GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

STATE EMPLOYEES' RETIREMENT SYSTEM OF ILLINOIS

GASB STATEMENT NOS. 67 AND 68 ACCOUNTING AND FINANCIAL REPORTING FOR PENSIONS

JUNE 30, 2015

GRS
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October 21, 2015

The Board of Trustees
State Employees' Retirement System of Illinois
Springfield, IL

Dear Board Members:

This report provides accounting and financial reporting information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 for the State Employees' Retirement System of Illinois ("SERS"). These calculations have been made on a basis that is consistent with our understanding of these Statements.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statements Nos. 67 and 68. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statements Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the State Employees' Retirement System of Illinois ("SERS") only in its entirety and only with the permission of SERS.

Our valuation and projections assume the sponsor will make the contributions required by state statute. To the extent the sponsor does not make the statutory required contribution the results contained in this report could be significantly different.

This report is based upon information, furnished to us by SERS, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not otherwise audited.

This report complements the actuarial valuation report that was provided to SERS and should be considered in conjunction with that report. Please see the actuarial valuation report as of June 30, 2015, for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, the information contained with this report is accurate and fairly represents the actuarial position of the State Employees' Retirement System of Illinois. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

The signing actuaries are independent of the plan sponsor.

Alex Rivera, David Kausch and Paul T. Wood are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

By Alex Rivera

Alex Rivera
FSA, EA, MAAA

By David T Kausch

David Kausch
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By Paul T Wood

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ASA, MAAA

Auditor's Note – This information is intended to assist in preparation of the financial statements of the State Employees' Retirement System of Illinois. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

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SECTION A

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY AS OF JUNE 30, 2015

		2015
Actuarial Valuation Date		June 30, 2015
Measurement Date of the Net Pension Liability		June 30, 2015
Employer's Fiscal Year Ending Date (Reporting Date)		June 30, 2015
Membership		
Number of		
- Retirees and Beneficiaries		67,954
- Inactive, Nonretired Members		25,540
- Active Members		63,273
- Total		156,767
Covered Payroll		$ 4,453,683,664
Net Pension Liability		
Total Pension Liability		$ 43,267,055,628
Plan Fiduciary Net Position		15,258,866,572
Net Pension Liability		$ 28,008,189,056
Plan Fiduciary Net Position as a Percentage of Total Pension Liability		35.27 %
Net Pension Liability as a Percentage of Covered Payroll		628.88 %
Development of the Single Discount Rate		
Single Discount Rate Beginning of Year		7.09 %
Single Discount Rate End of Year		7.02 %
Long-Term Expected Rate of Investment Return		7.25 %
Long-Term Municipal Bond Rate Beginning of Year*		4.29 %
Long-Term Municipal Bond Rate End of Year*		3.80 %
Last year ending June 30 in the 2015 to 2114 projection period for which projected benefit payments are fully funded		2067
Total Pension Expense		$ 2,489,989,430

Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference Between Expected and Actual Experience	$ -	$ 363,616,705
Changes in Assumptions	282,102,702	-
Net Difference Between Projected and Actual Earnings on Pension Plan Investments	300,513,044	-
Total	$ 582,615,746	$ 363,616,705

*Source: *"State & local bonds" rate from Federal Reserve statistical release (H.15) as of June 25, 2015. The statistical release describes this rate as "Bond Buyer Index, general obligation, 20 years to maturity, mixed quality." In describing this index, the Bond Buyer notes that the bonds' average credit quality is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA.*

DISCUSSION

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 states, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective net pension liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to SERS subsequent to the measurement date of June 30, 2015.

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *statement of changes in fiduciary net position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statements Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans, to include certain additional information. The list of disclosure items should include:

- A description of benefits provided by the plan;
- The type of employees and number of members covered by the pension plan;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The pension plan's investment policies;
- The pension plan's fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability;
- The net pension liability using a discount rate that is 1percent higher and 1percent lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- Significant assumptions and methods used to calculate the total pension liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- The composition of the pension plan's board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5 percent, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- Sources of changes in the net pension liability;
- Information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; and
- A comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of June 30, 2015, and a measurement date of June 30, 2015.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.25 percent; the municipal bond rate is 3.80 percent (based on the weekly rate closest to but not later than the measurement date of the "state & local bonds" rate from Federal Reserve statistical release (H.15)); and the resulting Single Discount Rate is 7.02 percent.

Effective Date and Transition

GASB Statements Nos. 67 and 68 are effective for fiscal years beginning after June 15, 2013, and June 15, 2014, respectively, earlier application is encouraged by the GASB.

SECTION B

FINANCIAL STATEMENTS

Auditor’s Note – This information is intended to assist in preparation of the financial statements of the State Employees' Retirement System of Illinois. Financial statements are the responsibility of management, subject to the auditor’s review. Please let us know if the auditor recommends any changes.

PENSION EXPENSE UNDER GASB STATEMENT NO. 68
FISCAL YEAR ENDED JUNE 30, 2015

A. Expense		
1. Service Cost Including Pension Plan Administrative Expense	$	847,997,030
2. Interest on the Total Pension Liability		2,912,736,360
3. Current-Period Benefit Changes		-
4. Employee Contributions (made negative for addition here)		(266,139,156)
5. Projected Earnings on Plan Investments (made negative for addition here)		(1,057,018,357)
6. Other Changes in Plan Fiduciary Net Position		-
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		(22,714,709)
8. Recognition of Outflow (Inflow) of Resources due to Assets		75,128,261
9. Total Pension Expense	**$**	**2,489,989,430**
B. Reconciliation of Net Pension Liability		
1. Net Pension Liability Beginning of Year	**$**	**27,103,519,942**
2. Pension Expense		2,489,989,430
3. Employer Contributions (made negative for addition here)		(1,804,319,356)
4. Deferred Investment Experience (Inflows)/Outflows		300,513,044
5. Deferred Liability Experience (Inflows)/Outflows		(363,616,705)
6. Deferred Assumption Changes (Inflows)/Outflows		282,102,702
7. Net Pension Liability End of Year	**$**	**28,008,189,056**

Our understanding is that SERS is a single employer defined benefit pension plan. If the sponsor has component units, a proportionate share allocation of the pension expense and net pension liability under paragraph 342 of GASB Statement No. 68 may be required.

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods
Fiscal Year Ended June 30, 2015

A. Change in Outflows and (Inflows) of Resources During Current Plan Year

Experience (Gain)/Loss	Balance at Beginning of Year	Amortization Factor	Amortization	Balance at End of Year
1. Differences Between Expected and Actual Non-Investment Experience	$ (464,942,210)	4.5886	$ (101,325,505)	$ (363,616,705)
2. Assumption Changes	360,713,498	4.5886	78,610,796	282,102,702
3. Difference Between Expected and Actual Investment Earnings	375,641,305	5.0000	75,128,261	300,513,044
4. Total	$ 271,412,593		$ 52,413,552	$ 218,999,041

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows (Inflows) of Resources
1. Differences Between Expected and Actual Non-Investment Experience	$ -	$ 101,325,505	$ (101,325,505)
2. Assumption Changes	78,610,796	-	78,610,796
3. Difference Between Expected and Actual Investment Earnings	75,128,261	-	75,128,261
4. Total	$ 153,739,057	$ 101,325,505	$ 52,413,552

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows (Inflows) of Resources
1. Differences Between Expected and Actual Non-Investment Experience	$ -	$ 363,616,705	$ (363,616,705)
2. Assumption Changes	282,102,702	-	282,102,702
3. Difference Between Expected and Actual Investment Earnings	300,513,044	-	300,513,044
4. Total	$ 582,615,746	$ 363,616,705	$ 218,999,041

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
2016	$ 153,739,057	$ 101,325,505	$ 52,413,552
2017	153,739,057	101,325,505	52,413,552
2018	153,739,057	101,325,505	52,413,552
2019	121,398,575	59,640,190	61,758,385
2020	-	-	-
Thereafter	-	-	-
Total	$ 582,615,746	$ 363,616,705	$ 218,999,041

STATEMENT OF FIDUCIARY NET POSITION
YEARS ENDED JUNE 30, 2015 AND 2014

	2015	2014
Assets		
Cash	$ 170,646,589	$ 200,752,173
Receivables		
Contributions:		
Participants	$ 14,152,324	$ 17,207,484
Employing state agencies	109,810,082	79,511,794
Other Accounts	4,784,680	4,682,423
Total Receivables	$ 128,747,086	$ 101,401,701
Investments		
Held in the Illinois State Board of Investment		
Commingled Fund at fair value	$ 14,967,254,053	$ 14,286,499,013
Securities lending collateral with State Treasurer	64,779,000	84,013,000
Total Investments	$ 15,032,033,053	$ 14,370,512,013
Property and equipment, net of accumulated		
depreciation	$ 5,272,553	$ 4,122,801
Total Assets	$ 15,336,699,281	$ 14,676,788,688
Liabilities		
Payables		
Benefits payable	$ 5,847,397	$ 5,106,425
Refunds payable	1,055,043	674,361
Administrative expenses payable	2,171,343	1,714,067
Participants' deferred service credit accounts	266,753	118,146
Due to State of Illinois	3,713,173	3,596,448
Securities lending collateral with State Treasurer	64,779,000	84,013,000
Total Liabilities	$ 77,832,709	$ 95,222,447
Net Position Restricted for Pensions	$ 15,258,866,572	$ 14,581,566,241

Statement of Changes in Fiduciary Net Position
Years Ended June 30, 2015 and 2014

	2015	2014
Additions		
Contributions		
Participants	$ 266,139,156	$ 269,232,241
Employing state agencies and appropriations	1,804,319,356	1,699,447,826
Total Contributions	$ 2,070,458,512	$ 1,968,680,067
Investment Income		
Net investments income	$ 440,457,817	$ 358,688,813
Interest earned on cash balances	622,012	698,856
Net appreciation in fair value of investments	240,297,223	1,809,958,589
Net Investment Income	$ 681,377,052	$ 2,169,346,258
Total Additions	$ 2,751,835,564	$ 4,138,026,325
Deductions		
Benefits		
Retirement annuities	$ 1,833,999,371	$ 1,720,825,103
Survivors' annuities	121,930,337	114,177,228
Disability benefits	63,929,747	64,782,236
Lump-sum benefits	14,998,980	17,278,072
Total Benefits	$ 2,034,858,435	$ 1,917,062,639
Refunds	23,128,975	23,082,814
Administrative	16,547,823	16,615,105
Total Deductions	$ 2,074,535,233	$ 1,956,760,558
Net Increase in Net Position	$ 677,300,331	$ 2,181,265,767
Net Position Restricted for Pensions		
Beginning of Year	$ 14,581,566,241	$ 12,400,300,474
End of Year	$ 15,258,866,572	$ 14,581,566,241

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Auditor's Note – This information is intended to assist in preparation of the financial statements of the State Employees' Retirement System of Illinois. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS CURRENT PERIOD

FISCAL YEAR ENDED JUNE 30, 2015

A. Total Pension Liability		
1. Service Cost Including Pension Plan Administrative Expense	$	847,997,030
2. Interest on the Total Pension Liability		2,912,736,360
3. Changes of Benefit Terms		-
4. Difference Between Expected and Actual Experience of the Total Pension Liability		(464,942,210)
5. Changes of Assumptions		360,713,498
6. Benefit Payments, Including Refunds of Employee Contributions		(2,057,987,410)
7. Pension Plan Administrative Expense		(16,547,823)
8. Net Change in Total Pension Liability	$	1,581,969,446
9. Total Pension Liability – Beginning		41,685,086,183
10. Total Pension Liability – Ending	**$**	**43,267,055,628**
B. Plan Fiduciary Net Position		
1. Contributions – Employer	$	1,804,319,356
2. Contributions – Employee		266,139,156
3. Net Investment Income		681,377,052
4. Benefit Payments, Including Refunds of Employee Contributions		(2,057,987,410)
5. Pension Plan Administrative Expense		(16,547,823)
6. Other		-
7. Net Change in Plan Fiduciary Net Position	$	677,300,331
8. Plan Fiduciary Net Position – Beginning		14,581,566,241
9. Plan Fiduciary Net Position – Ending	**$**	**15,258,866,572**
C. Net Pension Liability	**$**	**28,008,189,056**
D. Plan Fiduciary Net Position as a Percentage of the Total Pension Liability		**35.27%**
E. Covered-Employee Payroll	**$**	**4,453,683,664**
F. Net Pension Liability as a Percentage of Covered Employee Payroll		**628.88%**

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS MULTIYEAR

Fiscal year ending June 30,	2015	2014
Total Pension Liability		
Service Cost Including Pension Plan Administrative Expense	$ 847,997,030	$ 776,487,959
Interest on the Total Pension Liability	2,912,736,360	2,754,121,665
Benefit Changes	-	-
Difference between Expected and Actual Experience	(464,942,210)	150,997,067
Assumption Changes	360,713,498	3,142,466,514
Benefit Payments	(2,034,858,435)	(1,917,062,639)
Refunds	(23,128,975)	(23,082,814)
Pension Plan Administrative Expense	(16,547,823)	(16,615,105)
Net Change in Total Pension Liability	1,581,969,446	4,867,312,648
Total Pension Liability - Beginning	41,685,086,183	36,817,773,535
Total Pension Liability - Ending (a)	$ 43,267,055,628	$ 41,685,086,183
Plan Fiduciary Net Position		
Employer Contributions	$ 1,804,319,356	$ 1,699,447,826
Employee Contributions	266,139,156	269,232,241
Pension Plan Net Investment Income	681,377,052	2,169,346,258
Benefit Payments	(2,034,858,435)	(1,917,062,639)
Refunds	(23,128,975)	(23,082,814)
Pension Plan Administrative Expense	(16,547,823)	(16,615,105)
Other	-	-
Net Change in Plan Fiduciary Net Position	677,300,331	2,181,265,767
Plan Fiduciary Net Position - Beginning	14,581,566,241	12,400,300,474
Plan Fiduciary Net Position - Ending (b)	$ 15,258,866,572	$ 14,581,566,241
Net Pension Liability - Ending (a) - (b)	28,008,189,056	27,103,519,942
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	35.27 %	34.98 %
Covered Employee Payroll	$ 4,453,683,664	$ 4,416,152,691
Net Pension Liability as a Percentage of Covered Employee Payroll	628.88 %	613.74 %

10 fiscal years will be built prospectively.

Please see the following page for additional notes relating to the Schedule of Changes in Net Pension Liability and Related Ratios.

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
ADDITIONAL NOTES TO THE SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS MULTIYEAR

End of year Total Pension Liability for fiscal year 2014 uses a Single Discount Rate of 7.09 percent and the actuarial assumptions used in the June 30, 2014, funding valuation. The Single Discount Rate of 7.09 percent was based on a long-term expected rate of return on pension plan investments of 7.25 percent used in the June 30, 2014, funding valuation and a long-term municipal bond rate as of June 26, 2014, of 4.29 percent.

Difference between actual and expected experience includes impact of the change in the Single Discount Rate from 7.12 percent to 7.09 percent based on the long-term expected rate of return on pension plan investments of 7.25 percent used in the June 30, 2014, funding valuation and the long-term municipal bond rate of 4.63 percent as of June 27, 2013, and 4.29 percent as of June 26, 2014, respectively. This change was measured using the actuarial assumptions used in the June 30, 2014, funding valuation.

The increase in the Total Pension Liability for fiscal year 2014 due to assumption changes includes the impact of the change in assumptions used in the June 30, 2014, funding valuation, which were determined as part of an experience review for the years July 1, 2009, to June 30, 2013.

Beginning of year Total Pension Liability for fiscal year 2015 uses a Single Discount Rate of 7.09 percent, which was based on a long-term expected rate of return on pension plan investments of 7.25 percent used in the June 30, 2014, funding valuation and a long-term municipal bond rate as of June 26, 2014, of 4.29 percent.

End of year Total Pension Liability for fiscal year 2015 uses a Single Discount Rate of 7.02 percent which was based on a long-term expected rate of return on pension plan investments of 7.25 percent used in the June 30, 2015, funding valuation and a long-term municipal bond rate as of June 25, 2015, of 3.80 percent.

The increase in the Total Pension Liability for fiscal year 2015 due to assumption changes includes the impact of the change in the Single Discount Rate from 7.09 percent to 7.02 percent based on the long-term expected rate of return on pension plan investments of 7.25 percent used in the June 30, 2015, funding valuation and the long-term municipal bond rate of 4.29 percent as of June 26, 2014, and 3.80 percent as of June 25, 2015, respectively. This change was measured at the end of the year.

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF THE NET PENSION LIABILITY MULTIYEAR

FY Ending June 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll*	Net Pension Liability as a % of Covered Payroll
2014	$ 41,685,086,183	$ 14,581,566,241	$ 27,103,519,942	34.98 %	$ 4,416,152,691	613.74 %
2015	43,267,055,628	15,258,866,572	28,008,189,056	35.27 %	4,453,683,664	628.88 %

** Covered payroll is the amount in force as of the valuation date and likely differs from actual payroll paid during the fiscal year.*

10 fiscal years will be built prospectively.

SCHEDULE OF CONTRIBUTIONS MULTIYEAR
LAST 10 FISCAL YEARS

Fiscal Year	Actuarially Determined Contribution*	Actual Contribution**	Contribution Deficiency (Excess)	Covered Payroll***	Actual Contribution as a % of Covered Payroll	Statutory Contribution	Statutory Contribution Deficiency/(Excess)
7/1/05 - 6/30/06	$ 672,555,569	$ 210,499,791	$ 462,055,778	$ 3,572,541,000	5.89%	$ 207,814,710	$ (2,685,081)
7/1/06 - 6/30/07	823,802,760	358,786,650	465,016,110	3,762,000,000	9.54%	361,039,140	2,252,490
7/1/07 - 6/30/08	986,410,891	587,732,407	398,678,484	3,967,704,000	14.81%	576,626,422	(11,105,985)
7/1/08 - 6/30/09	1,003,432,849	774,910,344	228,522,505	4,027,263,000	19.24%	769,851,595	(5,058,749)
7/1/09 - 6/30/10	1,177,313,343	1,095,545,856	81,767,487	4,119,360,892	26.60%	1,168,951,040	73,405,184
7/1/10 - 6/30/11	1,289,002,005	1,127,886,796	161,115,209	4,211,186,269	26.78%	1,102,783,348	(25,103,448)
7/1/11 - 6/30/12	1,614,834,808	1,391,416,375	223,418,433	4,329,083,716	32.14%	1,396,216,080	4,799,705
7/1/12 - 6/30/13	1,741,286,416	1,531,932,137	209,354,279	4,236,191,257	36.16%	1,529,942,834	(1,989,303)
7/1/13 - 6/30/14	1,956,841,419	1,699,447,826	257,393,593	4,416,152,691	38.48%	1,697,348,287	(2,099,539)
7/1/14 - 6/30/15	2,045,354,223	1,804,319,356	241,034,867	4,453,683,664	40.51%	1,802,494,852	(1,824,504)

* *The SERS Statutory Funding may not conform to Actuarial Standards of Practice, therefore, the actuarially determined contribution is equal to the normal cost plus an amount to amortize the unfunded actuarial accrued liability as a level percentage of total payroll. The amortization period for fiscal years prior to 2007 is 40 years and the amortization period for fiscal years 2007 and beyond is 30 years. The Actuarially Determined Contribution (as a percent of payroll) for each fiscal year was determined as of the valuation two years prior and then applied to payroll in force as of the valuation date.*

** *The actual contributions for FYE 6/30/2005 through 6/30/2014 were obtained from the System's comprehensive annual financial reports. The actual contribution for FYE 6/30/2015 was provided by the System.*

*** *Covered payroll shown is the amount in force as of the valuation date and likely differs from actual payroll paid during the fiscal year.*

NOTES TO SCHEDULE OF CONTRIBUTIONS

Valuation Date:	June 30, 2015
Notes	Actuarially determined contribution rates and Statutory contribution rates are calculated as of June 30, which is 12 months prior to the beginning of the fiscal year in which the contributions will be made.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Projected Unit Credit
Amortization Method	**Statutory Contributions** — The Statutory Contribution is equal to the level percentage of pay contributions determined so that the Plan attains a 90 percent funded ratio by the end of 2045. An amortization payment is not directly calculated. The amortization payment is the difference between the total statutory contribution and the employer normal cost contribution. **Actuarially Determined Contributions** — The Actuarially Determined Contribution is equal to the employer's normal cost plus a level percent of capped payroll amortization of the unfunded accrued liability. The amortization period for fiscal years prior to 2007 is an open-period 40 years and the amortization period for fiscal years 2006 through 2016 is an open-period 30 years. The Board has adopted a policy to calculate the ADC for financial reporting purposes, effective for the valuation as of June 30, 2015. Under this policy, the ADC for FYE 2017 is calculated as the employer's normal cost plus a 25-year level percent of capped payroll closed-period amortization of the unfunded accrued liability as of June 30, 2015. The ADC is expressed as a percentage and applied to capped payroll for the fiscal year.
Asset Valuation Method	5 year smoothed market
Inflation	3.00 percent
Salary Increases	Salary increase rates based on age-related productivity and merit rates plus inflation.
Postretirement Benefit Increases	Postretirement benefit increases of 3.00 percent, compounded, for Tier 1 and 3.00 percent or one-half of the annual increase in the Consumer Price Index, whichever is less, simple, for Tier 2.
Investment Rate of Return	7.25 percent as of the June 30, 2015, valuation.
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the June 30, 2014, valuation pursuant to an experience study of the period July 1, 2009, to June 30, 2013.
Mortality	105 percent of the RP2014 Healthy Annuitant mortality table, sex distinct

Other Information:

Notes	The statutory contribution for fiscal year ending June 30, 2015, was determined based on the results of the June 30, 2013, valuation. Similarly, the statutory contributions for fiscal years ending June 30, 2016, and June 30, 2017, were determined based on the results of the valuations performed two years prior. All other contributions are projected using current assumptions.

Methods and Assumptions Used for Accounting Purposes as of the Valuation Date:

Actuarial Cost Method	Entry Age Normal
Discount Rate	7.09 percent as of the June 30, 2014, valuation. 7.02 percent as of the June 30, 2015, valuation.
Asset Valuation Method	Market value

SCHEDULE OF INVESTMENT RETURNS MULTIYEAR

FY Ending June 30,	Annual Return[1]
2014	17.90%
2015	4.79%

[1] *Annual money-weighted rate of return, net of investment expenses.*

The annual money-weighted rate of return, net of investment expenses for fiscal years ending June 30, 2014, and June 30, 2015, were provided by the System.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Auditor’s Note – This information is intended to assist in preparation of the financial statements of the State Employees' Retirement System of Illinois. Financial statements are the responsibility of management, subject to the auditor’s review. Please let us know if the auditor recommends any changes.

Long-Term Expected Return on Plan Assets

The long-term expected rate of return on pension plan investments was determined based on information provided by the Illinois State Board of Investments (ISBI) in conjunction with its investment consultant, Marquette Associates, Inc. ISBI and Marquette Associates, Inc. provided the simulated average 10-year annualized geometric return for each major asset class. These real rates of return are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. For each major asset class that is included in the pension plan's target asset allocation as of June 30, 2015, these best estimates are summarized in the following table:

ASSET ALLOCATION

Asset Class	Target Allocation	10-Year Simulated Real Rate of Return
Domestic Equity	30.00%	5.69 %
International Equity	20.00%	6.23 %
Fixed Income Plus Cash	20.00%	1.62 %
Private Equity	5.00%	10.10 %
Real Estate	10.00%	5.50 %
InfraStructure	5.00%	6.00 %
Hedge Funds	10.00%	4.00 %
Total	100.00%	5.03 %

The figures in the above table were supplied by the Illinois State Board of Investments in conjunction with its investment consultant, Marquette Associates, Inc. Gabriel, Roeder, Smith & Company does not provide investment advice.

Single Discount Rate

A Single Discount Rate of 7.02 percent was used to measure the total pension liability. This Single Discount Rate was based on an expected rate of return on pension plan investments of 7.25 percent and a municipal bond rate of 3.80 percent. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between statutory contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments through the year 2067. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2067, and the municipal bond rate was applied to all benefit payments after that date.

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 7.02 percent, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

SENSITIVITY OF NET PENSION LIABILITY TO THE SINGLE DISCOUNT RATE ASSUMPTION

1% Decrease 6.02%	Current Single Discount Rate Assumption 7.02%	1% Increase 8.02%
$ 33,717,210,155	$ 28,008,189,056	$ 23,269,260,392

SUMMARY OF POPULATION STATISTICS

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	67,954
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	25,540
Active Plan Members	63,273
Total Plan Members	156,767

Additional information about the member data used is included in the June 30, 2015, actuarial valuation report.

SECTION E

SUMMARY OF BENEFITS

Summary of Retirement System Plan (As of June 30, 2015)

Purpose

The State Employees' Retirement System of Illinois, a State Agency, provides an orderly means whereby aged or disabled employees may be retired from active service without prejudice or hardship and enables the employees to accumulate reserves for old age, disability, death and termination of employment.

Administration

Responsibility for the operation of the System and the direction of its policies is vested in a Board of Trustees of seven members. The administration of the detailed affairs of the System is the responsibility of the Executive Secretary who is appointed by the Board of Trustees. Administrative policies and procedures are designed to ensure an accurate accounting of funds of the System and prompt payment of claims for benefits within the applicable statute.

Membership

All persons entering State service on or after January 1, 1984, become members upon completion of six months of continuous service except that, beginning July 1, 1991, employees in police positions become members on their first day of employment. Persons entering State service from January 1, 1972, to January 1, 1984, became members on their first day of employment. Excluded from membership are: any employee whose position is subject to membership under another State-supported system, any person who becomes an employee after June 30, 1979, as a public service employment program participant under the federal CETA program, or any enrollee of the Young Adult Conservation Corps. Prior to January 1, 1984, emergency and temporary employees were excluded from membership. Persons appointed by the Governor with the advice and consent of the Senate may elect to become members of the System. Other exceptions are identified in State law.

Membership Service

Membership service includes all service rendered while a member of the System for which credit is allowable. Persons entering service on or after January 1, 1984, or after July 1, 1982, in the case of emergency or temporary employees, may also receive membership service credit for periods of employment prior to membership by making contributions for such periods.

Member Contributions

Members are required to contribute a percentage of salary as their share of meeting the cost of the various benefits. Contribution rates are as shown below:

- Members covered by Social Security – 4.0 percent of Salary.
- Members not covered by Social Security – 8.0 percent of Salary.
- Members covered by Social Security who are serving in a position in which service toward the Alternative Retirement Annuity may be earned – 8.5 percent of Salary.
- Members not covered by Social Security who are serving in a position in which service toward the Alternative Retirement Annuity may be earned – 12.5 percent of Salary.

Members covered by Social Security also pay the current Social Security tax rate.

Credit for regular interest each fiscal year on a member's individual contribution account is computed on the accumulated balance in the account at the beginning of each fiscal year.

Retirement Pension

Qualification of Member

Upon termination of State service, a member is eligible for a pension at age 60 with at least eight years of pension credit or at any age with 35 or more years of credit.

General formula members are eligible for a retirement annuity if the sum of the member's age plus years (and whole months) of pension credit equals or exceeds 85. General formula members between ages 55 and 60 with at least 25 years of pension credit are eligible for a retirement annuity reduced by one-half of 1 percent for each month the member is under age 60. Certain positions in the Department of Corrections were placed under the general formula effective July 1, 2005.

Members serving in a position in which service toward the Alternative Retirement Annuity may be earned are eligible to receive the alternative retirement annuity at age 50 with at least 25 years of pension credit or at age 55 with at least 20 years of pension credit in such a position. Security employees of the Department of Human Services were placed under the alternative formula effective January 1, 2001. Certain members of the Department of Transportation and the Toll Highway Authority were placed under the alternative formula effective August 1, 2001.

Amount of Pension

The pension is based on the member's final average compensation and the number of years of pension credit that has been established.

Final Average Compensation is the average of the highest 48 consecutive months in the last 10 years. All employees whose benefit is calculated under the alternative formula will have their benefit based on the greater of (i) the salary rate in effect on their last day of service, provided the last day salary does not exceed 115 percent of the average monthly compensation received by the member for the last 24 months of service, or (ii) the average monthly compensation for the last 48 months prior to retirement.

The general formula for members retiring on or after January 1, 1998, (regardless of termination date) is as follows:

- 1.67 percent of final average salary per year of credited service for members covered by Social Security.

- 2.20 percent of final average salary per year of credited service for members not covered by Social Security.

The alternative formula for members retiring on or after January 1, 2001 (regardless of termination date) is as follows:

- 2.50 percent of final average salary per year of credited service for members covered by Social Security.

- 3.00 percent of final average salary per year of credited service for members not covered by Social Security.

The maximum pension payable is 75 percent of final average compensation for general formula members and 80 percent of final average compensation for alternative formula members.

Optional Forms of Payment

<u>Reversionary Annuity</u>—A member may elect to receive a smaller pension during his lifetime in order to provide a spouse or a designated dependent with a lifetime income. That payment would be in addition to any other benefit payable by the System.

<u>Level Income</u>—A member who contributes to Social Security as a State employee may elect to have his pension payments increased before Social Security Normal Retirement Age and reduced thereafter. To be eligible for this election the member must have established eligibility for a Social Security pension.

Annual Increases in Pension

Postretirement increases of 3.0 percent of the current pension (i.e., increases are compounded) are granted to members effective each January 1 occurring on or after the first anniversary of the pension.

Survivors Annuity

Qualification of Survivor

If death occurs while in State employment, the member must have established at least 18 months of pension credit. If death occurs after termination of State service and the member was not receiving a retirement pension, the member must have established at least eight years of pension credit.

An eligible spouse qualifies at age 50 or at any age if there is, in the care of the spouse, any unmarried children of the member under age 18 (age 22 if full-time student); unmarried children under age 18 (age 22 if full-time student) qualify if no spouse survives; dependent parents at age 50 qualify if neither an eligible spouse nor children survive the member.

Amount of Payment

If the member's death occurs before retirement, the named beneficiary receives a lump sum refund of all of the member's pension contributions plus interest, excluding contributions for widows and survivors benefits. A single lump sum payment of $1,000 is also made immediately to the survivor beneficiary of the member.

An eligible spouse receives a monthly annuity equal to 30 percent of the member's final average compensation subject to a maximum of $400. If children of the member are under the care of the spouse, the annuity is increased for each child, subject to a monthly maximum of $600 or 80 percent of final average compensation. If only eligible children survive, the monthly annuity may not exceed the lesser of $600 or 80 percent of final average compensation. The maximum combined monthly payment to parents may not exceed $400. If the member's death occurs after retirement or after termination of State employment but before the member receives a pension, the monthly benefit is further limited to 80 percent of the pension received or earned by the member. Monthly benefits payable to survivors of a member who was covered by Social Security as a State employee are reduced by one-half of the Social Security benefits for which the survivors are eligible. For benefits granted on or after January 1, 1992, the reduction may not exceed 50 percent of the amount of survivors annuity otherwise payable. If death of the member occurs on or after January 1, 1984, the minimum total survivors annuity benefit payable (before any reduction for Social Security benefits) is equal to 50 percent of the member's earned pension without regard to the member's age at death. Any member who retires on or after July 1, 2009, will have the option at the time of retirement to remove the offset provision. In exchange for the removal, SERS will reduce the member’s retirement annuity by 3.825 percent.

Duration of Payment

The monthly annuity payable to a spouse continues for his/her lifetime without regard to remarriage. The monthly annuity to children terminates upon death, marriage or attainment of age 18 (age 22 if full-time student). However, the monthly annuity will continue for a child who at age 18, is physically or mentally disabled and unable to accept gainful employment.

Annual Increases in Annuity

If the member's death occurs before retirement, increases of 3.0 percent of the current annuity are granted to survivors effective each January 1 occurring on or after the first anniversary of the annuity (i.e., increases are compounded). If the member's death occurs after retirement, the initial 3.0 percent increase applies on the January 1 on or after the survivor annuity begins.

Widow's Annuity Option

The widow of a male member who was a participant in the System prior to July 19, 1961, may have the option of taking a Widow's Annuity rather than the Survivor's Annuity.

Qualification of Widow

An eligible widow receives a Widow's Annuity if she is age 50 or over or has in her care any of the member's unmarried children under age 18. If she is not age 50 and has no such children in her care, she becomes eligible at age 50.

Amount of Payment

The Widow's Annuity consists of a lump sum payment of $500, plus a monthly annuity equal to 50 percent of the pension earned or received by the member at the date of death. If the widow has in her care eligible children of the member, the monthly annuity is increased because of each child, subject to a maximum payment equal to 66-2/3 percent of the earned pension. Monthly benefits payable to a widow of a member who was covered by Social Security as a State employee are reduced by one-half of the amount of benefits she is entitled to as a widow from Social Security (reduced by one-half of the amount of benefits she is entitled to based on her own Primary Insurance Amount). For benefits granted on or after January 1, 1992, the reduction may not exceed 50 percent of the amount of widow's annuity otherwise payable. Any member who retires on or after July 1, 2009, will have the option at the time of retirement to remove the offset provision. In exchange for the removal, SERS will reduce the member’s retirement annuity by 3.825 percent.

Duration of Payment

The monthly payment to the widow continues for her lifetime whether or not she remarries. If the amount of benefit was increased because of eligible children, it is adjusted downward as these children's benefits are terminated (death, marriage or attainment of age 18 or 22).

Annual Increases in Annuity

If the member's death occurs before retirement, increases of 3.0 percent of the current annuity are granted to widows effective each January 1 occurring on or after the first anniversary of the annuity (i.e., increases are compounded). If the member's death occurs after retirement, the initial 3.0 percent increase applies on the January 1 on or after the widow's annuity begins.

Occupational Death Benefit

Qualification of Survivors

If a member's death results from an injury on the job or a job related cause, the spouse may be eligible for an Occupational Death benefit. If only unmarried children under age 18 (age 22 if full-time student) survive, they would be eligible for the benefit. If neither a spouse nor eligible children survive, a dependent father or mother would be eligible.

Amount and Duration of Payment

The nominated beneficiary receives a lump sum payment consisting of all contributions made by the member plus interest credited to his account.

A surviving spouse is entitled to a monthly benefit equal to 50 percent of the member's final average compensation. The benefit is payable for the remaining lifetime of the spouse without regard to remarriage. If children under age 18 (age 22 if full-time student) also survive, the annuity is increased by 15 percent of such average because of each child, subject to a maximum of 75 percent. If there is no spouse, or if the spouse dies before all children have attained age 18 (age 22 if full-time student), each child receives a monthly allowance of 15 percent of final average compensation.

The combined payment to children may not exceed 50 percent of the member's final average compensation. Payments to or on account of children terminate upon their death, marriage or attainment of age 18 (age 22 if full-time student).

If there is no spouse or eligible children, a benefit of 25 percent of final average compensation is payable to each surviving dependent parent for life.

Annual Increases in Annuity

Increases of 3.0 percent of the current annuity are granted effective each January 1 occurring on or after the first anniversary of the annuity (i.e., increases are compounded).

Reductions

The monthly benefit is reduced by any payments awarded under the Workmen's Compensation or Occupational Diseases Acts.

Other Death Benefits

If the survivor beneficiaries of the member do not qualify for any of the previously described death benefits, one of the following benefits is payable to the nominated beneficiary on file with the System at the date of death.

Before Retirement

If the member's death occurred while in State service the benefit consists of: (1) a refund of all contributions plus interest credited to the member's account; and (2) a payment equal to one month's salary for each full year of pension credit not to exceed six month's salary. The minimum payment is equal to one month's salary.

If the member had terminated State service but not yet qualified for a pension, the benefit consists of a refund of all of the member's contributions to the System plus the interest credited to the member's account.

After Retirement

The benefit consists of a lump sum payment equal to the excess of contributions plus interest credited to the member's account over the total amount of pension payments made to the member. The minimum payment is $500.00.

Non-Occupational Disability Benefits

Qualification and Amount of Payment

Available to any member who has established at least one and one-half years of creditable service and who has been granted a disability leave of absence by his employing agency. The benefit is 50 percent of the member's final average compensation plus a credit to the member's account of service and contributions. It begins on the 31st day of absence from service on account of disability.

If the member has Social Security coverage as a State employee, the benefit payable by the System is reduced by the amount of any disability payment to which he is entitled under Social Security.

Duration of Payment

The member is eligible for the monthly benefit until the occurrence of any of the following events: (1) disability ceases; (2) resumption of gainful employment; (3) payments are made for a period of time equal to one-half of the service credit established as of the date disability began; or (4) attainment of age 65 if the benefit commences prior to age 60, or payment for 5 years if benefit commences after age 60.

If termination of the benefit is due to the member receiving benefits for a period of time equal to one-half of the service credit established at the date of disability, he shall be eligible for a retirement annuity if he has attained age 55 and has 15 years of service, or if he has attained age 50 and has 20 years of service.

Annual Increases in Annuity

A onetime increase of 7.0 percent of the original annuity is granted to members on the January 1 following the fourth anniversary of the annuity. Increases of 3.0 percent of the current annuity are then granted to members each January 1 following the 7.0 percent increase (i.e., the 3.0 percent increases are compounded).

Occupational Disability Benefit

Qualification and Amount of Payment

Provided for any member who becomes disabled as the direct result of injury or diseases arising out of and in the course of State employment.

The benefit is 75 percent of final average compensation plus a credit to the member's account of service and contributions. The cash benefit is reduced by any payment received under the Workmen's Compensation or Occupational Diseases Acts.

Duration of Payment

Monthly benefits are payable until the occurrence of any of the following events: (1) disability ceases; (2) resumption of gainful employment; or (3) attainment of age 65 if the benefit commences prior to age 60, or payment for 5 years if the benefit commences after age 60.

If termination of the benefit is due to the member having attained age 65 or having received benefits for five years after age 60, the member is entitled to a retirement pension based upon service credit established as of that date.

Annual Increases in Annuity

A one-time increase of 7.0 percent of the original annuity is granted to members on the January 1 following the fourth anniversary of the annuity. Increases of 3.0 percent of the current annuity are then granted to members each January 1 following the 7.0 percent increase (i.e., the 3.0 percent increases are compounded).

Temporary Disability Benefit

A member who is initially denied Workers' Compensation benefits and is appealing the denial may receive payment at the non-occupational rate, 50 percent of pay, providing all eligibility requirements for the non-occupational benefit are met, until the determination is made.

Separation Benefits

Upon termination of State employment by resignation, discharge, dismissal, or layoff, a member may obtain a refund of the contributions made to the System. By accepting a refund, a member forfeits all accrued rights and benefits in the System for himself and his beneficiaries.

Provisions Applicable to Members Hired after December 31, 2010, as a result of Public Act 96-0889

Final Average Compensation

Based on last eight years of service and may not exceed $106,800, as automatically increased by the lesser of 3 percent or one-half of the annual increase in the consumer price index-u during the preceding 12-month calendar year.

Retirement Eligibility – All Members Except State policemen, fire fighters in the fire protection service of a department, or security employees of the Department of Corrections or the Department of Juvenile Justice

Normal retirement – 67 years old with 10 years of service.

Early Retirement – 62 years old with 10 years of service with a 6.0 percent per year reduction in benefit for each year age is under 67.

Retirement Eligibility – State policemen, fire fighters in the fire protection service of a department, or security employees of the Department of Corrections or the Department of Juvenile Justice

Normal retirement – 60 years old with 20 years of service.

Annual Increases in Annuity

Annual increases begin at the later of the first anniversary of retirement or age 67. The annual increases are equal to the lesser of 3.0 percent or one-half of the annual increase in the consumer price index-u during the preceding 12-month calendar year and are not compounded.

Survivor Benefits

Benefit equal to 66.67 percent of the earned retirement benefit at death. Survivor benefits are increased by the lesser of 3.0 percent or one-half of the annual increase in the consumer price index-u during the preceding 12-month calendar year and are not compounded.

Miscellaneous

State policeman, a fire fighter in the fire protection service of a department, or a security employee of the Department of Corrections or the Department of Juvenile are still eligible for Alternate formula benefits as defined in section 14-110 of the Illinois Pension Code.

Salary and COLA Development for Members Hired on or After January 1, 2011

Year Ending	CPI-U	1/2 CPI-U	COLA	Maximum Annual Pensionable Earnings
2011			3.00%	$106,800.00
2012	3.90%	1.95%	1.95%	$108,882.60
2013	2.00%	1.00%	1.00%	$109,971.43
2014	1.20%	0.60%	0.60%	$110,631.26
2015	1.70%	0.85%	0.85%	$111,571.63

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Valuation Methods — Calculation of the Total Pension Liability

***Actuarial Cost Method* -** Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) The annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) Each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Valuation Methods — Calculation of the Statutory Contributions, Actuarial Cost Method as Mandated by 40 ILCS 5/14-131, Adopted June 30, 1989

The projected unit credit normal cost method is used. Under this method, the projected pension at retirement age is first calculated and the value thereof at the individual member's current or attained age is determined. The normal cost for the member for the current year is equal to the value so determined divided by the member's projected service at retirement. The normal cost for the plan for the year is the sum of the individual normal costs.

The actuarial liability at any point in time is the value of the projected pensions at that time less the value of future normal costs.

For ancillary benefits for active members, in particular death and survivor benefits, termination benefits, and the postretirement increases, the same procedure as outlined above is followed.

Estimated annual administrative expenses are added to the normal cost.

For valuation purposes, as well as projection purposes, an actuarial value of assets is used.

Appropriation Requirements Under P.A. 88-0593

The law governing the System under P.A. 88-0593 provides that:

For fiscal years 2011 through 2045, the minimum contribution to the System for each fiscal year shall be an amount determined to be sufficient to cause the total assets of the System to equal 90 percent of the total actuarial liabilities of the System by the end of fiscal year 2045. In making these determinations, the required contribution shall be calculated each year as a level-percentage-of-payroll over the years remaining to and including fiscal year 2045 and shall be determined under the projected unit credit actuarial cost method. For fiscal years 1997 through 2010, the minimum contribution to the System, as a percentage of the payroll, shall be increased in equal annual increments so that by fiscal year 2010, the contribution rate is at the same level as the contribution rate for fiscal years 2011 through 2045.

Actuarial Assumptions Adopted June 30, 2014

Actuarial assumptions are set by the Board of Trustees. Additional information regarding the rationale for the assumptions may be found in the experience study report of the State Employees' Retirement System for the period from July 1, 2009, to June 30, 2013. All actuarial assumptions are expectations of future experience, not market measures.

Mortality

Post-Retirement Mortality

105 percent of the RP2014 Healthy Annuitant mortality table, sex distinct. No adjustment is made for post-disabled mortality. While a fully generational mortality table was considered as part of the most recent experience study, the mortality table used is a static table and provides an estimated margin of 20 percent for future mortality improvement based on the experience study report of the State Employees' Retirement System for the period from July 1, 2009, to June 30, 2013.

Pre-Retirement Mortality, including terminated vested members prior to attaining age 50

Based on a percentage of 90 percent for males and 110 percent for females of the RP2014 Total Employee mortality table. Five percent of deaths among active employees are assumed to be in the performance of their duty.

Interest

7.25 percent per annum, compounded annually.

General Inflation

3.00 percent per annum, compounded annually.

This assumption serves as a basis for the determination of Tier Two annual increases that are equal to the lesser of 3.0 percent and one-half of the annual increase in the consumer price index-u during the preceding 12-month calendar year and are not compounded.

Marriage Assumption

85.0 percent of active male participants and 65.0 percent of active female participants are assumed to be married. Actual marital status at benefit commencement is used for retirees.

Social Security Offset for Survivor Benefits

No offset assumption for male surviving spouses because it is assumed their own PIA is as great as their spouses' PIA. Sixty percent of married male members are assumed to have a dual income household. For the dual income household, it is assumed the offset at age 60 is 45.0 percent of the original survivor benefit. It is assumed the offset at age 62 is 10.0 percent of the original survivor benefit. Furthermore, it is assumed that 50 percent of retirees on or after July 1, 2009, will elect to remove the offset provision. In exchange for the removal, the member's retirement annuity is reduced by 3.825 percent monthly as mandated by Statutes.

Termination

Illustrative rates of withdrawal from the plan are as follows:

Service Based Withdrawal				
	Regular Formula Employees		Alternate Formula Employees	
Service (Beginning of Year)	Males	Females	Males	Females
0	0.2300	0.2300	0.0325	0.0600
1	0.1200	0.1200	0.0325	0.0450
2	0.0950	0.0850	0.0325	0.0450
3	0.0700	0.0650	0.0200	0.0400
4	0.0625	0.0500	0.0175	0.0300
5	0.0425	0.0475	0.0175	0.0300
6	0.0425	0.0350	0.0175	0.0300
7	0.0350	0.0350	0.0175	0.0200
8	0.0300	0.0300	0.0150	0.0200
9	0.0250	0.0250	0.0150	0.0200
10	0.0250	0.0250	0.0150	0.0200
11	0.0200	0.0200	0.0125	0.0175
12	0.0200	0.0200	0.0125	0.0175
13	0.0200	0.0200	0.0100	0.0150
14	0.0150	0.0150	0.0100	0.0150
15	0.0150	0.0150	0.0100	0.0150
16	0.0150	0.0150	0.0100	0.0150
17	0.0150	0.0150	0.0100	0.0150
18	0.0150	0.0150	0.0100	0.0150
19	0.0150	0.0150	0.0100	0.0150
20	0.0150	0.0100	0.0100	0.0150
21	0.0150	0.0100	0.0100	0.0150
22	0.0150	0.0100	0.0100	0.0150
23	0.0150	0.0100	0.0100	0.0150
24	0.0150	0.0100	0.0100	0.0150
25	0.0150	0.0100	0.0100	0.0150
26	0.0150	0.0100	0.0100	0.0150
27	0.0150	0.0100	0.0100	0.0150
28	0.0150	0.0100	0.0100	0.0150
29	0.0150	0.0100	0.0100	0.0150
30+	0.0150	0.0100	0.0100	0.0150

It is assumed that terminated employees will not be rehired. The rates apply only to employees who have not fulfilled the service requirement necessary for retirement at any given age.

Salary Increases

Illustrative rates of increase per individual employee per annum, compounded annually:

Age	Annual Increase
25	7.92%
30	6.45%
35	5.55%
40	5.22%
45	4.83%
50	4.51%
55	4.30%
60	4.10%
65	3.72%
70	3.50%

These increases include a component for inflation of 3.0 percent per annum.

Disability

Because members who receive disability benefits typically spend less than one year on disability, they are considered active members. Therefore a load of 1.63 percent of pay on the normal cost is applied to reflect the near-term cash flow. This assumption is based on 110 percent of the most recent disability benefit payment information as a percent of payroll and will be updated at each valuation date as experience emerges.

415(b) and 401(a)(17) Limits

No explicit assumption is made with respect to these items.

Population Projection

For purposes of determining annual appropriation as a percent of total covered payroll, the size of the active group is assumed to remain level at the number of actives as of the valuation date. New entrants are assumed to enter with an average age and an average pay as disclosed below. New entrants are assumed to have the same demographic profile as new entrants in the 15 years prior to the valuation date. The average increase in uncapped payroll for the projection period is 3.5 percent per annum.

	New Entrant Benefit Groups													
Age Group	New Entrants Eligible for Regular Formula Benefits that are Covered by Social Security		New Entrants Eligible for Regular Formula Benefits that are not Covered by Social Security		New Entrants in Positions Formerly Eligible for Alternate Formula Benefits that are Covered by Social Security that are now Eligible for Regular Formula Benefits		New Entrants Eligible for Alternate Formula Benefits that are Covered by Social Security		New Entrants in Positions Formerly Eligible for Alternate Formula Benefits that are not Covered by Social Security that are now Eligible for Regular Formula Benefits		New Entrants Eligible for Alternate Formula Benefits that are not Covered by Social Security		Total	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Under 20	80	2,358,446			14	690,023	17	780,785			1	36,934	112	3,866,188
20-24	2,182	85,476,855	8	289,273	587	29,624,728	843	42,684,464	218	13,929,071	73	4,422,404	3,911	176,426,795
25-29	3,788	171,209,790	28	1,507,166	814	42,939,907	1,016	55,143,162	355	23,295,236	129	8,107,343	6,130	302,202,604
30-34	3,359	166,218,047	27	1,519,642	571	32,634,270	766	44,917,258	169	11,839,114	60	4,055,243	4,952	261,183,574
35-39	2,912	152,253,060	8	409,630	454	26,583,379	563	34,534,786	73	5,046,495	17	1,209,947	4,027	220,037,297
40-44	2,856	154,770,274	15	827,662	431	25,834,477	417	26,931,594	29	2,125,886	2	125,244	3,750	210,615,137
45-49	2,350	129,772,966	12	726,104	317	19,072,924	285	19,364,613	14	906,632	3	214,488	2,981	170,057,727
50-54	1,962	108,959,941	7	433,206	231	14,816,904	155	10,787,405	11	798,398	1	50,964	2,367	135,846,818
55-59	1,234	67,843,687	10	644,644	137	8,846,704	53	3,537,563	8	593,711			1,442	81,466,309
60-64	432	22,392,766	3	223,522	44	2,863,177	15	1,148,446	3	234,394			497	26,862,305
65-69	38	2,264,329			4	261,762	1	77,852					43	2,603,943
70 & Over														
Total	21,193	$ 1,063,520,161	118	$ 6,580,849	3,604	$ 204,168,255	4,131	$ 239,907,928	880	$ 58,768,937	286	$ 18,222,567	30,212	$ 1,591,168,697
Avg. Salary		$ 50,183		$ 55,770		$ 56,650		$ 58,075		$ 66,783		$ 63,715		$ 52,667
Avg. Age		37.69		37.57		34.95		32.52		29.21		27.83		36.31
Percent Male		43%		73%		78%		75%		91%		84%		53%

Retirement

Employees are assumed to retire in accordance with the rates shown below. The rates apply only to employees who have fulfilled the service requirement necessary for retirement at any given age.

Retirement Rates for Regular Formula Employees		
	Males	Females
50	15.00%	25.00%
51	15.00%	25.00%
52	25.00%	30.00%
53	25.00%	25.00%
54	20.00%	20.00%
55	17.50%	16.00%
56	17.50%	16.00%
57	15.00%	16.00%
58	15.00%	16.00%
59	15.00%	16.00%
60	10.00%	16.00%
61	10.00%	12.50%
62	20.00%	20.00%
63	17.50%	17.50%
64	15.00%	17.50%
65	20.00%	25.00%
66	25.00%	20.00%
67	20.00%	20.00%
68	20.00%	20.00%
69	17.50%	20.00%
70	17.50%	20.00%
71	17.50%	15.00%
72	15.00%	20.00%
73	17.50%	20.00%
74	20.00%	20.00%
75	100.00%	100.00%

Early Retirement Rates for Regular Formula Employees		
Age	Males	Females
55	4.50%	4.50%
56	6.00%	4.00%
57	5.00%	7.00%
58	7.50%	9.50%
59	9.50%	12.00%

Retirement Rates for Alternate Formula Employees				
	Eligible for Alternate Formula Benefits Only		Eligible for Regular Formula Benefits Only	
Age	Males	Females	Males	Females
50	60.00%	40.00%	N/A	N/A
51	45.00%	40.00%	N/A	N/A
52	45.00%	35.00%	N/A	N/A
53	40.00%	30.00%	N/A	N/A
54	40.00%	25.00%	N/A	N/A
55	35.00%	30.00%	N/A	N/A
56	35.00%	25.00%	N/A	N/A
57	27.50%	20.00%	N/A	N/A
58	30.00%	20.00%	N/A	N/A
59	25.00%	25.00%	N/A	N/A
60	30.00%	30.00%	5.00%	8.00%
61	25.00%	20.00%	5.00%	8.00%
62	45.00%	45.00%	10.00%	8.00%
63	40.00%	35.00%	10.00%	12.50%
64	30.00%	40.00%	10.00%	12.50%
65	55.00%	40.00%	20.00%	17.50%
66	50.00%	60.00%	20.00%	15.00%
67	50.00%	50.00%	20.00%	40.00%
68	30.00%	15.00%	17.50%	30.00%
69	35.00%	35.00%	17.50%	20.00%
70	50.00%	60.00%	17.50%	25.00%
71	30.00%	50.00%	17.50%	30.00%
72	100.00%	100.00%	100.00%	100.00%

Assets

The Plan Fiduciary Net Position is used for GASB reporting purposes. The asset method used to project contributions is prescribed by statute. A description of this method can be found in the June 30, 2015, actuarial valuation report.

Expenses

As estimated and advised by SERS staff, based on current expenses and are expected to increase in relation to the projected capped payroll.

Spouse's Age

The female spouse is assumed to be three years younger than the male spouse.

Children

It is assumed that married members have 2.2 children, one year apart in age.

The age of the youngest child of a deceased employee at his date of death is assumed to be as follows:

Age at Death of Employee	Age of Youngest Child	Age at Death of Employee	Age of Youngest Child
20	2	40	6
25	3	45	8
30	4	50	10
35	5	55	12
		60	14

Overtime and Shift Differentials

Reported earnings include base pay alone. It is assumed that overtime and shift differentials will increase total payroll by 3.5 percent over reported earnings.

Load for Inactive Members Eligible for Deferred Vested Pension Benefits

Load of 15 percent to the liability attributable to inactive members eligible for deferred vested pension benefits for increase in final average salary due to participation in a reciprocal system after termination.

Missing Data

If year-to-date earnings were not available, then the monthly pay rate is used. If both year-to-date earnings and the monthly pay rate are not available, the annual rate of pay is assumed to be the rate of pay for the population as a whole on the valuation date. For members with less than a year of service, the annual rate of pay is based on the greater of year-to-date earnings or annualized pay rate. If a birth date was not available, the member was assumed to be age 35.

Decrement Timing

All decrements are assumed to occur mid-year.

Decrement Relativity

Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Decrement Operation

Disability and turnover decrements do not operate after member reaches retirement eligibility.

Eligibility Testing

Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.

Assumptions as a result of Public Act 96-0889 Adopted June 30, 2014

Members hired after December 31, 2010, are assumed to make contributions on salary up to the final average compensation cap in a given year until this plan provision or administrative procedure is clarified.

State contributions, expressed as a percentage of pay, are calculated based upon capped pay.

Members hired after December 31, 2010, eligible for the regular formula benefits will retire according to the following age-based retirement rates:

Retirement Rates for Regular Formula Employees			
Age	Employees Eligible For Normal Retirement	Age	Employees Eligible For Early Retirement
67	50.00%	62	30.00%
68	35.00%	63	15.00%
69	35.00%	64	15.00%
70	35.00%	65	15.00%
71	20.00%	66	15.00%
72	20.00%		
73	20.00%		
74	20.00%		
75	100.00%		

Members hired after December 31, 2010, eligible for the alternate formula benefits will retire according to the following age-based retirement rates:

Retirement Rates for Alternate Formula Employees		
Age	Males	Females
60	50.00%	50.00%
61	25.00%	20.00%
62	45.00%	45.00%
63	40.00%	35.00%
64	30.00%	40.00%
65	55.00%	40.00%
66	50.00%	60.00%
67	50.00%	50.00%
68	30.00%	15.00%
69	35.00%	35.00%
70	50.00%	60.00%
71	30.00%	50.00%
72	100.00%	100.00%

Projection Methodology Adopted June 30, 2005, and Amended June 30, 2009

Appropriation Requirements Under P.A. 93-0002, P.A. 94-0004, and P.A. 96-0043

State Contributions under P.A. 93-0002

In general, for each year during the life of the GOB program, the state contributions to the System are to be calculated as follows:

1. Calculation of the contribution maximum
   a. A projection of contributions will be made from the valuation date to June 30, 2045. Such projection will be based on hypothetical asset values determined using the following assumptions:
      i) That the System had received no portion of the general obligation bond proceeds in excess of the scheduled contributions for the remainder of fiscal 2003 and for the entirety of 2004,
      ii) That hypothetical state contributions had been made each fiscal year from 2005 through the valuation date, based on the funding process in place prior to P.A. 93-0002 (without regard to prior state minimum requirements),
      iii) That the actual amounts of member contributions and the actual cash outflows (benefit payments, refunds and administrative expenses) for each year prior to the valuation date were realized, and
      iv) That the hypothetical fund earned returns in each prior fiscal year equal to the rate of total return actually earned by the retirement fund in that year.
   b. The hypothetical asset values developed in a., above, will not exceed the actual assets of the fund.
   c. A projection of maximum contributions for each year of the GOB program will be performed each year, by reducing the contributions produced in a., above, by the respective amount of debt service allocated to the System for each year.
2. Calculation of the contribution with GOB proceeds
   a. The basic projection of state contributions from the valuation date through June 30, 2045, will be made, taking into account all assets of the System, including the GOB proceeds.
   b. State contribution rates (expressed as a percentage of covered pay), in the pattern required by the funding sections of the statutes, are calculated.
   c. In those projections, the dollars of state contributions which are added to assets each year during the GOB program are limited by the contribution maximum. Because the bonds are to be liquidated by the end of fiscal 2033, there is no contribution maximum thereafter.

State Contributions under P.A. 94-0004

The following is an excerpt from the Illinois Compiled statutes 40 ILCS 5/14-108.3 (f)-(g):

> (f) The System shall determine the amount of the increase in the present value of future benefits resulting from the granting of early retirement incentives under this Section and shall report that amount to the Governor and the Commission on Government Forecasting and Accountability on or after the effective date of this amendatory Act of the 93rd General Assembly and on or before November 15, 2004. Beginning with State fiscal year 2008, the increase reported under this subsection (f) shall be included in the calculation of the required State contribution under Section 14-131.
>
> (g) In addition to the contributions otherwise required under this Article, the State shall appropriate and pay to the System an amount equal to $70,000,000 in State fiscal years 2004 and 2005.

State Contributions under P.A. 96-0043

The following is an excerpt from the Illinois Compiled statutes 40 ILCS 5/14-131:

> (g) For purposes of determining the required State contribution to the System, the value of the System's assets shall be equal to the actuarial value of the System's assets, which shall be calculated as follows:
>
>> As of June 30, 2008, the actuarial value of the System's assets shall be equal to the market value of the assets as of that date. In determining the actuarial value of the System's assets for fiscal years after June 30, 2008, any actuarial gains or losses from investment return incurred in a fiscal year shall be recognized in equal annual amounts over the five-year period following that fiscal year.
>
> (h) For purposes of determining the required State contribution to the System for a particular year, the actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.

Following the above legislation we have calculated the required contribution and the results are shown in the summary section of this report.

SECTION G

CALCULATION OF THE SINGLE DISCOUNT RATE

CALCULATION OF THE SINGLE DISCOUNT RATE

GASB Statements Nos. 67 and 68 include specific requirements for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.25 percent; the municipal bond rate is 3.80 percent; and the resulting Single Discount Rate is 7.02 percent.

The sponsor finances benefits using a funding policy defined in state statute. Sponsor contributions are calculated as a level percentage of payroll contributions needed to attain a funded status of 90 percent in 2045 under the Projected Unit Credit cost method. After 2045, the sponsor makes a contribution such that the funded status remains at 90 percent. The statutory contribution does not explicitly separate projected employer contributions between current plan members and future plan members.

For purposes of developing the Single Discount Rate, we have projected actuarial liabilities on an Entry Age Normal basis, and compared against projected market value of assets. We have assumed the actuarial liability for future members will be fully financed, to the extent that assets are available, and any remaining asset will be assigned to current plan members. Based on this assignment of assets and employer contributions, plan assets assigned to current plan members are projected to be depleted by 2067.

The tables in this section provide background for the development of the Single Discount Rate.

The following tables show the assignment of assets and employer contributions and the projection of assets for current members as of the valuation date. Our projections assume the sponsor will make the required statutory contributions. The projections are based on the statutory funding projections performed during the June 30, 2015, actuarial valuation.

Total administrative expenses are assumed to increase at the same rate of payroll increases. Total administrative expenses are allocated between current and future hires by total payroll.

PROJECTION OF FUNDED STATUS AND ASSIGNMENT OF ASSETS

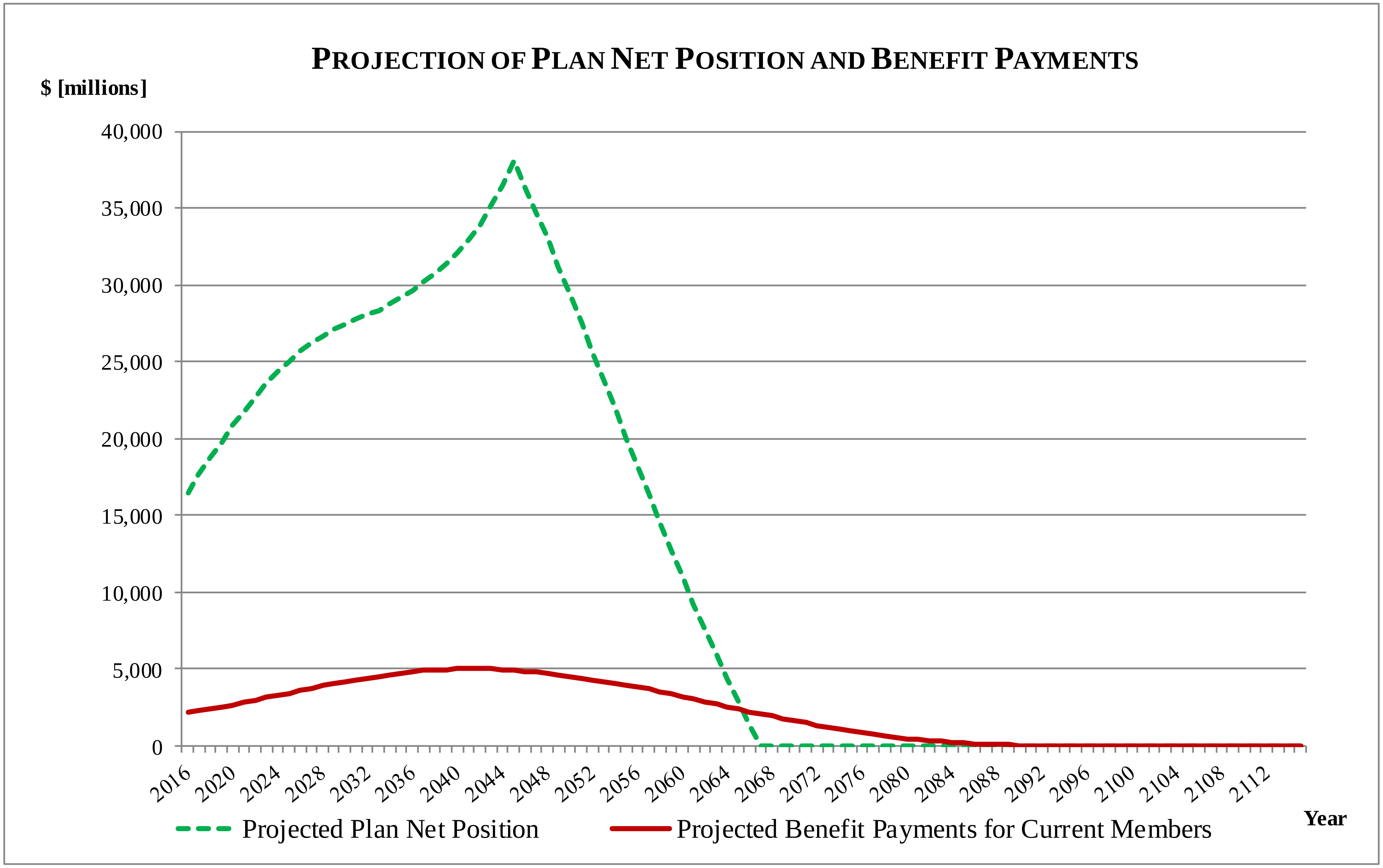
PYE 6/30	Open Group EAN Actuarial Liability	Closed Group EAN Actuarial Liability	Future Member EAN Actuarial Liability	Open Group Assets	Future Member Assigned Assets	Closed Group Assigned Assets	Funded Ratio Current Members	Funded Ratio Future Members
	(a)	(b)	(c)=(a)-(b)	(d)	(e)=min[(c),(d)]	(f)=(d)-(e)	(g)=(f)/(b)	(h)=(e)/(c)
2015	$ 42,099,205,191	$ 42,099,205,191	$ -	$ 15,258,866,572	$ -	$ 15,258,866,572	36.25%	0.00%
2016	43,743,445,593	43,743,445,593	-	16,497,482,391	-	16,497,482,391	37.71%	0.00%
2017	45,372,256,595	45,349,467,571	22,789,024	17,658,413,407	22,789,024	17,635,624,383	38.89%	100.00%
2018	46,981,650,087	46,913,428,184	68,221,904	18,811,231,483	68,221,904	18,743,009,579	39.95%	100.00%
2019	48,564,764,212	48,427,224,671	137,539,541	19,942,673,918	137,539,541	19,805,134,377	40.90%	100.00%
2020	50,112,680,798	49,879,319,714	233,361,084	21,048,901,209	233,361,084	20,815,540,125	41.73%	100.00%
2021	51,618,129,950	51,260,119,492	358,010,458	22,143,329,356	358,010,458	21,785,318,898	42.50%	100.00%
2022	53,071,259,768	52,556,618,627	514,641,141	23,215,929,194	514,641,141	22,701,288,053	43.19%	100.00%
2023	54,464,563,221	53,757,870,211	706,693,010	24,263,301,107	706,693,010	23,556,608,097	43.82%	100.00%
2024	55,789,671,513	54,850,299,779	939,371,734	25,279,356,660	939,371,734	24,339,984,926	44.38%	100.00%
2025	57,037,277,386	55,820,264,214	1,217,013,172	26,260,372,152	1,217,013,172	25,043,358,980	44.86%	100.00%
2026	58,209,026,413	56,665,714,046	1,543,312,368	27,219,820,626	1,543,312,368	25,676,508,258	45.31%	100.00%
2027	59,295,307,156	57,374,033,647	1,921,273,509	28,156,254,626	1,921,273,509	26,234,981,116	45.73%	100.00%
2028	60,298,244,709	57,943,750,557	2,354,494,153	29,071,996,658	2,354,494,153	26,717,502,506	46.11%	100.00%
2029	61,222,567,307	58,377,210,109	2,845,357,198	29,981,649,041	2,845,357,198	27,136,291,844	46.48%	100.00%
2030	62,070,913,203	58,673,629,806	3,397,283,397	30,891,835,745	3,397,283,397	27,494,552,348	46.86%	100.00%
2031	62,844,759,466	58,831,032,287	4,013,727,179	31,814,039,413	4,013,727,179	27,800,312,234	47.25%	100.00%
2032	63,543,038,945	58,844,622,084	4,698,416,860	32,761,502,872	4,698,416,860	28,063,086,012	47.69%	100.00%
2033	64,169,692,019	58,714,625,316	5,455,066,704	33,750,924,584	5,455,066,704	28,295,857,880	48.19%	100.00%
2034	64,730,729,139	58,443,936,874	6,286,792,265	35,025,570,321	6,286,792,265	28,738,778,056	49.17%	100.00%
2035	65,228,835,287	58,031,633,721	7,197,201,566	36,387,625,961	7,197,201,566	29,190,424,396	50.30%	100.00%
2036	65,663,418,420	57,475,006,479	8,188,411,941	37,848,780,764	8,188,411,941	29,660,368,823	51.61%	100.00%
2037	66,038,706,066	56,777,010,402	9,261,695,663	39,422,770,203	9,261,695,663	30,161,074,539	53.12%	100.00%
2038	66,363,857,840	55,945,889,186	10,417,968,654	41,132,003,304	10,417,968,654	30,714,034,650	54.90%	100.00%
2039	66,647,592,432	54,989,484,980	11,658,107,452	42,998,513,632	11,658,107,452	31,340,406,180	56.99%	100.00%
2040	66,899,267,354	53,916,480,918	12,982,786,436	45,045,972,707	12,982,786,436	32,063,186,272	59.47%	100.00%
2041	67,129,801,680	52,737,482,907	14,392,318,773	47,300,274,766	14,392,318,773	32,907,955,993	62.40%	100.00%
2042	67,350,635,728	51,463,928,734	15,886,706,995	49,789,413,854	15,886,706,995	33,902,706,859	65.88%	100.00%
2043	67,572,687,762	50,107,033,406	17,465,654,356	52,542,329,752	17,465,654,356	35,076,675,395	70.00%	100.00%
2044	67,805,013,009	48,676,677,341	19,128,335,668	55,587,581,674	19,128,335,668	36,459,246,006	74.90%	100.00%
2045	68,054,755,741	47,181,293,218	20,873,462,523	58,952,523,433	20,873,462,523	38,079,060,910	80.71%	100.00%
2046	68,327,544,061	45,628,312,149	22,699,231,911	59,129,926,470	22,699,231,911	36,430,694,559	79.84%	100.00%
2047	68,627,761,078	44,024,481,673	24,603,279,405	59,335,266,295	24,603,279,405	34,731,986,889	78.89%	100.00%
2048	68,959,357,393	42,376,585,438	26,582,771,955	59,573,781,566	26,582,771,955	32,991,009,612	77.85%	100.00%
2049	69,324,917,216	40,690,804,244	28,634,112,972	59,847,817,191	28,634,112,972	31,213,704,220	76.71%	100.00%
2050	69,725,757,126	38,972,995,303	30,752,761,823	60,158,305,548	30,752,761,823	29,405,543,726	75.45%	100.00%
2051	70,162,380,690	37,229,352,518	32,933,028,171	60,505,336,057	32,933,028,171	27,572,307,886	74.06%	100.00%
2052	70,634,593,789	35,466,602,815	35,167,990,974	60,888,160,362	35,167,990,974	25,720,169,388	72.52%	100.00%
2053	71,141,398,675	33,691,707,436	37,449,691,240	61,305,133,368	37,449,691,240	23,855,442,128	70.81%	100.00%
2054	71,681,108,560	31,911,551,253	39,769,557,307	61,753,888,386	39,769,557,307	21,984,331,078	68.89%	100.00%
2055	72,251,674,115	30,133,099,177	42,118,574,938	62,231,757,120	42,118,574,938	20,113,182,183	66.75%	100.00%
2056	72,851,085,501	28,363,792,514	44,487,292,987	62,736,120,610	44,487,292,987	18,248,827,624	64.34%	100.00%
2057	73,477,614,543	26,610,969,227	46,866,645,316	63,264,581,570	46,866,645,316	16,397,936,253	61.62%	100.00%
2058	74,130,121,959	24,881,692,578	49,248,429,381	63,815,372,145	49,248,429,381	14,566,942,764	58.54%	100.00%
2059	74,808,364,846	23,183,312,672	51,625,052,174	64,387,718,803	51,625,052,174	12,762,666,628	55.05%	100.00%
2060	75,512,786,681	21,523,231,252	53,989,555,428	64,981,655,566	53,989,555,428	10,992,100,138	51.07%	100.00%
2061	76,244,115,046	19,908,269,681	56,335,845,366	65,597,575,424	56,335,845,366	9,261,730,058	46.52%	100.00%
2062	77,002,955,836	18,344,083,794	58,658,872,042	66,235,781,211	58,658,872,042	7,576,909,168	41.30%	100.00%
2063	77,790,129,621	16,835,542,798	60,954,586,823	66,896,841,563	60,954,586,823	5,942,254,741	35.30%	100.00%
2064	78,606,936,003	15,387,102,359	63,219,833,644	67,581,879,497	63,219,833,644	4,362,045,853	28.35%	100.00%
2065	79,454,898,564	14,002,614,909	65,452,283,655	68,292,309,090	65,452,283,655	2,840,025,435	20.28%	100.00%
2066	80,335,518,644	12,685,218,049	67,650,300,594	69,029,585,422	67,650,300,594	1,379,284,828	10.87%	100.00%
2067	81,250,142,994	11,437,369,347	69,812,773,647	69,795,052,210	69,795,052,210	-	0.00%	99.97%
2068	82,200,012,830	10,260,944,454	71,939,068,375	70,589,993,626	70,589,993,626	-	0.00%	98.12%
2069	83,186,166,386	9,157,213,820	74,028,952,566	71,415,534,663	71,415,534,663	-	0.00%	96.47%
2070	84,209,471,809	8,126,869,271	76,082,602,538	72,272,657,345	72,272,657,345	-	0.00%	94.99%

CURRENT MEMBER PROJECTION OF ASSETS AND ASSIGNMENT OF EMPLOYER CONTRIBUTIONS

PYE 6/30	Assets (boy)	Member Contributions	Administrative Expenses	Benefit Payments	Assigned Employer Contribution	Income on Cash Flow	Income on Assigned Contribution	Total Investment Income	Assets (eoy)
2016	$ 15,258,866,572	$ 254,103,644	$ 20,909,555	$ 2,150,274,663	$ 2,044,877,000	$ 1,037,989,547	$ 72,829,846	$ 1,110,819,393	$ 16,497,482,391
2017	16,497,482,391	242,066,328	19,839,308	2,277,228,214	1,999,067,822	1,122,877,046	71,198,317	1,194,075,364	17,635,624,383
2018	17,635,624,383	235,453,895	19,261,817	2,408,384,004	2,026,881,993	1,200,506,189	72,188,940	1,272,695,129	18,743,009,579
2019	18,743,009,579	229,153,539	18,721,186	2,543,675,106	2,046,704,630	1,275,767,983	72,894,939	1,348,662,922	19,805,134,377
2020	19,805,134,377	222,156,473	18,151,524	2,685,183,224	2,070,343,956	1,347,503,195	73,736,871	1,421,240,066	20,815,540,125
2021	20,815,540,125	215,113,665	17,586,691	2,830,351,081	2,112,024,882	1,415,356,630	75,221,369	1,490,577,999	21,785,318,898
2022	21,785,318,898	207,358,243	16,982,771	2,980,375,249	2,149,350,521	1,480,067,661	76,550,750	1,556,618,411	22,701,288,053
2023	22,701,288,053	198,598,845	16,328,821	3,133,209,194	2,187,602,640	1,540,743,446	77,913,128	1,618,656,574	23,556,608,097
2024	23,556,608,097	189,748,317	15,669,176	3,290,723,286	2,223,960,493	1,596,852,441	79,208,041	1,676,060,481	24,339,984,926
2025	24,339,984,926	179,844,808	14,956,560	3,451,493,727	2,261,828,824	1,647,593,959	80,556,750	1,728,150,709	25,043,358,980
2026	25,043,358,980	169,527,891	14,221,861	3,605,297,069	2,308,163,834	1,692,769,477	82,207,007	1,774,976,484	25,676,508,258
2027	25,676,508,258	159,429,749	13,505,359	3,762,397,305	2,358,212,813	1,732,743,421	83,989,539	1,816,732,960	26,234,981,116
2028	26,234,981,116	148,966,961	12,769,740	3,912,668,216	2,405,774,645	1,767,534,251	85,683,490	1,853,217,740	26,717,502,506
2029	26,717,502,506	139,791,655	12,102,544	4,053,856,713	2,460,151,292	1,797,185,493	87,620,155	1,884,805,648	27,136,291,844
2030	27,136,291,844	131,042,514	11,457,274	4,187,769,819	2,514,403,034	1,822,489,678	89,552,372	1,912,042,050	27,494,552,348
2031	27,494,552,348	122,765,387	10,829,237	4,314,869,015	2,573,375,623	1,843,664,402	91,652,726	1,935,317,127	27,800,312,234
2032	27,800,312,234	114,428,012	10,197,097	4,436,380,783	2,639,679,620	1,861,229,832	94,014,193	1,955,244,025	28,063,086,012
2033	28,063,086,012	105,691,190	9,551,541	4,548,296,981	2,712,321,054	1,876,006,774	96,601,373	1,972,608,147	28,295,857,880
2034	28,295,857,880	97,722,863	8,940,844	4,648,935,108	3,006,942,348	1,889,036,384	107,094,534	1,996,130,917	28,738,778,056
2035	28,738,778,056	89,913,622	8,338,392	4,740,665,505	3,083,298,235	1,917,624,373	109,814,006	2,027,438,380	29,190,424,396
2036	29,190,424,396	81,958,193	7,731,284	4,824,530,951	3,160,562,550	1,947,120,085	112,565,834	2,059,685,919	29,660,368,823
2037	29,660,368,823	73,822,484	7,116,773	4,896,447,575	3,236,804,513	1,978,361,818	115,281,249	2,093,643,067	30,161,074,539
2038	30,161,074,539	66,619,383	6,549,170	4,953,085,244	3,315,482,265	2,012,409,461	118,083,417	2,130,492,877	30,714,034,650
2039	30,714,034,650	60,044,451	6,017,310	4,995,009,714	3,395,625,650	2,050,790,668	120,937,784	2,171,728,453	31,340,406,180
2040	31,340,406,180	54,131,857	5,521,750	5,022,002,913	3,477,278,690	2,095,048,289	123,845,919	2,218,894,208	32,063,186,272
2041	32,063,186,272	48,870,553	5,062,773	5,032,954,532	3,560,227,512	2,146,888,757	126,800,205	2,273,688,962	32,907,955,993
2042	32,907,955,993	44,318,707	4,644,361	5,027,902,126	3,644,992,191	2,208,167,292	129,819,163	2,337,986,455	33,902,706,859
2043	33,902,706,859	40,410,530	4,264,582	5,007,483,962	3,731,517,452	2,280,888,271	132,900,826	2,413,789,097	35,076,675,395
2044	35,076,675,395	37,012,708	3,924,288	4,973,243,211	3,819,576,675	2,367,111,604	136,037,122	2,503,148,726	36,459,246,006
2045	36,459,246,006	33,885,472	3,605,840	4,926,837,658	3,908,276,010	2,468,900,705	139,196,216	2,608,096,921	38,079,060,910
2046	38,079,060,910	30,998,562	3,307,839	4,869,566,250	584,410,121	2,588,284,845	20,814,210	2,609,099,055	36,430,694,559
2047	36,430,694,559	28,192,381	3,018,329	4,802,430,520	586,577,649	2,471,079,741	20,891,408	2,491,971,149	34,731,986,889
2048	34,731,986,889	25,534,227	2,740,334	4,725,802,628	590,434,847	2,350,567,824	21,028,785	2,371,596,610	32,991,009,612
2049	32,991,009,612	22,923,925	2,468,757	4,640,556,146	594,328,336	2,227,299,795	21,167,455	2,248,467,249	31,213,704,220
2050	31,213,704,220	20,314,442	2,194,572	4,547,348,390	598,085,126	2,101,681,645	21,301,256	2,122,982,901	29,405,543,726
2051	29,405,543,726	17,765,572	1,925,864	4,446,330,554	601,717,745	1,974,106,627	21,430,634	1,995,537,261	27,572,307,886
2052	27,572,307,886	15,303,442	1,664,930	4,337,424,253	605,098,781	1,844,997,411	21,551,052	1,866,548,464	25,720,169,388
2053	25,720,169,388	12,960,719	1,413,783	4,220,867,284	608,139,593	1,714,794,142	21,659,353	1,736,453,495	23,855,442,128
2054	23,855,442,128	10,741,533	1,175,059	4,097,262,436	610,894,288	1,583,933,161	21,757,464	1,605,690,624	21,984,331,078
2055	21,984,331,078	8,723,582	955,848	3,967,081,972	613,466,254	1,452,850,022	21,849,066	1,474,699,088	20,113,182,183
2056	20,113,182,183	6,952,336	764,055	3,830,403,567	615,920,859	1,322,003,379	21,936,489	1,343,939,868	18,248,827,624
2057	18,248,827,624	5,441,789	599,707	3,687,791,098	618,172,002	1,191,868,979	22,016,665	1,213,885,644	16,397,936,253
2058	16,397,936,253	4,126,730	455,816	3,539,935,954	620,276,324	1,062,903,615	22,091,612	1,084,995,227	14,566,942,764
2059	14,566,942,764	3,030,866	335,469	3,387,090,672	622,386,816	935,565,544	22,166,779	957,732,323	12,762,666,628
2060	12,762,666,628	2,181,080	241,520	3,229,723,478	624,637,145	810,333,357	22,246,926	832,580,283	10,992,100,138
2061	10,992,100,138	1,559,836	172,856	3,068,846,014	627,077,726	687,677,379	22,333,849	710,011,228	9,261,730,058
2062	9,261,730,058	1,103,403	122,388	2,905,944,895	629,702,714	568,012,936	22,427,340	590,440,276	7,576,909,168
2063	7,576,909,168	747,620	82,960	2,742,091,017	632,555,066	451,687,935	22,528,929	474,216,863	5,942,254,741
2064	5,942,254,741	488,874	54,335	2,578,010,796	635,714,771	339,011,134	22,641,464	361,652,598	4,362,045,853
2065	4,362,045,853	309,861	34,513	2,414,564,420	639,240,048	230,261,587	22,767,019	253,028,606	2,840,025,435
2066	2,840,025,435	194,384	21,714	2,252,670,848	643,173,063	125,677,412	22,907,097	148,584,509	1,379,284,828
2067	1,379,284,828	118,113	13,231	2,093,170,341	664,656,355	25,452,035	23,672,240	49,124,276	-
2068	-	71,871	8,049	1,936,774,187	1,936,710,365	(68,977,409)	68,977,409	-	-
2069	-	44,731	5,011	1,784,178,908	1,784,139,188	(63,543,471)	63,543,471	-	-
2070	-	26,966	3,025	1,636,017,933	1,635,993,992	(58,267,168)	58,267,168	-	-

DEVELOPMENT OF SINGLE DISCOUNT RATE

PYE 6/30	Benefit Payments	Discount Rate	Discounted Benefit Payment	Single Discount Rate	Discounted Benefit Payment
2016	$ 2,150,274,663	7.25%	$ 2,076,324,781	7.02%	$ 2,078,559,252
2017	2,277,228,214	7.25%	2,050,267,865	7.02%	2,056,894,281
2018	2,408,384,004	7.25%	2,021,773,416	7.02%	2,032,675,683
2019	2,543,675,106	7.25%	1,990,999,206	7.02%	2,006,046,245
2020	2,685,183,224	7.25%	1,959,684,111	7.02%	1,978,746,543
2021	2,830,351,081	7.25%	1,925,994,997	7.02%	1,948,917,684
2022	2,980,375,249	7.25%	1,890,986,779	7.02%	1,917,613,498
2023	3,133,209,194	7.25%	1,853,572,749	7.02%	1,883,720,505
2024	3,290,723,286	7.25%	1,815,157,470	7.02%	1,848,652,918
2025	3,451,493,727	7.25%	1,775,140,491	7.02%	1,811,790,790
2026	3,605,297,069	7.25%	1,728,898,098	7.02%	1,768,393,695
2027	3,762,397,305	7.25%	1,682,269,979	7.02%	1,724,405,900
2028	3,912,668,216	7.25%	1,631,198,306	7.02%	1,675,655,788
2029	4,053,856,713	7.25%	1,575,813,557	7.02%	1,622,247,545
2030	4,187,769,819	7.25%	1,517,825,833	7.02%	1,565,916,056
2031	4,314,869,015	7.25%	1,458,174,346	7.02%	1,507,614,251
2032	4,436,380,783	7.25%	1,397,891,137	7.02%	1,448,399,533
2033	4,548,296,981	7.25%	1,336,275,633	7.02%	1,387,539,381
2034	4,648,935,108	7.25%	1,273,513,105	7.02%	1,325,216,794
2035	4,740,665,505	7.25%	1,210,854,462	7.02%	1,262,727,687
2036	4,824,530,951	7.25%	1,148,974,604	7.02%	1,200,777,191
2037	4,896,447,575	7.25%	1,087,274,345	7.02%	1,138,742,121
2038	4,953,085,244	7.25%	1,025,502,051	7.02%	1,076,358,690
2039	4,995,009,714	7.25%	964,272,468	7.02%	1,014,272,147
2040	5,022,002,913	7.25%	903,947,253	7.02%	952,866,515
2041	5,032,954,532	7.25%	844,679,268	7.02%	892,308,552
2042	5,027,902,126	7.25%	786,789,114	7.02%	832,944,005
2043	5,007,483,962	7.25%	730,623,763	7.02%	775,149,554
2044	4,973,243,211	7.25%	676,576,056	7.02%	719,353,856
2045	4,926,837,658	7.25%	624,953,748	7.02%	665,898,556
2046	4,869,566,250	7.25%	575,933,847	7.02%	614,988,568
2047	4,802,430,520	7.25%	529,597,728	7.02%	566,728,166
2048	4,725,802,628	7.25%	485,918,352	7.02%	521,106,187
2049	4,640,556,146	7.25%	444,897,999	7.02%	478,142,805
2050	4,547,348,390	7.25%	406,491,388	7.02%	437,807,064
2051	4,446,330,554	7.25%	370,593,302	7.02%	400,002,979
2052	4,337,424,253	7.25%	337,078,011	7.02%	364,611,469
2053	4,220,867,284	7.25%	305,846,077	7.02%	331,540,862
2054	4,097,262,436	7.25%	276,820,150	7.02%	300,722,616
2055	3,967,081,972	7.25%	249,906,637	7.02%	272,069,855
2056	3,830,403,567	7.25%	224,985,147	7.02%	245,465,651
2057	3,687,791,098	7.25%	201,966,029	7.02%	220,825,615
2058	3,539,935,954	7.25%	180,763,241	7.02%	198,068,533
2059	3,387,090,672	7.25%	161,266,528	7.02%	177,085,844
2060	3,229,723,478	7.25%	143,378,969	7.02%	157,782,672
2061	3,068,846,014	7.25%	127,027,546	7.02%	140,089,636
2062	2,905,944,895	7.25%	112,153,514	7.02%	123,952,482
2063	2,742,091,017	7.25%	98,675,668	7.02%	109,291,569
2064	2,578,010,796	7.25%	86,499,907	7.02%	96,012,211
2065	2,414,564,420	7.25%	75,539,204	7.02%	84,026,733
2066	2,252,670,848	7.25%	65,710,390	7.02%	73,250,967
2067	2,093,170,341	7.25%	56,930,314	7.02%	63,600,004
2068	1,936,774,187	3.80%	273,349,277	7.02%	54,988,073
2069	1,784,178,908	3.80%	242,593,962	7.02%	47,333,090
2070	1,636,017,933	3.80%	214,304,995	7.02%	40,555,659
2071	1,492,809,406	3.80%	188,387,136	7.02%	34,578,385
2081	417,779,623	3.80%	36,309,528	7.02%	4,910,402
2091	43,107,109	3.80%	2,580,172	7.02%	257,092
2101	1,263,231	3.80%	52,073	7.02%	3,823
2111	27,168	3.80%	771	7.02%	42
2112	18,805	3.80%	514	7.02%	27
2113	12,979	3.80%	342	7.02%	17
2114	8,904	3.80%	226	7.02%	11
Total Present Value			**$ 50,437,109,678**		**$ 50,437,109,678**


PROJECTION OF PLAN NET POSITION AND BENEFIT PAYMENTS
$ [millions]
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2016
2020
2024
2028
2032
2036
2040
2044
2048
2052
2056
2060
2064
2068
2072
2076
2080
2084
2088
2092
2096
2100
2104
2108
2112
Year
Projected Plan Net Position
Projected Benefit Payments for Current Members

SECTION H

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Accrued Service	Service credited under the system which was rendered before the date of the actuarial valuation.
Actuarial Accrued Liability (AAL)	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
Actuarial Assumptions	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
Actuarial Equivalent	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
Actuarial Gain (Loss)	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
Actuarial Present Value (APV)	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
Actuarial Valuation	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions.
Actuarial Valuation Date	The date as of which an actuarial valuation is performed.
Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

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Amortization Method	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year.
Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
Covered-Employee Payroll	The payroll of employees that are provided with pensions through the pension plan.
Deferred Inflows and Outflows	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
Deferred Retirement Option Program (DROP)	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
Discount Rate	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: 1. The benefit payments to be made while the pension plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and 2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

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Entry Age Actuarial Cost Method (EAN) The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

Fiduciary Net Position The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.

GASB The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Long-Term Expected Rate of Return The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

Money-Weighted Rate of Return The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.

Municipal Bond Rate The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.

Multiple-Employer Defined Benefit Pension Plan A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

Net Pension Liability (NPL) The NPL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit pension plan.

Non-Employer Contributing Entities Non-employer contributing entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.

Normal Cost The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.

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Other Postemployment Benefits (OPEB)	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
Real Rate of Return	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
Service Cost	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total Pension Expense	The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year: 1. Service Cost 2. Interest on the Total Pension Liability 3. Current-Period Benefit Changes 4. Employee Contributions (made negative for addition here) 5. Projected Earnings on Plan Investments (made negative for addition here) 6. Pension Plan Administrative Expense 7. Other Changes in Plan Fiduciary Net Position 8. Recognition of Outflow (Inflow) of Resources due to Liabilities 9. Recognition of Outflow (Inflow) of Resources due to Assets
Total Pension Liability (TPL)	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
Unfunded Actuarial Accrued Liability (UAAL)	The UAAL is the difference between actuarial accrued liability and valuation assets.
Valuation Assets	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 67 and 68, the valuation assets are equal to the market value of assets.