Gabriel Roeder Smith & Company
Consultants & Actuaries

GENERAL ASSEMBLY RETIREMENT SYSTEM OF ILLINOIS

ANNUAL ACTUARIAL VALUATION AS OF JUNE 30, 2015

GRS
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October 27, 2015

Board of Trustees
General Assembly Retirement System
Springfield, IL

Re: General Assembly Retirement System Actuarial Valuation as of June 30, 2015

Dear Board Members:

The results of the June 30, 2015, Annual Actuarial Valuation of the General Assembly Retirement System ("GARS" or "System") are presented in this report. The purposes of the valuation were to measure the System's funding status and to determine the employer contribution rate for the fiscal year beginning July 1, 2016, and ending June 30, 2017.

The valuation was based upon information furnished by GARS staff concerning System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data.

The contribution rate has been determined under Illinois statues, in particular under 40 ILCS Section 5/2-124. Due to the court ruling recent pension reform unconstitutional, this valuation does not reflect the provisions of Public Act 98-0599. This valuation also provides historical information through fiscal year 2014 as required by the Governmental Accounting Standards Board ("GASB") Statements Nos. 25 and 27. Information required by GASB Statements Nos. 67 and 68 is provided in a separate report. The System's current contribution rate determined under the statutory funding policy may not conform to the Actuarial Standards of Practice. Therefore, the Board adopted a policy to be used to calculate the Actuarial Determined Contribution ("ADC") under GASB Statements Nos. 67 and 68 for financial reporting purposes.

Although the statutory contribution requirements were met, the statutory funding method generates a contribution requirement that is less than a reasonable actuarially determined contribution. Meeting the statutory requirement does not mean that the undersigned agree that adequate actuarial funding has been achieved. We recommend the adherence to a funding policy, such as the Board policy used to calculate the ADC under GASB Statements Nos. 67 an 68, that funds the normal cost of the plan as well as an amortization payment that seeks to pay off any unfunded accrued liability over a closed period of 20 years.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of GARS as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Alex Rivera, David Kausch and Paul Wood are Members of the American Academy of Actuaries and are independent of the plan sponsor and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

Alex Rivera, FSA, EA, MAAA	David Kausch, FSA, EA, MAAA	Paul T. Wood, ASA, MAAA
Senior Consultant	Senior Consultant	Consultant

Additional Disclosures Required by Actuarial Standards of Practice

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose stated.

The signing actuaries are independent of the plan sponsor.

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SECTION A

INTRODUCTION

Introduction

The law governing the General Assembly Retirement System ("GARS" or "System") requires the Actuary, as the technical advisor to the Board of Trustees to:

> "...make an annual valuation of the liabilities and reserves of the System, make an annual determination of the amount of contributions required from the State under this Article, and certify the results thereof to the board. (40 ILCS Section 5/2-146 (2))."

Gabriel, Roeder, Smith & Company ("GRS") has been retained by the Board of Trustees to perform an actuarial valuation as of June 30, 2015. In this report, we present the results of the valuation and the appropriation requirements under Public Act 88-0593, Public Act 93-0002, Public Act 93-0839, Public Act 94-0004 and Public Act 96-0043 for fiscal year ending June 30, 2017. Effective with fiscal year ending June 30, 2014, GASB Statement No. 67 replaced GASB Statement No. 25 for pension plan financial reporting requirements. Effective with fiscal year ending June 30, 2015, GASB Statement No. 68 is replacing GASB Statement No. 27 for employer financial reporting. Information required by GASB Statements Nos. 67 and 68 is provided in a separate report. This report also provides historical information through June 30, 2014, as required by GASB Statements Nos. 25 and 27.

The valuation was completed based upon membership and financial data provided by the administrative staff of the System. The actuarial assumptions used were based on an experience review for the five-year period ending June 30, 2012, and were adopted for use commencing with the June 30, 2013, valuation. The cost method used to determine the benefit liabilities is the Projected Unit Credit Cost Method. For valuation purposes, as well as projection purposes, actuarial value of assets are based on a 5-year smoothing method.

Changes Since Last Valuation

Legislative Changes

The following Public Acts were passed in fiscal year 2015 that affected GARS.

Public Act 98-1117 – Effective August 26, 2014, provides guidelines to implement a participant's correct benefit amount in the event of the System mistakenly setting an incorrect benefit amount, requires adopted actuarial tables to be used to determine all benefits payable by the System, and states that upon plan termination, a participant's interest in the pension fund will be non-forfeitable.

This valuation reflects the provisions of Public Act 98-1117.

Public Act 99-0232 was passed in fiscal year 2016, became effective August 3, 2015, and provides that the five state retirement systems shall conduct an actuarial experience study at least once every three years, as opposed to the prior law which required such studies to occur at least once every five years.

On November 21, 2014, Public Act 98-0599 was ruled unconstitutional and void in its entirety by the Circuit Court. Thus, this valuation does not reflect the provisions of Public Act 98-0599.

A summary of the plan provisions are included in Section G of this report.

Assumptions and Methods

At the request of the Board, a review of the opt-out percentage for future members of the System was performed. As part of this analysis, we reviewed data provided by the System going back to 2011 that showed the total number of new members that opted out of the System. Based on this data we recommended an assumption that 50 percent of future members eligible for membership in the System opt out. At the April 15, 2015, Board meeting, the Board approved this assumption for use beginning with the June 30, 2015, valuation. The cost impact of this assumption change was measured as of the June 30, 2014, valuation. Based on that valuation, the fiscal year 2016 State contribution increased as a dollar amount from $16.1 million to $22.4 million, and as a percent of pay from 126.7 percent to 195.9 percent. The increase in the State contribution was due to a lower payroll base resulting from the decrease in future population. The June 30, 2014, valuation and fiscal year 2016 State contribution were not re-certified based on this measurement.

The other assumptions and methods used are consistent with those used in the previous valuation and are based on the experience study of the General Assembly Retirement System performed for the five-year period ending June 30, 2012. We recommend that an experience review be performed based on census data from the period July 1, 2012, to June 30, 2015. As part of this study, all economic and demographic assumptions will be reviewed.

On the following page is a summary of the key valuation results for the current and prior plan years.

Key Valuation Results

Valuation Date:	June 30, 2015	June 30, 2014
Fiscal Year Ending:	June 30, 2017	June 30, 2016
Estimated Statutory Contributions:		
• Annual Amount	$ 21,721,000	$ 16,073,000
• Percentage of Projected Capped Payroll for Fiscal Year	194.949%	126.700%
Annual Determined Contribution* (ADC):		
• Annual Amount	$ 26,984,621	$ 17,140,656
• Percentage of Projected Capped Payroll for Fiscal Year	242.188%	135.117%
Membership		
• Number of		
- Active Members	145	158
- Members Receiving Payments	424	421
- Inactive Members	75	74
- Total	644	653
• Covered Payroll	$ 11,609,403	$ 12,777,821
• Annualized Benefit Payments	$ 21,548,120	$ 20,684,262
Assets		
• Market Value of Assets (MVA)	$ 54,574,264	$ 56,789,460
• Actuarial Value of Assets (AVA)	$ 52,564,685	$ 51,598,149
• Return on MVA	4.20%	16.28%
• Return on AVA	11.08%	11.60%
• Ratio – AVA to MVA	96.32%	90.86%
Actuarial Information		
• Normal Cost Amount	$ 2,191,924	$ 2,617,285
• Actuarial Accrued Liability (AAL)	$ 328,243,706	$ 323,379,470
• Unfunded Actuarial Accrued Liability (UAAL)	$ 275,679,021	$ 271,781,321
• Funded Ratio based on AVA	16.01%	15.96%
• UAAL as % of Covered Payroll	2374.62%	2126.98%
• Funded Ratio based on MVA	16.63%	17.56%

**For fiscal year ending June 30, 2016, the Annual Required Contribution (ARC) under GASB Statements Nos. 25 and 27 was determined based on a 30-year level percent of uncapped payroll amortization policy. The ARC is no longer applicable to the current accounting requirements found in GASB Statements Nos. 67 and 68. Thus, the Board adopted a recommended policy used to develop the Actuarially Determined Contribution (ADC) as defined in GASB Statements Nos. 67 and 68 for fiscal years ending on and after June 30, 2017. The policy adopted by the Board calculates the ADC as the Normal Cost plus a 20-year level percent of capped payroll closed-period amortization of the Unfunded Accrued Liability as of June 30, 2015. The ADC is used for financial reporting purposes only.*

Appropriation Requirements Under P.A. 88-0593, P.A. 93-0002, P.A. 93-0839, P.A. 94-0004 and P.A. 96-0043

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.

The above calculation provides the basis for calculating the appropriation requirements under P.A. 93-0002. For fiscal years 2005 and later, the contributions under P.A. 93-0002 start with a calculation of the contribution based upon the hypothetical asset value which assumes no infusion from the proceeds of the GOB sale that were deposited July 1, 2003 (Table 4a). This contribution is then reduced by the debt service beginning in fiscal year 2005 to produce the maximum contribution. For fiscal years 2006 and 2007, the maximum contribution is equal to the contribution amounts stated in P.A. 94-0004 for each respective year. The contribution amounts stated in P.A. 94-0004 are $4,157,000 for fiscal year 2006 and $5,220,300 for fiscal year 2007. A second projection is performed to develop the P.A. 88-0593 formula rate, which includes the GOB deposit. The lower of this formula rate with the GOB assets included and the maximum contribution is the required state appropriation (Table 4b).

Pursuant to Public Act 96-0043, for the calculation of the fiscal year 2011 contribution and beyond, the value of the System's assets shall be equal to the actuarial value of the System's assets. 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. Furthermore, for purposes of determining the required State contribution to the System for a particular year, the projected actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.

The following tables outline the reconciliation of the market value of assets and the development of the hypothetical asset value as of June 30, 2015. Also, the tables show the development of the actuarial value of assets under both the market value and the hypothetical value of assets.

Market Value of Asset Reconciliation and the Development of the Actuarial Value of Assets based upon the Market Value of Assets

1. Market Value of Assets 6/30/2014	$ 56,789,460
2. Actual State Contribution Amount	15,870,941
3. Employee Contribution Amount	1,487,346
4. Benefit Payouts & Refunds	(21,466,704)
5. Administrative Expenses	(394,695)
6. Investment Income	2,287,916
7. Market Value of Assets 6/30/2015	54,574,264
8. Expected Investment Return at 7.0%	3,820,319
9. Investment Gain/(Loss) Current Year	(1,532,403)
10. Deferred Investment Gains and (Losses) All Years	2,009,579
11. Actuarial Value of Assets 6/30/2015 (7. - 10.)	52,564,685

Development of the Hypothetical Value of Assets and the Development of the Actuarial Value of Assets based upon the Hypothetical Value of Assets

The hypothetical asset value assumes no infusion from the proceeds of the GOB sale that were deposited July 1, 2003.

1. Hypothetical Actuarial Value of Assets 6/30/2014	$ 8,662,755
2. State Contribution Amount[1]	17,963,988
3. Employee Contribution Amount	1,487,346
4. Benefit Payouts & Refunds	(21,466,704)
5. Administrative Expenses	(394,695)
6. Investment Income[2]	313,745
7. Hypothetical Value of Assets 6/30/2015	6,566,435
8. Expected Investment Return at 7.0%	523,467
9. Investment Gain/(Loss) Current Year	(209,722)
10. Deferred Investment Gains and (Losses) All Years[3]	391,822
11. Hypothetical Actuarial Value of Assets 6/30/2015 (7. - 10.)	6,174,613

[1]Represents FY 2015 no POB basic contribution. This amount was determined as part of the June 30, 2013, valuation and is based upon the hypothetical asset value which assumes no infusion from the proceeds of the GOB sale that were deposited July 1, 2003.

[2]Investment income assumes hypothetical value of assets earns the Fund's actual rate of return for fiscal year 2015 of 4.20 percent.

[3]Deferred gains and losses prior to June 30, 2012, are estimated based on hypothetical asset values disclosed in the prior actuary's reports.

The development of the actuarial smoothed value of assets with GOB proceeds and the hypothetical smoothed value of assets without GOB proceeds are provided in each respective historical valuation report GRS has produced since the GOB proceeds were deposited into the trust.

The fiscal year ending June 30, 2016, certified contribution and projected future year required State contribution rates and amounts assuming deferred investments gains and losses are recognized in the assets are as follows:

Fiscal Year Ending June 30,	Base Contribution	Assumed Capped Payroll (millions)	Total Required Contribution
2016	126.700%	$12.686	$16,073,000
2017	194.949%	11.142	21,721,000
2018	194.474%	11.213	21,806,000
2019	193.367%	11.271	21,795,000
2020	192.829%	11.318	21,825,000
2021	193.099%	11.451	22,112,000
2022	193.099%	11.392	21,997,000
2023	193.099%	11.510	22,225,000
2024	193.099%	11.526	22,257,000
2025	193.099%	11.528	22,260,000
2026	193.099%	11.629	22,456,000

For fiscal years 2017 through 2033, the base contribution may be limited by the maximum contribution determined under the assumption that the proceeds of the GOB sale were not deposited; therefore, the contribution rate is not level as a percent of pay.

Pursuant to Public Act 96-0043, the fiscal year 2017 contribution rate is calculated assuming the actuarial value of assets as of July 1, 2015, earns a rate of return equal to the System's actuarially assumed rate of return.

The contributions for fiscal years 2018 and beyond, as presented above, are developed in Tables 4c and 4d in this report. In those projections, the actuarial valuations as of June 30 for years 2016 through 2019 have been projected as though a valuation in each of those years was performed. At each projected valuation, an additional 20 percent of the investment gains and losses are recognized. The market value of assets at June 30, 2015, is assumed to have a rate of return equal to the valuation interest rate going forward. Therefore, the actuarial value of assets is calculated by adjusting the market value at each respective valuation date by the remaining percentage of the investment gains and losses. The actuarial value of assets converges to market value in 2019, when all remaining investment gains and losses have been recognized. Because the deferred asset gains and losses are incorporated into the projections, the projections found in Tables 4c and 4d do not show a stable contribution rate until the impact of the five-year asset smoothing has been fully realized.

Method of Calculation for Appropriation Requirements

The results are based on the projected unit credit actuarial cost method, the data provided and assumptions used for the June 30, 2015, actuarial valuation. In order to determine projected contribution rates and amounts, the following additional assumptions were used:

- Projected annualized payroll of $12,686,000 for fiscal year 2016, as provided by the System.
- Total employer contributions of $16,073,000 for fiscal year 2016, as provided by the System.
- Administrative expenses of $414,000 for fiscal year 2016, as provided by the System.
- New entrants whose average age is 41.81, average uncapped pay is $80,798 (2015 dollars) and average capped pay is $80,046 (2015 dollars). Based on the assumption that 50 percent of future members elect to opt out of the pension system, the population is projected to decrease from 145 members as of the valuation date, to 75 members in 2045 and ultimately reach 73 members in 2051.
- Projected benefits for members hired on or after January 1, 2011, are based on the new provisions established in P.A. 96-0889.

The average increase in total uncapped payroll for the 30-year projection period is approximately 3.5 percent per year. It is important to note that benefits for new hires are based on capped payroll which is ultimately projected to grow at 3.0 percent per year. All results in this valuation assume that State contributions will be made on capped pay.

To determine the contribution rates, the expected 2016 appropriation was converted to a percentage of the expected 2016 payroll. An amortization schedule was then determined on the assumption that:

- The ratio of total assets to total actuarial liabilities will be 90 percent by June 30, 2045.
- The actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.
- The contribution rates for fiscal years 2010 through 2033 will not be uniform, but the rate for any one of these years will be the minimum of: the difference between the "without-GOB" contribution and the debt service, and the underlying formula rate as determined by Public Act 88-0593.
- The contribution rate for fiscal year 2016 will be 126.700 percent based on expected total employer contributions of $16,073,000.
- The contribution rates for fiscal years 2034 through 2045 will be a uniform percentage of capped payroll.

The certified 2017 contribution rate of 194.949 percent is applied to expected FY 2017 capped payroll. The resulting amount of $21,721,000 is budgeted pursuant to the continuing appropriations process and deposited into the System in FY 2017.

GASB: Financial Accounting Information

In an effort to enhance the understandability and usefulness of the pension information that is included in the financial reports of pension plans for state and local governments, the Governmental Accounting Standards Board ("GASB") has issued Statement No. 25—Financial Reporting for Defined Benefit Pension Plans and Statement No. 27—Accounting for Pensions by State and Local Governmental Employers. Effective with Fiscal Year Ending June 30, 2014, Statement No. 67—Financial Reporting for Pension Plans is replacing Statement No. 25 for pension plan financial reporting requirements. Statement No. 68—Accounting and Financial Reporting for Pensions is replacing Statement No. 27 for employer financial reporting effective with fiscal year ending June 30, 2015.

Pension plan financial reporting under GASB Statements Nos. 67 and 68 is provided in a separate report. Historical information through fiscal year ending June 30, 2014, required under GASB Statements Nos. 25 and 27 can be found in Section D.

The term Annual Required Contribution ("ARC") is no longer in the GASB Statements. However, under GASB Statements Nos. 67 and 68 the Actuarial Determined Contribution ("ADC") is defined as:

> *A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with the Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.*

The ADC is presented in the financial statements as Required Supplementary Information and is compared to actual contributions to the System that are calculated under the current statutory funding policy that provides a 90 percent funded ratio in 2045. The current funding policy may not conform to the Actuarial Standards of Practice; therefore, the Board has adopted a policy to calculate the ADC for financial reporting purposes. Under this policy, the ADC is calculated as the Normal Cost plus a 20-year level percent of capped payroll closed-period amortization of the Unfunded Accrued Liability as of June 30, 2015.

The ARC and ADC for fiscal years 2016 and 2017, respectively, as well as the statutory contribution for fiscal years 2016 and 2017 are shown on the following page as a percentage of projected capped payroll. The ARC percentage and statutory contribution for 2016 are based on the results of the June 30, 2014, valuation. The dollar amount of the ARC and ADC for 2016 and 2017, respectively, and the statutory contribution for 2016 and 2017 will be the product of the actual payroll for 2016 and 2017 and the percentages shown.

	Fiscal Year 2017	Fiscal Year 2016 [1]
1. Employer normal cost	$ 2,191,924	$ 2,617,285
2. Initial amount to amortize the unfunded liability over a 20-year closed period as level percentage of capped payroll	24,792,697	14,523,371
3. ADC [(1) + (2)]	$ 26,984,621	$ 17,140,656
4. ADC as a percentage of projected capped payroll	242.188%	135.117%
5. Estimated statutory contribution	$ 21,721,000	$ 16,073,000
6. Estimated statutory contribution as a percentage of projected capped payroll	194.949%	126.700%
7. Estimated statutory contribution as a percentage of ADC [(5) ÷ (3)]	80.494%	93.771%

[1] *Fiscal year 2016 ARC is determined as the Employer Normal Cost plus a 30-year level percent of uncapped payroll open-period amortization of the Unfunded Accrued Liability.*

The significant provisions of GASB Statements Nos. 67 and 68 include:

1. Recognizing the entire Net Pension Liability (similar to the Unfunded Liability) on the balance sheet. The Net Pension Liability is comparable to the Net Pension Obligation which was recognized under GASB Statement No. 27.

2. Use of a single equivalent discount rate based on 7.00 percent for the projected benefits for all current members that can be paid from current assets and projected investment return, future employee contributions from current members, and future employer contributions attributable to current members, and a municipal bond rate for the portion of the projected benefits after assets are depleted. The applicable municipal bond rate for fiscal year end 2015 is 3.80 percent.

3. Use of market value of assets to calculate the Net Pension Liability.

4. Elimination of the Annual Pension Cost and replacing it with the Pension Expense, which is determined under a much shorter amortization period than 30 years.

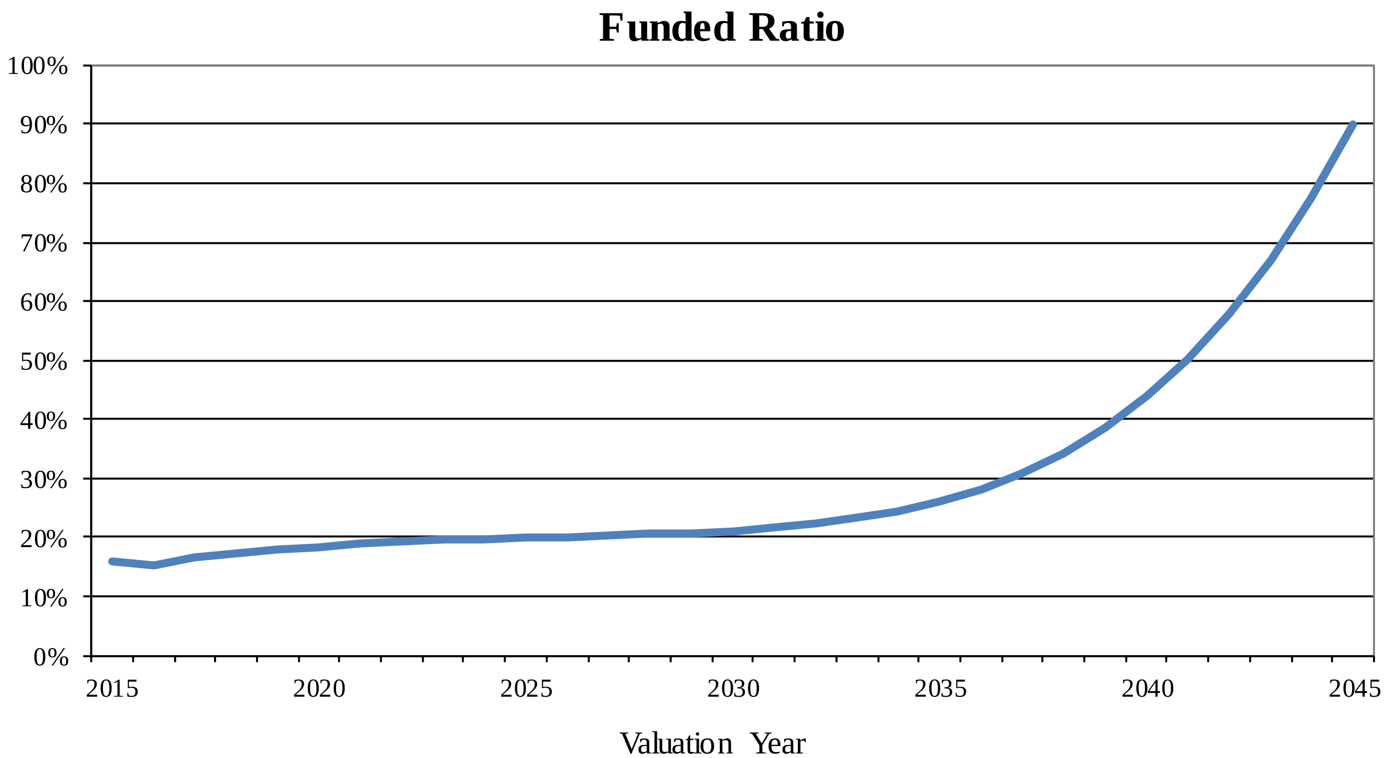
Due to the single equivalent discount rate and shorter amortization periods required under GASB Statements Nos. 67 and 68, the liabilities and pension expense will be higher and more volatile than under the current standards. The measurements required under GASB Statements Nos. 67 and 68 are provided in a separate report.

Observations on Actuarial Funding and Statutory Funding

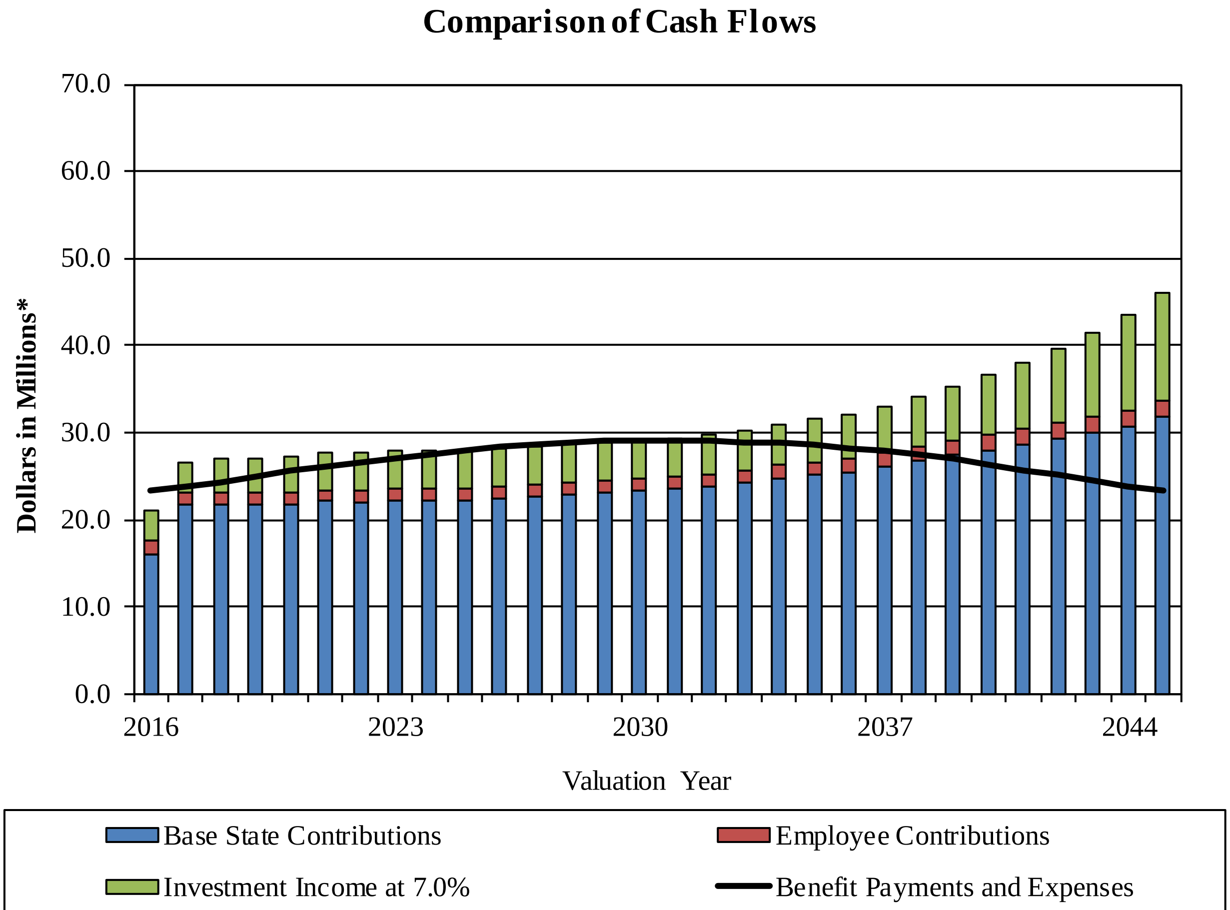
GASB Statements Nos. 25, 27, 67 and 68 provide guidance for retirement plans and plan sponsors on the development of an annual expense requirement to be reported in their annual financial statements. Under the rules established by GASB Statements Nos. 25 and 27, this expense requirement is called the Annual Required Contribution ("ARC"). The ARC is the sum of the normal cost and amortization of the unfunded accrued liability and represents the annual employer contributions that are projected to finance benefits for current plan members over a period not to exceed 30 years. GASB Statements Nos. 67 and 68, which replace GASB Statements Nos. 25 and 27, no longer use the ARC. However, measuring the Statutory Contribution against a policy such as the ARC helps evaluate the funding adequacy of the current Statutory funding method. Thus, the Board adopted a policy to calculate the Actuarial Determined Contribution ("ADC"). Under this funding policy, the ADC is calculated as the Normal Cost plus a 20-year level percent of capped payroll closed-period amortization of the Unfunded Accrued Liability as of June 30, 2015.

A key objective of the ADC is to accrue costs over the working lifetime of plan members to ensure that benefit obligations are satisfied and intergenerational equity is promoted. Although the ADC is solely an accounting provision, in certain circumstances it could represent a reasonable annual funding target and therefore is used by some plan sponsors as their de facto funding requirement. Given there is no requirement that the accounting provision for pension expense must equal the annual funding requirement, some plan sponsors adopt funding policies that differ from the ADC. However, a funding policy that differs significantly from the ADC approach could result in a potential "back-loading," meaning contributions are deferred to the future. Back-loading could result in an underfunding of the system.

The statutory funding policy adopted for GARS provides for level percent of pay funding that produces a funding target of 90 percent by 2045, assuming an open group projection. The following graph shows the projected funded ratio. A key observation is that the funded ratio does not grow markedly until after 2034. This illustrates how significantly the current funding policy defers contributions into the future and the fact that adverse experience could severely impair the System's ability to pay benefits when due.



The following graph compares the projected benefits and expenses against employer contributions, employee contributions and investment income.



**Future dollar amounts are based on assumed inflationary increases.*

The provisions of P.A. 96-0043 develop an actuarial value of assets based on five year smoothing that does not recognize deferred investment gains and losses in the projection of assets used to develop the statutory contribution. This policy has a tendency to defer contributions when plan assets experience a loss.

Given that GARS funded ratio at June 30, 2015, is only 17 percent on a market value of assets basis, and because the current statutory policy tends to back-load and defer contributions, we would advise strengthening the current statutory funding policy. Examples of other methods to strengthen the current funding policy include:

1. Increasing the 90 percent funding target,
2. Reducing the projection period needed to reach the funding target, and,
3. Separating the financing of benefits for members hired before and after December 31, 2010.

Also, the statutory contribution policy could be strengthened by changing to an ADC based funding approach with an appropriate amortization policy for each respective tiered benefit structure.

In 2014, the Society of Actuaries Blue Ribbon Panel on Public Pension Plan Funding and the Conference of Consulting Actuaries Public Plans Community both issued reports on public plan funding. Some of the common elements in those reports are to:

1. Establish a Funding Policy using Actuarially Determined Contributions.

2. Target 100 percent funded.

3. Shorten the amortization period to 15 to 20 years to avoid negative amortization of the unfunded actuarial accrued liability.

At the April 15, 2015, Board meeting, the Board adopted a policy, for purposes of financial reporting under GASB Statements Nos. 67 and 68, which provides for the annual financing of GARS' normal cost and amortizing the unfunded liability over 20 years as a level percent of capped payroll.

Finally, we strongly recommend that stress testing be performed and we will work with the Board on developing specific stress testing scenarios.

SECTION B

FUNDING RESULTS

Results of Actuarial Valuation as of June 30, 2015

1	Number of Members		
	a. Active		145
	b. Inactive:		
	i. Eligible for deferred vested pension benefits		60
	ii. Eligible for return of contributions only		15
	c. Current Benefit Recipients:		
	i. Retirement annuities		309
	ii. Survivor annuities		114
	iii. Reversionary annuities		1
	d. Total		644
2	Covered Payroll	$	11,609,403
3	Annualized Benefit Payments Currently Being Made		
	a. Retirement	$	17,941,952
	b. Survivor		3,600,168
	c. Reversionary		6,000
	d. Total	$	21,548,120
4	Actuarial Liability—Annuitants		
	a. Current Benefit Recipients:		
	i. Retirement annuities	$	226,503,624
	ii. Survivor annuities (Including Reversionary)		32,041,273
	b. Total	$	258,544,897

Table 1
(Continued)

			Normal Cost		Actuarial Liability
5	Actuarial Liability—Inactive Members			$	25,649,394
6	Active Members				
	a. Pension Benefits	$	2,054,724	$	29,418,482
	b. Cost-of-Living Adjustments		730,445		9,887,138
	c. Death Benefits		118,681		1,177,991
	d. Disability		-		-
	e. Withdrawal		332,940		3,565,804
	f. Expenses		414,000		-
	g. Total	$	3,650,790	$	44,049,415
7	Total Actuarial Liability (4 + 5 + 6)			$	328,243,706
8	Market Value of Assets (MVA)			$	54,574,264
9	Unfunded Actuarial Liability Based on MVA (7 – 8)			$	273,669,442
10	Funded Percentage Based on MVA (8 ÷ 7)				16.63%
11	Actuarial Value of Assets (AVA)			$	52,564,685
12	Unfunded Actuarial Liability Based on AVA (7 – 11)			$	275,679,021
13	Funded Percentage Based on AVA (11 ÷ 7) [1]				16.01%
14	Total Normal Cost	$	3,650,790		
15	Employee Contributions	$	1,458,866		
16	Annual Employer Normal Cost	$	2,191,924		
	(% payroll)		18.88%		

[1] *The funded status measure is appropriate for assessing the need for future contributions. The funded status is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.*

Analysis of Change in Unfunded Accrued Actuarial Liability

In addition to the expected change in the unfunded accrued actuarial liability, changes in membership demographics and fund assets have affected the valuation results. The increase in the unfunded accrued actuarial liability ("UAAL") of $3,897,700 was due to the following:

1	UAAL at 06/30/2014			$	271,781,321
2	Contributions				
	a.	Contributions due			
		i	interest on 1)	$	19,024,692
		ii	members contributions		1,487,346
		iii	employer normal cost		2,617,285
		iv	interest on ii and iii		141,232
		v	total due	$	23,270,555
	b.	Contributions paid			
		i	member contributions	$	1,487,346
		ii	state agencies		15,870,941
		iii	interest on i and ii		597,265
		iv	total paid	$	17,955,552
	c.	Expected increase in UAAL		$	5,315,003
3	Expected UAAL at 06/30/2015			$	277,096,324
4	(Gains)/Losses				
	a. investment income			$	(2,012,721)
	b. demographic				595,418
	c. total			$	(1,417,303)
5	Plan Provision Changes			$	-
6	Assumption Changes			$	-
7	Total Change in UAAL			$	3,897,700
8	UAAL at 06/30/2015			$	275,679,021

Analysis of Financial Gains and Losses in Unfunded Accrued Actuarial Liability for Fiscal Year Ending June 30, 2015

	Activity		(Gain) Loss	% of 06/30/2014 AAL
1	Actuarial (Gain)/Loss			
	a. Retirements	$	2,626,576	0.81%
	b. Incidence of Disability		-	0.00%
	c. In-Service Mortality		(1,158,729)	-0.36%
	d. Retiree Mortality and Other		591,366	0.18%
	e. Salary Increases		(976,354)	-0.30%
	f. Terminations		672,599	0.21%
	g. Investment		(2,012,721)	-0.62%
	h. New Entrant Liability		60,452	0.02%
	i. Other		(1,220,492)	-0.38%
	j. Total Actuarial (Gain)/Loss	$	(1,417,303)	-0.44%
2	Plan Provision Changes	$	-	0.00%
3	Assumption Changes	$	-	0.00%
4	Contribution (Excess)/Shortfall	$	5,315,003	1.64%
5	Total Financial (Gain)/Loss	$	3,897,700	1.20%

30-Year Projection of Costs and Liabilities
State Contribution Based on Public Act 88-0593, Public Act 94-0004, Public Act 96-0043
Maximum Contribution Calculation: Without GOB Proceeds
Rate of Return on Assets = 7.0%
(All Dollar Amounts in Millions)

							Annual Normal Cost				State Contribution		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Amount	Percent of Pay	Total Expenses
2016	140	$330.92	$3.12	$327.80	0.94%	$12.69	$ 3.65	$1.46	$2.19	17.26%	$18.44	145.31%	$23.27
2017	136	333.26	6.11	327.15	1.83%	11.14	3.55	1.28	2.27	20.38%	25.09	225.16%	23.69
2018	132	335.05	8.79	326.26	2.62%	11.21	3.53	1.29	2.24	19.98%	25.25	225.16%	24.36
2019	128	336.26	11.15	325.11	3.32%	11.27	3.49	1.30	2.19	19.43%	25.38	225.16%	24.99
2020	125	336.91	13.20	323.71	3.92%	11.32	3.43	1.30	2.13	18.82%	25.48	225.16%	25.55
2021	120	336.97	15.19	321.78	4.51%	11.45	3.33	1.32	2.01	17.55%	25.78	225.16%	26.07
2022	117	336.38	16.59	319.79	4.93%	11.39	3.27	1.31	1.96	17.21%	25.65	225.16%	26.64
2023	113	335.23	17.93	317.30	5.35%	11.51	3.19	1.32	1.87	16.25%	25.92	225.16%	27.07
2024	109	333.39	18.87	314.52	5.66%	11.53	3.12	1.33	1.79	15.52%	25.95	225.16%	27.58
2025	106	330.92	19.48	311.44	5.89%	11.53	3.02	1.33	1.69	14.66%	25.96	225.16%	27.97
2026	103	327.90	20.06	307.84	6.12%	11.63	2.96	1.34	1.62	13.93%	26.18	225.16%	28.27
2027	101	324.35	20.63	303.72	6.36%	11.71	2.91	1.35	1.56	13.32%	26.37	225.16%	28.53
2028	98	320.30	21.48	298.82	6.71%	11.90	2.88	1.37	1.51	12.69%	26.80	225.16%	28.75
2029	96	315.60	22.26	293.34	7.05%	11.96	2.80	1.38	1.42	11.87%	26.94	225.16%	29.01
2030	94	310.46	23.45	287.01	7.55%	12.14	2.77	1.40	1.37	11.29%	27.34	225.16%	29.09

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004 and Public Act 96-0043.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

30-Year Projection of Costs and Liabilities
State Contribution Based on Public Act 88-0593, Public Act 94-0004, Public Act 96-0043
Maximum Contribution Calculation: Without GOB Proceeds
Rate of Return on Assets = 7.0%
(All Dollar Amounts in Millions)

Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Annual Normal Cost: Total	Annual Normal Cost: Employee Cont.	Annual Normal Cost: Balance	Annual Normal Cost: Percent of Pay	State Contribution: Amount	State Contribution: Percent of Pay	Total Expenses
2031	92	$304.96	$25.19	$279.77	8.26%	$12.33	$2.75	$1.42	$1.33	10.79%	$27.76	225.16%	$29.09
2032	90	299.15	27.58	271.57	9.22%	12.50	2.73	1.44	1.29	10.32%	28.15	225.16%	28.98
2033	88	292.98	30.67	262.31	10.47%	12.69	2.70	1.46	1.24	9.77%	28.56	225.16%	28.91
2034	86	286.45	34.48	251.97	12.04%	12.85	2.67	1.48	1.19	9.26%	28.94	225.16%	28.81
2035	84	279.74	39.27	240.47	14.04%	13.03	2.66	1.50	1.16	8.90%	29.33	225.16%	28.53
2036	83	272.93	45.19	227.74	16.56%	13.20	2.66	1.52	1.14	8.64%	29.72	225.16%	28.18
2037	82	266.00	52.65	213.35	19.79%	13.52	2.67	1.55	1.12	8.28%	30.45	225.16%	27.84
2038	81	259.04	61.87	197.17	23.88%	13.85	2.71	1.59	1.12	8.09%	31.19	225.16%	27.43
2039	80	252.19	73.08	179.11	28.98%	14.18	2.75	1.63	1.12	7.90%	31.93	225.16%	26.90
2040	79	245.44	86.45	158.99	35.22%	14.51	2.77	1.67	1.10	7.58%	32.67	225.16%	26.37
2041	78	238.90	102.23	136.67	42.79%	14.85	2.82	1.71	1.11	7.47%	33.44	225.16%	25.74
2042	77	232.55	120.56	111.99	51.84%	15.19	2.85	1.75	1.10	7.24%	34.21	225.16%	25.15
2043	76	226.42	141.65	84.77	62.56%	15.54	2.89	1.79	1.10	7.08%	34.99	225.16%	24.55
2044	76	220.59	165.74	54.85	75.13%	15.90	2.94	1.83	1.11	6.98%	35.79	225.16%	23.91
2045	75	214.99	193.48	21.51	90.00%	16.46	3.02	1.89	1.13	6.87%	37.07	225.16%	23.36

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004 and Public Act 96-0043.
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Actuarial accrued liability and assets are measured at Plan Year End.
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30-Year Projection of Costs and Liabilities
State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043
Rate of Return on Assets = 7.0%
(All Dollar Amounts in Millions)

							Annual Normal Cost				Required State Contribution						
											(a)	(b)	(c)=(a)-(b)	(d)	Minimum of (c) and (d)		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Without GOB Cont.	Debt Service	Maximum Cont.	Formula Rate With GOB	Required Cont.	Percent of Pay	Total Expenses
2016	140	$330.92	$50.30	$280.62	15.20%	$12.69	$3.65	$1.46	$2.19	17.26%	$18.44	$2.12	$16.32	$16.07	$16.07	126.70%	$23.27
2017	136	333.26	53.12	280.14	15.94%	11.14	3.55	1.28	2.27	20.38%	25.09	2.20	22.89	21.72	21.72	194.95%	23.69
2018	132	335.05	55.58	279.47	16.59%	11.21	3.53	1.29	2.24	19.98%	25.25	2.28	22.97	21.86	21.86	194.95%	24.36
2019	128	336.26	57.69	278.57	17.16%	11.27	3.49	1.30	2.19	19.43%	25.38	2.34	23.04	21.97	21.97	194.95%	24.99
2020	125	336.91	59.47	277.44	17.65%	11.32	3.43	1.30	2.13	18.82%	25.48	2.49	22.99	22.07	22.07	194.95%	25.55
2021	120	336.97	61.12	275.85	18.14%	11.45	3.33	1.32	2.01	17.55%	25.78	2.64	23.14	22.32	22.32	194.95%	26.07
2022	117	336.38	62.17	274.21	18.48%	11.39	3.27	1.31	1.96	17.21%	25.65	2.77	22.88	22.21	22.21	194.95%	26.64
2023	113	335.23	63.10	272.13	18.82%	11.51	3.19	1.32	1.87	16.25%	25.92	2.90	23.02	22.44	22.44	194.95%	27.07
2024	109	333.39	63.61	269.78	19.08%	11.53	3.12	1.33	1.79	15.52%	25.95	3.11	22.84	22.47	22.47	194.95%	27.58
2025	106	330.92	63.75	267.17	19.26%	11.53	3.02	1.33	1.69	14.66%	25.96	3.31	22.65	22.47	22.47	194.95%	27.97
2026	103	327.90	63.80	264.10	19.46%	11.63	2.96	1.34	1.62	13.93%	26.18	3.38	22.80	22.67	22.67	194.95%	28.27
2027	101	324.35	63.77	260.58	19.66%	11.71	2.91	1.35	1.56	13.32%	26.37	3.46	22.91	22.83	22.83	194.95%	28.53
2028	98	320.30	63.89	256.41	19.95%	11.90	2.88	1.37	1.51	12.69%	26.80	3.62	23.18	23.20	23.18	194.72%	28.75
2029	96	315.60	63.74	251.86	20.20%	11.96	2.80	1.38	1.42	11.87%	26.94	3.77	23.17	23.32	23.17	193.66%	29.01
2030	94	310.46	63.70	246.76	20.52%	12.14	2.77	1.40	1.37	11.29%	27.34	3.99	23.35	23.67	23.35	192.28%	29.09

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(All Dollar Amounts in Millions)

							Annual Normal Cost				Required State Contribution						
											(a)	(b)	(c)=(a)-(b)	(d)	Minimum of (c) and (d)		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Without GOB Cont.	Debt Service	Maximum Cont.	Formula Rate With GOB	Required Cont.	Percent of Pay	Total Expenses
2031	92	$304.96	$63.91	$241.05	20.96%	$12.33	$2.75	$1.42	$1.33	10.79%	$27.76	$4.19	$23.57	$24.04	$23.57	191.12%	$29.09
2032	90	299.15	64.58	234.57	21.59%	12.50	2.73	1.44	1.29	10.32%	28.15	4.29	23.86	24.38	23.86	190.85%	28.98
2033	88	292.98	65.83	227.15	22.47%	12.69	2.70	1.46	1.24	9.77%	28.56	4.28	24.28	24.73	24.28	191.44%	28.91
2034	86	286.45	68.09	218.36	23.77%	12.85	2.67	1.48	1.19	9.26%	28.94	0.00	N/A	25.06	25.06	194.95%	28.81
2035	84	279.74	71.16	208.58	25.44%	13.03	2.66	1.50	1.16	8.90%	29.33	0.00	N/A	25.40	25.40	194.95%	28.53
2036	83	272.93	75.18	197.75	27.55%	13.20	2.66	1.52	1.14	8.64%	29.72	0.00	N/A	25.73	25.73	194.95%	28.18
2037	82	266.00	80.52	185.48	30.27%	13.52	2.67	1.55	1.12	8.28%	30.45	0.00	N/A	26.36	26.36	194.95%	27.84
2038	81	259.04	87.36	171.68	33.72%	13.85	2.71	1.59	1.12	8.09%	31.19	0.00	N/A	27.00	27.00	194.95%	27.43
2039	80	252.19	95.93	156.26	38.04%	14.18	2.75	1.63	1.12	7.90%	31.93	0.00	N/A	27.64	27.64	194.95%	26.90
2040	79	245.44	106.36	139.08	43.33%	14.51	2.77	1.67	1.10	7.58%	32.67	0.00	N/A	28.29	28.29	194.95%	26.37
2041	78	238.90	118.89	120.01	49.77%	14.85	2.82	1.71	1.11	7.47%	33.44	0.00	N/A	28.96	28.96	194.95%	25.74
2042	77	232.55	133.64	98.91	57.47%	15.19	2.85	1.75	1.10	7.24%	34.21	0.00	N/A	29.62	29.62	194.95%	25.15
2043	76	226.42	150.78	75.64	66.59%	15.54	2.89	1.79	1.10	7.08%	34.99	0.00	N/A	30.30	30.30	194.95%	24.55
2044	76	220.59	170.55	50.04	77.32%	15.90	2.94	1.83	1.11	6.98%	35.79	0.00	N/A	30.99	30.99	194.95%	23.91
2045	75	214.99	193.48	21.51	90.00%	16.46	3.02	1.89	1.13	6.87%	37.07	0.00	N/A	32.09	32.09	194.95%	23.36

Normal cost rate includes administrative expenses.
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Total expenses shown include benefit payments, refunds and administrative expenses.
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30-Year Projection of Costs and Liabilities
State Contribution Based on Public Act 88-0593, Public Act 94-0004, Public Act 96-0043
Maximum Contribution Calculation: Without GOB Proceeds
Rate of Return on Assets = 7.0%
Phase-In of Deferred Asset Gains and Losses Recognized in the Projected Actuarial Value of Assets
(All Dollar Amounts in Millions)

							Annual Normal Cost				State Contribution		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Amount	Percent of Pay	Total Expenses
2016	140	$330.92	$3.19	$327.73	0.96%	$12.69	$3.65	$1.46	$2.19	17.26%	$18.44	145.31%	$23.27
2017	136	333.26	6.47	326.79	1.94%	11.14	3.55	1.28	2.27	20.38%	25.09	225.16%	23.69
2018	132	335.05	9.31	325.74	2.78%	11.21	3.53	1.29	2.24	19.98%	25.24	225.11%	24.36
2019	128	336.26	11.62	324.64	3.46%	11.27	3.49	1.30	2.19	19.43%	25.35	224.91%	24.99
2020	125	336.91	13.68	323.23	4.06%	11.32	3.43	1.30	2.13	18.82%	25.45	224.82%	25.55
2021	120	336.97	15.66	321.31	4.65%	11.45	3.33	1.32	2.01	17.55%	25.75	224.85%	26.07
2022	117	336.38	17.05	319.33	5.07%	11.39	3.27	1.31	1.96	17.21%	25.61	224.85%	26.64
2023	113	335.23	18.38	316.85	5.48%	11.51	3.19	1.32	1.87	16.25%	25.88	224.85%	27.07
2024	109	333.39	19.32	314.07	5.80%	11.53	3.12	1.33	1.79	15.52%	25.92	224.85%	27.58
2025	106	330.92	19.93	310.99	6.02%	11.53	3.02	1.33	1.69	14.66%	25.92	224.85%	27.97
2026	103	327.90	20.50	307.40	6.25%	11.63	2.96	1.34	1.62	13.93%	26.15	224.85%	28.27
2027	101	324.35	21.07	303.28	6.50%	11.71	2.91	1.35	1.56	13.32%	26.33	224.85%	28.53
2028	98	320.30	21.91	298.39	6.84%	11.90	2.88	1.37	1.51	12.69%	26.76	224.85%	28.75
2029	96	315.60	22.68	292.92	7.19%	11.96	2.80	1.38	1.42	11.87%	26.90	224.85%	29.01
2030	94	310.46	23.86	286.60	7.69%	12.14	2.77	1.40	1.37	11.29%	27.30	224.85%	29.09

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004 and Public Act 96-0043.
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Phase-In of Deferred Asset Gains and Losses Recognized in the Projected Actuarial Value of Assets
(All Dollar Amounts in Millions)

							Annual Normal Cost				State Contribution		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Amount	Percent of Pay	Total Expenses
2031	92	$304.96	$25.58	$279.38	8.39%	$12.33	$2.75	$1.42	$1.33	10.79%	$27.72	224.85%	$29.09
2032	90	299.15	27.96	271.19	9.35%	12.50	2.73	1.44	1.29	10.32%	28.12	224.85%	28.98
2033	88	292.98	31.03	261.95	10.59%	12.69	2.70	1.46	1.24	9.77%	28.52	224.85%	28.91
2034	86	286.45	34.83	251.62	12.16%	12.85	2.67	1.48	1.19	9.26%	28.90	224.85%	28.81
2035	84	279.74	39.60	240.14	14.16%	13.03	2.66	1.50	1.16	8.90%	29.29	224.85%	28.53
2036	83	272.93	45.50	227.43	16.67%	13.20	2.66	1.52	1.14	8.64%	29.68	224.85%	28.18
2037	82	266.00	52.94	213.06	19.90%	13.52	2.67	1.55	1.12	8.28%	30.40	224.85%	27.84
2038	81	259.04	62.13	196.91	23.98%	13.85	2.71	1.59	1.12	8.09%	31.14	224.85%	27.43
2039	80	252.19	73.32	178.87	29.07%	14.18	2.75	1.63	1.12	7.90%	31.88	224.85%	26.90
2040	79	245.44	86.65	158.79	35.30%	14.51	2.77	1.67	1.10	7.58%	32.62	224.85%	26.37
2041	78	238.90	102.40	136.50	42.86%	14.85	2.82	1.71	1.11	7.47%	33.40	224.85%	25.74
2042	77	232.55	120.70	111.85	51.90%	15.19	2.85	1.75	1.10	7.24%	34.16	224.85%	25.15
2043	76	226.42	141.74	84.68	62.60%	15.54	2.89	1.79	1.10	7.08%	34.94	224.85%	24.55
2044	76	220.59	165.79	54.80	75.16%	15.90	2.94	1.83	1.11	6.98%	35.74	224.85%	23.91
2045	75	214.99	193.48	21.51	90.00%	16.46	3.02	1.89	1.13	6.87%	37.02	224.85%	23.36

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004 and Public Act 96-0043.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

30-Year Projection of Costs and Liabilities
State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043
Rate of Return on Assets = 7.0%
Phase-In of Deferred Asset Gains and Losses Recognized in the Projected Actuarial Value of Assets
(All Dollar Amounts in Millions)

							Annual Normal Cost				Required State Contribution						
											(a)	(b)	(c)=(a)-(b)	(d)	Minimum of (c) and (d)		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Without GOB Cont.	Debt Service	Maximum Cont.	Formula Rate With GOB	Required Cont.	Percent of Pay	Total Expenses
2016	140	$330.92	$50.88	$280.04	15.38%	$12.69	$3.65	$1.46	$2.19	17.26%	$18.44	$2.12	$16.32	$16.07	$16.07	126.70%	$23.27
2017	136	333.26	55.08	278.18	16.53%	11.14	3.55	1.28	2.27	20.38%	25.09	2.20	22.89	21.72	21.72	194.95%	23.69
2018	132	335.05	58.30	276.75	17.40%	11.21	3.53	1.29	2.24	19.98%	25.24	2.27	22.97	21.81	21.81	194.47%	24.36
2019	128	336.26	60.09	276.17	17.87%	11.27	3.49	1.30	2.19	19.43%	25.35	2.34	23.01	21.79	21.79	193.37%	24.99
2020	125	336.91	61.78	275.13	18.34%	11.32	3.43	1.30	2.13	18.82%	25.45	2.50	22.95	21.83	21.83	192.83%	25.55
2021	120	336.97	63.38	273.59	18.81%	11.45	3.33	1.32	2.01	17.55%	25.75	2.64	23.11	22.11	22.11	193.10%	26.07
2022	117	336.38	64.36	272.02	19.13%	11.39	3.27	1.31	1.96	17.21%	25.61	2.77	22.84	22.00	22.00	193.10%	26.64
2023	113	335.23	65.23	270.00	19.46%	11.51	3.19	1.32	1.87	16.25%	25.88	2.90	22.98	22.22	22.22	193.10%	27.07
2024	109	333.39	65.66	267.73	19.69%	11.53	3.12	1.33	1.79	15.52%	25.92	3.11	22.81	22.26	22.26	193.10%	27.58
2025	106	330.92	65.72	265.20	19.86%	11.53	3.02	1.33	1.69	14.66%	25.92	3.30	22.62	22.26	22.26	193.10%	27.97
2026	103	327.90	65.69	262.21	20.03%	11.63	2.96	1.34	1.62	13.93%	26.15	3.39	22.76	22.46	22.46	193.10%	28.27
2027	101	324.35	65.57	258.78	20.22%	11.71	2.91	1.35	1.56	13.32%	26.33	3.46	22.87	22.62	22.62	193.10%	28.53
2028	98	320.30	65.61	254.69	20.48%	11.90	2.88	1.37	1.51	12.69%	26.76	3.62	23.14	22.98	22.98	193.10%	28.75
2029	96	315.60	65.52	250.08	20.76%	11.96	2.80	1.38	1.42	11.87%	26.90	3.77	23.13	23.10	23.10	193.10%	29.01
2030	94	310.46	65.56	244.90	21.12%	12.14	2.77	1.40	1.37	11.29%	27.30	3.99	23.31	23.45	23.31	191.97%	29.09

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004 and Public Act 96-0043.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

30-Year Projection of Costs and Liabilities
State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043
Rate of Return on Assets = 7.0%
Phase-In of Deferred Asset Gains and Losses Recognized in the Projected Actuarial Value of Assets
(All Dollar Amounts in Millions)

							Annual Normal Cost				Required State Contribution						
											(a)	(b)	(c)=(a)-(b)	(d)	Minimum of (c) and (d)		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Without GOB Cont.	Debt Service	Maximum Cont.	Formula Rate With GOB	Required Cont.	Percent of Pay	Total Expenses
2031	92	$304.96	$65.87	$239.09	21.60%	$12.33	$2.75	$1.42	$1.33	10.79%	$27.72	$4.19	$23.53	$23.81	$23.53	190.81%	$29.09
2032	90	299.15	66.63	232.52	22.27%	12.50	2.73	1.44	1.29	10.32%	28.12	4.30	23.82	24.15	23.82	190.53%	28.98
2033	88	292.98	67.98	225.00	23.20%	12.69	2.70	1.46	1.24	9.77%	28.52	4.28	24.24	24.49	24.24	191.13%	28.91
2034	86	286.45	70.14	216.31	24.49%	12.85	2.67	1.48	1.19	9.26%	28.90	0.00	N/A	24.82	24.82	193.10%	28.81
2035	84	279.74	73.11	206.63	26.13%	13.03	2.66	1.50	1.16	8.90%	29.29	0.00	N/A	25.15	25.15	193.10%	28.53
2036	83	272.93	77.02	195.91	28.22%	13.20	2.66	1.52	1.14	8.64%	29.68	0.00	N/A	25.49	25.49	193.10%	28.18
2037	82	266.00	82.22	183.78	30.91%	13.52	2.67	1.55	1.12	8.28%	30.40	0.00	N/A	26.11	26.11	193.10%	27.84
2038	81	259.04	88.91	170.13	34.32%	13.85	2.71	1.59	1.12	8.09%	31.14	0.00	N/A	26.74	26.74	193.10%	27.43
2039	80	252.19	97.32	154.87	38.59%	14.18	2.75	1.63	1.12	7.90%	31.88	0.00	N/A	27.38	27.38	193.10%	26.90
2040	79	245.44	107.57	137.87	43.83%	14.51	2.77	1.67	1.10	7.58%	32.62	0.00	N/A	28.02	28.02	193.10%	26.37
2041	78	238.90	119.91	118.99	50.19%	14.85	2.82	1.71	1.11	7.47%	33.40	0.00	N/A	28.68	28.68	193.10%	25.74
2042	77	232.55	134.44	98.11	57.81%	15.19	2.85	1.75	1.10	7.24%	34.16	0.00	N/A	29.34	29.34	193.10%	25.15
2043	76	226.42	151.34	75.08	66.84%	15.54	2.89	1.79	1.10	7.08%	34.94	0.00	N/A	30.01	30.01	193.10%	24.55
2044	76	220.59	170.84	49.75	77.45%	15.90	2.94	1.83	1.11	6.98%	35.74	0.00	N/A	30.69	30.69	193.10%	23.91
2045	75	214.99	193.48	21.51	90.00%	16.46	3.02	1.89	1.13	6.87%	37.02	0.00	N/A	31.79	31.79	193.10%	23.36

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004 and Public Act 96-0043.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

SECTION C

FUND ASSETS

General Assembly Retirement System of Illinois
Statement of Fiduciary Net Position
Years ended June 30, 2015 and 2014

	2015	2014
Assets		
Cash	$ 4,904,253	$ 4,767,584
Receivables:		
Contributions:		
Participants	$ 63	$ 63
Employer - GRF Fund	658,709	577,370
Other accounts	8,518	12,445
	$ 667,290	$ 589,878
Investments - held in the Illinois State Board of Investment Commingled Fund at fair value	$ 49,165,676	$ 51,549,374
Securities lending collateral with State Treasurer	2,174,000	2,269,000
Property and equipment, net of accumulated depreciation	$ 9,118	$ 3,187
Total Assets	$ 56,920,337	$ 59,179,023
Liabilities		
Benefits payable	$ 1,823	$ 16,294
Refunds payable	38,627	5,210
Administrative expenses payable	36,918	27,520
Participants' deferred service credit accounts	-	-
Due to Judges' Retirement System of Illinois	94,705	71,539
Securities lending collateral with State Treasurer	2,174,000	2,269,000
Total Liabilities	$ 2,346,073	$ 2,389,563
Net assets held in trust for pension benefits	$ 54,574,264	$ 56,789,460

General Assembly Retirement System of Illinois
Statement of Changes in Fiduciary Net Position
Years ended June 30, 2015 and 2014

	2015	2014
Additions:		
Contributions:		
Participants	$ 1,487,346	$ 1,502,605
Employing state agencies and appropriations	15,870,941	13,956,669
Total Contributions revenue	$ 17,358,287	$ 15,459,274
Investments income:		
Net investments income	$ 1,497,169	$ 1,357,215
Interest earned on cash balances	21,614	17,838
Net appreciation in fair value of investments	769,133	6,988,375
Total Investments income	$ 2,287,916	$ 8,363,428
Other:		
Miscellaneous	$ -	$ -
Total Investments income	$ -	$ -
Total Additions	$ 19,646,203	$ 23,822,702
Deductions:		
Benefits:		
Retirement annuities	$ 17,663,009	$ 17,218,504
Survivors' annuities	3,611,940	3,581,998
Disability benefits	-	-
Lump-sum benefits	-	-
Total Benefits	$ 21,274,949	$ 20,800,502
Refunds	191,755	245,133
Administrative	394,695	334,628
Total Deductions	$ 21,861,399	$ 21,380,263
Net increase	$ (2,215,196)	$ 2,442,439
Net assets held in trust for pension benefits:		
Beginning of year	$ 56,789,460	$ 54,347,021
End of year	$ 54,574,264	$ 56,789,460

General Assembly Retirement System of Illinois
DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS - ACTUAL ASSETS

Year Ending June 30	2015	2016	2017	2018	2019
Beginning of Year:					
(1) Market Value of Assets	$ 56,789,460				
(2) Actuarial Value of Assets	51,598,149				
End of Year:					
(3) Market Value of Assets	54,574,264				
(4) Contributions and Disbursements					
(4a) Actual State Contribution Amount	15,870,941				
(4b) Employee Contribution Amount	1,487,346				
(4c) Benefit Payouts & Refunds	(21,466,704)				
(4d) Administrative Expenses	(394,695)				
(4e) Net of Contributions and Disbursements	(4,503,112)				
(5) Total Investment Income =(3)-(1)-(4e)	2,287,916				
(6) Projected Rate of Return	7.00%				
(7) Projected Investment Income =(1)x(6)+([1+(6)]^.5-1)x(4e)	3,820,319				
(8) Investment Income in Excess of Projected Income	(1,532,403)				
(9) Excess Investment Income Recognized This Year (5-year recognition)					
(9a) From This Year	$ (306,481)				
(9b) From One Year Ago	952,573	$ (306,481)			
(9c) From Two Years Ago	593,752	952,573	$ (306,481)		
(9d) From Three Years Ago	(809,728)	593,752	952,573	$ (306,481)	
(9e) From Four Years Ago	1,219,213	(809,725)	593,754	952,574	$ (306,479)
(9f) Total Recognized Investment Gain	1,649,329	430,119	1,239,846	646,093	(306,479)
(10) Change in Actuarial Value of Assets =(4e)+(7)+(9f)	$ 966,536				
End of Year:					
(3) Market Value of Assets	**$ 54,574,264**				
(11) Actuarial Value of Assets =(2)+(10)	**$ 52,564,685**				

General Assembly Retirement System of Illinois
DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS - HYPOTHETICAL ASSETS

Year Ending June 30	2015	2016	2017	2018	2019
Beginning of Year:					
(1) Hypothetical Value of Assets	$ 8,662,755				
(2) Hypothetical Actuarial Value of Assets	7,629,044				
End of Year:					
(3) Hypothetical Value of Assets	6,566,435				
(4) Contributions and Disbursements					
(4a) State Contribution Amount[1]	17,963,988				
(4b) Employee Contribution Amount	1,487,346				
(4c) Benefit Payouts & Refunds	(21,466,704)				
(4d) Administrative Expenses	(394,695)				
(4e) Net of Contributions and Disbursements	(2,410,065)				
(5) Total Investment Income2					
=(3)-(1)-(4e)	313,745				
(6) Projected Rate of Return	7.00%				
(7) Projected Investment Income					
=(1)x(6)+([1+(6)]^.5-1)x(4e)	523,467				
(8) Investment Income in					
Excess of Projected Income	(209,722)				
(9) Excess Investment Income Recognized[3]					
This Year (5-year recognition)					
(9a) From This Year	$ (41,944)				
(9b) From One Year Ago	170,852	$ (41,944)			
(9c) From Two Years Ago	128,954	170,852	$ (41,944)		
(9d) From Three Years Ago	(210,863)	128,954	170,852	$ (41,944)	
(9e) From Four Years Ago	385,168	(210,863)	128,954	170,851	$ (41,946)
(9f) Total Recognized Investment Gain	432,167	46,999	257,862	128,907	(41,946)
(10) Change in Hypothetical Actuarial Value of Assets					
=(4e)+(7)+(9f)	$ (1,454,431)				
End of Year:					
(3) Hypothetical Market Value of Assets	**$ 6,566,435**				
(11) Hypothetical Actuarial Value of Assets					
=(2)+(10)	**$ 6,174,613**				

[1] *Represents FY 2015 no POB basic contribution. This amount was determined as part of the June 30, 2013, valuation and is based upon the hypothetical asset value which assumes no infusion from the proceeds of the GOB sale that were deposited July 1, 2003.*

[2] *Investment income assumes hypothetical value of assets earns the Fund's actual rate of return for fiscal year 2015 of 4.20%.*

[3] *Deferred gains and losses prior to June 30, 2012, are estimated based on hypothetical asset values disclosed in the prior actuary's reports.*

SECTION D

HISTORICAL ACCOUNTING DISCLOSURES

The measurements required under GASB Statements Nos. 67 and 68 are provided in a separate report.

GASB Disclosure

Prior to fiscal year ending June 30, 2014, the accounting policies of the State of Illinois relative to its retirement systems were based on the terms of GASB Statements Nos. 25 and 27. Effective with fiscal year ending June 30, 2014, GASB Statement No. 67 replaced GASB Statement No. 25 for pension plan financial reporting. Effective with fiscal year ending June 30, 2015, GASB Statement No. 68 is replacing GASB Statement No. 27 for employer financial reporting. A separate report containing the information required by GASB Statements Nos. 67 and 68 has been provided to the System. Table Five below and Table Six on page 33 provide historical GASB Statements Nos. 25 and 27 information. Historical information regarding GASB Statements Nos. 25 and 27 will no longer be provided in valuation reports subsequent to June 30, 2015.

Table 5

Historical Financial Accounting Information in Accordance with GASB Statement No. 27

A. Historical Schedule of Funding Progress

	6/30/2014	6/30/2013	6/30/2012
1 Actuarial Value of Assets	$ 51,598,149	$ 51,849,558	$ 56,090,081
2 Actuarial Accrued Liability (AAL)	323,379,470	320,461,498	303,469,263
3 Unfunded AAL (UAAL) [(2) - (1)]	271,781,321	268,611,940	247,379,182
4 Funded Ratio [(1) ÷ (2)]	15.96%	16.18%	18.48%
5 Covered Payroll	12,777,821	12,954,801	14,004,122
6 UAAL as a Percentage of Covered Payroll	2126.98%	2073.45%	1766.47%

B. Historical Schedule of Employer Contributions for the Fiscal Year End

	6/30/2014	6/30/2013	6/30/2012
1 Annual Required Contribution (ARC) per GASB			
(a) Percentage of payroll	133.905%	131.724%	95.442%
(b) Covered payroll for fiscal year	$12,777,821	$12,954,801	$14,004,122
(c) ARC for fiscal year	17,110,135	17,064,640	13,365,820
2 Total Employer Contribution	13,956,669	14,150,000	10,502,000
3 Percentage of ARC Contributed [(2) ÷ (1)]	81.57%	82.92%	78.57%
4 Annual Contribution Required per State Statute			
(a) Percentage of payroll	108.438%	109.226%	74.992%
(b) Covered payroll for fiscal year	12,777,821	12,954,801	14,004,122
(c) Total required contribution	13,856,000	14,150,000	10,502,000
5 Employer Contribution	13,956,669	14,150,000	10,502,000
6 Percentage of (4) Contributed [(5) ÷ (4)]	100.73%	100.00%	100.00%

Table 5
(Continued)

C. Notes to Required Schedules

1. The cost method used to determine the ARC is the Projected Unit Credit Cost Method. The ARC (as percentage of payroll) for each fiscal year was determined as of the valuation two years prior, based on the assumptions then in effect.
2. The assets are shown at actuarial value.
3. Economic assumptions include an inflation rate of 3.0 percent; an investment return rate of 8.0 percent through the June 30, 2010, valuation and 7.00 percent thereafter; salary increase rates based on age-related productivity and merit rates plus inflation; and postretirement benefit increases of 3.0 percent.
4. The amortization method is an open 30-year period, level percent of projected uncapped payroll.

Historical Development of Net Pension Obligation in Accordance with GASB Statement No. 27 (Date of Transition is July 1, 1996)

Fiscal Year	Annual Required Contribution*	Beginning of Year NPO	Interest on NPO	Amortization of NPO	Annual Pension Cost (APC) (2 + 4 - 5)	Actual Contribution**	Increase in NPO (6 - 7)	End of Year NPO (3 + 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7/1/90 - 6/30/91	-	-	-	-	-	-	-	$ 7,624,282
7/1/91 - 6/30/92	5,513,388	7,624,282	609,943	613,116	5,510,215	1,965,600	3,544,615	11,168,897
7/1/92 - 6/30/93	5,668,411	11,168,897	893,512	898,161	5,663,762	2,201,000	3,462,762	14,631,659
7/1/93 - 6/30/94	6,462,239	14,631,659	1,170,533	1,176,623	6,456,149	2,116,800	4,339,349	18,971,008
7/1/94 - 6/30/95	7,168,649	18,971,008	1,517,681	1,525,577	7,160,753	2,148,200	5,012,553	23,983,561
7/1/95 - 6/30/96	7,942,130	23,983,561	1,918,685	1,928,668	7,932,147	2,400,000	5,532,147	29,515,708
7/1/96 - 6/30/97	4,939,052	29,515,708	2,361,257	1,256,201	6,044,108	2,787,074	3,257,034	32,772,742
7/1/97 - 6/30/98	5,318,505	32,772,742	2,621,819	1,394,822	6,545,502	3,113,000	3,432,502	36,205,244
7/1/98 - 6/30/99	6,092,002	36,205,244	2,896,420	1,540,911	7,447,511	3,699,758	3,747,753	39,952,997
7/1/99 - 6/30/00	6,311,995	39,952,997	3,196,240	1,700,417	7,807,818	3,951,000	3,856,818	43,809,815
7/1/00 - 6/30/01	6,530,519	43,809,815	3,504,785	1,864,565	8,170,739	4,311,909	3,858,830	47,668,645
7/1/01 - 6/30/02	6,961,911	47,668,645	3,813,492	2,028,798	8,746,605	4,721,478	4,025,127	51,693,772
7/1/02 - 6/30/03	7,752,005	51,693,772	4,135,502	2,369,318	9,518,189	5,433,781	4,084,408	55,778,180
7/1/03 - 6/30/04	8,894,016	55,778,180	4,462,254	2,556,521	10,799,749	32,951,754	(22,152,005)	33,626,175
7/1/04 - 6/30/05	8,302,564	33,626,175	2,690,094	1,541,213	9,451,445	4,675,000	4,776,445	38,402,620
7/1/05 - 6/30/06	8,593,196	38,402,620	3,072,210	1,760,135	9,905,271	4,175,390	5,729,881	44,132,501
7/1/06 - 6/30/07	10,125,503	44,132,501	3,530,600	2,359,396	11,296,707	5,470,429	5,826,278	49,958,779
7/1/07 - 6/30/08	10,672,535	49,958,779	3,996,702	2,827,642	11,841,595	6,809,800	5,031,795	54,990,574
7/1/08 - 6/30/09	11,129,440	54,990,574	4,399,246	3,112,439	12,416,247	8,856,422	3,559,825	58,550,399
7/1/09 - 6/30/10	12,064,078	58,550,399	4,684,032	3,313,923	13,434,187	10,411,274	3,022,913	61,573,312
7/1/10 - 6/30/11	13,086,199	61,573,312	4,925,865	3,485,019	14,527,045	11,433,614	3,093,431	64,666,743
7/1/11 - 6/30/12	13,365,820	64,666,743	4,526,672	3,660,313	14,232,179	10,502,000	3,730,179	68,396,922
7/1/12 - 6/30/13	17,064,640	68,396,922	4,787,785	3,871,451	17,980,974	14,150,000	3,830,974	72,227,896
7/1/12 - 6/30/14	17,110,135	72,227,896	5,055,953	4,088,294	18,077,794	13,956,669	4,121,125	76,349,021

* The annual required contributions for FYE 6/30/1988 through 6/30/1996 were determined based on the APB8 percentages provided by the System. For fiscal years 1997 through 2006, the annual required contribution was obtained by adding the normal cost plus a 40-year amortization (constant percent of payroll) of the UAAL (AAL - MVA). Thereafter, the annual required contribution was calculated as normal cost plus a 30-year amortization (constant percent of payroll) of the UAAL.

** The actual contributions for FYE 6/30/1988 through 6/30/2011 were obtained from the June 30, 2011 actuarial valuation. The actual contribution for FYE 6/30/2012 through 6/30/2014 were provided by the System.

SECTION E

PARTICIPANT DATA

Active Age and Service Distribution
June 30, 2015

Age Group	Years of Service 0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35&Up	Total	Percentage of Total
Under 20											
20-24											
25-29		3								3	2%
30-34		1	3							4	3%
35-39		6	5							11	8%
40-44		5	6	2						13	8%
45-49	1	8	10	7	3					29	20%
50-54		2	9	5	6	5				27	19%
55-59		7	5	4	3	2				21	14%
60-64		2	5	3	2		2			14	10%
65-69			2	2	3	1	3		1	12	8%
70 & Over			1	4	2	1	1		2	11	8%
Total	1	34	46	27	19	9	6		3	145	100%
Percentage of Total	1%	23%	32%	19%	13%	6%	4%		2%	100%	

Retirees and Beneficiaries by Type of Benefit Being Paid
June 30, 2015

Type of Benefit Being Paid	Count	Monthly Payment	Annual Payment	Average Annual Payment
Retirement Annuity[1]	309	$1,495,162.66	$ 17,941,951.92	$ 58,064.57
Survivors	114	$300,014.00	3,600,168.00	31,580.42
Reversionary Annuity	1	500.00	6,000.00	6,000.00
Total	**424**	**$ 1,795,676.66**	**$ 21,548,119.92**	**$ 50,821.04**

Based on data received from the System, of the 309 retirement annuities, 48 were classified as "Single," 191 classified as "Married" and 70 classified as "Unknown." We assume 75 percent are married and elect survivor benefits.

SECTION F

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Methods and Assumptions

Actuarial Cost Method as Mandated by 40 ILCS 5/2-124, 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.

Actuarial Assumptions Adopted June 30, 2013

Actuarial assumptions are set by the Board of Trustees. Additional information regarding the rationale for the assumptions may be found in the experience review of the General Assembly Retirement System for the five-year period ending June 30, 2012. All actuarial assumptions are expectations of future experience, not market measures.

Mortality

Post-Retirement Mortality

RP-2000 Combined Healthy Mortality Table, sex distinct, projected to 2015 (static table) setback 3 years for males and 2 years for females. The mortality table used is a static table with the provision for future mortality improvement in the projection to 2015 which is in sync with the next scheduled experience study.

Pre-Retirement Mortality

Based on a percentage of 85 percent for males and 70 percent for females of post-retirement mortality.

Interest

7.00 percent per annum, compounded annually, net of investment expenses.

General Inflation

3.00 percent per annum, compounded annually.

This assumption serves as the basis for the determination of Tier Two pay cap growth and annual increases that are equal to the lesser of 3.0 percent or the annual change in the consumer price index-u during the preceding 12-month calendar year.

Marriage Assumption

75.0 percent of active and retired participants are assumed to be married.

Termination

Rates of withdrawal are assumed to be equal to 0.04 for all ages 20 through 65.

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

A salary increase assumption of 3.50 percent per annum, compounded annually, was used. This 3.50 percent salary increase assumption includes an inflation component of 3.00 percent per annum, a productivity component of 0.40 percent per annum, and a merit/promotion component of 0.10 percent per annum. Furthermore, salaries were assumed to remain at their current rate for fiscal year 2016.

Inactive Member Pay Increases

Ten percent load on inactive vested liabilities to reflect increases in inactive members' pay due to current participation in a reciprocal retirement system.

Disability

No assumption for disability.

Population Projection

For purposes of determining annual appropriation as a percent of total covered payroll, the size of the active group is projected to decrease from 145 members as of the valuation date, to 75 members in 2045 and ultimately reach 73 members in 2051, due to the assumption that 50 percent of future members will elect to opt out of the pension system. New entrants are assumed to enter with an average age and average pay as disclosed below. The new entrant profile is based on the averages for all current active members. The average increase in uncapped payroll for the projection period is 3.5 percent per annum.

New Entrant Profile

Age Group	No.	Uncapped Salary	Capped Salary
Under 20			
20-24			
25-29	10	$ 810,810	$ 810,810
30-34	22	1,888,084	1,826,836
35-39	28	2,309,787	2,309,787
40-44	25	1,937,646	1,937,646
45-49	21	1,734,358	1,693,298
50-54	16	1,226,499	1,226,499
55-59	13	1,003,205	1,003,205
60-64	1	78,163	78,163
65-69			
70 & Over			
Total	136	$ 10,988,552	$ 10,886,244
Avg. Salary		$ 80,798	$ 80,046
Avg. Age			42.54
Percent Male			72.06%

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	
Age	Male & Female
55	10.00%
56 - 79	8.50%
80	100.00%

Assets

Assets available for benefits are used as described on page 42. The asset valuation method is prescribed by statute, and does not appear to allow a corridor; therefore, a corridor has not been established.

Expenses

As estimated and advised by GARS staff, based on current expenses and are expected to increase in relation to the projected capped payroll. Expenses are included in the service cost.

Spouse's Age

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

Decrement Timing

All decrements are assumed to occur beginning of year.

Decrement Relativity

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

Decrement Operation

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.

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

No explicit assumption is made with respect to these items.

Assumptions as a Result of Public Act 96-0889

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.

Retirement rates for tier two members to account for the change in retirement age, as follows:

Retirement Rates	
Age	Male & Female
62	40.00%
63	15.00%
64	20.00%
65	25.00%
66	30.00%
67	40.00%
68 - 79	5.00%
80	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 5/2-124:

> (c) Notwithstanding any other provision of this Article, the total State contribution for fiscal year 2006 is $4,157,000.
>
> Notwithstanding any other provision of this Article, the total State contribution for fiscal year 2007 is $5,220,300.
>
> For each State fiscal years 2008 through 2010, the State contribution to the System, as a percentage of the applicable payroll, shall be increased in equal annual increments from the required State contribution for State fiscal year 2007, so that by State fiscal year 2011, the State is contributing at a rate otherwise required under this Section.

State Contributions under P.A. 96-0043

The following is an excerpt from the Illinois Compiled statutes 40 ILCS 5/2-124:

> (d) 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 5-year period following that fiscal year.
>
> (e) 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.

SECTION G

PLAN PROVISIONS

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

1. Participation. A person eligible for membership must participate in the system as a condition of employment unless an "Election Not to Participate" is filed within 24 months from the date of assuming office.

2. Member Contributions. All members of the system are required to contribute to the system the following percentage of their salaries:

Retirement Annuity	8.5%
Automatic Annuity Increase	1.0
Survivor's Annuity	2.0
Total	11.5%

3. Retirement Annuity – Eligibility. A member who has at least 8 years of creditable service is entitled to a retirement annuity upon attainment of age 55. A member with at least 4 years of service but less than 8 years of service is entitled to a retirement annuity upon attainment of age 62.

   A member with at least 8 years of service who becomes disabled while in service is entitled to a retirement annuity regardless of age.

4. Retirement Annuity – Amount. The retirement annuity is determined according to the following formula based upon the member's final rate of salary:

   - 3.0% for each of the first 4 years of service, plus
   - 3.5% for each of the next 2 years of service, plus
   - 4.0% for each of the next 2 years of service, plus
   - 4.5% for each of the next 4 years of service, plus
   - 5.0% for each year of service in excess of 12

The maximum retirement annuity is 85% of the final rate of salary.

5. Automatic Increase In Retirement Annuity. (a) Annual automatic increases of 3% of the current amount of retirement annuity are provided. The initial increase is effective in the month of January or July of the year next following the year in which the first anniversary of retirement occurs, but in no event prior to attainment of age 60.

   (b) Beginning January 1, 1990, for persons who become participants prior to August 8, 2003, and who remain in service after attaining 20 years of creditable service, 3% annual automatic increases begin to accrue on January 1 next following the date the participant attains age 55 or completes 20 years of creditable service, whichever occurs later. For any person who has service credit for the entire period from January 15, 1969, through December 31, 1992, the increases shall accrue from age 50 instead of age 55. However, such increases shall not become payable until the January 1 or July 1 next following the first anniversary of retirement, or the first of the month following attainment of age 60, whichever occurs later.

6. Survivor's Annuity – Eligibility. A surviving spouse without children is eligible for survivor benefits at age 50 or over provided marriage to the member had been in effect for at least 1 year immediately prior to the member's death.

   A surviving spouse with unmarried eligible children is eligible for a survivor's annuity benefit at any age provided the above marriage requirements have been met. When all children are disqualified because of death, marriage or attainment of age 18 or age 22 in the case of a fulltime student, the spouse's benefit is suspended if the spouse is under age 50 until the attainment of such age.

   An unmarried eligible child under age 18 or under age 22 and a full-time student or over age 18 and disabled may qualify for the survivor's annuity if there is no surviving spouse or if the spouse dies. Legally adopted children are eligible for survivor benefits on the same basis as other children.

   If the member dies in service as a member, the member must have at least 2 years of service credit for survivor's annuity eligibility. If death occurs after termination of service but before retirement, the deceased member must have at least 4 years of service credit for survivor's annuity eligibility.

7. Survivor's Annuity – Amount. (a) A surviving spouse is entitled to a survivor's annuity of 66 2/3% of the amount of retirement annuity to which the member was entitled on the date of death, without regard to whether the member had attained age 55 as of the time of death, subject to a minimum payment of 10% of salary.

   (b) If a surviving spouse has in his or her care eligible children, the survivor's annuity shall be the greater of the following:

   (1) 66 2/3% of the amount of retirement annuity to which the member was entitled on the date of death, or (2) 30% of the member's salary increased by 10% of salary on account of each eligible child, subject to a total payment for the surviving spouse and children of 50% of salary. If only unmarried children survive, each such child shall be entitled to an annuity of 20% of salary, subject to a maximum total payment for all children of 50% of salary.

   (c) Upon the death of a member after termination of service, or upon the death of an annuitant, the maximum total payment to a surviving spouse and eligible children, or eligible children alone if there is no surviving spouse, shall be 75% of the retirement annuity to which the member or annuitant was entitled.

   (d) Survivor's annuities are subject to annual automatic increases of 3% of the current amount of annuity.

   (e) The minimum survivor's annuity provided by the system is $300 per month.

   (f) In the case of a proportional survivor's annuity under the Retirement Systems Reciprocal Act, if the amount payable by the system on January 1, 1993, is less than $300 per month, the amount shall be increased as of that date by $2 per month for each full year elapsed since the annuity began.

8. Refund of Contributions. Upon termination of service, a member is entitled to a refund of his total contributions without interest.

A member who has no eligible survivor's annuity beneficiaries, or is unmarried at the time of retirement, is entitled to a refund of his or her contributions for the survivor's annuity.

9. Retirement System Reciprocal Act. According to the provisions of the Retirement System Reciprocal Act provided in Illinois Compiled statutes 40 ILCS 5/20, a member who has pension credit in two or more participating systems may be entitled to a proportional retirement annuity if his or her combined pension credit satisfies the longest minimum retirement eligibility requirement of any such system.

   In calculating the proportional retirement annuity, the earnings credits under all participating systems shall be considered in determining final average salary.

Persons Who First Become Participants On or After January 1, 2011

The following changes to the above provisions apply to persons who first become participants on or after January 1, 2011:

1. The highest salary for annuity purposes is equal to the average monthly salary obtained by dividing the participant's total salary during the 96 consecutive months of service within the last 120 months of service in which the total compensation was the highest by the number of months in that period.

2. Required contributions shall not exceed the contributions that would be due on the highest salary for annuity purposes.

3. For 2011, the final average salary is limited to the Social Security wage base of $106,800. Limitations for future years shall automatically be increased or decreased, as applicable, by a percentage change in the Consumer Price Index-U during the preceding 12 month calendar year.

4. A participant is eligible to retire with unreduced benefits after attainment of age 67 with at least 8 years of service credit. However, a participant may elect to retire at age 62 with at least 8 years of service credit and receive a retirement annuity reduced by one-half of 1% for each month that his or her age is under 67.

5. The annual retirement annuity provided is equal to 3% of the participant's final average salary for each year of service. The maximum retirement annuity payable shall be 60% of the participant's final average salary.

6. Automatic annual increases are provided in the retirement annuity then being paid equal to 3% or the annual change in the Consumer Price Index for all Urban Consumers, whichever is less. Such increases are payable in the January or July next following the first anniversary of retirement, and in the same month of each year thereafter.

7. Automatic annual increases are provided in the survivor annuity then being paid equal to 3% or the annual change in the Consumer Price Index for all Urban Consumers, whichever is less. Such increases are payable (1) on each January 1 occurring on or after the commencement of the annuity if the deceased member died while receiving a retirement annuity, or (2) in other cases, on each January 1 occurring on or after the first anniversary of the commencement of the annuity.
8. The retirement annuity being paid is suspended when an annuitant accepts full time employment in a position covered under the General Assembly Retirement System or any other Article of the

Illinois Pension Code. Upon termination of the employment, the retirement annuity shall resume and, if appropriate, be recalculated.

9. Salary and COLA development for members hired on or after January 1, 2011, are shown in the table below:

Year Ending	CPI-U	COLA	Maximum Annual Pensionable Earnings
2011		3.00%	$106,800.00
2012	3.90%	3.00%	$110,004.00
2013	2.00%	2.00%	$112,204.08
2014	1.20%	1.20%	$113,550.53
2015	1.70%	1.70%	$115,480.89

SECTION H

GLOSSARY

Glossary

Actuarial Accrued Liability (“AAL”)	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
Actuarial Assumptions	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
Actuarial Cost Method	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of future Normal Costs and the Actuarial Accrued Liability.
Actuarial Equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (“APV”)	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
Actuarial Present Value of Future Benefits (“APVFB”)	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 25, such as the Funded Ratio and the Annual Required Contribution (“ARC”).
Actuarial Value of Assets	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution (“ARC”).

Glossary (cont'd)

Amortization Method A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.

Amortization Payment That portion of the plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Amortization Period The period used in calculating the Amortization Payment.

Annual Required Contribution ("ARC") The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB No. 25. The ARC consists of the Employer Normal Cost and Amortization Payment.

Closed Amortization Period A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.

Employer Normal Cost The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.

Equivalent Single Amortization Period For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.

Experience Gain/Loss A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience; e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience; i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.

Glossary (cont'd)

Funded Ratio	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
GASB	Governmental Accounting Standards Board.
GASB No. 25 and GASB No. 27	These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 27 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 25 sets the rules for the systems themselves.
GASB No. 67 and GASB No. 68	These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68, which replaces Statement No. 27 effective with fiscal year ending June 30, 2015, sets the accounting rules for the employers that sponsor or contribute to public retirement systems. Statement No. 67, which replaces Statement No. 25 effective with fiscal year ending June 30, 2014, sets the rules for the systems themselves.
Normal Cost	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
Open Amortization Period	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
Unfunded Actuarial Accrued Liability	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
Valuation Date	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

SECTION I

ADDITIONAL PROJECTION DETAILS

Table 7

30-Year Projection of Actuarial Accrued Liabilities
(All Dollar Amounts in Millions)

Valuation Date June 30	Current Inactives: Retirees & Beneficiaries	Current Inactives: Deferreds	Current Actives: Tier 1	Current Actives: Current Tier 2	Current Actives: Future Tier 2	Grand Totals: Current Retirees, Beneficiaries, & Deferreds	Grand Totals: Actives	Grand Totals: Total
2015	$ 258.54	$ 25.65	$ 42.84	$ 1.21	$ -	$ 284.19	$ 44.05	$ 328.24
2016	254.27	26.58	48.38	1.70	-	280.84	50.08	330.92
2017	249.53	27.65	53.81	2.23	0.04	277.18	56.08	333.26
2018	244.35	28.54	59.22	2.79	0.14	272.89	62.16	335.05
2019	238.71	29.27	64.55	3.43	0.29	267.98	68.28	336.26
2020	232.64	29.88	69.77	4.12	0.50	262.52	74.39	336.91
2021	226.14	30.39	74.81	4.85	0.78	256.54	80.44	336.97
2022	219.23	30.82	79.58	5.61	1.14	250.05	86.33	336.38
2023	211.93	31.18	84.13	6.39	1.59	243.11	92.12	335.23
2024	204.26	31.42	88.37	7.20	2.13	235.68	97.71	333.39
2025	196.25	31.62	92.24	8.04	2.77	227.87	103.04	330.92
2026	187.93	31.79	95.74	8.91	3.52	219.72	108.18	327.90
2027	179.33	31.90	98.89	9.83	4.39	211.23	113.12	324.35
2028	170.48	31.92	101.70	10.79	5.40	202.41	117.89	320.30
2029	161.44	31.88	103.97	11.79	6.52	193.32	122.28	315.60
2030	152.25	31.80	105.82	12.80	7.80	184.04	126.42	310.46
2031	142.95	31.61	107.35	13.81	9.24	174.56	130.40	304.96
2032	133.60	31.37	108.54	14.80	10.83	164.97	134.17	299.15
2033	124.26	31.02	109.36	15.75	12.59	155.28	137.69	292.98
2034	114.99	30.61	109.68	16.65	14.52	145.60	140.85	286.45
2035	105.84	30.14	109.67	17.48	16.62	135.98	143.77	279.74
2036	96.87	29.60	109.32	18.22	18.91	126.48	146.45	272.93
2037	88.15	29.00	108.57	18.89	21.38	117.16	148.84	266.00
2038	79.74	28.34	107.43	19.47	24.07	108.07	150.96	259.04
2039	71.67	27.59	105.98	20.01	26.95	99.26	152.93	252.19
2040	64.01	26.78	104.20	20.43	30.01	90.79	154.65	245.44
2041	56.79	25.90	102.13	20.79	33.29	82.69	156.21	238.90
2042	50.04	24.97	99.70	21.09	36.75	75.01	157.55	232.55
2043	43.79	23.98	96.93	21.31	40.42	67.76	158.66	226.42
2044	38.04	22.92	93.85	21.49	44.28	60.97	159.62	220.59
2045	32.82	21.82	90.46	21.54	48.35	54.63	160.35	214.99

Table 8

30-Year Projection of Present Value of Future Benefits

(All Dollar Amounts in Millions)

Valuation Date June 30	Current Inactives: Retirees & Beneficiaries	Current Inactives: Deferreds	Current Actives: Tier 1	Current Actives: Current Tier 2	Current Actives: Future Tier 2	Grand Totals: Current Retirees, Beneficiaries, & Deferreds	Grand Totals: Actives	Grand Totals: Total
2015	$ 258.54	$ 25.65	$ 66.99	$ 7.32	$ -	$ 284.19	$ 74.31	$ 358.50
2016	254.27	26.58	71.01	7.67	0.68	280.84	79.36	360.21
2017	249.53	27.65	74.97	8.04	1.54	277.18	84.56	361.75
2018	244.35	28.54	78.93	8.43	2.32	272.89	89.68	362.56
2019	238.71	29.27	82.82	8.86	3.15	267.98	94.83	362.81
2020	232.64	29.88	86.63	9.31	4.25	262.52	100.20	362.72
2021	226.14	30.39	90.33	9.81	5.38	256.54	105.52	362.05
2022	219.23	30.82	93.80	10.34	6.59	250.05	110.74	360.79
2023	211.93	31.18	97.12	10.90	7.88	243.11	115.90	359.01
2024	204.26	31.42	100.18	11.48	9.09	235.68	120.75	356.44
2025	196.25	31.62	102.96	12.09	10.70	227.87	125.74	353.61
2026	187.93	31.79	105.45	12.72	12.23	219.72	130.39	350.11
2027	179.33	31.90	107.65	13.38	14.03	211.23	135.06	346.29
2028	170.48	31.92	109.58	14.08	15.64	202.41	139.30	341.70
2029	161.44	31.88	111.06	14.79	17.77	193.32	143.62	336.95
2030	152.25	31.80	112.20	15.52	19.98	184.04	147.70	331.74
2031	142.95	31.61	113.06	16.25	22.21	174.56	151.52	326.08
2032	133.60	31.37	113.63	16.98	24.63	164.97	155.25	320.22
2033	124.26	31.02	113.88	17.68	27.26	155.28	158.82	314.10
2034	114.99	30.61	113.70	18.37	30.00	145.60	162.06	307.66
2035	105.84	30.14	113.21	19.00	32.86	135.98	165.07	301.05
2036	96.87	29.60	112.43	19.57	36.09	126.48	168.09	294.56
2037	88.15	29.00	111.28	20.08	39.54	117.16	170.90	288.05
2038	79.74	28.34	109.79	20.52	43.08	108.07	173.39	281.46
2039	71.67	27.59	108.00	20.93	46.70	99.26	175.62	274.88
2040	64.01	26.78	105.92	21.24	50.71	90.79	177.87	268.66
2041	56.79	25.90	103.57	21.50	54.77	82.69	179.83	262.53
2042	50.04	24.97	100.90	21.71	59.10	75.01	181.71	256.72
2043	43.79	23.98	97.93	21.85	63.61	67.76	183.38	251.15
2044	38.04	22.92	94.67	21.96	68.64	60.97	185.27	246.23
2045	32.82	21.82	91.14	21.94	73.47	54.63	186.55	241.18

30-Year Projection of Benefit Payments Including Administrative Expenses
(All Dollar Amounts in Millions)

Valuation Date June 30	Current Inactives: Retirees & Beneficiaries	Current Inactives: Deferreds	Current Actives: Tier 1	Current Actives: Current Tier 2	Current Actives: Future Tier 2	Grand Totals: Current Retirees, Beneficiaries, & Deferreds	Grand Totals: Actives	Grand Totals: Total
2015	$ 21.63	$ 0.84	$ 0.64	$ 0.16	$ -	$ 22.47	$ 0.80	$ 23.27
2016	21.78	0.76	0.97	0.16	0.01	22.54	1.14	23.69
2017	21.90	1.01	1.25	0.17	0.03	22.91	1.45	24.36
2018	21.98	1.23	1.58	0.16	0.04	23.21	1.78	24.99
2019	22.02	1.39	1.92	0.16	0.06	23.41	2.14	25.55
2020	22.03	1.53	2.29	0.14	0.08	23.55	2.52	26.07
2021	21.98	1.65	2.76	0.15	0.11	23.63	3.01	26.64
2022	21.89	1.74	3.14	0.16	0.13	23.63	3.44	27.07
2023	21.76	1.88	3.61	0.17	0.16	23.63	3.94	27.58
2024	21.57	1.94	4.09	0.19	0.18	23.50	4.47	27.97
2025	21.33	1.98	4.56	0.20	0.20	23.30	4.97	28.27
2026	21.03	2.04	5.00	0.22	0.23	23.07	5.45	28.53
2027	20.69	2.14	5.43	0.24	0.26	22.82	5.92	28.75
2028	20.28	2.20	5.98	0.26	0.29	22.48	6.53	29.01
2029	19.81	2.24	6.41	0.30	0.33	22.06	7.04	29.09
2030	19.29	2.33	6.76	0.34	0.37	21.62	7.47	29.09
2031	18.71	2.37	7.10	0.40	0.41	21.08	7.90	28.98
2032	18.07	2.46	7.45	0.46	0.46	20.53	8.38	28.91
2033	17.38	2.50	7.88	0.54	0.51	19.87	8.94	28.81
2034	16.63	2.53	8.16	0.63	0.58	19.16	9.37	28.53
2035	15.83	2.56	8.42	0.73	0.64	18.39	9.79	28.18
2036	14.98	2.58	8.72	0.83	0.73	17.57	10.27	27.84
2037	14.10	2.61	8.98	0.93	0.81	16.71	10.72	27.43
2038	13.19	2.64	9.16	0.99	0.91	15.83	11.07	26.90
2039	12.26	2.65	9.32	1.12	1.02	14.91	11.46	26.37
2040	11.31	2.66	9.44	1.18	1.15	13.97	11.77	25.74
2041	10.37	2.66	9.59	1.25	1.29	13.02	12.13	25.15
2042	9.43	2.65	9.70	1.33	1.44	12.08	12.47	24.55
2043	8.51	2.64	9.77	1.37	1.60	11.16	12.75	23.91
2044	7.63	2.62	9.82	1.50	1.79	10.25	13.11	23.36
2045	6.78	2.59	9.76	1.55	1.99	9.36	13.31	22.67

<u>Table 10</u>

30-Year Projection of Actives Population, Covered Payroll, Employee Contributions, and Normal Costs
(All Dollar Amounts in Millions)

Valuation	Tier 1 Active Members				Tier 2 Active Members				Future Tier 2 Active Members			
Date June 30	Population	Covered Payroll	Employee Contributions	Normal Cost	Population	Covered Payroll	Employee Contributions	Normal Cost	Population	Covered Payroll	Employee Contributions	Normal Cost
2015	99	$ 9.06	$ 1.04	$ 3.10	46	$ 3.62	$ 0.42	$ 0.55	0	$ -	$ -	$ -
2016	92	7.61	0.87	2.95	44	3.18	0.37	0.55	4	0.36	0.04	0.05
2017	84	7.27	0.84	2.84	42	3.15	0.36	0.57	9	0.79	0.09	0.12
2018	79	6.99	0.80	2.72	41	3.13	0.36	0.58	13	1.15	0.13	0.18
2019	73	6.70	0.77	2.60	39	3.11	0.36	0.59	16	1.51	0.17	0.24
2020	67	6.40	0.74	2.44	37	3.05	0.35	0.57	21	2.00	0.23	0.32
2021	61	6.02	0.69	2.30	34	2.92	0.34	0.57	25	2.46	0.28	0.40
2022	56	5.72	0.66	2.16	32	2.85	0.33	0.54	29	2.94	0.34	0.49
2023	51	5.40	0.62	2.02	29	2.71	0.31	0.52	32	3.42	0.39	0.58
2024	46	5.09	0.59	1.85	27	2.61	0.30	0.51	35	3.82	0.44	0.65
2025	42	4.72	0.54	1.70	26	2.53	0.29	0.51	39	4.38	0.50	0.75
2026	37	4.41	0.51	1.57	24	2.47	0.28	0.50	41	4.83	0.56	0.83
2027	34	4.11	0.47	1.44	23	2.42	0.28	0.50	44	5.38	0.62	0.94
2028	30	3.82	0.44	1.30	22	2.37	0.27	0.49	46	5.77	0.66	1.01
2029	27	3.49	0.40	1.17	20	2.29	0.26	0.48	49	6.36	0.73	1.12
2030	24	3.21	0.37	1.08	19	2.19	0.25	0.45	52	6.93	0.80	1.23
2031	21	3.00	0.35	0.99	17	2.07	0.24	0.42	54	7.43	0.85	1.32
2032	19	2.79	0.32	0.89	15	1.94	0.22	0.38	55	7.96	0.92	1.42
2033	17	2.56	0.29	0.80	14	1.78	0.20	0.34	57	8.52	0.98	1.53
2034	15	2.33	0.27	0.73	12	1.64	0.19	0.30	59	9.06	1.04	1.63
2035	13	2.15	0.25	0.66	11	1.47	0.17	0.27	60	9.57	1.10	1.73
2036	12	1.98	0.23	0.59	9	1.35	0.16	0.24	62	10.19	1.17	1.84
2037	10	1.79	0.21	0.53	8	1.23	0.14	0.21	63	10.83	1.25	1.96
2038	9	1.63	0.19	0.48	7	1.12	0.13	0.20	65	11.42	1.31	2.07
2039	8	1.50	0.17	0.43	7	1.07	0.12	0.17	65	11.95	1.37	2.17
2040	7	1.35	0.16	0.39	6	0.92	0.11	0.15	66	12.59	1.45	2.28
2041	6	1.21	0.14	0.33	5	0.84	0.10	0.14	67	13.14	1.51	2.38
2042	5	1.03	0.12	0.28	4	0.76	0.09	0.12	68	13.75	1.58	2.49
2043	4	0.89	0.10	0.23	4	0.67	0.08	0.11	68	14.34	1.65	2.60
2044	3	0.75	0.09	0.19	3	0.62	0.07	0.10	69	15.10	1.74	2.73
2045	3	0.61	0.07	0.17	3	0.56	0.06	0.09	69	15.65	1.80	2.83