

ACTUARIAL

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# SURS2013

BUILDING A SUSTAINABLE FUTURE

The Comprehensive Annual Financial Report  
for Fiscal Year Ended June 30, 2013

# LETTER OF CERTIFICATION



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December 18, 2013

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

Re: Certification of Actuarial Results

Dear Members of the Board:

At your request, we have performed an actuarial valuation of the State Universities Retirement System of Illinois ("SURS") as of June 30, 2013. The purpose of this actuarial valuation, which is performed annually, is to determine the funding status and annual contribution requirements of SURS. GRS has prepared this actuarial valuation exclusively at the request of, and for the benefit of, the Trustees of the State Universities Retirement System; GRS is not responsible for reliance upon this valuation for any other purpose or by any other party.

The actuarial valuation is based upon:

- Data relative to the Members of SURS* – Data for all members, including those participating in the Self Managed Plan, was provided by SURS staff. GRS reviewed such data for reasonableness, but did not otherwise verify or audit the data.
- Assets of the Fund* – The values of SURS assets are provided by SURS staff and were reviewed for reasonableness, but were not otherwise verified or audited. First effective with the valuation as of June 30, 2009, the actuarial value of assets, as defined in statute, smoothes investment gains and losses compared to the actuarial assumption of 7.75% (8.5% prior to fiscal year 2011) over a five-year period, and is calculated by the actuary and used to develop actuarial results.
- Actuarial Method* – The actuarial method prescribed in the statute and utilized by SURS is the Projected Unit Credit Cost Method. The objective of this method is to finance the benefits of SURS as such benefits accrue to each member. Any Unfunded Actuarial Accrued Liability (UAAL) under this method is separately financed. All actuarial gains and losses under this method are reflected in the UAAL.
- Actuarial Assumptions* – The actuarial assumptions used in this valuation are summarized in the next few pages. The Effective Rate of Interest (ERI) assumption was decreased from 7.75% to 7.00% first effective with the valuation as of June 30, 2013. The investment return assumption was decreased from 8.50% to 7.75% first effective with the valuation as of June 30, 2010. The remaining assumptions were reviewed and updated as part of the experience study conducted for the period June 30, 2006, through June 30, 2010, and adopted by the Board first effective for the valuation as of June 30, 2011.

The actuarial assumptions and methods used, including the economic and demographic assumptions, the actuarial cost method and asset method, are in accordance with paragraph 36 of GASB Statement Number 25 and are set by the Board.

The trend data in the Financial Section and the schedules and other data in this Section are prepared by SURS staff with our input.

The funding objective as defined in the statute is to collect employer and employee contributions sufficient to provide the benefits of SURS when due and to achieve an asset value equal to 90% of the Actuarial Accrued Liability by the end of fiscal year 2045. The financing objective of SURS and the funding process to reach that objective are set out in Section 15-155 of the SURS Article of the Illinois Pension Code.

The statutory funding policy set out in Section 15-155 of the Illinois Pension Code results in lower near-term contribution requirements than the Annual Required Contribution (ARC) as calculated under GASB 25. We recommend funding normal cost plus 30-year closed period level percentage of payroll amortization of the current unfunded accrued liability, which is equal to the ARC in the first year of funding. This letter does not certify that the funding method in the statute complies with generally accepted actuarial standards for the funding of retirement systems.

To the best of our knowledge, this actuarial statement is complete and accurate, fairly presents the actuarial position of SURS as of June 30, 2013, based on the data and actuarial techniques described above and applicable statutes, and has been prepared in accordance with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board, except where otherwise noted.

Future actuarial measurements may differ significantly from the current measurements presented in this valuation due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions, contribution amounts or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements in this report.

The signing actuaries are independent of the plan sponsor.

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,

Leslie L. Thompson, FSA, EA, MAAA, FCA  
Senior Consultant

Amy Williams, ASA, MAAA, FCA  
Consultant

Lance Weiss, EA, MAAA, FCA  
Senior Consultant

## ACTUARIAL REPORT

### Pension Financing

The State Universities Retirement System of Illinois (SURS) is financed by employee contributions, employer contributions (state appropriations and contributions from trust and federal funds), and investment earnings. Employee contributions are established by the Illinois Compiled Statutes at 8% of pay. Investment earnings and state funding are primary determinants of the System's financial status.

Employer (state) contributions are determined through annual actuarial valuations. Actuaries use demographic data (such as employee age, salary, and service credits), economic assumptions (such as estimated salary increases and interest rates), and decrement assumptions (such as employee turnover, mortality, and disability rates) in performing these valuations. The actuarial valuation process flows generally as follows:

- 1) Based on the demographic data and actuarial assumptions described above, the amount and timing of benefits payable in the future is estimated by the actuary for all participants at the valuation date. Important assumptions in this computation are the turnover, retirement age, and earnings progression for active members, and mortality for all participants.
- 2) The actuary then calculates the Actuarial Present Value of these benefits. This is the amount necessary to be invested at the valuation interest rate, at the valuation date, to provide benefit payments as they come due. Each year's estimated benefit payments are discounted by an assumed interest rate to determine the present dollar value of benefits.
- 3) The final step is to apply a cost method assigning portions of the total value of benefits to past, present, and future periods of employee service. This allocation is accomplished by development of normal cost and accrued benefit cost.

There are several accepted actuarial cost methods. The one used by SURS is the projected unit credit cost method. Under this method, the Actuarial Present Value of the projected pension at retirement age is determined at the individual member's current or attained age. The normal cost for the member for the current year is equal to the portion of the value so determined assigned to this year. The normal cost for the plan for the year is the sum of the normal costs of all active members.

Accrued benefit cost is the portion of the present value of benefits assigned by the cost method to years of service up to the valuation dates at the time the estimate is prepared. Although accrued during each member's employment, benefits are not paid until the member retires; thus the value changes as the member's salary and years of service change. Furthermore, membership continually changes as some members leave and are replaced by new members. The normal cost during FY 2013 was 20.04% of payroll, 8.0% of which is paid by the members' contributions. The remaining 12.04% is the employer's portion of the normal cost.

Actuarial funding of System benefits would require annual State appropriations which at least cover the employer's normal cost (12.04% of payroll) plus an amortization of the System's unfunded accrued benefit cost. The employer's normal cost plus amortization is called employer cost (see Schedule of Payroll Percentages). The State has not funded the System on this basis. Historically, the State funded the System by reimbursement (in full or in part) of benefit payments.

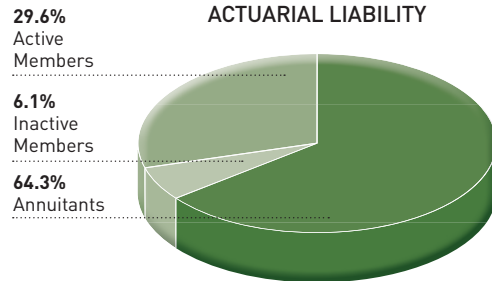
On August 22, 1994, Governor Jim Edgar signed legislation which requires a 15-year phase-in to a 35-year funding plan which provides adequate annual funding of the employer's normal cost while amortizing the unfunded accrued actuarial liability. This law, Public Act 88-0593, went into effect on July 1, 1995. A significant difference between the 1989 and 1994 funding legislation is that the latter takes the form of a continuing appropriation. This removes the pension funding from the General Assembly's annual budget negotiations and requires that the actuarially determined annual funding become an automatic contribution (see Financing Objective). Ultimately, this funding plan will increase the State's pension funding from its current level of 41.5% to approximately 90%.

As required by Public Act 96-1497 the State of Illinois issued \$3.7 billion in General Obligation Bonds March 10, 2011, at an interest rate of 5.56%. The proceeds of these bonds, were used to fund the State's contribution to the five retirement systems, including \$713.5 million paid to SURS.

# ACTUARIAL REPORT

## Valuation Results (\$ millions)

Actuarial liability (reserves)	
For members receiving annuities	\$ 22,099.9
For inactive members	2,084.4
For active members	<u>10,188.8</u>
 Total	 34,373.1
 Actuarial value of assets available for benefits	 <u>14,262.6</u>
 Unfunded accrued actuarial liability	 <u>\$ 20,110.5</u>



## Changes in the Unfunded Accrued Actuarial Liability (\$ millions)

Unfunded accrued actuarial liability at June 30, 2012	\$ 19,220.3
Expected increase in unfunded accrued actuarial liability	349.7
Actuarial differences	
Investments other than 7.75%	391.8
Salary increases	(53.6)
Age and service retirement differences	14.3
Termination differences	9.1
Mortality and disability incidence differences	6.5
Benefit recipient differences	31.2
New entrants	77.4
Other actuarial differences	<u>63.8</u>
Net actuarial loss	540.5
 <b>Unfunded accrued actuarial liability at June 30, 2013</b>	 <b><u>\$ 20,110.5</u></b>

## Actuarial Asset Valuation

The actuarial value of assets is used in determining the funding progress of the System and in establishing the employer contribution rates necessary to adhere to the statutory funding plan. The actuarial value of assets is based on a smoothed expected income investment rate. Investment income in excess or shortfall of the expected 7.75% rate on fair value is smoothed over a five-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year. The use of this actuarial method began with the valuation for the period ending June 30, 2009, as required by Public Act 96-0043, which was signed into law on July 15, 2009.

## Actuarial Cost Method

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

The actuarial liability at any point in time is the value of the projected pensions at that time less the value of future normal costs. For ancillary benefits for active members, in particular disability benefits, death and survivor benefits, termination benefits, and the postretirement increases, the same procedure as outlined above is followed. Estimated annual administrative expenses are added to the normal cost.

## Employee Data

Employee data are provided by the administrative staff of the State Universities Retirement System. Various tests are applied to check internal consistency as well as consistency from year to year. No calculations are made for employees not yet hired as of the valuation date.

## ACTUARIAL REPORT

### Financing Objective

Beginning in fiscal year 1996 the required contribution rates were based upon Public Act 88-0593, which calls for a 15-year-phase-in to a 35-year funding plan which provides for adequate annual funding of the employer's normal cost while amortizing the unfunded accrued actuarial liability. Annual funding under this plan will occur as a continuing appropriation.

### Defined Benefit Plan

#### Employer Contributions Received in Fiscal Year 2013

State appropriations (a)	\$ 1,209,607,030
State pension fund (a)	150,000,000
Federal/trust/employer funds/other	<u>41,874,081</u>
<b>Total</b>	<b><u>\$ 1,401,481,111</u></b>

#### Reconciliation to Total State Appropriations

Defined Benefit Plan–State	
Appropriations received (a)	\$ 1,359,607,030
Defined Contribution Plan–State	
Appropriations received	<u>43,192,970</u>
<b>Total State Appropriations Received</b>	<b><u>\$ 1,402,800,000</u></b>

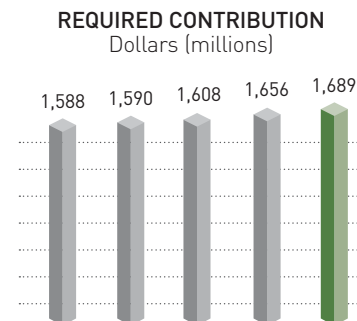
The projected required contribution rates and amounts are as follows:

Fiscal Year	Percentage of Payroll	Assumed Payroll (\$ billions)	Required Contribution (\$ millions)
2015	35.8%	\$ 4.44	\$ 1,588.2
2016	35.0%	4.55	1,589.7
2017	34.5%	4.66	1,607.5
2018	34.6%	4.78	1,655.7
2019	34.4%	4.91	1,688.9

The net State appropriation requirements can be determined by adjusting for such items as State Pension Fund appropriations and contributions from federal and trust funds. The results are based on the projected unit credit actuarial cost method, and on the data provided, and assumptions used, for the June 30, 2013 actuarial valuation. In order to determine projected contribution rates and amounts, the following additional assumptions and estimates were used:

- 1) Covered payroll of \$4.34 billion for fiscal year 2014.
- 2) 3.75% per annum rate of increase in covered payroll.
- 3) Total employer contributions of \$1,551,766,000 for fiscal year 2014.

As of June 30, 2013, the Unfunded Accrued Actuarial Liability (UAAL) to be amortized was \$20,110,483,000.



# ACTUARIAL REPORT

## Summary of Major Actuarial Assumptions

### ■ Mortality

Mortality rates are based upon the RP2000 Combined Mortality Table, with rates multiplied by 0.80 for males and 0.85 for females. The assumed mortality rates for active members are 85% of the postretirement assumption for males and 60% for females.

### ■ Interest

7.75% per annum, compounded annually.

### ■ Termination

Rates of withdrawal are based upon ages and years of service as developed from plan experience. Shown at right is a table of termination rates based upon experience in the 2006-2010 period. The assumption consists of a table of ultimate turnover rates by years of service credit.

### ■ Salary Increases

Each member's compensation is assumed to increase by 3.75% each year; 2.75% reflecting salary inflation and 1.00% reflecting standard of living increases. That rate is increased for members with less than 9 years of service as shown at right.

The payroll of the entire system is assumed to increase at 3.75% per year for purposes of calculating employer required contributions.

### ■ Retirement Age

Upon eligibility, active members are assumed to retire as shown at right.

### ■ Net Position

Assets available for benefits are used at fair value.

### ■ Expenses

As estimated and advised by the SURS staff, based on current expenses with an allowance for expected increases.

### ■ Spouse's Age

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

In addition to the above, other assumptions used include disability incidence, recovery from disability, mortality of disabled lives, marriage, remarriage rates with ages, and number of children.

These assumptions were adopted effective with the June 30, 2011 actuarial valuation. They were developed based upon an experience study completed in March, 2011.

## Termination Rates

Years of Service	All Members
0	.220
1	.220
2	.160
3	.140
4	.120
5	.105
6	.090
7	.075
8	.065
9	.060
10	.055
15	.030
20	.017
21-29	.015

## Annual Compensation Increases

Service Year	Additional Increase	Service Year	Additional Increase
0	.1200	7	.0575
1	.1000	8	.0550
2	.0850	9-13	.0500
3	.0725	14-18	.0475
4	.0650	19-33	.0425
5	.0625	34 & over	.0375
6	.0600		

## Retirement Rates

Age	Members Eligible for Normal Retirement		Members Eligible for Early Retirement	
	Hired Before 1/1/11	Hired on or After 1/1/11	Hired Before 1/1/11	Hired on or After 1/1/11
Under 50	.40	-	-	-
51	.38	-	-	-
52	.38	-	-	-
53	.38	-	-	-
54	.34	-	-	-
55	.32	.070	-	-
56	.26	.050	-	-
57	.26	.045	-	-
58	.26	.055	-	-
59	.26	.060	-	-
60	.11	-	-	-
61	.11	-	-	-
62	.13	-	-	.35
63	.13	-	-	.15
64	.13	-	-	.15
65	.17	-	-	.15
66	.15	-	-	.15
67	.15	-	.50	-
68	.15	-	.35	-
69	.15	-	.30	-
70-79	.30	-	.30	-
80+	1.00	-	1.00	-

## ANALYSIS OF FUNDING

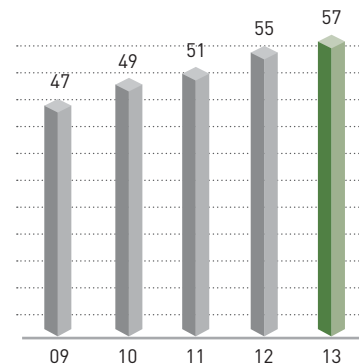
### Analysis of Financial Experience Gains & Losses in Accrued Actuarial Liability For Fiscal Year Ended June 30, 2013 (\$ millions)

Actuarial (gains) and losses		
Investments other than 7.75%	\$	391.8
Salary increases other than 3.75%		(53.6)
Age and service retirement differences		14.3
Termination differences		9.1
Mortality and disability incidence differences		6.5
Benefit recipient differences		31.2
New entrants		77.4
Other actuarial differences		63.8
		<hr/>
Total actuarial loss	\$	540.5
		<hr/>
Expected increase in UAAL		349.7
		<hr/>
<b>Total financial loss</b>	<b>\$</b>	<b>890.2</b>
		<hr/> <hr/>

### Schedule of Increases and Decreases of Benefit Recipients 10-Year Summary

Fiscal Year	Beginning Balance	Additions	Subtractions	Ending Balance
2004	36,390	3,498	1,401	38,487
2005	38,487	2,559	1,246	39,800
2006	39,800	3,140	1,302	41,638
2007	41,638	3,325	1,568	43,395
2008	43,395	3,498	1,547	45,346
2009	45,346	3,017	1,553	46,810
2010	46,810	3,599	1,506	48,903
2011	48,903	4,207	1,740	51,370
2012	51,370	4,782	1,620	54,532
2013	54,532	4,529	1,832	57,229

**BENEFIT RECIPIENTS**  
Persons (thousands)



### Active Participant Statistics 10-Year Summary

Fiscal Year	Males	Females	Total Actives	Percent Change	Average Salary	Percent Change	Average Age	Average Service Credit
2004	31,803	41,189	72,992	2.1	36,880	(0.4)	46.3	9.3
2005	31,207	40,455	71,662	(1.8)	39,221	6.3	46.8	9.7
2006	31,024	40,735	71,759	0.1	40,696	3.8	47.0	9.8
2007	31,019	41,073	72,092	0.5	42,373	4.1	47.0	9.8
2008	31,158	41,928	73,086	1.4	43,460	2.6	47.0	9.8
2009	31,185	42,514	73,699	0.8	45,204	4.0	47.3	9.9
2010	30,935	42,061	72,996	(1.0)	45,988	1.7	47.4	10.1
2011	30,448	41,440	71,888	(1.5)	46,402	0.9	47.4	10.1
2012	30,198	40,858	71,056	(1.2)	47,167	1.6	47.1	9.8
2013	29,963	40,593	70,556	(0.7)	48,276	2.4	47.1	9.9

# ANALYSIS OF FUNDING

## Analysis of Change in Membership 10-Year Summary

Fiscal Year	Beginning Members	Additions	Retired	Died	Other Terminations	Ending Members
2004	71,456	13,073	2,001	172	9,364	72,992
2005	72,992	10,310	1,566	180	9,894	71,662
2006	71,662	10,199	1,864	160	8,078	71,759
2007	71,759	10,021	1,749	173	7,766	72,092
2008	72,092	10,548	1,903	88	7,563	73,086
2009	73,086	9,610	1,484	120	7,393	73,699
2010	73,699	8,341	1,761	115	7,168	72,996
2011	72,996	8,434	2,200	106	7,236	71,888
2012	71,888	9,739	2,553	110	7,908	71,056
2013	71,056	9,188	1,811	118	7,759	70,556

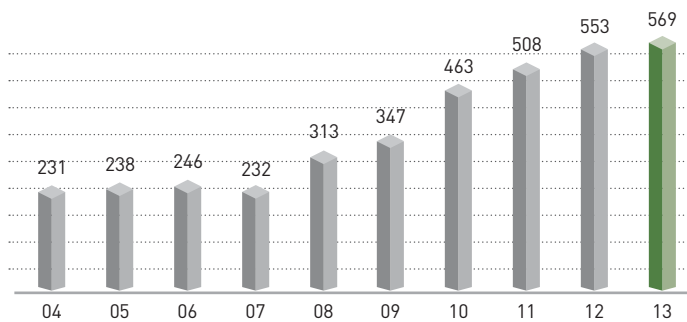
In an inflationary economy, the value of dollars is decreasing. This environment results in employee pay increasing in dollar amounts, retirement benefits increasing in dollar amounts, and then, unfunded accrued liabilities increasing in dollar amounts, all at a time when the actual substance of these items may be decreasing. Looking at just the dollar amounts of unfunded accrued liabilities can be misleading. Unfunded accrued liabilities dollars divided by active employee payroll dollars provides a helpful index which shows that the smaller the ratio of unfunded liabilities to active member payroll, the stronger the system. Observation of this relative index over a period of years will give an indication of whether the System is becoming financially stronger or weaker.

## Summary of Accrued and Unfunded Accrued Liabilities (\$ millions)

Fiscal Year	Accrued Liabilities	Net Assets at Market/Actuarial Value of Assets (A)	Assets as a % of Accrued Liabilities	Unfunded Accrued Liabilities (UAL)	Active Member Payroll	UAL as a % of Active Member Payroll
2004	\$ 19,078.6	\$ 12,586.3	66.0	\$ 6,492.3	\$ 2,814.1	230.7
2005	20,349.9	13,350.3	65.6	6,999.6	2,939.1	238.1
2006	21,688.0	14,175.1	65.4	7,513.8	3,054.1	246.0
2007	23,362.1	15,985.7	68.4	7,376.4	3,181.0	231.9
2008	24,917.7	14,586.3	58.5	10,331.4	3,303.2	312.8
2009	26,316.2	14,282.0	54.3	12,034.2	3,463.9	347.4
2010	30,120.4	13,966.6	46.4	16,153.8	3,491.1	462.7
2011	31,514.3	13,945.7	44.3	17,568.6	3,460.8	507.6
2012	33,170.2	13,949.9	42.1	19,220.3	3,477.2	552.8
2013	34,373.1	14,262.6	41.5	20,110.5	3,533.9	569.1

(A) Per Public Act 96-0043, the actuarial value of assets is used in determining the funding progress of the System and in establishing the employer contribution rates necessary to adhere to the statutory funding plan. The actuarial value of assets is based on a smoothed investment income rate. Investment income in excess or shortfall of the expected 7.75% rate on fair value is smoothed over a five-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year.

UNFUNDED ACCRUED LIABILITIES AS A % OF PAYROLL  
Payroll (%)



An increasing trend indicates a system is becoming financially weaker.



## TESTS OF FINANCIAL SOUNDNESS

The following four exhibits illustrate different measures of the financial soundness of the System. The Schedule of Funding compares State appropriations to the actuarial funding requirements, statutory funding requirement, and System expense. The Funding Ratios exhibit shows the percentage of the System's accrued benefit cost covered by net position. This funding ratio is used to assess the System's ability to make future benefit payments. The exhibit illustrates the ratio of net position to the System's accrued benefit cost over 10 years, with net position valued both at cost and at market. The Percentage of Benefits Covered by Net Position exhibit compares the plan's net position with the members' accumulated contributions, the amount necessary to cover the present value of benefits currently being paid, and the employer's portion of future benefits for active members. The final test, Payroll Percentages, compares member payroll to unfunded accrued benefit cost, normal cost, and total required contributions. These percentages should decrease over the years if SURS is growing stronger.

### Schedule of Funding: Fiscal Year 2004-2013 (\$ millions)

Fiscal Year	Funding Requirements				Covered Percentages		
	Gross ARC {1}(A)	Net ARC {2}(B)	System Expense {3}(C)	Employer Contribution {4}(D)	Gross ARC {5}(E)	Net ARC {6}(F)	System Expense {7}(G)
2004	\$ 934.8	\$ 691.0	\$ 926.7	\$ 1,757.5	188.0%	254.4%	189.6%
2005	859.7	607.8	1,016.5	285.4	33.2	47.0	28.1
2006	914.9	662.0	1,097.4	180.0	19.7	27.2	16.4
2007	968.3	705.9	1,189.1	261.1	27.0	37.0	22.0
2008	971.6	707.5	1,287.8	344.9	35.5	48.8	26.8
2009	1,147.3	874.0	1,384.9	451.6	39.4	51.7	32.6
2010	1,278.3	1,003.3	1,489.6	696.6	54.5	69.4	46.8
2011	1,519.2	1,259.0	1,623.5	773.6	50.9	61.4	47.6
2012	1,701.6	1,443.3	1,756.9	985.8	57.9	68.3	56.1
2013	1,794.4	1,549.3	1,928.0	1,401.5	78.1	90.5	72.7

- (A) The annual required contribution as defined in GASB Statement No. 25, "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans."  
 (B) The annual required contribution per Note A, less member contributions.  
 (C) Benefit and administrative expense.  
 (D) Contributions from The State of Illinois employer units and Pension Fund, and employer contributions from trust and federal funds.  
 (E) Employer contributions divided by the total required contribution (Column 4 divided by Column 1).  
 (F) Employer contributions divided by the employer required contribution (Column 4 divided by Column 2).  
 (G) Employer contributions divided by System expense (Column 4 divided by Column 3).

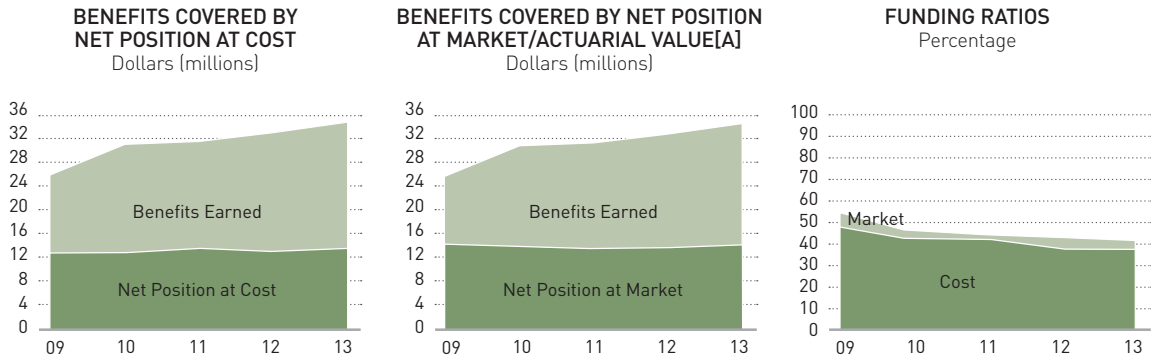
### Funding Ratios

#### 10-Year Summary (\$ millions)

Fiscal Year	Net Position at Cost	Net Position at Market/ Actuarial Value of Assets (A)	Actuarial Funding Requirement	Funding Ratio	
				Cost	Market/Actuarial
2004	\$ 11,371.7	\$ 12,586.3	\$ 19,078.6	59.6%	66.0%
2005	11,736.0	13,350.3	20,349.9	57.7	65.6
2006	13,414.9	14,175.1	21,688.9	61.9	65.4
2007	14,089.0	15,985.7	23,362.1	60.3	68.4
2008	14,282.3	14,586.3	24,917.7	57.3	58.5
2009	12,485.0	14,282.0	26,316.2	47.4	54.3
2010	12,672.7	13,966.6	30,120.4	42.1	46.4
2011	13,302.2	13,945.7	31,514.3	42.2	44.3
2012	12,806.2	13,949.9	33,170.2	38.6	42.1
2013	13,347.7	14,262.6	34,373.1	38.8	41.5

(A) Per Public Act 96-0043, the actuarial value of assets is used in determining the funding progress of the System and in establishing the employer contribution rates necessary to adhere to the statutory funding plan. The actuarial value of assets is based on a smoothed investment income rate. Investment income in excess or shortfall of the expected 7.75% rate on fair value is smoothed over a five-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year.

# TESTS OF FINANCIAL SOUNDNESS



## Percentage of Benefits Covered by Net Position 10-Year Summary (\$ millions)

Fiscal Year	Member Accumulated Contributions {1}(A)	Members Currently Receiving Benefits {2}(A)	Active/Inactive Members/ Employers' Portion {3}(A)	Net Position/ Actuarial Value of Assets (B)	% of Benefits Covered by Net Position/Actuarial Value of Assets		
					{1}	{2}	{3}
2004	\$ 4,529.6	\$ 10,145.8	\$ 4,402.9	\$ 12,586.3	100.0%	79.4%	-
2005	4,726.1	10,842.1	4,781.7	13,350.3	100.0	79.5	-
2006	4,957.3	11,701.3	5,030.4	14,175.1	100.0	78.8	-
2007	5,239.9	12,838.1	5,284.1	15,985.7	100.0	83.7	-
2008	5,426.8	13,978.1	5,512.8	14,586.3	100.0	65.5	-
2009	5,688.9	14,802.6	5,824.7	14,282.0	100.0	58.1(C)	-
2010	5,916.3	16,834.4	7,369.7	13,966.6	100.0	47.8	-
2011	6,007.4	18,918.1	6,588.8	13,945.7	100.0	42.0	-
2012	5,962.4	20,651.4	6,556.4	13,949.9	100.0	38.7	-
2013	5,830.1	22,099.9	6,443.1	14,262.6	100.0	38.2	-

(A) A test of financial soundness of a system is its ability to pay all promised benefits when due. Column 1 represents the value of members' accumulated contributions. Column 2 represents the amount necessary to pay participants currently receiving benefits. Column 3 represents the employer's portion of future benefits for active members. Section 5/15-156 of the Illinois Compiled Statutes provides an order of priority: that is, members' contributions would be covered first, then current benefit recipients and the employer portion of active and inactive employees. For a system receiving actuarially determined contribution amounts, the total of actuarial values in Columns 1 and 2 should generally be fully covered by assets, and the portion of the actuarial value of Column 3 covered by assets should increase over time.

(B) Per Public Act 96-0043, the actuarial value of assets is used in determining the funding progress of the System and in establishing the employer contribution rates necessary to adhere to the statutory funding plan. The actuarial value of assets is based on a smoothed investment income rate. Investment income in excess or shortfall of the expected 7.75% rate on fair value is smoothed over a five-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year.

(C) If the market value of net position are used, the percent of benefits covered for category 2 is 37.5.

**Payroll Percentages: Fiscal Year 2004-2013 (\$ millions)**

Fiscal Year	Member Payroll	Unfunded Accrued Benefit Cost		Employer Cost			Employer Contributions			
		Amount	% of Payroll	Normal Cost (A)	% of Payroll	Amortization of Unfunded Liability	Total (B)	% of Payroll	Emp Cont.	% of Payroll
2004	\$ 2,814.1	\$ 6,492.3	230.7%	\$ 267.3	9.5%	\$ 667.5	\$ 934.8	33.2%	\$ 1,757.5	62.5%
2005	2,939.1	6,999.6	238.1	271.0	9.2	588.7	859.7	29.2	285.4	9.7
2006	3,054.1	7,513.8	246.0	292.3	9.6	622.6	914.9	30.0	180.0	5.9
2007	3,181.0	7,376.4	231.9	301.4	9.5	666.9	968.3	30.4	261.1	8.2
2008	3,303.2	10,331.4	312.8	310.4	9.1	671.9	971.6	29.4	344.9	10.4
2009	3,463.9	12,034.2	347.4	317.9	9.2	829.4	1,147.3	33.1	451.6	13.0
2010	3,491.1	16,153.8	462.7	355.4	10.2	922.9	1,278.3	36.6	696.6	20.0
2011	3,460.8	17,568.6	507.6	463.6	13.4	1,055.6	1,519.2	43.9	773.6	22.4
2012	3,477.2	19,220.3	552.8	465.6	13.4	1,236.0	1,701.6	48.9	985.8	28.4
2013	3,533.9	20,110.5	569.1	454.6	12.9	1,339.9	1,794.4	50.8	1,401.5	39.7

(A) Actuarially determined normal cost less member contributions.

(B) Total annual required contribution as defined by GASB Statement No. 25, "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans."

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls - Defined Benefit Plan  
10-Year Summary**

Fiscal Year	Beginning of Year Balance	Number Added to Rolls	Allowances	Number Removed from Rolls	Allowances	End of Year Balance	Annual Pension Benefit Amount	Average Annual Benefit	% Increase in Average Benefit
2004	36,390	3,498	-	1,401	-	38,487	\$ 899,587,841	\$ 23,374	3.7%
2005	38,487	2,559	-	1,246	-	39,800	983,321,902	24,707	5.7
2006	39,800	3,140	-	1,302	-	41,638	1,067,075,275	25,627	3.7
2007	41,638	3,325	-	1,568	-	43,395	1,155,124,989	26,619	3.9
2008	43,395	3,498	-	1,547	-	45,346	1,254,030,795	27,655	3.9
2009(A)	45,346	3,017	127,710,300	1,553	(30,203,460)	46,810	1,351,537,635	28,873	4.4
2010	46,810	3,599	139,122,054	1,506	(33,710,616)	48,903	1,454,470,195	29,742	3.0
2011	48,903	4,207	169,921,275	1,740	(40,835,477)	51,370	1,619,615,689	31,528	6.0
2012	51,370	4,782	191,103,116	1,620	(39,279,398)	54,532	1,771,439,407	32,484	3.0
2013	54,532	4,529	184,293,143	1,832	(46,183,430)	57,229	1,909,495,120	33,366	2.7

(A) FY 2009 is the first year in which the allowances related to retirees added to or removed from the rolls have been calculated as part of the actuarial valuation.

