Gabriel Roeder Smith & Company
Consultants & Actuaries

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2015

GRS
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November 6, 2015

Board of Trustees
State Universities Retirement System of Illinois
1901 Fox Drive
Champaign, Illinois 61820

Dear Members of the Board:

At your request, we present the report of the actuarial valuation of the State Universities Retirement System of Illinois ("SURS") as of June 30, 2015. GRS has prepared this report exclusively for the Trustees of the State Universities Retirement System; GRS is not responsible for reliance upon this report by any other party. This report may be provided to parties other than SURS only in its entirety and only with the permission of the Board.

This valuation provides information on the funding status and the contribution requirements of SURS. This valuation includes a determination of the State contribution level (the "Statutory Contribution") for the fiscal year ending June 30, 2017, under Section 15-155 of the SURS Article of the Illinois Pension Code and provides estimates of Statutory contributions for subsequent years. This valuation also provides historical information through fiscal year 2014 as required by Governmental Accounting Standards Board ("GASB") Statement Nos. 25 and 27. Information required by GASB Statement Nos. 67 and 68 is provided in a separate report. This report should not be relied on for any purpose other than the purpose described.

This valuation is based on the provisions of SURS in effect as of June 30, 2015, data on the SURS membership and information on the asset value of the trust fund as of that date. Due to the court ruling recent pension reform unconstitutional, this valuation does not reflect the provisions of Public Act 98-0599. The valuation was based upon the information furnished by SURS staff, concerning SURS benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by SURS.

The benefit provisions for members hired on or after January 1, 2011, were changed under Public Act 96-0889. Members hired on or after this date and the assumed new hires in the projections were valued under Public Act 96-0889 benefit provisions and different actuarial assumptions, as applicable. New actuarial assumptions that were recommended and adopted from an experience review for the period June 30, 2010 through June 30, 2014, were first effective with this valuation as of June 30, 2015. The actuarial cost method (Projected Unit Credit, as required by statute) and the asset smoothing method (as required by statute) used in this valuation are unchanged from the prior June 30, 2014, actuarial valuation of SURS.

To the best of our knowledge, this actuarial statement is complete and accurate, fairly presents the actuarial position of SURS as of June 30, 2015, and has been prepared in accordance with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

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, contribution amounts or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements in this report.

Valuations do not affect the ultimate cost of the Plan, only the timing of contributions into the Plan. Plan funding occurs over time. Contribution shortfalls (the difference between the actual contributions and the annual required contributions) remain the responsibility of the Plan sponsor and can be made in later years. If the contribution levels over a period of years are lower or higher than necessary, it is normal and expected practice for adjustments to be made to future contribution levels to take account of this variance-with a view to funding the plan over time.

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 development and adherence to a funding policy that funds the normal cost of the plan as well as an amortization payment that would seek to pay off any unfunded accrued liability over a closed period at least as long as 15 years and no longer than 30 years.

The signing actuaries are independent of the plan sponsor.

Amy Williams, Lance Weiss and David Kausch are Members of the American Academy of Actuaries ("MAAA") and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Respectfully submitted,

Amy Williams Lance J. Weiss David T Kausch

Amy Williams, ASA, MAAA	Lance Weiss, EA, MAAA	David Kausch, FSA, EA, MAAA
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SUMMARY OF THE VALUATION

PURPOSES OF THE ACTUARIAL VALUATION

At your request we have performed an actuarial valuation of the State Universities Retirement System of Illinois ("SURS") as of June 30, 2015.

The purposes of this actuarial valuation are as follows:

- To determine the funding status of SURS as of the valuation date based on the market value of assets and the actuarial value of assets; and
- To develop the levels of contributions required under Section 15-155 of the SURS Article of the Illinois Pension Code for the fiscal year ending June 30, 2017, and to estimate contributions required under that Section for the subsequent years of the funding period ending in the year 2045.

Accounting information required under Governmental Accounting Standards Board ("GASB") Statement Nos. 67 and 68 is calculated in a separate report.

REPORT HIGHLIGHTS

The Statutory contribution for FY 2017 is $1.719 billion, and includes the State's projected normal cost of $438.3 million and the Self Managed Plan ("SMP") contribution of $68.9 million. The 2014 valuation had projected the Statutory contribution would decrease, from $1.647 billion for FY 2016 to $1.638 billion for FY 2017. The key reason for the increase in the Statutory contribution over the projected amount from the prior valuation is due to the new assumptions that were recommended and adopted from an experience review for the period June 30, 2010 through June 30, 2014, first effective with this valuation, which increased the actuarial accrued liability. In addition, the fiscal year 2015 investment market return was lower than the assumption of 7.25%, which increased the Statutory contribution.

In the past 10 years, SURS experienced investment gains on a market value basis (compared to the actuarial assumption) in fiscal years 2006, 2007, 2010, 2011, 2013 and 2014. However, SURS incurred investment losses (or shortfalls in return compared to the actuarial assumption) in fiscal years 2008, 2009, 2012 and 2015. The market return for the year ending June 30, 2015, was about 2.90% compared to a return of 18.16% in FY 2014. The average market value investment return over the most recent 10 years has been approximately 7.1%.

The funded ratio increased from 42.3% as of June 30, 2014, to 43.3% as of June 30, 2015, based on the actuarial value of assets and decreased from 46.5% as of June 30, 2014, to 44.2% as of June 30, 2015, based on the market value of assets. The net deferred asset gains will be recognized in the actuarial value of assets over the next four years.

The funded ratio and unfunded actuarial accrued liability are appropriate for assessing the need for or amount of future contributions other than normal cost contributions. They are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

ACTUARIAL ASSUMPTIONS

The Board voted to decrease the investment return assumption from 7.75% to 7.25% as of June 30, 2014, and to decrease the Effective Rate of Interest ("ERI") assumption from 7.75% to 7.00% as of June 30, 2013. The asset valuation method was changed from market value of assets to actuarial value of assets effective with the valuation as of June 30, 2009, as required by statute.

All other actuarial assumptions were first adopted by the Board for use with the actuarial valuation as of June 30, 2015, and were based on the recommendations from the experience review performed for the period from June 30, 2010, through June 30, 2014. The changes in assumptions include:

- Decreasing overall rates of salary increase;
- A net increase in retirement rates (increase in rates for ages younger than 60 and a decrease in rates for ages 70 through 79);
- A net decrease in service-based termination rates;
- Decrease disability rates;
- Updating mortality rates to the RP-2014 white collar mortality tables with projected generational mortality improvements using scale MP-2014; and
- Increasing the percentage of new hires assumed to elect to participate in the Self Managed Plan from 15% to 30%.

The assumptions can be found in Appendix G of the report.

In addition, we have assumed that the Statutory contribution will be calculated as a level percentage of pensionable payroll. Pensionable payroll for members hired on or after January 1, 2011, is limited by the pay cap. The basis for this assumption comes from 40 ILCS 5/1-160 (b-5).

SURS BENEFITS

The benefit provisions valued in this valuation are identical to those valued in the prior valuation as of June 30, 2014. Due to the court ruling recent pension reform unconstitutional, this valuation does not reflect the provisions of Public Act 98-0599.

EXPERIENCE DURING 2015

The System assets earned 2.90% on a market value basis during FY 2015 which was less than the investment return assumption of 7.25% for FY 2015. However, the System assets earned 10.82% on an actuarial value of assets basis during FY 2015, due to recognition of net deferred investment gains under the asset smoothing method. Because 10.82% exceeds the assumed rate of investment return of 7.25% for FY 2015, there was an asset gain of $558.1 million on the actuarial value of assets. Primarily due to this actuarial gain on assets, the SURS defined benefit programs experienced an overall actuarial gain of $602.3 million. There was a gain of $44.2 million from actuarial liabilities, including a gain of $45.3 million from lower than expected pay increases which was partially offset by a loss of about $1.1 million from demographic experience.

There was an increase in the liabilities of $972.9 million due to the change in actuarial assumptions and methods.

The total gain or loss from liabilities for the system is calculated as follows (dollars in millions):

1.	Actuarial Accrued Liability ("AAL") - Prior Year	$	37,429.5
2.	Total Normal Cost - Prior Year [1]		730.0
3.	Benefits and Administrative Expenses Paid in FY 2015		(2,227.8)
4.	Interest on the above items 1, 2 and 3		2,660.3
5.	Expected AAL 6/30/2015 (1+2+3+4)		38,592.0
6.	Impact of Change in Actuarial Assumptions and Methods		972.9
7.	Expected AAL 6/30/2015 After Assumption Changes (5+6)		39,564.9
8.	Actual AAL 6/30/2015		39,520.7
9.	Actuarial (Gain)/Loss on Liabilities (8-7)	$	(44.2)

[1] *Total Normal Cost from the previous valuation which includes both employee and employer portion.*

The total net actuarial gain is the total of the gain from assets and the net gain from liabilities. The total actuarial gain for the year is as follows (dollars in millions):

1.	Actuarial (Gain)/Loss on Assets	$	(558.1)
2.	Actuarial (Gain)/Loss on Liabilities		(44.2)
3.	Total Actuarial (Gain)/Loss (1+2)	$	(602.3)

The “behavior” of the population determines the liability gain or loss for the year. There was a gain on salaries, due to lower salary increases than assumed. From last year to this year, there were gains on retirement and disability that were partially offset by a loss on termination. Active and retiree mortality experience was about as expected, and, as always, there was a new entrant loss. The new entrant loss occurs each year, but is offset by additional contributions to the assets. The other assumptions were so close that they generated very little actuarial gain or loss.

See Table 10 (page 19), Appendix C, for detail of the gains and losses by source.

STATUTORY APPROPRIATIONS FOR THE 2017 FISCAL YEAR AND BEYOND

Section 15-155, which governs the development of Employer/State contributions to SURS, provides that:

1. Employer/State contributions are determined under the following process:

   a) The overall objective of the statute is to achieve a funding ratio of 90% by the end of fiscal year ("FY") 2045.

   b) The Employer/State contribution for FY 2012 and each year thereafter to and including FY 2045 is to be based on a (theoretically) constant percentage of the payroll[1] of active members of SURS based on the actuarial value of assets at the valuation date and assuming the actuarial value of assets earns the assumed investment return in the future.

   c) After 2045, the Employer/State contribution rate is to be sufficient to maintain the funding level at 90%.

   [1] *We have assumed the contribution would be based on pensionable payroll. Pensionable payroll for the members hired on or after January 1, 201l, is limited by the pay cap.*

2. During the period of amortization of the 2003 bond issue, the Employer/State contribution in any fiscal year may not exceed the excess of:

   a) the contribution, as developed in 1. above, assuming that the special contribution (from the bond proceeds) has not been made, over

   b) the debt service on the bond issue for the fiscal year.

3. Pursuant to Public Act 97-0694, Section 15-165, the dollar amount of the proposed Employer/State contribution required for a fiscal year shall be certified to the Governor no later than November 1 for the fiscal year commencing on the following July 1. The required amounts are budgeted pursuant to the continuing appropriations process. The State Actuary is required to review the actuarial assumptions and valuation and issue a preliminary report. After the Board considers the State Actuary's report, the certification is finalized no later than January 15.

Based on the actuarial value of assets, Employer/State contributions for FY 2017 and estimates of the required contributions for the subsequent five fiscal years follow. The estimates for fiscal years 2018-2022 are calculated based on the expected actuarial value of assets at each of the future corresponding valuations, including the recognition of deferred gains and losses that will be recognized in future years as shown in Table 7 (page 16). In addition, the following table shows the certified Employer/State contributions for FY 2016 for comparison purposes, as calculated in the actuarial valuation as of June 30, 2014.

Fiscal Year [1]	Estimated Statutory Contribution (in Millions) 30% of New Members to SMP SURS	SMP [2]	Total
2016	$ 1,582.566	$ 64.914	$ 1,647.480
2017	1,650.020	68.906	1,718.926
2018	1,681.386	72.319	1,753.705
2019	1,702.106	77.081	1,779.187
2020	1,734.233	81.887	1,816.120
2021	1,790.488	86.652	1,877.140
2022	1,836.980	91.423	1,928.403
Seven year total	$ 11,977.779	$ 543.182	$ 12,520.961

[1] *Total FY 2016 Contribution based on June 30, 2014, valuation. FY 2017 Contribution and projected FY 2018-2022 contributions based on June 30, 2015, valuation. The Statutory contribution does not include debt service.*

[2] *Projected Self Managed Plan ("SMP") contribution is based on projection of current SMP members and 30% of new members electing SMP, which is the defined contribution plan option.*

The Statutory contribution for FY 2017 is $1,718,926,000. This is equal to a gross Statutory contribution of $1,723,161,000 less $4,235,000 in SMP forfeitures. The projected SMP contributions for FY 2018-2022 are net of assumed projected SMP forfeitures.

The Statutory contribution increased from $1.647 billion for fiscal year 2016 to $1.719 billion for fiscal year 2017.

Estimates of Statutory contributions through 2045, assuming that 30% of future new members elect SMP and all other assumptions are realized, are set out in Table 14 (page 26).

The Statutory contributions set out in this report represent the contribution amount determined consistent with the state Statute. The net State appropriation certified to the Governor is the total shown in this report, adjusted by contributions from federal and trust funds.

ASSET INFORMATION

Prior to the valuation as of June 30, 2009, it was agreed that market value, without adjustment, would be used for all actuarial purposes. Legislation in 2009 determined that first effective in the valuation as of June 30, 2009, contribution projections would be calculated based on the actuarial value of assets. Funding status determinations and the contribution requirements were calculated based on the actuarial value of assets.

The market value of the assets of the fund that is available for benefits has increased from $17,391.3 million as of June 30, 2014, to $17,463.0 million as of June 30, 2015. The actuarial value of assets is $17,104.6 million, which is $358.4 million lower than the market value of assets. This difference is due to the continuing recognition of deferred investment gains and losses. Twenty percent of these gains and losses are recognized each year. The $358.4 million, which is the value of net deferred gains, will be smoothed into the actuarial value of assets over the next four years. The remaining unrecognized net asset gains from FY 2013 and FY 2014 will be smoothed in over the next two and three years, respectively, and the remaining asset loss from FY 2012 and FY 2015 will be smoothed in over the next one and four years, respectively.

The detailed determinations of asset values utilized in this valuation and asset growth in the last year are set out in Appendix A and Table 7 (page 16) of Appendix C.

FUNDING STATUS

The funding status of SURS is measured by the Funding Ratio. The Funding Ratio is the ratio of the assets available for benefits compared to the actuarial accrued liability of the System. Thus, it reflects the portion of benefits earned by SURS members, which are covered by System assets.

A funding ratio of 100% means that all of the benefits earned to date by SURS members are covered by assets. By monitoring changes in the funding ratio each year we can determine whether or not funding progress is being made.

Based on the actuarial value of assets, the SURS funding ratio increased from 42.3% at June 30, 2014, to 43.3% at June 30, 2015. The funded ratio is 44.2% based on the market value of assets at June 30, 2015. There are net deferred gains that will be smoothed into the actuarial value of assets over the next four years, and as a result, the funded ratio is projected to increase if all assumptions are realized and all employer contributions are made on a timely basis.

The following table shows a comparison for fiscal years 2008 through 2015 of the percentage of benefits that are covered by the actuarial value of assets. The employer financed liabilities for current active and inactive members are 0% funded by the assets. Only a portion of the retiree liabilities are funded by current assets and the percentage covered increased from 40.0% as of June 30, 2014, to 41.9% as of June 30, 2015.

Percentage of Benefits Covered by Net Assets
(in Millions)

Fiscal Year	Member Acc Contrib. (1)	Members Receiving Benefits (2)	Act/Inact Employer Portion (3)	Net Actuarial Value of Assets	% of Benefits Covered by Assets (1)	(2)	(3)
2008	$ 5,426.8	$ 13,978.1	$ 5,512.8	$ 14,586.3	100.0%	65.5%	0.0%
2009	5,688.9	14,802.6	5,824.7	14,282.0	100.0%	58.1%	0.0%
2010	5,916.3	16,834.4	7,369.7	13,966.6	100.0%	47.8%	0.0%
2011	6,007.4	18,918.1	6,588.8	13,945.7	100.0%	42.0%	0.0%
2012	5,962.4	20,651.4	6,556.4	13,949.9	100.0%	38.7%	0.0%
2013	5,830.1	22,099.9	6,443.1	14,262.6	100.0%	38.2%	0.0%
2014	6,094.9	24,388.6	6,946.0	15,844.7	100.0%	40.0%	0.0%
2015	6,196.6	26,042.4	7,281.7	17,104.6	100.0%	41.9%	0.0%

ACTUARIAL FUNDING AND STATUTORY FUNDING

Previous GASB requirements, as amplified by the Actuarial Standards of Practice, provided guidance on how to determine the Annual Required Contribution ("ARC") (defined under GASB Statements No. 25 and 27) for a retirement plan. This ARC is the sum of the normal cost and amortization of the unfunded accrued liability. The reason for this accrual pattern is to have benefits accrued within the same generation that has earned them as well as to ensure that all benefit obligations will be met. GASB Statements 67 and 68, which replace GASB Statements 25 and 27, no longer use the ARC. However, measuring the Statutory Contribution against a funding policy (such as the ARC) helps evaluate the funding adequacy of the current Statutory funding method. Table 14 illustrates an "alternative policy contribution" which is the sum of the employer normal cost and a 29-year closed period level percentage of capped payroll amortization payment. The alternative funding policy would require higher contributions in the near term compared to the Statutory funding policy. However, as shown in Graph 1 (page 22) and Graph 4 (page 27), the funded ratio would increase more quickly and require lower contributions than under the Statutory policy after approximately 15 years.

The actual SURS contribution (excluding SMP) for FY 2015 was $1.529 billion, which compares to the projected statutory SURS contribution of $1.535 billion determined in the valuation as of June 30, 2013, and the FY 2015 contribution calculated in a manner consistent with the GASB 25 ARC of $1.623 billion. Graph 5 (page 28) compares the Statutory contribution, the contribution calculated consistently with the GASB 25 ARC, and the alternative policy contribution. The Statutory contributions are projected to continue to rise in order to meet the ultimate funding objective of a 90% funded ratio in 2045.

Based on projections assuming that the Statutory contributions are made every year (as shown in Table 12, page 21) and an investment return of 7.25% each year, the funded ratio is projected to begin to increase from about 43% funded to 90% funded at 2045. The funded status is not projected to exceed 70% until 2040, and is projected to increase to 90% during the five year period from 2040 until 2045. If the Statutory contributions are not made or investment return is less than the assumption of 7.25%, the funded ratio will be lower and the cash flow strain will be higher.

The projected actuarial accrued liability of current retirees, current active and inactive members and future members is expected to increase from $39.521 billion as of the end of FY 2015 to $54.920 billion as of the end of FY 2045 (as shown in Graph 2, page 23, and Table 21, page 35). Total benefit payments are projected to increase from $2.214 billion in fiscal year 2015 to $4.577 billion in fiscal year 2045. Graph 3 (page 24, and Table 21, page 35) shows projected benefit payments separately for retirees as of June 30, 2015, active and inactive members as of June 30, 2015, and future members.

ADDITIONAL PROJECTION DETAILS

At the request of the State Actuary, we have included exhibits with additional projection details that can be found in Appendix E.

RECOMMENDATIONS

The calculations in this report were prepared based on the methods required by the Statutory funding policy including the asset smoothing method that was adopted for the first time in the June 30, 2009, actuarial valuation. In light of the current funded status of this Retirement System, we do not endorse this funding policy because the Statutory funding policy defers funding for these benefits into the future and places a higher burden on future generations of taxpayers.

We recommend a funding policy that contributes normal cost plus closed period amortization as a level percentage of capped payroll for paying off the current unfunded accrued liability (i.e., the amortization period declines by one year with each actuarial valuation) such that the funded ratio is projected to be 100 percent funded by 2045 or earlier. A 29-year closed amortization period (at the actuarial valuation as of June 30, 2015) methodology pays off the unfunded accrued liability in full by the end of the 29-year period in 2045. The fiscal year 2017 contribution would be $1,998.798 ($1,929.892 million for the SURS contribution and $68.906 million for SMP) under this funding policy. The current Statutory contribution does not comply with this recommendation. Underfunding the System creates the risk that ultimately benefit obligations cannot be met from the trust, and will require a greater amount of funding from other State resources. In addition, continually underfunding the System also creates more of a funding need from contributions and less is available from investment return – thereby creating a more expensive plan. Projected contributions under the current Statutory policy and the recommended policy are shown in Graph 4 on page 27 and projected funded ratios are shown in Graph 1 on page 22.

If the current statutory funding policy is not changed, we recommend that the provision that establishes a maximum contribution cap be eliminated. The contribution cap is based on the projected hypothetical contributions if the proceeds from the 2003 bond issue had not been received. The cap is projected to lower contributions during fiscal years 2029 through 2033 compared to if no maximum contribution methodology was in place.

In addition, we recommend that an asset corridor on the actuarial value of assets be implemented, in the event that there is another significant market downturn similar to fiscal year 2009. The actuarial value of assets was about 30% higher than the market value of assets as of June 30, 2009, and was about 15% higher than the market value of assets as of June 30, 2010. The actuarial value of assets was within 5% of market value as of June 30, 2011, June 30, 2012, June 30, 2013 and June 30, 2015 and within 10% of market value as of June 30, 2014. Using an actuarial value of assets that is significantly higher than the market value of assets delays funding to the system by further deferring contributions into the future. The plan is already in serious funding jeopardy, and we cannot recommend an asset valuation method that does not include a corridor because it could add additional risk to the funding of the benefit obligations if another downturn occurred.

We recognize that the State Statute governs the funding policy of the System. The purpose of these comments is to highlight the difference between the Statutory appropriation and the recommended actuarially sound funding policy and to highlight the risks and additional costs of continuing to underfund the System.

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 Statement No. 25 and 27. Historical information mandated by those statements through fiscal year 2014 can be found in Tables 22 and 23 (pages 36 and 37). Table 24 (page 38) provides additional supporting information.

GASB Statement No. 67 and 68 are new accounting standards which replaced Statement No. 25 and 27. GASB Statement No. 67 is first effective for fiscal year 2014 and GASB Statement No. 68 is first effective for fiscal year 2015. A separate GASB 67 and 68 report has been provided.

The significant provisions of GASB Statement No. 67 and 68 include:

1. Recognizing the entire Net Pension Liability (similar to the unfunded liability) on the balance sheet (compared with the Net Pension Obligation which is currently recognized).
2. Use of a blended discount rate to calculate liabilities for accounting purposes.
3. Use of market value of assets to calculate the Net Pension Liability.
4. Elimination of the Annual Required Contribution (ARC) and replacing it with a pension expense that requires a much shorter amortization period than 30 years.

FUTURE CONSIDERATIONS

Changes (such as five-year asset smoothing and the addition of the new benefit tier) have had the effect of reducing the Statutory contribution amounts that would have otherwise been made. However, the change in the investment return assumption and other changes to align the actuarial assumptions with current market expectations have increased the contribution amounts that would otherwise have been made. Assuming the statutory contributions are received (and the actuarial assumptions are met (including a 7.25% investment rate of return, each year through 2045) SURS is currently projected to have contributions sufficient to increase the funded ratio from the current level of 43.3% to 90.0% by 2045.

This is a severely underfunded plan and the ability of the plan to reach 90% funding by 2045 is heavily dependent on the plan sponsor contributing the statutory contributions each and every year until 2045. We are not able to assess the plan sponsor's ability to make contributions when due.

APPENDICES

APPENDIX A

ASSET INFORMATION

TABLE 1
STATEMENT OF PLAN NET POSITION
AS OF JUNE 30, 2015 AND JUNE 30, 2014

	Defined Benefit Plan	Self Managed Plan	Reporting Entity Totals 2015	Reporting Entity Totals 2014
Assets				
Cash and short-term investments	$ 749,161,649	-	$ 749,161,649	$ 792,286,594
Receivables				
Members	10,756,647	$ 3,368,018	14,124,665	11,992,250
Non-employer contributing entity	181,777,558	1,910,439	183,687,997	109,298,051
Federal, trust funds, and other	1,772,530	43,160	1,815,690	1,751,978
Pending investment sales	422,748,331	-	422,748,331	444,237,505
Interest and dividends	42,333,100	-	42,333,100	40,106,288
Total receivables	659,388,166	5,321,617	664,709,783	607,386,072
Prepaid expenses	158,059	-	158,059	124,042
Investments, at fair value				
Equity investments	11,243,565,767	63,957,331	11,307,523,098	12,010,571,148
Fixed income investments	4,562,385,463	28,475,297	4,590,860,760	4,097,642,745
Real estate investments	872,952,573	1,652,988	874,605,561	637,361,774
Mutual fund and variable annuities		1,654,146,781	1,654,146,781	1,490,380,389
Total investments	16,678,903,803	1,748,232,397	18,427,136,200	18,235,956,056
Securities lending collateral	752,561,440	-	752,561,440	664,501,026
Capital assets, at cost, net of accum deprec $ 18,627,220 and $ 18,437,341 respectively	6,169,023	-	6,169,023	6,143,069
Total assets	18,846,342,140	1,753,554,014	20,599,896,154	20,306,396,860
Liabilities				
Benefits payable	8,689,007	-	8,689,007	9,869,469
Refunds payable	4,639,366	-	4,639,366	5,319,941
Securities lending collateral	752,410,673	-	752,410,673	664,335,138
Payable to brokers for unsettled trades	600,790,779	-	600,790,779	635,098,360
Administrative expenses payable	16,844,459	-	16,844,459	15,759,455
Total liabilities	1,383,374,284	-	1,383,374,284	1,330,382,363
Plan Net Position	$ 17,462,967,856	$ 1,753,554,014	$ 19,216,521,870	$ 18,976,014,497

TABLE 2
STATEMENT OF CHANGES IN PLAN NET POSITION
FOR YEARS ENDED JUNE 30, 2015 AND JUNE 30, 2014

	Defined Benefit Plan	Self Managed Plan	Reporting Entity Totals 2015	Reporting Entity Totals 2014
Additions				
Contributions				
Employer	$ 39,933,909	$ 6,724,980	$ 46,658,889	$ 50,259,406
Non-employer contributing entity	1,488,591,489	55,608,511	1,544,200,000	1,509,766,000
Member	267,682,083	72,328,361	340,010,444	348,612,466
Total Contributions	1,796,207,481	134,661,852	1,930,869,333	1,908,637,872
Investment Income				
Net appreciation in fair value of investments	225,279,830	90,461,460	315,741,290	2,650,003,387
Interest	111,077,945	-	111,077,945	97,719,525
Dividends	218,278,974	-	218,278,974	214,220,387
Securities lending	4,690,554	-	4,690,554	4,147,244
Gross Investment Income	559,327,303	90,461,460	649,788,763	2,966,090,543
Less investment expense				
Asset management expense	55,705,026	-	55,705,026	51,526,391
Securities lending expense	422,320	-	422,320	375,242
Net investment income	503,199,957	90,461,460	593,661,417	2,914,188,910
Total additions	2,299,407,438	225,123,312	2,524,530,750	4,822,826,783
Deductions				
Benefits	2,129,977,721	30,865,879	2,160,843,600	2,021,245,873
Refunds of contributions	83,715,720	24,928,401	108,644,121	107,710,940
Administrative expense	14,069,273	466,382	14,535,655	14,297,630
Total deductions	2,227,762,714	56,260,662	2,284,023,376	2,143,254,443
Net increase	71,644,724	168,862,650	240,507,374	2,679,572,339
Plan Net Position				
Beginning of year	17,391,323,132	1,584,691,364	18,976,014,496	16,296,442,158
End of Year	$ 17,462,967,856	$ 1,753,554,014	$ 19,216,521,870	$ 18,976,014,497

APPENDIX B

MEMBERSHIP DATA

TABLE 3
SUMMARY OF DATA CHARACTERISTICS
($ IN MILLIONS)

	June 30, 2014		June 30, 2015	
	Number	Earnings	Number	Earnings
Active Members				
Full time				
Traditional SURS	46,159	$2,241.2	45,866	$2,284.5
Portable SURS	18,464	1,120.6	18,595	1,154.8
SMP	10,849	731.2	11,320	798.5
Total Full Time [1]	75,472	$4,093.0	75,781	$4,237.9
Part time				
Traditional SURS	4,095	$ 27.2	4,214	$ 30.6
Portable SURS	718	6.0	706	6.3
SMP	560	4.8	608	5.8
Total Part Time	5,373	$ 38.0	5,528	$ 42.6
Total	80,845	$4,131.0	81,309	$4,280.5
Inactive Members				
Traditional SURS	65,222		66,208	
Portable SURS	10,270		10,776	
SMP	7,992		8,476	
Total	83,484		85,460	

[1] *Includes 695 police officers and firefighters (including SMP) as of June 30, 2014 and 688 as of June 30, 2015.*

	Number	Annual Benefits	Number	Annual Benefits
Benefit Recipients				
Retirement				
Traditional SURS	46,043	$ 1,746.8	46,964	$ 1,820.7
Portable SURS	4,194	124.6	4,667	144.9
Total Retirement	50,237	$ 1,871.5	51,631	$ 1,965.6
Survivor				
Traditional SURS	8,011	$ 130.7	8,194	$ 139.6
Portable SURS	133	2.1	148	2.5
Total Survivor	8,144	$ 132.8	8,342	$ 142.1
Disability				
Traditional SURS	864	$ 16.3	870	$ 17.0
Portable SURS	161	3.7	177	4.2
Total Disability	1,025	$ 20.0	1,047	$ 21.2
Total	59,406	$ 2,024.4	61,020	$ 2,128.8
Total Participants				
Total Traditional SURS	170,394		172,316	
Total Portable SURS	33,940		35,069	
Total SMP	19,401		20,404	
Total	223,735		227,789	

Values may not add due to rounding.

TABLE 4
DISTRIBUTION OF FULL-TIME ACTIVE MEMBERS BY AGE AND YEARS OF SERVICE
AS OF JUNE 30, 2015

Age	Years of Service: Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30 & Over	Totals
Under 20	11	4	-	-	-	-	-	-	15
	$ 61,984	$ 73,175	$ -	$ -	$ -	$ -	$ -	$ -	$ 135,159
20-24	353	725	15	-	-	-	-	-	1,093
	$ 2,976,959	$ 18,528,760	$ 366,459	$ -	$ -	$ -	$ -	$ -	$ 21,872,177
25-29	603	3,762	610	6	-	-	-	-	4,981
	$ 7,409,091	$ 143,909,176	$ 24,857,480	$ 214,094	$ -	$ -	$ -	$ -	$ 176,389,841
30-34	564	4,590	2,392	544	20	-	-	-	8,110
	$ 9,018,968	$ 214,579,620	$ 116,446,191	$ 28,013,602	$ 983,849	$ -	$ -	$ -	$ 369,042,231
35-39	423	3,356	2,870	1,694	455	13	-	-	8,811
	$ 6,992,976	$ 171,992,133	$ 163,336,104	$ 100,063,188	$ 26,731,697	$ 724,560	$ -	$ -	$ 469,840,657
40-44	306	2,471	2,601	2,137	1,354	323	27	-	9,219
	$ 5,029,956	$ 124,427,489	$ 157,686,316	$ 145,902,082	$ 91,520,870	$ 21,626,910	$ 1,616,044	$ -	$ 547,809,665
45-49	256	2,135	2,340	2,151	1,750	947	422	18	10,019
	$ 4,113,970	$ 102,555,663	$ 128,917,458	$ 143,455,216	$ 128,588,243	$ 70,545,716	$ 28,403,402	$ 1,054,328	$ 607,633,996
50-54	224	1,939	2,147	2,124	1,973	1,395	1,041	224	11,067
	$ 3,548,609	$ 90,589,464	$ 106,810,874	$ 130,992,208	$ 137,968,024	$ 109,621,264	$ 80,687,901	$ 16,420,002	$ 676,638,346
55-59	170	1,589	1,913	1,924	1,825	1,381	936	387	10,125
	$ 3,343,111	$ 73,724,985	$ 94,431,965	$ 112,602,150	$ 121,482,652	$ 112,174,031	$ 84,842,396	$ 37,087,179	$ 639,688,468
60-64	74	1,057	1,476	1,527	1,356	1,085	658	350	7,583
	$ 1,223,889	$ 45,766,319	$ 66,856,824	$ 84,902,839	$ 84,953,688	$ 80,966,396	$ 61,501,509	$ 42,352,909	$ 468,524,374
65 & Over	30	470	1,008	1,043	864	710	282	351	4,758
	$ 381,031	$ 14,850,011	$ 35,390,560	$ 49,876,411	$ 50,248,439	$ 38,703,596	$ 26,275,806	$ 44,554,174	$ 260,280,028
Total Count	3,014	22,098	17,372	13,150	9,597	5,854	3,366	1,330	75,781
Total Payroll	$ 44,100,543	$ 1,000,996,796	$ 895,100,230	$ 796,021,790	$ 642,477,461	$ 434,362,473	$ 283,327,058	$ 141,468,592	$ 4,237,854,942

TABLE 5
DISTRIBUTION OF BENEFIT RECIPIENTS BY AGE
AS OF JUNE 30, 2015

Age	Number	Annual Benefit
Retirees and Survivors		
Under 50	489	$ 3,931,986
50-54	557	20,794,320
55-59	4,153	141,970,964
60-64	9,588	333,183,667
65-69	13,324	466,462,805
70-74	11,288	438,948,472
75-79	8,141	306,733,379
80-84	5,936	213,197,319
85-89	4,001	119,826,258
90 & Over	2,496	62,603,679
Total	59,973	$ 2,107,652,849
Disabilitants		
Under 50	154	$ 3,202,735
50-54	152	3,198,005
55-59	201	4,309,926
60-64	245	4,929,709
65-69	164	3,550,499
70-74	62	944,717
75-79	38	664,159
80-84	14	188,075
85-89	14	151,695
90 & Over	3	27,861
Total	1,047	$ 21,167,381

APPENDIX C

ACTUARIAL DETERMINATIONS

TABLE 6
SUMMARY OF ACTUARIAL VALUES
AS OF JUNE 30, 2015
($ IN MILLIONS)

	Actuarial Present Value of Projected Benefits (APV)	Projected Unit Credit Values: Actuarial Accrued Liability (AAL)	Projected Unit Credit Values: Gross Normal Cost (NC) [1]	Gross NC % of Pay [1]
1. Active Members				
a. Retirement	$14,386.3	$ 9,426.7	$545.3	15.14%
b. Death	235.1	152.0	9.9	0.27%
c. Disability	446.1	272.9	26.9	0.75%
d. Termination	2,051.9	1,288.3	142.1	3.95%
Total - Active Members	$17,119.4	$ 11,139.9	$724.2	20.11%
2. Benefit Recipients				
a. Retirement	$24,469.3	$24,469.3	$ 0.0	
b. Survivor	1,317.1	1,317.1	0.0	
c. Disability	255.9	255.9	0.0	
Total - Benefit Recipients	$26,042.4	$26,042.4	$ 0.0	
3. Other Inactive	$ 2,338.4	$ 2,338.4		
4. Grand Total	$45,500.2	$39,520.7	$724.2	20.11%
5. Operating Expense			$ 15.4	0.43%
6. Total Normal Cost			$739.6	20.53%
7. Expected Pay During Fiscal Year 2016 for Defined Benefit Plans[1]				$ 3,601.9
8. Present Value of Future Salaries (PVFS) [1]				$ 28,007.2

[1] For members currently active as of June 30, 2015, in the Traditional and Portable defined benefit plans and includes the use of capped payroll for members hired on or after January 1, 2011.

Values may not add due to rounding.

TABLE 7

DEFINED BENEFIT PLAN DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

FOR THE YEAR ENDING JUNE 30, 2015

	2014	2015	2016	2017	2018	2019
Beginning of Year:						
(1) Market Value of Assets	$ 15,037,101,827	$ 17,391,323,132				
(2) Actuarial Value of Assets	14,262,621,179	15,844,713,727				
End of Year:						
(3) Market Value of Assets	17,391,323,132	17,462,967,856				
(4) Net of Contributions and Disbursements	(313,679,098)	(431,555,233)				
(5) Total Investment Income						
=(3)-(1)-(4)	2,667,900,403	503,199,957				
(6) Projected Rate of Return	7.75%	7.25%				
(7) Projected Investment Income						
=(1)x(6)+([1+(6)]^.5-1)x(4)	1,153,447,124	1,245,500,760				
(8) Investment Income in						
Excess of Projected Income	1,514,453,279	(742,300,803)				
(9) Excess Investment Income Recognized						
This Year (5 year recognition)						
(9a) From This Year	302,890,656	(148,460,161)				
(9b) From One Year Ago	129,284,034	302,890,656	$ (148,460,161)			
(9c) From Two Years Ago	(215,038,203)	129,284,034	302,890,656	$ (148,460,161)		
(9d) From Three Years Ago	377,271,084	(215,038,203)	129,284,034	302,890,656	$ (148,460,161)	
(9e) From Four Years Ago	147,916,951	377,271,085	(215,038,203)	129,284,035	302,890,655	$ (148,460,159)
(9f) Total Recognized Investment Gain/(Loss)	742,324,522	445,947,411	68,676,326	283,714,530	154,430,494	(148,460,159)
(10) Change in Actuarial Value of Assets						
=(4)+(7)+9[f]	1,582,092,548	1,259,892,938				
End of Year:						
(3) Market Value of Assets	**17,391,323,132**	**17,462,967,856**				
(11) Final Actuarial Value of Assets	**15,844,713,727**	**17,104,606,665**				
(12) Difference Between Market & Actuarial Values	1,546,609,405	358,361,191				
(13) Actuarial Value Rate of Return	13.44 %	10.82 %				
(14) Estimated Market Value Rate of Return	17.93 %	2.93 %				
(15) Ratio of Actuarial Value to Market Value	91 %	98 %				
(16) SURS Reported Market Value Rate of Return	18.16 %	2.90 %				

Investment return assumption decreased from 7.75% to 7.25% as of June 30, 2014.

TABLE 8
ANALYSIS OF CHANGE IN
ACTUARIAL ACCRUED LIABILITY AND ACTUARIAL VALUE OF ASSETS
FOR THE YEAR ENDING JUNE 30, 2015
($ IN MILLIONS)

1. Actuarial (Gain)/Loss on Actuarial Accrued Liability ("AAL")		
(a) AAL 6/30/2014		$ 37,429.5
(b) Normal Cost FY 2015	$ 730.0	
(c) Benefits and Admin Expenses Paid FY 2015	(2,227.8)	
(d) Interest on (a), (b), and (c) at 7.25%	2,660.3	
(e) Expected AAL 6/30/2015 (a+b+c+d)		38,592.0
(f) Actual AAL 6/30/2015 Before Assumption and Method Changes		38,547.8
(g) Actuarial (Gain)/Loss on AAL (f-e)		$ (44.2)
(h) Impact of Benefit Changes		0.0
(i) Impact of Change in Actuarial Assumptions and Methods		972.9
(j) Actual AAL After Changes (f+h+i)		$ 39,520.7
2. Actuarial (Gain)/Loss on Assets		
(a) Actuarial Value of Assets 6/30/2014		$ 15,844.7
(b) Contributions FY 2015	1,796.2	
(c) Benefits and Administrative Expenses	(2,227.8)	
(d) Interest on (a), (b), and (c) at 7.25%	1,133.4	
(e) Expected Assets 6/30/2015 (a+b+c+d)		$ 16,546.5
(f) Actual Actuarial Value of Assets 6/30/2015		17,104.6
(g) Actuarial (Gain)/Loss on Assets (e-f)		$ (558.1)
3. Total Actuarial (Gain)/Loss		
(a) (Gain)/Loss on AAL		$ (44.2)
(b) (Gain)/Loss on Assets		(558.1)
(c) Net (Gain)/Loss (a+b)		$ (602.3)

Values may not add due to rounding.

TABLE 9
ANALYSIS OF CHANGE IN
UNFUNDED ACTUARIAL ACCRUED LIABILITY
FOR THE YEAR ENDING JUNE 30, 2015
($ IN MILLIONS)

1.	Unfunded Actuarial Accrued Liability (UAAL) at 06/30/2014	$	21,584.8
2.	Contributions		
	a. Contributions due		
	i Interest on 1)	$	1,564.9
	ii Member contributions		267.7
	iii Employer normal cost		462.3
	iv Interest on ii and iii		26.0
	v Total due	$	2,320.9
	b. Contributions paid		
	i Member contributions	$	267.7
	ii Employer contributions		1,528.5
	iii Interest on i and ii		64.0
	iv Total paid	$	1,860.2
	c. Expected increase in UAAL		460.7
3.	Expected UAAL at 06/30/2015		22,045.5
4.	(Gains)/Losses		
	a. Investment income	$	(558.1)
	b. Salary increases		(45.3)
	c. Demographic		1.1
	d. Total	$	(602.3)
5.	Plan Provision Changes		-
6.	Assumption Changes		972.9
7.	Total Change in UAAL (2c + 4d + 5 + 6)		831.3
8.	UAAL at 06/30/2015 (1 + 7)	$	22,416.1

TABLE 10
ANALYSIS OF ACTUARIAL GAINS AND LOSSES
($ IN MILLIONS)

	Amount of (Gain) or Loss			
	FY 2012	FY 2013	FY 2014	FY 2015
Investment Return[1]	$ 476.7	$ 391.8	$ (802.4)	$ (558.1)
Salary Increase	(4.0)	(53.6)	(94.3)	(45.3)
Age and Service Retirement	126.3	14.3	105.2	(17.0)
General Employment Termination	59.9	9.1	21.2	8.0
Disability Incidence	5.9	2.3	(8.3)	(3.4)
In Service Mortality	2.2	4.2	1.7	1.4
Benefit Recipient[2]	55.5	31.2	1.4	(2.0)
New Entrants	75.2	77.4	79.0	82.9
Other	56.2	63.8	(47.2)	(68.8)
Total Actuarial (Gain)/Loss	$ 853.9	$ 540.5	$ (743.7)	$ (602.3)

[1]Gain/Loss is based on actuarial value of assets.

[2]Benefit recipient (gain)/loss includes mortality gains and losses as well as gains and losses due to unexpected changes in benefit amounts from year to year. Unexpected changes may occur when benefits that are initially paid as preliminary estimates are finalized.

Beginning with the valuation as of June 30, 2011, there is an additional load of 10% on the liabilities of those retirees who are currently receiving benefits as a preliminary estimate. Beginning with the valuation as of June 30, 2013, Staff provided additional data fields for members whose benefits are paid as preliminary estimates in order to better measure the liabilities for these retirees whose benefits have not been finalized.

Beginning with the valuation as of June 30, 2015, the load of 10% was reduced to 5% for retirees for whom Staff provided a best formula benefit.

TABLE 11

FUNDED RATIO AND ILLUSTRATIVE CONTRIBUTIONS UNDER FUNDING POLICY OF NET NORMAL COST PLUS LEVEL PERCENTAGE OF PAYROLL AMORTIZATION OF UNFUNDED LIABILITY

($ IN 000S)

Fiscal Year	DB Payroll [1]	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Total Normal Cost	Member Contributions	Amortization of UAAL (30-year open) [2]	Net State Contribution (30-year open) [2]	Amortization of UAAL (30-year closed)[3]	Net State Contribution (30-year closed) [3]	Net State 30-year closed with 1 year Interest Adjustment [3]
2015	$3,606.537	$17,104.607	$39,520.687	$22,416.080	43.28 %	$730.020	$267.682	$1,160.318	$1,622.656			
2016						739.549	290.511	1,205.004	1,654.042	$1,350.394	$1,799.433	$1,929.892

[1] *Defined Benefit Plan payroll is rolled forward with one year of salary scale at 3.75% and uses capped payroll for members hired on and after January 1, 2011.*

[2] *A 30-year open period amortization policy is not a funding policy recommended by GRS. This illustrative contribution was included at the request of the Governor's Office. The amortization payment was calculated as a level percentage of total uncapped payroll.*

[3] *GRS recommends a 30-year (or shorter) closed amortization period beginning with fiscal year 2015, 29 years remaining at fiscal year 2016. (The statutory contribution would apply to fiscal year 2017; therefore a one year interest adjustment was applied). The amortization payment was calculated as a level percentage of pensionable (capped) payroll.*

APPENDIX D

Actuarial Projections

TABLE 12

BASELINE PROJECTIONS – ACTUARIAL VALUATION JUNE 30, 2015

ASSUMES CONTRIBUTIONS BASED ON TABLE 14 & INVESTMENT RETURN OF 7.25% EACH YEAR

($ IN MILLIONS)

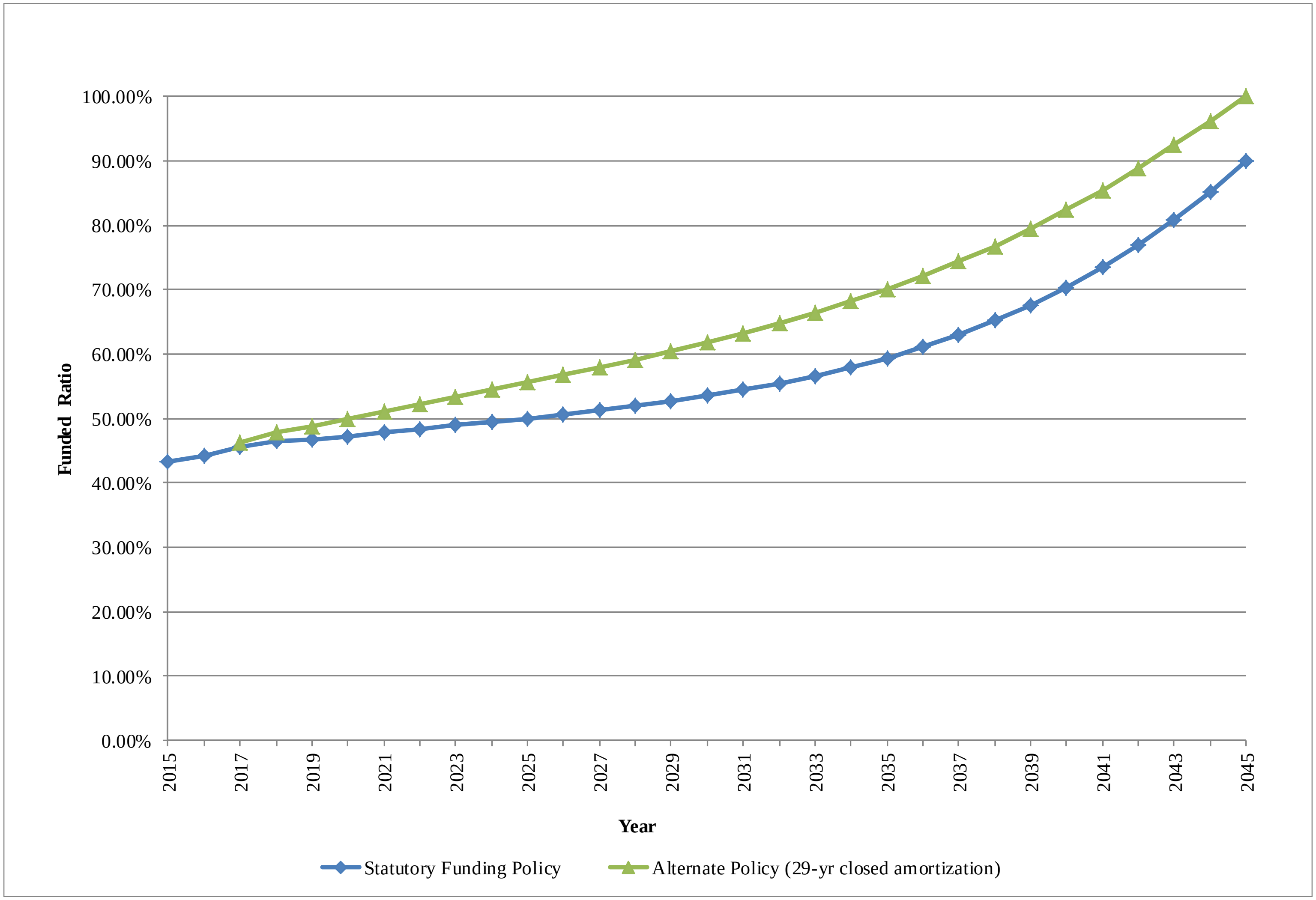
Fiscal Year Ending	Total Payroll [1]	SMP Payroll	DB Payroll [1]	SURS Contributions [2]	Member Contributions	Benefits	Expenses	Assets EOY	AAL	Funding Ratio	Debt Service	Maximum Contribution[3]	SURS Contribution % of Total Payroll
2015	$ 4,280.503	$ 804.323	$ 3,476.180	$ 1,528.525	$ 267.682	$ 2,213.693	$ 14.069	$ 17,104.607	$ 39,520.687	43.28 %	$ 113.227	$ 1,538.829	35.71%
2016	4,519.964	893.115	3,626.849	1,582.566	290.511	2,307.848	15.373	17,973.171	40,745.860	44.11	112.435	1,600.212	35.01%
2017	4,610.025	955.782	3,654.243	1,650.020	292.705	2,405.775	15.949	19,084.884	41,949.016	45.50	116.476	1,674.852	35.79%
2018	4,716.508	1,021.933	3,694.575	1,681.386	295.935	2,519.349	16.548	20,044.932	43,112.587	46.49	120.304	1,706.879	35.65%
2019	4,835.258	1,089.491	3,745.766	1,702.106	300.036	2,631.082	17.168	20,669.846	44,236.965	46.73	123.920	1,731.421	35.20%
2020	4,957.983	1,157.654	3,800.329	1,734.233	304.406	2,750.750	17.812	21,412.490	45,311.155	47.26	132.009	1,761.178	34.98%
2021	5,085.580	1,225.240	3,860.339	1,790.488	309.213	2,869.271	18.480	22,148.779	46,333.883	47.80	139.615	1,812.079	35.21%
2022	5,217.632	1,292.899	3,924.732	1,836.980	314.371	2,988.419	19.173	22,867.829	47,302.534	48.34	146.736	1,855.635	35.21%
2023	5,356.705	1,362.459	3,994.246	1,885.944	319.939	3,106.645	19.892	23,572.303	48,215.432	48.89	153.373	1,902.371	35.21%
2024	5,499.354	1,432.508	4,066.845	1,936.166	325.754	3,226.311	20.638	24,261.184	49,067.724	49.44	164.417	1,946.070	35.21%
2025	5,645.942	1,503.272	4,142.670	1,987.776	331.828	3,349.288	21.412	24,931.589	49,852.560	50.01	174.604	1,992.140	35.21%
2026	5,797.610	1,575.135	4,222.475	2,041.174	338.220	3,462.890	22.215	25,594.038	50,575.807	50.61	179.149	2,045.801	35.21%
2027	5,954.944	1,648.867	4,306.077	2,096.567	344.917	3,574.468	23.048	26,252.400	51,235.980	51.24	183.195	2,102.135	35.21%
2028	6,117.726	1,724.023	4,393.703	2,153.878	351.936	3,682.754	23.912	26,912.077	51,832.672	51.92	191.634	2,156.166	35.21%
2029	6,284.172	1,800.260	4,483.912	2,212.352	359.161	3,788.769	24.809	27,576.900	52,364.123	52.66	199.325	2,212.352	35.21%
2030	6,454.280	1,878.372	4,575.908	2,265.800	366.530	3,894.377	25.739	28,242.574	52,826.003	53.46	211.160	2,265.800	35.11%
2031	6,630.121	1,960.145	4,669.976	2,322.445	374.065	3,938.385	26.704	28,976.401	53,276.946	54.39	221.997	2,322.445	35.03%
2032	6,811.986	2,046.112	4,765.873	2,387.293	381.746	4,032.487	27.706	29,740.051	53,664.259	55.42	226.944	2,387.293	35.05%
2033	7,001.617	2,135.712	4,865.905	2,460.763	389.759	4,118.716	28.745	30,553.075	53,992.322	56.59	226.249	2,460.763	35.15%
2034	7,197.758	2,228.509	4,969.249	2,534.126	398.037	4,198.372	29.823	31,425.982	54,264.747	57.91	NA	2,762.284	35.21%
2035	7,399.292	2,324.300	5,074.992	2,605.081	406.507	4,272.585	30.941	32,366.414	54,483.590	59.41	NA	2,839.627	35.21%
2036	7,605.655	2,422.849	5,182.807	2,677.735	415.143	4,341.133	32.101	33,387.023	54,650.927	61.09	NA	2,918.823	35.21%
2037	7,818.378	2,525.443	5,292.935	2,752.629	423.964	4,403.052	33.305	34,502.950	54,770.097	63.00	NA	3,000.460	35.21%
2038	8,038.622	2,632.409	5,406.213	2,830.171	433.038	4,459.706	34.554	35,729.517	54,843.626	65.15	NA	3,084.983	35.21%
2039	8,267.050	2,743.304	5,523.745	2,910.594	442.452	4,507.912	35.850	37,086.783	54,878.287	67.58	NA	3,172.647	35.21%
2040	8,502.237	2,856.705	5,645.531	2,993.396	452.207	4,546.249	37.194	38,597.210	54,883.220	70.33	NA	3,262.904	35.21%
2041	8,747.405	2,972.985	5,774.420	3,079.713	462.531	4,573.162	38.589	40,287.910	54,870.960	73.42	NA	3,356.992	35.21%
2042	8,999.950	3,091.749	5,908.201	3,168.627	473.247	4,586.171	40.036	42,189.393	54,857.908	76.91	NA	3,453.912	35.21%
2043	9,259.312	3,214.281	6,045.031	3,259.941	484.207	4,591.039	41.537	44,328.054	54,854.776	80.81	NA	3,553.447	35.21%
2044	9,523.860	3,340.323	6,183.538	3,353.081	495.301	4,587.813	43.095	46,731.442	54,872.202	85.16	NA	3,654.973	35.21%
2045	9,793.805	3,470.327	6,323.478	3,448.121	506.511	4,577.451	44.711	49,428.166	54,920.184	90.00	NA	3,758.569	35.21%

[1] *Payroll shown is pensionable pay. It does not include amounts in excess of the pay cap that is applicable to members hired on or after January 1, 2011, participating in the Traditional and Portable plans.*

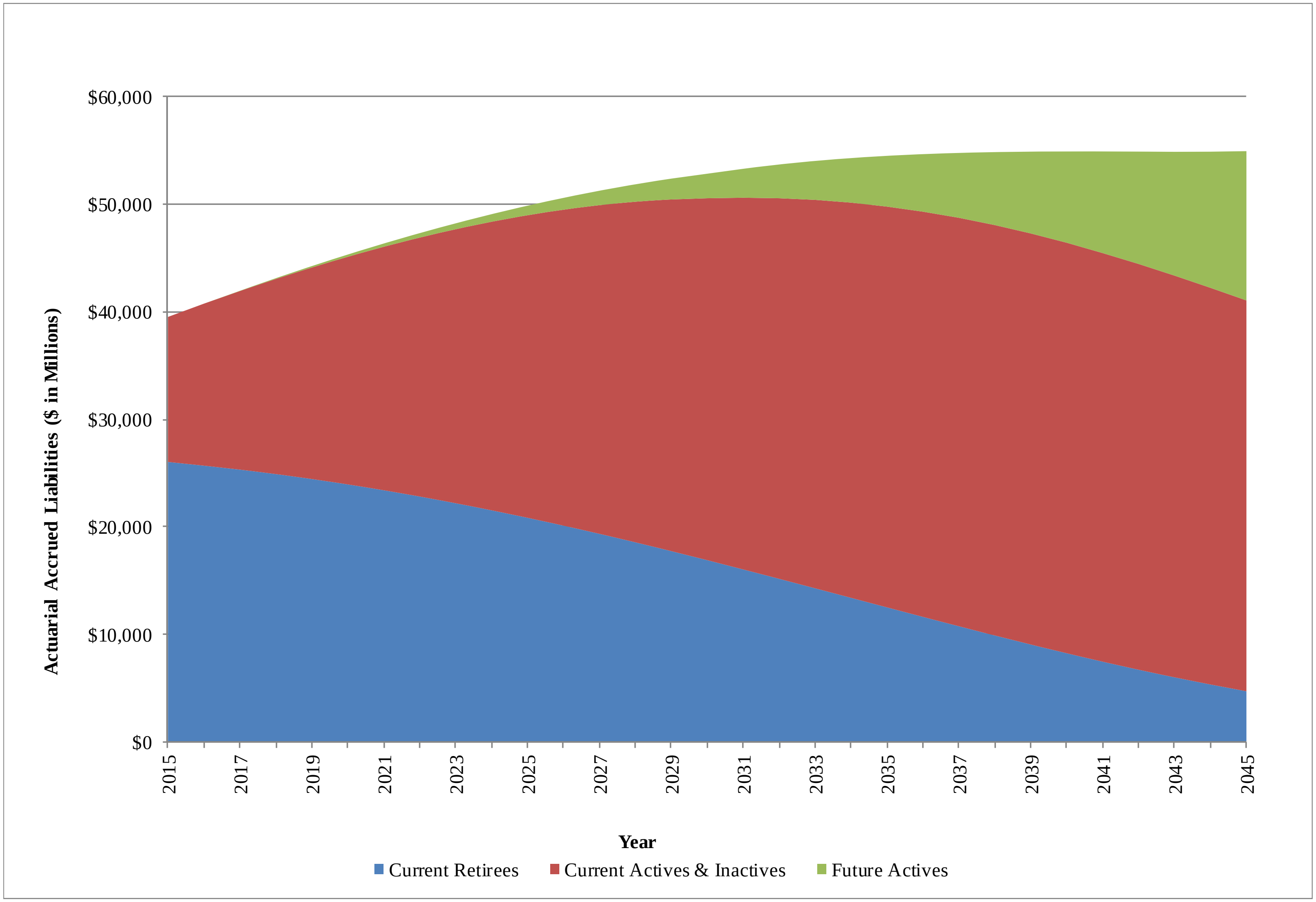
[2] *Excludes SMP contributions.*

[3] *Maximum contribution after impact of debt service.*

GRAPH 1
PROJECTED FUNDED RATIO BASED ON STATUTORY CONTRIBUTIONS
ACTUARIAL VALUATION AS OF JUNE 30, 2015
($ IN MILLIONS)



GRAPH 2
PROJECTED ACTUARIAL ACCRUED LIABILITIES
ACTUARIAL VALUATION AS OF JUNE 30, 2015
($ IN MILLIONS)



Graph 3
Projected Benefit Payments
Actuarial Valuation as of June 30, 2015
($ in Millions)

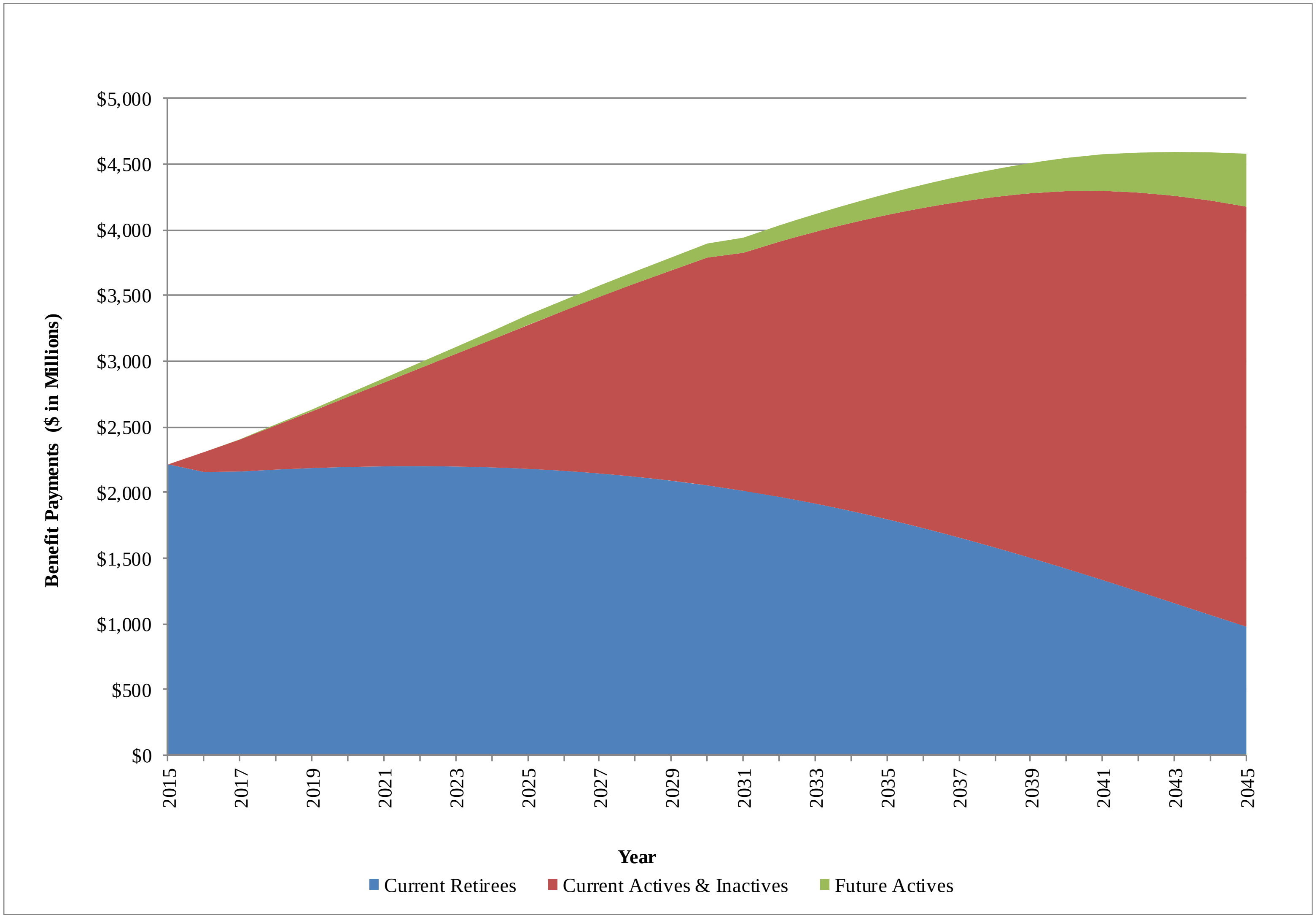


TABLE 13
PROJECTED STATUTORY CONTRIBUTIONS
ACTUARIAL VALUATION AS OF JUNE 30, 2015
BEFORE IMPACT OF BONDS ISSUED IN 2004
($ IN MILLIONS)

	30% of New Members to SMP			
			Total Contribution	
FYE	SURS Cont.	SMP Cont.	$	% of Pay [1]
2016 [2]	$ 1,712.647	$ 64.914	$ 1,777.561	39.33 %
2017	1,791.328	68.906	1,860.234	40.35
2018	1,827.183	72.319	1,899.502	40.27
2019	1,855.341	77.081	1,932.422	39.97
2020	1,893.187	81.887	1,975.074	39.84
2021	1,951.694	86.652	2,038.346	40.08
2022	2,002.371	91.423	2,093.794	40.13
2023	2,055.743	96.327	2,152.070	40.18
2024	2,110.488	101.267	2,211.755	40.22
2025	2,166.744	106.257	2,273.001	40.26
2026	2,224.949	111.325	2,336.274	40.30
2027	2,285.329	116.524	2,401.853	40.33
2028	2,347.800	121.825	2,469.625	40.37
2029	2,411.677	127.201	2,538.878	40.40
2030	2,476.960	132.710	2,609.670	40.43
2031	2,544.442	138.477	2,682.919	40.47
2032	2,614.236	144.539	2,758.775	40.50
2033	2,687.011	150.857	2,837.868	40.53
2034	2,762.284	157.401	2,919.685	40.56
2035	2,839.627	164.155	3,003.782	40.60
2036	2,918.823	171.104	3,089.927	40.63
2037	3,000.460	178.337	3,178.797	40.66
2038	3,084.983	185.879	3,270.862	40.69
2039	3,172.647	193.698	3,366.345	40.72
2040	3,262.904	201.693	3,464.597	40.75
2041	3,356.992	209.891	3,566.883	40.78
2042	3,453.912	218.265	3,672.177	40.80
2043	3,553.447	226.904	3,780.351	40.83
2044	3,654.973	235.791	3,890.764	40.85
2045	3,758.569	244.956	4,003.525	40.88
Total	$77,778.751	$4,278.565	$82,057.316	

[1] *Percent of pay amounts are calculated based on pensionable pay. Pensionable pay does not include amounts in excess of the pay cap that is applicable to members hired on or after January 1, 2011, participating in the Traditional and Portable plans.*
[2] *Fiscal Year 2016 contribution amounts as determined in the actuarial valuation as of June 30, 2014.*

TABLE 14
PROJECTED STATUTORY CONTRIBUTIONS
ACTUARIAL VALUATION AS OF JUNE 30, 2015
INCLUDING IMPACT OF BONDS ISSUED IN 2004
($ IN MILLIONS)

	30% of New Members to SMP				Debt Service		SURS	Projected % of
			Total Contribution				Alternate Policy	Alternate Policy
FYE	SURS Cont.	SMP Cont.	$	% of Pay [1]	$	% of Pay [1]	Contribution [2]	Contributed [3]
2016 [4]	$ 1,582.566	$ 64.914	$ 1,647.480	36.45 %	$ 112.435	2.49 %	$ 1,582.566	
2017	1,650.020	68.906	1,718.926	37.29	116.476	2.53	1,929.892	85.50 %
2018	1,681.386	72.319	1,753.705	37.18	120.304	2.55	1,950.732	86.19
2019	1,702.106	77.081	1,779.187	36.80	123.920	2.56	1,954.525	87.09
2020	1,734.233	81.887	1,816.120	36.63	132.009	2.66	1,969.365	88.06
2021	1,790.488	86.652	1,877.140	36.91	139.615	2.75	2,007.790	89.18
2022	1,836.980	91.423	1,928.403	36.96	146.736	2.81	2,036.012	90.22
2023	1,885.944	96.327	1,982.271	37.01	153.373	2.86	2,063.996	91.37
2024	1,936.166	101.267	2,037.433	37.05	164.417	2.99	2,093.466	92.49
2025	1,987.776	106.257	2,094.033	37.09	174.604	3.09	2,123.939	93.59
2026	2,041.174	111.325	2,152.499	37.13	179.149	3.09	2,155.666	94.69
2027	2,096.567	116.524	2,213.091	37.16	183.195	3.08	2,188.604	95.79
2028	2,153.878	121.825	2,275.703	37.20	191.634	3.13	2,220.703	96.99
2029	2,212.352	127.201	2,339.553	37.23	199.325	3.17	2,253.630	98.17
2030	2,265.800	132.710	2,398.510	37.16	211.160	3.27	2,287.170	99.07
2031	2,322.445	138.477	2,460.922	37.12	221.997	3.35	2,320.774	100.07
2032	2,387.293	144.539	2,531.832	37.17	226.944	3.33	2,354.204	101.41
2033	2,460.763	150.857	2,611.620	37.30	226.249	3.23	2,387.438	103.07
2034	2,534.126	157.401	2,691.527	37.39			2,420.986	104.67
2035	2,605.081	164.155	2,769.236	37.43			2,454.964	106.11
2036	2,677.735	171.104	2,848.839	37.46			2,488.475	107.61
2037	2,752.629	178.337	2,930.966	37.49			2,520.756	109.20
2038	2,830.171	185.879	3,016.050	37.52			2,551.334	110.93
2039	2,910.594	193.698	3,104.292	37.55			2,579.699	112.83
2040	2,993.396	201.693	3,195.089	37.58			2,605.344	114.89
2041	3,079.713	209.891	3,289.604	37.61			2,626.798	117.24
2042	3,168.627	218.265	3,386.892	37.63			2,641.688	119.95
2043	3,259.941	226.904	3,486.845	37.66			2,644.167	123.29
2044	3,353.081	235.791	3,588.872	37.68			2,617.646	128.10
2045	3,448.121	244.956	3,693.077	37.71			2,499.406	137.96
Total	$ 71,341.152	$4,278.565	$ 75,619.717		$ 3,023.541		$ 68,531.735	

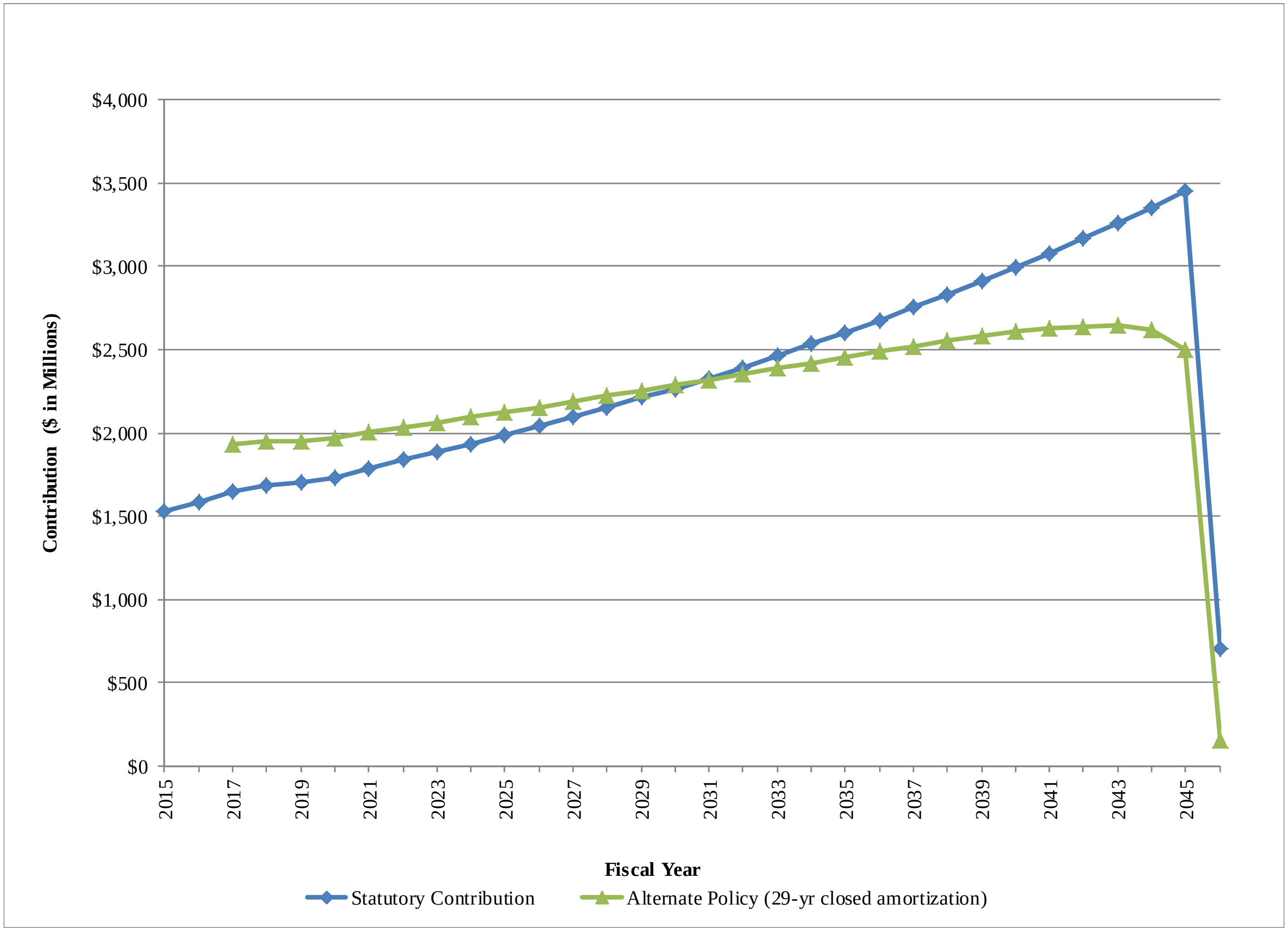
[1] *Percent of pay amounts are calculated based on pensionable pay. Pensionable pay does not include amounts in excess of the pay cap that is applicable to members hired on or after January 1, 2011, participating in the Traditional and Portable plans.*

[2] *Alternate funding policy of normal cost plus 29-year closed period amortization of the unfunded liability as a level percentage of capped payroll beginning in FY 2017. Statutory Contribution is shown for FY 2016. Excludes SMP.*

[3] *Compares SURS Statutory contribution against an alternate funding policy of normal cost plus 29-year closed period amortization of the unfunded liability as a level percentage of capped payroll beginning in FY 2017. Excludes SMP contribution.*

[4] *Total fiscal Year 2016 contribution amount as determined in the actuarial valuation as of June 30, 2014.*

GRAPH 4
PROJECTED STATUTORY CONTRIBUTIONS VS. CONTRIBUTIONS UNDER ALTERNATE POLICY (NORMAL COST PLUS 29-YEAR CLOSED PERIOD LEVEL PERCENT OF PAY AMORTIZATION)
($ IN MILLIONS)

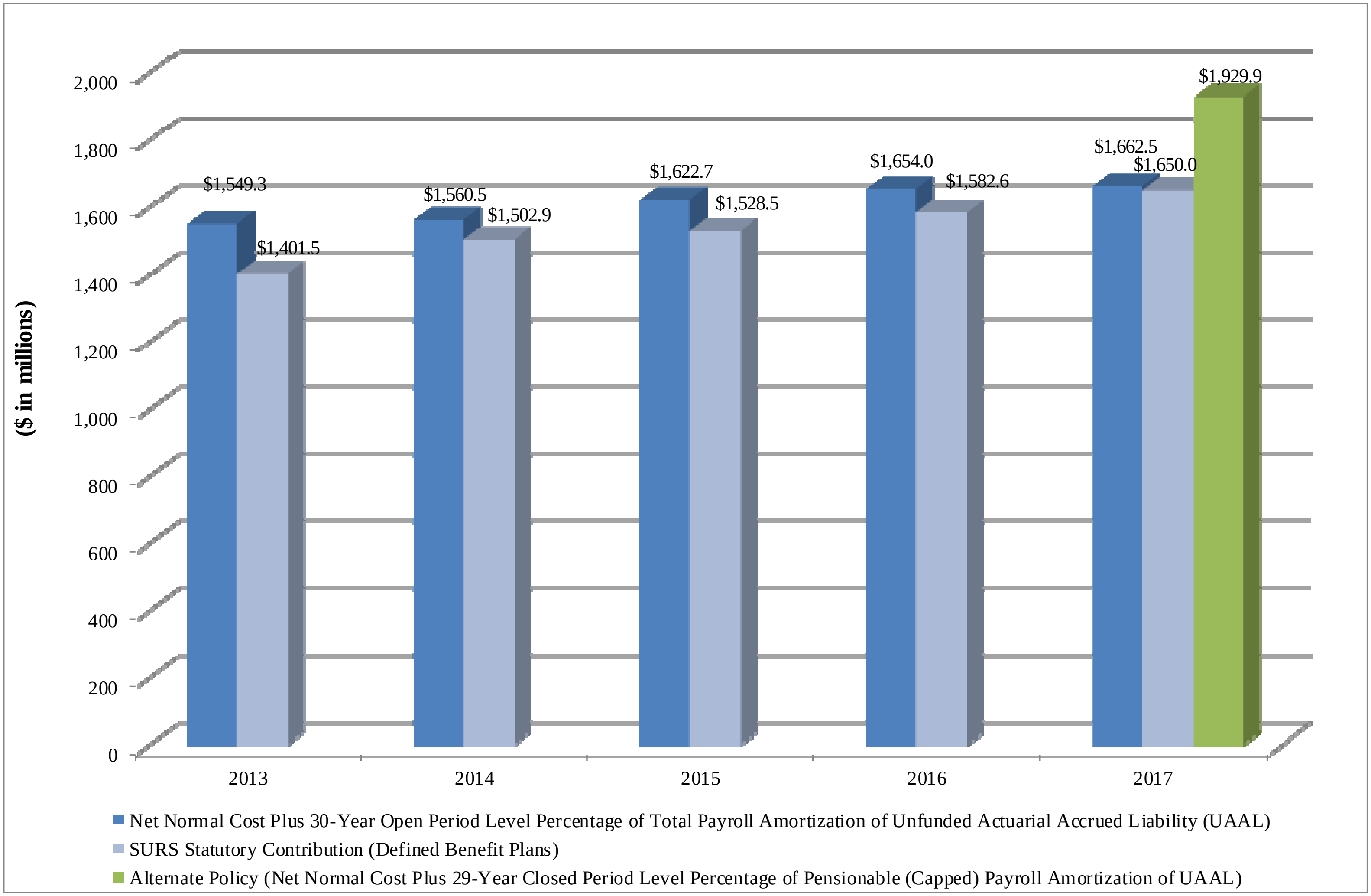


Alternate funding policy of normal cost plus 29-year closed period amortization of the unfunded liability as a level percentage of capped payroll beginning in FY 2017.

GRAPH 5

STATUTORY CONTRIBUTIONS VS. NET NORMAL COST PLUS LEVEL PERCENTAGE OF PAYROLL AMORTIZATION OF UNFUNDED LIABILITY AND ALTERNATE POLICY

($ IN MILLIONS)



Consistent underfunding compared to the Annual Required Contribution ("ARC") is a primary cause of the current low funded status. Amounts prior to fiscal year 2016 are based on the ARC. Beginning in fiscal year 2016, a contribution equal to normal cost plus 29-year closed period amortization of the unfunded liability as a level percentage of capped payroll is used. Amounts are projected for fiscal years 2016 and 2017.

APPENDIX E

ADDITIONAL PROJECTION DETAILS

TABLE 15

PROJECTIONS – DOES NOT REFLECT RECOGNITION OF DEFERRED ASSET GAINS AND LOSSES IN PROJECTED ACTUARIAL VALUE OF ASSETS (IMPACT OF BONDS ISSUED IN 2004 INCLUDED)

ASSUMES INVESTMENT RETURN OF 7.25% EACH YEAR ON ACTUARIAL VALUE OF ASSETS

($ IN MILLIONS)

Fiscal Year Ending	Total Payroll[1]	SMP Payroll	DB Payroll[1]	SURS Contributions[2]	Member Contributions	Benefits	Expenses	Assets EOY	AAL	Funding Ratio	Debt Service	Maximum Contribution[3]	SURS Contribution % of Total Payroll
2015	$ 4,280.503	$ 804.323	$ 3,476.180	$ 1,528.525	$ 267.682	$ 2,213.693	$ 14.069	$ 17,104.607	$ 39,520.687	43.28 %	$ 113.227	$ 1,538.829	35.71%
2016	4,519.964	893.115	3,626.849	1,582.566	290.511	2,307.848	15.373	17,878.514	40,745.860	43.88	112.435	1,600.212	35.01%
2017	4,610.025	955.782	3,654.243	1,650.020	292.705	2,405.775	15.949	18,678.647	41,949.016	44.53	116.476	1,674.852	35.79%
2018	4,716.508	1,021.933	3,694.575	1,688.132	295.935	2,519.349	16.548	19,461.366	43,112.587	45.14	120.304	1,712.400	35.79%
2019	4,835.258	1,089.491	3,745.766	1,730.635	300.036	2,631.082	17.168	20,232.741	44,236.965	45.74	123.920	1,754.927	35.79%
2020	4,957.983	1,157.654	3,800.329	1,774.561	304.406	2,750.750	17.812	20,985.460	45,311.155	46.31	132.009	1,794.525	35.79%
2021	5,085.580	1,225.240	3,860.339	1,820.231	309.213	2,869.271	18.480	21,721.591	46,333.883	46.88	139.615	1,836.500	35.79%
2022	5,217.632	1,292.899	3,924.732	1,867.495	314.371	2,988.419	19.173	22,441.271	47,302.534	47.44	146.736	1,880.691	35.79%
2023	5,356.705	1,362.459	3,994.246	1,917.272	319.939	3,106.645	19.892	23,147.263	48,215.432	48.01	153.373	1,928.094	35.79%
2024	5,499.354	1,432.508	4,066.845	1,968.329	325.754	3,226.311	20.638	23,838.637	49,067.724	48.58	164.417	1,972.479	35.79%
2025	5,645.942	1,503.272	4,142.670	2,019.253	331.828	3,349.288	21.412	24,511.005	49,852.560	49.17	174.604	2,019.253	35.76%
2026	5,797.610	1,575.135	4,222.475	2,073.642	338.220	3,462.890	22.215	25,176.586	50,575.807	49.78	179.149	2,073.642	35.77%
2027	5,954.944	1,648.867	4,306.077	2,130.731	344.917	3,574.468	23.048	25,840.064	51,235.980	50.43	183.195	2,130.731	35.78%
2028	6,117.726	1,724.023	4,393.703	2,185.544	351.936	3,682.754	23.912	26,502.640	51,832.672	51.13	191.634	2,185.544	35.72%
2029	6,284.172	1,800.260	4,483.912	2,242.530	359.161	3,788.769	24.809	27,169.032	52,364.123	51.88	199.325	2,242.530	35.69%
2030	6,454.280	1,878.372	4,575.908	2,296.794	366.530	3,894.377	25.739	27,837.234	52,826.003	52.70	211.160	2,296.794	35.59%
2031	6,630.121	1,960.145	4,669.976	2,354.284	374.065	3,938.385	26.704	28,574.646	53,276.946	53.63	221.997	2,354.284	35.51%
2032	6,811.986	2,046.112	4,765.873	2,420.005	381.746	4,032.487	27.706	29,343.045	53,664.259	54.68	226.944	2,420.005	35.53%
2033	7,001.617	2,135.712	4,865.905	2,494.385	389.759	4,118.716	28.745	30,162.107	53,992.322	55.86	226.249	2,494.385	35.63%
2034	7,197.758	2,228.509	4,969.249	2,576.221	398.037	4,198.372	29.823	31,050.263	54,264.747	57.22	NA	2,796.849	35.79%
2035	7,399.292	2,324.300	5,074.992	2,648.354	406.507	4,272.585	30.941	32,008.271	54,483.590	58.75	NA	2,875.159	35.79%
2036	7,605.655	2,422.849	5,182.807	2,722.216	415.143	4,341.133	32.101	33,048.979	54,650.927	60.47	NA	2,955.347	35.79%
2037	7,818.378	2,525.443	5,292.935	2,798.354	423.964	4,403.052	33.305	34,187.752	54,770.097	62.42	NA	3,038.005	35.79%
2038	8,038.622	2,632.409	5,406.213	2,877.183	433.038	4,459.706	34.554	35,440.154	54,843.626	64.62	NA	3,123.585	35.79%
2039	8,267.050	2,743.304	5,523.745	2,958.942	442.452	4,507.912	35.850	36,826.512	54,878.287	67.11	NA	3,212.346	35.79%
2040	8,502.237	2,856.705	5,645.531	3,043.120	452.207	4,546.249	37.194	38,369.564	54,883.220	69.91	NA	3,303.733	35.79%
2041	8,747.405	2,972.985	5,774.420	3,130.871	462.531	4,573.162	38.589	40,096.740	54,870.960	73.07	NA	3,398.999	35.79%
2042	8,999.950	3,091.749	5,908.201	3,221.262	473.247	4,586.171	40.036	42,038.872	54,857.908	76.63	NA	3,497.131	35.79%
2043	9,259.312	3,214.281	6,045.031	3,314.093	484.207	4,591.039	41.537	44,222.701	54,854.776	80.62	NA	3,597.912	35.79%
2044	9,523.860	3,340.323	6,183.538	3,408.780	495.301	4,587.813	43.095	46,676.134	54,872.202	85.06	NA	3,700.708	35.79%
2045	9,793.805	3,470.327	6,323.478	3,505.398	506.511	4,577.451	44.711	49,428.166	54,920.184	90.00	NA	3,805.601	35.79%

[1] *Payroll shown is pensionable pay. It does not include amounts in excess of the pay cap that is applicable to members hired on or after January 1, 2011, participating in the Traditional and Portable plans.*
[2] *Excludes SMP contributions.*
[3] *Maximum contribution after impact of debt service.*

TABLE 16

DEVELOPMENT OF MARKET AND ACTUARIAL VALUE OF ASSETS AS OF JUNE 30, 2015
AFTER BONDS (VALUATION BASIS) AND BEFORE BONDS (HYPOTHETICAL BASIS)

		After Bonds (Valuation Basis)	Before Bonds (Hypothetical)
1	Market Value at 6/30/2014	$17,391,323,132	$14,999,992,187
2a	Employer and Non-Employer Contributing Entity Contributions	1,528,525,398	1,652,056,509
2b	Member Contributions	267,682,083	267,682,083
2c	Benefits and Expenses	2,227,762,714	2,227,762,714
2d	Net Non-Investment Cash Flow	(431,555,233)	(308,024,122)
3	Investment Return (Based on Estimated Rate of 2.93%)	503,199,957	434,982,168
4	Expected Return (Based on Estimated Rate of 7.25%)	1,245,500,760	1,076,528,921
5	Market Value at 6/30/2015 (1+2d+3)	17,462,967,856	15,126,950,233
6	Expected Market Value at 6/30/2015 (1+2d+4)	18,205,268,659	15,768,496,986
7a	Actuarial Gain/(Loss) Current Year	(742,300,803)	(641,546,753)
7b	Actuarial Gain/(Loss) 1 Year Prior	1,514,453,279	1,303,474,812
7c	Actuarial Gain/(Loss) 2 Years Prior	646,420,171	553,235,951
7d	Actuarial Gain/(Loss) 3 Years Prior	(1,075,191,015)	(915,795,790)
7e	Actuarial Gain/(Loss) 4 Years Prior	1,886,355,421	1,598,970,107
8	Actuarial Value at 6/30/2014	15,844,713,727	13,671,795,042
9	Actuarial Value at 6/30/2015 (8+2d+4+.2*(7a+7b+7c+7d+7e))	17,104,606,665	14,819,967,506

TABLE 17

HYPOTHETICAL ASSETS TO DETERMINE MAXIMUM CONTRIBUTION PROJECTIONS – REFLECTS RECOGNITION OF DEFERRED ASSET GAINS AND LOSSES IN PROJECTED ACTUARIAL VALUE OF ASSETS (BEFORE IMPACT OF BONDS ISSUED IN 2004)

($ IN MILLIONS)

Fiscal Year Ending	Total Payroll [1]	SMP Payroll	DB Payroll [1]	SURS Contributions [2]	Member Contributions	Benefits	Expenses	Assets EOY	AAL	Funding Ratio	Debt Service	SURS Contribution % of Total Payroll
2015	$ 4,280.503	$ 804.323	$ 3,476.180	$ 1,652.057	$ 267.682	$ 2,213.693	$ 14.069	$ 14,819.968	$ 39,520.687	37.50 %	NA	38.59%
2016	4,519.964	893.115	3,626.849	1,712.647	290.511	2,307.848	15.373	15,645.082	40,745.860	38.40	NA	37.89%
2017	4,610.025	955.782	3,654.243	1,791.328	292.705	2,405.775	15.949	16,690.580	41,949.016	39.79	NA	38.86%
2018	4,716.508	1,021.933	3,694.575	1,827.183	295.935	2,519.349	16.548	17,605.849	43,112.587	40.84	NA	38.74%
2019	4,835.258	1,089.491	3,745.766	1,855.341	300.036	2,631.082	17.168	18,234.234	44,236.965	41.22	NA	38.37%
2020	4,957.983	1,157.654	3,800.329	1,893.187	304.406	2,750.750	17.812	18,964.912	45,311.155	41.85	NA	38.18%
2021	5,085.580	1,225.240	3,860.339	1,951.694	309.213	2,869.271	18.480	19,690.699	46,333.883	42.50	NA	38.38%
2022	5,217.632	1,292.899	3,924.732	2,002.371	314.371	2,988.419	19.173	20,402.820	47,302.534	43.13	NA	38.38%
2023	5,356.705	1,362.459	3,994.246	2,055.743	319.939	3,106.645	19.892	21,104.427	48,215.432	43.77	NA	38.38%
2024	5,499.354	1,432.508	4,066.845	2,110.488	325.754	3,226.311	20.638	21,794.917	49,067.724	44.42	NA	38.38%
2025	5,645.942	1,503.272	4,142.670	2,166.744	331.828	3,349.288	21.412	22,471.859	49,852.560	45.08	NA	38.38%
2026	5,797.610	1,575.135	4,222.475	2,224.949	338.220	3,462.890	22.215	23,146.299	50,575.807	45.77	NA	38.38%
2027	5,954.944	1,648.867	4,306.077	2,285.329	344.917	3,574.468	23.048	23,822.685	51,235.980	46.50	NA	38.38%
2028	6,117.726	1,724.023	4,393.703	2,347.800	351.936	3,682.754	23.912	24,507.037	51,832.672	47.28	NA	38.38%
2029	6,284.172	1,800.260	4,483.912	2,411.677	359.161	3,788.769	24.809	25,203.920	52,364.123	48.13	NA	38.38%
2030	6,454.280	1,878.372	4,575.908	2,476.960	366.530	3,894.377	25.739	25,916.234	52,826.003	49.06	NA	38.38%
2031	6,630.121	1,960.145	4,669.976	2,544.442	374.065	3,938.385	26.704	26,711.304	53,276.946	50.14	NA	38.38%
2032	6,811.986	2,046.112	4,765.873	2,614.236	381.746	4,032.487	27.706	27,545.761	53,664.259	51.33	NA	38.38%
2033	7,001.617	2,135.712	4,865.905	2,687.011	389.759	4,118.716	28.745	28,434.006	53,992.322	52.66	NA	38.38%
2034	7,197.758	2,228.509	4,969.249	2,762.284	398.037	4,198.372	29.823	29,389.565	54,264.747	54.16	NA	38.38%
2035	7,399.292	2,324.300	5,074.992	2,839.627	406.507	4,272.585	30.941	30,425.257	54,483.590	55.84	NA	38.38%
2036	7,605.655	2,422.849	5,182.807	2,918.823	415.143	4,341.133	32.101	31,554.806	54,650.927	57.74	NA	38.38%
2037	7,818.378	2,525.443	5,292.935	3,000.460	423.964	4,403.052	33.305	32,794.555	54,770.097	59.88	NA	38.38%
2038	8,038.622	2,632.409	5,406.213	3,084.983	433.038	4,459.706	34.554	34,161.151	54,843.626	62.29	NA	38.38%
2039	8,267.050	2,743.304	5,523.745	3,172.647	442.452	4,507.912	35.850	35,676.097	54,878.287	65.01	NA	38.38%
2040	8,502.237	2,856.705	5,645.531	3,262.904	452.207	4,546.249	37.194	37,363.355	54,883.220	68.08	NA	38.38%
2041	8,747.405	2,972.985	5,774.420	3,356.992	462.531	4,573.162	38.589	39,251.756	54,870.960	71.53	NA	38.38%
2042	8,999.950	3,091.749	5,908.201	3,453.912	473.247	4,586.171	40.036	41,373.563	54,857.908	75.42	NA	38.38%
2043	9,259.312	3,214.281	6,045.031	3,553.447	484.207	4,591.039	41.537	43,757.036	54,854.776	79.77	NA	38.38%
2044	9,523.860	3,340.323	6,183.538	3,654.973	495.301	4,587.813	43.095	46,431.669	54,872.202	84.62	NA	38.38%
2045	9,793.805	3,470.327	6,323.478	3,758.569	506.511	4,577.451	44.711	49,428.165	54,920.184	90.00	NA	38.38%

[1] *Payroll shown is pensionable pay. It does not include amounts in excess of the pay cap that is applicable to members hired on or after January 1, 2011, participating in the Traditional and Portable plans.*
[2] *Excludes SMP contributions.*

TABLE 18

HYPOTHETICAL ASSETS TO DETERMINE MAXIMUM CONTRIBUTION

PROJECTIONS – DOES NOT REFLECT RECOGNITION OF DEFERRED ASSET GAINS AND LOSSES IN PROJECTED ACTUARIAL VALUE OF ASSETS (BEFORE IMPACT OF BONDS ISSUED IN 2004)

ASSUMES INVESTMENT RETURN OF 7.25% EACH YEAR ON ACTUARIAL VALUE OF ASSETS

($ IN MILLIONS)

Fiscal Year Ending	Total Payroll [1]	SMP Payroll	DB Payroll [1]	SURS Contributions [2]	Member Contributions	Benefits	Expenses	Assets EOY	AAL	Funding Ratio	Debt Service	SURS Contribution % of Total Payroll
2015	$ 4,280.503	$ 804.323	$ 3,476.180	$ 1,652.057	$ 267.682	$ 2,213.693	$ 14.069	$ 14,819.968	$ 39,520.687	37.50 %	NA	38.59%
2016	4,519.964	893.115	3,626.849	1,712.647	290.511	2,307.848	15.373	15,562.952	40,745.860	38.20	NA	37.89%
2017	4,610.025	955.782	3,654.243	1,791.328	292.705	2,405.775	15.949	16,341.548	41,949.016	38.96	NA	38.86%
2018	4,716.508	1,021.933	3,694.575	1,832.704	295.935	2,519.349	16.548	17,104.548	43,112.587	39.67	NA	38.86%
2019	4,835.258	1,089.491	3,745.766	1,878.847	300.036	2,631.082	17.168	17,858.544	44,236.965	40.37	NA	38.86%
2020	4,957.983	1,157.654	3,800.329	1,926.535	304.406	2,750.750	17.812	18,596.519	45,311.155	41.04	NA	38.86%
2021	5,085.580	1,225.240	3,860.339	1,976.115	309.213	2,869.271	18.480	19,320.888	46,333.883	41.70	NA	38.86%
2022	5,217.632	1,292.899	3,924.732	2,027.427	314.371	2,988.419	19.173	20,032.146	47,302.534	42.35	NA	38.86%
2023	5,356.705	1,362.459	3,994.246	2,081.467	319.939	3,106.645	19.892	20,733.520	48,215.432	43.00	NA	38.86%
2024	5,499.354	1,432.508	4,066.845	2,136.896	325.754	3,226.311	20.638	21,424.468	49,067.724	43.66	NA	38.86%
2025	5,645.942	1,503.272	4,142.670	2,193.856	331.828	3,349.288	21.412	22,102.631	49,852.560	44.34	NA	38.86%
2026	5,797.610	1,575.135	4,222.475	2,252.790	338.220	3,462.890	22.215	22,779.134	50,575.807	45.04	NA	38.86%
2027	5,954.944	1,648.867	4,306.077	2,313.926	344.917	3,574.468	23.048	23,458.516	51,235.980	45.79	NA	38.86%
2028	6,117.726	1,724.023	4,393.703	2,377.179	351.936	3,682.754	23.912	24,146.890	51,832.672	46.59	NA	38.86%
2029	6,284.172	1,800.260	4,483.912	2,441.855	359.161	3,788.769	24.809	24,848.914	52,364.123	47.45	NA	38.86%
2030	6,454.280	1,878.372	4,575.908	2,507.954	366.530	3,894.377	25.739	25,567.588	52,826.003	48.40	NA	38.86%
2031	6,630.121	1,960.145	4,669.976	2,576.281	374.065	3,938.385	26.704	26,370.355	53,276.946	49.50	NA	38.86%
2032	6,811.986	2,046.112	4,765.873	2,646.949	381.746	4,032.487	27.706	27,213.970	53,664.259	50.71	NA	38.86%
2033	7,001.617	2,135.712	4,865.905	2,720.634	389.759	4,118.716	28.745	28,112.980	53,992.322	52.07	NA	38.86%
2034	7,197.758	2,228.509	4,969.249	2,796.849	398.037	4,198.372	29.823	29,081.060	54,264.747	53.59	NA	38.86%
2035	7,399.292	2,324.300	5,074.992	2,875.159	406.507	4,272.585	30.941	30,131.183	54,483.590	55.30	NA	38.86%
2036	7,605.655	2,422.849	5,182.807	2,955.347	415.143	4,341.133	32.101	31,277.236	54,650.927	57.23	NA	38.86%
2037	7,818.378	2,525.443	5,292.935	3,038.005	423.964	4,403.052	33.305	32,535.744	54,770.097	59.40	NA	38.86%
2038	8,038.622	2,632.409	5,406.213	3,123.585	433.038	4,459.706	34.554	33,923.553	54,843.626	61.86	NA	38.86%
2039	8,267.050	2,743.304	5,523.745	3,212.346	442.452	4,507.912	35.850	35,462.386	54,878.287	64.62	NA	38.86%
2040	8,502.237	2,856.705	5,645.531	3,303.733	452.207	4,546.249	37.194	37,176.434	54,883.220	67.74	NA	38.86%
2041	8,747.405	2,972.985	5,774.420	3,398.999	462.531	4,573.162	38.589	39,094.785	54,870.960	71.25	NA	38.86%
2042	8,999.950	3,091.749	5,908.201	3,497.131	473.247	4,586.171	40.036	41,249.970	54,857.908	75.19	NA	38.86%
2043	9,259.312	3,214.281	6,045.031	3,597.912	484.207	4,591.039	41.537	43,670.531	54,854.776	79.61	NA	38.86%
2044	9,523.860	3,340.323	6,183.538	3,700.708	495.301	4,587.813	43.095	46,386.256	54,872.202	84.54	NA	38.86%
2045	9,793.805	3,470.327	6,323.478	3,805.601	506.511	4,577.451	44.711	49,428.166	54,920.184	90.00	NA	38.86%

[1] *Payroll shown is pensionable pay. It does not include amounts in excess of the pay cap that is applicable to members hired on or after January 1, 2011, participating in the Traditional and Portable plans.*
[2] *Excludes SMP contributions.*

TABLE 19
ADDITIONAL DETAILS
($ IN MILLIONS)

Fiscal Year Ending	Total Normal Cost [1]				Normal Cost with Admin Expense				Expected Defined Benefit Plan Pay [2]				Normal Cost Rate [2]			
		Tier 2				Tier 2				Tier 2				Tier 2		
	Tier 1	Current	Future	Total	Tier 1	Current	Future	Total	Tier 1	Current	Future	Total	Tier 1	Current	Future	Total
2016	$ 655.298	$ 68.878	$ 0.000	$ 724.176	$ 667.692	$ 71.857	$ 0.000	$ 739.549	$ 2,903.929	$ 697.939	$ 0.000	$ 3,601.868	22.99%	10.30%		20.53%
2017	626.711	63.907	24.453	715.071	638.822	66.671	25.528	731.021	2,749.526	627.584	243.931	3,621.041	23.23%	10.62%	10.47%	20.19%
2018	598.928	59.719	47.546	706.193	610.739	62.288	49.714	722.741	2,604.245	566.622	477.868	3,648.735	23.45%	10.99%	10.40%	19.81%
2019	571.730	56.882	70.011	698.623	583.187	59.313	73.291	715.791	2,465.594	523.196	705.815	3,694.605	23.65%	11.34%	10.38%	19.37%
2020	544.796	55.270	91.050	691.116	555.895	57.633	95.400	708.928	2,332.053	496.401	913.980	3,742.434	23.84%	11.61%	10.44%	18.94%
2021	518.602	54.191	111.951	684.744	529.334	56.515	117.375	703.224	2,203.854	477.175	1,113.789	3,794.818	24.02%	11.84%	10.54%	18.53%
2022	493.769	53.219	133.088	680.076	504.129	55.510	139.610	699.249	2,081.935	460.398	1,310.782	3,853.115	24.21%	12.06%	10.65%	18.15%
2023	469.660	52.310	154.686	676.656	479.629	54.570	162.348	696.547	1,964.128	445.340	1,509.568	3,919.036	24.42%	12.25%	10.75%	17.77%
2024	445.939	51.511	176.440	673.890	455.511	53.746	185.271	694.528	1,849.371	431.848	1,705.999	3,987.218	24.63%	12.45%	10.86%	17.42%
2025	422.611	50.799	198.656	672.066	431.777	53.012	208.689	693.478	1,737.448	419.567	1,901.907	4,058.922	24.85%	12.64%	10.97%	17.09%
2026	399.855	50.318	221.080	671.253	408.607	52.515	232.345	693.467	1,628.885	408.874	2,096.451	4,134.210	25.09%	12.84%	11.08%	16.77%
2027	377.551	50.086	243.656	671.293	385.882	52.272	256.187	694.341	1,523.290	399.624	2,291.441	4,214.355	25.33%	13.08%	11.18%	16.48%
2028	355.680	50.031	266.356	672.067	363.584	52.208	280.187	695.979	1,420.619	391.393	2,485.950	4,297.962	25.59%	13.34%	11.27%	16.19%
2029	333.933	50.159	289.218	673.310	341.405	52.333	304.382	698.120	1,320.399	384.073	2,679.756	4,384.228	25.86%	13.63%	11.36%	15.92%
2030	311.771	50.333	312.431	674.535	318.798	52.503	328.974	700.275	1,221.215	376.929	2,874.648	4,472.792	26.11%	13.93%	11.44%	15.66%
2031	289.008	50.504	336.136	675.648	295.576	52.667	354.109	702.352	1,122.620	369.672	3,071.873	4,564.165	26.33%	14.25%	11.53%	15.39%
2032	265.862	50.655	360.223	676.740	271.960	52.809	379.675	704.444	1,025.260	362.266	3,269.993	4,657.519	26.53%	14.58%	11.61%	15.12%
2033	243.236	50.768	384.637	678.641	248.868	52.912	405.605	707.385	931.521	354.673	3,468.100	4,754.294	26.72%	14.92%	11.70%	14.88%
2034	221.422	50.906	409.277	681.605	226.597	53.039	431.793	711.429	842.243	347.153	3,665.092	4,854.488	26.90%	15.28%	11.78%	14.66%
2035	199.632	51.124	434.252	685.008	204.346	53.246	458.356	715.948	755.347	340.010	3,862.115	4,957.472	27.05%	15.66%	11.87%	14.44%
2036	177.547	51.354	459.600	688.501	181.796	53.465	485.341	720.602	670.096	332.874	4,059.474	5,062.444	27.13%	16.06%	11.96%	14.23%
2037	155.350	51.468	485.377	692.195	159.132	53.562	512.805	725.499	587.098	325.057	4,257.503	5,169.658	27.10%	16.48%	12.04%	14.03%
2038	133.337	51.502	511.598	696.437	136.655	53.575	540.760	730.990	507.077	316.804	4,456.196	5,280.077	26.95%	16.91%	12.14%	13.84%
2039	112.354	51.446	538.161	701.961	115.226	53.493	569.091	737.810	432.240	308.054	4,654.579	5,394.873	26.66%	17.36%	12.23%	13.68%
2040	92.991	51.268	564.908	709.167	95.447	53.283	597.631	746.361	364.103	298.732	4,851.040	5,513.875	26.21%	17.84%	12.32%	13.54%
2041	76.399	50.908	591.826	719.133	78.489	52.883	626.350	757.722	305.441	288.635	5,045.468	5,639.544	25.70%	18.32%	12.41%	13.44%
2042	63.272	50.253	618.709	732.234	65.061	52.177	655.033	772.271	257.742	277.345	5,235.846	5,770.933	25.24%	18.81%	12.51%	13.38%
2043	52.657	49.280	645.659	747.596	54.191	51.142	683.800	789.133	218.150	264.782	5,423.266	5,906.198	24.84%	19.31%	12.61%	13.36%
2044	43.900	47.864	672.678	764.442	45.217	49.650	712.669	807.536	184.700	250.582	5,608.036	6,043.318	24.48%	19.81%	12.71%	13.36%
2045	36.633	45.922	699.808	782.363	37.763	47.618	741.693	827.074	156.283	234.526	5,791.054	6,181.863	24.16%	20.30%	12.81%	13.38%
2046	30.594	43.469	726.991	801.054	30.594	43.469	726.991	801.054	132.127	216.844	5,972.348	6,321.319	23.15%	20.05%	12.17%	12.67%

[1] *Normal Cost excludes expense portion.*
[2]*Expected pay for members in the defined benefit plans at June 30. Used to develop normal cost as a percent of pay.*

TABLE 20
ADDITIONAL DETAILS
($ IN MILLIONS)

Fiscal	SMP Total	Number of Active Members				Defined Benefit Plan Payroll[1]				Member Contributions			
Year	Active		Tier 2				Tier 2				Tier 2		
Ending	Members	Tier 1	Current	Future	Total	Tier 1	Current	Future	Total	Tier 1	Current	Future	Total
2015	11,928	50,638	18,743	0	69,381	$ 2,862.366	$ 613.814	$ 0.000	$ 3,476.180				$ 267.682
2016	13,480	45,392	15,497	6,940	67,829	2,755.790	635.501	235.559	3,626.850	220.739	50.904	18.868	290.511
2017	14,902	40,643	12,648	13,116	66,407	2,612.569	573.840	467.835	3,654.244	209.267	45.965	37.474	292.706
2018	16,144	36,402	10,324	18,439	65,165	2,475.937	523.724	694.914	3,694.575	198.323	41.950	55.663	295.936
2019	17,040	32,955	9,069	22,245	64,269	2,344.880	493.283	907.604	3,745.767	187.825	39.512	72.699	300.036
2020	17,757	29,941	8,285	25,326	63,552	2,216.530	473.759	1,110.041	3,800.330	177.544	37.948	88.914	304.406
2021	18,386	27,235	7,621	28,067	62,923	2,095.530	457.222	1,307.588	3,860.340	167.852	36.623	104.738	309.213
2022	18,943	24,772	7,040	30,554	62,366	1,978.964	442.237	1,503.532	3,924.733	158.515	35.423	120.433	314.371
2023	19,447	22,509	6,540	32,813	61,862	1,865.621	428.984	1,699.642	3,994.247	149.436	34.362	136.141	319.939
2024	19,902	20,422	6,096	34,889	61,407	1,754.678	416.860	1,895.307	4,066.845	140.550	33.390	151.814	325.754
2025	20,312	18,501	5,704	36,792	60,997	1,646.776	405.738	2,090.156	4,142.670	131.907	32.500	167.422	331.829
2026	20,679	16,731	5,369	38,530	60,630	1,542.212	396.636	2,283.627	4,222.475	123.531	31.771	182.918	338.220
2027	21,014	15,088	5,067	40,140	60,295	1,440.000	388.116	2,477.960	4,306.076	115.344	31.088	198.485	344.917
2028	21,315	13,576	4,798	41,620	59,994	1,341.155	380.808	2,671.740	4,393.703	107.427	30.503	214.006	351.936
2029	21,590	12,164	4,551	43,004	59,719	1,243.646	373.998	2,866.267	4,483.911	99.616	29.957	229.588	359.161
2030	21,841	10,843	4,317	44,308	59,468	1,146.777	366.907	3,062.224	4,575.908	91.857	29.389	245.284	366.530
2031	22,082	9,606	4,093	45,528	59,227	1,050.403	359.826	3,259.747	4,669.976	84.137	28.822	261.106	374.065
2032	22,312	8,462	3,879	46,656	58,997	956.014	352.437	3,457.423	4,765.874	76.577	28.230	276.940	381.747
2033	22,525	7,428	3,676	47,680	58,784	866.859	345.008	3,654.038	4,865.905	69.435	27.635	292.688	389.758
2034	22,723	6,478	3,485	48,623	58,586	781.147	337.760	3,850.341	4,969.248	62.570	27.055	308.412	398.037
2035	22,905	5,590	3,310	49,504	58,404	696.585	331.079	4,047.328	5,074.992	55.796	26.519	324.191	406.506
2036	23,073	4,770	3,139	50,327	58,236	614.134	323.829	4,244.844	5,182.807	49.192	25.939	340.012	415.143
2037	23,233	4,008	2,971	51,097	58,076	533.988	315.861	4,443.086	5,292.935	42.772	25.300	355.891	423.963
2038	23,384	3,311	2,811	51,803	57,925	457.416	307.806	4,640.991	5,406.213	36.639	24.655	371.743	433.037
2039	23,519	2,701	2,654	52,435	57,790	387.552	298.870	4,837.323	5,523.745	31.043	23.939	387.470	442.452
2040	23,637	2,170	2,503	52,999	57,672	324.110	289.605	5,031.817	5,645.532	25.961	23.197	403.049	452.207
2041	23,732	1,754	2,348	53,475	57,577	273.039	279.070	5,222.312	5,774.421	21.870	22.353	418.307	462.530
2042	23,808	1,425	2,191	53,885	57,501	230.964	267.404	5,409.833	5,908.201	18.500	21.419	433.328	473.247
2043	23,872	1,161	2,033	54,243	57,437	195.696	254.360	5,594.975	6,045.031	15.675	20.374	448.157	484.206
2044	23,930	946	1,868	54,565	57,379	165.584	239.434	5,778.520	6,183.538	13.263	19.179	462.859	495.301
2045	23,981	773	1,698	54,857	57,328	140.157	222.716	5,960.605	6,323.478	11.227	17.840	477.444	506.511

[1] *Payroll shown is pensionable pay at the valuation date. It does not include amounts in excess of the pay cap that is applicable to members hired on or after January 1, 2011, participating in the Traditional and Portable plans.*

TABLE 21
ADDITIONAL DETAILS
($ IN MILLIONS)

Fiscal	Present Value of Future Benefits						Benefit Payments						Actuarial Accrued Liability					
Year	Current	Current	Tier 1	Tier 2 Actives			Current	Current	Tier 1	Tier 2 Actives			Current	Current	Tier 1	Tier 2 Actives		
Ending	Retirees	Inactives	Actives	Current	Future	Total	Retirees	Inactives	Actives	Current	Future	Total	Retirees	Inactives	Actives	Current	Future	Total
2015	$ 26,042.392	$ 2,338.432	$ 16,231.737	$ 887.633	$ 0.000	$ 45,500.194						$ 2,213.693	$ 26,042.392	$ 2,338.432	$ 10,964.355	$ 175.506	$ 0.000	$ 39,520.685
2016	25,698.487	2,465.554	17,316.359	928.515	206.284	46,615.199	2,155.219	40.956	89.009	22.664	0.000	2,307.848	25,698.487	2,465.554	12,345.729	236.091	0.000	40,745.861
2017	25,324.614	2,585.071	18,409.651	965.038	435.941	47,720.315	2,160.080	57.198	156.568	29.735	2.194	2,405.775	25,324.614	2,585.071	13,727.683	288.596	23.052	41,949.016
2018	24,908.625	2,703.967	19,497.620	1,001.316	692.837	48,804.365	2,174.574	66.165	238.246	32.528	7.836	2,519.349	24,908.625	2,703.967	15,096.468	337.678	65.848	43,112.586
2019	24,450.828	2,820.531	20,577.101	1,041.275	970.466	49,860.201	2,185.823	76.741	322.606	31.515	14.397	2,631.082	24,450.828	2,820.531	16,448.959	388.430	128.217	44,236.965
2020	23,951.338	2,933.412	21,641.231	1,084.405	1,270.177	50,880.563	2,194.033	88.457	413.001	31.249	24.010	2,750.750	23,951.338	2,933.412	17,777.997	441.468	206.940	45,311.155
2021	23,410.653	3,039.021	22,683.795	1,136.707	1,593.026	51,863.202	2,198.844	103.381	508.322	25.412	33.313	2,869.272	23,410.653	3,039.021	19,077.548	503.279	303.381	46,333.882
2022	22,829.456	3,135.478	23,700.243	1,200.036	1,938.965	52,804.178	2,200.111	119.613	606.524	18.426	43.745	2,988.419	22,829.456	3,135.478	20,343.900	575.799	417.902	47,302.535
2023	22,208.766	3,222.516	24,686.551	1,272.884	2,308.710	53,699.427	2,197.557	135.460	706.787	13.669	53.173	3,106.646	22,208.766	3,222.516	21,573.259	657.562	553.329	48,215.432
2024	21,549.920	3,299.000	25,638.345	1,354.644	2,702.673	54,544.582	2,190.949	151.743	809.162	10.161	64.295	3,226.310	21,549.920	3,299.000	22,761.161	748.058	709.585	49,067.724
2025	20,854.578	3,364.562	26,548.649	1,442.762	3,121.117	55,331.668	2,180.067	167.645	915.857	9.747	75.973	3,349.289	20,854.578	3,364.562	23,900.532	844.806	888.082	49,852.560
2026	20,124.837	3,418.012	27,415.658	1,534.916	3,573.259	56,066.682	2,164.604	183.930	1,021.391	12.019	80.946	3,462.890	20,124.837	3,418.012	24,989.649	945.718	1,097.593	50,575.809
2027	19,363.086	3,460.340	28,231.614	1,631.237	4,061.610	56,747.887	2,144.427	198.411	1,131.384	14.446	85.802	3,574.470	19,363.086	3,460.340	26,020.717	1,051.193	1,340.644	51,235.980
2028	18,572.099	3,489.409	28,994.040	1,731.889	4,586.857	57,374.294	2,119.328	214.178	1,240.196	17.007	92.045	3,682.754	18,572.099	3,489.409	26,991.200	1,161.604	1,618.360	51,832.672
2029	17,755.044	3,503.518	29,697.843	1,837.089	5,151.753	57,945.247	2,089.127	230.658	1,350.177	19.662	99.145	3,788.769	17,755.044	3,503.518	27,895.624	1,277.404	1,932.533	52,364.123
2030	16,915.456	3,501.088	30,335.262	1,946.881	5,758.656	58,457.343	2,053.685	247.615	1,463.549	22.592	106.936	3,894.377	16,915.456	3,501.088	28,725.257	1,398.745	2,285.457	52,826.003
2031	16,057.204	3,541.049	30,900.440	2,061.323	6,409.290	58,969.306	2,012.931	206.513	1,577.930	25.788	115.224	3,938.386	16,057.204	3,541.049	29,473.010	1,525.750	2,679.933	53,276.946
2032	15,184.492	3,572.695	31,386.357	2,180.345	7,104.582	59,428.471	1,966.810	217.340	1,694.030	29.378	124.930	4,032.488	15,184.492	3,572.695	30,130.769	1,658.402	3,117.901	53,664.259
2033	14,301.842	3,595.423	31,791.497	2,303.856	7,845.505	59,838.123	1,915.310	228.166	1,806.047	33.376	135.816	4,118.715	14,301.842	3,595.423	30,696.778	1,796.647	3,601.632	53,992.322
2034	13,414.094	3,608.450	32,112.935	2,431.876	8,634.668	60,202.023	1,858.441	239.124	1,915.234	37.668	147.905	4,198.372	13,414.094	3,608.450	31,168.156	1,940.614	4,133.432	54,264.746
2035	12,526.252	3,612.218	32,345.153	2,564.519	9,474.931	60,523.073	1,796.385	248.978	2,023.888	42.166	161.169	4,272.586	12,526.252	3,612.218	31,538.620	2,090.586	4,715.914	54,483.590
2036	11,643.436	3,606.722	32,483.916	2,701.735	10,368.435	60,804.244	1,729.376	258.186	2,130.385	47.036	176.149	4,341.132	11,643.436	3,606.722	31,802.781	2,246.625	5,351.364	54,650.928
2037	10,770.841	3,590.956	32,527.160	2,843.180	11,317.288	61,049.425	1,657.704	267.718	2,232.334	52.560	192.737	4,403.053	10,770.841	3,590.956	31,957.525	2,408.374	6,042.400	54,770.096
2038	9,913.697	3,564.757	32,470.859	2,988.447	12,322.854	61,260.614	1,581.697	276.689	2,331.483	58.770	211.068	4,459.707	9,913.697	3,564.757	31,998.011	2,575.454	6,791.708	54,843.627
2039	9,077.085	3,528.161	32,314.379	3,137.067	13,386.268	61,442.960	1,501.864	284.894	2,424.275	65.702	231.177	4,507.912	9,077.085	3,528.161	31,923.605	2,747.411	7,602.024	54,878.286
2040	8,265.883	3,480.921	32,059.508	3,288.759	14,509.463	61,604.534	1,418.761	292.610	2,508.327	73.141	253.411	4,546.250	8,265.883	3,480.921	31,736.707	2,923.946	8,475.763	54,883.220
2041	7,484.649	3,423.582	31,710.178	3,442.828	15,692.579	61,753.816	1,333.034	299.055	2,581.696	81.464	277.913	4,573.162	7,484.649	3,423.582	31,443.093	3,104.287	9,415.349	54,870.960
2042	6,737.537	3,356.710	31,274.580	3,598.063	16,937.982	61,904.872	1,245.394	304.245	2,640.541	91.124	304.867	4,586.171	6,737.537	3,356.710	31,053.657	3,287.022	10,422.982	54,857.908
2043	6,028.196	3,281.035	30,756.321	3,753.241	18,247.836	62,066.629	1,156.618	308.064	2,689.865	102.048	334.444	4,591.039	6,028.196	3,281.035	30,573.913	3,470.684	11,500.947	54,854.775
2044	5,359.747	3,196.785	30,161.459	3,906.585	19,624.684	62,249.260	1,067.475	311.047	2,727.551	114.681	367.059	4,587.813	5,359.747	3,196.785	30,011.290	3,653.111	12,651.269	54,872.202
2045	4,734.666	3,104.453	29,496.762	4,055.840	21,070.388	62,462.109	978.801	312.953	2,753.341	129.365	402.991	4,577.451	4,734.666	3,104.453	29,373.643	3,831.546	13,875.875	54,920.183

APPENDIX F

HISTORICAL GASB 25 AND 27 SCHEDULES

GASB 67 and 68 information has been provided in a separate report.

TABLE 22
HISTORICAL SCHEDULE OF FUNDING STATUS
($ IN 000S)

Plan Year	Assets	AAL	UAAL	Funding Ratio	Payroll/DB*	UAAL as % of Payroll
2001	$ 10,753,297	$ 14,915,317	$4,162,020	72.10 %	$2,474,631	168.19 %
2002	9,814,677	16,654,041	6,839,364	58.93	2,607,155	262.33
2003	9,714,547	18,025,032	8,310,485	53.89	2,763,428	300.73
2004	12,586,305	19,078,583	6,492,278	65.97	2,814,071	230.71
2005	13,350,278	20,349,922	6,999,644	65.60	2,939,185	238.15
2006	14,175,147	21,688,935	7,513,788	65.36	3,054,100	246.02
2007	15,985,730	23,362,079	7,376,349	68.43	3,180,985	231.89
2008	14,586,325	24,917,678	10,331,353	58.54	3,303,220	312.77
2009	11,032,973	26,316,231	15,283,258	41.92	3,463,922	441.21
2009 **	14,281,998	26,316,231	12,034,233	54.27	3,463,922	347.42
2010 ***	13,966,643	30,120,427	16,153,784	46.37	3,491,071	462.72
2011	13,945,680	31,514,336	17,568,656	44.25	3,460,838	507.64
2012	13,949,905	33,170,216	19,220,311	42.06	3,477,166	552.76
2013	14,262,621	34,373,104	20,110,483	41.49	3,533,858	569.08
2014 ***	15,844,714	37,429,515	21,584,801	42.33	3,522,246	612.81

AAL - Actuarial Accrued Liability
UAAL - Unfunded Actuarial Accrued Liability
** Payroll is rolled forward with salary scale for one year and uses capped payroll for members hired on and after January 1, 2011.*
*** Assets at Actuarial Value (Market Value through first 2009, then Actuarial Value)*
**** Investment rate of return assumption decreased from 8.50 percent to 7.75 percent in plan year 2010, and decreased from 7.75 percent to 7.25 percent in plan year 2014.*

GASB 67 information has been provided in a separate report.

TABLE 23
HISTORICAL SCHEDULE OF CONTRIBUTIONS
($ IN MILLIONS)

Fiscal Year	(1) Total Normal Cost	(2) Amortization of UAAL	(3) (1) + (2) Total ADC	(4) Member Contributions	(5) (3) - (4) Net State ARC*	(6) Actual State Contribution	(7) (6) / (5) State Cont. as Percent of Net ARC
2002			$ 686.9	$ 251.6	$ 435.3	$ 256.1	58.84 %
2003			843.8	246.3	597.5	285.3	47.74
2004			934.8	243.8	691.0	1,757.5	254.36
2005			859.7	251.9	607.8	285.4	46.96
2006			914.9	252.9	662.0	180.0	27.19
2007			968.3	262.4	705.9	261.1	36.99
2008			971.6	264.1	707.5	344.9	48.75
2009			1,147.3	273.3	874.0	451.6	51.67
2010 **			1,278.3	275.0	1,003.3	696.6	69.43
2011 ***	$ 723.798	$ 795.427	1,519.2	260.2	1,259.0	773.6	61.44
2012	700.972	1,000.612	1,701.584	258.236	1,443.348	985.815	68.30
2013	699.747	1,094.681	1,794.428	245.141	1,549.287	1,401.481	90.46
2014	698.225	1,145.380	1,843.605	283.081	1,560.524	1,502.864	96.31

* *ARC - Annual Required Contribution as defined in GASB Statements No. 25 and 27. The ARC is the Actuarially Determined Contribution ("ADC") net of member contributions.*
** *Assets at Actuarial Value (Market Value through 2009, then Actuarial Value beginning with fiscal year 2010).*
*** *Investment rate of return assumption decreased from 8.50 percent to 7.75 percent in fiscal year 2011.*
Beginning in fiscal year 2011, dollars are shown rounded to three decimal places.

GASB 67 information has been provided in a separate report.

TABLE 24
HISTORICAL GENERAL INFORMATION GASB NO. 27
($ IN MILLIONS)

Fiscal Year	(1) Total ADC	(2) Interest on NPO	(3) NPO Adjustment	(4) (1) + (2) + (3) Total Expense	(5) Member Contributions	(6) (4) - (5) State Expense	(7) Actual State Contribution	(8) Beg. of Year NPO	(9) (8) + (6) - (7) End of Year NPO
2010	$1,278.331	$572.406	$(362.553)	$1,488.184	$275.000	$1,213.184	$696.595	$6,734.188	$7,250.777
2011	1,519.225	561.935	(357.035)	1,724.125	260.177	1,463.948	773.595	7,250.777	7,941.130
2012	1,701.584	615.438	(452.282)	1,864.740	258.236	1,606.504	985.815	7,941.130	8,561.819
2013	1,794.428	663.541	(487.633)	1,970.336	245.141	1,725.195	1,401.481	8,561.819	8,885.533
2014	1,843.605	688.629	(506.070)	2,026.164	283.081	1,743.083	1,502.864	8,885.533	9,125.752

Notes in Trend Data

Information	Data
Valuation Date	June 30, 2015
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level Percent, Open
Remaining Amortization Period	30 years
Asset Valuation Method	5-Year Smoothed Market
Actuarial Assumptions	
Investment rate of return*	7.25%
Projected salary increases*	3.75% - 12.00%
Cost-of-living adjustment (pre/post 1/1/2011 hires)	3.0%/1.375%

**Includes price inflation of 2.75%*

GASB 67 information has been provided in a separate report.

APPENDIX G

ACTUARIAL METHODS AND ASSUMPTIONS

PROJECTED UNIT CREDIT METHOD

The Projected Unit Credit Method is mandated under Section 15-155 as the funding method to be used for all purposes under SURS.

The concept of this method is that funding of benefits should occur as benefits are accrued (earned) by active members of SURS.

The Normal Cost ("NC") for a fiscal year under this method is the actuarial present value of all benefits expected to be accrued during the fiscal year adjusted for future expected salary increases. The Actuarial Accrued Liability ("AAL") under this method is the actuarial present value of all benefits accrued to the valuation date. To the extent that the assets of the fund are insufficient to cover the AAL, an Unfunded Actuarial Accrued Liability ("UAAL") develops. Under the classical application of this method, the contribution for a year is the NC for that year plus an amount to amortize the UAAL.

Under Section 15-155, the employer/State contribution is determined such that the assets of SURS reach 90% of the AAL by the end of FY 2045.

This contribution is determined as a level percentage of pay for all years except that the contribution rates through 2010 shall grade in equal steps to the desired level contribution rate. *We have assumed the contribution would be based on pensionable (capped) payroll for members hired on or after January 1, 2011 ("Tier 2 members").* Pensionable pay does not include amounts in excess of the pay cap ($111,572 in 2015, increased by the lesser of 3% and 1/2 of the increase in CPI-U as measured in the preceding 12-month calendar year) that is applicable to members hired on or after January 1, 2011, participating in the defined benefit plans.

ASSET VALUATION METHOD

Prior to the valuation as of June 30, 2009, market value of assets was used. Under statue 15-155(l), beginning with the June 30, 2009, valuation, the asset value is the actuarial value of assets which is calculated by recognizing 20% of the investment gain or loss (the difference between the actual investment return and the expected investment return) on the market value of assets for each of the five following fiscal years. This method was not applied retroactively to recognize a portion of investment gains or losses from previous fiscal years.

Following is a table with the recent investment return assumptions.

Valuation Date	Investment Return Assumption
Prior to June 30, 2010	8.50%
June 30, 2010 through June 30, 2013	7.75%
June 30, 2014 and after	7.25%

ACTUARIAL ASSUMPTIONS (MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2015 ACTUARIAL VALUATION)

Under statute 15-155(a), the Board adopts the assumptions after consultation with the actuary. All actuarial assumptions are expectations of future experience and are not market measures. The rationale for the assumption may be found in the 2010-2014 experience study report issued to the Board of Trustees on January 16, 2015.

Rate of Investment Return. For all purposes under the system the rate of investment return is assumed to be 7.25% per annum beginning with the **June 30, 2014**, valuation. This assumption is net of investment expenses.

Price Inflation (Increase in Consumer Price Index "CPI"). The assumed rate is 2.75% per annum.

Effective Rate of Interest. The actuarial valuation assumed rate credited to member accounts is 7.00% per annum, beginning with the June 30, 2013 actuarial valuation.

Cost of living adjustment "COLA." The assumed rate is 3.00% per annum for members hired before January 1, 2011, based on the benefit provision of 3.00% annual compound increases. The assumed rate is 1.375% for members hired on or after January 1, 2011, based on the benefit provision of increases equal to ½ of the increase in CPI with a maximum increase of 3.00%.

Annual Compensation Increases. Each member's compensation is assumed to increase by 3.75% each year, 2.75% reflecting salary inflation and 1.00% reflecting standard of living increases. That rate is increased for members with less than 34 years of service. The total assumed increase follows:

Service Year	Total Increase
0	15.00%
1	12.00%
2	9.00%
3	7.25%
4	6.50%
5	6.00%
6	5.75%
7	5.50%
8	5.25%
9	5.00%
10	4.75%
11	4.50%
12-13	4.25%
14-33	4.00%
34+	3.75%

Payroll Growth. The assumed rate of total payroll growth is 3.75%.

ACTUARIAL ASSUMPTIONS
(MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2015 ACTUARIAL VALUATION)
(CONTINUED)

Mortality. The mortality assumptions are as follows:

Base Table with 2014 Base Year	Male Set Forward	Female Set Forward	Male Multiplier	Female Multiplier
RP-2014 White Collar Employee, sex distinct (pre-retirement)	None	None	110% pre 60, 80% at ages 60+	90% pre 60, 90% at ages 60+
RP-2014 White Collar Healthy Annuitant, sex distinct (non-disabled post-retirement)	1 year	1 year	100%	100%
RP-2014 Disabled Annuitant, sex distinct (disabled post-retirement)	9 years	10 years	100%	100%

The provision for future mortality improvement is based on the generational application of the MP-2014 improvement scales.

Future Life Expectancy (years) in 2015

	Postretirement		Disabled - Retiree	
Age	**Male**	**Female**	**Male**	**Female**
35	51.94	54.05	29.56	34.36
40	46.70	48.83	26.21	30.32
45	41.55	43.67	23.01	26.45
50	36.51	38.58	19.86	22.71
55	31.61	33.57	16.77	19.10
60	26.84	28.66	13.85	15.66
65	22.22	23.93	11.14	12.48
70	17.83	19.43	8.67	9.69
75	13.76	15.23	6.48	7.33

Disability. A table of disability incidence with rates follows:

Age	Male	Female	Age	Male	Female
20	0.042%	0.060%	50	0.206%	0.249%
21	0.043%	0.064%	51	0.219%	0.257%
22	0.044%	0.067%	52	0.231%	0.264%
23	0.045%	0.071%	53	0.244%	0.272%
24	0.046%	0.074%	54	0.256%	0.279%
25	0.047%	0.078%	55	0.264%	0.287%
26	0.048%	0.081%	56	0.271%	0.294%
27	0.049%	0.085%	57	0.279%	0.302%
28	0.050%	0.088%	58	0.286%	0.309%
29	0.051%	0.092%	59	0.294%	0.317%
30	0.054%	0.099%	60	0.301%	0.324%
31	0.056%	0.107%	61	0.309%	0.332%
32	0.059%	0.114%	62	0.316%	0.339%
33	0.061%	0.122%	63	0.324%	0.347%
34	0.064%	0.129%	64	0.331%	0.354%
35	0.067%	0.137%	65	0.339%	0.362%
36	0.071%	0.144%	66	0.346%	0.369%
37	0.074%	0.152%	67	0.354%	0.377%
38	0.078%	0.159%	68	0.361%	0.384%
39	0.081%	0.167%	69	0.369%	0.392%
40	0.091%	0.174%	70	0.369%	0.392%
41	0.101%	0.182%	71	0.369%	0.392%
42	0.111%	0.189%	72	0.369%	0.392%
43	0.121%	0.197%	73	0.369%	0.392%
44	0.131%	0.204%	74	0.369%	0.392%
45	0.144%	0.212%	75	0.369%	0.392%
46	0.156%	0.219%	76	0.369%	0.392%
47	0.169%	0.227%	77	0.369%	0.392%
48	0.181%	0.234%	78	0.369%	0.392%
49	0.194%	0.242%	79	0.369%	0.392%

Disability rates apply during the retirement eligibility period.

ACTUARIAL ASSUMPTIONS (MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2015 ACTUARIAL VALUATION) (CONTINUED)

Retirement. Upon eligibility, active members are assumed to retire as follows:

	Members Hired Before January 1, 2011 and Eligible for		Members Hired on or after January 1, 2011 and Eligible for	
Age	**Normal Retirement**	**Early Retirement**	**Normal Retirement**	**Early Retirement**
Under 50	50.0%	-	-	-
50	45.0	-	-	-
51	45.0	-	-	-
52	45.0	-	-	-
53	40.0	-	-	-
54	40.0	-	-	-
55	38.0	7.5%	-	-
56	36.0	6.0	-	-
57	30.0	4.5	-	-
58	30.0	5.5	-	-
59	30.0	6.0	-	-
60	11.0	-	-	-
61	11.0	-	-	-
62	13.0	-	-	35.0%
63	13.0	-	-	15.0
64	13.0	-	-	15.0
65	17.0	-	-	15.0
66	17.0	-	-	15.0
67	15.0	-	50.0%	-
68	15.0	-	35.0	-
69	15.0	-	30.0	-
70-74	15.0	-	15.0	-
75-79	20.0	-	20.0	-
80+	100.0	-	100.0	-

Members that retire are assumed to elect the most valuable option on a present value basis – refund of contributions (or portable lump sum retirement, if applicable) or a retirement annuity.

ACTUARIAL ASSUMPTIONS
(MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2015
ACTUARIAL VALUATION)
(CONTINUED)

General Turnover. A table of termination rates based on experience in the 2010-2014 period. The assumption is a table of turnover rates by years of service. A sample of these rates follows:

Years of Service	All Members
0	20.00%
1	20.00
2	15.00
3	14.00
4	12.00
5	10.00
6	9.00
7	7.50
8	6.75
9	6.00
10	5.25
11	4.50
12	4.00
13	3.70
14	3.20
15	3.00
16	3.00
17	3.00
18	3.00
19	3.00
20	2.50
21	2.50
22	2.50
23	2.50
24	2.50
25	2.00
26	2.00
27	2.00
28	2.00
29	2.00

Part time members with less than 3 years of service (all members classified as part time for valuation purposes) are assumed to terminate at the valuation date.

Members that terminate with at least 5 years of service (10 years of service for Tier 2 members) are assumed to elect the most valuable option on a present value basis – refund of contributions or a deferred benefit.

Termination rate for 29 years of service used for Tier 2 members until retirement eligibility is met.

ACTUARIAL ASSUMPTIONS (MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2015 ACTUARIAL VALUATION) (CONTINUED)

Operational Expenses. The amount of operational expenses for administration incurred in the latest fiscal year are supplied by SURS staff and incorporated in the Normal Cost.

Marital Status. Members are assumed to be married in the following proportions:

Age	Males	Females
20	25 %	40 %
30	70	75
40	80	80
50	85	80
60	85	70

Spouse Age. The female spouse is assumed to be 3 years younger than the male spouse.

Benefit Commencement Age. Inactive members eligible for a deferred benefit are assumed to commence benefits at their earliest normal retirement age. For Tier 1 members this is age 62 with at least 5 years of service, age 60 with at least 8 years of service, or immediately if at least 30 years of service. For Tier 2 members, this is age 67 with 10 or more years of service.

Load on Final Average Salary. No load is assumed to account for higher than assumed pay increases in final years of employment before retirement.

Load on Liabilities for Service Retirees With Non-finalized Benefits. A load of 10% on liabilities for service retirees whose benefits have not been finalized as of the valuation date is assumed to account for finalized benefits that on average are 10% higher than 100% of the preliminary estimated benefit. A load of 5% is used if a “best formula” benefit was provided in the data by Staff.

Valuation of Inactives. An annuity benefit is estimated based on information provided by staff for Tier 1 inactive members with five or more years of service and Tier 2 members with 10 or more years of service.

Assumption for Missing Data. Members with an unknown gender are assumed to be female. Active and inactive members with an unknown date of birth are assumed to be 37 years old at the valuation. An assumed spouse date of birth is calculated for current service retirees in the traditional plan for purposes of calculating future survivor benefits. The female spouse is assumed to be 3 years younger than the male spouse. 70% of current total male retirees and 80% of current total female retirees in the traditional plan that have not elected a survivor refund are assumed to have a spouse at the valuation date.

ACTUARIAL ASSUMPTIONS (MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2015 ACTUARIAL VALUATION) (CONTINUED)

Reciprocal Service. Reciprocal service is included for current inactive members for purposes of determining vesting eligibility and eligibility age to commence benefits.

The recently updated actuarial assumptions (including retirement and termination rates) were based on SURS service only. Therefore, reciprocal service was not included for current active members. Reciprocal service will be collected and analyzed in the future and will be considered in the next experience review.

Projection Assumptions. The number of total active members throughout the projection period will remain the same as the total number of active members in the defined benefit plans and the SMP in the current valuation.

30% of total future hires will elect to participate in the Self Managed Plan.

New entrants have an average age of 37.2 and average capped pay of $36,607 and average uncapped pay of $37,954 (2015 dollars). These values are based on the average age and average pay of current members. The range profile is based on the age at hire and assumed pay at hire (using the actuarial assumptions, inflated to 2015 dollars) of current active members with service between one and four years.

		Average Pay			Average Pay			Average Pay	
Age	Number Males	Capped Male	Uncapped Male	Number Females	Capped Female	Uncapped Female	Total Number	Capped Total	Uncapped Total
<20	63	$15,625	$15,625	50	$14,030	$14,030	113	$14,919	$14,919
20 - 24	737	27,868	27,868	1,198	26,866	26,866	1,935	27,248	27,248
25 - 29	1,830	37,401	38,058	2,406	34,209	34,275	4,236	35,588	35,909
30 - 34	1,622	43,460	44,993	2,029	37,989	38,733	3,651	40,419	41,514
35 - 39	1,068	45,119	48,118	1,378	37,205	38,062	2,446	40,661	42,453
40 - 44	829	42,908	45,651	1,177	36,194	37,190	2,006	38,969	40,686
45 - 49	724	42,675	46,460	1,004	33,367	34,424	1,728	37,267	39,467
50 - 54	678	42,025	46,592	872	32,002	33,340	1,550	36,386	39,136
55 - 59	476	37,799	41,147	616	32,298	33,933	1,092	34,696	37,077
60 - 64	269	34,456	40,625	263	31,022	32,869	532	32,758	36,791
65 - 69	15	17,789	17,789	6	25,405	25,405	21	19,965	19,965
Total	8,311	39,843	42,039	10,999	34,163	34,867	19,310	36,607	37,954

SMP Contribution Assumptions. The projected SMP contributions are equal to 7.6% of SMP payroll, plus estimated SMP expenses minus SMP employer forfeitures. Estimated SMP expenses for FY 2016 are $488,530 and SMP employer forfeitures used to reduce the certified contributions for FY 2017 are $4,235,356. Estimated SMP expenses for FY 2017 and after are assumed to increase by 2.75%. Estimated SMP employer forfeitures used to reduce the certified contributions for FY 2018 and after are assumed to be 7.5% of the gross SMP employer contribution.

APPENDIX H

SUMMARY OF BENEFIT PROVISIONS OF TRADITIONAL SURS

It should be noted that the purpose of this Appendix is to describe the benefit structures of SURS for which actuarial values have been generated. There is no description of the Self Managed Plan (SMP) and many portions of the defined plans are described in a manner which is not legally complete or precise.

It is not our intent to provide an exhaustive description of all benefits provided under SURS or the policies and procedures utilized by SURS staff. A more precise description of the provisions of SURS is contained in the Member's Guide, published by SURS staff. Of course, the statute is controlling.

GENERAL

Plans

There are two defined benefit plans available under SURS, the Traditional Plan and the Portable Plan, and one defined contribution plan, the Self Managed Plan (SMP). A Member must select one of these plans within the first six months of participation. If no choice is made in that time, the Traditional Plan is deemed chosen. A new tier of benefits was established for members hired on or after January 1, 2011. Members hired before January 1, 2011, ("Tier 1 members") are not subject to a pay cap. Members hired on or after January 1, 2011, ("Tier 2 members") are eligible to choose one of the benefit plans. Tier 2 members that participate in the Traditional and Portable Plans are subject to the pay cap established under Public Act 96-0889. The pay cap history is as follows:

Year	CPI-U	½ CPI-U	Pensionable Pay Cap
2011			$106,800.00
2012	3.90%	1.95%	$108,882.60
2013	2.00%	1.00%	$109,971.43
2014	1.20%	0.60%	$110,631.26
2015	1.70%	0.85%	$111,571.63

The pay cap is calculated annually by the Illinois Department of Insurance.

The Self Managed Plan is a defined contribution plan under which members contribute 8.0% of compensation and the State contributes 7.6% of compensation. A portion of the employer contribution is used to fund disability benefits for SMP participants. Members hired on or after January 1, 2011, who participate in the SMP are not subject to the pay cap established under Public Act 96-0889.

The provisions of the defined benefit plans are identical in many areas. The description below is primarily of the Traditional Plan. Where different, the Portable plan provisions will be described in *italics.*

Member Contributions

Most members contribute a total of 8% of compensation. Police officers and firefighters contribute a total of 9.5% of compensation, with the additional 1.5% allocated to the retirement annuity.

The total contribution is broken down as follows:

	Police/Fire	All Others
Retirement Annuity	8.0%	6.5%
Survivor Benefits	1.0%	1.0%
Annual Increases in Retirement Benefits	0.5%	0.5%
Total Contribution	9.5%	8.0%

Portable Plan members contribute a total of 8% of compensation, but the breakdown set out above does not apply.

The retirement annuity portion of the total contribution (8.0% of compensation for police officers and firefighters and 6.5% of compensation for all others) is annuitized for the money purchase formula (Rule 2) calculation.

Contributions for members hired on or after January 1, 2011, are assumed not to be made on pay in excess of $106,800 in 2011 ($111,572 in 2015), increased by the lesser of 3% and 1/2 of the increase in CPI-U as measured in the preceding 12-month calendar year.

Since January 1, 1981, the member contributions under SURS have been "picked up" by employers.

Effective Rate of Interest

The Effective Rate of Interest ("ERI") is the interest rate that is applied to member contribution balances. Effective for the 2006 fiscal year, the ERI for the purpose of determining the money purchase benefit is established by the State Comptroller annually. The ERI for other purposes such as the calculation of purchases of service credit, refunds for excess contributions, portable plan refunds and lump sum portable retirements is determined by the SURS Board annually and certified to the Governor. For purposes of the actuarial valuation, the assumed ERI is 7.00%.

For the purposes of withdrawal of contributions at termination or death by Traditional Plan Members, this rate is not greater than 4.5% by statute.

RETIREMENT BENEFITS

Normal Retirement:

Eligibility

For police officers and firefighters, separation from service on or after the attainment of the earlier of:

1. Age 55 with 20 years of service, or
2. Age 50 with 25 years of service.

For other members hired before January 1, 2011, separation from service on or after attainment of the earlier of:

1. Age 62 with 5 years of service,
2. Age 60 with 8 years of service, and
3. 30 years of service regardless of age.

For members hired on or after January 1, 2011, separation from service on or after attainment age 67 with 10 years of service.

Initial Benefit Amount

There are 3 alternate formulae. The initial benefit is the largest produced by one of the three:

1. General Formula: The following percentages of high 4 consecutive year average compensation for each year of service:

Year of Service	General	Police/Fire
1st 10 Years	2.20 %	2.25 %
Next 10 Years	2.20	2.50
Over 20	2.20	2.75

   For members hired on or after January 1, 2011, the above percentages of high final eight consecutive year average compensation within the last 10 years of service for each year of service. The pay cap for 2010 through 2013 is shown in the table on the previous page. We have assumed the limit applies to individual pay amounts that are used to develop the final average compensation.

2. Money Purchase Formula:

   a) The member contributions for retirement benefits (8.0% of compensation for police officers and firefighters and 6.5% of compensation for all others) accumulated with interest at the ERI, plus

   b) An imputed employer contribution match at $1.40 per dollar of member contribution accumulated with interest at the ERI.

   c) The total of the accumulations in (a) and (b) is converted into an annuity using a life annuity factor that takes into account neither the automatic 50% spousal survivor benefit nor the automatic annual increases.

   Members hired on or after July 1, 2005, no longer receive the Money Purchase Formula under the plan.

3. Minimum Benefit – A benefit for each year of service, up to 30, based on final annual pay, as follows:

Under 3,500	$ 8
$3,500 - $4,500	9
$4,500 - $5,500	10
$5,500 - $6,500	11
$6,500 - $7,500	12
$7,500 - $8,500	13
$8,500 - $9,500	14
Over $9,500	15

Minimum Retirement Annuity – No retiree shall receive a retirement annuity less than $25 per month for each year of service up to 30. The comparable benefit for survivor benefit recipients is $17.50 per month for each year of service up to 30.

Maximum Benefit

80% of high 4-year average compensation for members hired before January 1, 2011, and 80% of final 8-year average for members hired on or after January 1, 2011.

Contribution waivers are applicable to members whose benefits are capped at 80% of final average compensation. Member contributions made once the maximum benefit is achieved are refunded to the member with interest (at the Effective Rate of Interest).

The present value of the benefits for pay increases in excess of 6% during the last four years prior to retirement will be paid by the employer. The employer will pay this amount in a lump sum to the Retirement System.

Benefit Duration

The Normal Retirement benefit is payable for the lifetime of the retired member. If the retiree under the Traditional Plan has a spouse at date of retirement and if that spouse survives the retiree the spouse will receive, upon the death of the retiree, a survivor benefit equal to 50% of the monthly benefit being paid to the retiree as of the date of death. Such benefit will continue for the lifetime of the surviving spouse.

The survivor benefit for members hired on or after January 1, 2011, is equal to 66 2/3% of the monthly benefit being paid to the retiree as of the date of death.

For retirees under the Portable Plan, the normal form of benefit is a single-life annuity for unmarried participants and a reduced 50% joint and survivor benefit for married participants. With spousal consent, a member may designate a contingent annuitant to receive a joint and survivor annuity or elect a single-life annuity or lump sum distribution. Those providing a joint and survivor annuity will have their benefit reduced to cover the cost of the option. The available joint and survivor options are 50%, 75% and 100%. A member may elect the 75% or 100% spousal joint and survivor annuity without consent.

Portable Plan members may also elect to receive their retirement benefit as a lump sum equal to member contributions with an equal employer match (if have at least five years of service), accumulated with interest (at the Effective Rate of Interest that is certified annually by the SURS Board).

Annual Increases

For members hired before January 1, 2011, each January 1 subsequent to retirement date the monthly benefit being paid each retiree shall be increased by 3%. The adjustment for the first January after retirement shall be proportional based on the portion of the year retired.

For members hired on or after January 1, 2011, each January 1 subsequent to retirement date the monthly benefit being paid each retiree shall be increased fifty percent of the Consumer Price Index ("CPI") up to a maximum of 3% applied to the original benefit. The first increase will be granted upon the later of the attainment of age 67 or the first anniversary of the commencement of the annuity.

The historical development of the Annual Increase as determined by the Illinois Department of Insurance for members hired on or after January 1, 2011 can be found in the following table.

Year	CPI-U	½ CPI-U	Annual Increase
2011			3.00%
2012	3.90%	1.95%	1.95%
2013	2.00%	1.00%	1.00%
2014	1.20%	0.60%	0.60%
2015	1.70%	0.85%	0.85%

Early Retirement

Eligibility

For members hired before January 1, 2011, other than police and fire employees, separation from service on or after attainment of age 55 with 8 years of service but not eligible for Normal Retirement. For members hired on or after January 1, 2011, separation from service on or after attainment of age 62 with 10 years of service but not eligible for Normal Retirement.

Benefits

The benefit amounts and all terms of benefit payment are the same as that for Normal Retirement, except that the benefit amounts calculated under the General Formula and the Minimum Formula shall be reduced by .5% for each month by which the retirement date precedes the 60th birthday for members hired before January 1, 2011. The Minimum Formula shall be reduced by .5% for each month by which the retirement date precedes the 67th birthday for members hired on or after January 1, 2011.

BENEFITS ON DEATH BEFORE RETIREMENT

Survivor Benefits

Traditional Plan

Eligibility

Payable to eligible survivor(s) (spouse, child or dependent parent) for the death of an active member with at least 1.5 years of service or a terminated member with at least 10 years of service. For this purpose, service under the State Employees' Retirement System, the Teachers' Retirement System of the State of Illinois and the Public School Teachers' Pension Fund of Chicago is recognized.

Benefits

For members hired before January 1, 2011, an annuity to the eligible survivor(s) equal to the greater of:

1. 50% of the benefit accrued to the date of the death of the member, and
2. The lowest applicable benefit from the following list:
   a) $400 per month to a single eligible survivor or $600 per month to two or more eligible survivors.
   b) 30% (one survivor), or 60% (two survivors), or 80% (three or more survivors) of the member's final rate of earnings.
   c) If member inactive, 80% of base retirement annuity.

For members hired on or after January1, 2011, an annuity to the survivor(s) equal to 66 2/3% of the benefit accrued to the date of the death of the member.

Benefit Duration

Surviving spouse
May receive a lifetime benefit commencing at the later of the member's date of death and the spouse's attainment of age 50. May be payable at the date of death if a dependent child in their care is also receiving benefits.

Dependent child
Payable to unmarried child(ren) under age 18 (over 18 if disabled prior to age 18), and children age 18-22 if a qualified full-time student.

Dependent parent
Payable until dependency conditions are not met, so long as they were dependent upon the member at the time of their death.

Annual Increases

For members hired before January 1, 2011, each January 1 subsequent to retirement date the monthly benefit being paid each survivor annuity recipient shall be increased by 3%. The adjustment for the first January after retirement shall be proportional.

For members hired on or after January 1, 2011, each January 1 subsequent to retirement date the monthly benefit being paid each survivor annuity recipient shall be increased fifty percent of the Consumer Price Index ("CPI") up to a maximum of 3% of the originally granted survivor annuity. The first increase will be granted upon January 1 following the first anniversary of the commencement of the annuity.

Portable Plan

Eligibility

Payable to an eligible spouse for the death of an active or inactive member with at least 1.5 years of SURS service.

Benefits

An annuity to the eligible spouse equal to 50% of the member's earned retirement benefit after the reductions to pay for the cost of providing the pre-retirement survivor annuity. (Applicable to both Tier 1 and Tier 2 members.)

Benefit Duration

Surviving spouse
May receive a lifetime benefit commencing at the member's earliest retirement age.

Annual Increases

For members hired before January 1, 2011, each January 1 subsequent to retirement date the monthly benefit being paid each survivor annuity recipient shall be increased by 3%. The adjustment for the first January after retirement shall be proportional.

For members hired on or after January 1, 2011, each January 1 subsequent to retirement date the monthly benefit being paid each survivor annuity recipient shall be increased fifty percent of the Consumer Price Index ("CPI") up to a maximum of 3% of the originally granted survivor annuity. The first increase will be granted upon January 1 following the first anniversary of the commencement of the annuity.

Lump Sum Death Benefit

Eligibility

Death of member prior to retirement.

Traditional Plan

Benefit

With Eligible Survivor

- Refund of accumulated member contributions for retirement and annual adjustment at 4.5% interest

Without Eligible Survivor

- Refund of the total accumulated member contribution at 4.5% interest, and
- $5,000 to a dependent beneficiary or $2,500 to a non-dependent beneficiary

Portable Plan

Benefit

With Eligible Spouse

- Refund of total accumulated member contributions at the full Effective Rate of Interest, plus, if the member has at least 1.5 years of service at death, a like amount of imputed employer contributions – less the actuarial equivalent of the Pre-Retirement Survivor Annuity.

Without Eligible Spouse

- Refund of total accumulated member contributions at the full Effective Rate of Interest, plus, if the member has at least 1.5 years of service at death, a like amount of imputed employer contributions.

BENEFITS ON DEATH AFTER RETIREMENT

In addition to survivor/spouse benefits payable from the System, the following death benefit is payable if a member does not have an eligible survivor/spouse/contingent annuitant:

- The greater of the total accumulated member contributions or $1,000.

BENEFITS FOR DISABILITY

Disability Benefit

Eligibility

Disablement after completing 2 years of service. The service requirement is waived if the disablement is accidental.

Disability definition – inability to perform the duties of "own occupation."

Pregnancy and childbirth are, by definition, disablement.

Benefit

50% of the basic compensation paid at date of disablement. This base benefit level is offset dollar for dollar by each of the following:

1. Earnings while disabled in excess of the disability benefit.
2. Other disability insurance either fully or partially employer provided.
3. Worker's compensation benefits.

Duration of Benefit

Benefits become payable on the later of the termination of salary and sick leave, or the 61st day after disablement and continue to the earlier of the following:

1. Recovery or death.
2. Benefits paid equal 50% of total compensation during the period of SURS service.
3. If disablement occurs prior to age 65, the disability benefit may not continue past the August 31 following 70th birthday.
4. If disablement occurs at or after attainment of age 65, completion of 5 years in disablement.

Survivor and death benefits are payable if a member dies while receiving disability benefits.

If, at discontinuance of the disability benefit, the member is eligible for a retirement benefit (based on service, which includes the period of disability and may also include time receiving a disability retirement annuity), the member may retire and receive that benefit. The member may commence the retirement benefit once age and service requirements are met. The early retirement reduction does not apply for members that began first participating prior to January 1, 2011 (Tier 1). The benefit is based on the greatest of 3 formulas (General Formula, Money Purchase, and Minimum Benefit), subject to applicable maximums. Contributions are not made during the disability period. However, accumulated contributions continue to accrue interest.

Annual Increases

Each January 1 subsequent to retirement date the monthly benefit being paid each retiree shall be increased by 3%. The adjustment for the first January after retirement shall be proportional.

Disability Retirement Annuity

Eligibility

Continuing disablement after discontinuation of the disability benefit as a result of reaching the "50% of total earnings" limitation. Disability is defined in accordance with the Social Security disability definition.

Benefit

35% of the compensation being earned at disablement.

Duration of Benefit

Benefits become payable upon discontinuance of the disability benefit and continue to the earlier of the following:

1. Recovery or death
2. Election to receive a retirement benefit

Survivor and death benefits are payable if a member dies while receiving a disability retirement annuity.

Annual Increases

Each January 1 subsequent to retirement date the monthly benefit being paid each retiree shall be increased by 3%. The adjustment for the first January after retirement shall be proportional.

For members hired on or after January 1, 2011, if the member converts to a service retirement annuity (item 2 above), each January 1 subsequent to retirement date the monthly benefit being paid each retiree shall be increased fifty percent of the Consumer Price Index ("CPI") up to a maximum of 3% of the originally granted benefit. The first increase will be granted upon the later of the attainment of age 67 or the first anniversary of the commencement of the annuity.

BENEFITS FOR DEFERRED MEMBERS

Eligibility

For members hired before January 1, 2011, separation from employment with at least 5 years of service and separation from employment with at least 10 years of service for members hired on or after January 1, 2011.

Benefit

Benefit as defined for normal retirement purposes, but calculated based on final average compensation and service at date of termination.

Commencement of Benefit

Benefits commence when member reaches the age condition for either normal or early retirement.

Annual Increases

For members hired before January 1, 2011, each January 1 subsequent to retirement date the monthly benefit being paid each retiree shall be increased by 3%. The adjustment for the first January after retirement shall be proportional.

For members hired on or after January 1, 2011, each January 1 subsequent to retirement date the monthly benefit being paid each retiree shall be increased fifty percent of the Consumer Price Index ("CPI") up to a maximum of 3% applied to the original benefit. The first increase will be granted upon the later of the attainment of age 67 or the first anniversary of the commencement of the annuity.

APPENDIX I

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Actuarial Accrued Liability ("AAL"). The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of future plan experience such as investment return, expected lifetimes and the likelihood of receiving a pension from the Pension Plan. Demographic, or "people" assumptions, include rates of mortality, retirement and separation. Economic, or "money" assumptions, include expected investment return, inflation and salary increases.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Present Value of Future Plan Benefits ("APV"). The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Actuarial Value of Assets ("AVA"). Smoothed value of assets that recognizes the difference between the expected investment return using the valuation assumption of 8.0 percent and the actual investment return over a five-year period. Dampens volatility of asset value over time.

Actuarially Determined Contribution ("ADC"). The sum of the gross normal cost (including employee contributions) and amortization of the unfunded actuarial accrued liability over a period not to exceed 30 years.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Annual Required Contribution ("ARC"). The sum of the normal cost (net of employee contributions) and amortization of the unfunded actuarial accrued liability over a period not to exceed 30 years. Currently required for accounting purposes by the Governmental Accounting Standards Board (GASB).

Asset Return. The net investment return for the asset divided by the mean asset value. Example: if \$1.00 is invested and yields \$1.08 after a year, the asset return is 8.00 percent.

Funded Ratio. The actuarial value of assets divided by the actuarial accrued liability. Measures the portion of the actuarial accrued liability that is currently funded.

GLOSSARY OF TERMS

Market Value of Assets ("MVA"). The value of assets currently held in the trust available to pay for benefits of the Pension Plan. Each of the investments in the trust is valued at market price which is the price at which buyers and sellers trade similar items in the open market

Net Pension Obligation ("NPO"). The accumulated value of contribution variances (the difference between the Annual Pension Contribution and the actual employer contributions). Currently required for accounting purposes by the Governmental Accounting Standards Board (GASB).

Normal Cost ("NC"). The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Unfunded Actuarial Accrued Liability ("UAAL"). The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."