

**STATE UNIVERSITIES RETIREMENT  
SYSTEM OF ILLINOIS**  
ACTUARIAL VALUATION REPORT  
AS OF JUNE 30, 2010



November 11, 2010

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, 2010.

This valuation provides information on the funding status of SURS. In addition, it includes a determination of the State contribution level for the fiscal year ending June 30, 2012, under Section 15-155 of the SURS Article of the Illinois Pension Code and estimates of contributions for subsequent years.

This valuation is based on the provisions of SURS in effect as of June 30, 2010, data on the SURS membership and information on the asset value of the trust fund as of that date. All member data and asset information were provided by SURS staff. While certain checks for reasonableness were performed, the data was not audited.

The benefit provisions for members hired on or after January 1, 2011, have changed under Public Act 96-0889 since the last valuation as of June 30, 2009. Effective with the valuation as of June 30, 2010, the benefit provisions used for new hires in the projections have changed. In addition, new assumptions, including retirement rates, are used for the members under these provisions. The actuarial cost method and other assumptions except for the investment return assumption used in this valuation are those used in the prior actuarial valuation of SURS. The assumption for the rate of investment return decreased from 8.50 percent to 7.75 percent effective with the valuation as of June 30, 2010.

To the best of our knowledge, this actuarial statement is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practices.

The undersigned 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,



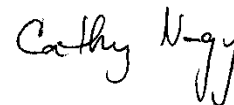
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## **SUMMARY OF THE VALUATION**

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## **PURPOSES OF THE ACTUARIAL VALUATION**

At your request we have performed the actuarial valuation of the State Universities Retirement System of Illinois (“SURS”) as of June 30, 2010.

The purposes of an 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,
- To determine the annual required contribution (ARC) under the standards set by the Governmental Accounting Standards Board (GASB), and
- To develop the levels of contributions required under Section 15-155 of the SURS Article of the Illinois Pension Code (“Section 15-155”) for the fiscal year ending June 30, 2012, and to estimate contributions required under that Section for the subsequent years of the funding period ending in the year 2045.

## **REPORT HIGHLIGHTS**

SURS had six successive years of double-digit positive investment performance through FY 2000, suffered significant investment losses in fiscal years 2001 through 2003, had investment gains in fiscal years 2004 through 2007, significant losses in fiscal years 2008 and 2009 and an investment gain in fiscal year 2010. The return on the market value of assets for the year ending June 30, 2010 was about 15.0% after a (19.7)% return in FY 2009.

The funded ratio decreased from 54.3% as of June 30, 2009, to 46.4% as of June 30, 2010, based on the actuarial value of assets and decreased from 41.9% as of June 30, 2009, to 40.2% as of June 30, 2010, based on the market value of assets.

There was pension legislation affecting SURS in the 2010 Legislative session. Benefit provisions have changed for members hired on or after January 1, 2011.

In addition, the investment rate of return assumption was decreased from 8.50% to 7.75% beginning with the valuation as of June 30, 2010.

## **ACTUARIAL ASSUMPTIONS**

The investment rate of return assumption was decreased from 8.50% to 7.75% beginning with the valuation as of June 30, 2010. In addition, due to the new benefit provisions affecting members hired on or after January 1, 2011, a new set of retirement rates were used to value these members. The assumptions can be found in Appendix E of the report. The other methods and assumptions used in this valuation are the same as those used in the actuarial valuation as of June 30, 2009, including the asset valuation method, which changed from market value of assets to actuarial value of assets effective with the valuation as of June 30, 2009. The remaining assumptions were first adopted for use with the June 30, 2007, actuarial valuation and were based on the recommendations from the experience review performed for the period 2001 through 2006. GRS recommended that the timing of the next experience study be accelerated one year and be performed after the June 30, 2010, actuarial valuation which will cover the period from June 30, 2006, through June 30, 2010.

The decrease in the investment return assumption from 8.50% to 7.75%, decreased the funded ratio from 50.4% to 46.4% on an actuarial value of assets basis, and increased the statutory contribution for fiscal year 2012 by approximately \$100 million.

## **SURS BENEFITS**

The benefit provisions valued in this valuation are identical to those valued in the prior valuation for current members as of June 30, 2010.

The benefit provisions valued in this valuation for members hired on or after January 1, 2011, which affect the projections, are based on the provisions of Public Act 96-0889. The changes include:

- Eligibility for normal retirement with unreduced benefits at age 67 with 10 years of service or for early retirement with reduced benefits at age 62 with 10 years of service;
- Final average pay based on highest consecutive 8 of final 10 years of service;
- Pensionable pay is limited to \$106,800 in 2010, which automatically increases by the lesser of 3% or ½ of the increase in the Consumer Price Index over the prior calendar year;
- Cost of living increases based on the lesser of 3% and 50% of the change in the Consumer Price Index commencing at the later of age 67 and the first anniversary of commencement;
- Cost of living increases based on the originally granted benefit (simple COLA); and
- Survivor annuity is equal to 66 2/3% of the participant's earned retirement annuity at date of death.

GRS made certain assumptions for provisions that were not specifically addressed in the legislation. GRS assumed employee contributions would only be made on pensionable pay up to the pay cap, and *employer contributions would be made on total uncapped payroll*. Additional descriptions of the benefit provisions can be found in Appendix F of the report. If either of these assumptions is incorrect, valuation results should be revised.

Because the benefit provisions impact members hired on or after January 1, 2011, there was no change in actuarial accrued liability as of June 30, 2010, as a result of the change. However, the projected actuarial accrued liability at 2045 is about 67% of the projected actuarial accrued liability if the benefit provisions for new hires had not been passed.

In addition, due to the statutory funding policy, the FY2012 contribution is about \$71 million lower than it otherwise would have been had the benefit provisions for new hires not been passed. This is due to the statutory funding policy under which contributions are calculated as a level percentage of pay such that the funded ratio at 2045 will be 90%. Since the actuarial accrued liability at 2045 is lower, the level percentage of pay contribution beginning in FY2012 is also lower.

The impact of this is to delay funding beginning in FY2012, which adversely impacts the funded status of the system.

## **EXPERIENCE DURING 2010**

The fund earned 15.0% on a market value basis during FY 2010, which increased the market value of assets of the fund and exceeded the assumption of 8.50% for FY 2010. However, the fund earned 1.8% on an actuarial value of assets basis (smoothed value of assets basis) during FY 2010, due to additional recognition in the actuarial value of assets of the significant investment loss from FY 2009 and recognition of only 20% of the market value asset gain from FY 2010. Because 1.8% return on an actuarial value of assets basis compares to the assumed rate of investment return of 8.5%, there was an asset loss of \$940.5 million on the actuarial value of assets. Led by this actuarial loss on assets, the SURS defined benefit programs experienced an overall actuarial loss of \$1,038.2 million. There was a loss of \$97.7 million from actuarial liabilities, including a loss of about \$210.8 million from demographic experience which was partially offset by a gain of \$113.1 million from pay increases.



The total gain or loss from liabilities for the system is calculated as follows:

|  |                 |
|--|-----------------|
| 1. AAL - Prior Year                                      | \$ 26,316.2     |
| 2. Normal Cost - Prior Year <sup>1</sup>                 | 630.4           |
| 3. Benefits and Admin Expenses Paid in FY 2010           | (1,536.9)       |
| 4. Interest on the above items                           | 2,199.1         |
| 5. Expected AAL 6/30/2010 (1+2+3+4)                      | <u>27,608.8</u> |
| 6. Impact of Change in Actuarial Assumptions and Methods | 2,413.9         |
| 7. Actual AAL 6/30/2010                                  | 30,120.4        |
| 8. Actuarial (Gain)/Loss on Liabilities (7-6-5)          | <u>\$ 97.7</u>  |

<sup>1</sup> Total Normal Cost from the previous valuation which includes both employee and employer portion.

The total net actuarial loss is the total of the loss from assets and the loss from liabilities. The total loss is as follows:

|   |             |
|---|-------------|
| 1. Actuarial (Gain)/Loss on Assets      | \$ 940.5    |
| 2. Actuarial (Gain)/Loss on Liabilities | <u>97.7</u> |
| 3. Total Actuarial (Gain)/Loss (1+2)    | \$ 1,038.2  |

The “behavior” of the population determines the liability gain or loss for the year. From last year to this year, there was a gain on retirement. Based on the assumptions, there were about 3,300 employees expected to retire from active service, and only 1,800 retired from active service. Retiree mortality experience was a loss, meaning retirees are living a little bit longer than expected, and, as always, there was a new entrant loss. The new entrant loss occurs each year, but is offset by additional contributions in the assets. The other assumptions were so close that they generated very little actuarial gain or loss.

See Table 9, Appendix C, for detail of the gains and losses by source.

## STATUTORY APPROPRIATIONS FOR THE 2012 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 is to achieve a funding ratio of 90% by the end of fiscal year (“FY”) 2045.
  - b) The Employer/State contribution for FY 2011 and each year thereafter to and including FY 2045 are to be based on a (theoretically) constant percentage of the payroll 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%.
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 Section 15-165, the dollar amount of Employer/State contribution required for a fiscal year shall be certified to the Governor no later than November 15 for the fiscal year commencing on the following July 1. The required amounts are budgeted pursuant to the continuing appropriations process.

Based on the actuarial value of assets, Employer/State contributions for FY 2012 and estimates of the required contributions for the subsequent five fiscal years are on the following page. The estimates for fiscal years 2012-2016 are calculated based on the expected actuarial value of assets at each of the future corresponding valuations, including the loss that will be recognized from FY 2009 as shown in Table 7. In addition, the table on the following page shows the certified Employer/State contributions for FY 2011 for comparison purposes, as calculated in the actuarial valuation as of June 30, 2009.

| Fiscal<br>Year <sup>1</sup> | Estimated Statutory Contribution<br>(in Millions) |          |           |
|-----------------------------|---|----------|-----------|
|                             | 15% of New Members to SMP                         |          |           |
|                             | SURS  | SMP      | Total     |
| 2011                        | \$ 844.2  | \$ 43.9  | \$ 888.1  |
| 2012                        | 977.1   | 42.4     | 1,019.5   |
| 2013                        | 1,048.9   | 47.8     | 1,096.7   |
| 2014                        | 1,122.7   | 49.8     | 1,172.5   |
| 2015                        | 1,198.0   | 51.9     | 1,249.9   |
| 2016                        | 1,236.2   | 54.1     | 1,290.3   |
| 2017                        | 1,279.6   | 56.4     | 1,336.0   |
| Seven year total            | \$7,706.7   | \$ 346.3 | \$8,053.0 |

<sup>1</sup>FY 2011 Contribution based on June 30, 2009, valuation. FY 2012 Contribution and projected FY 2013-2017 Contributions based on June 30, 2010, valuation.

The Statutory contribution for FY 2012 is \$1,019,485,000. This is equal to a gross Statutory contribution of \$1,023,119,000 less \$3,634,000 in SMP forfeitures.

Estimates of Statutory contributions through 2045, assuming that 15% of future new members elect SMP, are set out in Table 15.

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

## ASSET INFORMATION

The Governmental Accounting Standards Board (“GASB”) has promulgated Statements No. 25 and 27 that mandate, among other things, the use of market or market-related (actuarial) asset value. 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 will be set out based on the actuarial value of assets. Funding status determinations and the Annual Required Contribution (ARC) were calculated based on the actuarial value of assets. Had this change not been enacted, the ARC and the Statutory contribution would be higher than is shown in this valuation and the funding status would be 40.2%, rather than the 46.4% shown. The assets of the fund that are available for benefits are the total assets of the system reduced by current fund liabilities.

The market value of the assets of the fund that is available for benefits has increased from \$11,033.0 million as of June 30, 2009, to \$12,121.5 million as of June 30, 2010. This increase is due to favorable return on fund assets. The actuarial value of assets is \$13,966.6 million, which is \$1,845.1 million higher than the market value of assets due to recognition of only 40% of the FY 2009 investment losses as of June 30, 2010. The \$1.85 billion, which is the net value of deferred losses, will be smoothed into the actuarial value of assets over the next four years. The losses will be smoothed in over the next three years and the remaining net asset gain from FY2010 will be smoothed in the fourth year.

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 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 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 decreased from 54.3% at June 30, 2009, to 46.4% at June 30, 2010. The funded ratio is 40.2% based on the market value of assets at June 30, 2010. Approximately half of the decline in the funded ratio on an actuarial value of assets basis is due to a change in the investment return assumption from 8.50% to 7.75%. In absence of investment gains, the funded ratio will continue to decline.

The table on the following page shows a comparison for fiscal years 2008 through 2010 of the percentage of benefits that are covered by the market 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 36.1% as of June 30, 2009 to 38.2% as of June 30, 2010. The following table first allocates the assets to accumulated member contribution balances, as recommended by GFOA. However, this table is intended to illustrate the funding situation of the System and does not necessarily indicate that assets would be retained in the fund or refunded to members instead of being used to pay retiree benefits.

**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 Market 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                        | 11,033.0                   | 100.0%                          | 36.1% | 0.0% |
| 2010        | 5,697.6                 | 16,834.4                       | 7,588.4                        | 12,121.5                   | 100.0%                          | 38.2% | 0.0% |

**ACTUARIAL FUNDING AND STATUTORY FUNDING**

Actuarial standards of practice, as amplified by GASB, provide guidance on how to ascertain the annual required contribution (ARC) for a retirement plan. This ARC is the sum of the normal cost and amortization of the unfunded accrued liability. The reason for this funding pattern is to have benefits funded within the same generation that has earned them as well as to ensure that all benefit obligations will be met.

The Total ARC for FY 2011 is \$1.5 billion (Table 11). On a statutory appropriation basis the contribution for SURS (which excludes the SMP amount) for FY 2011 (from the June 30, 2009 report) was \$844 million and projected member contributions are \$280 million, for projected total contributions of \$1.1 billion. The difference between the ARC and the contributions represents a “net pension obligation” (NPO) as defined under GASB. An NPO is viewed as the accumulated value of contribution variances – where GASB defines contribution variances as the difference between the ARC and the statutory appropriation. In lay terms, this NPO could be viewed as a “past due” on the annual required contributions.

The Statute creates a perpetual contribution variance. In the case of SURS, Statute creates a perpetual underfunding of the plan. Each year, the Statute determines a contribution that is less than the ARC – thereby adding to the NPO. As shown in Table 12 of this report, the NPO (accumulated missed contributions) is over \$7.2 billion dollars as of June 30, 2010. A large and growing NPO may raise concerns in the capital markets and impact the cost of debt and borrowing for the State. As shown in Graph 2, the statutory contributions are projected to remain below the ARC until fiscal year 2023. The perpetual underfunding puts the plan at serious risk for ultimate exhaustion of the trust, leaving the responsibility for the payment of benefits elsewhere.

The legislation did not impact the statutory funding policy for SURS. The funding policy mandates that the plan reach 90% funding in 2045. With the new, lower benefits for members hired in or after 2011, the accrued liability is projected to be lower in 2045 than it would have been without the amendment. The statute then forces a lower contribution in the current year. A delay in funding may harm the long term sustainability of the plan. This is not the effect for the Annual Required Contribution. The following table illustrates the two differences:

**SURS Only (Excludes SMP)**

| <i><b>Includes Benefit Changes Affecting New Hires</b></i> | <i><b>No</b></i>            | <i><b>No</b></i>            | <i><b>Yes</b></i>           | <i><b>Yes</b></i>           |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <i><b>Investment Return Assumption</b></i>                 | <i><b>8.50%</b></i>         | <i><b>8.50%</b></i>         | <i><b>8.50%</b></i>         | <i><b>7.75%</b></i>         |
| <i><b>Valuation Date</b></i>                               | <i><b>June 30, 2009</b></i> | <i><b>June 30, 2010</b></i> | <i><b>June 30, 2010</b></i> | <i><b>June 30, 2010</b></i> |
| <i><b>Contribution Applies to Fiscal Year</b></i>          | <i><b>2011</b></i>          | <i><b>2012</b></i>          | <i><b>2012</b></i>          | <i><b>2012</b></i>          |
| <i><b>Statutorily based contribution</b></i>               | \$ 844.2 million            | \$ 948.9 million            | \$ 877.7 million            | \$ 977.1 million            |
| <i><b>Annual Required Contribution</b></i>                 | \$1,101.2 million           | \$1,138.8 million           | \$1,138.8 million           | \$1,277.7 million           |
| <i><b>Deficit Contribution (deficit from ARC)</b></i>      | \$ 257.0 million            | \$ 189.9 million            | \$ 261.1 million            | \$ 300.6 million            |

Based on projections assuming that the statutory contributions are made every year (as shown in Table 15) and an investment return of 7.75% each year, the funded ratio is projected to decline from the current level until 2027. Beginning in 2028, the funded ratio is projected to begin to increase from about 37% funded to 90% funded at 2045. The funded status is not projected to exceed 60% until 2041, and is projected to increase to 90% during the four year period until 2045. Total contributions are not projected to exceed benefit payments and expenses until 2041. Therefore, all contributions, projected investment return and some current assets are projected to be needed to pay benefits over the next several years. The percentage of total investment return needed to pay benefits is projected to be high for most of the projection period. This causes the funded status to remain very low until 2040. If the statutory contributions are not made or investment return is less than the assumption of 7.75%, the funded ratio will be lower and the cash flow strain will be higher.

## 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 most benefits far into the future and places a higher burden on future generations of taxpayers. In addition, maintaining the statutory funding policy in combination with the benefit provision changes for new hires further delays funding of benefits.

We recommend a funding policy that recognizes and funds to the ARC. In addition, we recommend that the funding policy for financing the current unfunded accrued liability be changed to a closed amortization period (i.e. the amortization period declines by one year with each actuarial valuation). A closed amortization period method pays off the unfunded accrued liability in full by the end of the 30 year period. The open amortization method (the current method) resets the funding period to 30 years each year, and pushes a portion of the unfunded accrued liability beyond the 30 year period. The current statutory funding policy of this plan does not comply with our recommendations. If all actuarial assumptions are met, the benefit obligations will need to be funded through the payment of the ARC. In addition, the NPO will be “paid off” through contributing amounts in excess of the ARC. Continually funding the Plan below the ARC 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, we recommend that an asset corridor on the actuarial value of assets be implemented. The actuarial value of assets was about 30% higher than the market value of assets as of June 30, 2009, and is about 15% higher than the market value of assets as of June 30, 2010. Using an actuarial value of assets that is significantly higher than the market value of assets delays funding to the system by further pushing the contributions into the future. The plan is already in serious funding jeopardy, and we cannot recommend a policy such as “no corridor” which further brings risk to the funding of the benefit obligations.

**We recognize that the Statute governs the funding policy of the plan. The purpose of these comments is to highlight the difference between the statutory appropriation and the ARC, to discuss the impact of the ongoing contribution variance, and most importantly to clarify that the plan is in significant funding peril unless the contributions recommended under the ARC can be made within a reasonably short period of time.**

## **GASB DISCLOSURE**

The accounting policies of the State of Illinois relative to its retirement systems are based on the terms of GASB Statement No. 25. Tables 10 and 11 are Required Supplemental Information tables mandated by that statement. Table 12 provides additional supporting information.

Significant changes have occurred over the last few years in both the assets of the plan as well as the underlying membership of the plan. Capital market expectations, combined with scenario analyses are predicting overall lower returns on the assets of the trust. Employers are facing severe budget shortages which are impacting the compensation structures and hiring practices of the employers. For all these reasons, we recommend that the regular comprehensive experience study, in which we will review all assumptions, be conducted once this 2010 valuation has been received by the Board. We recommended that the investment return assumption be decreased from 8.50% to 7.75% effective with the valuation as of June 30, 2010, to immediately recognize the change in capital market expectations and scenario analyses.

## **FUTURE CONSIDERATIONS**

Recent changes (such as five-year asset smoothing and the addition of the new benefit tier) have had the effect of reducing the contribution amounts that would have otherwise been made. We recognize that this is the work of the statute. However, the change in the investment return assumption to align the assumption with current market expectations increased the contribution amounts that would otherwise have been made.

We must also point out that the statute as it is currently written will defer contributions and “steepen the slope” for the increasing contribution amounts (see Graph 2 on page 30). This will occur because the 90% funded ratio is fixed in statute, and thus the funding is truly “pay me more later”, instead of “pay me now for benefits earned”. Later payments are most costly, since the funds were not in the trust to earn interest. The steep increase in the contribution requirement on or after 2030 will likely place a significant strain on the state’s resources. We continue to recommend a funding policy to fully fund the ARC so more resources enter the plan through investment return, thereby creating less of a strain on future state revenue.



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## **APPENDICES**

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**APPENDIX A**  
**ASSET INFORMATION**

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**TABLE 1**  
**STATEMENT OF PLAN NET ASSETS**  
**AS OF JUNE 30, 2010 AND JUNE 30, 2009**

|  | Defined Benefit<br>Plan | Self Managed<br>Plan | Reporting Entity Totals |                   |
|--|-------------------------|----------------------|-------------------------|-------------------|
|  |                         |                      | 2010                    | 2009              |
| <b>Assets</b>  |                         |                      |                         |                   |
| Cash and short-term investments  | \$ 758,435,840          |                      | \$ 758,435,840          | \$ 543,659,417    |
| <b>Receivables</b>   |                         |                      |                         |                   |
| Participants   | 13,174,337              | \$ 2,034,293         | 15,208,630              | 13,808,147        |
| Federal, trust funds, and other  | 2,553,537               | 1,215,308            | 3,768,845               | 3,758,588         |
| Pending investment sales   | 729,180,673             |                      | 729,180,673             | 606,501,124       |
| Interest and dividends   | 37,970,185              |                      | 37,970,185              | 39,454,498        |
| Total receivables  | 782,878,732             | 3,249,601            | 786,128,333             | 663,522,357       |
| Prepaid expenses   | 22,480                  |                      | 22,480                  |                   |
| <b>Investments, at fair value</b>  |                         |                      |                         |                   |
| Equity investments   | 7,601,044,062           | 33,315,130           | 7,634,359,192           | 6,967,844,154     |
| Fixed income investments   | 3,580,179,337           | 16,167,307           | 3,596,346,644           | 3,565,341,020     |
| Real estate investments  | 265,951,229             | 232,957              | 266,184,186             | 228,750,215       |
| Mutual fund and variable annuities   |                         | 667,015,195          | 667,015,195             | 530,092,101       |
| Total investments  | 11,447,174,628          | 716,730,589          | 12,163,905,217          | 11,292,027,490    |
| Securities lending collateral  | 1,940,729,837           |                      | 1,940,729,837           | 1,323,035,827     |
| Capital assets, at cost, net of accum deprec<br>\$17,729,535 and \$16,768,688 respectively | 6,408,913               |                      | 6,408,913               | 6,583,663         |
| Total assets   | 14,935,650,430          | 719,980,190          | 15,655,630,620          | 13,828,828,754    |
| <b>Liabilities</b>   |                         |                      |                         |                   |
| Benefits payable   | 6,577,950               |                      | 6,577,950               | 5,441,147         |
| Refunds payable  | 3,863,392               |                      | 3,863,392               | 2,437,930         |
| Securities lending collateral  | 1,935,311,903           |                      | 1,935,311,903           | 1,323,035,827     |
| Payable to brokers for unsettled trades  | 851,863,268             |                      | 851,863,268             | 878,088,978       |
| Administrative expenses payable  | 16,491,806              |                      | 16,491,806              | 13,256,204        |
| Total liabilities  | 2,814,108,319           |                      | 2,814,108,319           | 2,222,260,086     |
| Net assets held in trust for pension benefits  | \$ 12,121,542,111       | \$ 719,980,190       | \$ 12,841,522,301       | \$ 11,606,568,668 |

**TABLE 2**  
**STATEMENT OF CHANGES IN PLAN NET ASSETS**  
**FOR YEARS ENDED JUNE 30, 2010 AND JUNE 30, 2009**

|   | Defined Benefit   | Self Managed   | Reporting Entity Totals |                   |
|---|-------------------|----------------|-------------------------|-------------------|
|   | Plan              | Plan           | 2010                    | 2009              |
| Additions                                     |                   |                |                         |                   |
| Contributions                                 |                   |                |                         |                   |
| Employer                                      | \$ 696,595,341    | \$ 43,116,502  | \$ 739,711,843          | \$ 489,881,392    |
| Participant                                   | 274,999,557       | 48,570,757     | 323,570,314             | 322,117,492       |
| Total Contributions                           | 971,594,898       | 91,687,259     | 1,063,282,157           | 811,998,884       |
| Investment Income                             |                   |                |                         |                   |
| Net appreciation                              |                   |                |                         |                   |
| in fair value of investments                  | 1,222,989,578     | 71,482,509     | 1,294,472,087           | (3,290,131,425)   |
| Interest                                      | 324,588,475       |                | 324,588,475             | 183,668,534       |
| Dividends                                     | 153,916,871       |                | 153,916,871             | 153,789,636       |
| Securities lending                            | 6,534,929         |                | 6,534,929               | 18,313,879        |
|   | 1,708,029,853     | 71,482,509     | 1,779,512,362           | (2,934,359,376)   |
| Less investment expense                       |                   |                |                         |                   |
| Asset management expense                      | 53,524,481        | -              | 53,524,481              | 31,095,737        |
| Securities lending expense                    | 652,536           |                | 652,536                 | 1,664,780         |
| Net investment income                         | 1,653,852,836     | 71,482,509     | 1,725,335,345           | (2,967,119,893)   |
| Total additions                               | 2,625,447,734     | 163,169,768    | 2,788,617,502           | (2,155,121,009)   |
| Deductions                                    |                   |                |                         |                   |
| Benefits                                      | 1,477,486,374     | 6,254,132      | 1,483,740,506           | 1,376,726,389     |
| Refunds of contributions                      | 47,284,471        | 10,183,308     | 57,467,779              | 51,372,312        |
| Bond interest expense                         |                   |                |                         |                   |
| Administrative expense                        | 12,108,181        | 347,403        | 12,455,584              | 12,922,070        |
| Total deductions                              | 1,536,879,026     | 16,784,843     | 1,553,663,869           | 1,441,020,771     |
| Net increase                                  | 1,088,568,708     | 146,384,925    | 1,234,953,633           | (3,596,141,780)   |
| Net assets held in trust for pension benefits |                   |                |                         |                   |
| Beginning of year                             | 11,032,973,403    | 573,595,265    | 11,606,568,668          | 15,202,710,448    |
| End of Year                                   | \$ 12,121,542,111 | \$ 719,980,190 | \$ 12,841,522,301       | \$ 11,606,568,668 |

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**APPENDIX B**  
**MEMBERSHIP DATA**

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**TABLE 3**  
**SUMMARY OF DATA CHARACTERISTICS**  
(\$ IN MILLIONS)

|                           | <u>June 30, 2009</u> |                        | <u>June 30, 2010</u> |                        |
|---------------------------|----------------------|------------------------|----------------------|------------------------|
|                           | <u>Number</u>        | <u>Earnings</u>        | <u>Number</u>        | <u>Earnings</u>        |
| <b>Active Members</b>     |                      |                        |                      |                        |
| Full time                 |                      |                        |                      |                        |
| Traditional SURS          | 50,045               | \$2,318.6              | 49,177               | \$2,305.9              |
| Portable SURS             | 18,041               | 980.4                  | 18,543               | 1,018.9                |
| SMP                       | <u>9,162</u>         | <u>536.2</u>           | <u>9,146</u>         | <u>543.6</u>           |
| Total Full Time           | 77,248               | \$3,835.2              | 76,866               | \$3,868.4              |
| Part time                 |                      |                        |                      |                        |
| Traditional SURS          | 4,676                | \$ 26.0                | 4,316                | \$ 25.6                |
| Portable SURS             | 937                  | 6.5                    | 960                  | 6.6                    |
| SMP                       | <u>684</u>           | <u>4.9</u>             | <u>600</u>           | <u>4.0</u>             |
| Total Part Time           | 6,297                | \$ 37.4                | 5,876                | \$ 36.2                |
| Total                     | 83,545               | \$3,872.6              | 82,742               | \$3,904.6              |
| <b>Inactive Members</b>   |                      |                        |                      |                        |
| Traditional/Portable      | 71,280               |                        | 71,870               |                        |
| SMP                       | <u>6,500</u>         |                        | <u>8,568</u>         |                        |
| Total                     | 77,780               |                        | 80,438               |                        |
|                           | <u>Number</u>        | <u>Annual Benefits</u> | <u>Number</u>        | <u>Annual Benefits</u> |
| <b>Benefit Recipients</b> |                      |                        |                      |                        |
| Retirement                |                      |                        |                      |                        |
| Traditional SURS          |                      |                        | 38,435               | \$1,324.8              |
| Portable SURS             |                      |                        | <u>1,929</u>         | <u>45.8</u>            |
| Total Retirement          | 38,400               | \$1,271.9              | 40,364               | 1,370.6                |
| Survivor                  |                      |                        |                      |                        |
| Traditional SURS          |                      |                        | 7,337                | 98.1                   |
| Portable SURS             |                      |                        | <u>65</u>            | <u>0.7</u>             |
| Total Survivor            | 7,269                | 92.6                   | 7,402                | 98.8                   |
| Disability                |                      |                        |                      |                        |
| Traditional SURS          |                      |                        | 990                  | 17.7                   |
| Portable SURS             |                      |                        | <u>147</u>           | <u>3.4</u>             |
| Total Disability          | 1,141                | 20.6                   | 1,137                | 21.1                   |
| Total                     | 46,810               | \$1,385.1              | 48,903               | \$1,490.5              |

**TABLE 4**  
**DISTRIBUTION OF FULL-TIME\* ACTIVE MEMBERS BY AGE AND YEARS OF SERVICE**  
**AS OF JUNE 30, 2010**

| Age       | Years of Service |             |             |             |             |             |             |             |   | Totals        |
|-----------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|---------------|
|           | Under 1          | 1-4         | 5-9         | 10-14       | 15-19       | 20-24       | 25-29       | 30 & Over   |   |               |
| Under 20  | 6                | 16          | -           | -           | -           | -           | -           | -           | - | 22            |
|           | 20,692           | 193,902     | -           | -           | -           | -           | -           | -           | - | 214,594       |
| 20-24     | 218              | 825         | 25          | -           | -           | -           | -           | -           | - | 1,068         |
|           | 1,974,128        | 19,521,880  | 556,213     | -           | -           | -           | -           | -           | - | 22,052,221    |
| 25-29     | 433              | 3,672       | 821         | 28          | -           | -           | -           | -           | - | 4,954         |
|           | 4,634,088        | 124,634,436 | 30,763,155  | 916,532     | -           | -           | -           | -           | - | 160,948,211   |
| 30-34     | 415              | 4,225       | 2,461       | 559         | 14          | -           | -           | -           | - | 7,674         |
|           | 5,245,100        | 171,690,141 | 110,462,515 | 25,703,572  | 571,252     | -           | -           | -           | - | 313,672,580   |
| 35-39     | 297              | 3,209       | 2,917       | 1,615       | 356         | 28          | -           | -           | - | 8,422         |
|           | 4,054,323        | 145,815,969 | 152,266,992 | 87,022,899  | 19,304,198  | 1,382,295   | -           | -           | - | 409,846,677   |
| 40-44     | 208              | 2,618       | 2,850       | 2,082       | 1,058       | 442         | 29          | -           | - | 9,287         |
|           | 3,341,636        | 114,011,962 | 147,684,760 | 122,597,332 | 64,264,355  | 24,780,068  | 1,572,967   | -           | - | 478,253,080   |
| 45-49     | 199              | 2,294       | 2,726       | 2,340       | 1,595       | 1,167       | 489         | 29          | - | 10,839        |
|           | 3,038,946        | 93,283,627  | 131,593,770 | 133,068,198 | 103,433,112 | 75,725,385  | 29,092,351  | 1,579,090   | - | 570,814,479   |
| 50-54     | 162              | 2,106       | 2,590       | 2,400       | 1,856       | 1,522       | 1,032       | 249         | - | 11,917        |
|           | 2,910,784        | 84,590,300  | 118,716,294 | 130,484,508 | 119,283,825 | 112,811,188 | 74,005,209  | 16,576,563  | - | 659,378,671   |
| 55-59     | 116              | 1,682       | 2,352       | 2,093       | 1,897       | 1,525       | 1,064       | 477         | - | 11,206        |
|           | 1,796,509        | 67,042,042  | 105,501,544 | 108,382,359 | 114,218,898 | 111,683,740 | 91,343,825  | 43,329,759  | - | 643,298,676   |
| 60-64     | 70               | 1,040       | 1,658       | 1,334       | 1,368       | 949         | 689         | 434         | - | 7,542         |
|           | 1,181,254        | 36,828,076  | 68,245,544  | 67,047,029  | 68,479,246  | 68,399,717  | 61,222,868  | 45,434,505  | - | 416,838,241   |
| 65 & Over | 27               | 445         | 912         | 758         | 774         | 371         | 227         | 421         | - | 3,935         |
|           | 294,775          | 10,275,675  | 29,697,700  | 31,331,145  | 29,959,912  | 26,262,617  | 18,962,353  | 46,299,380  | - | 193,083,557   |
| Totals    | 2,151            | 22,132      | 19,312      | 13,209      | 8,918       | 6,004       | 3,530       | 1,610       | - | 76,866        |
|           | 28,492,236       | 867,888,009 | 895,488,489 | 706,553,575 | 519,514,798 | 421,045,011 | 276,199,573 | 153,219,296 | - | 3,868,400,987 |

\* Includes part-time members with at least three years of service.

**TABLE 5**  
**DISTRIBUTION OF BENEFIT RECIPIENTS BY AGE**  
**AS OF JUNE 30, 2010**

| <u>Age</u>                    | <u>Number</u> | <u>Annual Benefit</u> |
|-------------------------------|---------------|-----------------------|
| <b>Retirees and Survivors</b> |               |                       |
| Under 50                      | 546           | \$ 4,100,888          |
| 50-54                         | 609           | 19,470,165            |
| 55-59                         | 4,120         | 128,444,985           |
| 60-64                         | 8,150         | 264,212,045           |
| 65-69                         | 9,640         | 338,965,291           |
| 70-74                         | 8,022         | 267,260,201           |
| 75-79                         | 6,515         | 205,626,645           |
| 80-84                         | 5,131         | 136,347,236           |
| 85-89                         | 3,373         | 76,195,973            |
| 90 & Over                     | <u>1,660</u>  | <u>28,805,364</u>     |
| Total                         | 47,766        | \$ 1,469,428,793      |
| <b>Disabilitants</b>          |               |                       |
| Under 50                      | 180           | \$ 3,331,745          |
| 50-54                         | 190           | 3,669,676             |
| 55-59                         | 251           | 4,926,456             |
| 60-64                         | 222           | 4,293,396             |
| 65-69                         | 142           | 2,762,381             |
| 70-74                         | 77            | 1,235,359             |
| 75-79                         | 34            | 500,246               |
| 80-84                         | 29            | 283,829               |
| 85-89                         | 8             | 71,655                |
| 90 & Over                     | <u>4</u>      | <u>26,356</u>         |
| Total                         | 1,137         | \$ 21,101,099         |



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**APPENDIX C**  
**ACTUARIAL DETERMINATIONS**

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**TABLE 6**  
**SUMMARY OF ACTUARIAL VALUES**  
**AS OF JUNE 30, 2010**  
**(\$ IN MILLIONS)**

|                              | APV of<br>Projected<br>Benefits | Projected Unit Credit Values               |                |
|------------------------------|---------------------------------|--|----------------|
|                              |                                 | Actuarial<br>Accrued<br>Liability<br>(AAL) | Normal<br>(NC) |
| <b>1. Active Members</b>     |                                 |  |                |
| a. Retirement                | \$13,986.2                      | \$ 9,351.6                                 | \$534.8        |
| b. Death                     | 302.1                           | 198.4                                      | 13.0           |
| c. Disability                | 736.0                           | 472.6                                      | 41.0           |
| d. Termination               | 1,744.2                         | 1,116.2                                    | 121.9          |
| Total - Active Members       | \$16,768.5                      | \$ 11,138.8                                | \$710.7        |
| <b>2. Benefit Recipients</b> |                                 |  |                |
| a. Retirement                | \$15,673.6                      | \$15,673.6                                 | \$ 0.0         |
| b. Survivor                  | 859.7                           | 859.7                                      | 0.0            |
| c. Disability                | 301.1                           | 301.1                                      | 0.0            |
| Total - Benefit Recipients   | \$16,834.4                      | \$16,834.4                                 | \$ 0.0         |
| <b>3. Other Inactive</b>     | \$ 2,147.2                      | \$ 2,147.2                                 |                |
| <b>4. Grand Total</b>        | \$35,750.1                      | \$30,120.4                                 | \$710.7        |
| <b>5. Operating Expense</b>  |                                 |  | \$ 13.1        |
| <b>6. Total Normal Cost</b>  |                                 |  | \$723.8        |

**TABLE 7**  
**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**  
**FOR THE YEAR ENDING JUNE 30, 2010**

|   | 2009                  | 2010                  | 2011           | 2012           | 2013           | 2014           |
|---|-----------------------|-----------------------|----------------|----------------|----------------|----------------|
| Beginning of Year:                                  |                       |                       |                |                |                |                |
| (1) Market Value of Assets                          | \$ 14,586,325,455     | \$ 11,032,973,403     |                |                |                |                |
| (2) Actuarial Value of Assets                       | 14,586,325,455        | 14,281,998,099        |                |                |                |                |
| End of Year:  |                       |                       |                |                |                |                |
| (3) Market Value of Assets                          | 11,032,973,403        | 12,121,542,111        |                |                |                |                |
| (4) Net of Contributions and Disbursements          | (702,654,977)         | (565,284,128)         |                |                |                |                |
| (5) Total Investment Income                         |                       |                       |                |                |                |                |
| = (3)-(1)-(4)                                       | (2,850,697,075)       | 1,653,852,836         |                |                |                |                |
| (6) Projected Rate of Return                        | 8.50%                 | 8.50%                 |                |                |                |                |
| (7) Projected Investment Income                     |                       |                       |                |                |                |                |
| = (1)x(6)+[(1+(6))^5-1]x(4)                         | 1,210,583,795         | 914,268,077           |                |                |                |                |
| (8) Investment Income in Excess of Projected Income | (4,061,280,870)       | 739,584,759           |                |                |                |                |
| (9) Excess Investment Income Recognized             |                       |                       |                |                |                |                |
| This Year (5 year recognition)                      |                       |                       |                |                |                |                |
| (9a) From This Year                                 | (812,256,174)         | 147,916,952           |                |                |                |                |
| (9b) From One Year Ago                              | 0                     | (812,256,174)         | \$ 147,916,952 |                |                |                |
| (9c) From Two Years Ago                             | 0                     | 0                     | (812,256,174)  | \$ 147,916,952 |                |                |
| (9d) From Three Years Ago                           | 0                     | 0                     | 0              | (812,256,174)  | \$ 147,916,952 |                |
| (9e) From Four Years Ago                            | 0                     | 0                     | 0              | 0              | (812,256,174)  | \$ 147,916,951 |
| (9f) Total Recognized Investment Gain               | (812,256,174)         | (664,339,222)         | (664,339,222)  | (664,339,222)  | (664,339,222)  | 147,916,951    |
| (10) Change in Actuarial Value of Assets            |                       |                       |                |                |                |                |
| = (4)+(7)+9[a..e]                                   | (304,327,356)         | (315,355,273)         |                |                |                |                |
| End of Year:  |                       |                       |                |                |                |                |
| <b>(3) Market Value of Assets</b>                   | <b>11,032,973,403</b> | <b>12,121,542,111</b> |                |                |                |                |
| <b>(11) Final Actuarial Value of Assets</b>         | <b>14,281,998,099</b> | <b>13,966,642,826</b> |                |                |                |                |
| (12) Difference Between Market & Actuarial Values   | (3,249,024,696)       | (1,845,100,715)       |                |                |                |                |
| (13) Actuarial Value Rate of Return                 | 2.80 %                | 1.79 %                |                |                |                |                |
| (14) Estimated Market Value Rate of Return          | (20.03)%              | 15.38 %               |                |                |                |                |
| (15) Ratio of Actuarial Value to Market Value       | 129 %                 | 115 %                 |                |                |                |                |
| (16) SURS Reported Market Value Rate of Return      | (19.70)%              | 15.00 %               |                |                |                |                |

**TABLE 8**  
**ANALYSIS OF CHANGE IN**  
**UNFUNDED ACTUARIAL ACCRUED LIABILITY**  
**FOR THE YEAR ENDING JUNE 30, 2010**  
**(\$ IN MILLIONS)**

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|   |           |                 |
|---|-----------|-----------------|
| 1. Actuarial (Gain)/Loss on AAL                           |           |                 |
| (a) AAL 6/30/09   |           | \$ 26,316.2     |
| (b) Normal Cost FY10                                      | \$ 630.4  |                 |
| (c) Benefits and Admin Expenses Paid FY10                 | (1,536.9) |                 |
| (d) Interest on (a), (b), and (c)                         | 2,199.1   |                 |
| (e) Expected AAL 6/30/2010 (a+b+c+d)                      |           | 27,608.8        |
| (f) Actual AAL 6/30/2010 Before Changes                   |           | <u>27,706.5</u> |
| (g) Actuarial (Gain)/Loss on AAL (f-e)                    |           | \$ 97.7         |
| (h) Impact of Benefit Changes                             |           | 0.0             |
| (i) Impact of Change in Actuarial Assumptions and Methods |           | 2,413.9         |
| (j) Actual AAL After Changes (f+h+i)                      |           | \$ 30,120.4     |
| 2. Actuarial (Gain)/Loss on Assets                        |           |                 |
| (a) Assets 6/30/09  |           | 14,282.0        |
| (b) Contributions FY10                                    | 971.6     |                 |
| (c) Benefits and Admin Expenses                           | (1,536.9) |                 |
| (d) Interest at 8.5%                                      | 1,190.4   |                 |
| (e) Expected Assets 6/30/2010 (a+b+c+d)                   |           | 14,907.1        |
| (f) Actual Actuarial Value of Assets 6/30/2010            |           | <u>13,966.6</u> |
| (g) Actuarial (Gain)/Loss on Assets (e-f)                 |           | \$ 940.5        |
| 3. Total Actuarial (Gain)/Loss                            |           |                 |
| (a) (Gain)/Loss on AAL                                    |           | \$ 97.7         |
| (b) (Gain)/Loss on Assets                                 |           | <u>940.5</u>    |
| (c) Net (Gain)/Loss (a+b)                                 |           | \$ 1,038.2      |

**TABLE 9**  
**ANALYSIS OF ACTUARIAL GAINS AND LOSSES**  
**(\$ IN MILLIONS)**

|                                    | <b>Amount of (Gain) or Loss</b> |                   |                   |                   |
|------------------------------------|---------------------------------|-------------------|-------------------|-------------------|
|                                    | <b>FY 2007</b>                  | <b>FY 2008</b>    | <b>FY 2009</b>    | <b>FY 2010</b>    |
| Investment Return                  | \$(1,342.0)                     | \$ 2,004.4        | \$ 4,061.1        | \$ 940.5          |
| Salary Increase                    | 67.0                            | 30.6              | (1.3)             | (113.1)           |
| Age and Service Retirement         | (21.7)                          | (34.7)            | (47.1)            | (59.2)            |
| General Employment Termination     | 46.5                            | 45.3              | 57.8              | 32.0              |
| Disability Incidence               | (1.4)                           | 2.1               | (6.6)             | (6.1)             |
| In Service Mortality               | 5.5                             | (1.1)             | (5.5)             | 2.3               |
| Benefit Recipient                  | 44.7                            | 105.5             | 88.9              | 104.7             |
| New Entrants                       | 71.3                            | 117.0             | 85.1              | 65.6              |
| Other                              | (22.9)                          | 95.0              | (19.4)            | 71.5              |
| <b>Total Actuarial (Gain)/Loss</b> | <b>\$(1,153.0)</b>              | <b>\$ 2,364.1</b> | <b>\$ 4,213.0</b> | <b>\$ 1,038.2</b> |

**TABLE 10**  
**SCHEDULE OF FUNDING STATUS**  
(\$ IN 000'S)

| <b>Plan Year</b> | <b>Assets*</b> | <b>AAL</b>    | <b>UAAL</b> | <b>Funding Ratio</b> | <b>Payroll/DB**</b> | <b>UAAL as % of Payroll</b> |
|------------------|----------------|---------------|-------------|----------------------|---------------------|-----------------------------|
| 1997             | \$ 5,750,637   | \$ 10,552,216 | \$4,801,579 | 54.50 %              | \$2,298,029         | 208.94 %                    |
| 1997 *           | 8,376,347      | 10,552,216    | 2,175,869   | 79.38                | 2,298,029           | 94.68                       |
| 1998             | 9,793,809      | 11,416,095    | 1,622,286   | 85.79                | 2,377,578           | 68.23                       |
| 1999             | 10,762,157     | 12,617,495    | 1,855,338   | 85.30                | 2,411,118           | 76.95                       |
| 2000             | 12,063,950     | 13,679,039    | 1,615,089   | 88.19                | 2,424,209           | 66.62                       |
| 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                      |

\* *Book Value up to second 1997 value, then Market Value*

*AAL - Actuarial Accrued Liability*

*UAAL - Unfunded Actuarial Accrued Liability*

\*\* *Payroll is rolled forward with salary scale for one year.*

\*\*\* *Uses new actuarial value of asset method (Book Value up to second 1997 value, then Market Value up to second 2009, then Actuarial Value)*

\*\*\*\* *Investment rate of return assumption decreased from 8.50 percent to 7.75 percent.*

**TABLE 11**  
**SCHEDULE OF CONTRIBUTIONS**  
(\$ IN MILLIONS)

| Fiscal<br>Year | (1)<br>Total<br>Normal Cost | (2)<br>Amortization<br>of UAAL | (3)<br>(1) + (2)<br>Total ARC | (4)<br>Member<br>Contributions | (5)<br>(3) - (4)<br>Net State<br>ARC* | (6)<br>Actual State<br>Contribution | (7)<br>(6) / (5)<br>State Cont.<br>as Percent of Net ARC |
|----------------|-----------------------------|--------------------------------|-------------------------------|--------------------------------|---------------------------------------|-------------------------------------|--|
| 1997           |                             |                                | \$ 634.8                      | \$ 202.2                       | \$ 432.6                              | \$ 182.0                            | 42.08 %  |
| 1998 **        |                             |                                | 512.1                         | 221.7                          | 290.4                                 | 227.8                               | 78.44  |
| 1999           |                             |                                | 509.2                         | 213.0                          | 296.2                                 | 237.9                               | 80.32  |
| 2000           |                             |                                | 547.8                         | 222.5                          | 325.3                                 | 241.1                               | 74.11  |
| 2001           |                             |                                | 548.1                         | 221.6                          | 326.5                                 | 247.1                               | 75.69  |
| 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                        | 1,519.225                     |                                |                                       |                                     |  |

\* ARC - Annual Required Contribution as defined in GASB Statements No. 25 and 27

\*\* Assets at market value

\*\*\* Assets at actuarial value

\*\*\*\* Investment rate of return assumption decreased from 8.50 percent to 7.75 percent.

**TABLE 12**  
**GENERAL INFORMATION GASB #25**  
**(\$ IN MILLIONS)**

| Fiscal<br>Year | (1)<br>Total<br>ARC | (2)<br>Interest on<br>NPO | (3)<br>NPO<br>Adjustment | (4)<br>(1) + (2) + (3)<br>Total<br>Expense | (5)<br>Member<br>Contributions | (6)<br>(4) - (5)<br>State<br>Expense | (7)<br>Actual State<br>Contribution | (8)<br>Beg. of Year<br>NPO | (9)<br>(8) + (6) - (7)<br>End of Year<br>NPO |
|----------------|---------------------|---------------------------|--------------------------|--|--------------------------------|--------------------------------------|-------------------------------------|----------------------------|--|
| 2009           | \$1,147.332         | \$520.287                 | \$(329.542)              | \$1,338.077                                | \$273.292                      | \$1,064.785                          | \$451.617                           | \$6,121.020                | \$6,734.188                                  |
| 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                                  |                                |                                      |                                     | 7,250.777                  |  |

**Notes in Trend Data**

| <u>Information</u>            | <u>Data</u>            |
|-------------------------------|------------------------|
| Valuation Date                | June 30, 2010          |
| Actuarial Cost Method         | Projected Unit Credit  |
| Amortization Method           | Level Percent, Open    |
| Remaining Amortization Period | 30 years               |
| Asset Valuation Method        | 5-Year Smoothed Market |
| <b>Actuarial Assumptions</b>  |                        |
| Investment rate of return     | 7.75%                  |
| Projected salary increases    | 5% - 10%               |
| Cost-of-living adjustment     | 3.0%                   |



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**APPENDIX D**  
**ACTUARIAL PROJECTIONS**

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**TABLE 13**  
**BASELINE PROJECTIONS – ACTUARIAL VALUATION JUNE 30, 2010**  
**ASSUMES CONTRIBUTIONS BASED ON TABLE 15 & INVESTMENT RETURN OF 7.75% EACH YEAR**  
**(\$ MILLIONS)**

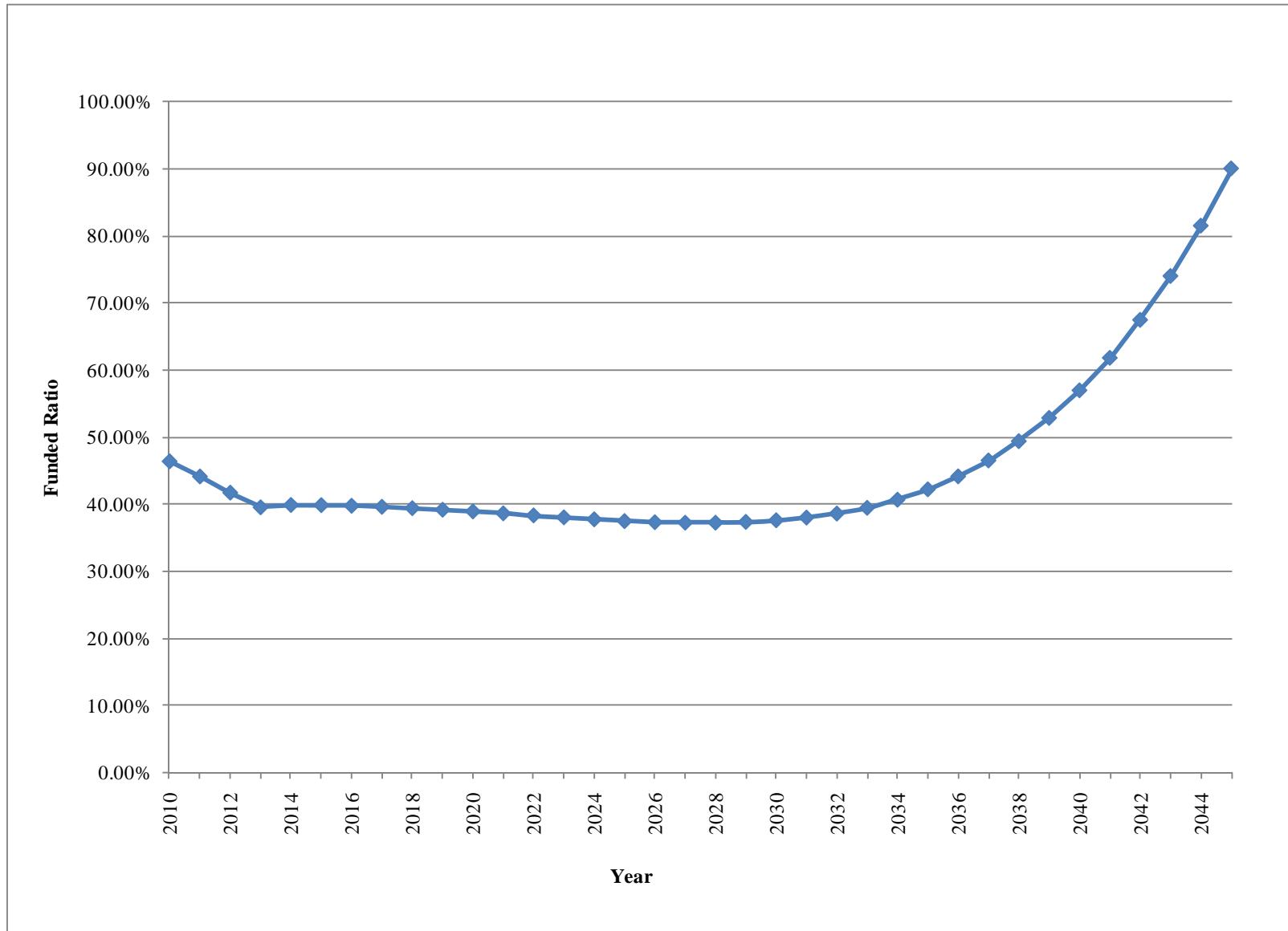
| <b>Fiscal</b> |                            |                            |                            |                                  |                 |                 |               |               |                |
|---------------|----------------------------|----------------------------|----------------------------|----------------------------------|-----------------|-----------------|---------------|---------------|----------------|
| <b>Year</b>   | <b>Total</b>               | <b>SMP</b>                 | <b>DB</b>                  | <b>Total</b>                     |                 |                 | <b>Assets</b> |               | <b>Funding</b> |
| <b>Ending</b> | <b>Payroll<sup>1</sup></b> | <b>Payroll<sup>1</sup></b> | <b>Payroll<sup>1</sup></b> | <b>Contributions<sup>2</sup></b> | <b>Benefits</b> | <b>Expenses</b> | <b>EOY</b>    | <b>AAL</b>    | <b>Ratio</b>   |
| 2010          | \$ 3,904.514               | \$ 547.563                 | \$ 3,356.951               | \$ 971.595                       | \$ 1,524.771    | \$ 12.108       | \$ 13,966.643 | \$ 30,120.427 | 46.37 %        |
| 2011          | 4,092.626                  | 586.478                    | 3,506.148                  | 1,125.254                        | 1,660.684       | 13.127          | 13,672.306    | 30,995.331    | 44.11          |
| 2012          | 4,211.293                  | 609.512                    | 3,601.781                  | 1,263.853                        | 1,754.422       | 13.619          | 13,452.700    | 32,260.013    | 41.70          |
| 2013          | 4,339.034                  | 635.798                    | 3,703.236                  | 1,342.737                        | 1,860.213       | 14.130          | 13,239.101    | 33,504.073    | 39.51          |
| 2014          | 4,478.106                  | 664.517                    | 3,813.589                  | 1,424.198                        | 1,970.191       | 14.660          | 13,842.538    | 34,720.152    | 39.87          |
| 2015          | 4,625.926                  | 694.789                    | 3,931.137                  | 1,507.432                        | 2,083.938       | 15.210          | 14,301.118    | 35,900.800    | 39.84          |
| 2016          | 4,785.322                  | 727.365                    | 4,057.958                  | 1,554.104                        | 2,203.617       | 15.780          | 14,718.864    | 37,038.978    | 39.74          |
| 2017          | 4,953.702                  | 761.766                    | 4,191.937                  | 1,606.151                        | 2,331.352       | 16.372          | 15,089.803    | 38,119.395    | 39.59          |
| 2018          | 5,137.349                  | 798.233                    | 4,339.116                  | 1,663.373                        | 2,456.254       | 16.986          | 15,418.600    | 39,144.398    | 39.39          |
| 2019          | 5,334.468                  | 836.541                    | 4,497.927                  | 1,725.074                        | 2,580.797       | 17.623          | 15,706.984    | 40,108.411    | 39.16          |
| 2020          | 5,543.316                  | 875.945                    | 4,667.371                  | 1,785.930                        | 2,705.723       | 18.283          | 15,950.528    | 41,004.342    | 38.90          |
| 2025          | 6,806.471                  | 1,090.331                  | 5,716.140                  | 2,156.179                        | 3,275.085       | 21.979          | 16,683.683    | 44,537.962    | 37.46          |
| 2030          | 8,494.229                  | 1,328.137                  | 7,166.091                  | 2,660.236                        | 3,704.571       | 26.420          | 17,527.864    | 46,629.099    | 37.59          |
| 2035          | 10,720.734                 | 1,636.433                  | 9,084.301                  | 3,358.481                        | 4,033.660       | 31.760          | 19,998.336    | 47,394.854    | 42.20          |
| 2040          | 13,643.883                 | 2,055.510                  | 11,588.373                 | 4,197.873                        | 4,181.457       | 38.179          | 26,921.234    | 47,279.313    | 56.94          |
| 2045          | 17,384.135                 | 2,608.608                  | 14,775.527                 | 5,260.787                        | 4,100.133       | 45.895          | 42,692.426    | 47,436.029    | 90.00          |

<sup>1</sup> Payroll shown includes amounts in excess of the pay cap that is applicable to members hired on or after January 1, 2011.

<sup>2</sup> Includes member and employer contributions. Excludes SMP contributions.

**GRAPH 1**  
**PROJECTED FUNDED RATIO BASED ON STATUTORY CONTRIBUTIONS**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2010**

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**TABLE 14**  
**PROJECTED STATUTORY CONTRIBUTIONS**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2010**  
**BEFORE IMPACT OF BONDS ISSUED IN 2004**  
**(\$ MILLIONS)**

| FYE  | <b>15% of New Members to SMP</b> |                  |                           |                 |
|------|----------------------------------|------------------|---------------------------|-----------------|
|      | <b>SURS Cont.</b>                | <b>SMP Cont.</b> | <b>Total Contribution</b> |                 |
|      |                                  |                  | <b>\$</b>                 | <b>% of Pay</b> |
| 2012 | \$ 1,092.575                     | \$ 42.398        | \$ 1,134.973              | 26.95 %         |
| 2013 | 1,163.622                        | 47.858           | 1,211.480                 | 27.92           |
| 2014 | 1,236.699                        | 49.839           | 1,286.538                 | 28.73           |
| 2015 | 1,311.188                        | 51.898           | 1,363.086                 | 29.47           |
| 2016 | 1,348.639                        | 54.084           | 1,402.723                 | 29.31           |
| 2017 | 1,396.093                        | 56.347           | 1,452.440                 | 29.32           |
| 2018 | 1,447.850                        | 58.701           | 1,506.551                 | 29.33           |
| 2019 | 1,503.404                        | 61.117           | 1,564.520                 | 29.33           |
| 2020 | 1,562.263                        | 63.528           | 1,625.791                 | 29.33           |
| 2021 | 1,624.995                        | 65.957           | 1,690.952                 | 29.33           |
| 2022 | 1,691.628                        | 68.370           | 1,759.998                 | 29.32           |
| 2023 | 1,762.884                        | 70.762           | 1,833.645                 | 29.31           |
| 2024 | 1,838.230                        | 73.052           | 1,911.281                 | 29.30           |
| 2025 | 1,918.256                        | 75.274           | 1,993.530                 | 29.29           |
| 2026 | 2,003.097                        | 77.431           | 2,080.528                 | 29.27           |
| 2027 | 2,092.901                        | 79.439           | 2,172.340                 | 29.25           |
| 2028 | 2,187.886                        | 81.348           | 2,269.234                 | 29.23           |
| 2029 | 2,288.006                        | 83.110           | 2,371.115                 | 29.21           |

**TABLE 14**  
**PROJECTED STATUTORY CONTRIBUTIONS**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2010**  
**BEFORE IMPACT OF BONDS ISSUED IN 2004**  
**(CONCLUDED)**  
**(\$ MILLIONS)**

| FYE   | 15% of New Members to SMP |             |                    |          |
|-------|---------------------------|-------------|--------------------|----------|
|       | SURS Cont.                | SMP Cont.   | Total Contribution |          |
|       |                           |             | \$                 | % of Pay |
| 2030  | \$ 2,393.914              | \$ 84.777   | \$ 2,478.691       | 29.18 %  |
| 2031  | 2,505.773                 | 86.462      | 2,592.235          | 29.16    |
| 2032  | 2,624.119                 | 88.227      | 2,712.347          | 29.13    |
| 2033  | 2,749.235                 | 90.015      | 2,839.249          | 29.11    |
| 2034  | 2,881.566                 | 91.900      | 2,973.466          | 29.08    |
| 2035  | 3,021.406                 | 93.761      | 3,115.167          | 29.06    |
| 2036  | 3,168.912                 | 95.610      | 3,264.522          | 29.03    |
| 2037  | 3,324.806                 | 97.561      | 3,422.367          | 29.01    |
| 2038  | 3,489.169                 | 99.605      | 3,588.774          | 28.99    |
| 2039  | 3,662.535                 | 101.777     | 3,764.312          | 28.97    |
| 2040  | 3,845.232                 | 104.120     | 3,949.351          | 28.95    |
| 2041  | 4,036.565                 | 106.529     | 4,143.094          | 28.93    |
| 2042  | 4,237.366                 | 109.050     | 4,346.416          | 28.91    |
| 2043  | 4,447.722                 | 111.642     | 4,559.364          | 28.89    |
| 2044  | 4,668.301                 | 114.316     | 4,782.617          | 28.87    |
| 2045  | 4,899.340                 | 117.022     | 5,016.362          | 28.86    |
| Total | \$85,426.175              | \$2,752.884 | \$88,179.059       |          |

**TABLE 15**  
**PROJECTED STATUTORY CONTRIBUTIONS**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2010**  
**INCLUDING IMPACT OF BONDS ISSUED IN 2004**  
**(\$ MILLIONS)**

| FYE  | 15% of New Members to SMP |           |                    |          | Debt Service |          | GASB Annual<br>Required<br>Contribution<br>(ARC) | Projected<br>% of ARC<br>Contributed <sup>1</sup> |
|------|---------------------------|-----------|--------------------|----------|--------------|----------|--|---|
|      | SURS Cont.                | SMP Cont. | Total Contribution |          | \$           | % of Pay |  |   |
|      |                           |           | \$                 | % of Pay |              |          |  |   |
| 2012 | \$ 977.087                | \$ 42.398 | \$ 1,019.485       | 24.21 %  | \$ 115.487   | 2.74 %   | \$ 1,277.734                                     | 76.47 %   |
| 2013 | 1,048.868                 | 47.858    | 1,096.727          | 25.28    | 114.754      | 2.64     | 1,338.148  | 78.38   |
| 2014 | 1,122.699                 | 49.839    | 1,172.538          | 26.18    | 114.000      | 2.55     | 1,395.492  | 80.45   |
| 2015 | 1,197.961                 | 51.898    | 1,249.859          | 27.02    | 113.227      | 2.45     | 1,410.415  | 84.94   |
| 2016 | 1,236.204                 | 54.084    | 1,290.288          | 26.96    | 112.435      | 2.35     | 1,430.575  | 86.41   |
| 2017 | 1,279.617                 | 56.347    | 1,335.964          | 26.97    | 116.476      | 2.35     | 1,450.457  | 88.22   |
| 2018 | 1,327.546                 | 58.701    | 1,386.247          | 26.98    | 120.304      | 2.34     | 1,470.130  | 90.30   |
| 2019 | 1,379.484                 | 61.117    | 1,440.601          | 27.01    | 123.920      | 2.32     | 1,490.630  | 92.54   |
| 2020 | 1,430.254                 | 63.528    | 1,493.781          | 26.95    | 132.009      | 2.38     | 1,511.003  | 94.66   |
| 2021 | 1,485.380                 | 65.957    | 1,551.338          | 26.91    | 139.615      | 2.42     | 1,530.546  | 97.05   |
| 2022 | 1,544.892                 | 68.370    | 1,613.262          | 26.88    | 146.736      | 2.44     | 1,549.734  | 99.69   |
| 2023 | 1,609.511                 | 70.762    | 1,680.273          | 26.86    | 153.373      | 2.45     | 1,568.434  | 102.62  |
| 2024 | 1,673.812                 | 73.052    | 1,746.864          | 26.78    | 164.417      | 2.52     | 1,586.328  | 105.51  |
| 2025 | 1,743.652                 | 75.274    | 1,818.926          | 26.72    | 174.604      | 2.57     | 1,603.157  | 108.76  |
| 2026 | 1,823.948                 | 77.431    | 1,901.379          | 26.75    | 179.149      | 2.52     | 1,618.596  | 112.69  |
| 2027 | 1,909.707                 | 79.439    | 1,989.145          | 26.79    | 183.195      | 2.47     | 1,630.619  | 117.12  |
| 2028 | 1,996.251                 | 81.348    | 2,077.600          | 26.76    | 191.634      | 2.47     | 1,639.915  | 121.73  |
| 2029 | 2,088.680                 | 83.110    | 2,171.790          | 26.75    | 199.325      | 2.46     | 1,645.866  | 126.90  |

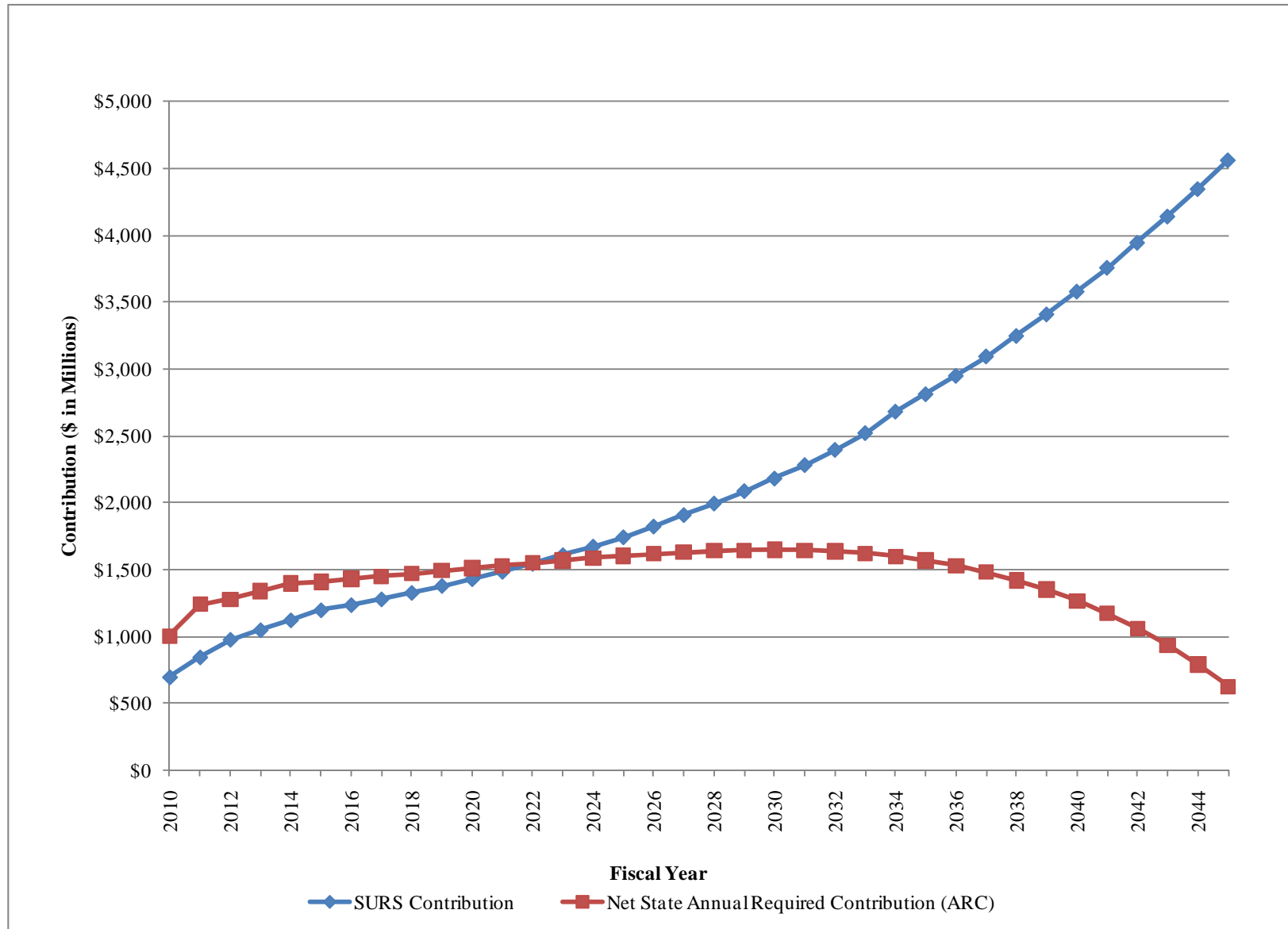
<sup>1</sup> Compares SURS Contribution against GASB ARC.

**TABLE 15**  
**PROJECTED STATUTORY CONTRIBUTIONS**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2010**  
**INCLUDING IMPACT OF BONDS ISSUED IN 2004**  
**(CONCLUDED)**  
**(\$ MILLIONS)**

| FYE   | 15% of New Members to SMP |             |                    |          | Debt Service |          | GASB Annual<br>Required<br>Contribution<br>(ARC) | Projected<br>% of ARC<br>Contributed <sup>1</sup> |
|-------|---------------------------|-------------|--------------------|----------|--------------|----------|--|---|
|       | SURS Cont.                | SMP Cont.   | Total Contribution |          | \$           | % of Pay |  |   |
|       |                           |             | \$                 | % of Pay |              |          |  |   |
| 2030  | \$ 2,182.753              | \$ 84.777   | \$ 2,267.531       | 26.69 %  | \$ 211.160   | 2.49 %   | \$ 1,647.578                                     | 132.48 %  |
| 2031  | 2,283.775                 | 86.462      | 2,370.237          | 26.66    | 221.997      | 2.50     | 1,644.678  | 138.86  |
| 2032  | 2,397.176                 | 88.227      | 2,485.403          | 26.69    | 226.944      | 2.44     | 1,636.366  | 146.49  |
| 2033  | 2,522.986                 | 90.015      | 2,613.001          | 26.79    | 226.249      | 2.32     | 1,622.175  | 155.53  |
| 2034  | 2,683.405                 | 91.900      | 2,775.304          | 27.14    |              |          | 1,600.962  | 167.61  |
| 2035  | 2,813.627                 | 93.761      | 2,907.389          | 27.12    |              |          | 1,570.221  | 179.19  |
| 2036  | 2,950.989                 | 95.610      | 3,046.600          | 27.10    |              |          | 1,530.936  | 192.76  |
| 2037  | 3,096.163                 | 97.561      | 3,193.724          | 27.07    |              |          | 1,481.864  | 208.94  |
| 2038  | 3,249.223                 | 99.605      | 3,348.828          | 27.05    |              |          | 1,421.943  | 228.51  |
| 2039  | 3,410.667                 | 101.777     | 3,512.444          | 27.03    |              |          | 1,350.724  | 252.51  |
| 2040  | 3,580.800                 | 104.120     | 3,684.919          | 27.01    |              |          | 1,268.033  | 282.39  |
| 2041  | 3,758.975                 | 106.529     | 3,865.505          | 26.99    |              |          | 1,172.954  | 320.47  |
| 2042  | 3,945.968                 | 109.050     | 4,055.018          | 26.97    |              |          | 1,063.342  | 371.09  |
| 2043  | 4,141.858                 | 111.642     | 4,253.500          | 26.95    |              |          | 937.223  | 441.93  |
| 2044  | 4,347.268                 | 114.316     | 4,461.583          | 26.93    |              |          | 792.156  | 548.79  |
| 2045  | 4,562.419                 | 117.022     | 4,679.440          | 26.92    |              |          | 625.836  | 729.01  |
| Total | \$78,803.608              | \$2,752.884 | \$ 81,556.491      |          | \$ 3,481.009 |          | \$ 85,037.500                                    |   |

<sup>1</sup> Compares SURS Contribution against GASB ARC.

**GRAPH 2**  
**PROJECTED STATUTORY CONTRIBUTIONS VS. GASB ANNUAL REQUIRED CONTRIBUTIONS**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2010**





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## **APPENDIX E**

### **ACTUARIAL METHOD AND ASSUMPTIONS**

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## **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. 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.

## **ASSET VALUATION METHOD**

Previous to the valuation as of June 30, 2009, market value of assets was used. 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, which is 8.5% prior to June 30, 2010, and 7.75% thereafter) 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.

**ACTUARIAL ASSUMPTIONS**  
**(MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2007 ACTUARIAL**  
**VALUATION)**

**Rate of Investment Return.** For all purposes under the system the rate of investment return is assumed to be 7.75% per annum beginning with the **June 30, 2010**, valuation. The most recent assumption was 8.50%.

**Effective Rate of Interest:** The assumed rate credited to member accounts is 8.50% per annum.

**Annual Compensation Increases.** Each member's compensation is assumed to increase by 5.00% each year, 3.75% reflecting salary inflation and 1.25% reflecting standard of living increases. That rate is increased for members with less than 9 years of service, as follows:

| <u>Service Year</u> | <u>Additional Increase</u> |
|---------------------|----------------------------|
| 0                   | 5.00%                      |
| 1                   | 4.00                       |
| 2                   | 2.50                       |
| 3                   | 1.50                       |
| 4                   | 1.25                       |
| 5                   | 1.00                       |
| 6                   | 0.80                       |
| 7                   | 0.50                       |
| 8                   | 0.30                       |
| 9 & Over            | 0.00                       |

**Mortality.** The mortality assumption for retirees, beneficiaries and disabilities are based on the 1994 Group Annuity Mortality Table with a two-year age setback for males and no age setback for females. The assumed mortality rates for active members are 75% of those for retirees.

**Disability.** A table of disability incidence with sample rates follows:

| <u>Age</u> | <u>Males</u> | <u>Females</u> |
|------------|--------------|----------------|
| 20         | 0.05%        | 0.05%          |
| 30         | 0.08         | 0.08           |
| 40         | 0.16         | 0.16           |
| 50         | 0.34         | 0.34           |
| 60         | 0.55         | 0.55           |
| 70         | 0.85         | 0.85           |

**ACTUARIAL ASSUMPTIONS**  
**(MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2007 ACTUARIAL**  
**VALUATION)**  
**(CONTINUED)**

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

Members hired before January 1, 2011:

| <u>Age</u> | <u>Members Eligible For<br/>Normal Retirement</u> | <u>Members Eligible For<br/>Early Retirement</u> |
|------------|---|--|
| Under 55   | 35.0%   | 0.0%   |
| 55         | 30.0  | 7.0  |
| 56         | 30.0  | 5.0  |
| 57         | 27.0  | 5.0  |
| 58         | 27.0  | 5.5  |
| 59         | 26.0  | 6.0  |
| 60         | 12.0  |  |
| 61         | 12.0  |  |
| 62         | 15.0  |  |
| 63         | 15.0  |  |
| 64         | 15.0  |  |
| 65         | 20.0  |  |
| 66         | 17.0  |  |
| 67         | 17.0  |  |
| 68         | 17.0  |  |
| 69         | 17.0  |  |
| 70         | 100.0   |  |

Members hired on or after January 1, 2011:

| <u>Age</u> | <u>Members Eligible For<br/>Normal Retirement</u> | <u>Members Eligible For<br/>Early Retirement</u> |
|------------|---|--|
| 62         |   | 30.0%  |
| 63         |   | 34.0   |
| 64         |   | 38.0   |
| 65         |   | 55.0   |
| 66         |   | 46.0   |
| 67         | 50.0%   |  |
| 68         | 75.0  |  |
| 69         | 90.0  |  |
| 70         | 100.0   |  |

**ACTUARIAL ASSUMPTIONS  
(MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2007 ACTUARIAL  
VALUATION)  
(CONTINUED)**

*General Turnover.* A table of termination rates based on experience in the 2001-2006 period. The assumption is a table of turnover rates by years of service. A sample of these rates follows:

| <u>Years of Service</u> | <u>All Members</u> |
|-------------------------|--------------------|
| 0                       | 29.5%              |
| 1                       | 25.5               |
| 2                       | 19.0               |
| 3                       | 16.0               |
| 4                       | 14.0               |
| 5                       | 12.0               |
| 6                       | 10.0               |
| 7                       | 9.0                |
| 8                       | 7.5                |
| 9                       | 6.5                |
| 10                      | 5.5                |
| 15                      | 3.0                |
| 20                      | 2.1                |
| 25                      | 1.6                |
| 30                      | 0.0                |

Part time members with less than 3 years of service are assumed to terminate at the valuation date.

**ACTUARIAL ASSUMPTIONS**  
**(MOST ADOPTED EFFECTIVE WITH THE JUNE 30, 2007 ACTUARIAL**  
**VALUATION)**  
**(CONTINUED)**

*Operational Expenses.* The amount of operational expenses 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:

| <u>Age</u> | <u>Males</u> | <u>Females</u> |
|------------|--------------|----------------|
| 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.

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

*Valuation of Inactives.* An annuity benefit is estimated based on information provided by staff for members with five or more years of service.

*Self Managed Plan Election Percentage:* 15%

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## **APPENDIX F**

### **SUMMARY OF BENEFIT PROVISIONS OF TRADITIONAL SURS**

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**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 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. 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. Members hired on or after January 1, 2011, are eligible to participate in one defined benefit plan.

The provisions of the 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, broken down as follows:

|   |      |
|---|------|
| Retirement Annuity                      | 6.5% |
| Survivor Benefits                       | 1.0% |
| Annual Increases in Retirement Benefits | 0.5% |

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

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

Contributions for members hired on or after January 1, 2011, are assumed not to be made on pay in excess of \$106,800 in 2010, 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 interest rate credited to member contribution accounts for most purposes under the system is called the Effective Rate of Interest (“ERI”). Effective for the 2006 fiscal year, the ERI for the purpose of determining the money purchase benefit is established annually by the State Comptroller.

For the purposes of withdrawal of contributions at termination 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:

| <u>Year of Service</u>   | <u>General</u> | <u>Police/Fire</u> |
|--------------------------|----------------|--------------------|
| 1 <sup>st</sup> 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. Final rate of earnings is limited to \$106,800 in 2010, which is the Social Security Taxable Wage Base (SSTWB). The maximum final rate of earnings will be increased by the lesser of 3% and 1/2 of the increase in CPI-U as measured in the preceding 12-month calendar year. 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 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.

1. 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   |

2. 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.

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 an annuity which is payable for the lifetime of the retiree only. Benefit forms, which provide for continuation of the benefit to a surviving spouse after the death of the retiree, are available as options. Those selecting such an option will have their benefit reduced to cover the cost of the option.*

### **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.

### **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 60<sup>th</sup> 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 67<sup>th</sup> birthday for members hired on or after January 1, 2011.

## **BENEFITS ON DEATH BEFORE RETIREMENT**

### **Survivor Benefits – Traditional Plan Only**

#### **Eligibility**

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 and Retirement Fund of Chicago is recognized.

#### **Benefits**

For members hired before January 1, 2011, an annuity to the surviving spouse equal to the greater of:

1. 50% of the benefit accrued to the date of the death of the member, and
2. The applicable benefit from the following list:
  - a) \$400 per month to a single survivor (spouse, child or dependent parent), or
  - b) \$600 to two or more survivors.

For members hired on or after January 1, 2011, an annuity to the surviving spouse equal to 66 2/3% of the participant's earned retirement annuity at the date of death.

#### **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. Benefits are payable to a spouse at an earlier date so long as there is a surviving dependent, unmarried child under age 18 (over 18 if disabled).

#### **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.

## **Death Benefit – Portable Plan**

Upon the death of a member of the Portable Plan prior to retirement, the member's survivors will receive a benefit whose value is the larger of:

1. A Pre-Retirement Survivor Annuity, or
2. A refund of all member contributions plus interest at the full Effective Rate, plus, if the member has at least 5 years of service at death, a like amount of imputed employer contributions.

## **Lump Sum Death Benefit – Traditional and Portable Plan**

### **Eligibility**

Death of member prior to retirement.

### **Benefit**

The following are payable to the member's beneficiary:

1. Refund of accumulated member contributions for retirement and annual adjustment,
2. \$1,000
3. If survivor benefits not payable,
  - a) Refund of the accumulated member contribution for survivor benefits, and
  - b) \$5,000 to a dependent beneficiary or \$2,500 to a non-dependent beneficiary

# **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 attainment of age 70
4. If disablement occurs at or after attainment of age 65, completion of 5 years in disablement.

If, at discontinuance of the disability benefit, the member is eligible for a retirement benefit (based on service, which includes the period of disability), the member may retire and receive that benefit.

## **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.

## **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

## **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% 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.