit plan. Effective October 1, 2011, contributions by Members are 6.5% and increase by 1/7 of 1% each July thereafter until an ultimate rate of 7.5% is attained on July 1, 2018. For members hired on or after July 1, 2007, compensation for contributions is capped at the Social Security Taxable Wage Base ($110,100 for 2012). For compensation in excess of the Social Security Taxable Wage Base, contributions on the excess compensation are made to the Defined Contribution Retirement Program.

2. Effective Date

   The Plan was established in 1919. It was reorganized and integrated with Social Security in 1955. Social Security integration was eliminated in 1966, i.e., reductions in retirement benefits based on Social Security benefits were eliminated.

3. Eligibility for Membership

   Employees, appointed to positions requiring certification as members of a regular teaching or professional staff of a public school system in New Jersey, are required to enroll as a condition of employment. Employees of the Department of Education holding unclassified, professional and certificated titles are eligible for membership. Temporary or substitute employees are not eligible. The eligible employee must be scheduled to work at least 32 hours per week effective May 22, 2010, per Chapter 1, P.L. 2010.

4. Definitions

   a. Fiscal Year: A Fiscal Year is a 12-month period beginning on July 1 and ending on June 30.

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4. Definitions (continued)

   b. Credited Service: A year of Credited Service for each year an employee is a Member of the Retirement System plus service, if any, covered by a prior service liability. Class F members must be scheduled to work at least 32 hours per week, Class E members must have an annual salary of $7,500 (indexed for inflation) and other members must have an annual salary of $500.

   c. Final Compensation: This is the average annual compensation upon which contributions by a member are based on the period consecutive years of Creditable Service immediately preceding retirement or the period of highest fiscal years of Membership Service. The period equals three for members hired prior to May 22, 2010 and five for Class F and later members.

   d. Final Year Compensation: This is the compensation upon which contributions by a Member to the Annuity Savings Fund are based in the last year of Membership Service.

   e. Aggregate Member Contributions: This is the sum of all amounts deducted from the compensation of a Member or contributed by him or on his behalf without interest.

   f. Class A Member: Any member who contributes towards retirement allowance based on 1/64th benefit rate per year of creditable service.

   g. Class B Member: Any member hired prior to July 1, 2007 who contributes towards a retirement allowance based on 1/55th benefit rate per year of creditable service.

   h. Class D Member: Any member hired on or after July 1, 2007 and before November 2, 2008 who contributes up to the Social Security Taxable Wage Base towards a retirement allowance based on 1/55th benefit rate per year of creditable service payable at age 60.

   i. Class E Member: Any member hired after November 1, 2008 and before May 22, 2010 who contributes up to the Social Security Taxable Wage Base towards a retirement allowance based on 1/55th benefit rate per year of creditable service payable at age 62.

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4. Definitions (continued)

   j. Class F Member: Any member hired after May 21, 2010 and before June 28, 2011 who contributes up to the Social Security Taxable Wage Base towards a retirement allowance based on 1/60th benefit rate per year of creditable service payable at age 62.

   k. Class G Member: Any member hired on or after June 28, 2011 who contributes up to the Social Security Taxable Wage Base towards a retirement allowance based on 1/60th benefit rate per year of creditable service payable at age 65.

5. Cost-of-Living Adjustment

   The Pension Adjustment Program provides a cost-of-living adjustment (COLA) to retirees and their survivors who receive a monthly retirement allowance from the TPAF. The first adjustment is received in the 25^{th} month after the member's retirement. Subsequent cost-of-living adjustments are computed annually and are first reflected in February. The rate of increase is equal to 60 percent of the percentage change between the average CPI for the 12 month period ending December 31 in the year of retirement and the August 31 preceding the February adjustment. Any pension adjustments to be paid on or after July 1, 2011 have been eliminated for all members.

6. Retirement Benefits

   a. Service Retirement

      Service Retirement Eligibility: Eligibility means age 60 (Class A, B, and D), age 62 (Class E and F) or age 65 (Class G) with no minimum service requirement.

      Service Retirement Benefit: An employee's annual service retirement allowance is equal to a member annuity plus an employer pension which together equals $1/64^{th}$ of Final Compensation for each year of service for Class A members, $1/55^{th}$ of Final Compensation for each year of service for Class B, D and E members and $1/60^{th}$ of Final Compensation for each year of service for Class F and G members. The member annuity is based on the member contributions credited at the valuation interest rate.

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2012

6. Retirement Benefits (continued)

   Note: See Section 12 for special benefits for veteran members.

   b. Early Retirement

      Early Retirement Eligibility: Class A, B, D, E and F members may retire after completion of 25 years of Creditable Service and Class G members may retire after completion of 30 years of Creditable Service.

      Early Retirement Benefit: The benefit may be either:

      (i) the lump sum withdrawal benefit described in 7.a. below; or

      (ii) the Service Retirement Benefit reduced by 1/4 of one percent for each month the retirement date precedes age 55 for Class B members; or

      (iii) the Service Retirement Benefit reduced by 1/12 of one percent for each month the retirement date precedes age 60 but over age 55 and by ¼ of one percent for each month the retirement date precedes age 55, for Class D members.

      (iv) the Service Retirement Benefit reduced by 1/12 of one percent for each month the retirement date precedes age 62 but over age 55 and by ¼ of one percent for each month the retirement date precedes age 55, for Class E and F members.

      (v) the Service Retirement Benefit reduced by ¼ of one percent for each month the retirement date precedes age 65, for Class G members.

   c. Deferred Retirement

      Eligibility: A Member is eligible upon termination of service prior to age 60 (Class A, B, D), age 62 (Class E and Class F) or age 65 (Class G) and after 10 years of Creditable Service.

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6. Retirement Benefits (continued)

   Deferred Retirement Benefit: The benefit may be either:

   (i) the lump sum withdrawal benefit described in 7.a. above; or
   (ii) a deferred retirement benefit, commencing at age 60 (Class A, B, D), age 62 (Class E and Class F) or age 65 (Class G), equal to a member annuity plus an employer pension which together provide a retirement allowance equal to the service retirement benefit based on Final Compensation and Creditable Service at date of termination. Member annuity based on member contributions credited at the valuation interest rate.

7. Termination Benefits

   a. Lump Sum Withdrawal

   Eligibility: A Member is eligible upon termination of service.

   Lump Sum Withdrawal Benefit: The benefit equals a refund of Aggregate Member Contributions plus, if the member has completed three years of service, interest accumulated at 2.0% per annum allowed thereon.

8. Death Benefits

   a. Ordinary Death (Insured) Benefit - Lump Sum (Non-Contributory)

   Pre-retirement Death Benefit Eligibility: Any current active member is eligible.

   Pre-retirement Death Benefit: The benefit is a lump sum benefit equal to the Aggregate Contributions with interest allowed thereon plus an amount equal to 1-1/2 times Compensation at date of death.

   Post-retirement Death Benefit Prior to Age 60 (Class A, B, D), Age 62 (Class E and Class F) or Age 65 (Class G) Eligibility: Eligible if disabled or retired early.

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8. Death Benefits (continued)

Post-retirement Death Benefit Prior to Age 60 (Class A, B, D), Age 62 (Class E and Class F) or Age 65 (Class G) Benefit: The benefit is as follows:

(i) For death while a Disabled Retiree the benefit is equal to 1-1/2 times Compensation.
(ii) For death while an Early Retiree, the benefit is equal to 3/16 times Compensation.
(iii) For death while vested terminated, the benefit is equal to his Aggregate Contributions with interest allowed thereon.

Post-retirement Death Benefit After Age 60 (Class A, B, D), Age 62 (Class E and F) or Age 65 (Class G) Eligibility: Eligible after attainment of service retirement, deferred and disabled retirements (if not disabled, 10 years of Creditable Service required for members enrolling on or after July 1, 1971).

Post-retirement Death Benefit After Age 60 (Class A, B, D), Age 62 (Class E and F) or Age 65 (Class G) Benefit: The benefit payable is equal to 3/16 times Compensation.

b. Contributory Death Benefit: An additional, employee-paid, death benefit is also available through group insurance purchased by the Board of Trustees. Contributions for this benefit are required by Members during the first year of enrollment. Participation may be terminated after the first year. The benefit prior to retirement is 2 times compensation. The benefit after retirement is 1/4 times final year compensation (coverage at retirement, and 10 years of participation for Members enrolling on or after July 1, 1970, is required).

c. Pre-retirement Accidental Death Benefit:

Eligibility: A death resulting from injuries received from an accident during performance of duty and not a result of willful negligence is eligible.

Pre-retirement Lump Sum Benefit: The benefit is a lump sum equal to 1-1/2 times Compensation.

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8. Death Benefits (continued)

Pre-retirement Accidental Death Benefit: The benefit payable is as follows:

(i) The annuity benefit to a widow or widower is equal to 50% of Compensation, payable for life or until remarriage.
(ii) The annuity benefit, when there is no spouse, or the spouse is remarried, is equal to 20% of Compensation for one child, 35% for two children, 50% for three or more children. The benefit is payable while the children are under age 18 and it is payable for life if they are disabled.
(iii) The annuity benefit, when there is no spouse or children, is equal to 25% of Compensation for one dependent parent and 40% for two dependent parents.
(iv) The benefit, when there is no relation as stated above, is equal to the Aggregate Contributions with interest allowed thereon and is payable to a beneficiary or to the Member's estate. This is also the minimum benefit payable under (i), (ii) and (iii) above.

9. Disability Benefits

a. Ordinary Disability Retirement

Eligibility: A Member is eligible for Ordinary Disability Retirement if he (she) has 10 years of Creditable Service and is totally and permanently incapacitated from the performance of usual or available duties.

Ordinary Disability Retirement Benefit for Class A, B, D and E members: The total retirement allowance is equal to the greater of:

(i) 1.64% of Final Compensation times the number of years of Creditable Service; or

(ii) 43.6% of Final Compensation.

Note: See Section 12 for special benefits for veteran members.

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9. Disability Benefits (continued)

   Ordinary and Accidental Disability Retirement Benefit for Class F and G members: A disability benefit equal to 60% of salary reduced by the initial Social Security benefit is paid until the earlier of age 70 or commencement of a retirement benefit from a disability income policy outside of TPAF. The policy also makes employee contributions during the period of disability.

   b. Accidental Disability Retirement for Class A, B, D and E members

      Eligibility: A Member is eligible upon total and permanent incapacitation as a direct result of a traumatic event occurring during and as a result of the performance of regular or assigned duties.

      Accident Disability Retirement Benefit: The benefit payable is equal to a Member annuity plus an employer pension which together equals 72.7% of the Compensation at date of injury.

10. Additional Old-Plan Benefit: An additional pension is payable to any retiree who was a member of the old Teachers' Retirement Fund. This pension is the actuarial equivalent of his contributions to the old Teachers' Retirement Fund without interest.

11. Special Minimum Benefit: A member who retired prior to 1955 with 20 or more years of service may receive a minimum pension of $500 a month inclusive of any amounts payable under any pension adjustments.

12. Special Benefits for Veterans:

    a. Service Retirement: Eligible if member attains age 60 and completes 20 years of service or attains age 55 and completes 25 years of service. Benefit equals 54.5% of highest 12-month contributory compensation.

    b. Chapter 97 Benefit: Eligible if age 55 and completes 35 years of service. Benefit equals 1/55th of final year compensation for each year of service.

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SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2012

13. Benefit and Compensation Limits

The provisions of IRC Section 415 and IRC Section 401(a)(17), which limit benefits paid and limit compensation used in determining benefits, has been reflected in this report. The IRC Section 415 limit is $200,000 and the 401(a)(17) compensation cap is $250,000 for 2012 and is applied on a calendar year basis.

14. Forms of Payment

a. Maximum Option – Single life annuity.
b. Option 1 – Single life annuity with return of reserve option.
c. Option 2 – 100% joint and survivor annuity.
d. Option 3 – 50% joint and survivor annuity.
e. Option 4 – Other percentage joint and survivor annuity.
f. Option A – 100% pop-up joint and survivor annuity.
g. Option B – 75% pop-up joint and survivor annuity.
h. Option C – 50% pop-up joint and survivor annuity.
i. Option D – 25% pop-up joint and survivor annuity.

15. Contributions

a. Member Contributions: Each member becoming a member on or after January 1, 1956 and prior to July 1, 2007 contributes at the rate of contribution applicable to Class B members. Any members hired after June 30, 2007 and prior to November 2, 2008 are Class D members. Members hired after November 1, 2008 and prior to May 22, 2010 are Class E members. Members hired after May 21, 2010 are Class F members and members hired after June 28, 2011 are Class G members.

   (i) Class D, E, F or G Membership: Class D, E, F or G members contribute at their applicable contribution rate up to the Social Security Taxable Wage Base.
   (ii) Class B Membership: Any member on December 31, 1955 may elect to be classified as a Class B member and contribute at the rate of contribution applicable to Class B members at his age at membership. Any such member may elect to increase his accumulated deductions by the amount required by the Board to receive credit as a Class B member for all or part of his service prior to such election.

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SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2012

15. Contributions (continued)

(iii) Class A Membership: Any member who is not a veteran and does not elect to be classified as a Class B member continues to contribute at the rate of contribution applicable to his age at membership which was payable prior to the establishment of the integrated system, except that if he became a member subsequent to June 30, 1946 he will pay after January 1, 1955 at the rate of contribution in effect on June 30, 1946 applicable to his age at membership.

Prior to July 1, 1979 different contribution rates were established for men and women. Effective on that date members contribute at rates intermediate between the rates previously applicable to male and female members, computed to provide the same present value of future employee contributions at each entry age on the basis of the membership as constituted on the effective date.

b. Local Employer Contributions

(i) Early Retirement Incentive Contributions: The State and Local employers which elected to participate in the early retirement incentive programs authorized by Chapters 137, 229 and 231, P.L. 1991, Chapters 48, 138 and 163, P.L. 1993, Chapter 23, P.L. 2001 and Chapters 128 and 129, P.L. 2003 pay contributions to cover the additional liability for these programs over amortization periods chosen by the employer (15 years for Chapters 128 and 129) or the amortization period for the Unfunded Accrued Liability of the system (Chapter 23, P.L. 2002 and Chapter 21, P.L. 2008). The remaining present values are re-amortized upon changes to the interest rate assumption. Effective with the revised June 30, 2011 actuarial valuation, for any local employer with an increasing payment amortization schedule, the increase factor is 3.25%

(ii) Chapter 113 Contributions: Certain School Districts have elected to exempt a select group of employees from the compensation limit under IRC Section 401(a)(17) incorporated under Chapter 113. These school districts will pay the full cost of this exemption at a member's date of retirement.

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SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2012

16. Changes in Plan Provisions Since Prior Valuation

None.

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APPENDIX I - EARLY RETIREMENT INCENTIVE CONTRIBUTION SCHEDULE

Group	Number	Location Name	ERI 1 Present Value June 30, 2012	ERI 1 Fiscal Year 2014 Payment	ERI 2 Present Value June 30, 2012	ERI 2 Fiscal Year 2014 Payment
3	981	NJ INST OF TECH	$161,070	$25,185	$386,430	$30,154
5	1001	ATLANTIC COMMUNITY COLLEGE	52,220	8,165	N/A	N/A
6	911	ALLAMUCHY BD OF ED	N/A	N/A	106,031	10,302
6	300	ASBURY PARK BD OF ED	2,616,012	409,039	N/A	N/A
6	969	ATLANTIC CO VOCATIONAL SCHOOLS	157,375	24,607	N/A	N/A
6	4015	BERLIN TWP BD OF ED	149,814	23,425	88,525	26,156
6	412	BOONTON TWP BD OF ED	102,028	15,953	N/A	N/A
6	774	BYRAM TWP BD OF ED	179,446	28,058	N/A	N/A
6	4017	CHESILHURST BORO BD OF ED	22,779	3,562	13,459	3,977
6	4018	CLEMENTON BD OF ED	84,756	13,252	50,082	14,797
6	121	EAST WINDSOR REG SCHOOL DIST	N/A	N/A	110,419	32,625
6	753	GREEN BROOK BD OF ED	238,315	37,263	N/A	N/A
6	8082	GUTTENBERG BORO BD OF ED	128,177	20,042	N/A	N/A
6	956	HUDSON CO VOCATIONAL SCHOOL	N/A	N/A	712,220	69,203
6	6040	IRVINGTON TWP BD OF ED	N/A	N/A	1,762,039	520,616
6	521	LAKEHURST BORO BD OF ED	66,966	10,471	N/A	N/A
6	645	LAKELAND REGIONAL	602,064	94,138	N/A	N/A
6	111	MERCER CO SPECIAL SERVICES	297,682	46,545	N/A	N/A
6	346	MONMOUTH BEACH BD OF ED	81,629	12,763	N/A	N/A
6	987	MONMOUTH CO VOCATIONAL SCHOOLS	481,646	75,310	N/A	N/A
6	4069	PINE HILL BORO BD OF ED	$216,684	$33,881	$76,151	$22,500
6	5071	SHILOH TOWNSHIP	8,901	1,392	N/A	N/A
6	8070	WEST NEW YORK TWP BD OF ED	N/A	N/A	$2,500,949	$243,004
6	934	WHITE TWP BD OF ED	$168,344	$26,322	N/A	N/A
		Grand total for Local Employers	**$5,815,908**	**$909,373**	**$5,806,305**	**$973,334**

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TEACHERS' PENSION AND ANNUITY FUND OF NEW JERSEY

APPENDIX I - EARLY RETIREMENT INCENTIVE CONTRIBUTION SCHEDULE

(continued)

Group	Number	Location Name	ERI 3 Present Value June 30, 2012	ERI 3 Fiscal Year 2014 Payment	ERI 4 Present Value June 30, 2012	ERI 4 Fiscal Year 2014 Payment
2	90400	EDUCATION DEPARTMENT	$15,517,615	$1,438,783	N/A	N/A
2	90416	MARIE KATZENBACK SCH FOR DEAF	$2,761,459	$256,041	N/A	N/A
2	90207	OFFICE OF ADM LAW	$653,370	$60,580	N/A	N/A
3	981	NJ INST OF TECH	$647,895	$60,072	N/A	N/A
4	90411	NEW JERSEY UNIVERSITY	$3,221,790	$298,722	N/A	N/A
4	90412	KEAN UNIVERSITY	$1,685,175	$156,248	N/A	N/A
4	90414	MONTCLAIR STATE UNIVERSITY	$1,333,159	$123,610	N/A	N/A
4	90410	ROWAN UNIVERSITY	$546,490	$50,670	N/A	N/A
4	90415	THE COLLEGE OF NEW JERSEY	$342,656	$31,771	N/A	N/A
4	90413	WILLIAM PATERSON UNIVERSITY	$622,239	$57,694	N/A	N/A
6	8083	HARRISON TWP BD OF ED	N/A	N/A	$1,272,988	$199,044
6	956	HUDSON CO VOCATIONAL SCHOOL	N/A	N/A	$1,003,420	$156,894
6	620	PASSAIC BD OF ED	N/A	N/A	$15,711,113	$2,456,584
		Grand total for State Locations and Local Employers	**$27,331,848**	**$2,534,191**	**$17,987,521**	**$2,812,522**

Group	Number	Location Name	ERI 5 Present Value June 30, 2012	ERI 5 Fiscal Year 2014 Payment
2	90400	EDUCATION DEPARTMENT	$3,822,726	$354,441
2	90416	MARIE KATZENBACK SCH FOR DEAF	$1,118,318	$103,690
		Grand total for State Locations	**$4,941,044**	**$458,131**

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