

**STATE UNIVERSITIES RETIREMENT  
SYSTEM OF ILLINOIS**  
ACTUARIAL VALUATION REPORT  
AS OF JUNE 30, 2009



November 5, 2009

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, 2009.

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, 2011, 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, 2009, 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 asset valuation method has changed since the last valuation. Effective with the valuation as of June 30, 2009, the actuarial value of assets is used which smoothes investment gains and losses compared to the actuarial assumption of 8.5% over a 5-year period. The actuarial cost method and other assumptions used in this valuation are those used in the prior actuarial valuation of SURS.

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,



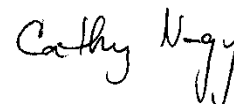
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## **SUMMARY OF THE VALUATION**

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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, 2009.

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 annually required contribution 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, 2011 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 investment performance through FY 2000, suffered significant investment losses in fiscal years 2001 through 2003, had investment gains in fiscal years 2004 through 2007, and significant losses in fiscal years 2008 and 2009. The returns for the year ending June 30, 2009 amounted to about (19.7)% after a (4.5)% return in FY 2008.

The funded ratio decreased from 58.5% as of June 30, 2008 to 54.3% as of June 30, 2009 based on the actuarial value of assets and to 41.9% on a market value of assets basis.

There was pension legislation affecting SURS in the 2009 Legislative session. Effective with the valuation as of June 30, 2009, the actuarial value of assets will be used to determine the required State contribution. Investment gains or losses compared to the investment return assumption of 8.5% will be recognized in equal amounts over subsequent 5-year period. The loss for fiscal year ending June 30, 2009, is the first loss (or gain) to be used in the calculation of the actuarial value of assets. For purposes of calculating the contribution specified under State Statute (herein after referred to as the statutory contribution), the actuarial value of assets is assumed to earn the investment return assumption of 8.5% in future years. The statutory contribution for fiscal year 2010 will be made from the proceeds of obligation bonds and the State Pension Fund.

## ACTUARIAL ASSUMPTIONS

The asset valuation method has changed from market value of assets to actuarial value of assets effective with the valuation as of June 30, 2009. For this year, this has the effect of showing an actuarial asset value that is higher than the market value of the assets. The other methods and assumptions used in this valuation are the same as those used in the actuarial valuation as of June 30, 2008. The 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.

## SURS BENEFITS

The benefits valued in this valuation are identical to those valued in the prior valuation.

## EXPERIENCE DURING 2009

The fund earned (19.7)% on a market value basis during FY 2009. The return during FY 2009 was less than the assumed rate of investment return of 8.5%. Led by this actuarial loss on investment return, the SURS defined benefit programs experienced an overall actuarial loss of \$4,213.0 million.

Based on market value, the loss from investment return was about \$4,061.1 million. In addition, there was a loss of \$151.9 million from actuarial liabilities, including a gain of \$1.3 million from pay increases and a loss of about \$153.2 million from demographic experience.

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

1. AAL - Prior Year	\$ 24,917.7
2. Normal Cost - Prior Year	591.0
3. Benefits and Admin Expenses Paid in FY 2009	(1,427.6)
4. Interest on the above items	2,083.2
5. Expected AAL 6/30/2009 (1+2+3+4)	<u>26,164.3</u>
6. Actual AAL 6/30/2009	26,316.2
7. Actuarial (Gain)/Loss on Liabilities (6-5)	<u>\$ 151.9</u>

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	\$ 4,061.1
2. Actuarial (Gain)/Loss on Liabilities	<u>151.9</u>
3. Total Actuarial (Gain)/Loss (1+2)	\$ 4,213.0

The “behavior” of the population determines the liability gain or loss for the year. We examine the key drivers of changes in liabilities. From last year to this year, there was a gain on retirement. Based on the assumptions, there were about 3,100 employees expected to retire from active service, and only 1,500 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 2011 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 2010 is \$702,514,000 and is to be paid from bonds issued in FY 2010 less the pro rata share of bond sale expenses, any amounts received from the General Revenue Fund in FY 2010, and any reduction in bond proceeds due to the issuance of discounted bonds, if applicable. SURS expects to receive the full FY 2010 certified contribution of \$744,514,000 less bond sale expenses. The additional contribution will be received from Federal and Trust Funds.
  - c) 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.

- d) 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 2011 and estimates of the required contributions for the subsequent five fiscal years are set out below. 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.

<b>Fiscal Year</b>	<b>Required Statutory Contribution (in Millions)</b>		
	<b>15% of New Members to SMP</b>		
	<b>SURS</b>	<b>SMP</b>	<b>Total</b>
2011	\$ 844.2	\$ 43.9	\$ 888.1
2012	937.2	47.4	984.6
2013	1,030.3	49.5	1,079.8
2014	1,122.3	51.9	1,174.2
2015	1,212.4	54.4	1,266.8
2016	1,261.4	57.0	1,318.4
Six year total	\$6,407.8	\$304.1	\$6,711.9

The Statutory contribution for FY 2011 is \$888,142,000. This is equal to a gross Statutory contribution of \$889,698,000 less \$1,556,000 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**

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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 this 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 41.9%, rather than the 54.3% 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 had decreased from \$14,586.2 million as of June 30, 2008 to \$11,033.0 million as of June 30, 2009. This decrease is due to unfavorable return on fund assets. The actuarial value of assets is \$14,282.0 million, which is \$3,249.0 million higher than the market value of assets due to recognition of only 20% of the FY 2009 investment loss compared to the investment return assumption of 8.5%. The \$3.2 billion dollars, which is the value of deferred losses, will be smoothed into the actuarial value of assets over the next four years.

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 58.5% at June 30,

2008, to 54.3% at June 30, 2009. The funded ratio is 41.9% based on the market value of assets at June 30, 2009.

The table below shows a comparison for fiscal year 2008 and 2009 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 decreased from 65.5% as of June 30, 2008 to 36.1% as of June 30, 2009.

<b>Percentage of Benefits Covered by Net Assets</b>							
<b>(in Millions)</b>							
<b>Fiscal Year</b>	<b>Member Acc Contrib.</b>	<b>Members Receiving Benefits</b>	<b>Act/Inact Employer Portion</b>	<b>Net Market Value of Assets</b>	<b>% of Benefits Covered by Assets</b>		
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	
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%

## **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 ARC for FY 2010 is \$1.3 billion (Table 11). On a statutory appropriation basis the contribution for SURS (which excludes the SMP amount) for FY 2010 (from the June 30, 2008 report) was \$708 million. The difference between the ARC and the statutory appropriation 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 \$6.7 billion dollars as of June 30, 2009. A large and growing NPO may raise concerns in the capital markets and impact the cost of debt and borrowing for the State. The perpetual underfunding puts the plan at serious risk for ultimate exhaustion of the trust, leaving the responsibility for the payment of benefits elsewhere.

Based on projections assuming that the statutory contributions are made every year (as shown in Table 15) and an investment return of 8.5% each year, the funded ratio is projected to remain below 45.0% until 2030 and below 60.0% until 2038. Total contributions are not projected to exceed benefit payments and expenses until 2040. Therefore, a portion of investment return (over 50%) or current assets are used to pay benefits. This amount is expected to increase to 70% of investment return within 15 years. If the statutory contributions are not made or investment return is less than the assumption of 8.5%, 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 these benefits in the future and places a higher burden on future generations of taxpayers.

We recommend a funding policy that recognizes and funds to the ARC. In addition, we recommend the funding policy for paying off 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 the recommendation. 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 is 30% higher than the market value of assets as of June 30, 2009. Using an actuarial value of assets that is significantly higher than the market value of assets delays funding to the system by pushing the annual required contribution 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.**

## **GASB DISCLOSURE**

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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.

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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, 2009 AND JUNE 30, 2008**

	Defined Benefit Plan	Self Managed Plan	Reporting Entity Totals	
			2009	2008
<b>Assets</b>				
Cash and short-term investments	\$ 543,659,417		\$ 543,659,417	\$ 797,620,497
<b>Receivables</b>				
Participants	12,072,460	\$ 1,735,687	13,808,147	12,891,573
Federal, trust funds, and other	2,009,986	1,149,915	3,159,901	3,192,408
Notes receivable, long-term	598,687		598,687	542,701
Pending investment sales	606,501,124		606,501,124	2,087,413,798
Interest and dividends	39,454,498		39,454,498	39,705,356
Total receivables	660,636,755	2,885,602	663,522,357	2,143,745,836
Prepaid expenses				8,000
<b>Investments, at fair value</b>				
Equity investments	6,940,178,087	27,666,067	6,967,844,154	8,731,804,485
Fixed income investments	3,552,427,529	12,913,491	3,565,341,020	4,813,443,832
Real estate investments	228,712,211	38,004	228,750,215	352,275,186
Mutual fund and variable annuities		530,092,101	530,092,101	562,118,120
Total investments	10,721,317,827	570,709,663	11,292,027,490	14,459,641,623
Securities lending collateral	1,323,035,827		1,323,035,827	2,046,536,507
Capital assets, at cost, net of accum deprec \$16,768,688 and \$16,053,476 respectively	6,583,663		6,583,663	6,931,226
Total assets	13,255,233,489	573,595,265	13,828,828,754	19,454,483,689
<b>Liabilities</b>				
Benefits payable	5,441,147		5,441,147	5,436,697
Refunds payable	2,437,930		2,437,930	2,899,940
Securities lending collateral	1,323,035,827		1,323,035,827	2,046,536,507
Payable to brokers for unsettled trades	878,088,978		878,088,978	2,184,482,162
Administrative expenses payable	13,256,204		13,256,204	12,417,935
Total liabilities	2,222,260,086		2,222,260,086	4,251,773,241
Net assets held in trust for pension benefits	\$ 11,032,973,403	\$ 573,595,265	\$ 11,606,568,668	\$ 15,202,710,448



**TABLE 2**  
**STATEMENT OF CHANGES IN PLAN NET ASSETS**  
**FOR YEARS ENDED JUNE 30, 2009 AND JUNE 30, 2008**

	Defined Benefit	Self Managed	Reporting Entity Totals	
	Plan	Plan	2009	2008
Additions				
Contributions				
Employer	\$ 451,617,066	\$ 38,264,326	\$ 489,881,392	\$ 383,899,304
Participant	273,292,053	48,825,439	322,117,492	310,101,265
Total Contributions	<u>724,909,119</u>	<u>87,089,765</u>	<u>811,998,884</u>	<u>694,000,569</u>
Investment Income				
Net appreciation				
in fair value of investments	(2,827,385,189)	(116,422,818)	(2,943,808,007)	(938,306,823)
Interest	(162,654,884)		(162,654,884)	60,706,695
Dividends	153,789,636		153,789,636	187,602,637
Securities lending	18,313,879		18,313,879	14,161,232
	<u>(2,817,936,558)</u>	<u>(116,422,818)</u>	<u>(2,934,359,376)</u>	<u>(675,836,259)</u>
Less investment expense				
Asset management expense	31,095,737	-	31,095,737	39,012,867
Securities lending expense	1,664,780		1,664,780	
	<u>32,760,517</u>		<u>32,760,517</u>	<u>78,025,734</u>
Net investment income	<u>(2,850,697,075)</u>	<u>(116,422,818)</u>	<u>(2,967,119,893)</u>	<u>(714,849,126)</u>
Total additions	<u>(2,125,787,956)</u>	<u>(29,333,053)</u>	<u>(2,155,121,009)</u>	<u>(20,848,557)</u>
Deductions				
Benefits	1,371,990,391	4,735,998	1,376,726,389	1,279,172,742
Refunds of contributions	42,651,635	8,720,677	51,372,312	54,939,592
Bond interest expense				
Administrative expense	12,922,070		12,922,070	12,079,244
Total deductions	<u>1,427,564,096</u>	<u>13,456,675</u>	<u>1,441,020,771</u>	<u>1,346,191,578</u>
Net increase	<u>(3,553,352,052)</u>	<u>(42,789,728)</u>	<u>(3,596,141,780)</u>	<u>(1,367,040,135)</u>
Net assets held in trust for pension benefits				
Beginning of year	<u>14,586,325,455</u>	<u>616,384,993</u>	<u>15,202,710,448</u>	<u>16,569,750,583</u>
End of Year	<u>\$ 11,032,973,403</u>	<u>\$ 573,595,265</u>	<u>\$ 11,606,568,668</u>	<u>\$ 15,202,710,448</u>

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

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

	<u>June 30, 2008</u>		<u>June 30, 2009</u>	
	<u>Number</u>	<u>Earnings</u>	<u>Number</u>	<u>Earnings</u>
<b>Active Members</b>				
Full time				
Traditional SURS	50,073	\$2,235.3	50,045	\$2,318.6
Portable SURS	17,315	910.6	18,041	980.4
SMP	9,168	509.2	9,162	536.2
Total Full Time	<u>76,556</u>	<u>\$3,655.1</u>	<u>77,248</u>	<u>\$3,835.2</u>
Part time				
Traditional SURS	4,757	\$ 24.3	4,676	\$ 26.0
Portable SURS	941	6.2	937	6.5
SMP	820	5.6	684	4.9
Total Part Time	<u>6,518</u>	<u>\$ 36.1</u>	<u>6,297</u>	<u>\$ 37.4</u>
Total	83,074	\$3,691.2	83,545	\$3,872.6
<b>Inactive Members</b>				
Traditional/Portable	70,657		71,280	
SMP	6,064		6,500	
Total	<u>76,721</u>		<u>77,780</u>	
<b>Benefit Recipients</b>				
	<u>Number</u>	<u>Annual Benefits</u>	<u>Number</u>	<u>Annual Benefits</u>
Retirement	37,055	\$1,189.8	38,400	\$1,271.9
Survivor	7,122	86.6	7,269	92.6
Disability	1,169	21.0	1,141	20.6
Total	<u>45,346</u>	<u>\$1,297.4</u>	<u>46,810</u>	<u>\$1,385.1</u>

**TABLE 4**  
**DISTRIBUTION OF FULL-TIME\* ACTIVE MEMBERS BY AGE AND YEARS OF SERVICE**  
**AS OF JUNE 30, 2009**

Age	Years of Service									Totals
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30 & Over		
Under 20	9	27	-	-	-	-	-	-	-	36
	35,477	276,583	-	-	-	-	-	-	-	312,060
20-24	247	991	31	-	-	-	-	-	-	1,269
	2,019,761	24,508,224	668,749	-	-	-	-	-	-	27,196,734
25-29	502	3,929	787	18	-	-	-	-	-	5,236
	5,520,097	134,981,435	29,754,085	601,849	-	-	-	-	-	170,857,466
30-34	413	4,214	2,333	476	15	-	-	-	-	7,451
	5,265,797	175,636,834	106,128,286	22,001,484	563,136	-	-	-	-	309,595,537
35-39	310	3,452	2,888	1,489	386	23	-	-	-	8,548
	4,102,177	155,855,827	146,007,641	81,220,427	20,352,312	1,100,911	-	-	-	408,639,294
40-44	254	2,743	2,766	1,913	1,107	435	19	-	-	9,237
	3,721,857	118,409,703	142,996,624	111,257,166	66,198,959	23,376,888	1,032,391	-	-	466,993,588
45-49	237	2,490	2,807	2,213	1,625	1,189	486	31	-	11,078
	3,013,876	101,464,308	136,357,961	125,225,142	105,303,161	75,725,555	28,555,871	1,810,432	-	577,456,307
50-54	225	2,273	2,694	2,241	1,960	1,623	987	247	-	12,250
	3,452,791	91,299,138	121,711,639	119,758,311	125,060,721	118,729,796	70,850,872	15,943,033	-	666,806,301
55-59	133	1,813	2,368	1,946	2,028	1,545	1,014	479	-	11,326
	2,175,312	74,584,988	108,356,189	96,411,050	118,157,772	111,683,368	85,470,293	43,755,120	-	640,594,092
60-64	53	1,056	1,533	1,218	1,317	884	602	404	-	7,067
	664,029	38,010,138	63,255,060	58,100,471	65,985,629	62,600,528	54,881,755	44,161,740	-	387,659,350
65 & Over	23	471	885	669	748	332	207	415	-	3,750
	171,407	10,492,610	27,253,818	25,272,919	31,348,667	22,784,727	17,346,753	44,365,048	-	179,035,950
Totals	2,406	23,459	19,092	12,183	9,186	6,031	3,315	1,576	-	77,248
	30,142,581	925,519,788	882,490,051	639,848,820	532,970,357	416,001,774	258,137,935	150,035,374	-	3,835,146,679

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

**TABLE 5**  
**DISTRIBUTION OF BENEFIT RECIPIENTS BY AGE**  
**AS OF JUNE 30, 2009**

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<u>Age</u>	<u>Number</u>	<u>Annual Benefit</u>
<b>Retirees and Survivors</b>		
Under 50	552	\$ 3,865,377
50-54	599	18,452,262
55-59	3,938	121,773,723
60-64	7,676	249,692,208
65-69	9,249	316,509,650
70 & Over	<u>23,655</u>	<u>654,227,431</u>
Total	45,669	\$ 1,364,520,651
<b>Disabilitants</b>		
Under 50	175	\$ 2,803,577
50-54	221	4,074,937
55-59	236	4,588,910
60-64	215	4,326,236
65-69	150	2,929,708
70 & Over	<u>144</u>	<u>1,874,464</u>
Total	1,141	\$ 20,597,832

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

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**TABLE 6**  
**SUMMARY OF ACTUARIAL VALUES**  
**AS OF JUNE 30, 2009**  
**(\$ IN MILLIONS)**

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	APV of Projected Benefits	Projected Unit Credit Values	
		Actuarial Accrued Liability (AAL)	Normal (NC)
<b>1. Active Members</b>			
a. Retirement	\$12,006.1	\$ 8,126.8	\$461.6
b. Death	271.0	180.4	11.8
c. Disability	630.5	410.6	35.5
d. Termination	1,507.7	966.4	108.5
Total - Active Members	\$14,415.3	\$ 9,684.2	\$617.4
<b>2. Benefit Recipients</b>			
a. Retirement	\$13,756.4	\$13,756.4	\$ 0.0
b. Survivor	775.0	775.0	0.0
c. Disability	271.2	271.2	0.0
Total - Benefit Recipients	\$14,802.6	\$14,802.6	\$ 0.0
<b>3. Other Inactive</b>	\$ 1,829.4	\$ 1,829.4	
<b>4. Grand Total</b>	\$31,047.3	\$26,316.2	\$617.4
<b>5. Operating Expense</b>			\$ 13.0
<b>6. Total Normal Cost</b>			\$630.4

**TABLE 7**  
**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**  
**FOR THE YEAR ENDING JUNE 30, 2009**

	2009	2010	2011	2012	2013
Beginning of Year:					
(1) Market Value of Assets	\$ 14,586,325,455				
(2) Actuarial Value of Assets	14,586,325,455				
End of Year:					
(3) Market Value of Assets	11,032,973,403				
(4) Net of Contributions and Disbursements	(702,654,977)				
(5) Total Investment Income					
=(3)-(1)-(4)	(2,850,697,075)				
(6) Projected Rate of Return	8.50%				
(7) Projected Investment Income					
=(1)x(6)+([1+(6)] <sup>.5</sup> -1)x(4)	1,210,583,795				
(8) Investment Income in					
Excess of Projected Income	(4,061,280,870)				
(9) Excess Investment Income Recognized					
This Year (5 year recognition)					
(9a) From This Year	(812,256,174)				
(9b) From One Year Ago	0	\$ (812,256,174)			
(9c) From Two Years Ago	0	0	\$ (812,256,174)		
(9d) From Three Years Ago	0	0	0	\$ (812,256,174)	
(9e) From Four Years Ago	0	0	0	0	\$ (812,256,174)
(9f) Total Recognized Investment Gain	(812,256,174)	(812,256,174)	(812,256,174)	(812,256,174)	(812,256,174)
(10) Change in Actuarial Value of Assets					
=(4)+(7)+9[a..e]	(304,327,356)				
End of Year:					
<b>(3) Market Value of Assets</b>	<b>11,032,973,403</b>				
<b>(11) Final Actuarial Value of Assets</b>	<b>14,281,998,099</b>				
(12) Difference Between Market & Actuarial Values	(3,249,024,696)				
(13) Actuarial Value Rate of Return	2.80 %				
(14) Estimated Market Value Rate of Return	(20.03)%				
(15) Ratio of Actuarial Value to Market Value	129 %				
(16) SURS Reported Market Value Rate of Return	(19.70)%				



**TABLE 8**  
**ANALYSIS OF CHANGE IN**  
**UNFUNDED ACTUARIAL ACCRUED LIABILITY**  
**FOR THE YEAR ENDING JUNE 30, 2009**  
**(\$ IN MILLIONS)**

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1. Actuarial (Gain)/Loss on AAL		
(a) AAL 6/30/08		\$ 24,917.7
(b) Normal Cost FY09	\$ 591.0	
(c) Benefits and Admin Expenses Paid FY09	(1,427.6)	
(d) Interest on (a), (b), and (c)	2,083.2	
(e) Expected AAL 6/30/2009 (a+b+c+d)		26,164.3
(f) Actual AAL 6/30/2009		<u>26,316.2</u>
(g) Actuarial (Gain)/Loss on AAL (f-e)		\$ 151.9
(h) Impact of Benefit Changes		0.0
(i) Impact of Change in Actuarial Assumptions and Methods		0.0
(j) Actual AAL After Changes (f+h+i)		\$ 26,316.2
2. Actuarial (Gain)/Loss on Assets		
(a) Assets 6/30/08		14,586.2
(b) Contributions FY09	724.9	
(c) Benefits and Admin Expenses	(1,427.6)	
(d) Interest at 8.5%	1,210.6	
(e) Expected Assets 6/30/2009 (a+b+c+d)		15,094.1
(f) Actual Assets Before Method Change 6/30/2009		<u>11,033.0</u>
(g) Actuarial (Gain)/Loss on Assets (e-f)		\$ 4,061.1
(h) Impact of Change in Actuarial Assumptions and Methods		3,249.0
(i) Actual Assets After Change (f+h)		\$ 14,282.0
3. Total Actuarial (Gain)/Loss		
(a) (Gain)/Loss on AAL		\$ 151.9
(b) (Gain)/Loss on Assets		<u>4,061.1</u>
(c) Net (Gain)/Loss (a+b)		\$ 4,213.0

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

	<b>Amount of (Gain) or Loss</b>			
	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>
Investment Return	\$ (414.1)	\$ (1,342.0)	\$ 2,004.4	\$ 4,061.1
Salary Increase	28.6	67.0	30.6	(1.3)
Age and Service Retirement	133.8	(21.7)	(34.7)	(47.1)
General Employment Termination	(39.6)	46.5	45.3	57.8
Disability Incidence	13.7	(1.4)	2.1	(6.6)
In Service Mortality	2.4	5.5	(1.1)	(5.5)
Benefit Recipient	(49.7)	44.7	105.5	88.9
New Entrants	81.6	71.3	117.0	85.1
Other	45.5	(22.9)	95.0	(19.4)
<b>Total Actuarial (Gain)/Loss</b>	<b>\$ (197.8)</b>	<b>\$ (1,153.0)</b>	<b>\$ 2,364.1</b>	<b>\$ 4,213.0</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>
1996	\$ 5,082,891	\$ 10,155,039	\$5,072,148	50.05 %	\$2,330,038	217.69 %
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

\* *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)*

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

Fiscal Year	(1) Total ARC*	(2) Member Contributions	(3) (1) - (2) Net State ARC	(4) Actual State Contribution	(5) (4) / (3) State Cont. as Percent of Net ARC
1996	\$ 787.1	\$ 197.0	\$ 590.1	\$ 147.4	24.97 %
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				

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

\*\* Assets at market value

\*\*\* Assets at actuarial value

**TABLE 12**  
**GENERAL INFORMATION GASB #25**

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**Development of Net Pension Obligation**  
**June 30, 2009**  
**(\$ in Millions)**

1. NPO at 6/30/08		\$6,121.020
2. State Expense for FY 2009	\$1,064.785	
3. State Contribution for FY 2009	451.617	
4. Excess of Expense over Contribution (2-3)	613.168	
5. NPO at 6/30/09 (1+4)		\$6,734.188

**Development of ARC and Expense for FY 2010**  
**(\$ in Millions)**

1. Normal Cost		\$ 630.436
2. Amortization of UAAL (30 years remaining)		647.895
3. Total ARC (1+2)		\$1,278.331
4. Interest on NPO		572.406
5. NPO Adjustment		(362.553)
6. Total Expense (Including member contributions) (3+4+5)		\$1,488.184

**Notes in Trend Data**

Information	Data
Valuation Date	June 30, 2009
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	8.50%
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, 2009**  
**ASSUMES CONTRIBUTIONS BASED ON TABLE 15 & INVESTMENT RETURN OF 8.5% EACH YEAR**  
**(\$ MILLIONS)**

<b>Fiscal Year Ending</b>	<b>Total Payroll</b>	<b>SMP Pay</b>	<b>DB Pay</b>	<b>Benefits</b>	<b>Expenses</b>	<b>Assets EOY</b>	<b>AAL</b>	<b>Funding Ratio</b>
2010	\$ 4,051.529	\$ 574.298	\$ 3,477.231	\$ 1,538.992	\$ 13.651	\$ 13,807.304	\$ 27,165.816	50.83 %
2011	4,175.298	598.723	3,576.574	1,632.884	14.068	13,423.775	28,386.958	47.29
2012	4,309.160	623.309	3,685.851	1,736.620	14.519	13,074.167	29,606.504	44.16
2013	4,451.336	651.708	3,799.628	1,845.421	14.998	12,756.479	30,818.594	41.39
2014	4,603.661	682.690	3,920.971	1,957.683	15.511	13,281.653	32,020.354	41.48
2015	4,765.343	715.277	4,050.066	2,076.158	16.056	13,832.044	33,204.267	41.66
2016	4,938.760	750.310	4,188.451	2,199.888	16.640	14,362.348	34,363.062	41.80
2017	5,121.683	787.230	4,334.453	2,329.263	17.257	14,863.302	35,486.409	41.88
2018	5,319.852	826.211	4,493.642	2,457.543	17.925	15,339.236	36,576.130	41.94
2019	5,531.799	866.836	4,664.964	2,585.168	18.639	15,793.882	37,628.759	41.97
2020	5,755.219	908.678	4,846.541	2,711.726	19.391	16,226.024	38,647.048	41.99
2025	7,103.661	1,137.031	5,966.629	3,279.092	23.935	18,325.879	43,357.679	42.27
2030	8,893.178	1,390.637	7,502.541	3,780.831	29.964	21,410.900	47,880.470	44.72
2035	11,242.877	1,717.320	9,525.558	4,211.787	37.881	27,415.662	52,942.600	51.78
2040	14,313.268	2,157.138	12,156.130	4,557.709	48.227	39,679.147	59,782.239	66.37
2045	18,254.678	2,739.596	15,515.082	4,939.374	61.507	63,045.158	70,052.247	90.00

**TABLE 14**  
**PROJECTED STATUTORY CONTRIBUTIONS FOR RETIREMENT**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2009**  
**BEFORE IMPACT OF BONDS ISSUED IN 2004**  
**(\$ MILLIONS)**

FYE	15% of New Members to SMP			
	SURS Cont.	SMP Cont.	Total Contribution	
			\$	% of Pay
2011	\$ 974.294	\$ 43.947	\$ 1,018.241	24.39 %
2012	1,060.895	47.372	1,108.266	25.72
2013	1,148.061	49.530	1,197.591	26.90
2014	1,236.345	51.884	1,288.230	27.98
2015	1,325.606	54.361	1,379.967	28.96
2016	1,373.847	57.024	1,430.870	28.97
2017	1,424.731	59.830	1,484.561	28.99
2018	1,479.857	62.792	1,542.649	29.00
2019	1,538.816	65.880	1,604.696	29.01
2020	1,600.966	69.060	1,670.026	29.02
2021	1,667.214	72.346	1,739.560	29.02
2022	1,737.511	75.737	1,813.248	29.03
2023	1,812.635	79.239	1,891.874	29.03
2024	1,891.907	82.789	1,974.696	29.03
2025	1,976.071	86.414	2,062.485	29.03
2026	2,064.993	90.126	2,155.119	29.03
2027	2,159.035	93.874	2,252.909	29.03
2028	2,258.446	97.713	2,356.160	29.02

(Continued on next page)



**TABLE 14**  
**PROJECTED STATUTORY CONTRIBUTIONS FOR RETIREMENT**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2009**  
**BEFORE IMPACT OF BONDS ISSUED IN 2004**  
**(CONCLUDED)**  
**(\$ MILLIONS)**

FYE	15% of New Members to SMP			
	SURS Cont.	SMP Cont.	Total Contribution	
			\$	% of Pay
2029	\$ 2,363.206	\$ 101.638	\$ 2,464.843	29.01 %
2030	2,473.872	105.688	2,579.561	29.01
2031	2,590.664	110.016	2,700.679	29.00
2032	2,714.102	114.696	2,828.798	28.99
2033	2,844.485	119.641	2,964.126	28.99
2034	2,982.163	124.958	3,107.121	28.98
2035	3,127.503	130.516	3,258.019	28.98
2036	3,280.741	136.370	3,417.111	28.97
2037	3,442.322	142.631	3,584.953	28.97
2038	3,612.980	149.308	3,762.288	28.97
2039	3,792.757	156.415	3,949.171	28.96
2040	3,981.613	163.942	4,145.556	28.96
2041	4,179.716	171.866	4,351.581	28.96
2042	4,388.028	180.233	4,568.260	28.96
2043	4,606.776	189.072	4,795.848	28.96
2044	4,836.679	198.402	5,035.082	28.96
2045	5,078.021	208.209	5,286.230	28.96
Total	\$89,026.857	\$3,743.518	\$92,770.375	

**TABLE 15**  
**PROJECTED STATUTORY CONTRIBUTIONS**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2009**  
**INCLUDING IMPACT OF BONDS ISSUED IN 2004**  
**(\$ MILLIONS)**

FYE	15% of New Members to SMP					
	SURS Cont.	SMP Cont.	Total Contribution		Debt Service	
			\$	% of Pay	\$	% of Pay
2011	\$ 844.195	\$ 43.947	\$ 888.142	21.27 %	\$ 106.050	2.54 %
2012	937.208	47.372	984.580	22.85	115.487	2.68
2013	1,030.266	49.530	1,079.795	24.26	114.754	2.58
2014	1,122.345	51.884	1,174.230	25.51	114.000	2.48
2015	1,212.379	54.361	1,266.740	26.58	113.227	2.38
2016	1,261.412	57.024	1,318.436	26.70	112.435	2.28
2017	1,308.256	59.830	1,368.085	26.71	116.476	2.27
2018	1,359.553	62.792	1,422.345	26.74	120.304	2.26
2019	1,414.896	65.880	1,480.776	26.77	123.920	2.24
2020	1,468.957	69.060	1,538.016	26.72	132.009	2.29
2021	1,527.599	72.346	1,599.945	26.70	139.615	2.33
2022	1,590.775	75.737	1,666.512	26.68	146.736	2.35
2023	1,659.262	79.239	1,738.502	26.68	153.373	2.35
2024	1,727.490	82.789	1,810.279	26.62	164.417	2.42
2025	1,801.467	86.414	1,887.882	26.58	174.604	2.46
2026	1,885.845	90.126	1,975.971	26.62	179.149	2.41
2027	1,975.840	93.874	2,069.714	26.67	183.195	2.36
2028	2,066.812	97.713	2,164.525	26.66	191.634	2.36

(Continued on next page)

**TABLE 15**  
**PROJECTED STATUTORY CONTRIBUTIONS**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2009**  
**INCLUDING IMPACT OF BONDS ISSUED IN 2004**  
**(CONCLUDED)**  
**(\$ MILLIONS)**

FYE	15% of New Members to SMP					
	SURS Cont.	SMP Cont.	Total Contribution		Debt Service	
			\$	% of Pay	\$	% of Pay
2029	\$ 2,163.880	\$ 101.638	\$ 2,265.518	26.67 %	\$ 199.325	2.35 %
2030	2,262.712	105.688	2,368.400	26.63	211.160	2.37
2031	2,368.666	110.016	2,478.682	26.62	221.997	2.38
2032	2,487.158	114.696	2,601.854	26.67	226.944	2.33
2033	2,618.236	119.641	2,737.877	26.78	226.249	2.21
2034	2,763.132	124.958	2,888.090	26.94		
2035	2,897.797	130.516	3,028.314	26.94		
2036	3,039.780	136.370	3,176.150	26.93		
2037	3,189.494	142.631	3,332.124	26.93		
2038	3,347.617	149.308	3,496.926	26.92		
2039	3,514.190	156.415	3,670.605	26.92		
2040	3,689.176	163.942	3,853.118	26.92		
2041	3,872.728	171.866	4,044.594	26.92		
2042	4,065.740	180.233	4,245.973	26.92		
2043	4,268.422	189.072	4,457.494	26.92		
2044	4,481.440	198.402	4,679.842	26.92		
2045	4,705.055	208.209	4,913.264	26.92		
Total	\$ 81,929.782	\$ 3,743.518	\$ 85,673.300		\$ 3,587.059	

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## **APPENDIX E**

### **ACTUARIAL METHOD AND ASSUMPTIONS**

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## **PROJECTED UNIT CREDIT METHOD**

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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**

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Previous to the valuation as of June 30, 2008, 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 of 8.5%) 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**  
**(ADOPTED EFFECTIVE WITH THE JUNE 30, 2007 ACTUARIAL**  
**VALUATION)**

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**Rate of Investment Return.** For all purposes under the system the rate of investment return is assumed to be 8.5% per annum.

**Effective Rate of Interest:** The assumed rate credited to member accounts is 8.5% per annum.

**Annual Compensation Increases.** Each member's compensation is assumed to increase by 5.0% 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**  
**(ADOPTED EFFECTIVE WITH THE JUNE 30, 2007 ACTUARIAL**  
**VALUATION)**  
**(CONTINUED)**

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

<u>Age</u>	<u>Members Eligible For Normal Retirement</u>	<u>Members Eligible For 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	

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

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

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**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

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### 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.

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.*

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 purpose of withdrawal of contributions at termination by Traditional Plan Members, this rate is not greater than 4.5% by statute.

# RETIREMENT BENEFITS

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## 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, 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.

### 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

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.

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

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

4. 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.

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.

*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**

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.

## **Early Retirement**

### **Eligibility**

For members 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.

### **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.

## **BENEFITS ON DEATH BEFORE RETIREMENT**

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### **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**

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.

#### **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**

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.



## **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

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## 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**

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

## **Disability Retirement Annuity**

### **Eligibility**

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

### **Benefit**

35% of the compensation being earned at disablement.

### **Duration of Benefit**

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

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

## **Annual Increases**

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

## **BENEFITS FOR DEFERRED MEMBERS**

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### **Eligibility**

Separation from employment with at least 5 years of service.

### **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**

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.