Gabriel Roeder Smith & Company
Consultants & Actuaries

JUDGES' RETIREMENT SYSTEM OF ILLINOIS

ANNUAL ACTUARIAL VALUATION AS OF JUNE 30, 2015

GRS
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October 23, 2015

Board of Trustees
Judges' Retirement System
Springfield, IL

Re: Judges' Retirement System Actuarial Valuation as of June 30, 2015

Dear Board Members:

The results of the June 30, 2015, Annual Actuarial Valuation of the Judges' Retirement System ("JRS" 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 JRS 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 5/18-131. 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 finances 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 25 years.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of JRS 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

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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 Judges' Retirement System ("JRS" 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, an annual determination of the amount of the required State contributions and certify the results thereof to the board (40 ILCS Section 5/18-152 (2))."

Gabriel, Roeder, Smith & Company 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 valuation 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 Act was passed in fiscal year 2015 that affected JRS.

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.

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

Assumptions and Methods

The assumptions and methods used are consistent with those used in the previous valuation and are based on the experience study of the Judges' 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. There were no changes to the assumptions or methods for the valuation as of June 30, 2015.

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	$	131,334,000	$	132,060,000
• Percentage of Projected Capped Payroll for Fiscal Year		79.683%		80.072%
Actuarially Determined Contribution* (ADC):				
• Annual Amount	$	152,699,188	$	121,362,703
• Percentage of Projected Capped Payroll for Fiscal Year		92.646%		73.586%
Membership				
• Number of				
- Active Members		961		951
- Members Receiving Payments		1,121		1,100
- Inactive Members		24		19
- Total		2,106		2,070
• Covered Uncapped Payroll	$	177,164,450	$	172,846,373
• Annualized Benefit Payments	$	127,867,430	$	120,684,700
Assets				
• Market Value of Assets (MVA)	$	833,910,155	$	776,013,028
• Actuarial Value of Assets (AVA)	$	804,188,844	$	705,250,403
• Return on MVA		4.58%		16.81%
• Return on AVA		10.76%		11.65%
• Ratio – AVA to MVA		96.44%		90.88%
Actuarial Information				
• Normal Cost Amount	$	42,463,979	$	42,271,942
• Actuarial Accrued Liability (AAL)	$	2,314,147,315	$	2,229,277,180
• Unfunded Actuarial Accrued Liability (UAAL)	$	1,509,958,471	$	1,524,026,777
• Funded Ratio based on AVA		34.75%		31.64%
• UAAL as % of Covered Uncapped Payroll		852.29%		881.72%
• Funded Ratio based on MVA		36.04%		34.81%

** 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 25-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 $29,189,400 for fiscal year 2006 and $35,236,800 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	$ 776,013,028
2. Actual State Contribution Amount	134,039,684
3. Employee Contribution Amount	15,431,105
4. Benefit Payouts & Refunds	(126,600,156)
5. Administrative Expenses	(982,656)
6. Investment Income	36,009,150
7. Market Value of Assets 6/30/2015	833,910,155
8. Expected Investment Return at 7.0%	55,074,034
9. Investment Gain/(Loss) Current Year	(19,064,884)
10. Deferred Investment Gains and (Losses) All Years	29,721,311
11. Actuarial Value of Assets 6/30/2015 (7. - 10.)	804,188,844

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 Value of Assets 6/30/2014	$ 520,037,248
2.	State Contribution Amount[1]	148,449,385
3.	Employee Contribution Amount	15,431,105
4.	Benefit Payouts & Refunds	(126,600,156)
5.	Administrative Expenses	(982,656)
6.	Investment Income[2]	24,639,617
7.	Hypothetical Value of Assets 6/30/2015	580,974,543
8.	Expected Investment Return at 7.0%	37,651,539
9.	Investment Gain/(Loss) Current Year	(13,011,922)
10.	Deferred Investment Gains and (Losses) All Years[3]	18,915,491
11.	Hypothetical Actuarial Value of Assets 6/30/2015 (7. - 10.)	562,059,052

[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 4.58 percent.*

[3]*Deferred gains and losses prior to July 1, 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	80.072%	$164.926	$132,060,000
2017	79.683%	164.820	131,334,000
2018	79.174%	165.943	131,384,000
2019	78.277%	166.919	130,659,000
2020	77.813%	168.037	130,755,000
2021	78.015%	169.012	131,854,000
2022	78.015%	169.937	132,575,000
2023	78.015%	171.224	133,580,000
2024	78.015%	172.617	134,666,000
2025	78.015%	174.206	135,906,000
2026	78.015%	175.915	137,240,000

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 $164,926,000 for fiscal year 2016, as provided by the System.
- Total employer contributions of $132,060,000 for fiscal year 2016, as provided by the System.
- Administrative expenses of $1,112,000 for fiscal year 2016, as provided by the System.
- New entrants whose average age is 46.98 and average uncapped pay is $184,340 (2015 dollars) and average capped pay is $115,481 (2015 dollars). The active member population is assumed to remain level at 961 for all years of the 30-Year projection.
- 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 3.75 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 80.072 percent based on expected total employer contributions of $132,060,000.
- The contribution rates for fiscal years 2034 through 2045 will be a uniform percentage of capped payroll.

The certified FY 2017 contribution rate of 79.683 percent is applied to expected FY 2017 capped payroll. The resulting amount of $131,334,000 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 25-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	$ 42,463,979	$ 42,271,942
2. Initial amount to amortize the unfunded liability over a 25-year closed period as a level percentage of capped payroll	110,235,209	79,090,761
3. ADC [(1) + (2)]	$ 152,699,188	$ 121,362,703
4. ADC as a percentage of projected capped payroll	92.646%	73.586%
5. Estimated statutory contribution	$ 131,334,000	$ 132,060,000
6. Estimated statutory contribution as a percentage of projected capped payroll	79.683%	80.072%
7. Estimated statutory contribution as a percentage of ADC [(5) ÷ (3)]	86.008%	108.814%

[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.

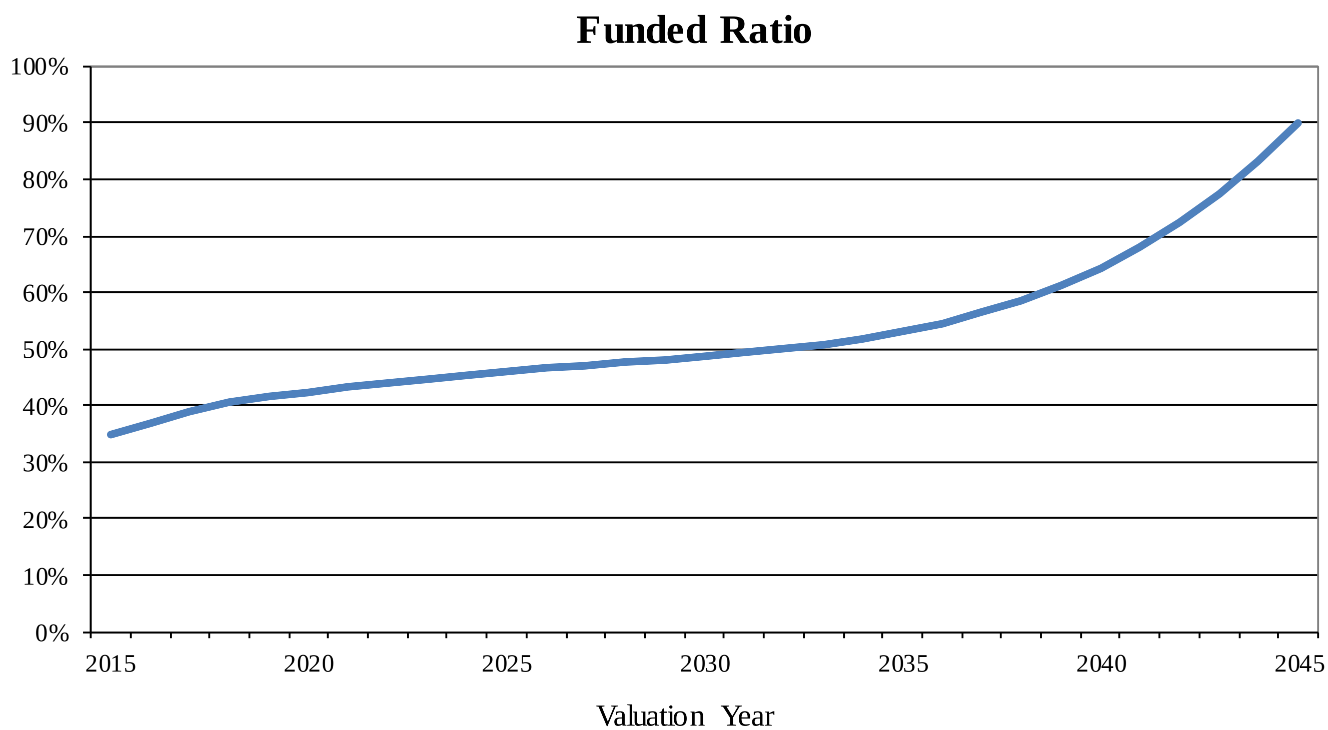
Due to the single equivalent discount rate and shorter amortization periods required under GASB Statements Nos. 67 and 68, the liabilities and pension expense will be higher and more volatile than under the current standards. The measurements required under GASB Statements Nos. 67 and 68 are provided 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 25-year level percent of capped payroll closed-period amortization of the Unfunded Accrued Liability as of June 30, 2015.

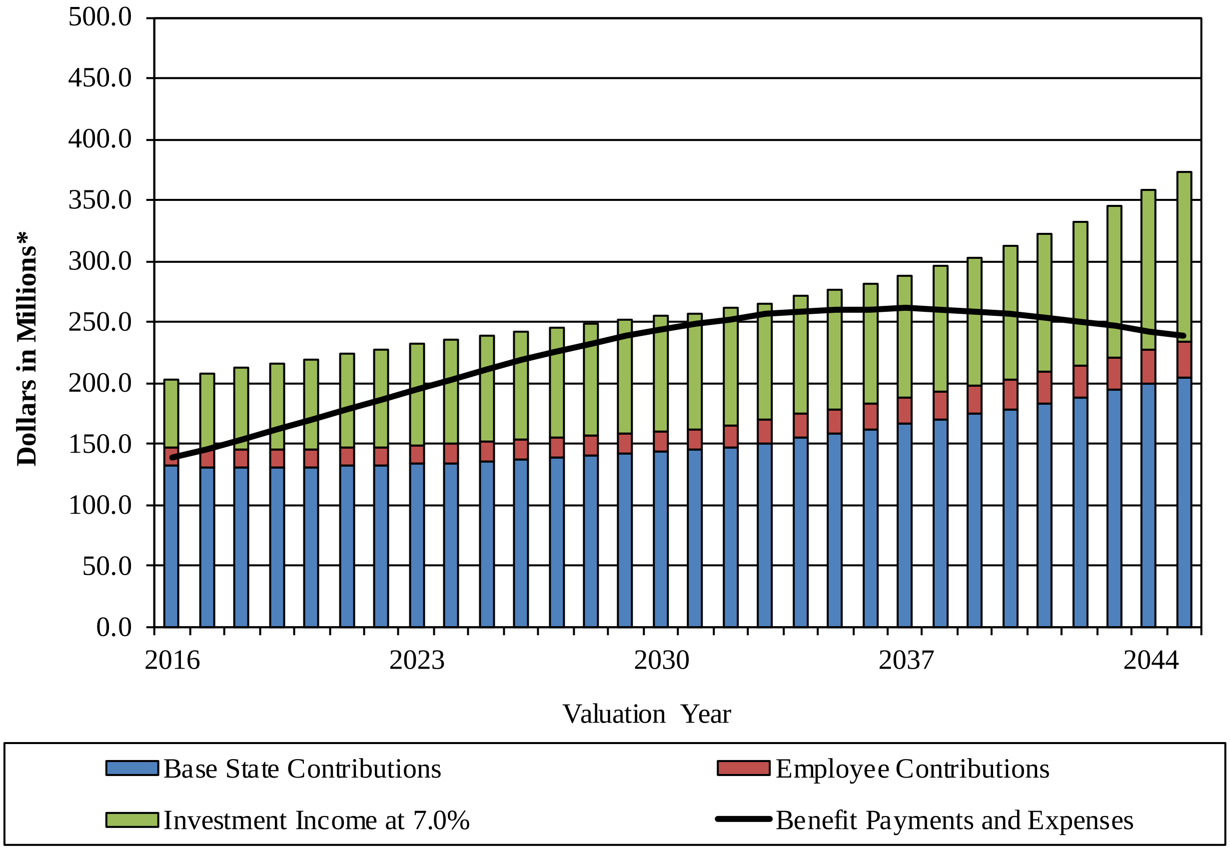
A key objective of the ADC is to accrue costs over the working lifetime of plan members to ensure that benefit obligations are satisfied and intergenerational equity is promoted. Although the ADC is solely an accounting provision, in certain circumstances it could represent a reasonable annual funding 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 JRS 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 2033. That is, a majority of the funding occurs between 2034 and 2045. This illustrates how significantly the current funding policy defers contributions into the future..



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

Comparison of Cash Flows



**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 JRS funded ratio at June 30, 2015, is only 36 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 March 27, 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 JRS' normal cost and amortizing the unfunded liability over 25 years as a level percent of capped payroll.

Finally, we strongly recommend that stress testing be performed and we will work with the System 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		961
	b. Inactive:		
	i. Eligible for deferred vested pension benefits		10
	ii. Eligible for return of contributions only		14
	c. Current Benefit Recipients:		
	i. Retirement annuities		787
	ii. Survivor annuities		334
	d. Total		2,106
2	Covered Uncapped Payroll as of Valuation Date	$	177,164,450
3	Annualized Benefit Payments Currently Being Made		
	a. Retirement	$	104,371,772
	b. Survivor		23,495,658
	d. Total	$	127,867,430
4	Actuarial Liability—Annuitants		
	a. Current Benefit Recipients:		
	i. Retirement annuities	$	1,352,177,476
	ii. Survivor annuities		211,172,152
	b. Total	$	1,563,349,628

		Normal Cost	Actuarial Liability
5	Actuarial Liability—Inactive Members		$ 7,639,743
6	Active Members		
	a. Pension Benefits	$ 41,117,589	$ 548,358,004
	b. Cost-of-Living Adjustments	13,344,029	176,112,178
	c. Death Benefits	1,306,983	16,844,267
	d. Disability	-	-
	e. Withdrawal	217,723	1,843,495
	f. Expenses	1,112,000	-
	g. Total	$ 57,098,324	$ 743,157,944
7	Total Actuarial Liability (4 + 5 + 6)		$ 2,314,147,315
8	Market Value of Assets (MVA)		$ 833,910,155
9	Unfunded Actuarial Liability Based on MVA (7 – 8)		$ 1,480,237,160
10	Funded Percentage Based on MVA (8 ÷ 7)		36.04%
11	Actuarial Value of Assets (AVA)		$ 804,188,844
12	Unfunded Actuarial Liability Based on AVA (7 – 11)		$ 1,509,958,471
13	Funded Percentage Based on AVA (11 ÷ 7) [1]		34.75%
14	Total Normal Cost	$ 57,098,324	
15	Employee Contributions	$ 14,634,345	
16	Annual Employer Normal Cost	$ 42,463,979	
	(% uncapped payroll)	23.97%	

[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 decrease in the unfunded accrued actuarial liability ("UAAL") of $14,068,306 was due to the following:

1	UAAL at 06/30/2014	$	1,524,026,777
2	Contributions		
	a. Contributions due		
	i interest on 1)	$	106,681,874
	ii members contributions		15,431,105
	iii employer normal cost		42,271,942
	iv interest on ii and iii		1,985,449
	v total due	$	166,370,370
	b. Contributions paid		
	i member contributions	$	15,431,105
	ii state agencies		134,039,684
	iii interest on i and ii		5,142,997
	iv total paid	$	154,613,786
	c. Expected increase in UAAL	$	11,756,584
3	Expected UAAL at 06/30/2015	$	1,535,783,361
4	(Gains)/Losses		
	a. investment income	$	(26,929,814)
	b. demographic		1,104,924
	c. total	$	(25,824,890)
5	Plan Provision Changes	$	-
6	Assumption Changes	$	-
7	Total Change in UAAL	$	(14,068,306)
8	UAAL at 06/30/2015	$	1,509,958,471

Table 3

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	$	1,451,782	0.08%
	b. Incidence of Disability		-	0.00%
	c. In-Service Mortality		(87,909)	0.00%
	d. Retiree Mortality and Other		8,838,562	0.40%
	e. Salary Increases		(16,202,872)	-0.73%
	f. Terminations		(383,119)	-0.02%
	g. Investment		(26,929,814)	-1.21%
	h. New Entrant Liability		1,726,536	0.08%
	i. Other		5,761,944	0.26%
	j. Total Actuarial (Gain)/Loss	$	(25,824,890)	-1.14%
2	Plan Provision Changes	$	-	0.00%
3	Assumption Changes	$	-	0.00%
4	Contribution (Excess)/Shortfall	$	11,756,584	0.53%
5	Total Financial (Gain)/Loss	$	(14,068,306)	-0.61%

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	961	$2,392.36	$626.48	$1,765.88	26.19%	$164.93	$57.10	$14.63	$42.47	25.75%	$147.69	89.55%	$138.09
2017	961	2,466.61	687.77	1,778.84	27.88%	164.82	55.56	14.37	41.19	24.99%	148.16	89.90%	145.68
2018	961	2,535.81	745.84	1,789.97	29.41%	165.94	53.93	14.38	39.55	23.83%	149.17	89.90%	153.95
2019	961	2,600.07	800.58	1,799.49	30.79%	166.92	52.55	14.43	38.12	22.84%	150.05	89.90%	162.03
2020	961	2,658.38	851.58	1,806.80	32.03%	168.04	50.80	14.46	36.34	21.63%	151.06	89.90%	170.39
2021	961	2,709.76	898.39	1,811.37	33.15%	169.01	48.70	14.62	34.08	20.16%	151.93	89.90%	178.93
2022	961	2,754.88	941.12	1,813.76	34.16%	169.94	47.27	14.77	32.50	19.12%	152.76	89.90%	187.02
2023	961	2,792.90	979.67	1,813.23	35.08%	171.22	45.60	14.93	30.67	17.91%	153.92	89.90%	195.27
2024	961	2,824.25	1,014.39	1,809.86	35.92%	172.62	44.44	15.23	29.21	16.92%	155.17	89.90%	203.14
2025	961	2,848.30	1,045.15	1,803.15	36.69%	174.21	43.15	15.51	27.64	15.87%	156.60	89.90%	211.02
2026	961	2,865.15	1,072.35	1,792.80	37.43%	175.92	41.98	15.87	26.11	14.84%	158.14	89.90%	218.44
2027	961	2,874.69	1,096.03	1,778.66	38.13%	177.84	40.98	16.10	24.88	13.99%	159.87	89.90%	225.64
2028	961	2,877.02	1,116.41	1,760.61	38.80%	179.96	40.13	16.16	23.97	13.32%	161.78	89.90%	232.40
2029	961	2,872.79	1,134.58	1,738.21	39.49%	182.36	39.62	16.50	23.12	12.68%	163.93	89.90%	238.41
2030	961	2,862.16	1,151.40	1,710.76	40.23%	185.10	39.21	16.98	22.23	12.01%	166.40	89.90%	243.90

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)

							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	961	$2,845.86	$1,167.70	$1,678.16	41.03%	$188.09	$39.07	$17.27	$21.80	11.59%	$169.09	89.90%	$248.51
2032	961	2,823.99	1,184.70	1,639.29	41.95%	191.47	38.97	17.99	20.98	10.96%	172.12	89.90%	252.69
2033	961	2,797.29	1,203.52	1,593.77	43.02%	195.03	39.13	18.75	20.38	10.45%	175.32	89.90%	256.05
2034	961	2,766.50	1,225.55	1,540.95	44.30%	198.97	39.47	19.53	19.94	10.02%	178.86	89.90%	258.54
2035	961	2,732.49	1,252.31	1,480.18	45.83%	203.23	40.01	20.35	19.66	9.67%	182.69	89.90%	260.10
2036	961	2,696.03	1,285.30	1,410.73	47.67%	207.86	40.67	21.13	19.54	9.40%	186.85	89.90%	260.83
2037	961	2,657.63	1,325.95	1,331.68	49.89%	212.79	41.34	21.94	19.40	9.12%	191.29	89.90%	260.91
2038	961	2,618.10	1,375.86	1,242.24	52.55%	218.02	42.15	22.75	19.40	8.90%	195.99	89.90%	260.21
2039	961	2,578.33	1,436.83	1,141.50	55.73%	223.55	43.06	23.56	19.50	8.72%	200.96	89.90%	258.68
2040	961	2,538.92	1,510.54	1,028.38	59.50%	229.41	44.00	24.37	19.63	8.56%	206.22	89.90%	256.57
2041	961	2,500.70	1,598.83	901.87	63.94%	235.50	45.00	25.20	19.80	8.41%	211.70	89.90%	253.77
2042	961	2,464.30	1,703.54	760.76	69.13%	241.95	46.08	26.03	20.05	8.29%	217.50	89.90%	250.49
2043	961	2,430.46	1,826.60	603.86	75.15%	248.62	47.22	26.88	20.34	8.18%	223.50	89.90%	246.69
2044	961	2,399.87	1,970.03	429.84	82.09%	255.61	48.44	27.74	20.70	8.10%	229.78	89.90%	242.48
2045	961	2,373.01	2,135.73	237.28	90.00%	262.88	49.69	28.62	21.07	8.02%	236.31	89.90%	238.06

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.

Table 4b

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)

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	Required State Contribution: (a) Without GOB Cont.	(b) Debt Service	(c)=(a)-(b) Maximum Cont.	(d) Formula Rate With GOB	Minimum of (c) and (d): Required Cont.	Minimum of (c) and (d): Percent of Pay	Total Expenses
2016	961	$2,392.36	$869.38	$1,522.98	36.34%	$164.93	$57.10	$14.63	$42.47	25.75%	$147.69	$11.14	$136.55	$132.06	$132.06	80.07%	$138.09
2017	961	2,466.61	930.27	1,536.34	37.71%	164.82	55.56	14.37	41.19	24.99%	148.16	11.54	136.62	131.33	131.33	79.68%	145.68
2018	961	2,535.81	987.79	1,548.02	38.95%	165.94	53.93	14.38	39.55	23.83%	149.17	11.92	137.25	132.23	132.23	79.68%	153.95
2019	961	2,600.07	1,041.84	1,558.23	40.07%	166.92	52.55	14.43	38.12	22.84%	150.05	12.28	137.77	133.01	133.01	79.68%	162.03
2020	961	2,658.38	1,091.98	1,566.40	41.08%	168.04	50.80	14.46	36.34	21.63%	151.06	13.09	137.97	133.90	133.90	79.68%	170.39
2021	961	2,709.76	1,137.76	1,572.00	41.99%	169.01	48.70	14.62	34.08	20.16%	151.93	13.84	138.09	134.67	134.67	79.68%	178.93
2022	961	2,754.88	1,179.30	1,575.58	42.81%	169.94	47.27	14.77	32.50	19.12%	152.76	14.54	138.22	135.41	135.41	79.68%	187.02
2023	961	2,792.90	1,216.43	1,576.47	43.55%	171.22	45.60	14.93	30.67	17.91%	153.92	15.20	138.72	136.44	136.44	79.68%	195.27
2024	961	2,824.25	1,249.49	1,574.76	44.24%	172.62	44.44	15.23	29.21	16.92%	155.17	16.30	138.87	137.55	137.55	79.68%	203.14
2025	961	2,848.30	1,278.31	1,569.99	44.88%	174.21	43.15	15.51	27.64	15.87%	156.60	17.31	139.29	138.81	138.81	79.68%	211.02
2026	961	2,865.15	1,303.25	1,561.90	45.49%	175.92	41.98	15.87	26.11	14.84%	158.14	17.76	140.38	140.18	140.18	79.68%	218.44
2027	961	2,874.69	1,324.30	1,550.39	46.07%	177.84	40.98	16.10	24.88	13.99%	159.87	18.16	141.71	141.71	141.71	79.68%	225.64
2028	961	2,877.02	1,341.01	1,536.01	46.61%	179.96	40.13	16.16	23.97	13.32%	161.78	19.00	142.78	143.40	142.78	79.34%	232.40
2029	961	2,872.79	1,354.47	1,518.32	47.15%	182.36	39.62	16.50	23.12	12.68%	163.93	19.76	144.17	145.31	144.17	79.06%	238.41
2030	961	2,862.16	1,365.03	1,497.13	47.69%	185.10	39.21	16.98	22.23	12.01%	166.40	20.94	145.46	147.50	145.46	78.59%	243.90

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%
(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	961	$2,845.86	$1,373.52	$1,472.34	48.26%	$188.09	$39.07	$17.27	$21.80	11.59%	$169.09	$22.01	$147.08	$149.88	$147.08	78.19%	$248.51
2032	961	2,823.99	1,381.66	1,442.33	48.93%	191.47	38.97	17.99	20.98	10.96%	172.12	22.49	149.63	152.57	149.63	78.14%	252.69
2033	961	2,797.29	1,391.07	1,406.22	49.73%	195.03	39.13	18.75	20.38	10.45%	175.32	22.43	152.89	155.41	152.89	78.39%	256.05
2034	961	2,766.50	1,405.21	1,361.29	50.79%	198.97	39.47	19.53	19.94	10.02%	178.86	0.00	N/A	158.54	158.54	79.68%	258.54
2035	961	2,732.49	1,423.08	1,309.41	52.08%	203.23	40.01	20.35	19.66	9.67%	182.69	0.00	N/A	161.94	161.94	79.68%	260.10
2036	961	2,696.03	1,446.07	1,249.96	53.64%	207.86	40.67	21.13	19.54	9.40%	186.85	0.00	N/A	165.63	165.63	79.68%	260.83
2037	961	2,657.63	1,475.48	1,182.15	55.52%	212.79	41.34	21.94	19.40	9.12%	191.29	0.00	N/A	169.56	169.56	79.68%	260.91
2038	961	2,618.10	1,512.83	1,105.27	57.78%	218.02	42.15	22.75	19.40	8.90%	195.99	0.00	N/A	173.72	173.72	79.68%	260.21
2039	961	2,578.33	1,559.78	1,018.55	60.50%	223.55	43.06	23.56	19.50	8.72%	200.96	0.00	N/A	178.13	178.13	79.68%	258.68
2040	961	2,538.92	1,617.86	921.06	63.72%	229.41	44.00	24.37	19.63	8.56%	206.22	0.00	N/A	182.80	182.80	79.68%	256.57
2041	961	2,500.70	1,688.79	811.91	67.53%	235.50	45.00	25.20	19.80	8.41%	211.70	0.00	N/A	187.65	187.65	79.68%	253.77
2042	961	2,464.30	1,774.25	690.05	72.00%	241.95	46.08	26.03	20.05	8.29%	217.50	0.00	N/A	192.79	192.79	79.68%	250.49
2043	961	2,430.46	1,876.00	554.46	77.19%	248.62	47.22	26.88	20.34	8.18%	223.50	0.00	N/A	198.11	198.11	79.68%	246.69
2044	961	2,399.87	1,995.88	403.99	83.17%	255.61	48.44	27.74	20.70	8.10%	229.78	0.00	N/A	203.68	203.68	79.68%	242.48
2045	961	2,373.01	2,135.62	237.39	90.00%	262.88	49.69	28.62	21.07	8.02%	236.31	0.00	N/A	209.47	209.47	79.68%	238.06

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 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	961	$2,392.36	$633.07	$1,759.29	26.46%	$164.93	$57.10	$14.63	$42.47	25.75%	$147.69	89.55%	$138.09
2017	961	2,466.61	706.23	1,760.38	28.63%	164.82	55.56	14.37	41.19	24.99%	148.16	89.89%	145.68
2018	961	2,535.81	771.09	1,764.72	30.41%	165.94	53.93	14.38	39.55	23.83%	148.67	89.59%	153.95
2019	961	2,600.07	823.39	1,776.68	31.67%	166.92	52.55	14.43	38.12	22.84%	148.67	89.07%	162.03
2020	961	2,658.38	874.06	1,784.32	32.88%	168.04	50.80	14.46	36.34	21.63%	149.19	88.78%	170.39
2021	961	2,709.76	920.73	1,789.03	33.98%	169.01	48.70	14.62	34.08	20.16%	150.28	88.92%	178.93
2022	961	2,754.88	963.30	1,791.58	34.97%	169.94	47.27	14.77	32.50	19.12%	151.10	88.92%	187.02
2023	961	2,792.90	1,001.67	1,791.23	35.86%	171.22	45.60	14.93	30.67	17.91%	152.25	88.92%	195.27
2024	961	2,824.25	1,036.18	1,788.07	36.69%	172.62	44.44	15.23	29.21	16.92%	153.48	88.92%	203.14
2025	961	2,848.30	1,066.70	1,781.60	37.45%	174.21	43.15	15.51	27.64	15.87%	154.90	88.92%	211.02
2026	961	2,865.15	1,093.63	1,771.52	38.17%	175.92	41.98	15.87	26.11	14.84%	156.42	88.92%	218.44
2027	961	2,874.69	1,116.99	1,757.70	38.86%	177.84	40.98	16.10	24.88	13.99%	158.12	88.92%	225.64
2028	961	2,877.02	1,137.02	1,740.00	39.52%	179.96	40.13	16.16	23.97	13.32%	160.02	88.92%	232.40
2029	961	2,872.79	1,154.79	1,718.00	40.20%	182.36	39.62	16.50	23.12	12.68%	162.15	88.92%	238.41
2030	961	2,862.16	1,171.15	1,691.01	40.92%	185.10	39.21	16.98	22.23	12.01%	164.59	88.92%	243.90

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%
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	961	$2,845.86	$1,186.93	$1,658.93	41.71%	$188.09	$39.07	$17.27	$21.80	11.59%	$167.25	88.92%	$248.51
2032	961	2,823.99	1,203.34	1,620.65	42.61%	191.47	38.97	17.99	20.98	10.96%	170.25	88.92%	252.69
2033	961	2,797.29	1,221.49	1,575.80	43.67%	195.03	39.13	18.75	20.38	10.45%	173.41	88.92%	256.05
2034	961	2,766.50	1,242.76	1,523.74	44.92%	198.97	39.47	19.53	19.94	10.02%	176.91	88.92%	258.54
2035	961	2,732.49	1,268.67	1,463.82	46.43%	203.23	40.01	20.35	19.66	9.67%	180.70	88.92%	260.10
2036	961	2,696.03	1,300.70	1,395.33	48.25%	207.86	40.67	21.13	19.54	9.40%	184.82	88.92%	260.83
2037	961	2,657.63	1,340.26	1,317.37	50.43%	212.79	41.34	21.94	19.40	9.12%	189.20	88.92%	260.91
2038	961	2,618.10	1,388.97	1,229.13	53.05%	218.02	42.15	22.75	19.40	8.90%	193.85	88.92%	260.21
2039	961	2,578.33	1,448.60	1,129.73	56.18%	223.55	43.06	23.56	19.50	8.72%	198.77	88.92%	258.68
2040	961	2,538.92	1,520.80	1,018.12	59.90%	229.41	44.00	24.37	19.63	8.56%	203.98	88.92%	256.57
2041	961	2,500.70	1,607.43	893.27	64.28%	235.50	45.00	25.20	19.80	8.41%	209.40	88.92%	253.77
2042	961	2,464.30	1,710.29	754.01	69.40%	241.95	46.08	26.03	20.05	8.29%	215.13	88.92%	250.49
2043	961	2,430.46	1,831.31	599.15	75.35%	248.62	47.22	26.88	20.34	8.18%	221.06	88.92%	246.69
2044	961	2,399.87	1,972.48	427.39	82.19%	255.61	48.44	27.74	20.70	8.10%	227.28	88.92%	242.48
2045	961	2,373.01	2,135.69	237.32	90.00%	262.88	49.69	28.62	21.07	8.02%	233.74	88.92%	238.06

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.

Table 4d

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	961	$2,392.36	$879.56	$1,512.80	36.77%	$164.93	$57.10	$14.63	$42.47	25.75%	$147.69	$11.14	$136.55	$132.06	$132.06	80.07%	$138.09
2017	961	2,466.61	959.07	1,507.54	38.88%	164.82	55.56	14.37	41.19	24.99%	148.16	11.54	136.62	131.33	131.33	79.68%	145.68
2018	961	2,535.81	1,027.14	1,508.67	40.51%	165.94	53.93	14.38	39.55	23.83%	148.67	11.93	136.74	131.38	131.38	79.17%	153.95
2019	961	2,600.07	1,077.43	1,522.64	41.44%	166.92	52.55	14.43	38.12	22.84%	148.67	12.29	136.38	130.66	130.66	78.28%	162.03
2020	961	2,658.38	1,126.82	1,531.56	42.39%	168.04	50.80	14.46	36.34	21.63%	149.19	13.08	136.11	130.75	130.75	77.81%	170.39
2021	961	2,709.76	1,172.12	1,537.64	43.26%	169.01	48.70	14.62	34.08	20.16%	150.28	13.84	136.44	131.85	131.85	78.02%	178.93
2022	961	2,754.88	1,213.13	1,541.75	44.04%	169.94	47.27	14.77	32.50	19.12%	151.10	14.55	136.55	132.58	132.58	78.02%	187.02
2023	961	2,792.90	1,249.68	1,543.22	44.74%	171.22	45.60	14.93	30.67	17.91%	152.25	15.21	137.04	133.58	133.58	78.02%	195.27
2024	961	2,824.25	1,282.08	1,542.17	45.40%	172.62	44.44	15.23	29.21	16.92%	153.48	16.30	137.18	134.67	134.67	78.02%	203.14
2025	961	2,848.30	1,310.17	1,538.13	46.00%	174.21	43.15	15.51	27.64	15.87%	154.90	17.31	137.59	135.91	135.91	78.02%	211.02
2026	961	2,865.15	1,334.31	1,530.84	46.57%	175.92	41.98	15.87	26.11	14.84%	156.42	17.76	138.66	137.24	137.24	78.02%	218.44
2027	961	2,874.69	1,354.47	1,520.22	47.12%	177.84	40.98	16.10	24.88	13.99%	158.12	18.16	139.96	138.74	138.74	78.02%	225.64
2028	961	2,877.02	1,370.82	1,506.20	47.65%	179.96	40.13	16.16	23.97	13.32%	160.02	19.00	141.02	140.40	140.40	78.02%	232.40
2029	961	2,872.79	1,384.40	1,488.39	48.19%	182.36	39.62	16.50	23.12	12.68%	162.15	19.76	142.39	142.27	142.27	78.02%	238.41
2030	961	2,862.16	1,395.18	1,466.98	48.75%	185.10	39.21	16.98	22.23	12.01%	164.59	20.94	143.65	144.41	143.65	77.61%	243.90

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	961	$2,845.86	$1,403.87	$1,441.99	49.33%	$188.09	$39.07	$17.27	$21.80	11.59%	$167.25	$22.01	$145.24	$146.74	$145.24	77.22%	$248.51
2032	961	2,823.99	1,412.20	1,411.79	50.01%	191.47	38.97	17.99	20.98	10.96%	170.25	22.50	147.75	149.38	147.75	77.17%	252.69
2033	961	2,797.29	1,421.77	1,375.52	50.83%	195.03	39.13	18.75	20.38	10.45%	173.41	22.42	150.99	152.15	150.99	77.42%	256.05
2034	961	2,766.50	1,434.63	1,331.87	51.86%	198.97	39.47	19.53	19.94	10.02%	176.91	0.00	N/A	155.22	155.22	78.02%	258.54
2035	961	2,732.49	1,451.05	1,281.44	53.10%	203.23	40.01	20.35	19.66	9.67%	180.70	0.00	N/A	158.55	158.55	78.02%	260.10
2036	961	2,696.03	1,472.41	1,223.62	54.61%	207.86	40.67	21.13	19.54	9.40%	184.82	0.00	N/A	162.16	162.16	78.02%	260.83
2037	961	2,657.63	1,500.00	1,157.63	56.44%	212.79	41.34	21.94	19.40	9.12%	189.20	0.00	N/A	166.01	166.01	78.02%	260.91
2038	961	2,618.10	1,535.30	1,082.80	58.64%	218.02	42.15	22.75	19.40	8.90%	193.85	0.00	N/A	170.09	170.09	78.02%	260.21
2039	961	2,578.33	1,579.96	998.37	61.28%	223.55	43.06	23.56	19.50	8.72%	198.77	0.00	N/A	174.40	174.40	78.02%	258.68
2040	961	2,538.92	1,635.50	903.42	64.42%	229.41	44.00	24.37	19.63	8.56%	203.98	0.00	N/A	178.97	178.97	78.02%	256.57
2041	961	2,500.70	1,703.59	797.11	68.12%	235.50	45.00	25.20	19.80	8.41%	209.40	0.00	N/A	183.73	183.73	78.02%	253.77
2042	961	2,464.30	1,785.91	678.39	72.47%	241.95	46.08	26.03	20.05	8.29%	215.13	0.00	N/A	188.75	188.75	78.02%	250.49
2043	961	2,430.46	1,884.19	546.27	77.52%	248.62	47.22	26.88	20.34	8.18%	221.06	0.00	N/A	193.96	193.96	78.02%	246.69
2044	961	2,399.87	2,000.23	399.64	83.35%	255.61	48.44	27.74	20.70	8.10%	227.28	0.00	N/A	199.42	199.42	78.02%	242.48
2045	961	2,373.01	2,135.74	237.27	90.00%	262.88	49.69	28.62	21.07	8.02%	233.74	0.00	N/A	205.08	205.08	78.02%	238.06

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

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

	2015	2014
Assets		
Cash	$ 33,161,274	$ 32,055,593
Receivables:		
Contributions:		
Participants	$ 41,965	$ 1,895
Employer - GRF Fund	5,582,584	5,283,670
Other accounts	173,069	201,243
	$ 5,797,618	$ 5,486,808
Investments - held in the Illinois State Board of Investment Commingled Fund at fair value	$ 795,296,831	$ 738,704,938
Securities lending collateral with State Treasurer	12,776,000	13,475,000
Property and equipment, net of accumulated depreciation	$ 26,929	$ 8,389
Total Assets	$ 847,058,652	$ 789,730,728
Liabilities		
Benefits payable	$ -	$ -
Refunds payable	147,799	158,990
Administrative expenses payable	224,698	83,710
Participants' deferred service credit accounts	-	-
Due to the State of Illinois	-	-
Securities lending collateral with State Treasurer	12,776,000	13,475,000
Total Liabilities	$ 13,148,497	$ 13,717,700
Net assets held in trust for pension benefits	$ 833,910,155	$ 776,013,028

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

		2015		2014
Additions:				
Contributions:				
Participants	$	15,431,105	$	15,918,732
Employing state agencies and appropriations		134,039,684		126,815,881
Total Contributions revenue	$	149,470,789	$	142,734,613
Investments income:				
Net investments income	$	23,128,695	$	18,263,906
Interest earned on cash balances		117,257		105,612
Net appreciation in fair value of investments		12,763,198		91,689,469
Total Investments income	$	36,009,150	$	110,058,987
Other:				
Miscellaneous	$	-	$	-
Total Investments income	$	-	$	-
Total Additions	$	185,479,939	$	252,793,600
Deductions:				
Benefits:				
Retirement annuities	$	102,794,428	$	97,116,965
Survivors' annuities		22,859,921		21,474,000
Disability benefits		-		-
Lump-sum benefits		-		-
Total Benefits	$	125,654,349	$	118,590,965
Refunds		945,807		687,923
Administrative		982,656		831,652
Total Deductions	$	127,582,812	$	120,110,540
Net increase	$	57,897,127	$	132,683,060
Net assets held in trust for pension benefits:				
Beginning of year	$	776,013,028	$	643,329,968
End of year	$	833,910,155	$	776,013,028

Judges' 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	$ 776,013,028				
(2) Actuarial Value of Assets	705,250,403				
End of Year:					
(3) Market Value of Assets	833,910,155				
(4) Contributions and Disbursements					
(4a) Actual State Contribution Amount	134,039,684				
(4b) Employee Contribution Amount	15,431,105				
(4c) Benefit Payouts & Refunds	(126,600,156)				
(4d) Administrative Expenses	(982,656)				
(4e) Net of Contributions and Disbursements	21,887,977				
(5) Total Investment Income =(3)-(1)-(4e)	36,009,150				
(6) Projected Rate of Return	7.00%				
(7) Projected Investment Income =(1)x(6)+([1+(6)]^.5-1)x(4e)	55,074,034				
(8) Investment Income in Excess of Projected Income	(19,064,884)				
(9) Excess Investment Income Recognized This Year (5-year recognition)					
(9a) From This Year	$ (3,812,977)				
(9b) From One Year Ago	12,849,488	$ (3,812,977)			
(9c) From Two Years Ago	7,364,958	12,849,488	$ (3,812,977)		
(9d) From Three Years Ago	(8,305,164)	7,364,958	12,849,488	$ (3,812,977)	
(9e) From Four Years Ago	13,880,125	(8,305,163)	7,364,960	12,849,487	$ (3,812,976)
(9f) Total Recognized Investment Gain	21,976,430	8,096,306	16,401,471	9,036,510	(3,812,976)
(10) Change in Actuarial Value of Assets =(4e)+(7)+(9f)	$ 98,938,441				
End of Year:					
(3) Market Value of Assets	**$ 833,910,155**				
(11) Actuarial Value of Assets =(2)+(10)	**$ 804,188,844**				

Judges' 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	$ 520,037,248				
(2) Hypothetical Actuarial Value of Assets	474,790,423				
End of Year:					
(3) Hypothetical Value of Assets	580,974,543				
(4) Contributions and Disbursements					
(4a) State Contribution Amount[1]	148,449,385				
(4b) Employee Contribution Amount	15,431,105				
(4c) Benefit Payouts & Refunds	(126,600,156)				
(4d) Administrative Expenses	(982,656)				
(4e) Net of Contributions and Disbursements	36,297,678				
(5) Total Investment Income[2]					
=(3)-(1)-(4e)	24,639,617				
(6) Projected Rate of Return	7.00%				
(7) Projected Investment Income					
=(1)x(6)+([1+(6)]^.5-1)x(4e)	37,651,539				
(8) Investment Income in					
Excess of Projected Income	(13,011,922)				
(9) Excess Investment Income Recognized[3]					
This Year (5-year recognition)					
(9a) From This Year	$ (2,602,384)				
(9b) From One Year Ago	8,399,036	$ (2,602,384)			
(9c) From Two Years Ago	4,654,144	8,399,036	$ (2,602,384)		
(9d) From Three Years Ago	(5,180,369)	4,654,145	8,399,036	$ (2,602,384)	
(9e) From Four Years Ago	8,048,985	(5,180,370)	4,654,146	8,399,036	$ (2,602,386)
(9f) Total Recognized Investment Gain	13,319,412	5,270,427	10,450,798	5,796,652	(2,602,386)
(10) Change in Hypothetical Actuarial Value of Assets					
=(4e)+(7)+(9f)	$ 87,268,629				
End of Year:					
(3) Hypothetical Market Value of Assets	**$ 580,974,543**				
(11) Hypothetical Actuarial Value of Assets					
=(2)+(10)	**$ 562,059,052**				

[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 4.58%.*

[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	$ 705,250,403	$ 610,195,584	$ 601,219,999
2 Actuarial Accrued Liability (AAL)	2,229,277,180	2,156,804,991	2,021,715,796
3 Unfunded AAL (UAAL) [(2) - (1)]	1,524,026,777	1,546,609,407	1,420,495,797
4 Funded Ratio [(1) ÷ (2)]	31.64%	28.29%	29.74%
5 Covered Payroll	172,846,373	173,018,089	172,345,976
6 UAAL as a Percentage of Covered Payroll	881.72%	893.90%	824.21%

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	72.354%	72.580%	64.361%
(b) Covered payroll for fiscal year	$172,846,373	$173,018,089	$172,345,976
(c) ARC for fiscal year	125,061,595	125,576,795	110,923,357
2 Total Employer Contribution	126,815,881	88,239,564	63,644,099
3 Percentage of ARC Contributed [(2) ÷ (1)]	101.40%	70.27%	57.38%
4 Annual Contribution Required per State Statute			
(a) Percentage of payroll	73.365%	50.983%	36.919%
(b) Covered payroll for fiscal year	172,846,373	173,018,089	172,345,976
(c) Total required contribution	126,808,000	88,210,000	63,628,000
5 Employer Contribution	126,815,881	88,239,564	63,644,099
6 Percentage of (4) Contributed [(5) ÷ (4)]	100.01%	100.03%	100.03%

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	-	-	-	-	-	-	-	$ 48,261,173
7/1/91 - 6/30/92	26,280,222	48,261,173	3,860,894	3,880,982	26,260,134	10,052,100	16,208,034	64,469,207
7/1/92 - 6/30/93	29,037,582	64,469,207	5,157,537	5,184,371	29,010,748	11,099,030	17,911,718	82,380,925
7/1/93 - 6/30/94	31,719,450	82,380,925	6,590,474	6,624,764	31,685,160	10,766,000	20,919,160	103,300,085
7/1/94 - 6/30/95	32,937,148	103,300,085	8,264,007	8,307,004	32,894,151	10,806,000	22,088,151	125,388,236
7/1/95 - 6/30/96	37,711,076	125,388,236	10,031,059	10,083,250	37,658,885	12,129,000	25,529,885	150,918,121
7/1/96 - 6/30/97	26,021,939	150,918,121	12,073,450	6,423,141	31,672,248	13,783,328	17,888,920	168,807,041
7/1/97 - 6/30/98	28,867,624	168,807,041	13,504,563	7,184,501	35,187,686	15,692,152	19,495,534	188,302,575
7/1/98 - 6/30/99	38,631,275	188,302,575	15,064,206	8,014,240	45,681,241	18,688,816	26,992,425	215,295,000
7/1/99 - 6/30/00	40,205,224	215,295,000	17,223,600	9,163,049	48,265,775	21,411,577	26,854,198	242,149,198
7/1/00 - 6/30/01	42,546,928	242,149,198	19,371,936	10,305,975	51,612,889	24,348,926	27,263,963	269,413,161
7/1/01 - 6/30/02	47,277,311	269,413,161	21,553,053	11,466,342	57,364,022	27,532,000	29,832,022	299,245,183
7/1/02 - 6/30/03	53,470,841	299,245,183	23,939,615	13,715,519	63,694,937	31,440,103	32,254,834	331,500,017
7/1/03 - 6/30/04	63,261,895	331,500,017	26,520,001	15,193,877	74,588,019	178,593,095	(104,005,076)	227,494,941
7/1/04 - 6/30/05	57,749,460	227,494,941	18,199,595	10,426,938	65,522,117	32,043,009	33,479,108	260,974,049
7/1/05 - 6/30/06	62,927,993	260,974,049	20,877,924	11,961,410	71,844,507	29,337,911	42,506,596	303,480,645
7/1/06 - 6/30/07	73,371,653	303,480,645	24,278,452	16,224,573	81,425,532	35,236,800	46,188,732	349,669,377
7/1/07 - 6/30/08	75,134,070	349,669,377	27,973,550	19,791,113	83,316,507	46,977,961	36,338,546	386,007,923
7/1/08 - 6/30/09	78,386,597	386,007,923	30,880,634	21,847,856	87,419,375	59,983,000	27,436,375	413,444,298
7/1/09 - 6/30/10	86,916,418	413,444,298	33,075,544	23,400,741	96,591,221	78,509,810	18,081,411	431,525,709
7/1/10 - 6/30/11	95,490,182	431,525,709	30,206,800	24,424,140	101,272,842	62,694,460	38,578,382	470,104,091
7/1/11 - 6/30/12	110,923,357	470,104,091	32,907,286	26,609,163	117,221,480	63,644,099	53,577,381	523,681,472
7/1/12 - 6/30/13	125,576,795	523,681,472	36,657,703	29,641,788	132,592,710	88,239,564	44,353,146	568,034,618
7/1/12 - 6/30/14	125,061,595	568,034,618	39,762,423	32,152,296	132,671,722	126,815,881	5,855,841	573,890,459

* 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											
30-34											
35-39		5								5	1%
40-44	3	19	12	1						35	4%
45-49	2	40	40	10	3					95	10%
50-54	1	54	71	33	13					172	18%
55-59	3	43	69	41	39	19	3			217	22%
60-64		15	63	48	48	28	14	2		218	22%
65-69		15	29	25	33	15	15	5	4	141	15%
70 & Over	1	4	8	13	13	9	11	7	12	78	8%
Total	10	195	292	171	149	71	43	14	16	961	100%
Percentage of Total	1%	20%	30%	18%	16%	7%	4%	2%	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	787	$	8,697,647.69	$	104,371,772.28	$	132,619.79
Survivors	334		1,957,971.48		23,495,657.76		70,346.28
Total	**1,121**	**$**	**10,655,619.17**	**$**	**127,867,430.04**	**$**	**114,065.50**

Based on data received from the System, of the 787 retirement annuities, 118 were classified as "Single," 554 classified as "Married" and 115 were 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 5/18-131, Adopted June 30, 1989

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

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

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

Estimated annual administrative expenses are added to the normal cost.

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

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 Judges' 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 a basis for the determination of the 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

Illustrative rates of withdrawal from the plan are as follows:

Age Based Withdrawal	
	Male & Female
30	0.0128
35	0.0110
40	0.0094
45	0.0076
50	0.0058
55	0.0042
60	0.0024
65	0.0007

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 3.75 percent per annum, compounded annually, was used. This 3.75 percent salary increase assumption includes an inflation component of 3.00 percent per annum, a productivity component of 0.60 percent per annum, and a merit/promotion component of 0.15 percent per annum.

Disability

No assumption for disability.

Employee Contribution Election

For purposes of the valuation, it is assumed that all judges elect to contribute only on increases in salary when they become eligible for this provision.

Population Projection

For purposes of determining annual appropriation as a percent of total covered payroll, the size of the active group is assumed to remain level at the number of actives as of the valuation date. New entrants are assumed to enter with an average age and 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 3.75 percent per annum.

New Entrant Profile

Age Group	No.	Uncapped Salary	Capped Salary
Under 20			
20-24			
25-29	1	$ 187,018	$ 115,481
30-34	32	6,146,046	3,695,388
35-39	114	21,246,272	13,164,821
40-44	219	40,307,224	25,290,315
45-49	206	37,951,827	23,789,063
50-54	166	30,369,576	19,169,828
55-59	100	18,292,047	11,548,089
60-64	52	9,567,662	6,005,006
65-69	5	916,388	577,404
70 & Over			
Total	895	$ 164,984,060	$ 103,355,395
Avg. Salary		$ 184,340	$ 115,481
Avg. Age			46.98
Percent Male			69.05%

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
60	22.00%
61 - 70	11.00%
71	12.00%
72	14.00%
73	16.00%
74	18.00%
75 - 79	20.00%
80	100.00%

Early Retirement Rates	
Age	Male & Female
55	8.00%
56	8.00%
57	8.00%
58	8.00%
59	8.00%

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 JRS 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	30.00%
63	10.00%
64	13.00%
65	16.00%
66	20.00%
67	30.00%
68	11.00%
69 - 71	12.00%
72	14.00%
73	16.00%
74	18.00%
75 - 79	20.00%
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 5/18-131:

(c) Notwithstanding any other provision of this Article, the total required State contribution for fiscal year 2006 is $29,189,400.

Notwithstanding any other provision of this Article, the total required State contribution for fiscal year 2007 is $35,236,800.

For each State fiscal years 2008 through 2010, the State contribution to the System, as a percentage of the applicable employee 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 5/18-131:

(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. Participation in the system is mandatory when a person first becomes a judge, unless an "Election Not to Participate" is filed by the judge within 30 days of the date of notification of this option.

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

Retirement Annuity	7.5%
Automatic Annuity Increase	1.0
Survivor's Annuity	2.5
Total	11.0%

   All judges who become participants after December 31, 1992, are required to make contributions toward the survivor's annuity unless they file an election not to participate in the survivor's annuity benefit, in which case the total participant contribution rate is 8.5% of salary.

3. Discontinuance of Contributions. A participant who becomes eligible to receive the maximum rate of annuity may elect to discontinue contributions and have his or her benefits "fixed" based upon the final rate of salary immediately prior to the effective date of such election. This election, once made, is irrevocable.

4. Election to Contribute Only on Increases in Salary. A participant who has attained age 60 and continues to serve as a judge after becoming eligible to receive the maximum rate of annuity and has not elected to discontinue contributing to the system may elect to make contributions based only on the amount of the increases in salary received by the judge on or after the date of the election.

5. Retirement Annuity – Eligibility. A judge who has at least 10 years of service may retire with an unreduced retirement annuity upon attainment of age 60. A judge with at least 6 years of service may retire with an unreduced retirement annuity upon attainment of age 62.

   A judge with at least 10 years of service may retire upon attainment of age 55, with the amount of the retirement annuity reduced 1/2 of 1% for each month that the judge is under age 60 if the judge has less than 28 years of service. This penalty for retirement before age 60 is reduced by 5/12 of 1% for every month of service in the System in excess of 20 years.

6. Retirement Annuity – Amount. The retirement annuity is determined according to the following formula based upon the final rate of salary:
   - 3 1/2% for each of the first 10 years of service; plus
   - 5% for each year of service in excess of 10

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

7. Automatic Increase In Retirement Annuity. Annual automatic increases of 3% of the current amount of retirement annuity are provided. The initial increase is effective in the month of January of the year next following the year in which the first anniversary of retirement occurs.

8. Temporary Total Disability. A member with at least 2 years of service who becomes totally disabled and unable to perform his or her duties as a judge is entitled to a temporary disability benefit equal to 50% of salary payable during the period of disability but not beyond the end of the term of office.

9. Total and Permanent Disability. A member with at least 10 years of service who becomes totally and permanently disabled while serving as a judge is eligible to commence receiving his or her retirement annuity without reduction regardless of age.

10. Survivor's Annuity – Participation and Eligibility. A married judge, an unmarried judge who becomes a participant after December 31, 1992 or a judge who marries after becoming a participant is subject to the provisions relating to the survivor's annuity unless he or she files a written notice of election not to participate in the survivor's annuity.

    An active judge who is not contributing for the survivor's annuity and later marries or remarries may receive partial credit for the survivor's annuity thereby providing a prorated benefit for his or her spouse by contributing to the survivor's annuity benefit prospectively from the date of marriage.

    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 of the member 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 full-time student, the spouse's benefit is suspended if the spouse is under age 50 until the attainment of such age.

    Children of the member who are under age 18 or under age 22 and a full-time student or who are over age 18 and dependent because of a physical or mental disability are eligible for survivor benefits. Legally adopted children are eligible for survivor benefits on the same basis as other children.

    If the member dies in service as a judge, the member must have at least 1 1/2 years of service credit for survivor's annuity eligibility. If death occurs after termination of service, the deceased member must have at least 10 years of service credit for survivor's annuity eligibility.

11. Survivor's Annuity – Amount. (a) Upon the death of an annuitant, his or her surviving spouse shall be entitled to a survivor's annuity of 66 2/3% of the annuity the annuitant was receiving immediately prior to his or her death.

    (b) Upon the death of a judge while in service, the surviving spouse shall receive a survivor's annuity of 66 2/3% of the annuity earned by the judge as of the date of death, or 7 1/2% of the judge's last salary, whichever is greater.

    (c) Upon the death of a former judge who had terminated service with at least 10 years of service, his or her surviving spouse shall be entitled to a survivor's annuity of 66 2/3% of the annuity earned by the deceased member as of the date of death.

(d) Upon the death of an annuitant, a judge in service, or a former judge who had terminated service with at least 10 years of service, each surviving child unmarried and under the age of 18, or age 22 in the case of a full-time student, or disabled shall be entitled to a child's annuity in an amount equal to 5% of the decedent's final salary, not to exceed in total for all such children the greater of 20% of final salary or 66 2/3% of the earned retirement annuity.

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

12. Refund of Contributions. A participant who ceases to be a judge may apply for and receive a refund of his or her total contributions to the system, provided he or she is not then eligible to receive a retirement annuity.

    A participant who becomes unmarried, either before or after retirement, is entitled to a refund of contributions made for the survivor's annuity.

<u>Judges Who First Become Participants On or After January 1, 2011</u>

The following changes to the above provisions apply to judges 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. The 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 next following attainment of age 67 and in January 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 on each January 1 occurring on or after attainment of age 67.

8. The retirement annuity being paid is suspended when an annuitant accepts full time employment in a position covered under the Judges' 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

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	$1,563.35	$7.64	$734.15	$9.00	$0.00	$1,570.99	$743.16	$2,314.15
2016	1,539.37	7.64	831.15	14.21	0.00	1,547.01	845.35	2,392.36
2017	1,512.79	8.06	924.48	20.06	1.22	1,520.85	945.76	2,466.61
2018	1,483.64	8.48	1,013.24	26.62	3.84	1,492.11	1,043.70	2,535.81
2019	1,451.94	8.85	1,097.27	33.97	8.04	1,460.79	1,139.28	2,600.07
2020	1,417.73	9.25	1,175.51	41.91	13.98	1,426.98	1,231.40	2,658.38
2021	1,381.06	9.51	1,247.30	49.95	21.95	1,390.56	1,319.19	2,709.76
2022	1,341.97	9.78	1,312.53	58.26	32.34	1,351.75	1,403.13	2,754.88
2023	1,300.53	10.02	1,370.69	66.36	45.29	1,310.56	1,482.34	2,792.90
2024	1,256.84	10.27	1,421.49	74.42	61.23	1,267.11	1,557.14	2,824.25
2025	1,210.98	10.39	1,464.41	82.60	79.93	1,221.36	1,626.93	2,848.30
2026	1,163.07	10.50	1,499.21	90.79	101.58	1,173.57	1,691.58	2,865.15
2027	1,113.27	10.53	1,525.72	98.85	126.32	1,123.79	1,750.89	2,874.69
2028	1,061.73	10.51	1,543.80	106.64	154.34	1,072.24	1,804.78	2,877.02
2029	1,008.67	10.47	1,553.84	114.07	185.74	1,019.14	1,853.65	2,872.79
2030	954.29	10.42	1,555.83	121.06	220.56	964.70	1,897.45	2,862.16
2031	898.85	10.35	1,550.17	127.57	258.92	909.20	1,936.66	2,845.86
2032	842.64	10.26	1,536.91	133.42	300.77	852.90	1,971.09	2,823.99
2033	785.96	10.12	1,516.56	138.45	346.19	796.08	2,001.20	2,797.29
2034	729.17	9.96	1,489.58	142.63	395.16	739.13	2,027.37	2,766.50
2035	672.63	9.77	1,456.53	145.94	447.61	682.40	2,050.09	2,732.49
2036	616.73	9.56	1,417.85	148.50	503.38	626.29	2,069.73	2,696.03
2037	561.86	9.33	1,373.99	150.15	562.29	571.20	2,086.43	2,657.63
2038	508.43	9.08	1,325.45	150.92	624.22	517.51	2,100.59	2,618.10
2039	456.82	8.81	1,272.82	150.92	688.96	465.63	2,112.70	2,578.33
2040	407.42	8.51	1,216.52	150.18	756.30	415.92	2,123.00	2,538.92
2041	360.55	8.19	1,157.27	148.69	826.00	368.74	2,131.96	2,500.70
2042	316.52	7.85	1,095.53	146.51	897.89	324.37	2,139.93	2,464.30
2043	275.57	7.49	1,031.98	143.68	971.75	283.06	2,147.40	2,430.46
2044	237.90	7.11	967.19	140.28	1,047.39	245.00	2,154.87	2,399.87
2045	203.61	6.71	901.74	136.31	1,124.64	210.32	2,162.69	2,373.01

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	$1,563.35	$7.64	$1,070.93	$62.09	$0.00	$1,570.99	$1,133.02	$2,704.01
2016	1,539.37	7.64	1,137.22	66.23	18.17	1,547.01	1,221.61	2,768.62
2017	1,512.79	8.06	1,200.86	70.63	37.75	1,520.85	1,309.25	2,830.10
2018	1,483.64	8.48	1,261.24	75.33	59.08	1,492.11	1,395.64	2,887.76
2019	1,451.94	8.85	1,318.16	80.33	81.10	1,460.79	1,479.58	2,940.37
2020	1,417.73	9.25	1,370.90	85.57	105.91	1,426.98	1,562.37	2,989.35
2021	1,381.06	9.51	1,419.11	90.88	134.61	1,390.56	1,644.61	3,035.17
2022	1,341.97	9.78	1,462.52	96.33	163.08	1,351.75	1,721.93	3,073.68
2023	1,300.53	10.02	1,500.61	101.76	195.38	1,310.56	1,797.74	3,108.30
2024	1,256.84	10.27	1,533.10	107.18	227.93	1,267.11	1,868.21	3,135.31
2025	1,210.98	10.39	1,559.55	112.64	263.01	1,221.36	1,935.21	3,156.57
2026	1,163.07	10.50	1,579.74	118.08	300.51	1,173.57	1,998.33	3,171.90
2027	1,113.27	10.53	1,593.40	123.41	340.81	1,123.79	2,057.62	3,181.41
2028	1,061.73	10.51	1,600.37	128.53	383.68	1,072.24	2,112.58	3,184.82
2029	1,008.67	10.47	1,600.76	133.40	428.90	1,019.14	2,163.06	3,182.20
2030	954.29	10.42	1,594.52	137.95	477.16	964.70	2,209.63	3,174.33
2031	898.85	10.35	1,581.89	142.13	527.64	909.20	2,251.66	3,160.86
2032	842.64	10.26	1,562.82	145.83	581.85	852.90	2,290.49	3,143.39
2033	785.96	10.12	1,537.64	148.94	638.98	796.08	2,325.56	3,121.64
2034	729.17	9.96	1,506.65	151.44	699.14	739.13	2,357.23	3,096.36
2035	672.63	9.77	1,470.27	153.28	762.17	682.40	2,385.73	3,068.13
2036	616.73	9.56	1,428.83	154.54	828.05	626.29	2,411.42	3,037.72
2037	561.86	9.33	1,382.69	155.09	897.60	571.20	2,435.39	3,006.59
2038	508.43	9.08	1,332.29	154.95	970.04	517.51	2,457.28	2,974.79
2039	456.82	8.81	1,278.13	154.18	1,045.05	465.63	2,477.36	2,942.99
2040	407.42	8.51	1,220.61	152.79	1,123.07	415.92	2,496.47	2,912.39
2041	360.55	8.19	1,160.36	150.76	1,204.02	368.74	2,515.14	2,883.87
2042	316.52	7.85	1,097.84	148.14	1,287.44	324.37	2,533.42	2,857.78
2043	275.57	7.49	1,033.66	144.95	1,373.27	283.06	2,551.88	2,834.94
2044	237.90	7.11	968.39	141.26	1,461.22	245.00	2,570.86	2,815.87
2045	203.61	6.71	902.57	137.05	1,551.40	210.32	2,591.02	2,801.34

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	$128.97	$0.52	$8.39	$0.20	$0.00	$129.50	$8.59	$138.09
2016	129.87	0.11	15.43	0.22	0.05	129.97	15.70	145.68
2017	130.56	0.14	22.90	0.24	0.11	130.70	23.25	153.95
2018	131.05	0.21	30.33	0.26	0.18	131.26	30.77	162.03
2019	131.33	0.22	38.22	0.37	0.26	131.54	38.85	170.39
2020	131.39	0.37	46.16	0.65	0.35	131.77	47.16	178.93
2021	131.25	0.38	54.07	0.88	0.45	131.63	55.40	187.02
2022	130.87	0.43	62.15	1.27	0.55	131.30	63.98	195.27
2023	130.25	0.44	70.14	1.64	0.67	130.69	72.45	203.14
2024	129.39	0.58	78.17	1.97	0.90	129.97	81.05	211.02
2025	128.26	0.60	86.02	2.37	1.20	128.86	89.58	218.44
2026	126.85	0.68	93.70	2.84	1.57	127.54	98.11	225.64
2027	125.16	0.73	101.09	3.40	2.03	125.89	106.52	232.40
2028	123.15	0.75	107.92	3.99	2.60	123.90	114.51	238.41
2029	120.83	0.76	114.37	4.63	3.31	121.59	122.31	243.90
2030	118.17	0.77	120.11	5.29	4.16	118.94	129.57	248.51
2031	115.17	0.78	125.49	6.04	5.21	115.95	136.74	252.69
2032	111.81	0.83	130.10	6.85	6.45	112.64	143.41	256.05
2033	108.09	0.84	134.01	7.67	7.92	108.93	149.60	258.54
2034	104.00	0.85	137.13	8.46	9.66	104.86	155.25	260.10
2035	99.56	0.86	139.56	9.16	11.69	100.42	160.41	260.83
2036	94.78	0.87	141.29	9.92	14.05	95.65	165.26	260.91
2037	89.68	0.88	142.30	10.63	16.73	90.55	169.66	260.21
2038	84.30	0.88	142.52	11.23	19.76	85.18	173.50	258.68
2039	78.68	0.88	142.10	11.78	23.13	79.56	177.01	256.57
2040	72.88	0.88	140.85	12.30	26.87	73.76	180.01	253.77
2041	66.96	0.88	138.97	12.73	30.95	67.85	182.65	250.49
2042	61.00	0.88	136.34	13.11	35.36	61.88	184.81	246.69
2043	55.07	0.87	133.05	13.38	40.10	55.95	186.54	242.48
2044	49.25	0.86	129.16	13.63	45.16	50.11	187.95	238.06
2045	43.61	0.85	124.66	13.83	50.52	44.46	189.01	233.47

Table 10

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	760	$141.53	$12.06	$52.48	201	$23.39	$2.57	$4.62	0	$0.00	$0.00	$0.00
2016	696	133.25	10.89	49.41	200	23.74	2.61	4.92	66	7.83	0.86	1.24
2017	633	125.76	9.96	46.14	198	24.28	2.67	5.23	130	15.90	1.75	2.56
2018	572	117.77	9.02	42.99	197	24.84	2.73	5.57	193	24.31	2.67	3.99
2019	515	110.07	8.09	39.60	195	25.41	2.79	5.75	251	32.56	3.58	5.46
2020	460	101.90	7.24	36.01	191	25.56	2.81	5.58	310	41.55	4.57	7.11
2021	407	93.49	6.36	32.73	180	24.76	2.72	5.53	375	51.69	5.69	9.01
2022	360	85.87	5.54	29.55	171	24.27	2.67	5.17	430	61.09	6.72	10.88
2023	317	78.36	4.87	26.49	155	22.73	2.50	4.94	489	71.52	7.87	13.01
2024	277	71.22	4.18	23.47	144	21.64	2.38	4.84	540	81.35	8.95	14.84
2025	241	64.20	3.58	20.57	135	20.94	2.30	4.70	585	90.77	9.98	16.72
2026	208	57.51	2.87	17.87	126	20.11	2.21	4.49	627	100.22	11.02	18.62
2027	179	51.13	1.99	15.33	116	19.07	2.10	4.23	667	109.76	12.07	20.57
2028	152	45.17	1.41	13.15	105	17.89	1.97	3.96	703	119.30	13.12	22.51
2029	129	39.81	1.00	11.14	96	16.71	1.84	3.68	736	128.58	14.14	24.40
2030	109	34.77	0.40	9.36	86	15.51	1.71	3.39	766	137.81	15.16	26.32
2031	92	30.36	0.27	7.76	78	14.38	1.58	3.06	792	146.74	16.14	28.14
2032	76	26.09	0.17	6.42	69	13.13	1.44	2.69	816	155.82	17.14	30.01
2033	63	22.37	0.10	5.29	60	11.79	1.30	2.34	838	164.81	18.13	31.84
2034	52	19.07	0.09	4.38	52	10.48	1.15	2.01	858	173.68	19.10	33.62
2035	42	16.26	0.05	3.60	44	9.27	1.02	1.76	874	182.33	20.06	35.32
2036	35	13.78	0.04	2.94	39	8.28	0.91	1.47	888	190.73	20.98	36.93
2037	28	11.58	0.04	2.39	32	7.14	0.79	1.21	901	199.30	21.92	38.55
2038	23	9.67	0.03	1.94	27	6.11	0.67	1.02	912	207.77	22.85	40.10
2039	18	8.08	0.03	1.54	23	5.33	0.59	0.85	920	216.00	23.76	41.60
2040	14	6.59	0.02	1.24	19	4.59	0.51	0.69	928	224.31	24.67	43.07
2041	11	5.45	0.02	0.97	15	3.84	0.42	0.57	934	232.66	25.59	44.54
2042	9	4.36	0.01	0.76	13	3.25	0.36	0.46	940	241.01	26.51	46.00
2043	7	3.50	0.01	0.58	10	2.71	0.30	0.37	944	249.41	27.44	47.48
2044	5	2.75	0.01	0.43	8	2.28	0.25	0.30	947	257.85	28.36	48.96
2045	4	2.08	0.01	0.31	7	1.85	0.20	0.22	951	266.47	29.31	50.47