Illinois State Retirement Systems

Financial Condition as of June 30, 2015

Commission on Government Forecasting & Accountability

March 2016

Commission on Government Forecasting and Accountability

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Executive Summary

This report examines the financial status of the five State-funded retirement systems.
The following is a summary of the findings:

- Public Act 88-0593 requires the State to make contributions to the State retirement systems such that the total assets of the systems will equal 90% of their total actuarial liabilities by Fiscal Year 2045. The contributions are required to be made at a level percent of payroll in Fiscal Years 2011 through 2045, following a phase-in period that began in Fiscal Year 1996.

- From FY 2001 through FY 2015, the combined unfunded liabilities of the systems increased by $86 billion based upon the market value of assets. The main factors for this increase in unfunded liabilities were actuarially insufficient employer contributions, changes in actuarial assumptions and lower-than-assumed investment returns over 5 years, along with other miscellaneous actuarial factors.

- The discussion of the financial condition of the State retirement systems centers on the funded ratio, or net assets divided by accrued liabilities. A system with a 100% funded ratio is fully funded because its assets are sufficient to pay all benefits earned by employees. Based upon the market value of assets, the funded ratio of the State retirement systems combined was 41.9% as of June 30, 2015.

- Projections of the future financial condition of the State retirement systems provide valuable information on the effect that past funding has had on the retirement systems' financial position. The funding projections shown in the appendices A-L of this report were prepared by the systems' actuaries and by CGFA's actuary based on the June 30, 2015 actuarial valuations.

- If the State continues funding according to Public Act 88-0593, the projected accrued liabilities of the State retirement systems will increase from $197.9 billion at the end of FY 2016 to **$338.4** billion at the end of FY 2045. At the same time, the projected actuarial value of assets is projected to increase from $83.1 billion to **$304.5** billion. Consequently, the projected unfunded liabilities are projected to decrease from $114.8 billion at the end of FY 2016 to **$33.8** billion at the end of FY 2045, and the projected funded ratio is expected to increase from 42.0% in FY 2016 to 90.0% by the end of FY 2045. All of the projected figures in this paragraph come from the various systems' actuaries, and are predicated upon the state making the necessary contribution as required by law.

- Each of the 5 state retirement systems provided a certification of the required state contribution for FY 2017. These certification letters are displayed in the appendices.

- For FY 2015, all systems, except for JRS which experienced neither a gain nor loss from salary increases, experienced a net actuarial gain from investment returns and salary increases. Overall, investment returns lowered the unfunded liabilities by $2.4 billion in FY 2015. More information on this topic can be found in the "Change in Unfunded Liabilities" charts (Chart 2 and 3) located herein.

- The first section in this report discusses in detail the characteristics of the two-tier retirement system enacted by P.A. 96-0889 and P.A. 96-1495, then moves on to pension reform of the State systems enacted by P.A. 98-0599.

FY 2016 Pension Appropriation by Fund

($ in Millions)

***Only TRS received an appropriation via P.A. 99-0005. The other systems received appropriations by exercising continuing appropriation authority via P.A. 88-0593.**

System	GRF	Other State Funds	Total
TRS	3,742.6	$0.0	$3,742.60
SURS	1,411.5	$190.0 [1]	$1,601.50
SERS	1,381.2	$743.7	$2,124.9 [2]
GARS	16.1	$0.0	$16.1
JRS	132.1	$0.0	$132.1
Total	**$6,683.5**	**$933.7**	**$7,617.2**

[1] *This amount might change because SURS cannot confirm the exact amount paid from the State Pensions Fund until the end of FY 2016.*
[2] *SERS total FY 2016 appropriation includes a total of $80 million in 2003 Pension Obligation Bonds debt service. Of this amount, according to SERS, $52 million comes from GRF and $28 million comes from OSF.*

FY 2017 Estimated Pension Appropriation by Fund

($ in Millions)

System	GRF	Other State Funds	Total [3]
TRS	3,986.6	$0.0	$3,986.6
SURS	1,481.4	$190.0	$1,671.4 [4]
SERS	1,363.3	$734.1	$2,097.4 [5]
GARS	21.7	$0.0	$21.7
JRS	131.3	$0.0	$131.3
Total	**$6,984.3**	**$924.1**	**$7,908.4**

Total FY 2016 Pension Appropriation: $ 7,617.3 Million
Total FY 2017 Pension Appropriation: $ 7,908.4 Million

Total Increase, FY 17 over FY 16: $ 291.1 Million

[3]*The amounts shown above in the "Total" column reflect the State systems' final FY 2017 certification pursuant to P.A. 97-0694, the State Actuary Law. This chart is meant to be an estimate only insofar as the FY 2017 appropriation by fund is concerned.*
[4] *The SURS "Other State Funds" amount assumes that SURS will receive an FY 2017 appropriation from the State Pension Fund in the same amount that SURS is expected to receive from the State Pension Fund in FY 2016. SURS' historical appropriation from the State Pension Fund varies from year to year.*
[5] *SERS 2017 estimated appropriation includes a total of $82.97 million in 2003 Pension Obligation Bonds debt service. Of this amount, according to SERS, $53.93 million comes from GRF and $29.04 million comes from OSF. The SERS "Other State Funds" amount is based upon the system's assumption that 65% of SERS' FY 2017 appropriation will come from GRF, while 35% will come from Other State Funds.*

I. Public Act 96-0889 (SB 1946) and Public Act 96-1495 (SB 3538)

Two-Tier Pension Reform for the State Systems, IMRF, and Chicago Funds
Public Act 96-0889
Senate Bill 1946 – Cullerton (Madigan)

I. Overview of Key Provisions of Public Act 96-0889 (SB 1946)

Effective Date

• January 1, 2011

Systems Impacted

• IMRF, Chicago Municipal, Cook County, Cook County Forest Preserve, Chicago Laborers, Chicago Park District, Metropolitan Water, SERS, SURS, TRS, Chicago Teachers (Judges and GA separate; CTA, Police, and Fire excluded)

Retirement Eligibility – Except State Policemen, Firefighters, and Correctional Guards

• Normal Retirement: 67 years old with 10 years of service
• Early Retirement: 62 years old with 10 years of service with a 6% per year reduction in benefits for each year age is under 67
• Annuity based on highest 8 years out of last 10 years of service
• Annual Final Average Salary may not exceed $106,800, as automatically increased by the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year

Retirement Eligibility – State Policemen, Firefighters, and Correctional Guards

• Normal Retirement: 60 years old with 20 years of service
• State Policemen, Firefighters, DOC Guards are still eligible for Alternative Formula

Annual Increases in Annuity

• Increases begin at the later of the first anniversary of retirement or at age 67
• Increases equal to the lesser of 3% of one-half the annual increase in the CPI-U during the preceding 12-month calendar year; if increase in CPI is zero or if there is a decrease in CPI, then no COLA is payable
• Increase not compounded

Survivor Benefits

• 66.7% of the earned retirement benefit at death
• Increased by the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year
• Increases not compounded

"Double Dipping" Prohibited

• Prohibition on simultaneously collecting a pension and a salary with public employer.

Chicago Teachers' Extension of Funding Plan

- Contributions specified in Fiscal Years 2011 – 2014
- New Goal: CTPF must reach 90% by 2059 (currently 2045)

Retirement Eligibility – Judges and General Assembly

- Normal Retirement: 67 years old with 8 years of service
- Early Retirement: 62 years old with 8 years of service

Change in Benefit Formula – Judges and General Assembly

- 3% of Final Average Salary for each year of service
- Maximum annuity 60% of Final Average Salary
- Retirement annuity based on highest 8 out of final 10 years of service

Annual Increase in Annuity – Judges and General Assembly

- Increases begin after attainment of age 67
- Increases equal to the lesser of 3% or the annual increase in the CPI-U during the preceding 12-month calendar year
- Increases compounded

Annual Increase in Survivor's Annuity – Judges and General Assembly

- 66.7% of the earned retirement benefit at death
- Increases equal to the lesser of 3% or the annual increase in the CPI-U during the preceding 12-month calendar year
- Increases compounded

Police and Fire Pension Reform - Downstate, IMRF, and Chicago
P.A. 96-1495
SB 3538 – Link (McCarthy)

Effective Date
- January 1, 2011

Systems Impacted
- Downstate Police, Downstate Fire, Chicago Police, Chicago Fire, IMRF (SLEP)

Creation of a Two Tier System for Firefighters and Police Officers
- Benefits for current police officers and firefighters have not changed.
- Changes only apply to police officers and firefighters hired on or after January 1, 2011.
- Normal Retirement: 55 years old with 10 years of service.
- Early Retirement: 50 years old with 10 years of service, but penalty of ½% for each month that the police officer or firefighter is younger than 55 years.
- Retirement Pension based upon 2.5% of Final Average Salary for a maximum of 75%.
- Annuity based on highest 8 years out of last 10 years of service.
- Annual Final Average Salary may not exceed $106,800, as automatically increased by the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year.

Annual Increases in Annuity
- Increases begin at age 60 either on the January 1st after police officer/firefighter retires or the first anniversary of pension starting date, whichever is later.
- Increases equal to the lesser of 3% of one-half the annual increase in the CPI-U during the preceding 12-month calendar year; if increase in CPI is zero or if there is a decrease in CPI, then no COLA is payable.
- Increase not compounded

Survivor Benefits
- 66.7% of the earned retirement benefit at death
- Increased by the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year
- Increases not compounded

Municipal Funding Provisions
- Pension funds must be 90% funded by Fiscal Year 2040
- Annual Municipal contributions will be calculated as level percentage of payroll under Projected Unit Credit Actuarial Cost Method.
- Comptroller is authorized to redirect municipal monies directly to pension funds if municipal contributions are insufficient.
- Future pension fund studies are authorized to review the condition of pension funds and potential investment pooling.

II. Pension Legislation History

86th General Assembly (1989 – 1991)

Compounded Annual Cost of Living Adjustments (P.A. 86-0273)

Public Act 86-1273, which took effect on August 23, 1989, provided for compounded 3% annual cost of living adjustments (COLA's) beginning January 1, 1990 for annuitants in all five of the State-funded retirement systems (TRS, SERS, SURS, JRS and GARS). Prior to the enactment of P.A. 86-0273, annual COLA's had been calculated on a simple non-compounded basis.

88th General Assembly (1993 – 1995)

Funding Plan for State-Funded Retirement Systems (P. A. 88-0593)

Public Act 88-0593 implemented a funding plan for the five State retirement systems that requires the State to make contributions as a level percent of payroll in fiscal years 2011 through 2045, following a phase in which began in fiscal year 1996. The contributions are required to be sufficient, when added to employee contributions, investment income, and other income, to bring the total assets of the systems to 90% of the actuarial liabilities by fiscal year 2045. Each system is required to certify the amount necessary for the next fiscal year by November 15 of the current fiscal year, for inclusion in the Governor's budget.

90th General Assembly (1997 – 1999)

SERS Formula Increase (P.A. 90-0065)

P.A. 90-0065 (HB 0110) implemented a flat rate formula for SERS Regular Formula members covered by Social Security of 1.67% for all years of service. Regular Formula members not covered by Social Security moved to a flat rate formula of 2.2% for all years of service. The Act applied to all members retiring on or after January 1, 1998.

TRS Formula Increase (P.A. 90-0582)

P.A. 90-0582 implemented a retirement formula increase for members of the Teachers' Retirement System. The Act provided that active teachers would earn creditable service on or after July 1, 1998 at a rate of 2.2% of final average salary for each year of service. The Act also allowed teachers to make contributions to TRS in order to upgrade past service earned prior to the implementation of the flat-rate formula.

Creation of Self-Managed Plan in SURS (P.A. 90-0448)

P.A. 90-0448 gave members of the State Universities Retirement System the option to enroll in a Self-Managed Plan (SMP) in which participants are able to choose from a variety of investment options ranging from mutual funds to annuity contracts. Members who choose the SMP become vested after earning 5 years of service credit.

91st General Assembly (1999 – 2001)

"Rule of 85" for SERS (P.A. 91-0927)

P.A. 91-0927 created a "Rule of 85" for the State Employees' Retirement System, wherein an employee is eligible to retire when the employee's age plus service credit equals 85 years.

92nd General Assembly (2001 – 2003)

SERS Alternative Formula Increase (P.A. 92-0014)

P.A. 92-0014 changed the retirement formula for alternative formula employees to 2.5% for each year of service for members coordinated with Social Security and 3.0% for each year of service for non-coordinated members. The Act increased the maximum retirement annuity for alternative formula employees to 80% of final average salary.

Addition of Highway Maintenance Workers to the SERS Alternative Formula (P.A 92-0257)

P.A 92-0257 added state highway maintenance workers to the alternative formula under SERS. Specifically, the Act included persons employed on a full-time basis by the Illinois Department of Transportation in the position of highway maintainer, highway maintenance lead worker, heavy construction equipment operator, and other job titles. The Act also added several positions within the Illinois State Toll Highway Authority such as equipment operator/laborer, welders, sign makers/hangers, and other job titles.

SERS Early Retirement Incentive (Public Act 92-0566)

Public Act 92-0566 created the 2002 Early Retirement Incentive for certain SERS and TRS members. The ERI allowed members to purchase up to five years of service credit and age enhancement. Eligible members were then required to leave employment between July 1, 2002 and December 31, 2002. Over 11,000 members took advantage of the ERI, and a majority of the participants were eligible to receive benefits immediately following termination.

93rd General Assembly (2003 – 2005)

Pension Obligation Bond (P.A. 93-0002)

Public Act 93-0002 amended the General Obligation Bond Act to increase bond authorization by $10 billion. These general obligation bonds were designated as a pension funding series. The State used a portion of the bond proceeds to pay part of the FY 2003 State contribution and all of the FY 2004 State contributions to the retirement systems. Of the $10 billion, $7.3 billion was used to reduce the unfunded liabilities of the State-funded retirement systems.

Along with the $10 billion increase in bond authorization, Public Act 93-0002 included a provision requiring State contributions to the retirement systems to be reduced by the amount of the debt service (the amount of principal and interest payments) on the bonds. The legislation set the maximum annual employer contribution to each system at the amount that would have been contributed without the bond issuance, minus the total debt service payments for the fiscal year. Effectively, the reduction in retirement contributions is used to pay the debt service on the bonds.

FY 2006 – FY 2007 "Pension Holiday" (P.A. 94-0004)

Public Act 94-0004 temporarily deviated from the funding plan created in 1994 by Public Act 88-0593. The Act set the State contribution levels for FY 2006 and FY 2007, rather than requiring the State to make contributions based on actuarial calculations set forth under P.A. 88-0593. In addition, the separate funding of the liability created by the 2002 SERS Early Retirement Incentive was eliminated. The following table provides a comparison of the FY 2006 certified contributions and FY 2007 contributions with the State contributions that were required by Public Act 94-0004.

TABLE 1

Public Act 88-0593 Contributions vs.
Public Act 94-0004 Contributions
(in Millions $)

	FY 2006			FY 2007		
System	PA 88-0593	PA 94-0004	Difference	PA 88-0593	PA 94-0004	Difference
TRS	$1,058.5	$534.6	$523.9	$1,233.1	$735.5	$497.6
SERS	690.3	203.8	486.5	832.0	344.2	487.8
SURS	324.9	166.6	158.3	391.9	252.1	139.8
JRS	38.0	29.2	8.8	44.5	35.2	9.3
GARS	5.5	4.2	1.3	6.3	5.2	1.1

SERS Alternative Formula Changes (P.A. 94-0004)

Prior to the enactment of P.A. 94-0004, all employees of the Department of Corrections were covered by the SERS alternative formula. Public Act 94-0004 provides that for employees entering service after July 1, 2005, only Department of Corrections employees who are headquartered at a correctional facility, parole officers, members of an apprehension unit, members of an intelligence unit, and DOC investigators will be covered by the alternative formula. New employees included in other groups currently covered by the alternative formula will continue to be eligible for the SERS alternative formula.

SURS Money Purchase Retirement Option Changes (P.A. 94-0004)

Public Act 94-0004 eliminated the money purchase formula for employees who became members of SURS after July 1, 2005. Beginning in FY 2006, the Act requires the Comptroller (rather than the SURS Board of Trustees) to determine the interest rate to be used when crediting interest to the accounts of current employees.

Salary Increase Payments For Teachers and State University Personnel (P.A. 94-0004)
Public Act 94-0004 provided a mechanism by which the liability associated with salary increases above a certain level may be shifted to the employer (school districts and universities) providing those salary increases. The Act provides that during the years used to determine final average salary, the employer must pay to TRS or SURS an amount equal to the present value of the increase in benefits resulting from salary increases above 6%. The employer contribution required by Public Act 94-0004 must be paid in a lump sum within 30 days of the receipt of the bill from the retirement system. The Act specifies that the retirement system must calculate the contribution amount using the same actuarial assumptions and tables used for the most recent actuarial valuation.

The salary increase payment provision for TRS and SURS contained in Public Act 94-0004 does not apply to salaries paid under contracts or collective bargaining agreements entered into, amended, or renewed before the effective date of the Act (June 1, 2005).

Teacher Sick Leave Service Credit (P.A. 94-0004)
Prior to the enactment of P.A. 94-0004, members of TRS could establish up to 2 years of service credit for unused and uncompensated sick leave without making contributions. Public Act 94-0004 provides that if days granted by an employer are in excess of the normal annual sick leave allotment, the employer is required to contribute to TRS the normal cost of the benefits associated with this excess sick leave.

Retention of "Pipeline" Early Retirement Option in TRS (P.A. 94-0004)
An Early Retirement Option for members of TRS was created in 1980 and, prior to 2005, had been extended every 5 years since its inception. (Public Act 91-0017 extended the TRS ERO option until June 30, 2005). If an employee exercised the ERO option (i.e. retires before age 60 with less than 34 years of service) employee and employer contributions were required to avoid discount. The employee contribution was 7% of salary for each year less than age 60 or 35 years of service (whichever is less) and the employer contribution was 20% of salary for each year less than age 60. Public Act 92-0582 removed the employee contribution for members with 34 years of service and Public Act 91-0017 removed the employer contribution requirement for employees who retire with 34 years of service.

Public Act 94-0004 allowed TRS members to participate in the "pipeline" ERO if the member retired between June 30, 2005 and July 1, 2007.

New Early Retirement Option in TRS (P.A. 94-0004)
Public Act 94-0004 creates a new ERO effective July 1, 2005. If an employee exercises the new ERO option (retires before age 60) employee and employer contributions are required to avoid discount. The employee contribution is 11.5% of salary for each year less than age 60 or 35 years of service (whichever is less) and the employer contribution is 23.5% of salary for each year less than age 60. In addition, all active TRS members are required to contribute 0.4% of salary towards the cost of ERO. This contribution would be refunded, without interest, if the member does not utilize the ERO, if the member takes a refund from TRS, if the member dies, or if the ERO is discontinued.

By June 30, 2012 (and every 5 years thereafter), TRS is required to review the System's ERO experience to determine if the required contributions adequately fund the ERO. The TRS Board of Trustees must submit the results to the Commission on Government Forecasting and Accountability, who must then recommend to the General Assembly (by February 1, 2013) if the required ERO contributions should be adjusted. If the General Assembly does not adjust the required contributions as recommended, the ERO would be terminated at the end of that fiscal year.

Extension of Early Retirement Option for Chicago Teachers (P.A. 94-0004)
Public Act 91-0017 extended the Early Retirement Option in the Chicago Teachers' Pension Fund until June 30, 2005. If an employee exercises that option by retiring before age 60 with less than 34 years of service, employee and employer contributions are required to avoid a reduction in annuity. The employee contribution is 7% of salary for each month less than age 60 or 35 years of service (whichever is less), and the employer contribution is 20% of salary for each year less than age 60. No employee or employer contributions are required for members with 34 years of service. Currently, each employer has the authority to determine whether it should provide an ERO for its employees.

Public Act 94-0004 extends the ERO option to June 30, 2010. The Act also specifies that the employer may not limit the number of ERO participants to less than 200 (rather than 30% of eligible members). The Act also allows the employer and collective bargaining agent to agree to set the limit higher than 200, and to base the allocation for participation on a basis other than seniority.

Application of New Benefits (P.A. 94-0004)
Public Act 94-0004 requires every new benefit increase to identify and provide for additional funding at least sufficient to fund the resulting annual increase in cost as it accrues to the System. Unless the funding inadequacy is corrected by the General Assembly, the benefit increase would expire at the end of the fiscal year. In addition, Public Act 94-0004 provides that all benefit increases will expire 5 years after the effective date of the increase, unless an earlier date is specified in the legislation that provides the benefit increase. This provision does not apply to the Chicago Teachers' Pension Fund.

Exemptions to 6% End-of-Career Salary Increase Cap (P.A. 94-1057)
P.A. 94-1057 amended both the Downstate Teachers' and State Universities' Articles of the Pension Code to exempt the employer (the university or the school district) from paying the increased contribution associated with certain salary increases above 6% granted during the employee's final average salary period. The Act applies to specifically enumerated salary increases granted between June 1, 2005 and July 1, 2011 as follows:

- Salary increases paid to teachers or university employees who are ten or more years away from retirement.
- Salary increases that result when a teacher is transferred from one employer to another as a result of school consolidation.
- Salary increases paid to teachers or university employees that are earned as a result of summer school or overload work. (Overload work must be for the sole purpose of

academic instruction in excess of the standard number of instruction hours, and the overload pay must be necessary for the educational mission).

- Salary increases due to promotion for which a teacher is required to hold a certificate or supervisory endorsement issued by the State Teacher Certification Board. The certification must be different than what was required for the teacher's previous position, and the position must have existed and been filled by a member for no less than one complete academic year.
- Salary increase due to promotion for which a university employee moves to a higher classification under the State Universities Civil Service System, promotion to a tenure-track faculty position, or promotion to a position recommended on a promotional list created by the Illinois Community College Board.
- Payments to a teacher from the State Board of Education or the State of Illinois over which the school district does not have discretion.
- Salary increases granted to teachers or university employees under the aforementioned conditions after July 1, 2011, but before July 1, 2014, pursuant to a contract or collective bargaining agreement entered into on or after June 1, 2005, but before July 1, 2011.

P.A. 94-1057 also requires both SURS and TRS to file a report with the Governor and General Assembly by January 1, 2007 outlining the number of recalculations performed by school districts or universities, the dollar amount by which each school district or university's contribution was changed due to the recalculation, and the total amount received from each school district or university as a result of P.A. 94-0004. The Act also requires both SURS and TRS to provide an estimate of the increase in state contributions resulting from the aforementioned end-of-career salary increase exemptions.

96th General Assembly (2009 – 2011)

Pension Obligation Notes for FY 2010 / Introduction of Asset Smoothing (P.A. 96-0043)

P.A. 96-0043 mandated the issuance of new pension bonds totaling $3.466 billion. The bond sale proceeds, net of sales expenses, were used as a portion of the FY 2010 State contributions to the various State pension systems. Specifically, the Act establishes the FY 2010 State pension contributions as follows: (1) TRS - $2,089,268,000, (2) SERS - $723,703,100, (3) SURS - $702,514,000, (4) JRS - $78,832,000, (5) GARS - $10,454,000. The FY 2010 total inflows into each of the 5 systems from all sources will be equal to the GRF portion of the certified amounts for each system.

P.A. 96-0043 also establishes that as of June 30, 2008, the actuarial value of each system's assets will be equal to their market value. In determining the actuarial value of the systems' assets for fiscal years after June 30, 2008, any unexpected gains or losses from investment returns incurred in a fiscal year will be recognized in equal annual amounts over the 5 year period following that fiscal year. An unexpected gain or loss will be defined as any deviation from the forecasted return on invested assets.

P.A. 96-0043 contains a statement of legislative intent that all of the operating funds freed up by the bond sale should be used to fund programs and services provided by community-based human services providers to ensure the State continues assisting the most vulnerable citizens.

Calculation of Final Average Salary for Annuity Purposes - General Assembly Retirement System (P.A. 96-0207)

P.A. 96-0207 provides that for participants who become a member of GARS on or after August 10th, 2009 (the effective date of the Act), retirement annuities will be based on the 48 consecutive months of service within the last 120 months of service in which the total compensation was the highest, or by dividing the total period of service, if less than 48 months, by the number of months of service in that period.

Calculation of Final Average Salary for Annuity Purposes - Judges Retirement System (P.A. 96-0207)

P.A. 96-0207 provides that for participants who become members of JRS on or after August 10th, 2009 (the effective date of the Act), retirement annuities will be calculated by dividing the total salary of the participant during the period of the 48 consecutive months of service within the last 120 months of service in which the total compensation was the highest, or the total period of service, if less than 48 months, by the number of months of service in that period.

Illinois Governmental Ethics Act (P.A. 96-0006)

Currently, elected officials and members of certain boards and commissions are required to file verified written statements of economic interests. Public Act 096-0006 amends the Illinois Governmental Ethics Act to add that members of the board of any retirement system, pension fund or investment board established under the Illinois Pension Code will be required to file verified written statements of economic interests only if they are not already required to file such a statement.

Creation of Investment Working Group (P.A. 96-0006)

Public Act 096-0006 amends the State Treasurer Act to add a new Section titled, "working group; peer cost comparison." The Treasurer shall convene a working group consisting of representatives from the retirement systems, pension funds, and investment board created under the Illinois Pension Code, persons that provide investment services, and members of the financial industry. The working group shall review the performance of investment managers and consultants providing investment services for the retirement systems, pension funds, and investment board created under the Illinois Pension Code. The group shall develop uniform standards for comparing the costs of investment services and make recommendations to the retirement systems, pension funds, and investment board. The working group shall draft a report, and the Treasurer must submit such report, to the Governor and the General Assembly by January 1, 2011.

Expansion of Fiduciary Duties (P.A. 96-0006)

Currently, the Illinois Pension Code defines a fiduciary as someone who exercises discretionary authority or discretionary control respecting management of the pension fund or retirement system. Those who render investment advice for a fee or other compensation are acting in a fiduciary capacity pursuant to current law. Public Act 096-0006 amends the Illinois Pension Code to stipulate that rendering advice with respect to the selection of fiduciaries in and of itself constitutes a fiduciary duty.

Requirements for Consultants (P.A. 96-0006)
Public Act 096-0006 amends the Illinois Pension Code to add a new Section concerning consultants. The new Section states that "consultant" means any person or entity retained or employed by the board of a retirement system, pension fund, or investment board to make recommendations in developing an investment strategy, assist with finding appropriate investment advisers, or monitoring the board's investments.

Reporting Requirements for Emerging Investment Managers (P.A. 96-0006)
Public Act 096-0006 requires that each retirement system, pension fund, and investment board, except for Downstate Police and Downstate Fire pension funds, shall submit a report to the Governor and the General Assembly by January 1 of each year. The report shall include all of the adopted policies, including the names and addresses of the emerging investment managers used, percentage of the assets under the investment control of emerging investment managers, the actions it has undertaken to increase the use of emerging investment managers, including encouraging other investment managers to use emerging investment managers as subcontractors when the opportunity arises, and also including specific actions undertaken to increase the use of minority broker-dealers.

Prohibited Transactions (P.A. 96-0006)
Public Act 096-0006 amends the Pension Code to require that a board member, employee, or consultant with respect to a retirement system, pension fund, or investment board shall not knowingly cause or advise the system, fund, or board to engage in an investment transaction with an investment adviser when the board member, employee, consultant, or their spouse (i) has any direct interest in the income, gains, or profits of the investment adviser through which the investment transaction is made or (ii) has a relationship with that investment adviser that would result in a pecuniary benefit to the board member, employee, consultant, or spouse of such board member, employee, or consultant as a result of the investment transaction. Public Act 096-0006 clarifies that a consultant includes an employee or agent of a consulting firm who has greater than 7.5% ownership of the consulting firm. Any violation of this provision constitutes a Class 4 felony.

Selection and Appointment of Investment Advisors and Consultants (P.A. 96-0006)
Public Act 096-0006 creates a new section in the Pension Code concerning investment services for all retirement systems, pension funds, and investment boards, except Downstate Police and Fire pension funds. Pursuant to this new Section, all contracts for investment services shall be awarded by the board using a competitive process that is substantially similar to the process required for the procurement of professional and artistic services under Article 35 of the Illinois Procurement Code. The Act states that each board of trustees shall implement this policy by June 2, 2009.

Limitations on Investment Consulting Contracts (P.A. 96-0006)
Public Act 096-0006 states that notwithstanding any other provision of law, a retirement system, pension fund, or investment board shall not enter into a contract with a consultant that exceeds 5 years in duration. The Act provides that no contract to provide consulting services may be renewed or extended. At the end of the term of a contract, however, the consultant is eligible to compete for a new contract. No retirement system, pension fund, or investment board shall attempt to avoid or contravene these restrictions by any means.

Disclosure of Fees and Commissions by Consultants (P.A. 96-0006)
P.A. 96-0006 provides that by June 2, 2009, each investment adviser or consultant currently providing services or subject to an existing contract for the provision of services must disclose to the board of trustees all direct and indirect fees, commissions, penalties, and other compensation paid by or on behalf of the investment adviser or consultant in connection with the provision of those services and shall update that disclosure promptly after a modification of those payments or an additional payment.

Investment Transparency (P.A. 96-0006)
Public Act 096-0006 amends the Illinois Pension Code to create an additional section concerning investment transparency. The purpose of this new section is to provide for transparency in the investment of retirement or pension fund assets and require the reporting of full and complete information regarding investments by pension funds, retirement systems, and investment boards. A retirement system, pension fund, or investment board subject to the Pension Code and any committees established by such system, fund, or board must comply with the Open Meetings Act.

Ethics Training (P.A. 96-0006)
Public Act 096-0006 amends the Illinois Pension Code to create a new Section concerning ethics training. All board members of a retirement system, pension fund, or investment board created under this Code must attend ethics training of at least 8 hours per year. The training shall incorporate the following areas: ethics, fiduciary duty, and investment issues and any other curriculum that the board of the retirement system, pension fund, or investment board establishes as being important.

Prohibition on Gifts (P.A. 96-0006)
Public Act 096-0006 amends the Illinois Pension Code to clarify that no trustee or employee of a retirement system, pension fund, or investment board created under the Illinois Pension Code shall intentionally solicit or accept any gift from any prohibited source.

No Monetary Gain on Investments (P.A. 96-0006)
Public Act 096-0006 amends the Illinois Pension Code to create a new section stating that no member or employee of the board of trustees of any retirement system, pension fund, or investment board or any spouse of such member or employee shall knowingly have any direct interest in the income, gains, or profits of any investments made on behalf of a retirement system, pension fund, or investment board for which such person is a member or employee, nor receive any pay or emolument for services in connection with any investment.

Fraud (P.A. 96-0006)
Public Act 096-0006 amends the Illinois Pension Code to create a new Section concerning fraud. Any person who knowingly makes any false statement or falsifies or permits to be falsified any record of a retirement system or pension fund created under this Code or the Illinois State Board of Investment in an attempt to defraud the retirement system, pension fund, or the Illinois State Board of Investment is guilty of a Class 3 felony.

Contingent and Placement Fees Prohibited (P.A. 96-0006)
Public Act 096-0006 amends the Illinois Pension Code to create a new section concerning the prohibiting of contingent and placement fees. No person or entity shall retain a person or entity to attempt to influence the outcome of an investment decision of or the procurement of investment advice or services of a retirement system, pension fund, or investment board for compensation, contingent in whole or in part upon the decision or procurement. Any person

who violates this provision is guilty of a business offense and shall be fined not more than $10,000. In addition, any person convicted of a violation of this provision is prohibited for a period of 3 years from conducting such activities.

Approval of Travel or Educational Mission (P.A. 96-0006)
Public Act 096-0006 creates a new Section concerning travel and educational missions. The expenses for travel or educational missions of a board member of a retirement system, pension fund, or investment board must be approved by a majority of the board prior to the travel or educational mission.

Changes to SERS Board of Directors (P.A. 96-0006)
Public Act 96-0006 states that notwithstanding any provision of current law, the term of office of each trustee of the board appointed by the Governor who is sitting on the board is terminated on that effective date of the Act (April 3rd, 2009). Beginning on the 90th day after the effective date of this Act (July 2, 2009), the board shall consist of 13 trustees as follows:

(i) the Comptroller, who shall be the Chairperson;

(ii) six persons appointed by the Governor with the advice and consent of the Senate who may not be members of the system or hold an elective State office and who shall serve for a term of 5 years, except that the terms of the initial appointees under this Act shall be 3 for a term of 3 years and 3 for a term of 5 years;

(iii) four active participants of the system having at least 8 years of creditable service, to be elected from the contributing members of the system;

(iv) two annuitants of the system who have been annuitants for at least one full year, to be elected from and by the annuitants of the system.

Changes to SURS Board of Trustees (P.A. 96-0006)
Public Act 096-0006 amends the Illinois Pension Code to add that the terms of all trustees holding office on the effective date of this Act (April 3, 2009) shall terminate on that effective date. The Governor shall make nominations for appointment within 60 days after the effective date of this Act (June 2, 2009). A trustee sitting on the board on April 3, 2009 may not hold over in office for more than 90 days after that effective date. In addition to this, Public Act 096-0006 states that beginning on the 90th day after the effective date of this Act (July 2, 2009), the Board of Trustees shall be constituted as follows:

(i) The Chairperson of the board of Higher Education, who shall act as chairperson of the Board.

(ii) Four trustees appointed by the Governor with the advice and consent of the Senate who may not be members of the system or hold an elective State office and who shall serve for a term of 6 years, except that the terms of the initial appointees shall be 2 for a term of 3 years and 2 for a term of 6 years.

(iii) Four active participants of the system to be elected from the contributing membership of the system by the contributing members, no more than 2 of which may be from any of the University of Illinois campuses, who shall serve for a term of 6 years, except that the terms of the initial elected shall be 2 for a term of 3 years and 2 for a term of 6 years.

(iv) Two annuitants of the system who have been annuitants for at least one full year, to be elected from and by the annuitants of the system, no more than one of which may be from any of the University of Illinois campuses, who shall serve for a term of 6 years, except that the terms of the initial elected shall be 1 for a term of 3 years and 1 for a term of 6 years.

Termination of TRS Executive Director (P.A. 96-0006)

Public Act 096-0006 amends the Illinois Pension Code to add that the secretary and chief executive officer of the Teachers' Retirement System, known as the Executive Director, holding that position on April 1, 2009 is terminated on July 1, 2009, by operation of law, and shall thereafter no longer hold that position or any other employment with the system. The board is directed to take whatever action is necessary to effectuate this termination.

Changes to the TRS Board of Trustees (P.A. 96-0006)

Public Act 096-0006 amends the Pension Code to change the composition of the TRS board of trustees. The board shall consist of 13 members, 6 of whom shall be appointed by the governor; 4 active teachers elected by the contributing members, and 2 annuitant members elected by the annuitants of the system. The Superintendent of Education is an ex-officio member who serves as president of the board.

Issuance of Pension Obligation Bonds for FY 2011 (P.A. 96-1497)

Public Act 96-1497 mandated the issuance of new pension bonds totaling $4.096 billion. The bond sale proceeds, net of expenses, were used as a portion of the FY 2011 State contributions to the five State systems. The actual bond sale proceeds, net of expenses, were $3.7 billion. Public Act 96-1497 also required the Boards of Trustees of the State Systems to recertify to the Governor the amount of required State contributions for FY 2011 using the assumption that the second tier of benefits implemented by P.A. 96-0889 had been in effect on June 30, 2009.

97th General Assembly (2011 – 2013)

Anti-Fraud Provisions (P.A. 97-0651)

P.A. 97-0651 provides that any reasonable suspicion of a false statement by any appointed or elected commissioners, trustees, directors, board members, or employees of a retirement system or pension fund governed by the Pension Code or the State Board of Investment shall be immediately referred to the board of trustees of the pension fund or the State Board of Investment. The Act also states that the board shall immediately notify the State's Attorney of the jurisdiction where any alleged fraudulent activity occurred.

Pension Credit for Employees of Statewide Teacher Organizations – SURS and TRS (P.A. 97-0651)

Prior to the enactment of P.A. 97-0651, members of SURS and TRS were allowed to earn pensionable service credit while working for a statewide teacher organization or national teacher organization under certain conditions. P.A. 97-0651 specifies that such service credit can only be earned if the individual first became a full-time employee of the teacher organization and becomes a participant before the effective date of this amendatory Act (January 5th, 2012). This provision effectively prohibits members of SURS and TRS from earning this type of service credit after January 5th, 2012.

Repeal of Optional TRS Service Credit Provision of P.A. 94-1111 (P.A. 97-0651)
P.A. 94-1111, which became effective on February 27th, 2007, allowed certain employees of statewide teacher organizations to establish service credit in TRS for periods of employment prior to becoming certified as a teacher if certain conditions were met before the effective date of the Act. P.A. 97-0651 repeals this provision.

Payment for Reciprocal Service in GARS (P.A. 97-0967)
P.A. 97-0967 amends the GARS and the General Provisions Articles of the Illinois Pension Code. In cases where a GARS participant's final average salary in a retirement fund governed under the Retirement Systems Reciprocal Act is used to calculate a GARS pension, and in cases where the final average salary in a reciprocal system is higher than the final salary for annuity purposes in GARS, then the employer of the participant in the reciprocal system must pay to GARS the increased cost that is attributable to the higher level of compensation.

Creation of the State Actuary (P.A. 97-0694)
P.A. 97-0694 amends the Illinois State Auditing Act to permit the Auditor General to contract with or hire an actuary to serve as the State Actuary. The Act allows the Auditor General to select the State Actuary without engaging in a competitive procurement process. The State Actuary will have the responsibility for conducting reviews of the actuarial practices of the State retirement systems and identifying recommended changes in actuarial assumptions that the boards of the systems must consider before finalizing their certifications of the required annual State contributions.

98th General Assembly (2013 – 2014)

Temporary Extension of the TRS Early Retirement Option (ERO) (P.A. 98-0042)
Currently, TRS members who do not use the modified Early Retirement Option (ERO) under P.A. 94-0004 who retire with less than 35 years of service see a reduction of 6% per year for every year they are under the age of 60. By utilizing ERO, teachers who are between the ages of 55 and 60 who have at least 20 but less than 35 years of service may retire without a discounted annuity by paying a specified amount to TRS. School district contributions are also required for a member to retire under ERO. P.A. 94-0004, which became effective on July 1, 2005, set the member ERO contribution rate at 11.5% multiplied by the lesser of the number of years of partial years of service under 35 years, or the number of years or partial years the teacher is shy of age 60. The school district ERO contribution rate is currently set at 23.5% multiplied by each year or partial year that the teacher's age is less than 60.

P.A. 94-0004 required CGFA to make a recommendation to the General Assembly by February 1, 2013 on any proportional adjustments to member and employer contribution rates. In accordance with TRS' experience study by Buck Consultants, COGFA's actuary, Sandor Goldstein, conducted a review of Buck's recommended revision to member and employer ERO contribution rates. Mr. Goldstein found the revised rates (14.4% for members and 29.3% for employers) to be sufficient to fund 100% of the ERO benefit. CGFA's recommendation was transmitted to the General Assembly on January 10^{th}.

SB 1366 extends the ERO at the employee and employer rates recommended by CGFA for members who retire on or after July 1, 2013 and before July 1, 2016.

III. Current Combined Financial Condition of the State Retirement Systems

All of the numbers appearing in the report, unless otherwise noted, are based upon market value of assets

STATE RETIREMENT SYSTEMS, COMBINED

The following section of the report looks at historical information regarding the financial condition of the State funded retirement systems. These systems include the Teachers' Retirement System, State Employees' Retirement System, State Universities' Retirement System, Judges' Retirement System, and General Assembly Retirement System. We will begin by examining the five systems together and then take a snapshot of each system's position and outlook as of June 30, 2015. This section of the report covers the period from FY 1996 to FY 2015.

Over the last 20 years, the State of Illinois has appropriated $67.3 billion to the five retirement systems. Of that amount, $7.3 billion was from the sale of $10 billion in pension obligation bonds. The Teachers' Retirement System has received by far the largest amount of contributions, totaling $34.9 billion. The Judges' and General Assembly Retirement Systems have received the smallest amount of contributions, as they have far fewer participants. The effect these appropriations have had on the unfunded liabilities of the five systems is discussed in greater detail in the following section.

TABLE 2

Summary of Appropriations Authorized
State Retirement Systems
FY 1996 - FY 2016
($ in Millions)

Fiscal Years	TRS	SURS	SERS	JRS	GARS	Total
1996	330.8	123.9	144.0	13.0	2.6	614.3
1997	386.1	159.5	159.1	14.6	3.0	722.3
1998	467.9	201.6	168.1	16.7	3.4	857.7
1999	573.5	215.4	305.9	20.5	4.0	1,119.3
2000	640.1	224.6	325.7	23.5	4.4	1,218.3
2001	724.9	232.6	341.9	26.4	4.8	1,330.6
2002	815.4	240.4	364.7	29.8	5.2	1,455.5
2003	930.1	269.6	405.5	33.6	5.6	1,644.4
***2004**	5,362.0	1,743.7	1,864.7	178.5	32.9	9,181.8
2005	907.0	270.0	498.6	32.0	4.7	1,712.3
2006	534.6	166.6	203.8	29.2	4.2	938.4
2007	738.0	252.0	344.1	35.2	5.2	1,374.5
2008	1,041.3	340.3	551.6	46.9	6.8	1,986.9
2009	1,451.8	450.2	757.2	60.0	8.8	2,728.0
2010	2,080.7	700.2	1,169.0	78.5	10.4	4,038.8
2011	2,170.9	776.5	1,219.7	62.7	11.4	4,241.2
2012	2,406.5	980.5	1,450.8	63.6	10.5	4,911.9
2013	2,703.5	1,402.8	1,659.6	88.2	14.2	5,868.3
2014	3,438.6	1,509.8	1,743.9	126.8	13.9	6,833.0
2015	3,412.9	1,544.2	1,829.1	134.0	15.8	6,936.0
2016	3,742.7	1,601.5	2,124.9	132.1	16.1	7,617.3
Totals	34,859.3	13,405.9	17,631.9	1,245.8	187.9	67,330.8

**FY 2004 State appropriations authorized include $7.3 Billion in proceeds from the sale of pension obligation bonds.*

Based upon the actuarial value of assets, the total unfunded liabilities of the State systems totaled $112.9 billion on June 30, 2015, led by the Teachers' Retirement System (TRS) whose unfunded liabilities amounted to $62.7 billion. As the largest of the State systems, TRS accounts for approximately 57% of the total assets and liabilities of the five State systems combined. Table 3 below provides a summary of the financial condition of each of the five State retirement systems, showing their respective liabilities and assets as well as their accumulated unfunded liabilities and funded ratios. This table includes Asset Smoothing effects.

TABLE 3

Summary of Financial Condition FY 2015
State Retirement Systems Combined
Assets at Actuarial Value / With Asset Smoothing (P.A. 96-0043)
($ in Millions)

System	Accrued Liability	Actuarial Assets	Unfunded Liability	Funded Ratio
TRS	$108,121.8	$45,435.2	$62,686.6	42.0%
SERS	$40,743.4	$14,741.7	$26,001.7	36.2%
SURS	$39,520.7	$17,104.6	$22,416.1	43.3%
JRS	$2,314.1	$804.2	$1,509.9	34.8%
GARS	$328.2	$52.6	$275.6	16.0%
TOTAL	**$191,028.2**	**$78,138.3**	**$112,889.9**	**40.9%**

However, a much more realistic valuation of the true financial position of the various retirement systems would be based upon the market value of the assets, as shown in Table 4 on the following page. Based upon this more realistic value of the assets, the unfunded liabilities of the State systems totaled $111.0 billion on June 30, 2015. The Teachers' Retirement System (TRS), whose unfunded liabilities amounted to $61.7 billion, would represent over 55% of the combined total unfunded balance. Table 4 on the following page provides a summary of the financial condition of each of the five State retirement systems, showing their respective liabilities and assets as well as their accumulated unfunded liabilities and funded ratios. No Asset Smoothing effects are included in these numbers.

TABLE 4

Summary of Financial Condition FY 2015 State Retirement Systems Combined Assets at Market Value / Without Asset Smoothing (P.A. 96-0043) ($ in Millions)				
System	Accrued Liability	Market Assets	Unfunded Liability	Funded Ratio
TRS	$108,121.8	$46,406.9	$61,714.9	42.9%
SERS	$40,743.4	$15,258.9	$25,484.5	37.5%
SURS	$39,520.7	$17,463.0	$22,057.7	44.2%
JRS	$2,314.1	$833.9	$1,480.2	36.0%
GARS	$328.2	$54.6	$273.6	16.6%
TOTAL	**$191,028.2**	**$80,017.3**	**$111,010.9**	**41.9%**

The funded ratios for each of the five State retirement systems may be compared to the aggregate funded ratio of 41.9% for the five systems. Although the Judges' Retirement System and the General Assembly Retirement System have the poorest funded ratios, these two systems are much smaller and their unfunded liabilities are thus more manageable than the three larger systems.

CHART 1

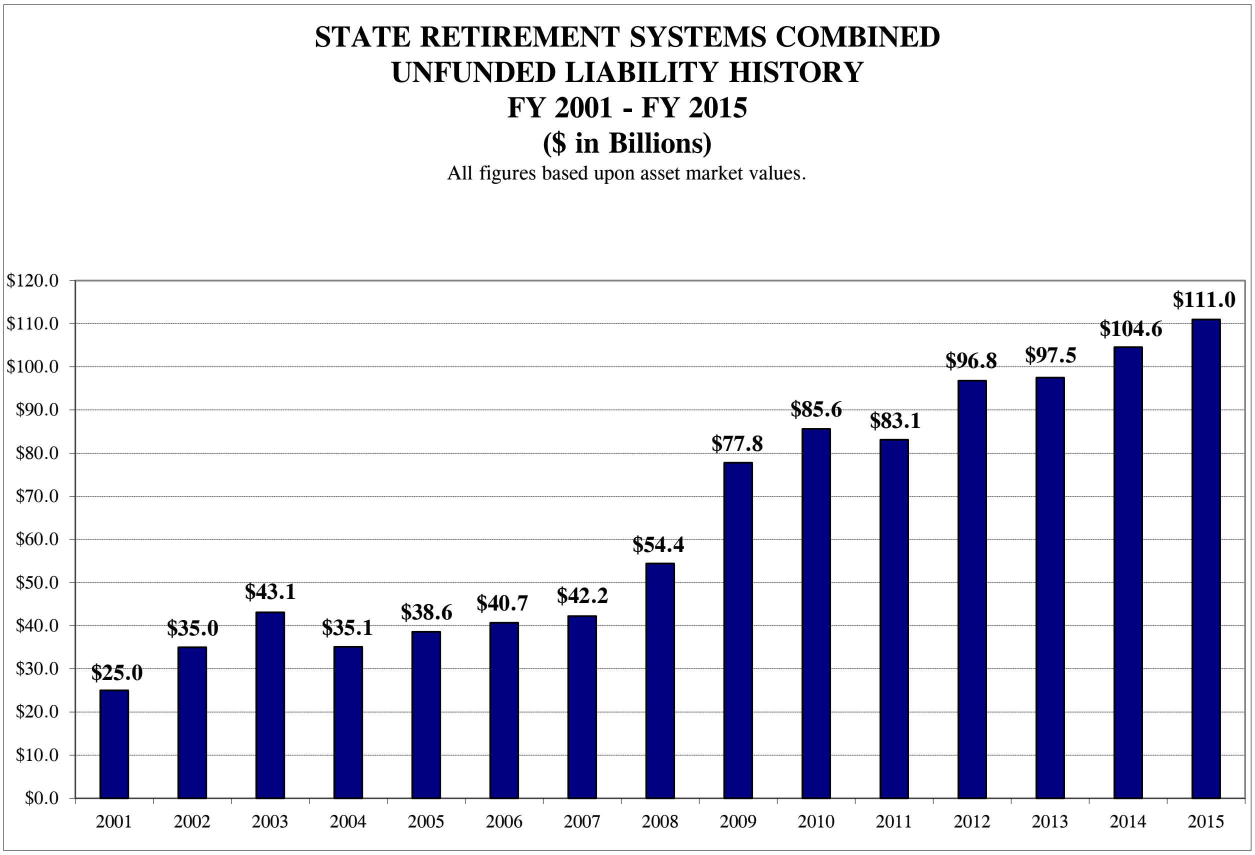


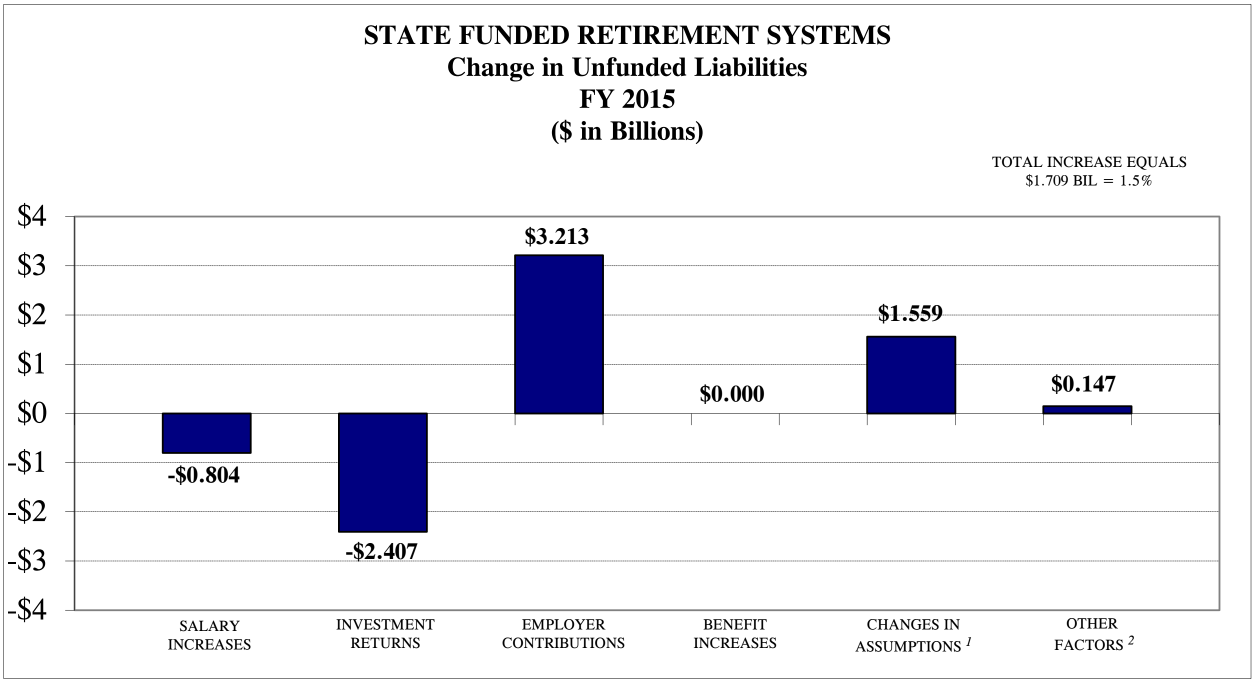
Chart 1 is based upon calculations using the market value of assets for all years, including FY 2015. The full effects of the large investment losses during FY 2009 and investment gains for FY 2011 are therefore reflected in the bars for these years. These extremely large investment losses are the main reason for the significant jump in unfunded liabilities during FY 2009. The asset smoothing approach, required by Public Act 96-0043, only recognized 20% of the FY 2009 investment losses during that fiscal year. Chart 1 above recognizes 100% of the FY 2009 investment losses in FY 2009, and is therefore a much more realistic representation of the retirement systems' true financial condition. In FY 2013, the market value of investment returns were above the actuarially-assumed rate for all systems. This helped control the growth of unfunded liabilities to a certain degree, however they still rose primarily due to insufficient contributions made by the State.

In FY 2014, TRS voted to reduce its assumed investment rate of return from 8.0% to 7.5%, and SERS and SURS both reduced their respective rates of return from 7.75% to 7.25%. Although investment performance far exceeded actuarial expectations in FY 2014, the rate of return assumption changes helped contribute heavily to an increase in total accrued liability, and hence, the significant increase in unfunded liability of $7.1 billion, in FY 2014.

TRS adopted several actuarial recommendations in FY 2015 based on the three-year experience study including updating mortality rates and lowering the average salary increase assumption. Although lowering the average salary increase assumption significantly reduced unfunded liability, changes in the actuarial assumptions regarding mortality rates increased unfunded liability by $586.5 million. SURS updated their mortality assumption as well, which is one of the main factors that caused an increase in unfunded liability of $973 million. All five systems' assumed rates of investment return remained unchanged in FY 2015. Overall, the total unfunded liability increased by $6.4 billion in FY 2015 based on market value of assets.

The following chart shows how six factors affected the combined unfunded actuarial liabilities of the five State systems during FY 2015. All of the factors shown as positive amounts represent increases in the unfunded liability and negative amounts represent decreases in the unfunded liability.

CHART 2



NOTE: This chart is based upon asset actuarial values, i.e., WITH asset smoothing.

[1] This column reflects mortality rate changes enacted by TRS and SURS.

[2] Other Factors include losses from retirements, terminations, and rates of mortality.

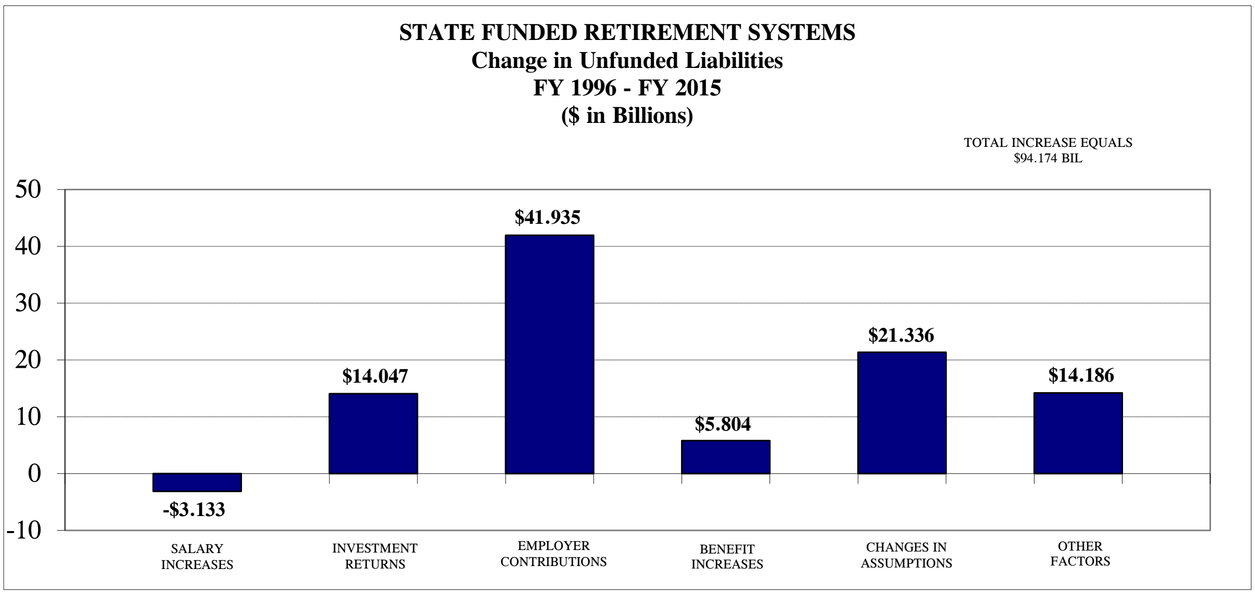
During FY 2015 the total unfunded liabilities utilizing the actuarial value of assets increased to $112.9 billion from $111.2 billion in FY 2014. This equates an increase in unfunded liabilities of 1.5 % over FY 2014, due primarily to actuarially insufficient State contribution and the changes in assumptions despite an actuarial gain from investment returns. In FY 2015, market value investment returns for all five State systems were below the actuarially-assumed rates of return, as shown below:

- TRS- 3.9%
- SERS- 4.7%
- SURS- 2.9%
- JRS- 4.6%
- GARS- 4.2%

Despite the fact that FY 2015 saw lower returns than expected on a market value basis, the actuarial value of assets in FY 2015, overall, recognized the cumulative effects of smoothing past gains by the asset smoothing method, required by Public Act 96-0042. Thus, the systems experienced an actuarial investment gain, which decreased unfunded liabilities.

TRS adopted several actuarial recommendations in FY 2015 based on the three-year experience study including updating mortality rates and lowering the average salary increase assumption. Although lowering the average salary increase assumption regarding mortality rates significantly reduced unfunded liability, changes in the actuarial assumptions increased unfunded liability by $586.5 million. SURS updated mortality rates as well, which is one of the main factors that caused an increase in unfunded liability of $973 million. All five systems' assumed rates of investment return remained unchanged in FY 2015. Overall, the total unfunded liability increased by $6.4 billion in FY 2015 on a market value basis.

CHART 3

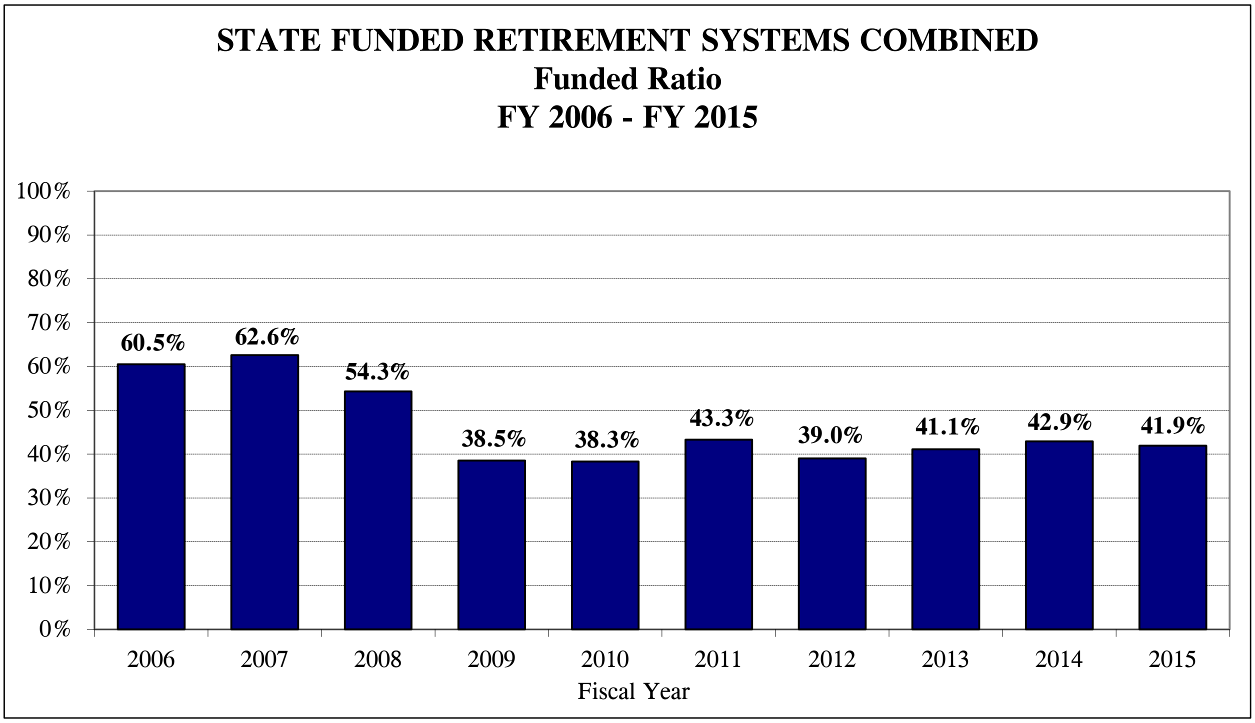


Note: This chart is based upon actuarial asset values, i.e., WITH asset smoothing.

The above chart provides an analysis of the causative factors for the increase in unfunded liabilities since FY 1996. The largest factor was the insufficient employer contributions which caused a $41.9 billion unfunded increase during the period under review. Changes in actuarial assumptions; including the changes of mortality rate assumptions in TRS and SURS in FY 2015, caused an additional increase of $21.3 billion.

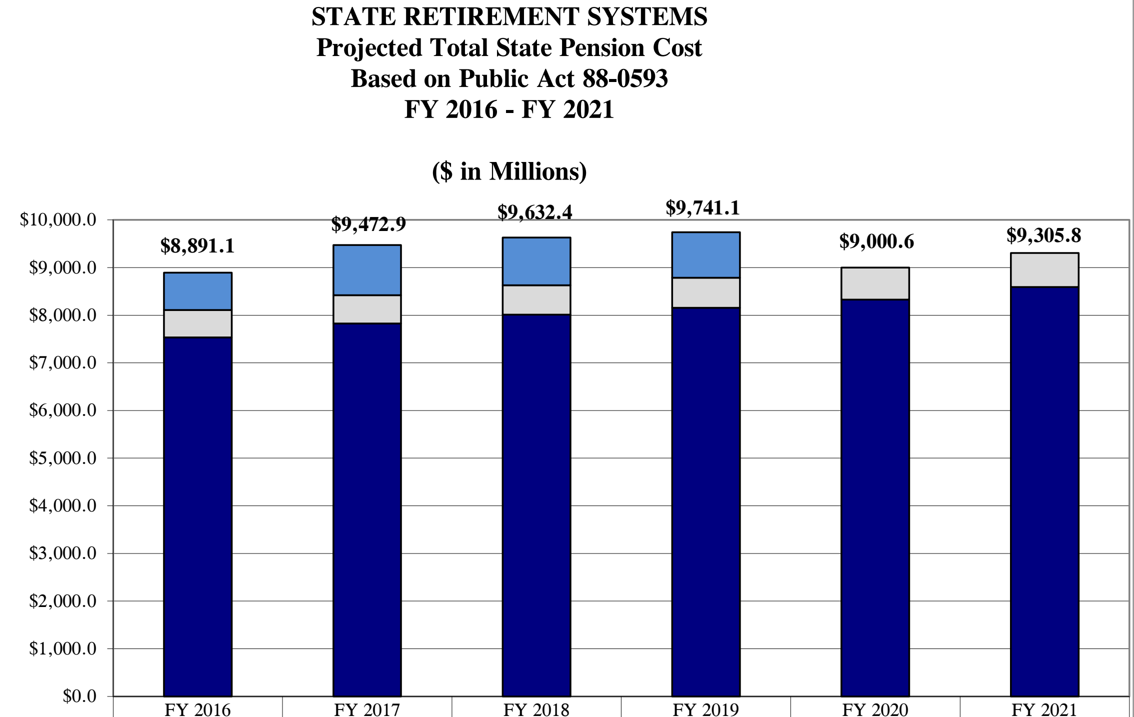
Due to the asset smoothing method, investment gains of the last five years are now subject to smoothing. This has resulted in a cumulative market value of assets that is now higher than the actuarial (smoothed) value of assets, and therefore the funded ratio using the market value of assets is slightly higher than the funded ratio using the actuarial (smoothed) value of assets. This was not the case just 3 years earlier (for more information regarding the asset smoothing, please refer to Appendix V on page 123). Due to the funding policy being based on the actuarial value of assets pursuant to P.A. 96-0043, the FY 2017 contribution to the systems will be higher than would otherwise have been required if the market value of assets were used to determine annual State pension contributions.

CHART 4



All of the previously mentioned factors influence the funded ratio, the most commonly recognized measure of a retirement system's financial health. The funded ratio at any single point in time is less important than the trend over time. In 2003 the State sold $10 billion in pension obligation bonds and used part of the proceeds to pay all of the contributions for FY 2004. The bond sale generated $7.3 billion to reduce unfunded liabilities of the state-funded retirement systems. The funded ratio remained relatively stable through FY 2006 before increasing in FY 2007. Despite insufficient employer contributions, higher-than-expected investment returns led to this improvement. In FY 2008 and FY 2009 the funded ratio fell significantly due to much lower than expected investment revenues and insufficient employer contributions. The funded ratio remained essentially unchanged during FY 2010. In FY 2011 the combined funded ratio improved slightly as a result of improved investment returns. The FY 2011 funded ratio gains were reversed during FY 2012 due to insufficient State contributions. In FY 2013 and FY 2014 the funded ratio slightly improved as a result of above-average investment returns, despite an increase in unfunded liabilities due to the change of actuarial assumptions in FY 2014. The FY 2015 funded ratio slightly decreased because of insufficient employer contributions and mortality rate changes in TRS and SURS in spite of an actuarial investment gain.

CHART 5



	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
2010/11 Debt Service	$781.9	$1,052.2	$1,003.9	$952.9	$0.0	$0.0
2003 POB Debt Service	$574.3	$595.2	$614.7	$633.2	$674.6	$713.4
Regular Contribution	$7,534.9	$7,825.6	$8,013.8	$8,155.0	$8,326.0	$8,592.4

Chart 5 reflects the total pension related expenditures by showing State contribution projections reflecting P.A. 88-0593 and all related debt service requirements for the period under review. State contributions for FY 2017 have already been certified, as per the certification letters located in the appendices of this report.

Pubic Act 93-0002 authorized the 2003 issuance of the pension obligation bonds and established the resulting debt service requirements shown in Appendix J. Public Act 96-0043 authorized the 2010 issuance of the pension obligation notes and established the resulting debt service requirements shown in Appendix J. Public Act 96-1497 authorized the 2011 issuance of additional pension obligation notes and the actual proceeds established the resulting debt service requirements shown in Appendix J.

TABLE 5

ALL FIVE STATE RETIREMENT SYSTEMS COMBINED Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2015 Data ($ in Millions)						
Fiscal Year	Tier 1 Normal Cost	Tier 1 Normal Cost as a % of Payroll	Tier 2 Normal Cost	Tier 2 Normal Cost as a % of Payroll	Total Normal Cost	Total Normal Cost as a % of Payroll
2016	3,322.5	16.6%	238.2	1.2%	3,560.7	17.8%
2017	3,276.4	16.3%	314.4	1.6%	3,590.8	17.8%
2018	3,228.1	15.6%	392.4	1.9%	3,620.4	17.5%
2019	3,175.6	14.9%	474.0	2.2%	3,649.6	17.1%
2020	3,119.7	14.2%	557.6	2.5%	3,677.3	16.8%
2021	3,059.6	13.6%	645.0	2.9%	3,704.5	16.4%
2022	2,996.6	12.9%	735.8	3.2%	3,732.5	16.1%
2023	2,930.5	12.3%	830.7	3.5%	3,761.2	15.7%
2024	2,857.8	11.6%	929.5	3.8%	3,787.3	15.4%
2025	2,779.2	11.0%	1,033.0	4.1%	3,812.2	15.1%
2026	2,694.5	10.3%	1,140.4	4.4%	3,834.9	14.7%
2027	2,604.5	9.7%	1,252.6	4.7%	3,857.1	14.4%
2028	2,508.7	9.1%	1,368.7	4.9%	3,877.4	14.0%
2029	2,406.1	8.4%	1,488.5	5.2%	3,894.6	13.7%
2030	2,298.1	7.8%	1,612.8	5.5%	3,910.9	13.3%
2031	2,181.7	7.2%	1,741.3	5.8%	3,923.0	13.0%
2032	2,058.1	6.6%	1,874.0	6.0%	3,932.1	12.6%
2033	1,927.0	6.0%	2,010.8	6.3%	3,937.9	12.3%
2034	1,786.3	5.4%	2,151.1	6.5%	3,937.4	11.9%
2035	1,635.9	4.8%	2,295.6	6.8%	3,931.5	11.6%
2036	1,480.2	4.2%	2,442.7	7.0%	3,923.0	11.2%
2037	1,324.0	3.7%	2,591.3	7.2%	3,915.4	10.9%
2038	1,165.6	3.2%	2,742.3	7.5%	3,907.9	10.6%
2039	1,003.9	2.7%	2,895.3	7.7%	3,899.2	10.3%
2040	843.1	2.2%	3,050.5	7.9%	3,893.5	10.1%
2041	688.9	1.7%	3,206.0	8.1%	3,894.9	9.9%
2042	544.8	1.3%	3,360.5	8.3%	3,905.3	9.7%
2043	415.1	1.0%	3,513.8	8.5%	3,928.9	9.5%

CHART 6

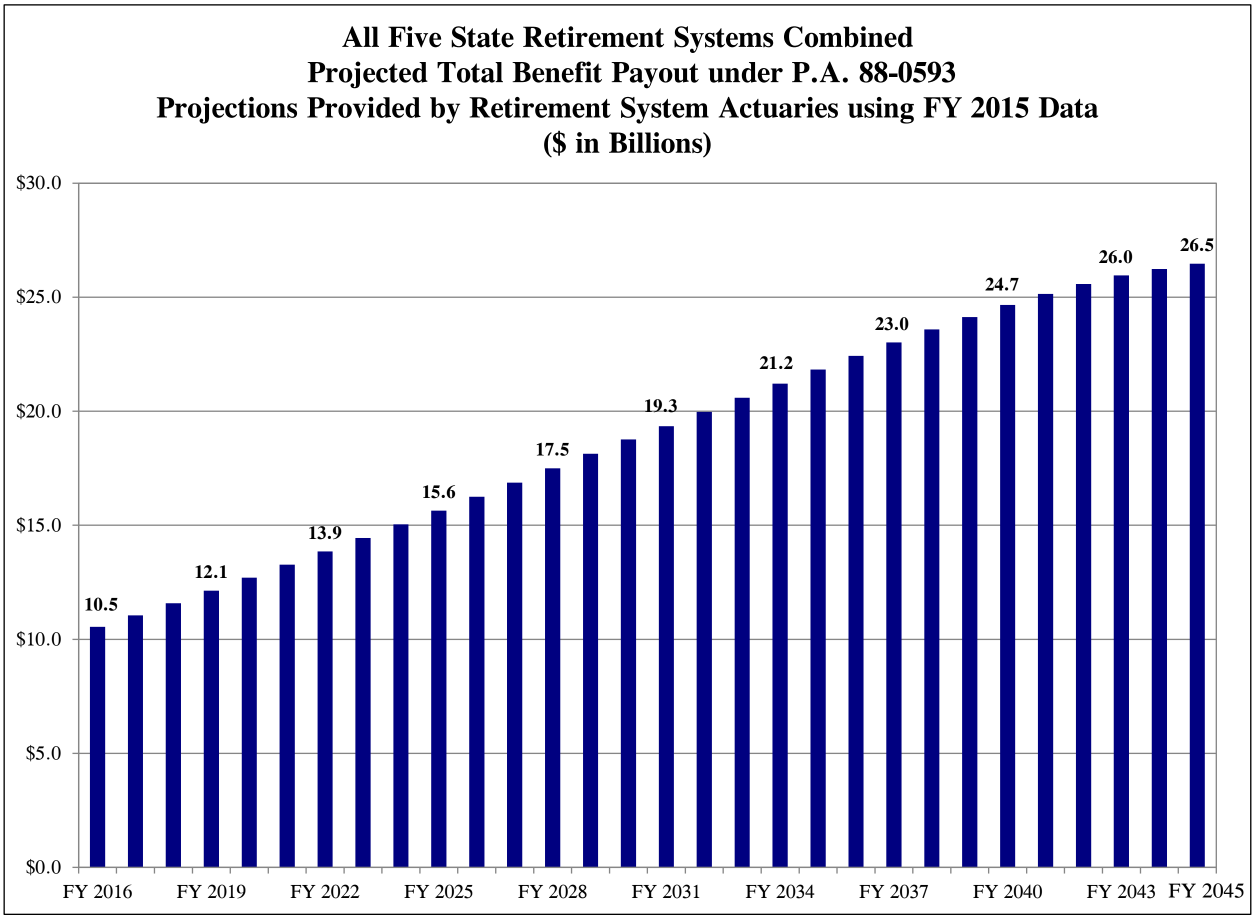
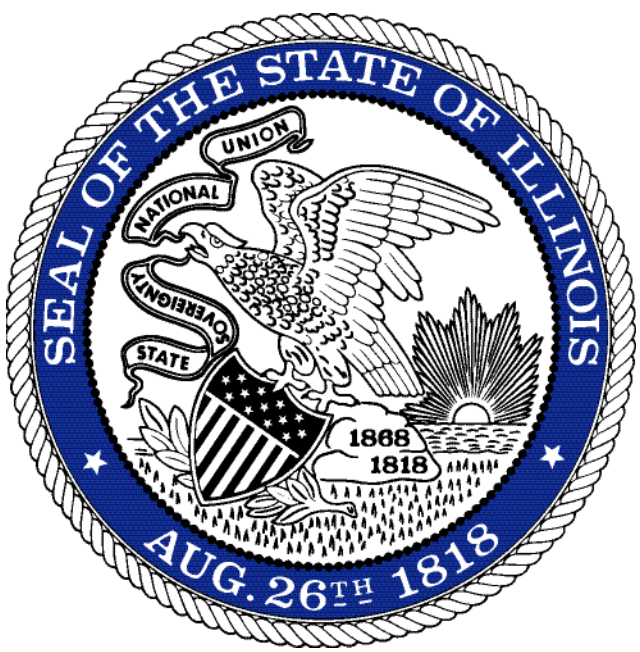


Chart 6 shows the projected total retirement benefits to be paid to annuitants.

IV. The Teachers' Retirement System

- Plan Summary
- FY 2015 Change in Unfunded Liabilities
- Funded Ratio History
- Active Member Headcount
- Average Active Member Salaries
- Retiree Headcount
- Average Retirement Annuities
- Unfunded History
- Rate of Return on Investments
- Annual Investment Revenue
- Total Payout
- Annual Changes in Unfunded
- Changes in Net Assets
- Investment Return History
- Reduction in State Contributions
- Tier 1 & Tier 2 Normal Cost Projections



All of the numbers appearing in the report, unless otherwise noted, are based upon market value of assets

Teachers Retirement System
Tier 1 Defined Benefit Plan Summary

Retirement Age

- Age 62 with 5 years of service credit.
- Age 60 with 10 years of service credit.
- Age 55 with 20 years of service credit (discounted annuity or Early Retirement Option)
- Age 55 with 35 years of service credit.
- "Rule of 85" for TRS members who are employees of the State of Illinois.

Retirement Formula

- 2.2% of final average salary for each year of service credit earned after June 30, 1998 (prior years under graduated formula can be upgraded).

Maximum Annuity

- 75% of final average salary.

Salary Used to Calculate Pension

- Average of the four highest consecutive annual salary rates within the last 10 years of service.

Annual COLA

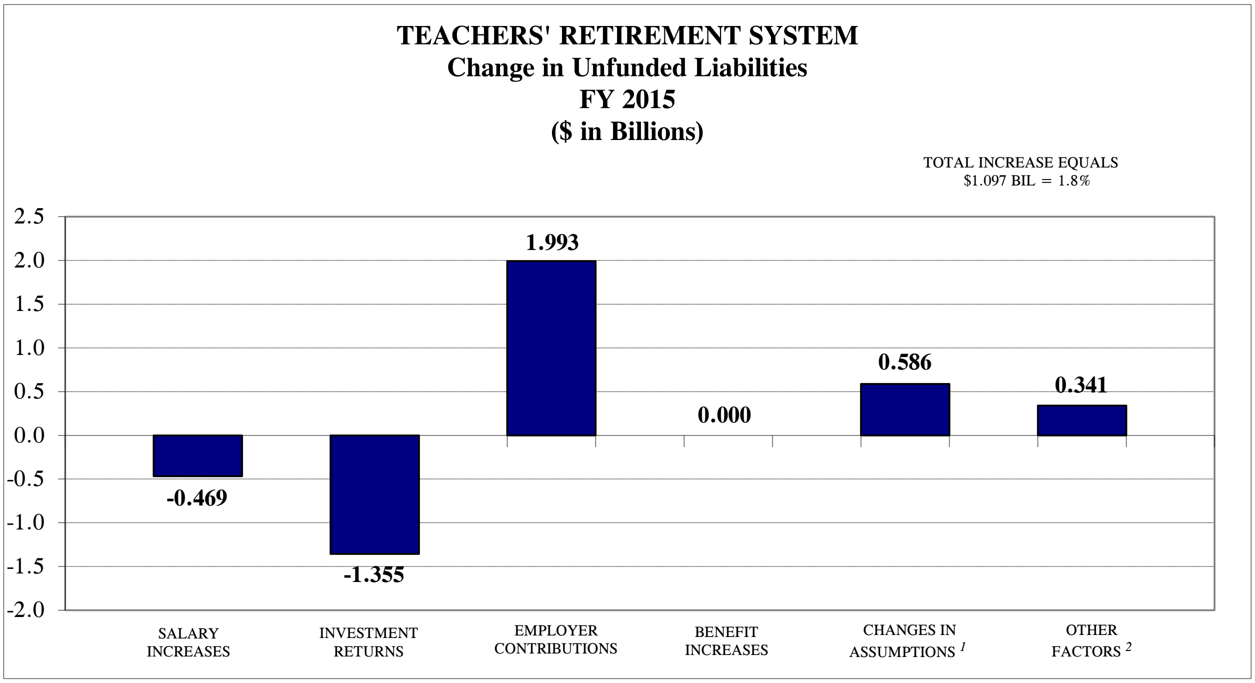
- 3% compounded.

Employee Contributions

- 9.4% of salary.

The benefits shown do not reflect P.A. 96-0899 (2 Tier Act of 2011). Please refer to Section I earlier in this report for details.

CHART 7



NOTE: The above chart is based upon actuarial value of assets.

[1] *On August 2015 TRS Board of Trustees decided to change mortality rates, which increases unfunded liabilities, and decrease severance pay and optional service, which decreases unfunded liabilities. The amount shown for this column reflects these changes.*

[2] *Other Factors include losses from retirements, terminations, and rehires.*

CHART 8

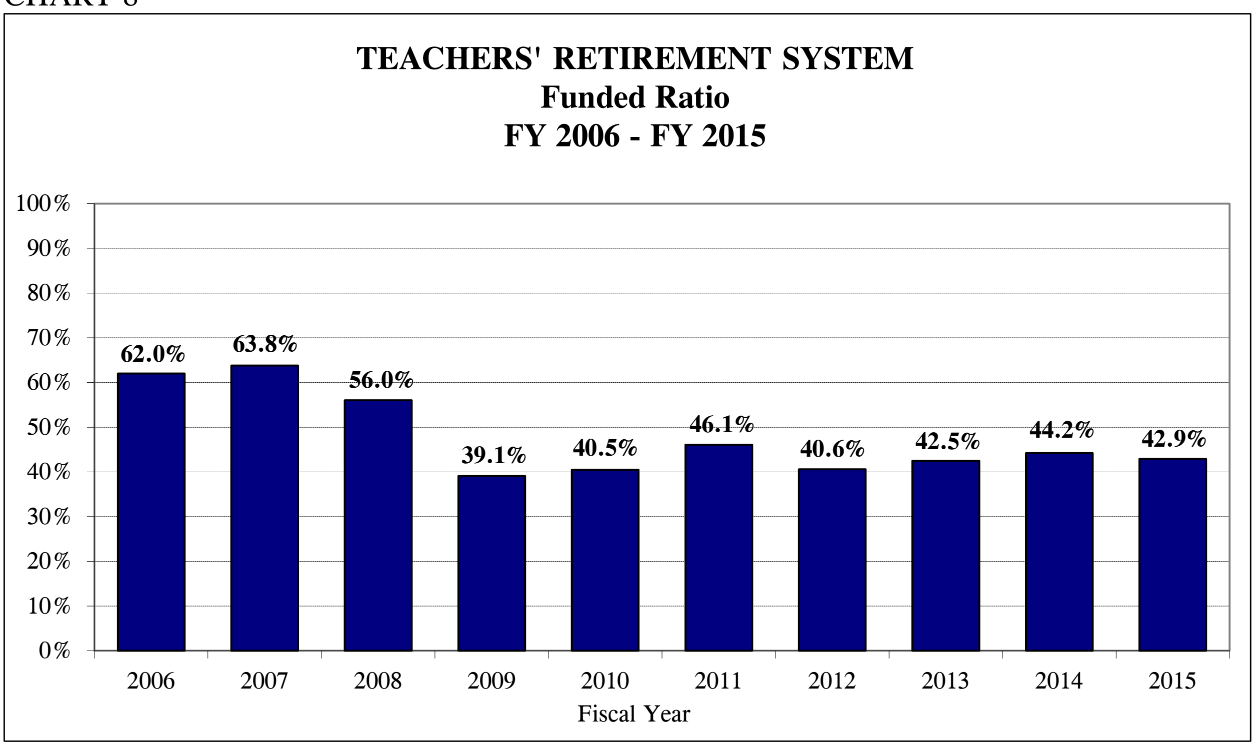


CHART 9

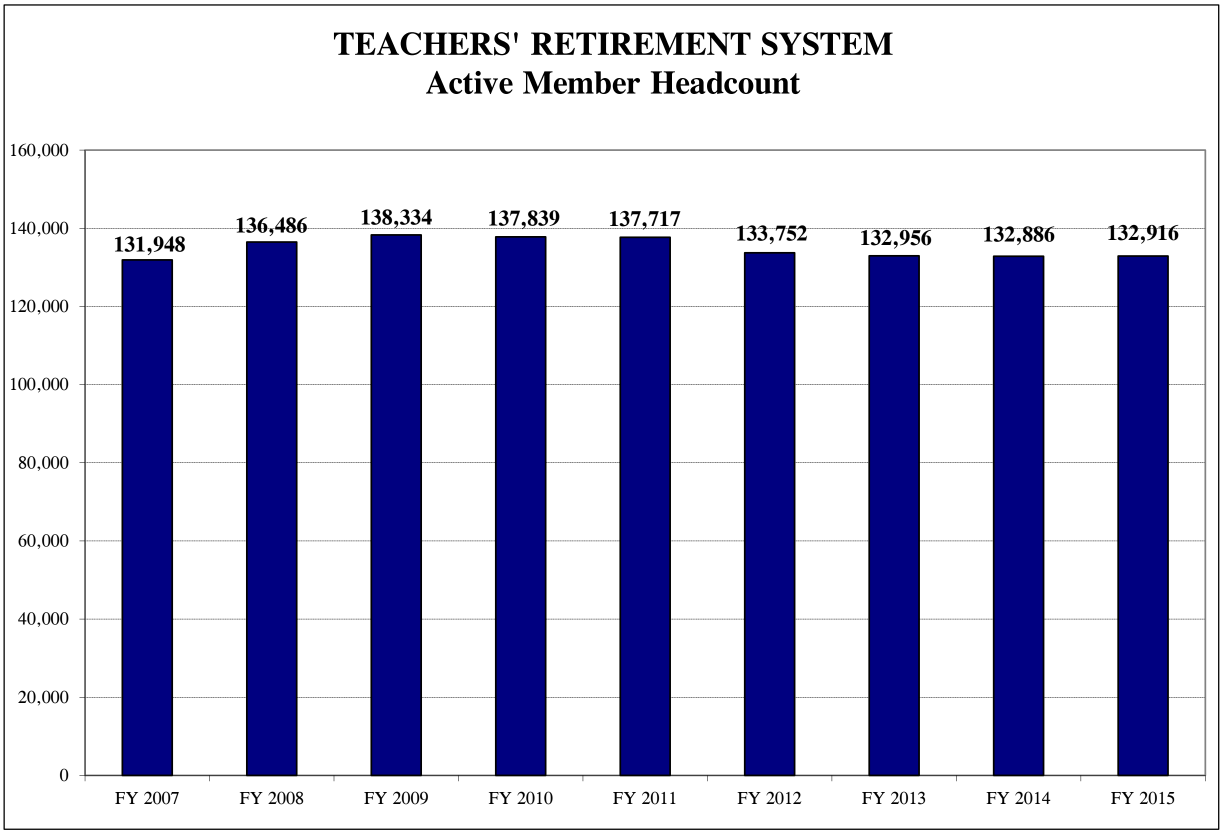
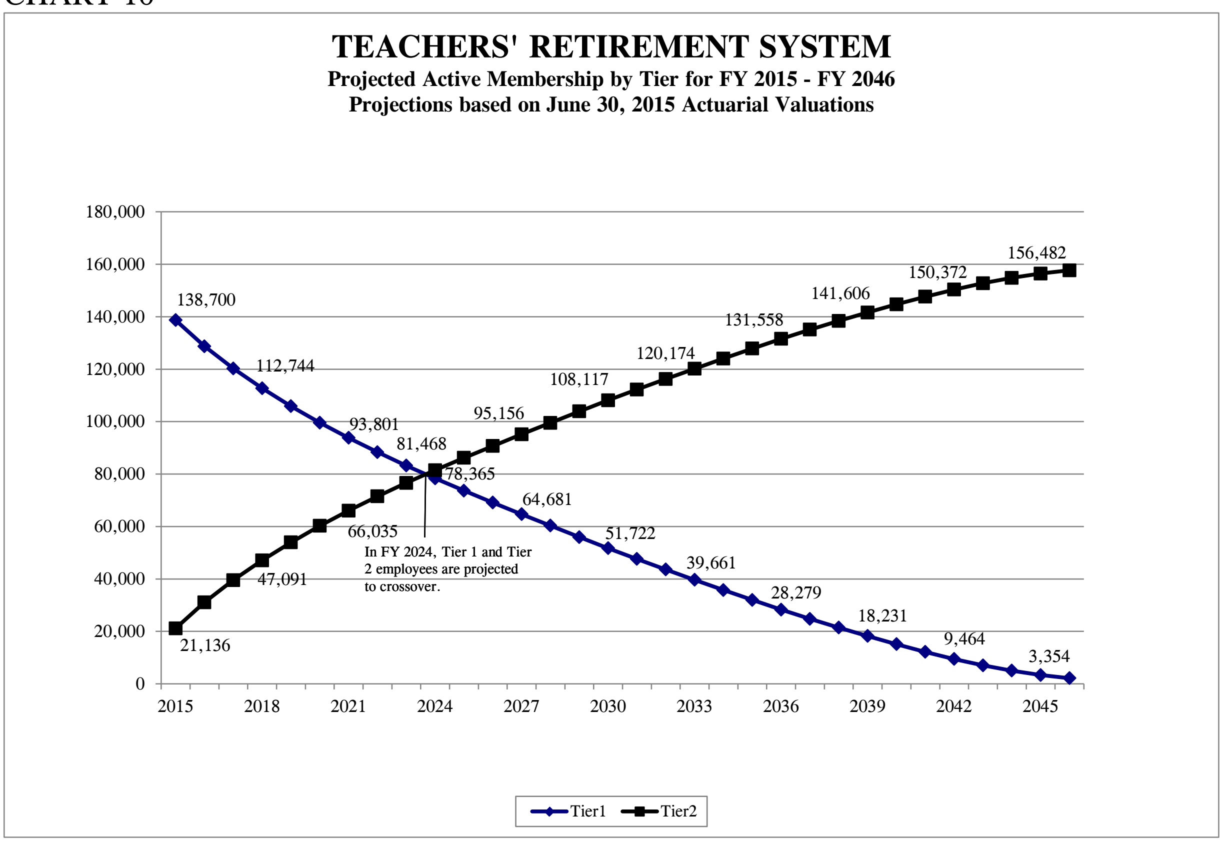


CHART 10



NOTE: The above membership projections include all active employees such as full-time, part-time, substitute, and hourly employees.

CHART 11

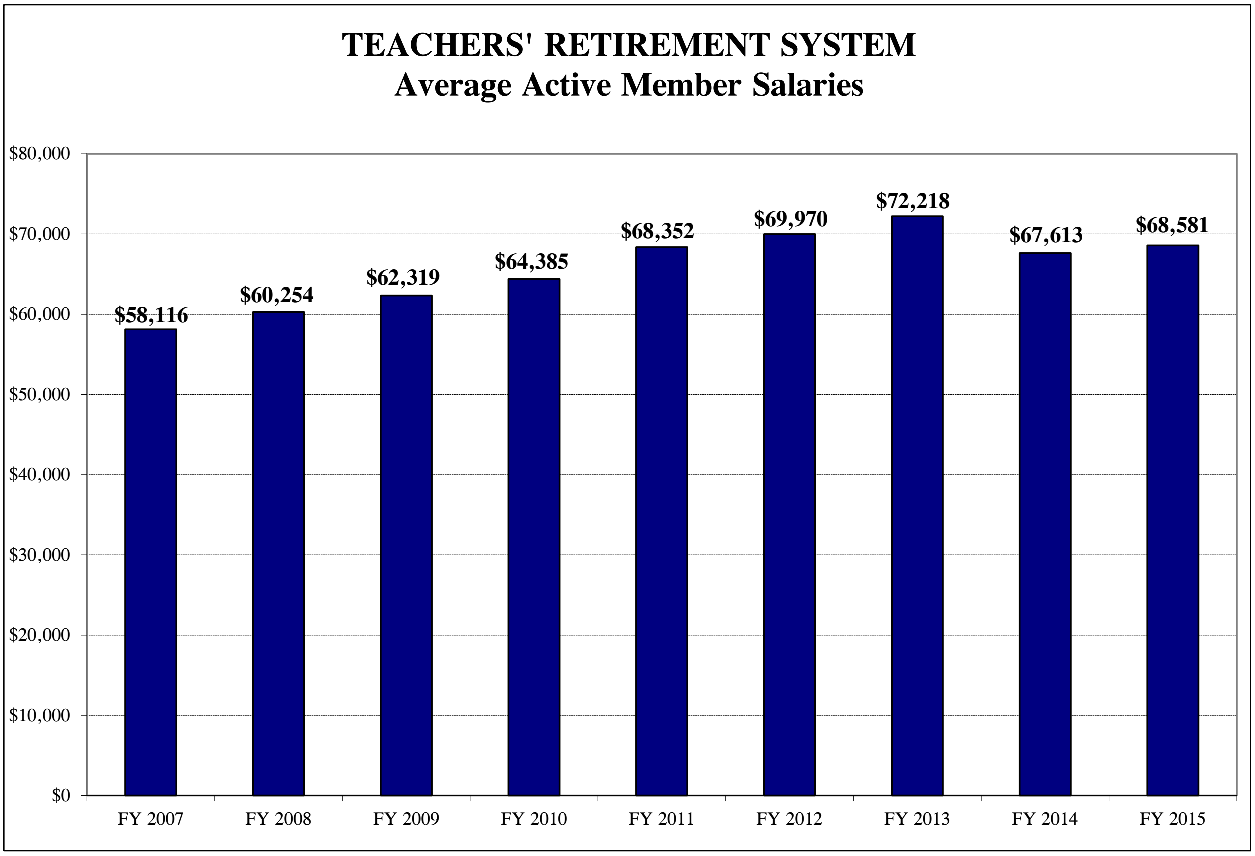


CHART 12

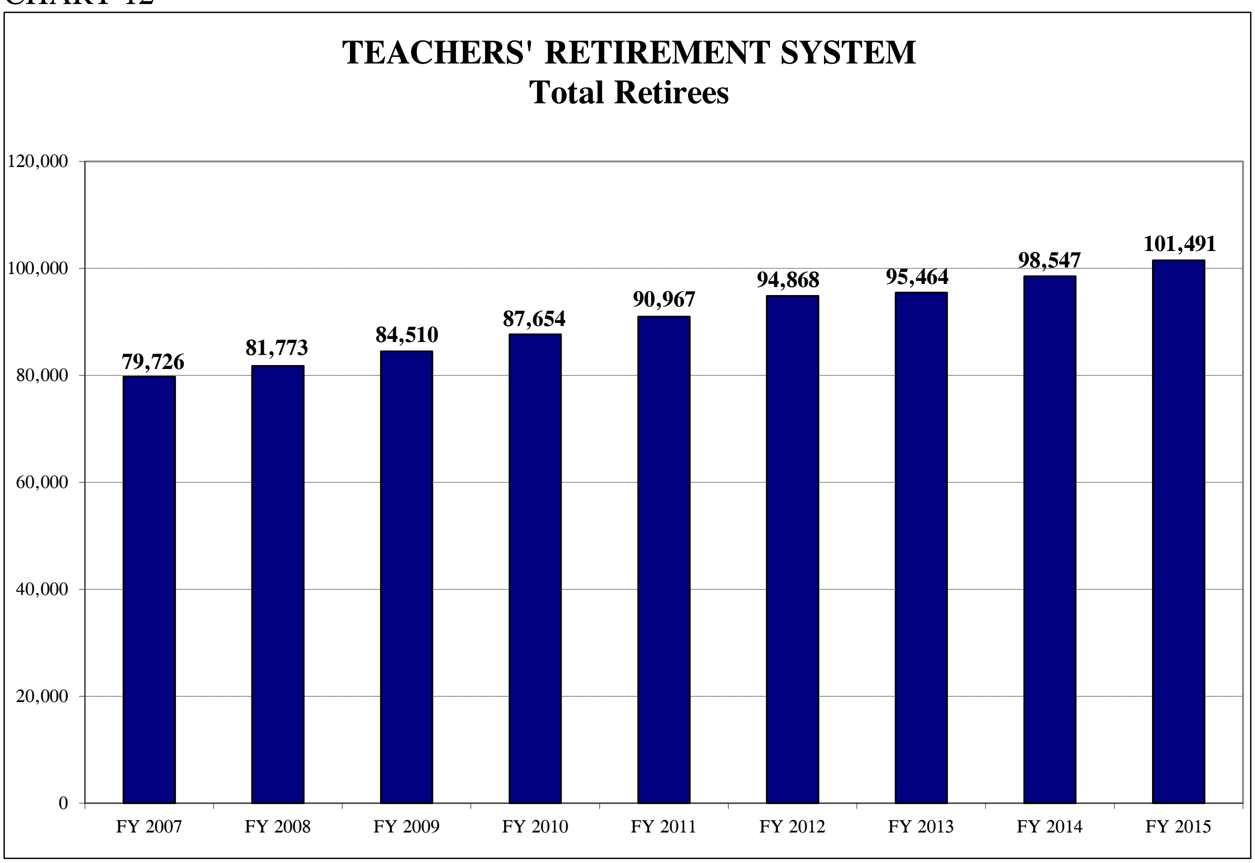


CHART 13

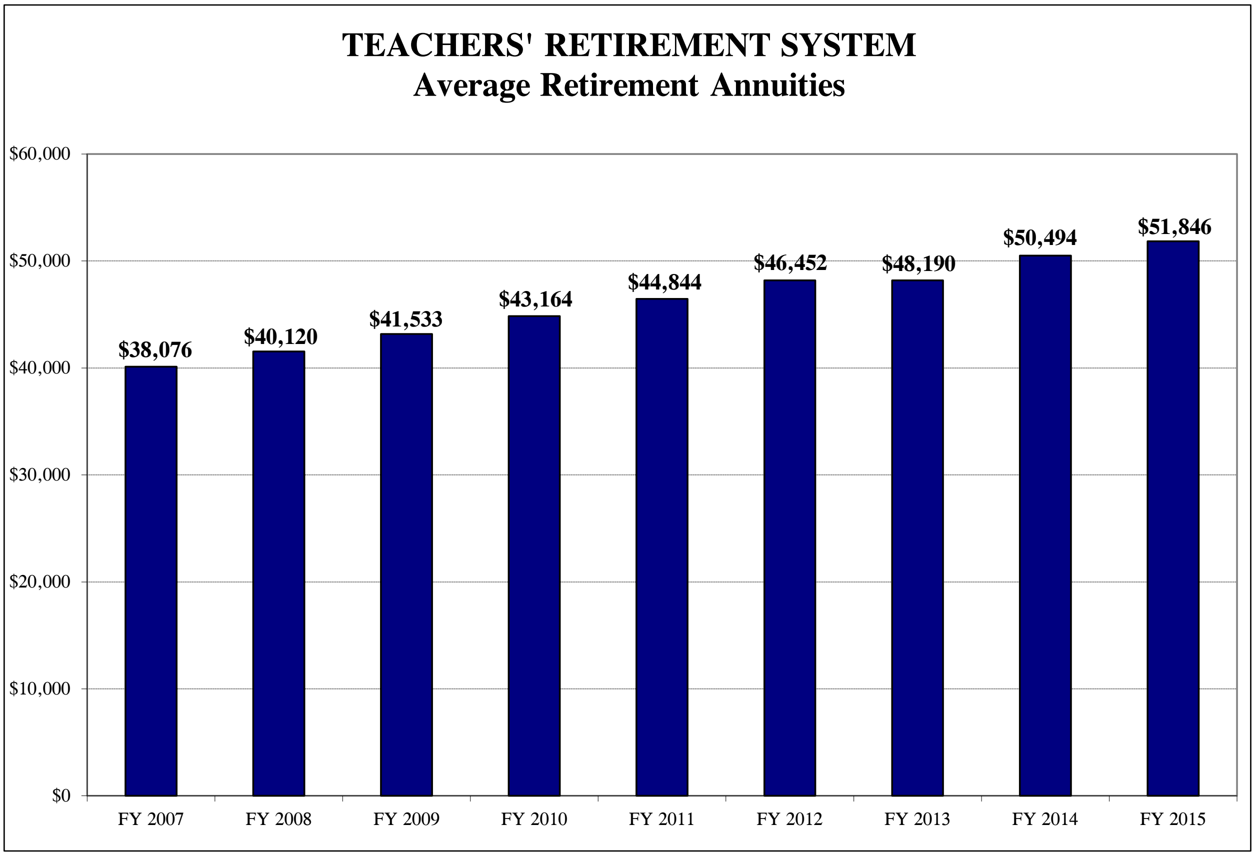


CHART 14

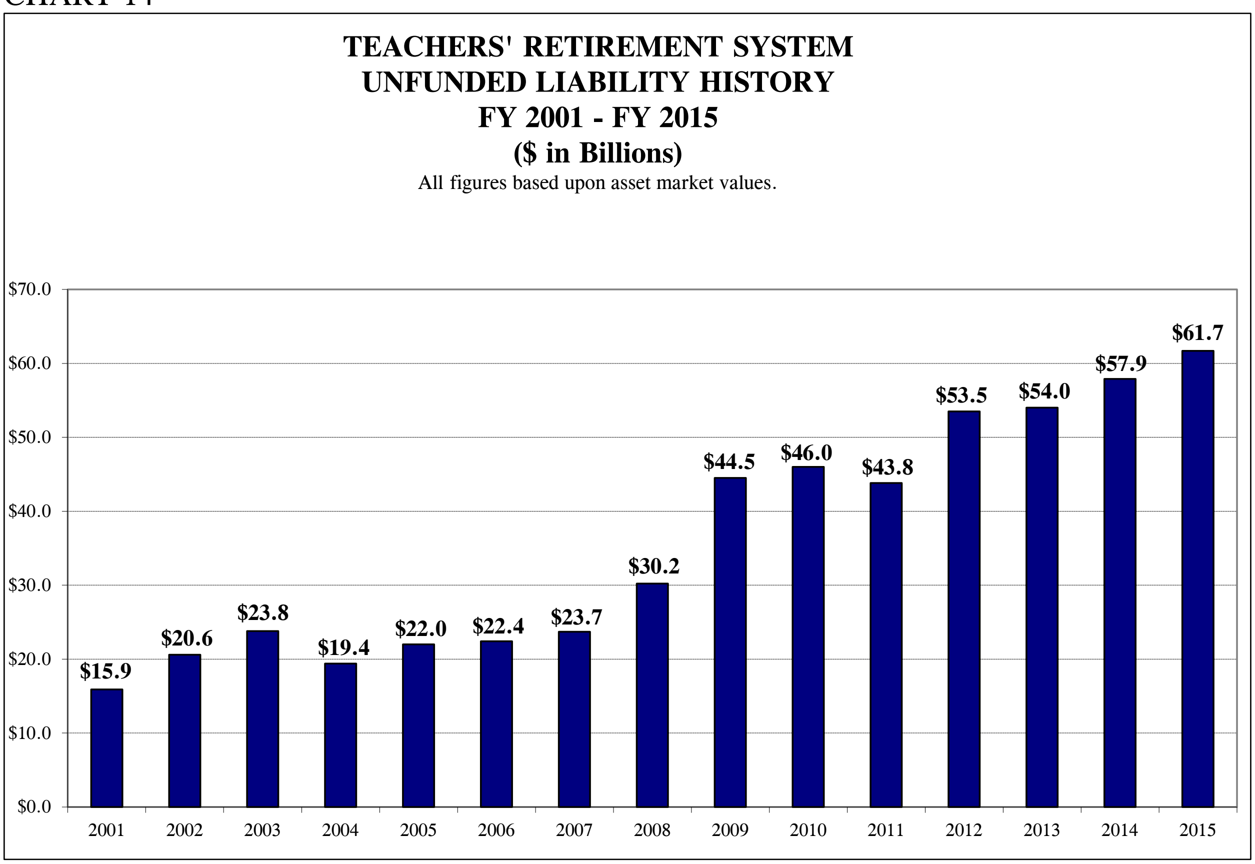


CHART 15

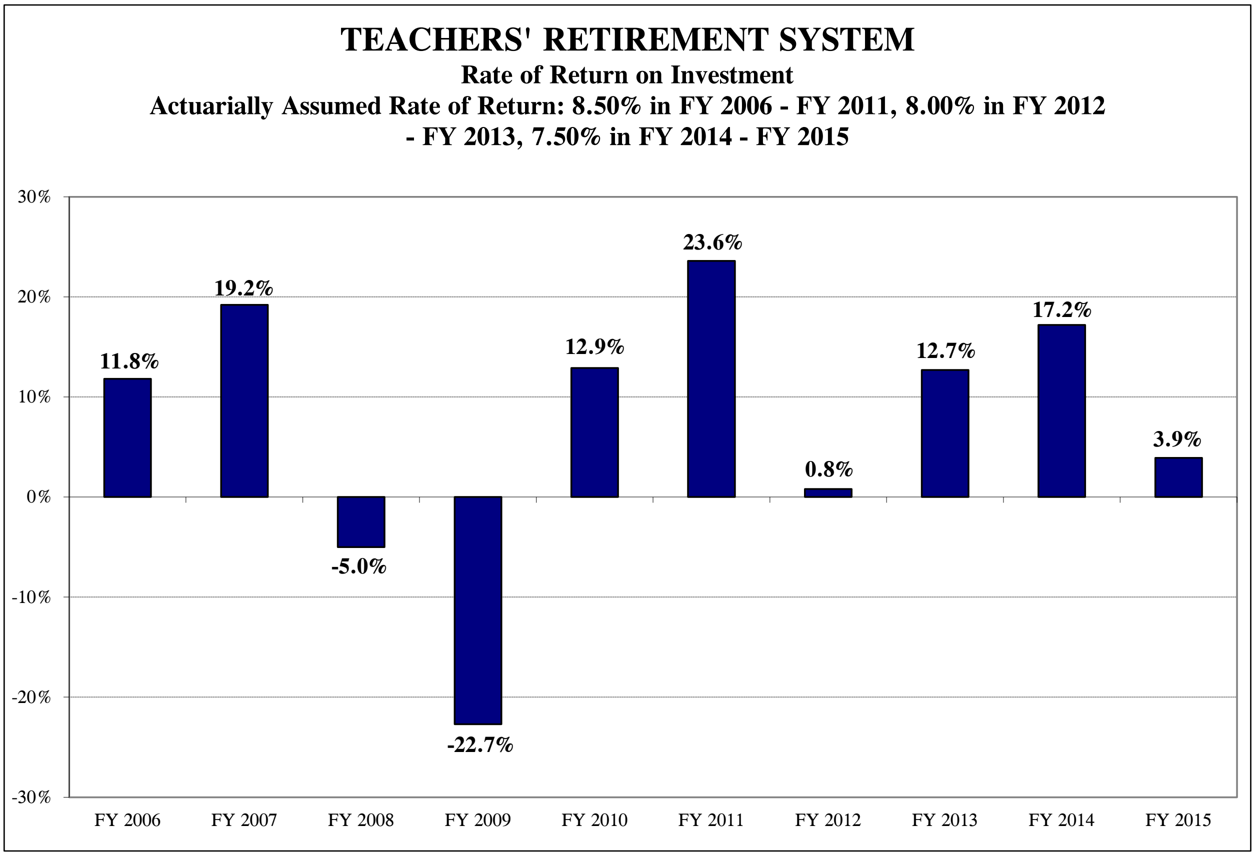


CHART 16

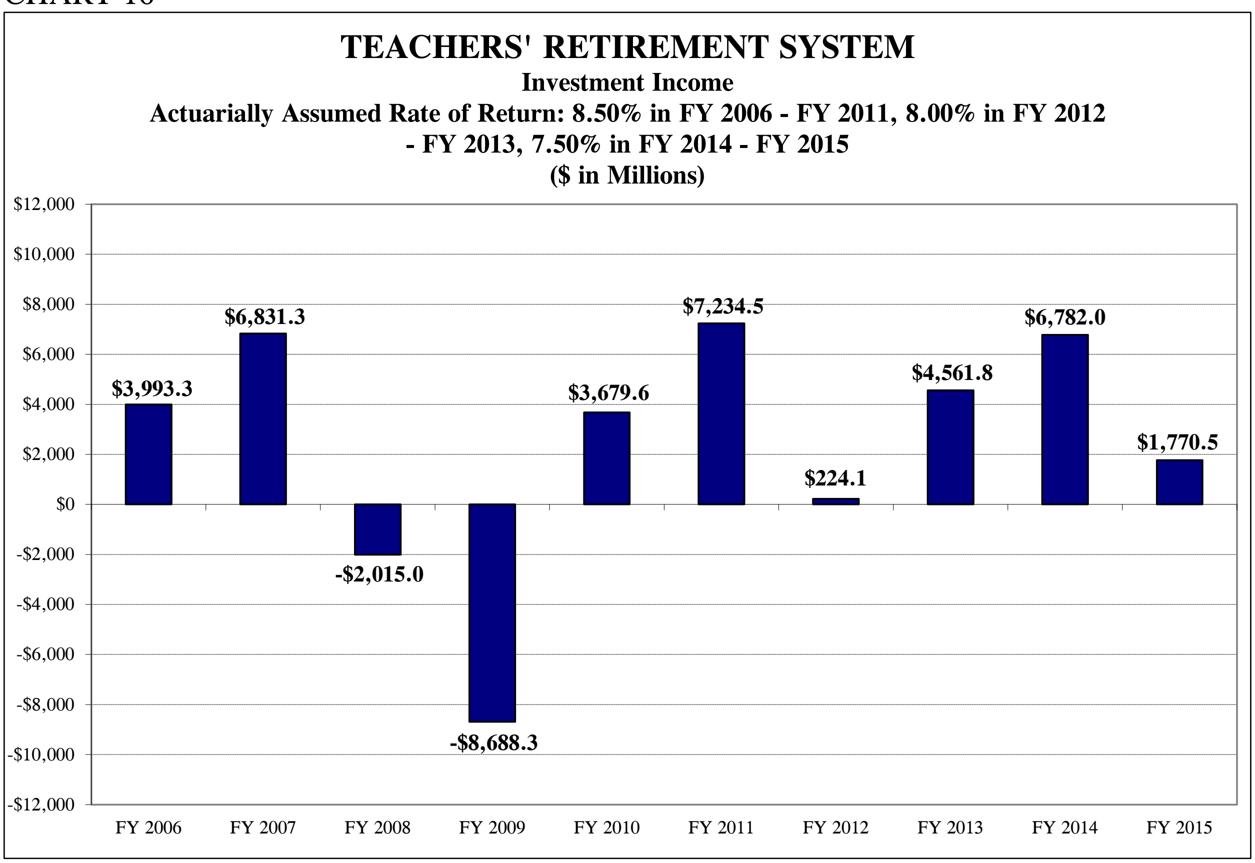


CHART 17

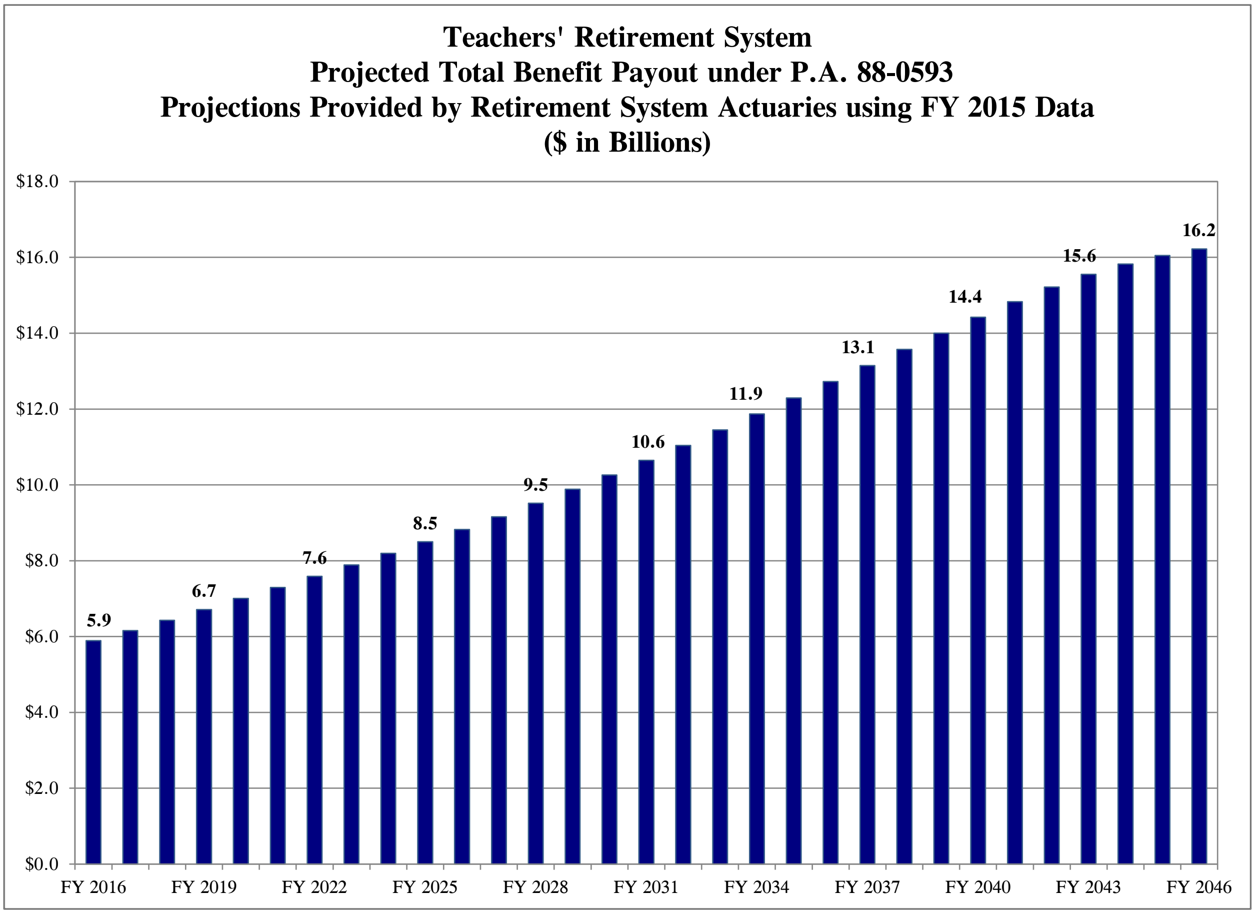

Teachers' Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2015 Data
($ in Billions)
$18.0
$16.0
$14.0
$12.0
$10.0
$8.0
$6.0
$4.0
$2.0
$0.0
5.9
6.7
7.6
8.5
9.5
10.6
11.9
13.1
14.4
15.6
16.2
FY 2016
FY 2019
FY 2022
FY 2025
FY 2028
FY 2031
FY 2034
FY 2037
FY 2040
FY 2043
FY 2046

TABLE 6

TEACHERS' RETIREMENT SYSTEM
CHANGES IN UNFUNDED LIABILITY
FY 1996 - FY 2015

YEAR ENDED	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N.C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	CHANGES IN ACTUARIAL ASSUMPTIONS	OTHER FACTORS MISC.	TOTAL CHANGE IN UNFUNDED LIABILITY FROM PREVIOUS YEAR
6/30/1996	$400,399,000	($577,281,000)	$965,961,000	$17,772,000	$0	$166,531,000	$973,382,000
6/30/1997	(59,062,000)	(830,936,000)	992,390,000	0	(2,944,771,000)	88,773,000	(2,753,606,000)
6/30/1998	(46,017,000)	(1,417,747,000)	776,189,000	1,000,300,000	0	71,152,000	383,877,000
6/30/1999	44,030,000	(389,014,000)	677,408,000	33,870,000	125,223,000	533,933,000	1,025,450,000
6/30/2000	(33,403,000)	(450,361,000)	723,606,000	0	0	197,345,000	437,187,000
6/30/2001	(10,310,000)	3,089,765,000	733,877,000	0	0	632,729,000	4,446,061,000
6/30/2002	4,934,000	2,696,199,000	1,074,422,000	0	694,736,000	360,047,000	4,830,338,000
6/30/2003	171,802,000	827,434,000	1,415,610,000	53,850,000	0	658,524,000	3,127,220,000
6/30/2004	217,255,000	(2,168,876,000)	(2,811,516,000)	0	0	357,250,000	(4,405,887,000)
6/30/2005	236,687,000	(682,294,000)	1,299,840,000	0	26,425,000	1,706,431,000	2,587,089,000
6/30/2006	68,398,000	(1,159,525,000)	1,913,368,000	0	0	(400,028,000)	422,213,000
6/30/2007	149,682,000	(3,785,653,000)	1,739,187,000	0	2,410,756,000	813,081,000	1,327,053,000
6/30/2008	(153,987,000)	5,514,988,000	1,529,701,000	0	0	(428,135,000)	6,462,567,000
6/30/2009	(29,162,000)	2,373,683,000	1,782,855,000	0	0	672,134,000	4,799,510,000
6/30/2010	(210,220,000)	2,929,300,000	1,572,250,000	0	0	561,570,000	4,852,900,000
6/30/2011	(545,612,000)	1,718,405,000	1,913,647,000	0	0	589,446,000	3,675,886,000
6/30/2012	(1,211,160,000)	1,806,150,000	2,710,710,000	0	4,624,970,000	618,880,000	8,549,550,000
6/30/2013	(412,776,000)	1,557,219,000	2,125,732,000	0	0	382,074,000	3,652,249,000
6/30/2014	(474,190,195)	(1,791,604,611)	1,648,042,240	0	6,403,256,969	72,310,315	5,857,814,718
6/30/2015	(468,541,235)	(1,354,881,665)	1,992,652,465	0	586,418,960	341,371,995	1,097,020,520
TOTALS	($2,361,253,430)	$7,904,969,724	$24,775,931,705	$1,105,792,000	$11,927,014,929	$7,995,419,310	$51,347,874,238

NOTE: All of the calculations in this table are based upon actuarial value of assets, i.e., WITH Asset Smoothing.

TABLE 7

TEACHERS' RETIREMENT SYSTEM
Changes in Net Assets
($ in Millions)

Fiscal Years	2015	2014	2013	2012	2011	2010	2009	2008	2007
Additions to Assets									
State of Illinois	3,377.7	3,438.4	2,703.3	2,406.4	2,170.9	2,080.7	1,451.6	1,041.1	737.7
Pension Obligation Bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employees	935.5	928.7	921.4	917.7	909.6	899.4	876.2	865.4	826.2
School Districts	75.8	83.9	88.3	92.5	89.1	97.1	99.4	88.3	83.4
Federal	69.8	74.5	68.9	62.3	66	74.4	52.9	42.4	32.5
Net Investment Income	1,770.6	6,782.0	4,561.8	224.1	7,234.5	3,679.6	-8,688.3	-2,015.0	6,831.3
Total Asset Additions (A)	6,229.3	11,307.5	8,343.6	3,703.0	10,470.1	6,831.2	-6,208.2	22.2	8,511.1
Deductions from Assets									
Benefits	5,536.4	5,225.2	4,893.1	4,553.8	4,228.2	3,927.8	3,653.7	3,424.0	3,111.8
Refunds	88.6	95.5	88.4	84.6	76.6	60.3	53.7	60.3	59.7
Subsidy Payments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative Expenses	21.7	21.2	20.3	19.0	17.8	17.0	17.4	16.6	15.2
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Asset Deductions (B)	5,646.7	5,341.9	5,001.7	4,657.4	4,322.6	4,005.1	3,724.8	3,500.9	3,186.7
Change in Net Assets (A-B=C)	582.5	5,965.6	3,341.9	-954.4	6,147.5	2,826.1	-9,933.0	-3,478.7	5,324.4

TABLE 8

TEACHERS' RETIREMENT SYSTEM
Historical Investment Revenues
($ in Millions)

Fiscal Year	Market Value of Assets at Year End	Net Investment Revenue	Rate of Return Earned
2004	31,544.7	4,485.7	16.5%
2005	34,085.2	3,330.0	10.8%
2006	36,584.9	3,993.3	11.8%
2007	41,909.3	6,831.3	19.2%
2008	38,430.7	-2,015.0	-5.0%
2009	28,961.4	-8,688.3	-22.7%
2010	31,323.8	3,679.6	12.9%
2011	37,471.3	7,234.5	23.6%
2012	36,516.8	224.1	0.8%
2013	39,858.8	4,561.8	12.7%
2014	45,824.4	6,782.0	17.2%
2015	46,406.9	1,770.6	3.9%

TABLE 9

TEACHERS RETIREMENT SYSTEM Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2015 Data ($ in Millions)						
Fiscal Year	Tier 1 Normal Cost	Tier 1 Normal Cost as a % of Payroll	Tier 2 Normal Cost	Tier 2 Normal Cost as a % of Payroll	Total Normal Cost	Total Normal Cost as a % of Payroll
2016	1,763.7	16.6%	84.3	0.8%	1,848.0	17.4%
2017	1,765.0	16.7%	117.0	1.1%	1,882.0	17.9%
2018	1,766.2	16.2%	150.5	1.4%	1,916.6	17.6%
2019	1,766.3	15.8%	184.9	1.6%	1,951.3	17.4%
2020	1,765.9	15.3%	220.4	1.9%	1,986.2	17.2%
2021	1,764.5	14.8%	257.2	2.2%	2,021.7	17.0%
2022	1,762.0	14.3%	295.7	2.4%	2,057.7	16.7%
2023	1,758.2	13.8%	336.2	2.6%	2,094.4	16.5%
2024	1,751.1	13.3%	378.8	2.9%	2,129.9	16.2%
2025	1,738.6	12.8%	424.0	3.1%	2,162.7	16.0%
2026	1,720.4	12.3%	471.8	3.4%	2,192.2	15.7%
2027	1,695.0	11.7%	522.3	3.6%	2,217.3	15.4%
2028	1,659.7	11.1%	576.1	3.9%	2,235.7	15.0%
2029	1,615.7	10.5%	632.3	4.1%	2,248.0	14.6%
2030	1,566.0	9.9%	691.5	4.4%	2,257.4	14.2%
2031	1,509.7	9.2%	753.4	4.6%	2,263.1	13.8%
2032	1,446.0	8.6%	818.0	4.8%	2,264.0	13.4%
2033	1,372.1	7.9%	885.9	5.1%	2,258.1	13.0%
2034	1,287.9	7.2%	956.3	5.3%	2,244.2	12.5%
2035	1,195.2	6.5%	1,030.0	5.6%	2,225.1	12.1%
2036	1,096.5	5.8%	1,105.8	5.8%	2,202.3	11.6%
2037	993.9	5.1%	1,183.1	6.1%	2,177.0	11.2%
2038	886.0	4.4%	1,262.7	6.3%	2,148.7	10.8%
2039	770.8	3.8%	1,344.3	6.6%	2,115.2	10.4%
2040	651.4	3.1%	1,428.7	6.8%	2,080.1	10.0%
2041	532.1	2.5%	1,514.1	7.1%	2,046.2	9.6%
2042	416.0	1.9%	1,599.5	7.4%	2,015.5	9.3%
2043	309.1	1.4%	1,684.6	7.6%	1,993.7	9.0%
2044	215.9	1.0%	1,768.3	7.9%	1,984.2	8.8%
2045	140.5	0.6%	1,850.9	8.1%	1,991.4	8.7%
2046	86.2	0.4%	1,930.7	8.3%	2,016.9	8.7%

V. The State Employees' Retirement System

- Plan Summaries
- FY 2015 Change in Unfunded Liabilities
- Funded Ratio History
- Active Member Headcount
- Average Active Member Salaries
- Retiree Headcount
- Average Retirement Annuities
- Unfunded History
- Rate of Return on Investments
- Annual Investment Revenue
- Total Payout
- Annual Changes in Unfunded
- Changes in Net Assets
- Investment Return History
- Reduction in State Contributions
- Tier 1 & Tier 2 Normal Cost Projections

State Employees' Retirement System
Tier 1 Regular Formula - Plan Summary

Retirement Age

- "Rule of 85" – retirement when member's age plus years of service equals 85.
- Age 60 with 8 years of service credit.
- Age 55 with at least 25 years of service (reduced one-half of one percent for each month the member is under age 60).

Retirement Formula

- 1.67% of final average salary for each year of service for members covered by Social Security.
- 2.2% of final average salary for each year of service credit for members not covered by Social Security.

Maximum Annuity

- 75% of final average salary.

Salary Used to Calculate Pension

- Highest 48 consecutive months of service within the last 120 months of service.

Annual COLA

- 3% compounded

Employee Contributions

- 4.0% of salary for members covered by Social Security.
- 8.0% of salary for members not covered by Social Security.

The benefits shown do not reflect P.A. 96-0899 (2 Tier Act of 2011). Please refer to Section I earlier in this report for details.

State Employees' Retirement System
Tier 1 Alternative Formula - Plan Summary

Retirement Age

- Age 55 with at least 20 years of service.
- Age 50 with at least 25 years of service.

Retirement Formula

- 2.5% of final average salary for each year of service for members covered by Social Security.
- 3.0% of final average salary for each year of service credit for members not covered by Social Security.

Maximum Annuity

- 80% of final average salary.

Salary Used to Calculate Pension

- Rate of pay on the last day of employment, or the average of the last 48 months of compensation, whichever is greater.
- Salary capped at Tier II cap level. This salary cap rises annually at an increase that is equal to one-half of the annual rate of inflation in the previous year.

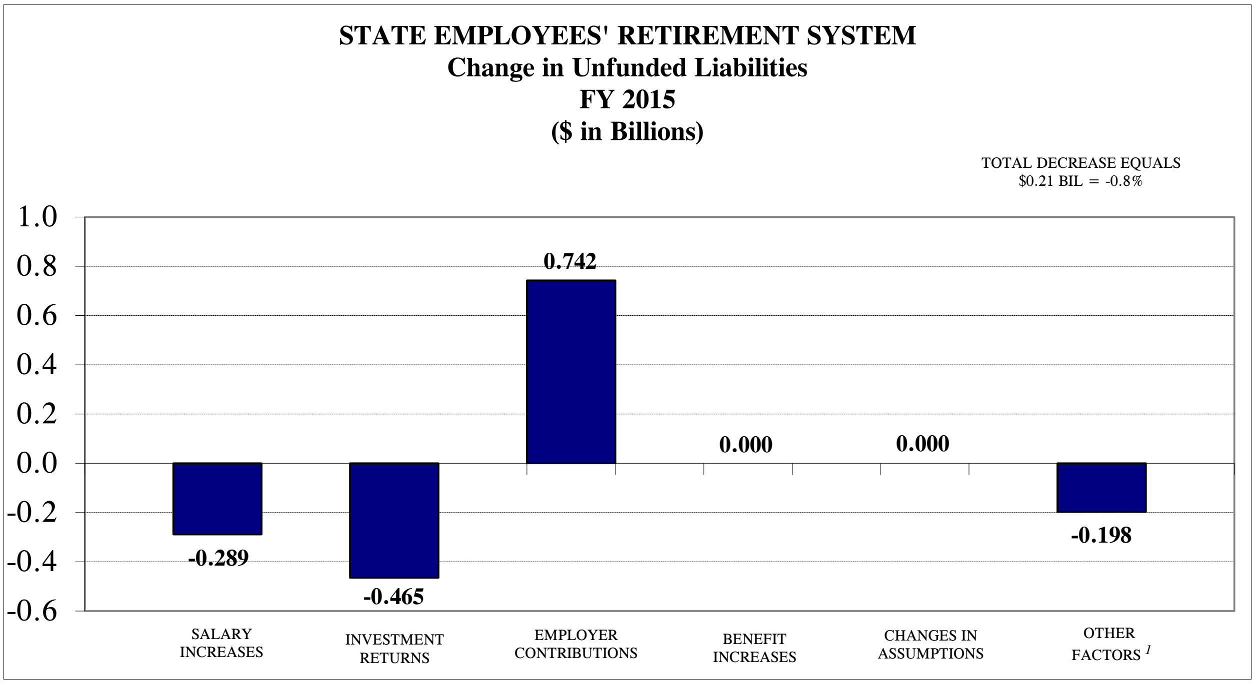
Annual COLA

- 3% compounded.

Employee Contributions

- 8.5% of salary for members covered by Social Security. Applies to Security Employees of the Department of Corrections and Department of Human Services, Air Pilots and State Highway Maintenance Workers.
- 12.5% of salary for members not covered by Social Security. Applies to State Police, Special Agents, Firefighters, Secretary of State Investigators, Conservation Police Officers, Department of Revenue Investigators, Central Management Services Police Officers, Mental Health Police Officers, Dangerous Drug Investigators, Attorney General Investigators, Controlled Substance Inspectors, States Attorneys Appellate Prosecutors Investigators, Commerce Commission Police Officers and Arson Investigators.

CHART 18



NOTE: The above chart is based upon actuarial value of assets.

[1] *Other Factors include actuarial gains from retiree mortality and benefit changes.*

CHART 19

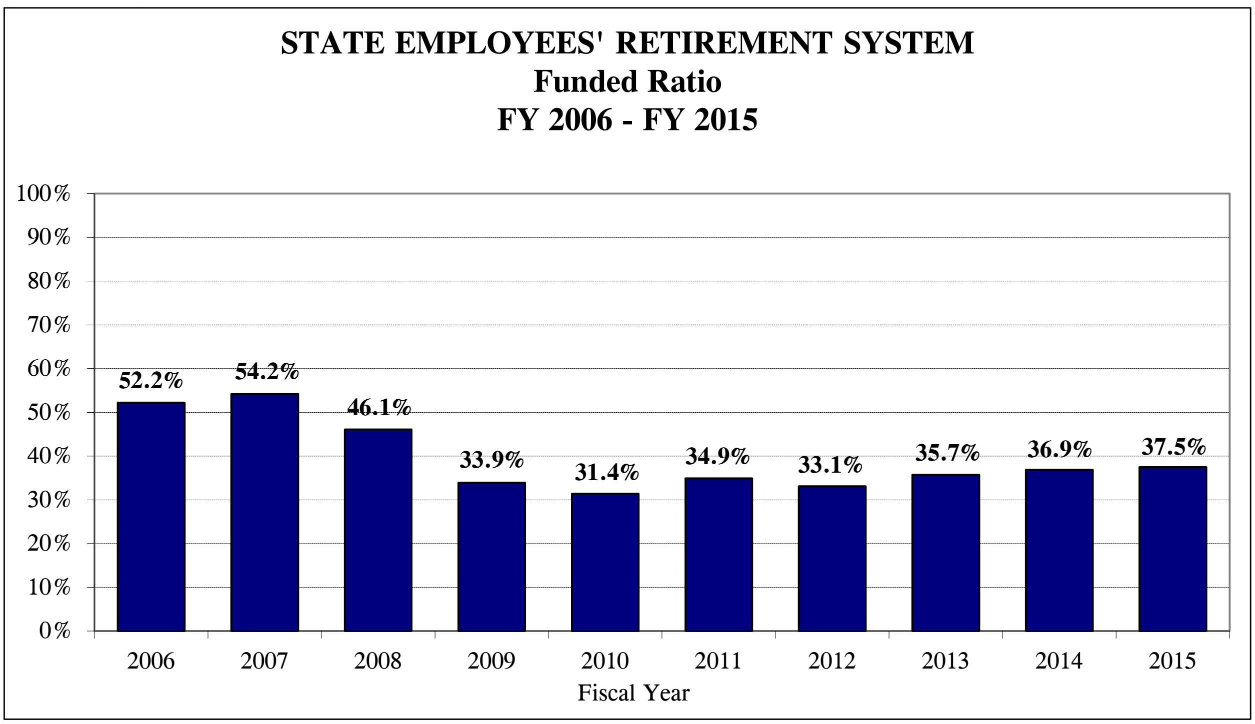


CHART 20

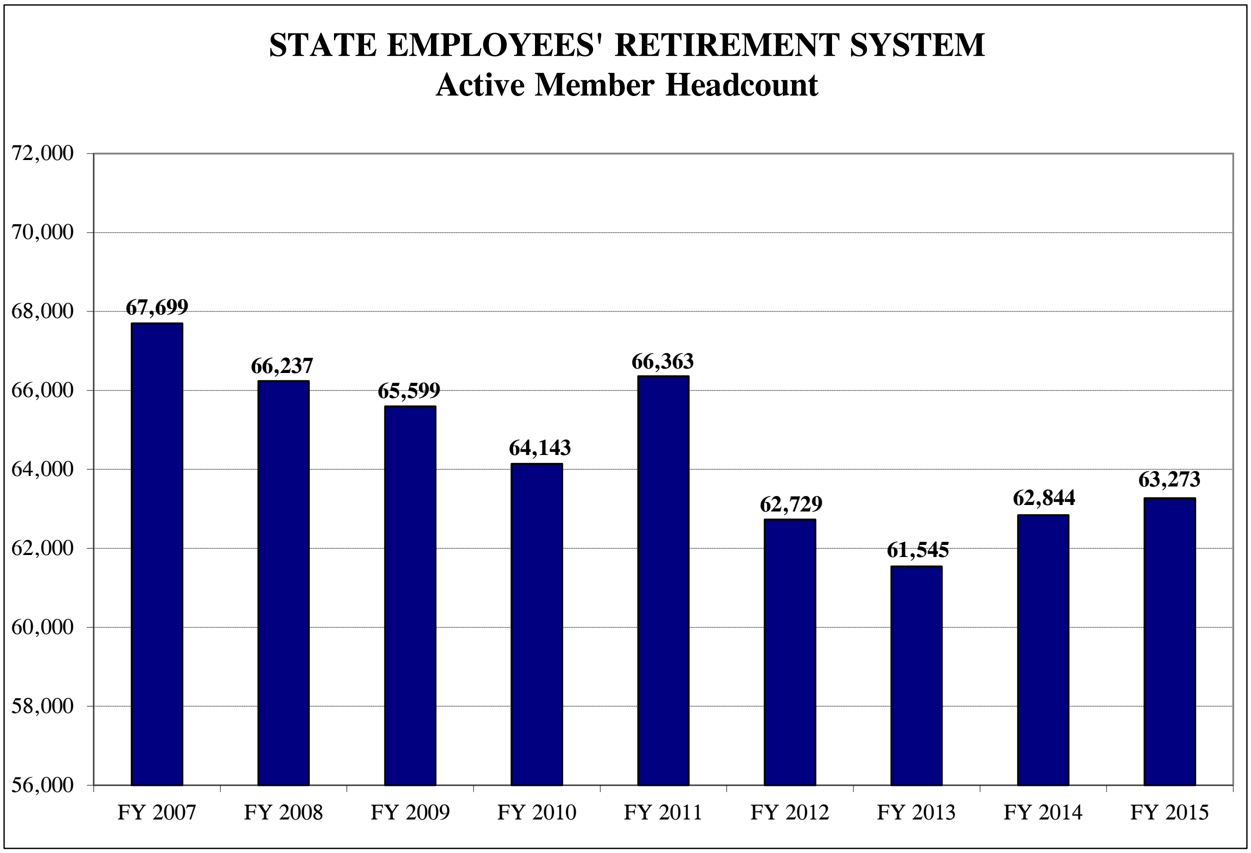


CHART 21

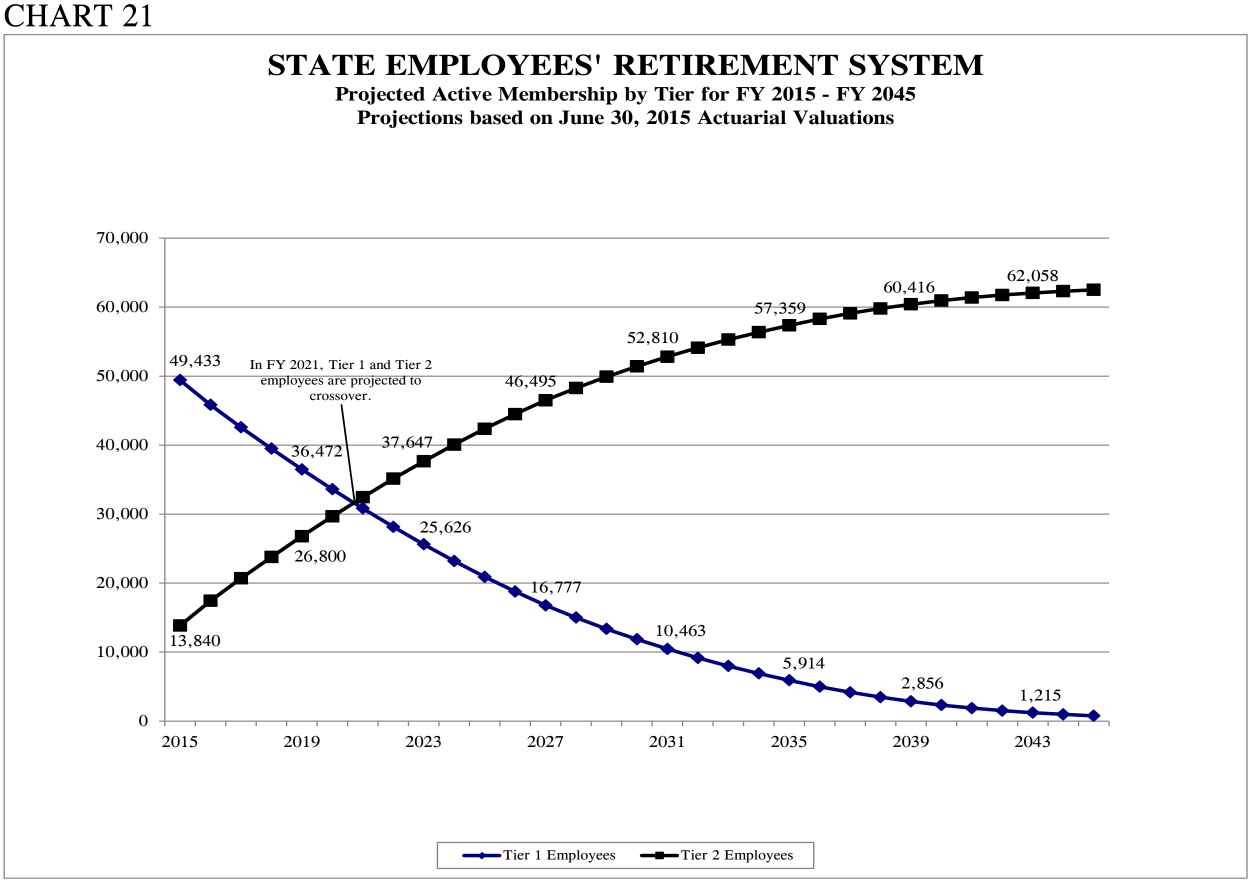


CHART 22

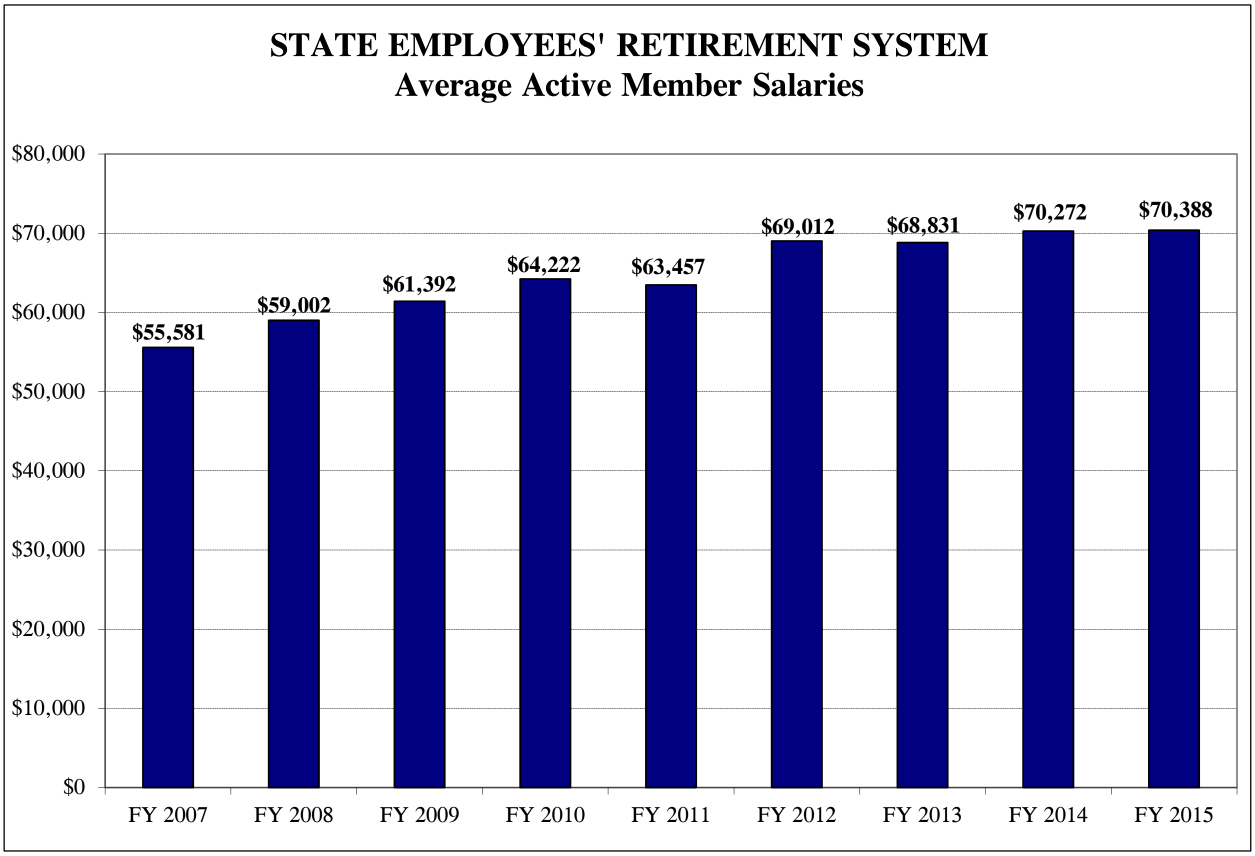


CHART 23

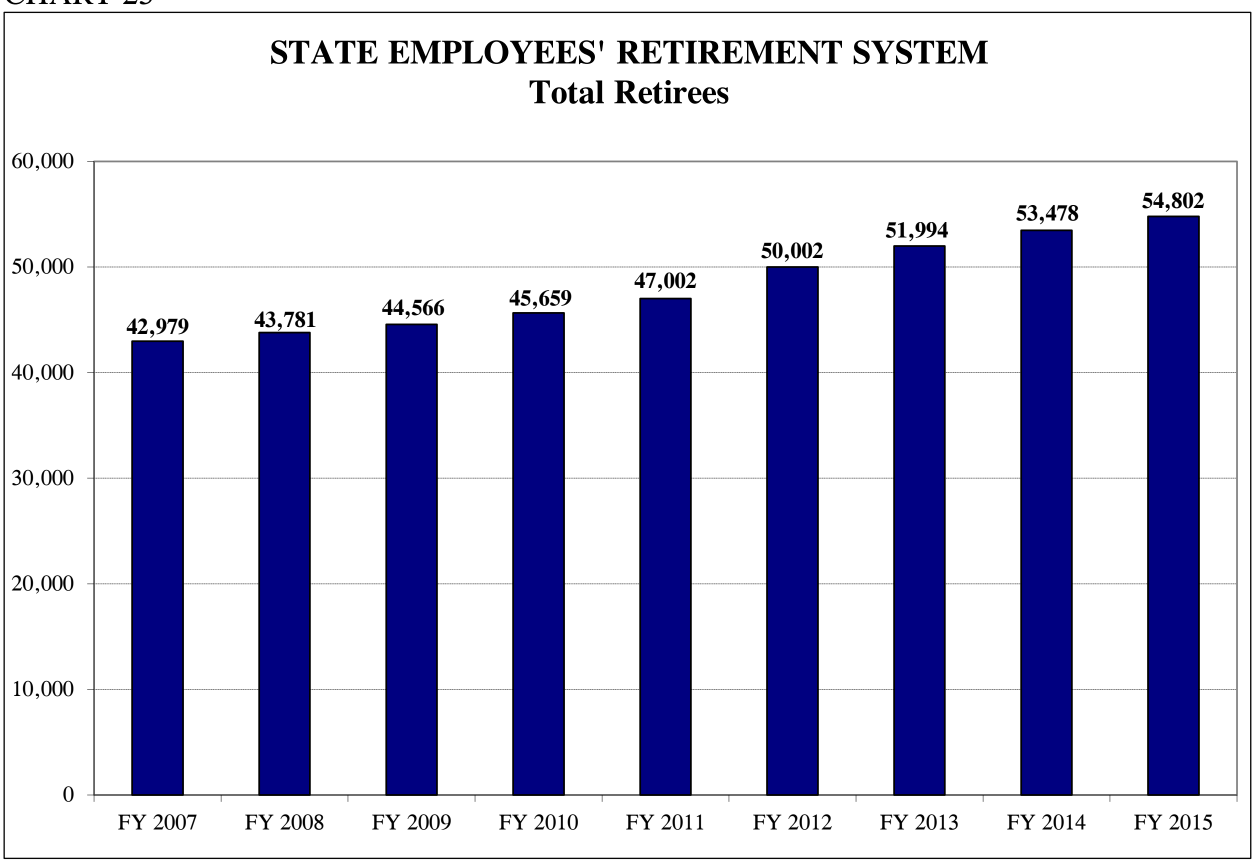


CHART 24

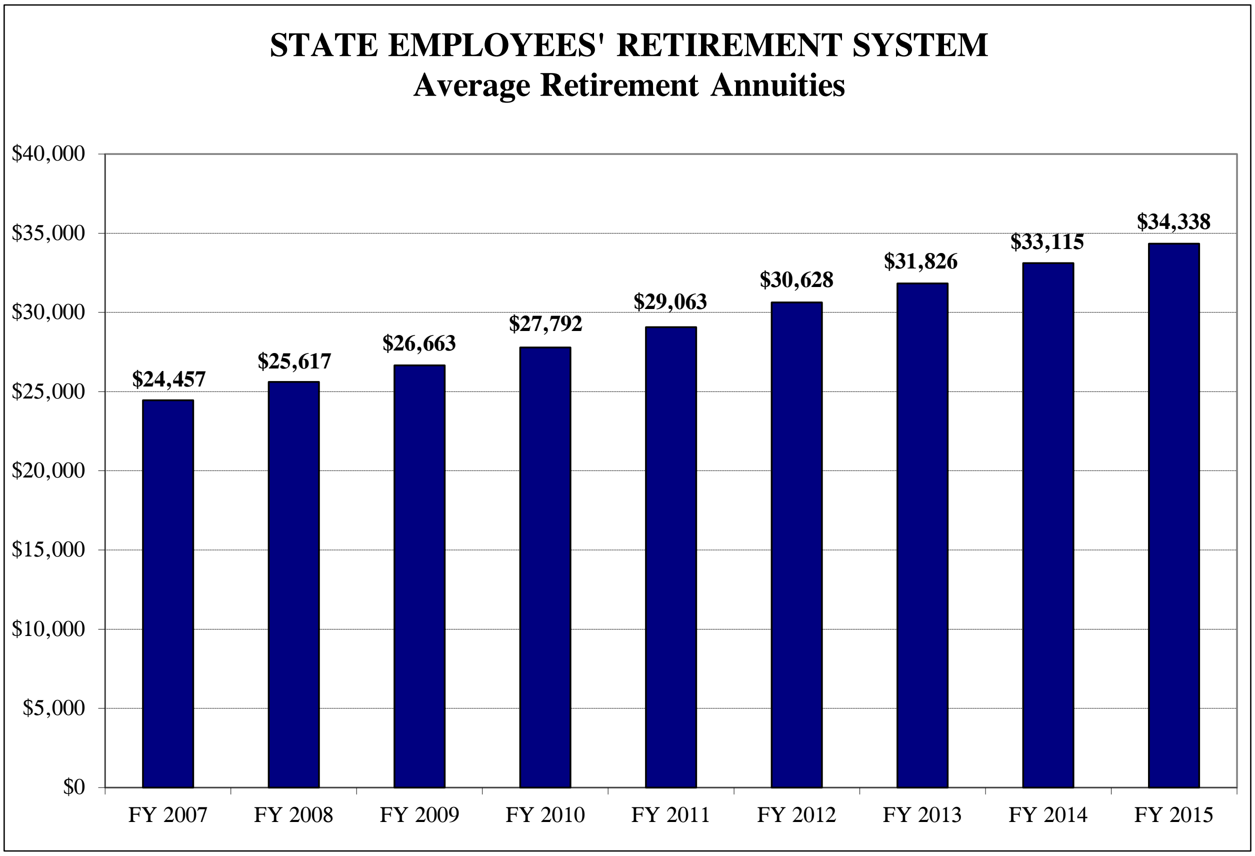


CHART 25

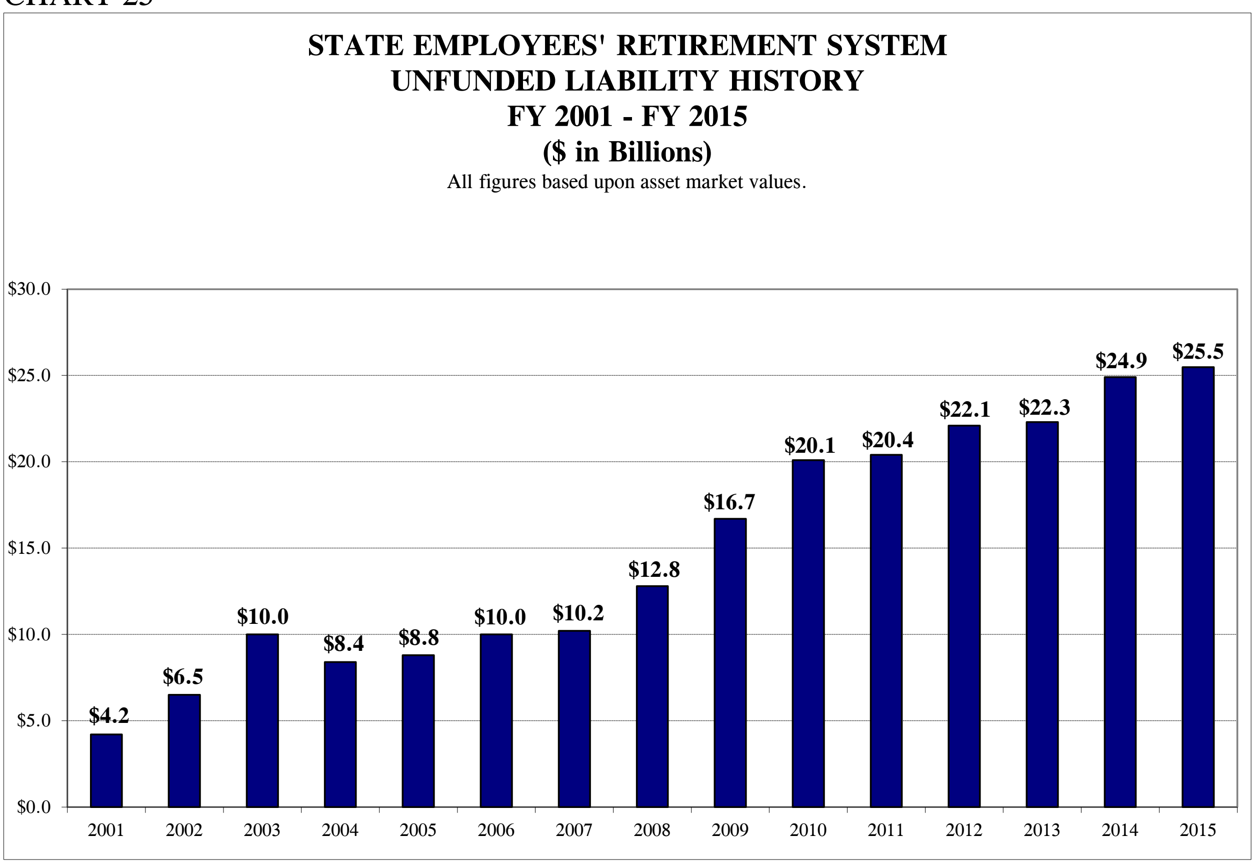
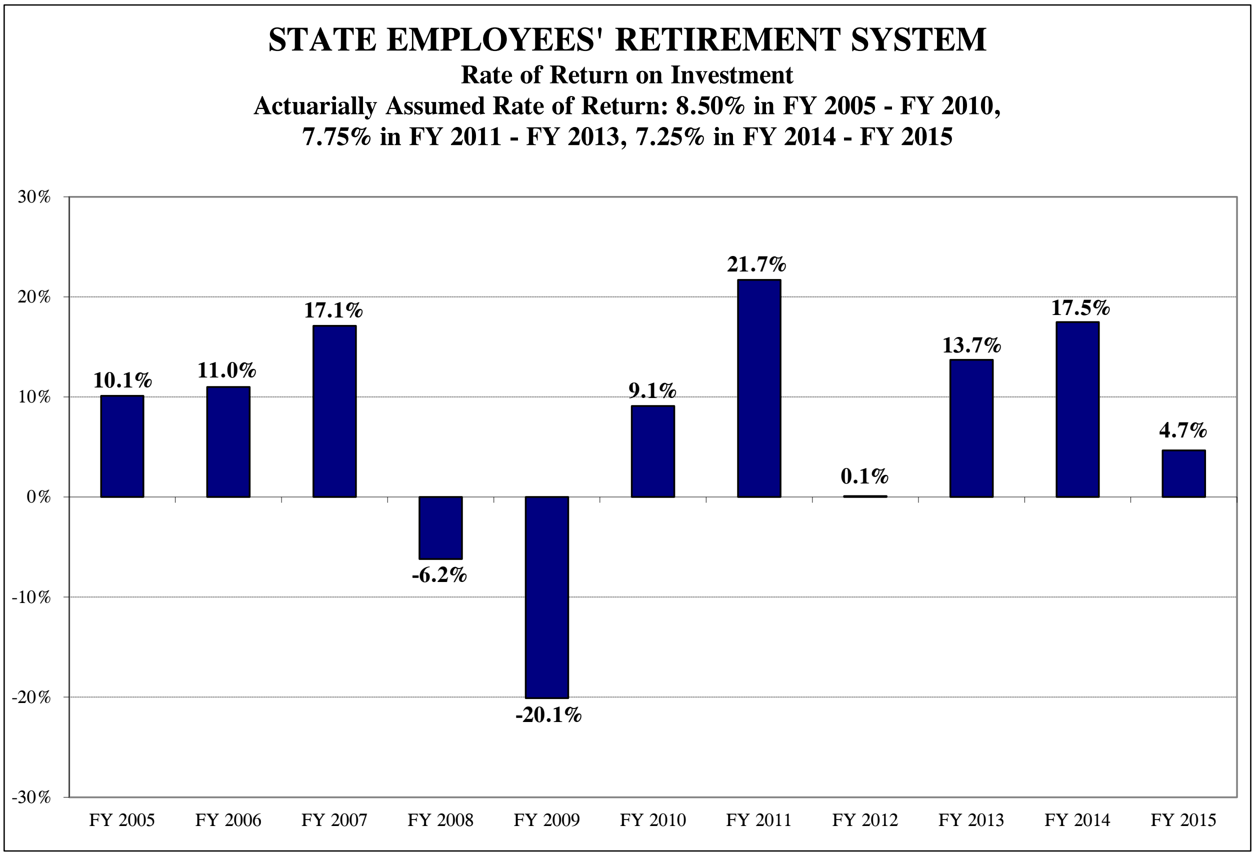


CHART 26



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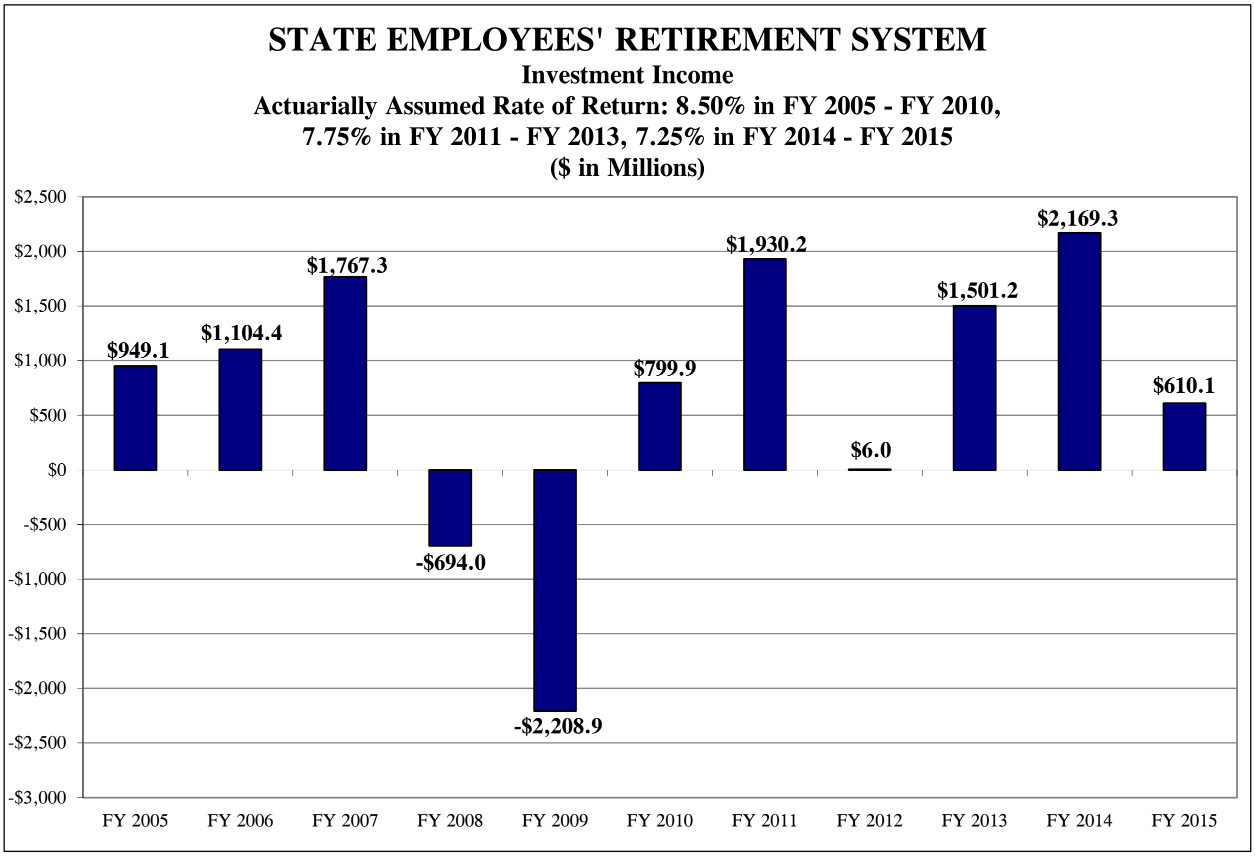

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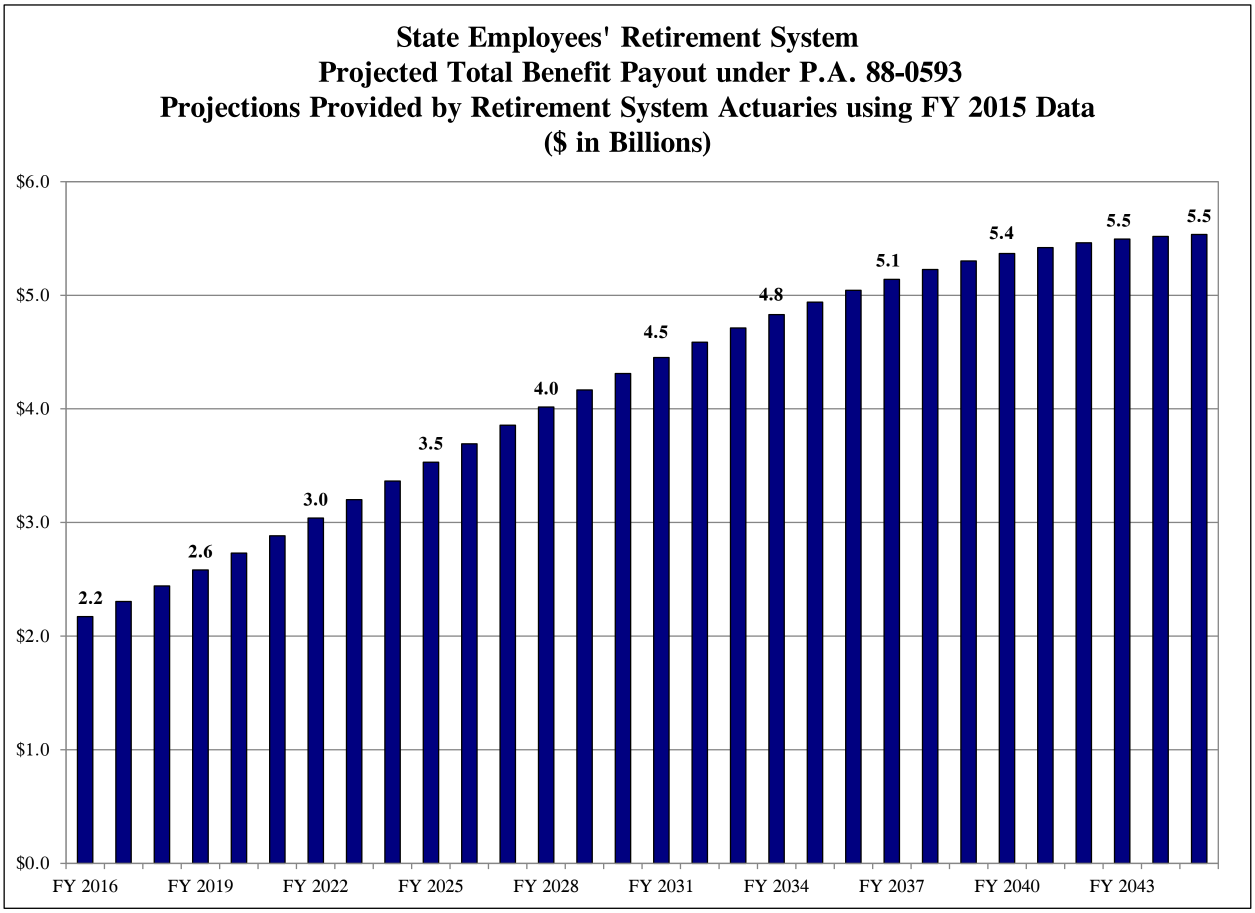

State Employees' Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2015 Data
($ in Billions)
$6.0
$5.0
$4.0
$3.0
$2.0
$1.0
$0.0
2.2
2.6
3.0
3.5
4.0
4.5
4.8
5.1
5.4
5.5
5.5
FY 2016
FY 2019
FY 2022
FY 2025
FY 2028
FY 2031
FY 2034
FY 2037
FY 2040
FY 2043

TABLE 10

STATE EMPLOYEES' RETIREMENT SYSTEM CHANGES IN UNFUNDED LIABILITY FY 1996 - FY 2015							
YEAR ENDED	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N.C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	CHANGES IN ACTUARIAL ASSUMPTIONS	OTHER FACTORS MISC.	TOTAL CHANGE IN UNFUNDED LIABILITY FROM PREVIOUS YEAR
6/30/1996	($63,804,332)	($251,369,719)	$196,620,212	$0	$0	$47,104,123	($71,449,716)
6/30/1997	(65,121,542)	(541,583,072)	121,668,957	0	(379,894,379)	152,898,511	(712,031,525)
6/30/1998	(62,013,427)	(568,807,725)	9,431,057	1,249,883,128	0	148,729,225	777,222,258
6/30/1999	(12,536,220)	(307,064,512)	21,020,544	0	0	32,949,396	(265,630,792)
6/30/2000	14,642,937	(252,699,421)	(21,811,201)	0	0	250,182,926	(9,684,759)
6/30/2001	(8,000,000)	1,368,815,911	(29,398,605)	652,110,224	0	309,964,003	2,293,491,533
6/30/2002	52,000,000	1,247,268,792	186,860,538	171,100,000	168,144,000	496,199,643	2,321,572,973
6/30/2003	(28,282,435)	629,483,966	404,526,925	2,371,173,094	0	97,815,307	3,474,716,857
6/30/2004	(22,316,647)	(679,743,495)	(944,135,304)	0	0	6,804,783	(1,639,390,663)
6/30/2005	(166,479,933)	(123,132,472)	503,532,346	0	0	144,142,000	358,061,941
6/30/2006	33,070,000	(250,686,000)	772,374,000	0	710,976,000	(101,544,000)	1,164,190,000
6/30/2007	98,239,312	(878,435,107)	816,648,269	0	0	190,866,392	227,318,866
6/30/2008	207,247,739	1,690,697,791	615,695,516	0	0	130,264,860	2,643,905,906
6/30/2009	(70,364,604)	608,553,603	662,751,770	0	0	251,538,179	1,452,478,948
6/30/2010	(84,033,935)	894,331,428	470,035,082	0	2,606,334,218	162,864,774	4,049,531,567
6/30/2011	(116,457,671)	483,803,315	749,926,844	0	554,815,304	215,159,241	1,887,247,033
6/30/2012	(57,658,148)	530,809,433	715,357,450	0	0	190,241,965	1,378,750,700
6/30/2013	(145,924,336)	425,364,445	660,382,617	0	0	289,600,870	1,229,423,596
6/30/2014	356,142,591	(505,321,103)	578,293,232	0	2,915,263,296	23,508,555	3,367,886,571
6/30/2015	(289,320,641)	(464,963,323)	742,380,222	0	0	(197,654,338)	(209,558,080)
TOTALS	($430,971,292)	$3,055,322,735	$7,232,160,471	$4,444,266,446	$6,575,638,439	$2,841,636,415	$23,718,053,214

NOTE: All of the calculations in this table are based upon actuarial value of assets,i.e., WITH Asset Smoothing.

TABLE 11

STATE EMPLOYEES' RETIREMENT SYSTEM Changes in Net Assets ($ in Millions)									
Fiscal Years	2015	2014	2013	2012	2011	2010	2009	2008	2007
Additions to Assets									
State of Illinois	1,804.3	1,699.4	1,531.9	1,391.4	1,127.9	1,095.5	774.9	587.7	358.8
Pension Obligation Bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employees	266.1	269.2	248.2	259.1	254.2	246.2	242.2	250.0	224.7
Net Investment Income	681.4	2,169.3	1,501.2	6.0	1,930.2	799.9	-2,208.9	-680.8	1,779.9
Total Asset Additions (A)	2,751.8	4,138.0	3,281.3	1,656.5	3,312.3	2,141.6	-1,191.8	156.9	2,363.4
Deductions from Assets									
Benefits	2,034.9	1,917.1	1,799.9	1,627.4	1,492.1	1,390.6	1,300.2	1,214.1	1,161.5
Refunds	23.1	23.1	24.3	23.5	37.6	15.3	14.8	16.8	14.1
Subsidy Payments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative Expenses	16.5	16.6	17.5	15.7	13.7	11.7	10.7	9.5	8.8
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Asset Deductions (B)	2,074.5	1,956.8	1,841.7	1,666.6	1,543.4	1,417.6	1,325.7	1,240.4	1,184.4
Change in Net Assets (A-B=C)	677.3	2,181.3	1,439.6	-10.1	1,768.9	724.0	-2,517.5	-1,083.5	1,179.0

TABLE 12

STATE EMPLOYEES' RETIREMENT SYSTEM
Historical Investment Revenues
($ in Millions)

Fiscal Year	Market Value of Assets at Year End	Net Investment Revenue	Rate of Return Earned
2004	9,840.0	1,421.9	16.4%
2005	10,271.3	953.6	10.1%
2006	10,654.9	1,113.2	11.0%
2007	11,810.1	1,779.9	17.1%
2008	10,654.0	-680.8	-6.2%
2009	8,565.7	-2,208.9	-20.1%
2010	9,201.8	799.9	9.1%
2011	10,970.8	1,930.2	21.7%
2012	10,960.7	6.0	0.1%
2013	12,400.3	1,501.2	13.7%
2014	14,581.6	2,169.3	17.5%
2015	15,258.9	681.4	4.7%

TABLE 13

STATE EMPLOYEES' RETIREMENT SYSTEM Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2015 Data ($ in Millions)						
Fiscal Year	Tier 1 Normal Cost	Tier 1 Normal Cost as a % of Payroll	Tier 2 Normal Cost	Tier 2 Normal Cost as a % of Payroll	Total Normal Cost	Total Normal Cost as a % of Payroll
2016	838.8	17.8%	75.2	1.6%	914.0	19.4%
2017	823.6	17.1%	96.7	2.0%	920.3	19.1%
2018	805.4	16.2%	119.6	2.4%	925.0	18.7%
2019	783.9	15.4%	144.4	2.8%	928.3	18.2%
2020	759.5	14.5%	170.6	3.3%	930.1	17.8%
2021	730.7	13.6%	198.4	3.7%	929.1	17.3%
2022	698.8	12.7%	227.9	4.1%	926.7	16.9%
2023	664.2	11.8%	258.5	4.6%	922.7	16.4%
2024	625.9	10.8%	290.8	5.0%	916.7	15.8%
2025	586.6	9.9%	324.5	5.5%	911.1	15.3%
2026	546.1	8.9%	359.4	5.9%	905.4	14.8%
2027	506.8	8.1%	395.6	6.3%	902.4	14.4%
2028	471.0	7.3%	432.2	6.7%	903.3	14.0%
2029	436.7	6.6%	469.9	7.1%	906.5	13.6%
2030	402.9	5.9%	508.5	7.4%	911.4	13.3%
2031	367.6	5.2%	548.3	7.8%	915.9	13.0%
2032	332.9	4.6%	589.0	8.1%	921.9	12.7%
2033	300.0	4.0%	630.3	8.5%	930.3	12.5%
2034	266.7	3.5%	672.4	8.8%	939.2	12.2%
2035	232.1	2.9%	715.0	9.1%	947.1	12.0%
2036	198.4	2.4%	757.6	9.4%	956.0	11.8%
2037	168.1	2.0%	800.0	9.6%	968.0	11.6%
2038	140.5	1.6%	842.0	9.9%	982.4	11.5%
2039	115.9	1.3%	883.6	10.1%	999.4	11.4%
2040	94.6	1.1%	924.7	10.3%	1,019.2	11.4%
2041	77.0	0.8%	965.0	10.5%	1,042.0	11.3%
2042	62.7	0.7%	1,004.8	10.7%	1,067.5	11.3%
2043	51.0	0.5%	1,043.7	10.8%	1,094.7	11.3%
2044	41.4	0.4%	1,081.7	10.9%	1,123.1	11.4%
2045	33.4	0.3%	1,118.7	11.1%	1,152.1	11.4%

VI. The State Universities Retirement System

- **Plan Summary**
- **FY 2015 Change in Unfunded Liabilities**
- **Funded Ratio History**
- **Active Member Headcount**
- **Average Active Member Salaries**
- **Retiree Headcount**
- **Average Retirement Annuities**
- **Unfunded History**
- **Rate of Return on Investments**
- **Annual Investment Revenue**
- **Total Payout**
- **Annual Changes in Unfunded**
- **Changes in Net Assets**
- **Investment Return History**
- **Reduction in State Contributions**
- **Tier 1 & Tier 2 Normal Cost Projections**

All of the numbers appearing in the report, unless otherwise noted, are based upon market value of assets

State Universities Retirement System
Tier 1 Traditional Defined Benefit Formula Plan Summary

Retirement Age

- Age 62 with at least 5 years of service.
- Age 55 with at least 8 years of service.
- Any age with 30 years of service.

Retirement Formula

- 2.2% of final average salary for each year of service.

Maximum Annuity

- 80% of final average salary.

Salary Used to Calculate Pension

- For hourly employees and those who receive an annual salary in installments during 12 months of each academic year, the 48 consecutive calendar-month period ending with the last day of final termination of employment or the 4 consecutive academic years of service in which the employee's earnings were the highest, whichever is greater.
- For all other employees, the average annual earnings during the 4 consecutive academic years of service which his or her earnings were the highest.

Annual COLA

- 3% compounded

Employee Contributions

- 8.0% of salary.

The benefits shown do not reflect P.A. 98-0599 (SB 1), or P.A. 96-0899 (2 Tier Act of 2011). Please refer to Section I earlier in this report for details.

State Universities Retirement System
Self-Managed Defined Contribution Formula Plan Summary

Maximum Annuity

- There is no minimum or maximum annuity. The annuity is based solely on the account value at retirement.

Key Plan Features

- All SURS employees have the option to place 8.0% of their earnings into a SMP retirement account. The State of Illinois will subsequently add an additional 7.6% of employee earnings into their account. This SMP is a defined contribution plan where the employee decides how their account balance will be invested, selecting from a variety of mutual funds, stable value funds and variable annuities. The employee is solely responsible for the ultimate balance in the account, and the State of Illinois bears no responsibility for the outcome of the employee investment decisions.

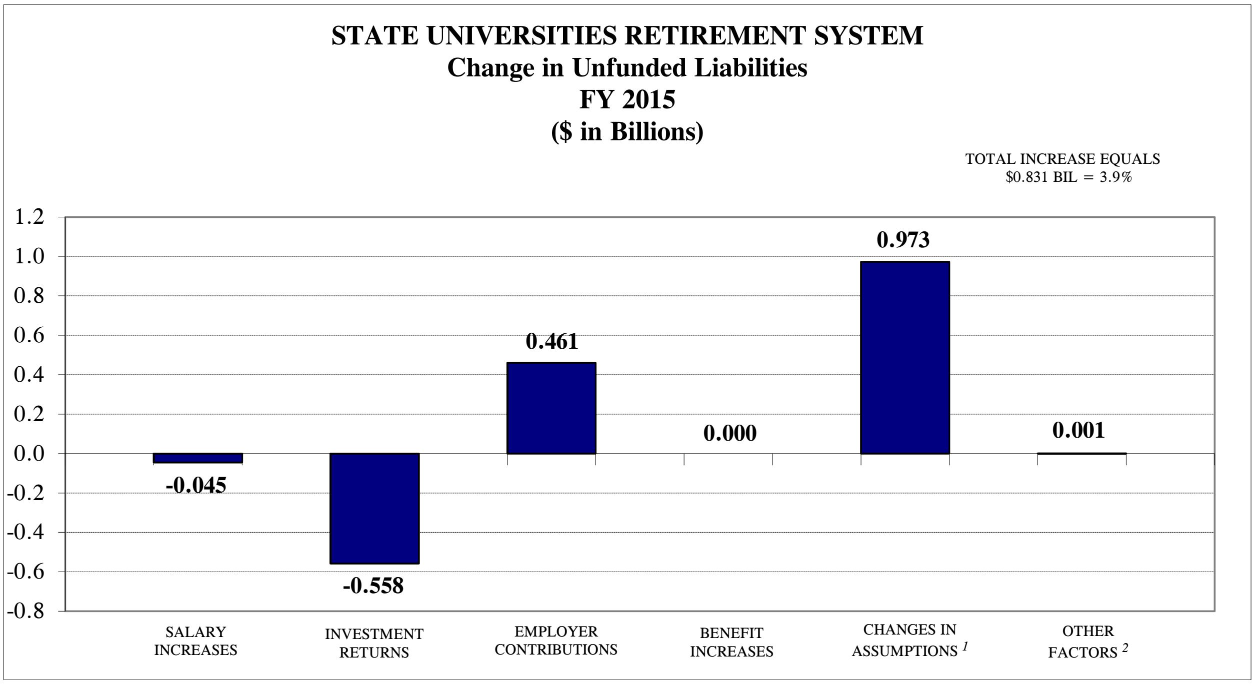
- If SURS-covered employment ends before retirement with less than 5 years of service, an employee is entitled to a lump sum of the value of their employee contributions and the investment return earned.

- If SURS-covered employment ends before retirement with greater than 5 years of service, an employee is entitled to a lump sum of the value of their employee contributions, matching employer contributions, and the investment return earned.

Employee Contributions

- 8.0% of salary.

CHART 29

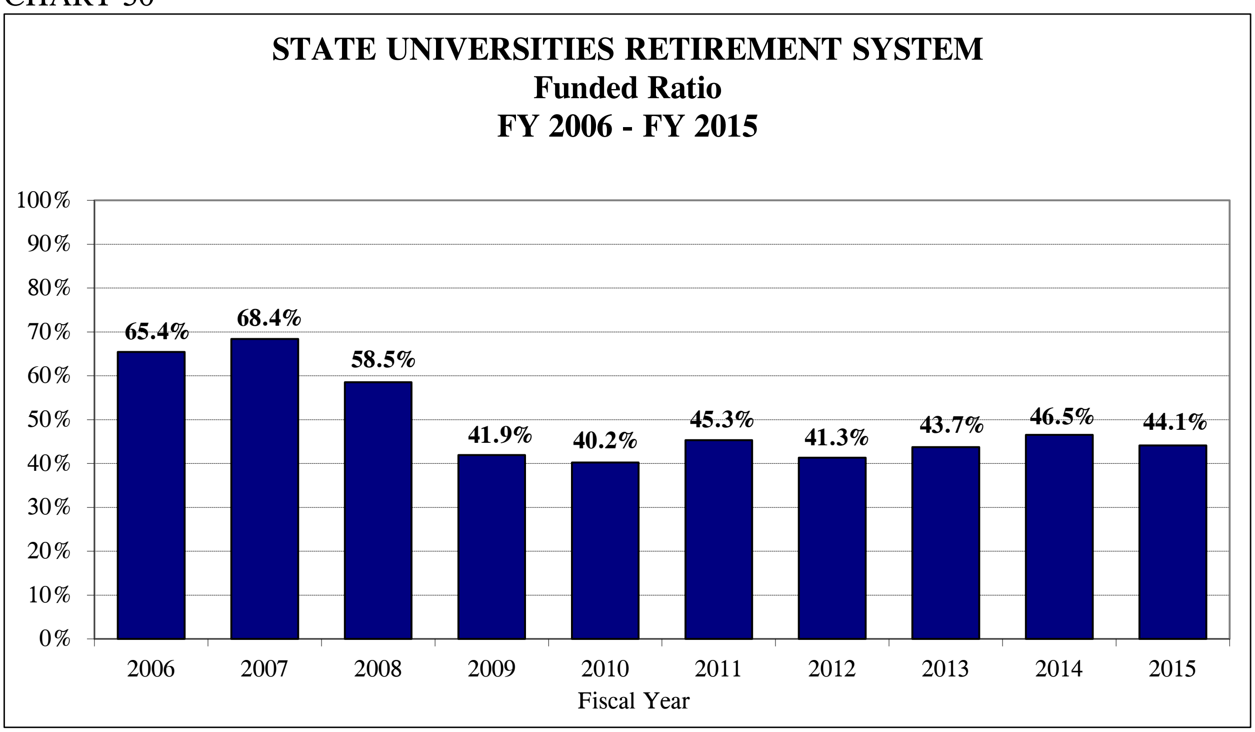


NOTE: The above chart is based upon asset actuarial values.

[1] *Changing mortality rates is one of the main factors increasing unfunded liabilities.*

[2] *Other Factors include losses from new entrants, termination, and mortality and gains from retirements and disability incidence.*

CHART 30



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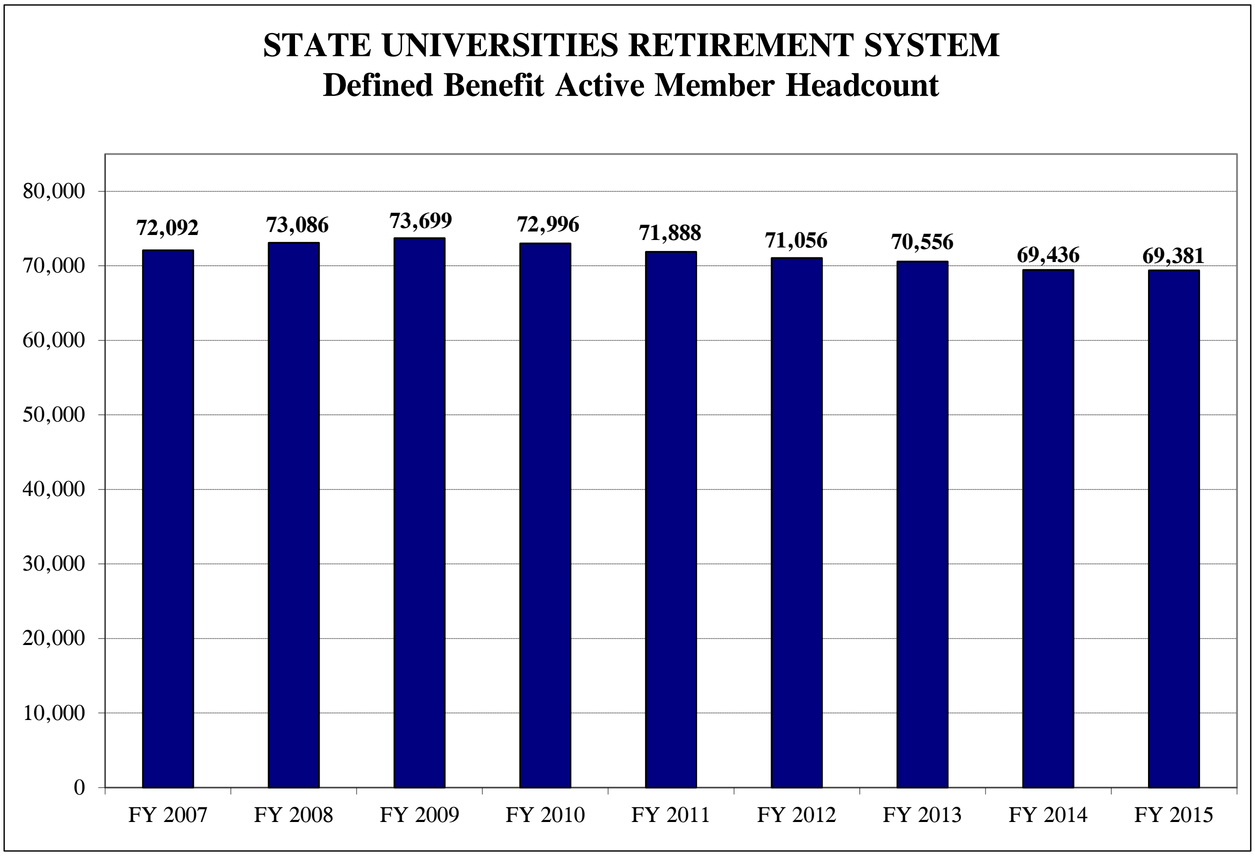

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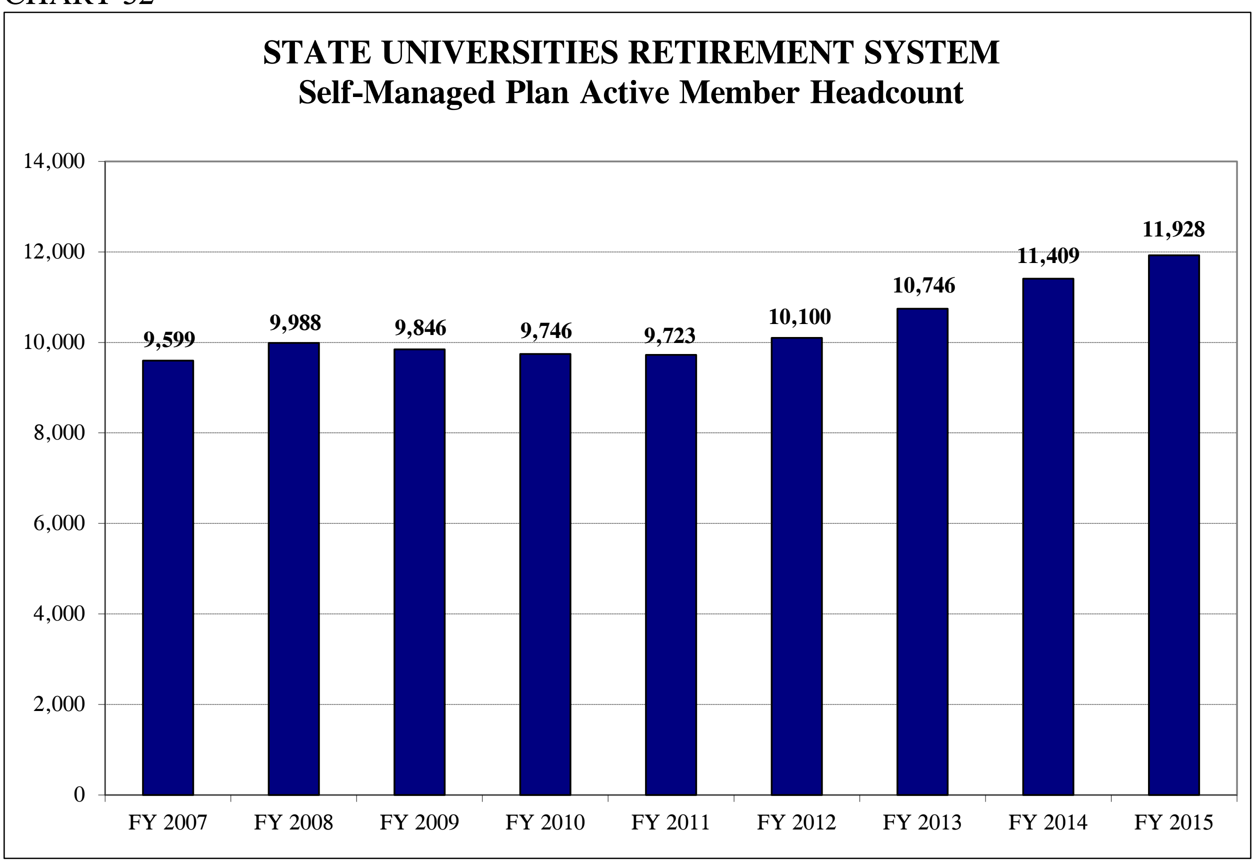
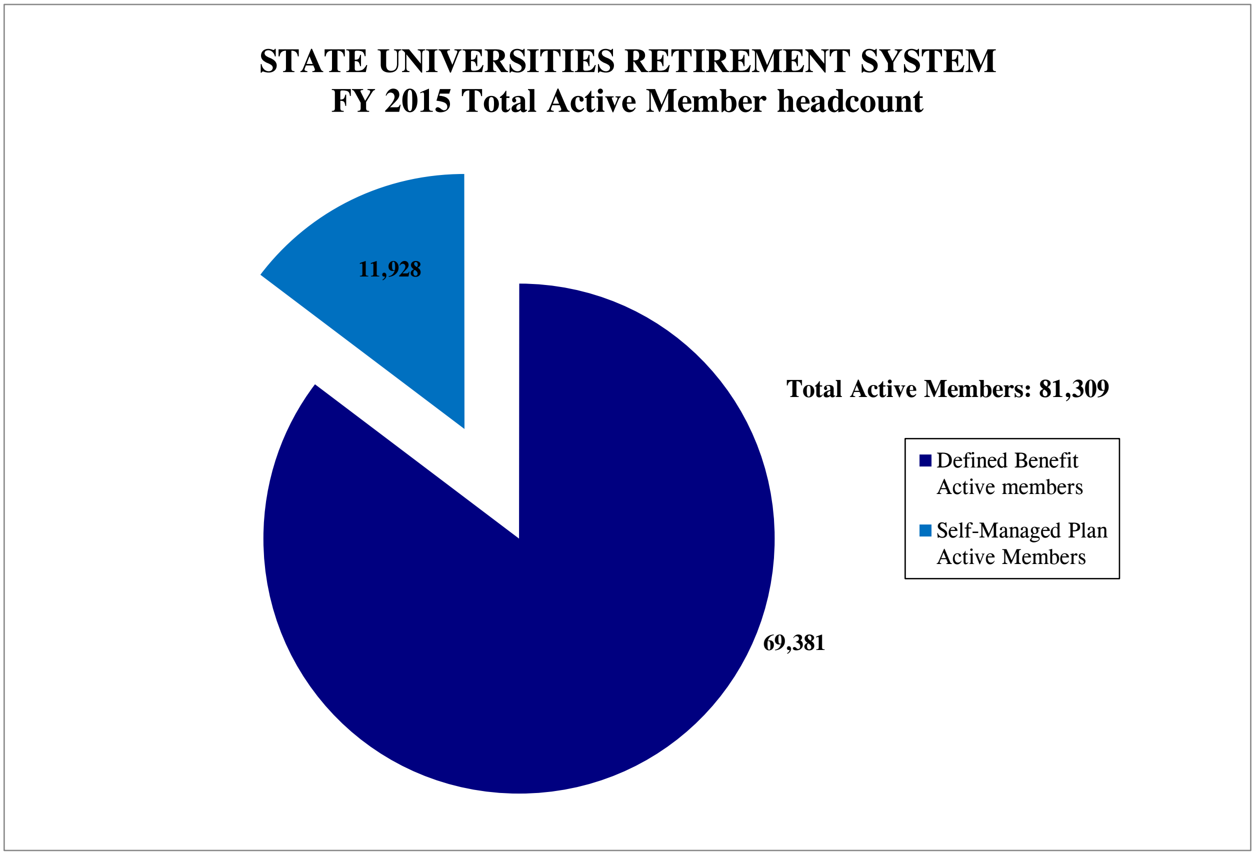


CHART 33



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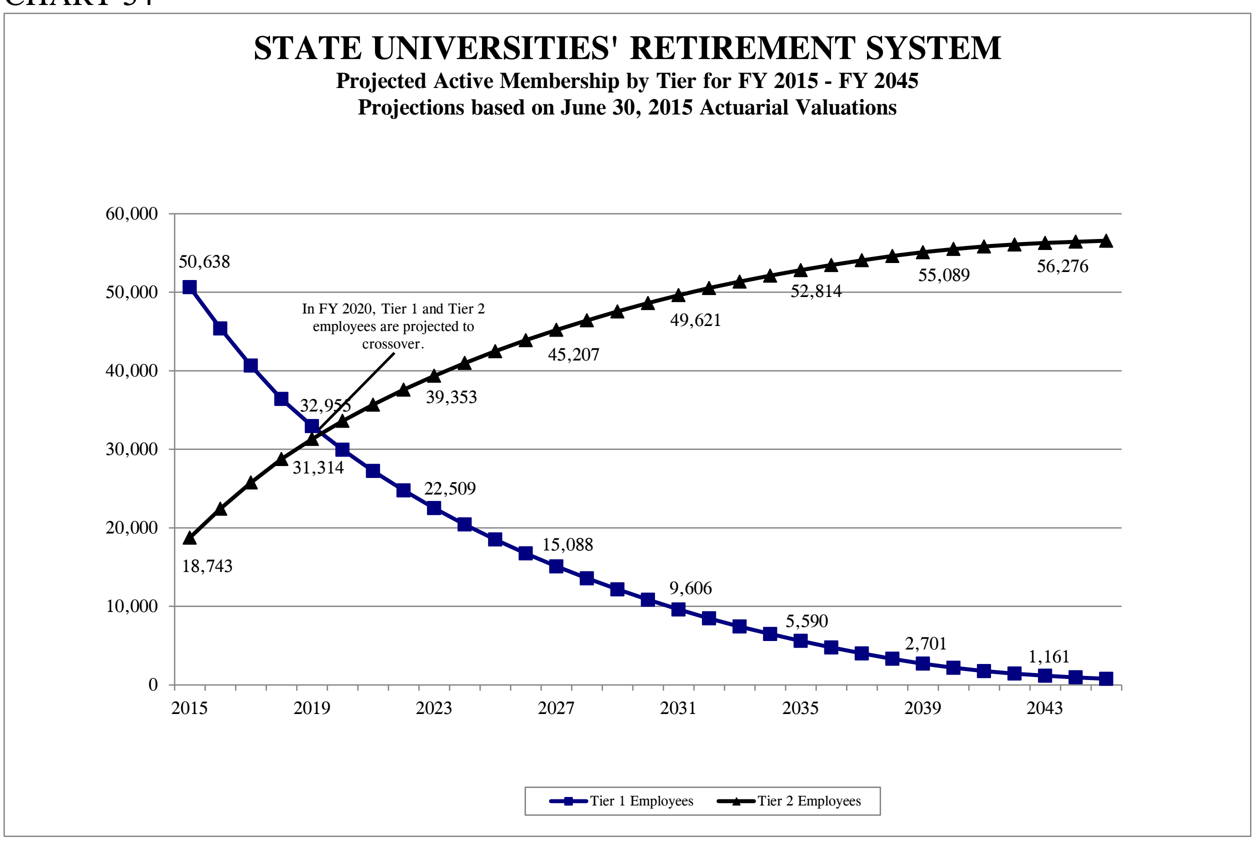
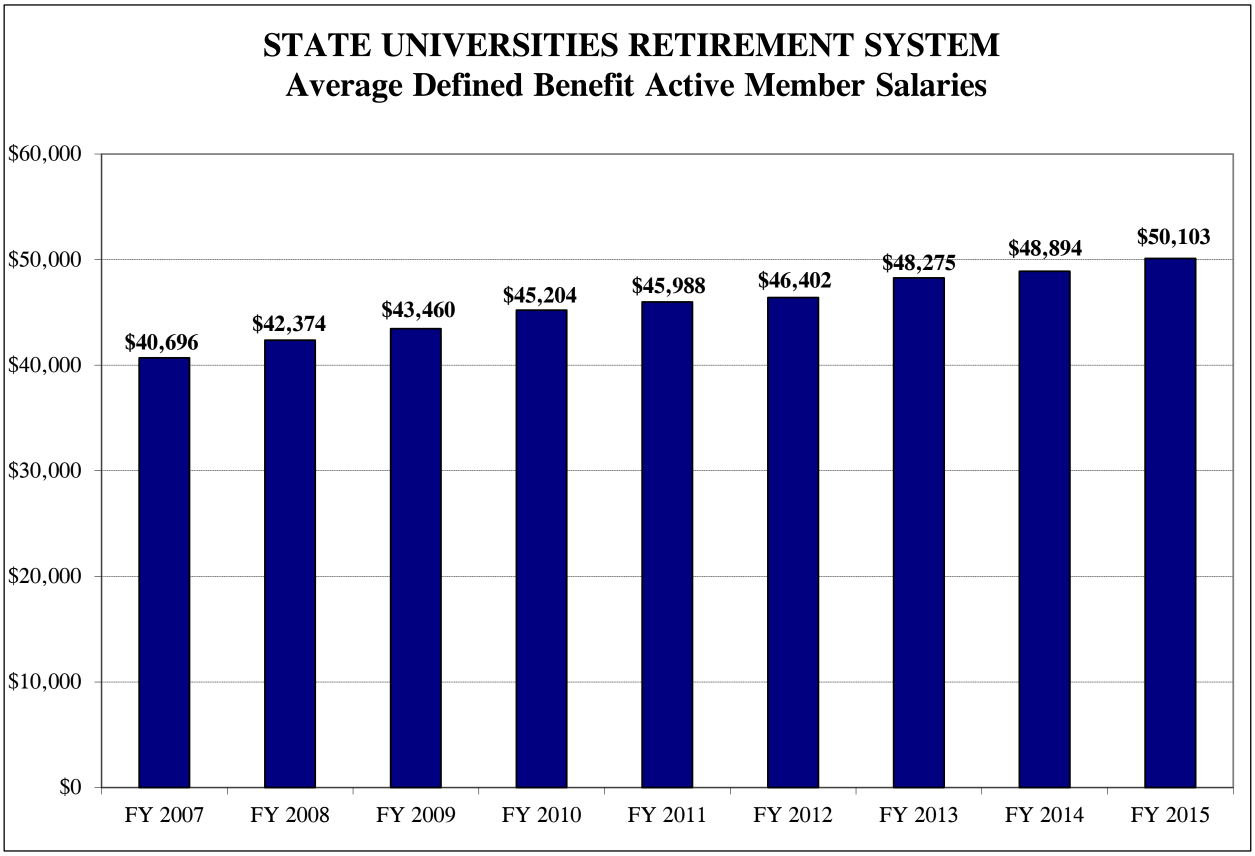


CHART 35



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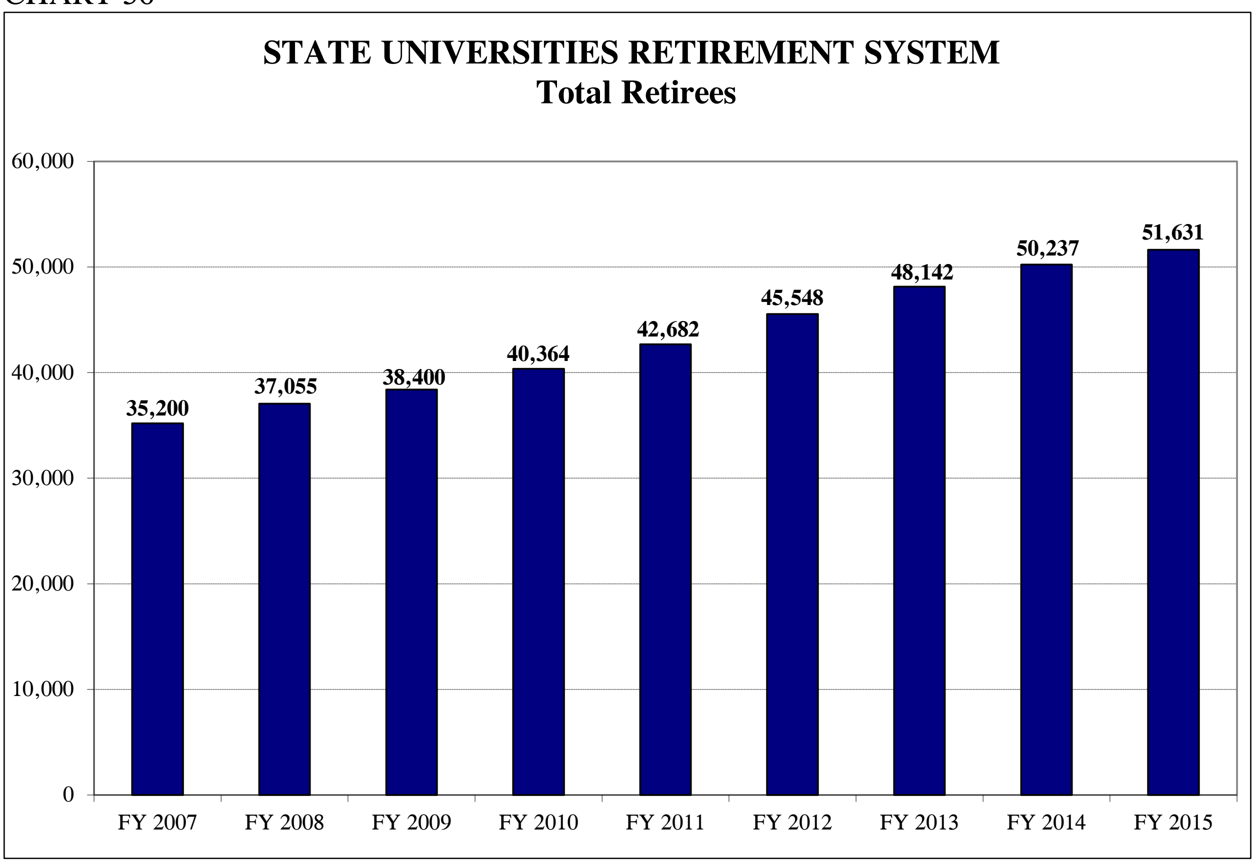


CHART 37

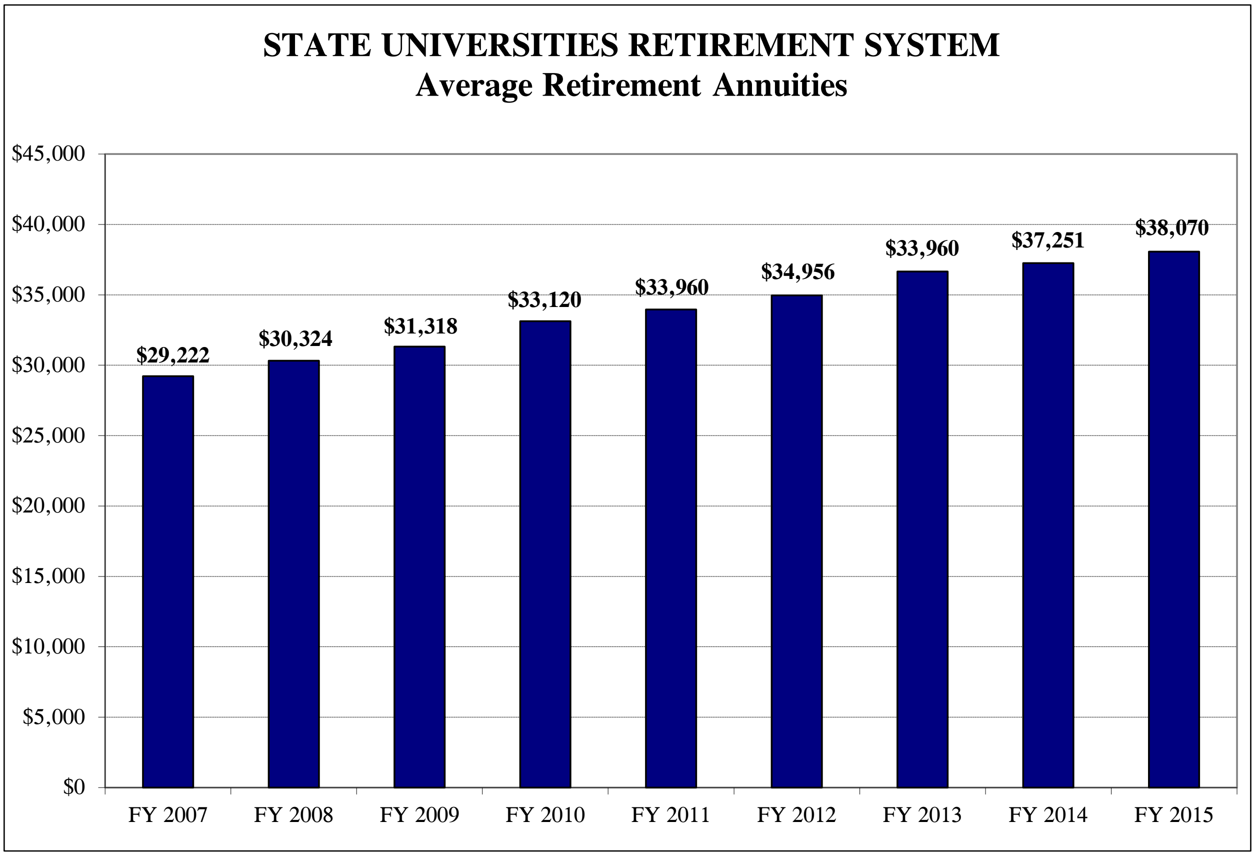


CHART 38

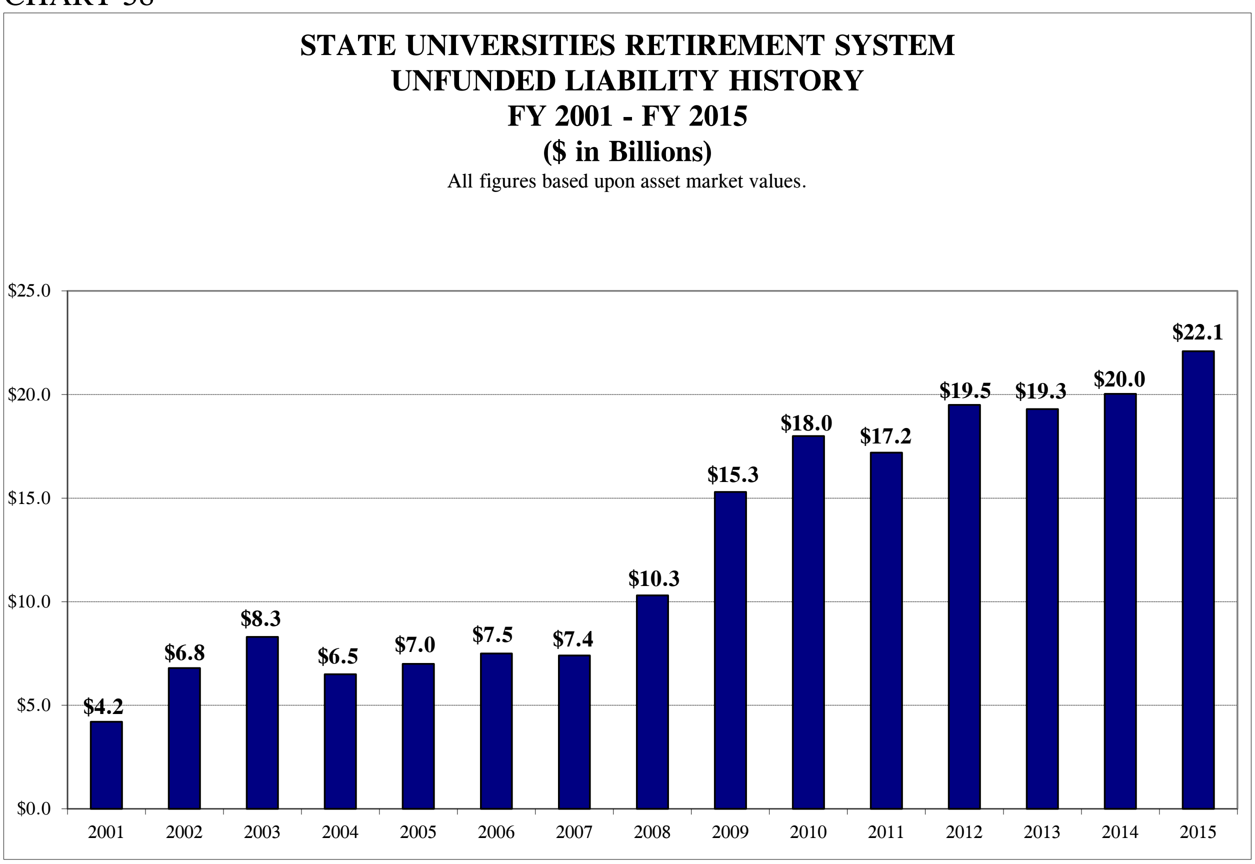


CHART 39

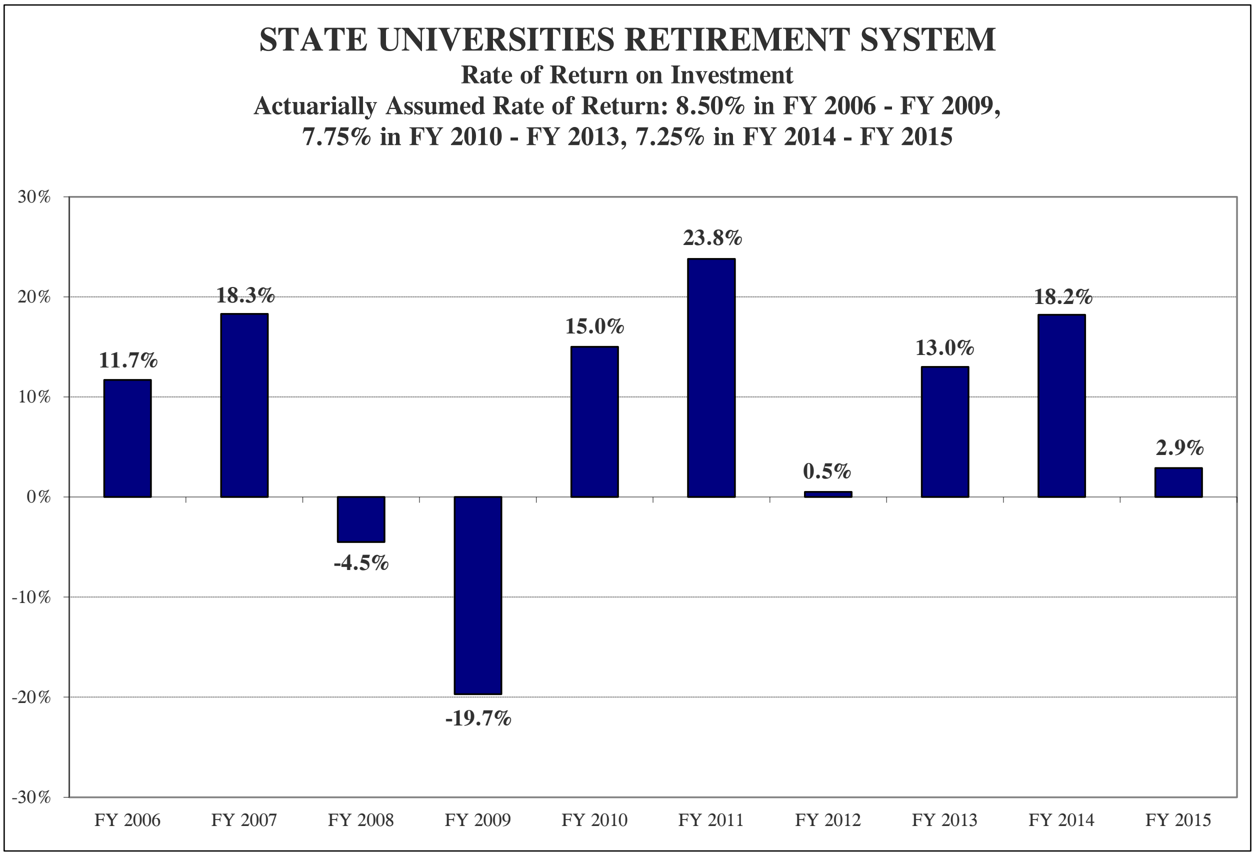


CHART 40

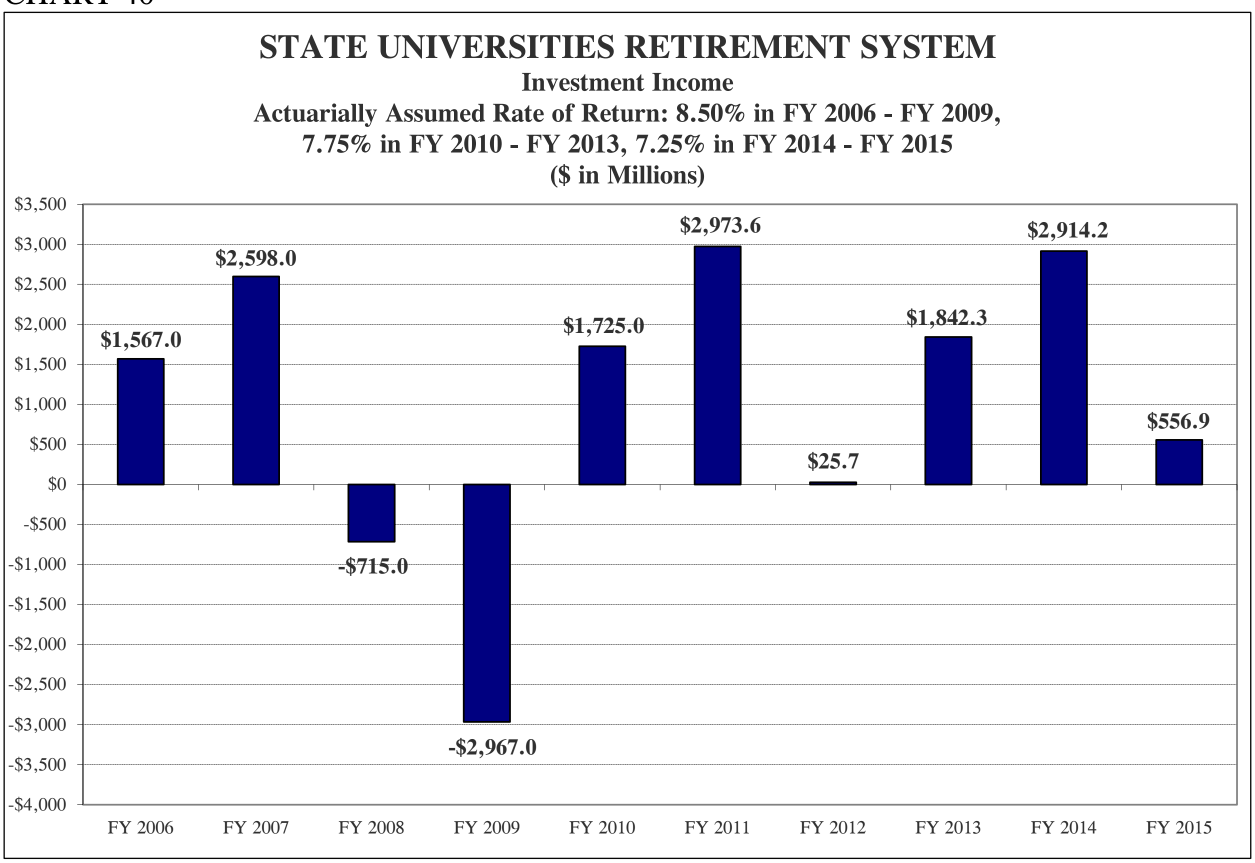


CHART 41

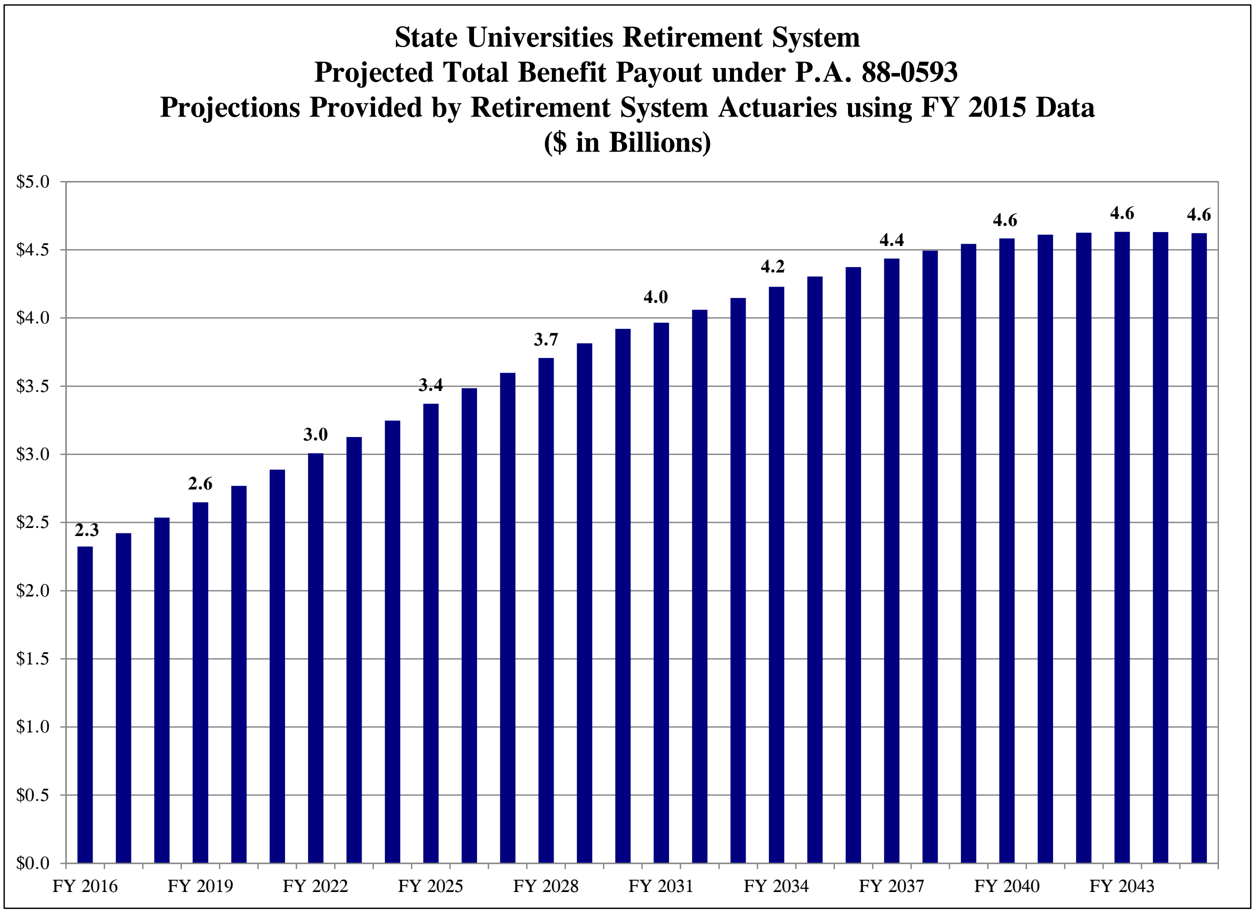

State Universities Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2015 Data
($ in Billions)
$5.0
$4.5
$4.0
$3.5
$3.0
$2.5
$2.0
$1.5
$1.0
$0.5
$0.0
2.3
2.6
3.0
3.4
3.7
4.0
4.2
4.4
4.6
4.6
4.6
FY 2016
FY 2019
FY 2022
FY 2025
FY 2028
FY 2031
FY 2034
FY 2037
FY 2040
FY 2043

TABLE 14

STATE UNIVERSITIES RETIREMENT SYSTEM
CHANGES IN UNFUNDED LIABILITY
FY 1996 - FY 2015

YEAR ENDED	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N.C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	CHANGES IN ACTUARIAL ASSUMPTIONS	OTHER FACTORS MISC.	TOTAL CHANGE IN UNFUNDED LIABIILITY FROM PREVIOUS YEAR
6/30/1996	($70,535,000)	($105,383,000)	$456,044,000	$0	$0	$86,823,000	$366,949,000
6/30/1997	(44,026,000)	(312,322,000)	424,816,000	179,117,000	(3,342,395,000)	198,529,000	(2,896,281,000)
6/30/1998	5,238,000	(765,736,000)	158,840,000	0	0	48,075,000	(553,583,000)
6/30/1999	44,300,000	(273,300,000)	271,300,000	0	0	190,800,000	233,100,000
6/30/2000	171,500,000	(587,500,000)	306,700,000	0	0	(130,949,000)	(240,249,000)
6/30/2001	70,300,000	2,068,500,000	301,000,000	0	0	107,131,000	2,546,931,000
6/30/2002	90,800,000	1,568,700,000	430,800,000	63,000,000	485,300,000	38,744,000	2,677,344,000
6/30/2003	10,300,000	583,000,000	558,500,000	0	0	319,300,000	1,471,100,000
6/30/2004	(62,900,000)	(950,500,000)	(822,700,000)	0	0	17,893,000	(1,818,207,000)
6/30/2005	(19,400,000)	(218,000,000)	574,300,000	0	0	170,520,000	507,420,000
6/30/2006	28,600,000	(414,100,000)	734,900,000	0	0	164,900,000	514,300,000
6/30/2007	67,000,000	(1,342,000,000)	707,200,000	0	324,400,000	105,900,000	(137,500,000)
6/30/2008	30,600,000	2,004,400,000	590,900,000	0	0	329,100,000	2,955,000,000
6/30/2009	(1,300,000)	812,300,000	738,700,000	0	0	153,200,000	1,702,900,000
6/30/2010	(113,100,000)	940,500,000	667,500,000	0	2,413,900,000	210,800,000	4,119,600,000
6/30/2011	(172,300,000)	430,000,000	930,200,000	0	(24,900,000)	251,800,000	1,414,800,000
6/30/2012	(4,000,000)	476,700,000	797,800,000	0	0	381,200,000	1,651,700,000
6/30/2013	(53,600,000)	391,800,000	506,700,000	0	(157,000,000)	202,300,000	890,200,000
6/30/2014	(94,300,000)	(802,400,000)	429,500,000	0	1,788,500,000	153,000,000	1,474,300,000
6/30/2015	(45,300,000)	(550,800,000)	460,700,000	0	972,900,000	1,100,000	838,600,000
TOTALS	$ (162,123,000)	$ 2,953,859,000	$ 9,223,700,000	$ 242,117,000	$ 2,460,705,000	$ 3,000,166,000	$ 17,718,424,000

NOTE: All of the calculations in this table are based upon actuarial value of assets,i.e., WITH Asset Smoothing.

TABLE 15

STATE UNIVERSITIES RETIREMENT SYSTEM
Changes in Net Assets
($ in Millions)

Fiscal Years	2015	2014	2013	2012	2011	2010	2009	2008	2007
Additions to Assets									
State of Illinois	1544.2	1,518.1	1,408.8	989.8	776.6	700.2	445.6	340.3	252.1
Pension Obligation Bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employees	340.0	348.6	305.1	312.4	309.9	323.6	322.1	310.1	304.0
Federal/trust/other funds	46.7	41.9	41.9	41.9	41.9	39.5	44.2	43.6	42.4
Net Investment Income	556.9	2,914.2	1,842.3	25.7	2,973.6	1,725.3	-2,967.1	-714.8	2,597.8
Total Asset Additions (A)	2487.8	4,822.8	3,598.1	1,369.8	4,102.0	2,788.6	-2,155.2	-20.8	3,196.3
Deductions from Assets									
Benefits	2160.8	2,021.2	1,934.1	1,748.7	1,622.5	1,483.7	1,376.7	1,279.2	1,180.6
Refunds	108.6	107.7	101.6	94.2	73.9	57.5	51.4	54.9	53.4
Subsidy Payments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative Expenses	14.5	14.3	13.9	13.5	12.6	12.5	12.9	12.1	11.7
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Asset Deductions (B)	2284.0	2,143.2	2,049.6	1,856.4	1,709.0	1,553.7	1,441.0	1,346.2	1,245.7
Change in Net Assets (A-B=C)	203.8	2,679.6	1,548.5	-486.6	2,393.0	1,234.9	-3,596.2	-1,367.0	1,950.6

NOTE: Values may not add due to rounding

TABLE 16

STATE UNIVERSITIES RETIREMENT SYSTEM
Historical Investment Revenues
($ in Millions)

Fiscal Year	Market Value of Assets at Year End	Net Investment Revenue	Rate of Return Earned
2004	12,839.2	1,865.3	17.0%
2005	13,280.1	1,302.0	10.4%
2006	14,045.4	1,566.8	11.7%
2007	16,283.8	2,597.8	18.3%
2008	15,202.7	-714.8	-4.5%
2009	11,292.0	-2,967.1	-19.7%
2010	12,163.9	1,725.3	15.0%
2011	14,274.0	2,973.6	23.8%
2012	13,705.1	25.7	0.1%
2013	15,037.1	1,842.3	12.5%
2014	17,391.3	2,914.2	18.2%
2015	17,426.2	556.9	2.9%

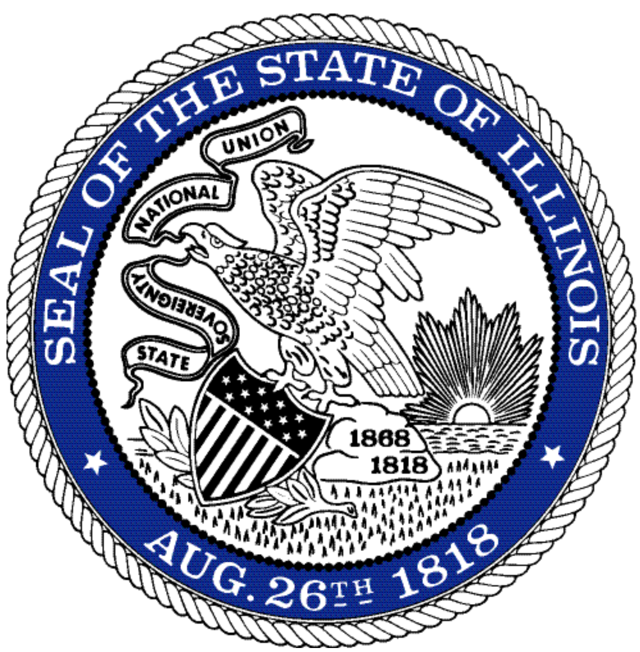
TABLE 17

STATE UNIVERSITIES RETIREMENT SYSTEM
Projected Normal Costs based on Public Act 88-0593
Projections Provided by Retirement System Actuaries using FY 2015 Data
($ in Millions)

Fiscal Year	Tier 1 Normal Cost	Tier 1 Normal Cost as a % of Payroll	Tier 2 Normal Cost	Tier 2 Normal Cost as a % of Payroll	Total Normal Cost	Total Normal Cost as a % of Payroll
2016	667.7	14.8%	71.9	1.6%	739.5	16.4%
2017	638.8	13.9%	92.2	2.0%	731.0	15.9%
2018	610.7	12.9%	112.0	2.4%	722.7	15.3%
2019	583.2	12.1%	132.6	2.7%	715.8	14.8%
2020	555.9	11.2%	153.0	3.1%	708.9	14.3%
2021	529.3	10.4%	173.9	3.4%	703.2	13.8%
2022	504.1	9.7%	195.1	3.7%	699.2	13.4%
2023	479.6	9.0%	216.9	4.0%	696.5	13.0%
2024	455.5	8.3%	239.0	4.3%	694.5	12.6%
2025	431.8	7.6%	261.7	4.6%	693.5	12.3%
2026	408.6	7.0%	284.9	4.9%	693.5	12.0%
2027	385.9	6.5%	308.5	5.2%	694.3	11.7%
2028	363.6	5.9%	332.4	5.4%	696.0	11.4%
2029	341.4	5.4%	356.7	5.7%	698.1	11.1%
2030	318.8	4.9%	381.5	5.9%	700.3	10.8%
2031	295.6	4.5%	406.8	6.1%	702.4	10.6%
2032	272.0	4.0%	432.5	6.3%	704.4	10.3%
2033	248.9	3.6%	458.5	6.5%	707.4	10.1%
2034	226.6	3.1%	484.8	6.7%	711.4	9.9%
2035	204.3	2.8%	511.6	6.9%	715.9	9.7%
2036	181.8	2.4%	538.8	7.1%	720.6	9.5%
2037	159.1	2.0%	566.4	7.2%	725.5	9.3%
2038	136.7	1.7%	594.3	7.4%	731.0	9.1%
2039	115.2	1.4%	622.6	7.5%	737.8	8.9%
2040	95.4	1.1%	650.9	7.7%	746.4	8.8%
2041	78.5	0.9%	679.2	7.8%	757.7	8.7%
2042	65.1	0.7%	707.2	7.9%	772.3	8.6%
2043	54.2	0.6%	734.9	7.9%	789.1	8.5%
2044	45.2	0.5%	762.3	8.0%	807.5	8.5%
2045	37.8	0.4%	789.3	8.1%	827.1	8.4%

VII. The Judges' Retirement System

- **Plan Summary**
- **FY 2015 Change in Unfunded Liabilities**
- **Funded Ratio History**
- **Active Member Headcount**
- **Average Active Member Salaries**
- **Retiree Headcount**
- **Average Retirement Annuities**
- **Unfunded History**
- **Rate of Return on Investments**
- **Annual Investment Revenue**
- **Total Payout**
- **Annual Changes in Unfunded**
- **Changes in Net Assets**
- **Investment Return History**
- **Tier 1 & Tier 2 Normal Cost Projections**



All of the numbers appearing in the report, unless otherwise noted, are based upon market value of assets.

Judges' Retirement System
Tier 1 Plan Summary

Retirement Age

- Age 60 with 10 years of service.
- Age 62 with 6 years of service.
- Age 55 with 10 years of service (reduced ½ of 1% for each month under 60).

Retirement Formula

- 3.5% of final salary for each of the first 10 years of service, plus
- 5% of final salary for each year of service in excess of 10 years.

Maximum Annuity

- 85% of final salary.

Salary Used to Calculate Pension

- Salary on last day of service.

Annual COLA

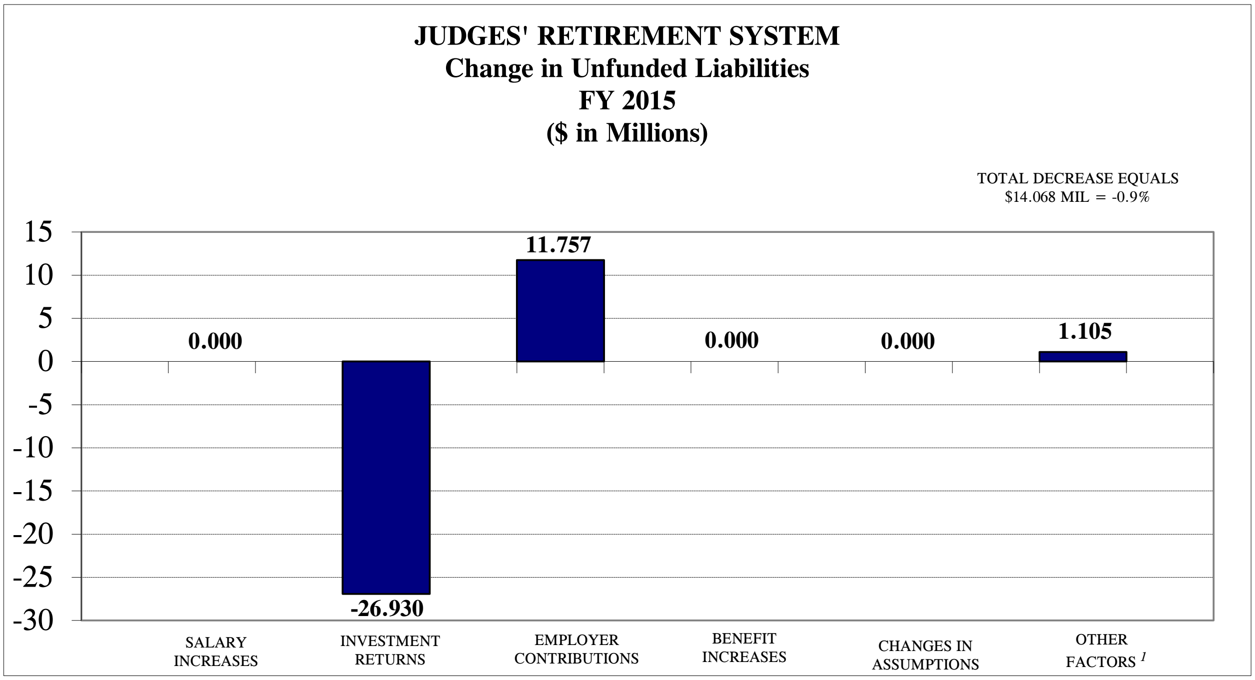
- 3% compounded.

Employee Contributions

- 11.0% of salary.

The details of retirement plans applicable to personnel beginning employment on or after January 1, 2011, please refer to Section I earlier in this report.

CHART 42



NOTE: The above chart is based upon actuarial value of assets.

[1] Other Factors include losses from retirements, terminations, and rates of mortality.

CHART 43

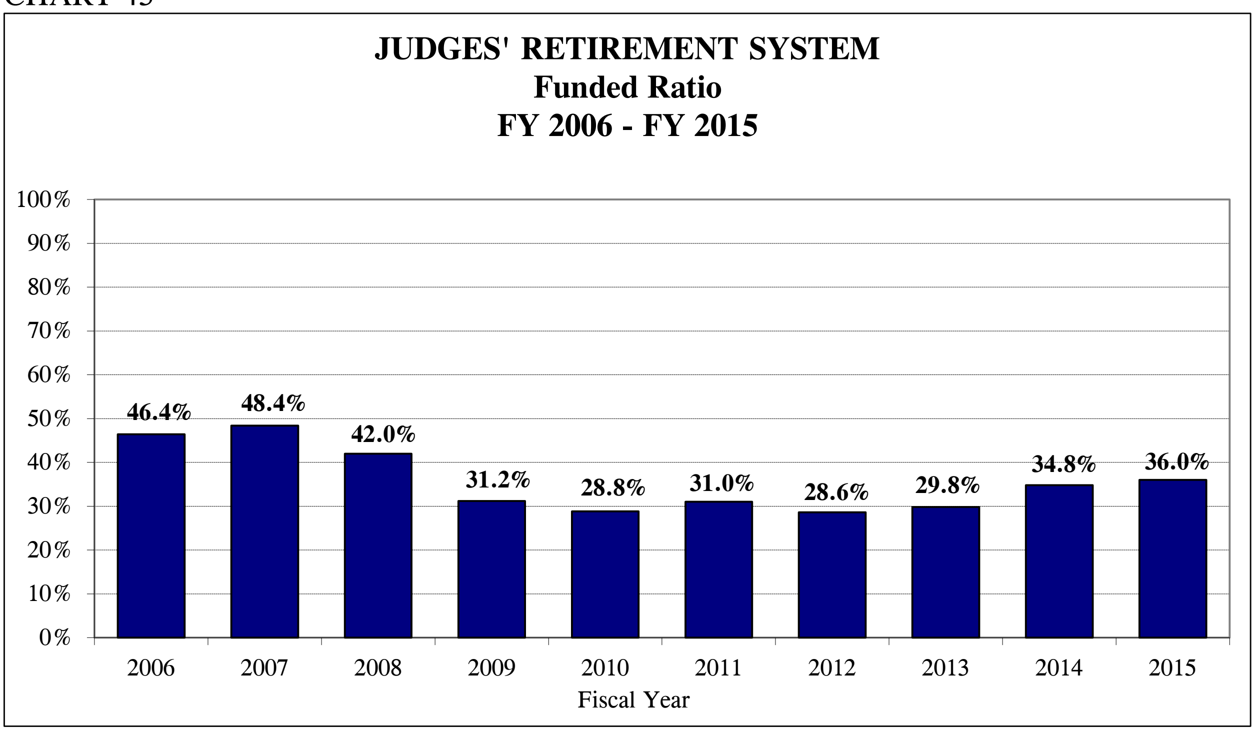


CHART 44

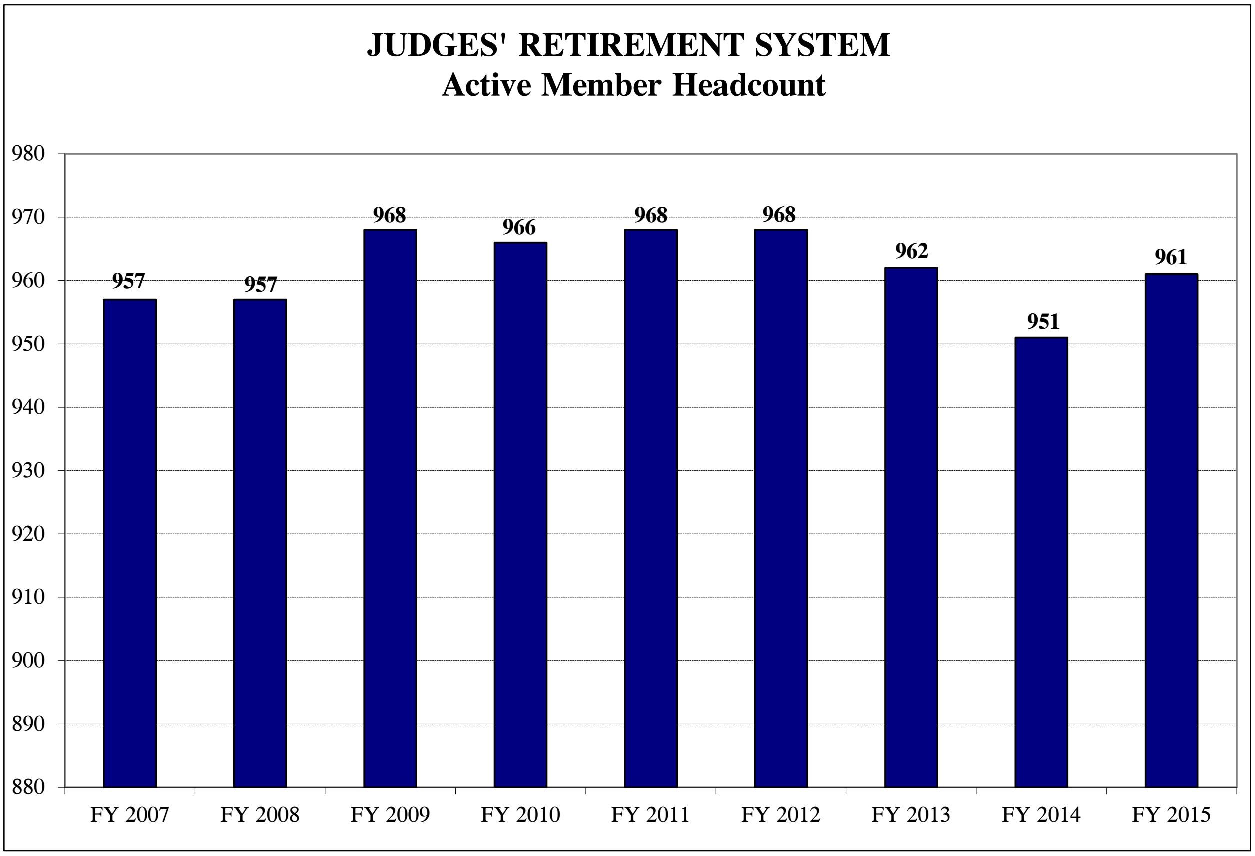
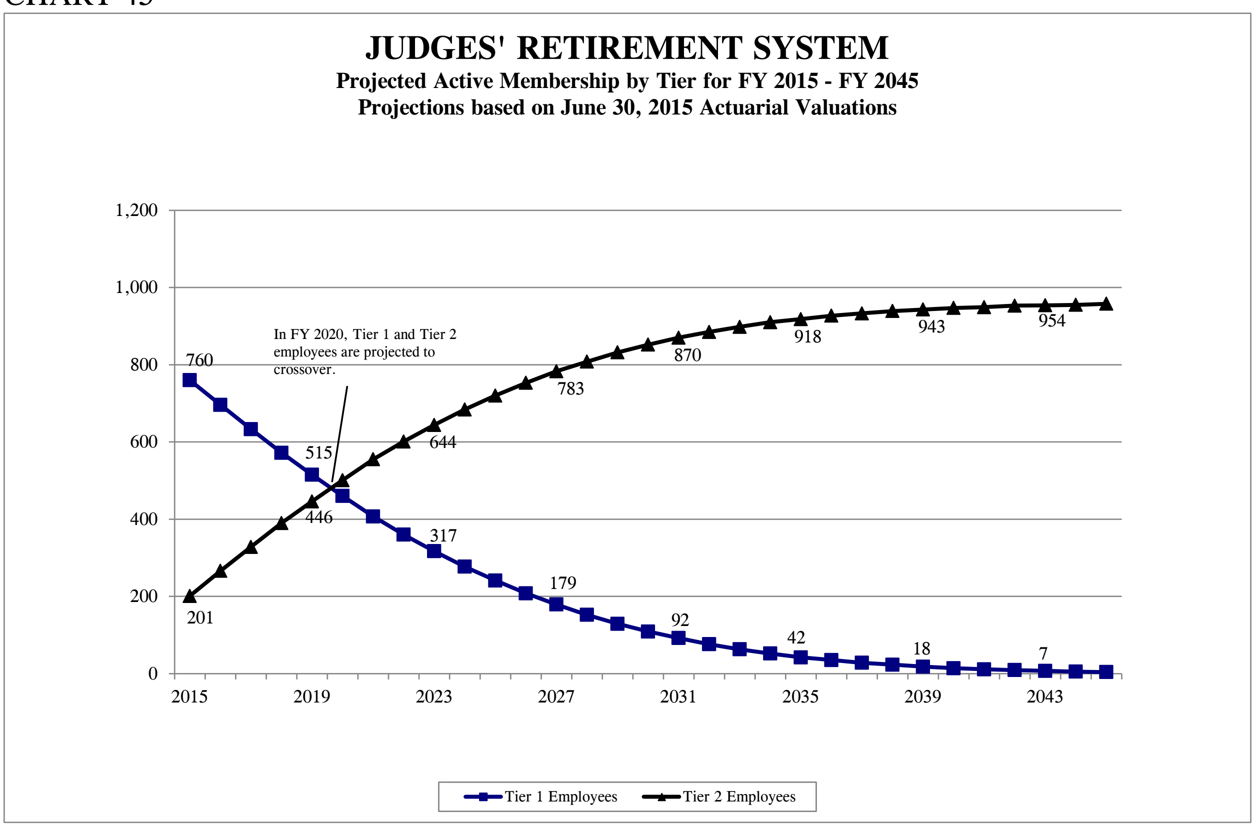


CHART 45



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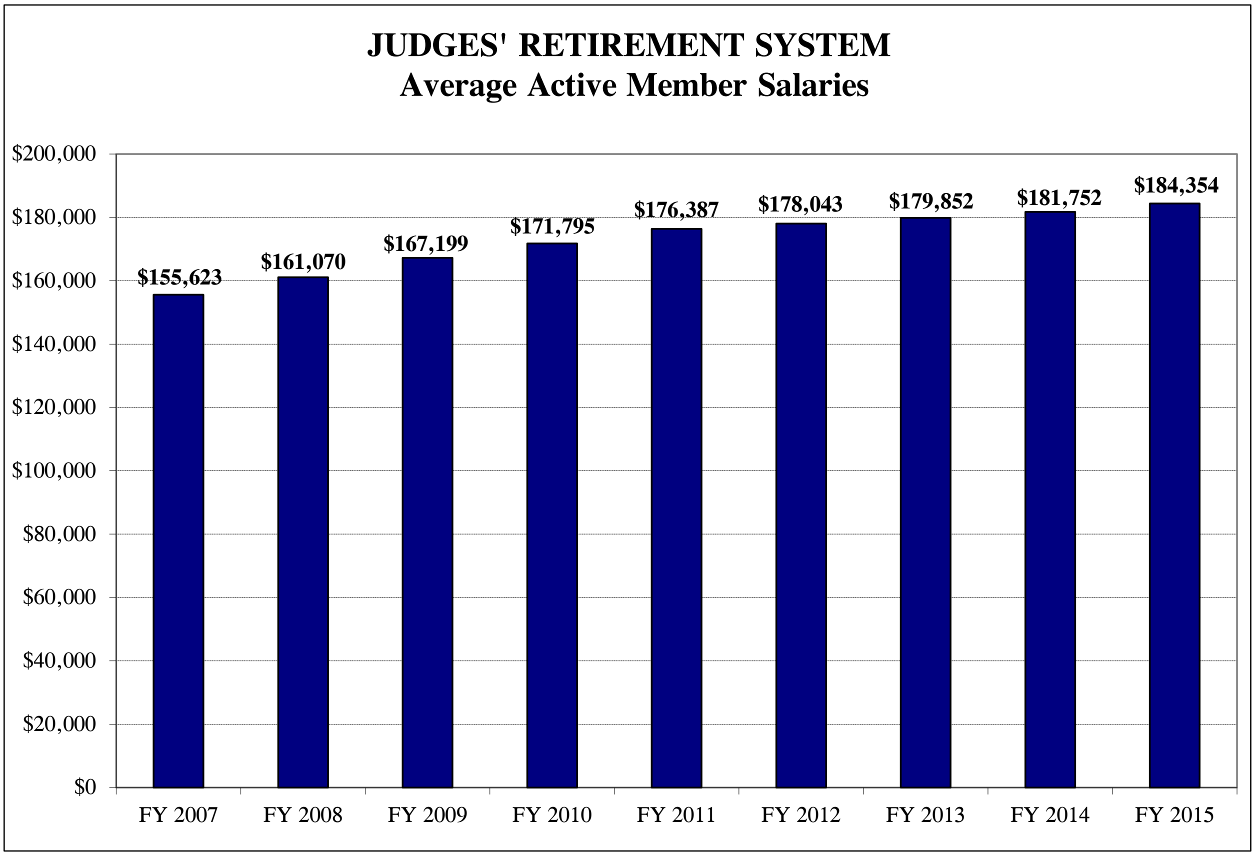


CHART 47

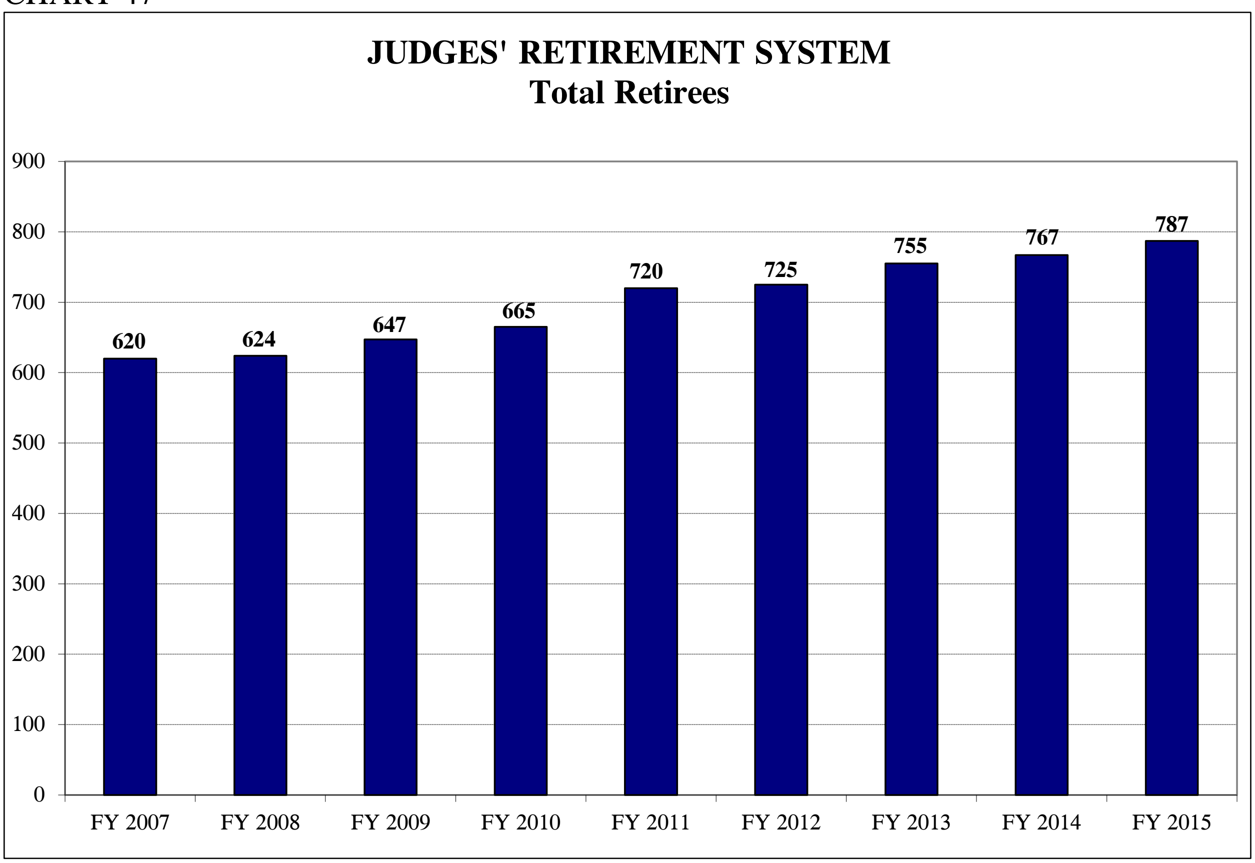


CHART 48

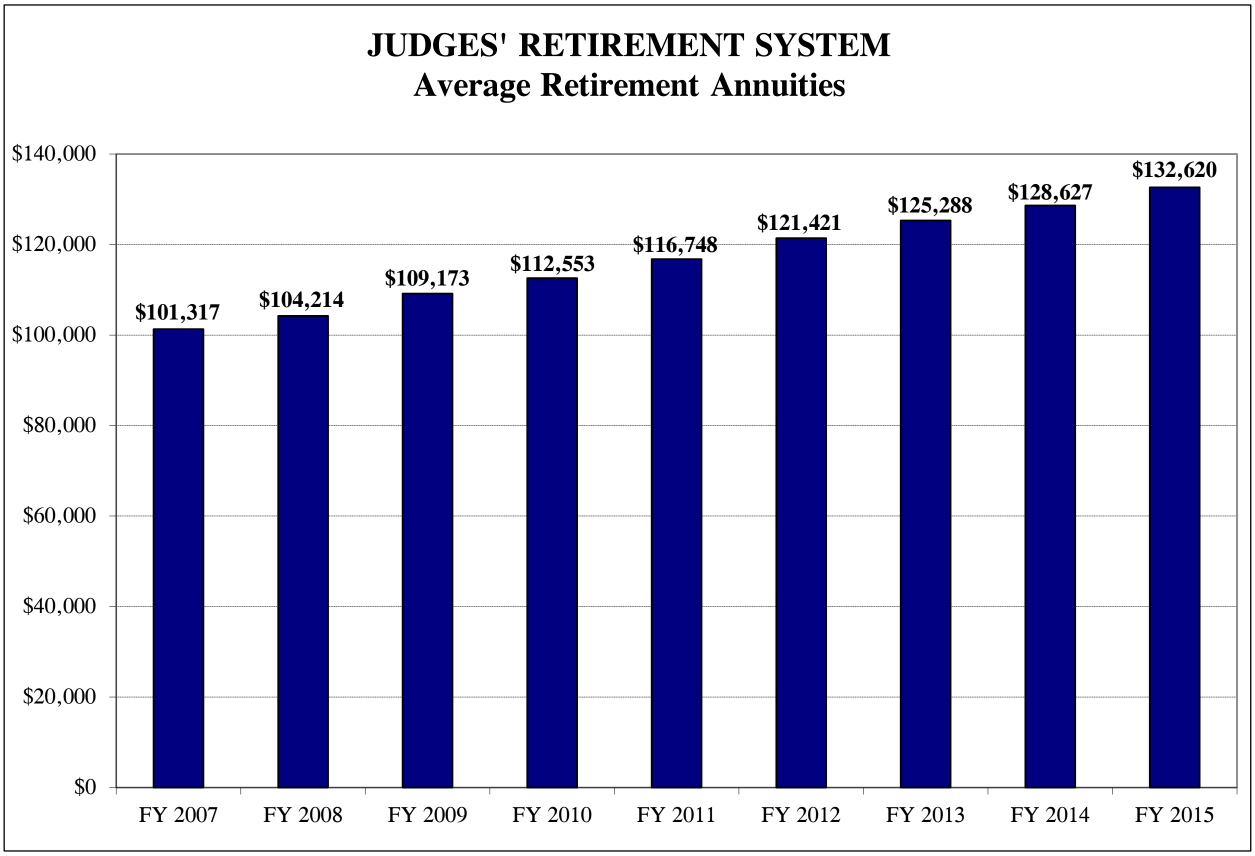


CHART 49

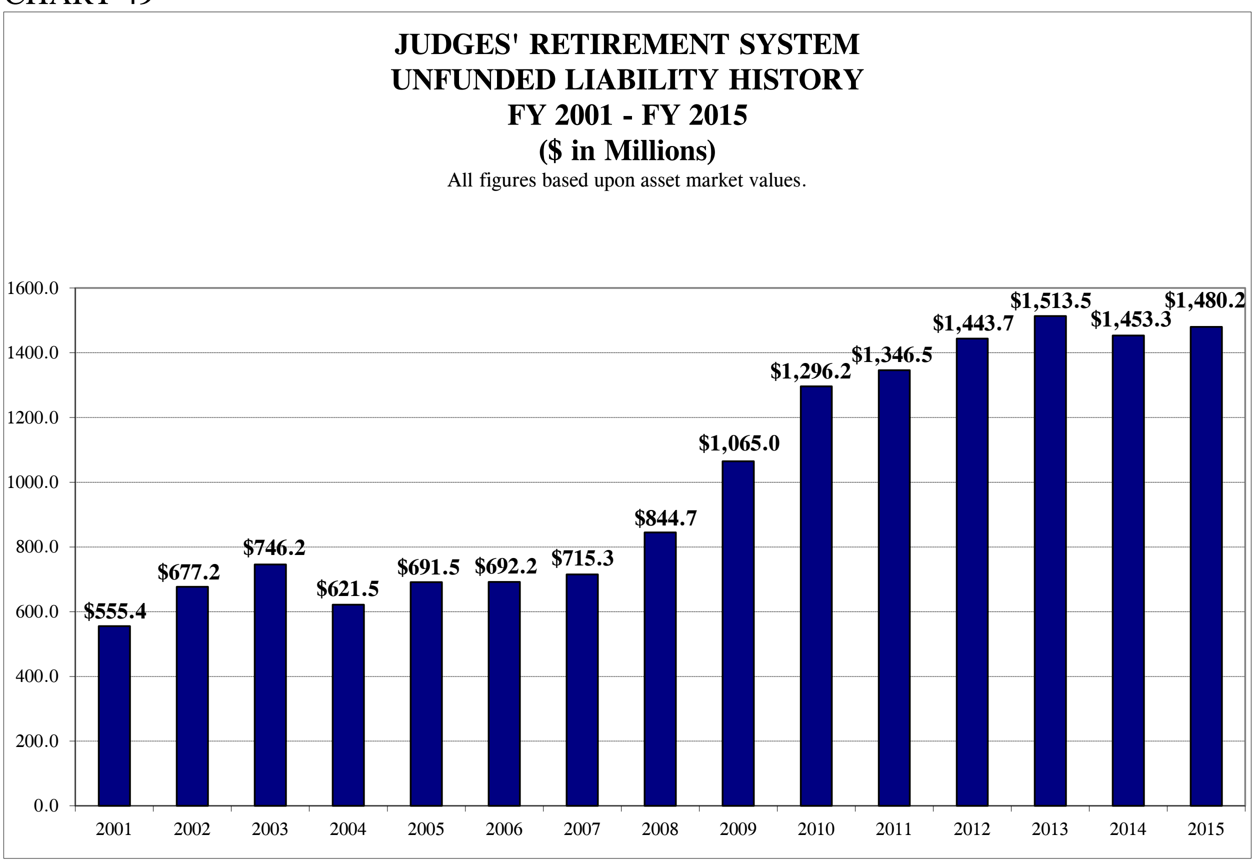


CHART 50

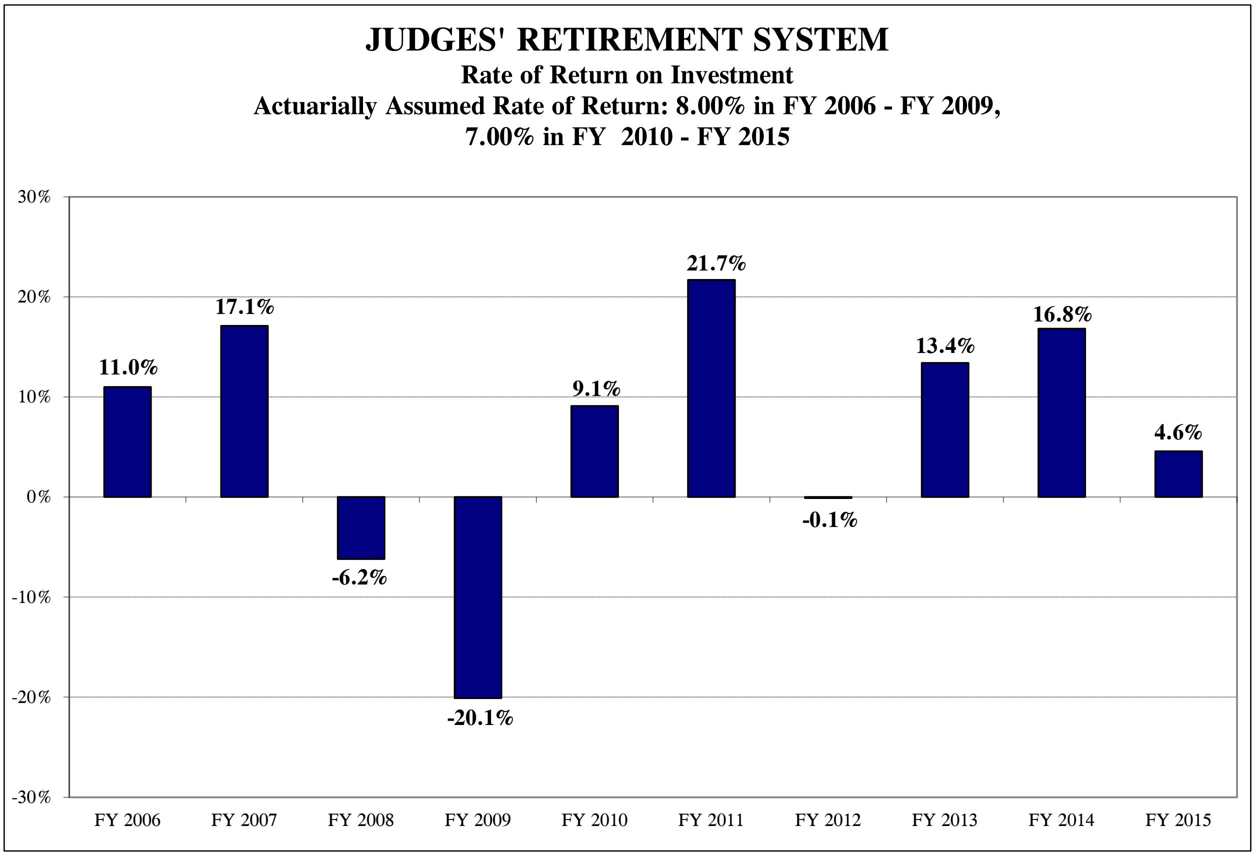


CHART 51

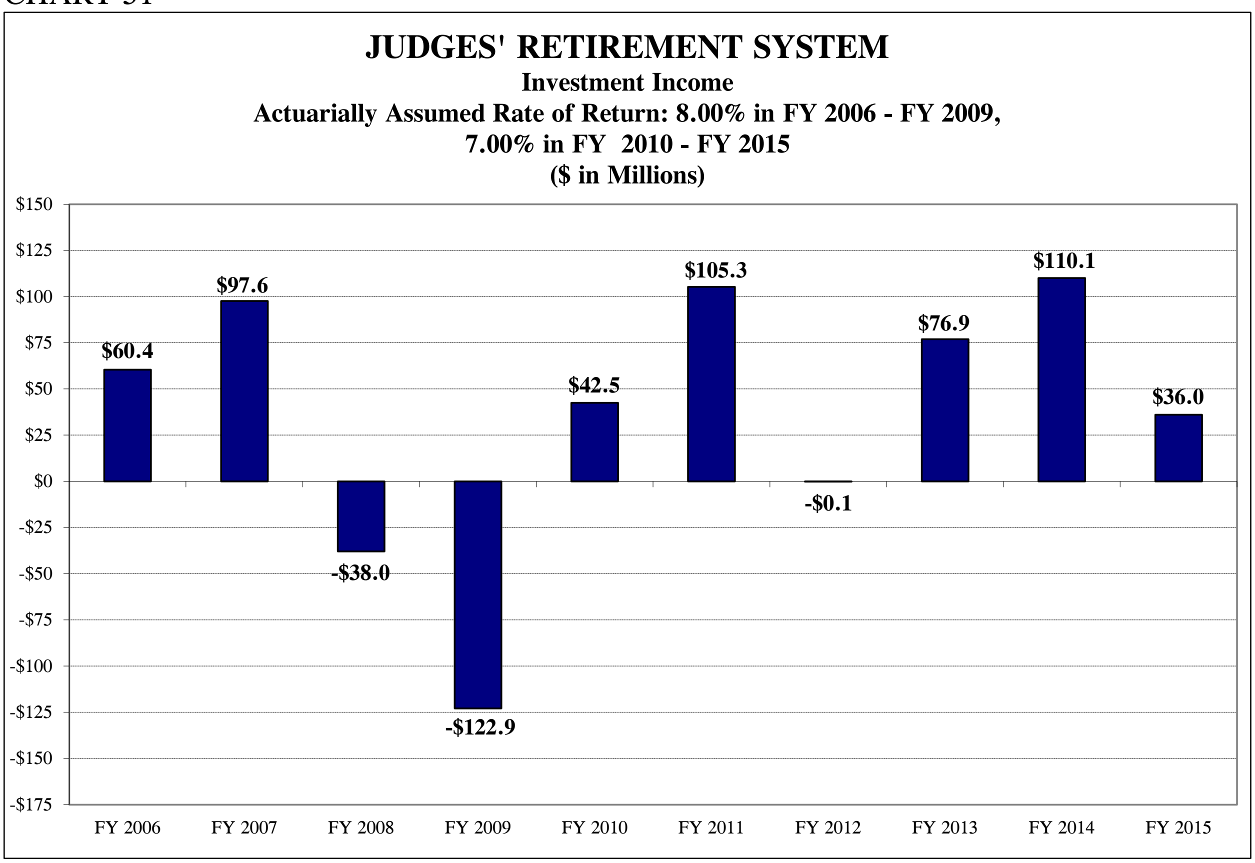


CHART 52

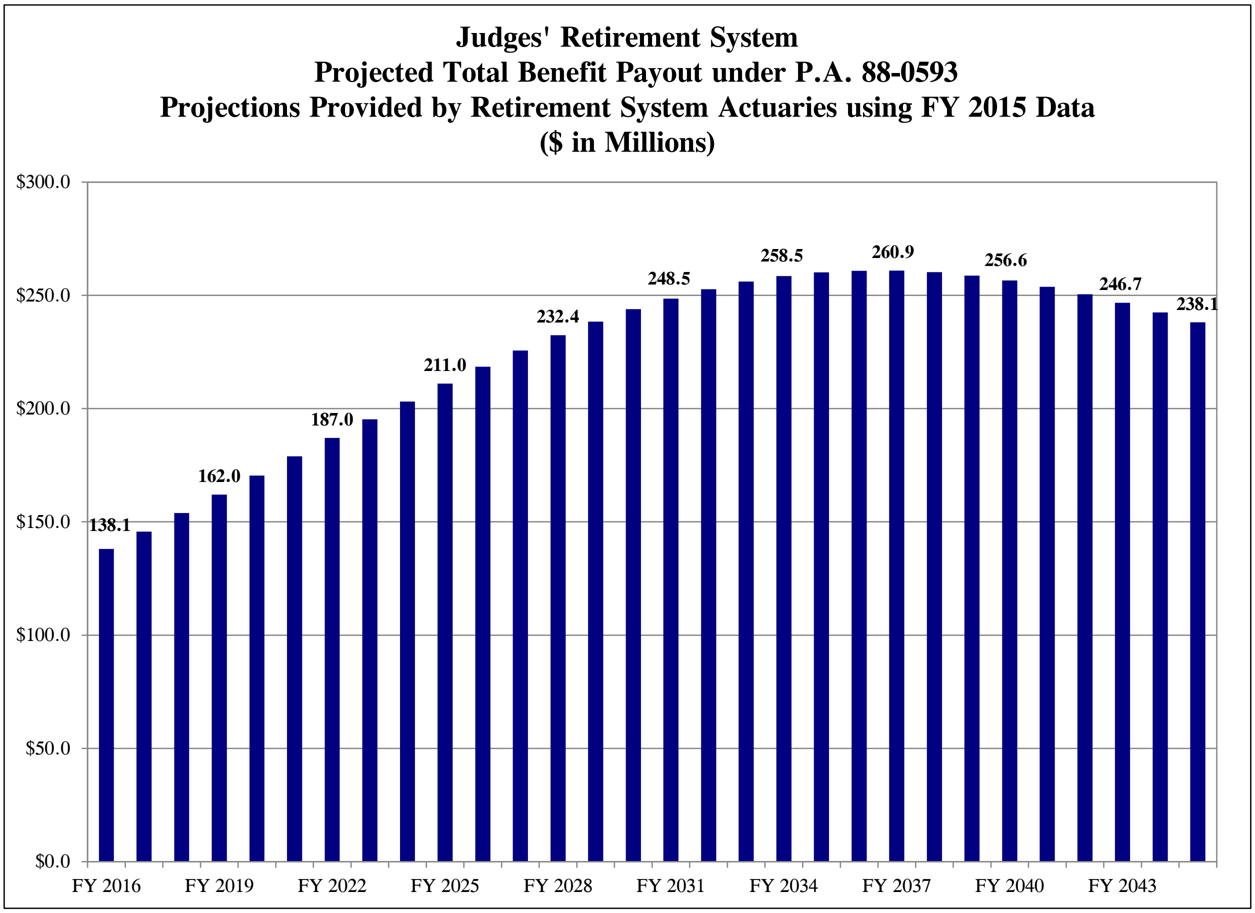

Judges' Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2015 Data
($ in Millions)
$300.0
$250.0
$200.0
$150.0
$100.0
$50.0
$0.0
138.1
162.0
187.0
211.0
232.4
248.5
258.5
260.9
256.6
246.7
238.1
FY 2016
FY 2019
FY 2022
FY 2025
FY 2028
FY 2031
FY 2034
FY 2037
FY 2040
FY 2043

TABLE 18

JUDGES' RETIREMENT SYSTEM CHANGES IN UNFUNDED LIABILITY FY 1996 - FY 2015							
YEAR ENDED	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N.C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	CHANGES IN ACTUARIAL ASSUMPTIONS	OTHER FACTORS MISC.	TOTAL CHANGE IN UNFUNDED LIABIILITY FROM PREVIOUS YEAR
6/30/1996	$9,999,484	($13,671,404)	$24,518,236	$0	$0	$14,931,343	$35,777,659
6/30/1997	(7,658,092)	(28,145,182)	27,156,529	0	37,922,093	15,264,216	44,539,564
6/30/1998	(10,160,914)	(30,497,137)	34,123,085	0	0	7,218,733	683,767
6/30/1999	456,439	(16,539,663)	32,504,330	0	0	8,821,168	25,242,274
6/30/2000	2,215,672	(14,134,561)	33,196,266	2,848,501	0	8,268,502	32,394,380
6/30/2001	(7,464,258)	61,790,163	35,767,996	0	0	17,044,333	107,138,234
6/30/2002	(11,821,953)	54,489,350	42,170,792	0	28,381,924	8,609,434	121,829,547
6/30/2003	(26,392,926)	27,183,676	49,293,246	0	0	18,906,930	68,990,926
6/30/2004	6,291,883	(36,709,772)	(92,295,242)	0	0	(1,952,146)	(124,665,277)
6/30/2005	(15,087,614)	(8,899,756)	46,427,305	0	0	27,509,646	49,949,581
6/30/2006	(18,612,759)	(17,213,516)	55,344,402	0	(11,189,825)	12,319,701	20,648,003
6/30/2007	(3,952,822)	(51,310,984)	50,305,409	0	0	28,046,308	23,087,911
6/30/2008	(8,834,671)	90,806,378	42,511,153	0	0	4,924,005	129,406,865
6/30/2009	(6,661,210)	33,322,668	40,870,123	0	0	19,481,669	87,013,250
6/30/2010	(14,285,209)	48,213,678	30,639,057	0	188,889,493	14,404,557	267,861,576
6/30/2011	(17,743,557)	31,451,544	66,647,892	0	15,622,518	42,442,760	138,421,157
6/30/2012	(19,671,785)	27,522,701	75,313,560	0	0	(611,876)	82,552,600
6/30/2013	(18,934,843)	21,180,279	54,355,269	0	62,945,069	6,567,836	126,113,610
6/30/2014	0	(28,938,605)	22,548,920	0	0	(16,192,945)	(22,582,630)
6/30/2015	0	(26,929,814)	11,756,584	0	0	1,104,924	(14,068,306)
TOTALS	$ (168,319,135)	$ 122,970,043	$ 683,154,912	$ 2,848,501	$ 322,571,272	$ 237,109,098	$ 1,200,334,691

NOTE: All of the calculations in this table are based upon actuarial value of assets,i.e., WITH Asset Smoothing.

TABLE 19

JUDGES' RETIREMENT SYSTEM Changes in Net Assets ($ in Millions)									
Fiscal Years	2015	2014	2013	2012	2011	2010	2009	2008	2007
Additions to Assets									
State of Illinois	134.0	126.8	88.2	63.7	62.7	78.5	60.0	47.0	35.2
Pension Obligation Bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employees	15.4	15.9	16.4	16.4	16.7	16.0	15.8	15.4	14.2
Net Investment Income	36.0	110.1	76.9	-0.1	105.3	42.5	-122.7	-38.0	98.2
Total Asset Additions (A)	185.5	252.8	181.5	80.0	184.7	137.0	-46.9	24.4	147.6
Deductions from Assets									
Benefits	125.7	118.6	113.6	106.6	100.7	91.6	85.8	80.5	75.6
Refunds	0.9	0.7	1.7	0.6	0.7	0.5	0.4	0.8	0.6
Subsidy Payments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative Expenses	1.0	0.8	0.8	0.8	0.6	0.5	0.6	0.5	0.5
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Asset Deductions (B)	127.6	120.1	116.1	108.0	102.0	92.6	86.8	81.8	76.7
Change in Net Assets (A-B=C)	57.9	132.7	65.4	-28.0	82.7	44.4	-133.7	-57.4	70.9

TABLE 20

JUDGES' RETIREMENT SYSTEM Historical Investment Revenues ($ in Millions)			
Fiscal Year	**Market Value of Assets at Year End**	**Net Investment Revenue**	**Rate of Return Earned**
2004	321.4	0.5	0.3%
2005	550.4	75.2	16.4%
2006	582.6	50.9	10.1%
2007	658.2	60.4	11.0%
2008	589.2	97.6	17.1%
2009	483.5	-38.0	-6.2%
2010	523.3	-122.7	-20.1%
2011	606.0	42.5	9.1%
2012	578.0	-0.1	-0.1%
2013	643.3	76.9	13.4%
2014	776.0	110.1	16.8%
2015	833.9	36.0	4.58%

TABLE 21

JUDGES RETIREMENT SYSTEM Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2015 Data						
Fiscal Year	Tier 1 Normal Cost	Tier 1 Normal Cost as a % of Payroll	Tier 2 Normal Cost	Tier 2 Normal Cost as a % of Payroll	Total Normal Cost	Total Normal Cost as a % of Payroll
2016	49.4	30.0%	6.2	3.7%	55.6	33.7%
2017	46.1	27.8%	7.8	4.7%	53.9	32.5%
2018	43.0	25.8%	9.6	5.7%	52.6	31.5%
2019	39.6	23.6%	11.2	6.7%	50.8	30.2%
2020	36.0	21.3%	12.7	7.5%	48.7	28.8%
2021	32.7	19.3%	14.5	8.6%	47.3	27.8%
2022	29.6	17.3%	16.1	9.4%	45.6	26.6%
2023	26.5	15.3%	18.0	10.4%	44.4	25.7%
2024	23.5	13.5%	19.7	11.3%	43.2	24.8%
2025	20.6	11.7%	21.4	12.2%	42.0	23.9%
2026	17.9	10.0%	23.1	13.0%	41.0	23.0%
2027	15.3	8.5%	24.8	13.8%	40.1	22.3%
2028	13.2	7.2%	26.5	14.5%	39.6	21.7%
2029	11.1	6.0%	28.1	15.2%	39.2	21.2%
2030	9.4	5.0%	29.7	15.8%	39.1	20.8%
2031	7.8	4.1%	31.2	16.3%	39.0	20.3%
2032	6.4	3.3%	32.7	16.8%	39.1	20.1%
2033	5.3	2.7%	34.2	17.2%	39.5	19.8%
2034	4.4	2.2%	35.6	17.5%	40.0	19.7%
2035	3.6	1.7%	37.1	17.8%	40.7	19.6%
2036	2.9	1.4%	38.4	18.0%	41.3	19.4%
2037	2.4	1.1%	39.8	18.2%	42.2	19.3%
2038	1.9	0.9%	41.1	18.4%	43.1	19.3%
2039	1.5	0.7%	42.5	18.5%	44.0	19.2%
2040	1.2	0.5%	43.8	18.6%	45.0	19.1%
2041	1.0	0.4%	45.1	18.6%	46.1	19.0%
2042	0.8	0.3%	46.5	18.7%	47.2	19.0%
2043	0.6	0.2%	47.9	18.7%	48.4	18.9%
2044	0.4	0.2%	49.3	18.7%	49.7	18.9%
2045	0.3	0.1%	50.7	18.7%	51.0	18.9%

VIII. The General Assembly Retirement System

- **Plan Summary**
- **FY 2015 Change in Unfunded Liabilities**
- **Funded Ratio History**
- **Active Member Headcount**
- **Average Active Member Salaries**
- **Retiree Headcount**
- **Average Retirement Annuities**
- **Unfunded History**
- **Rate of Return on Investments**
- **Annual Investment Revenue**
- **Total Payout**
- **Annual Changes in Unfunded**
- **Changes in Net Assets**
- **Investment Return History**
- **Reduction in State Contributions**
- **Tier 1 & Tier 2 Normal Cost Projections**

All of the numbers appearing in the report, unless otherwise noted, are based upon market value of assets

General Assembly Retirement System
Tier 1 Plan Summary

Retirement Age

- Age 55 with 8 years of service.
- Age 62 with at least 4 years of service.

Retirement Formula

- 3.0% of final salary for each of the first 4 years of service, plus
- 3.5% of final salary for each of the next 2 years of service, plus
- 4.0% of final salary for each of the next 2 years of service, plus
- 4.5% of final salary for each of the next 4 years of service, plus
- 5.0% of final salary for each year of service in excess of 12 years

Maximum Annuity

- 85% of final salary.

Salary Used to Calculate Pension

- Salary on last day of service.

Annual COLA

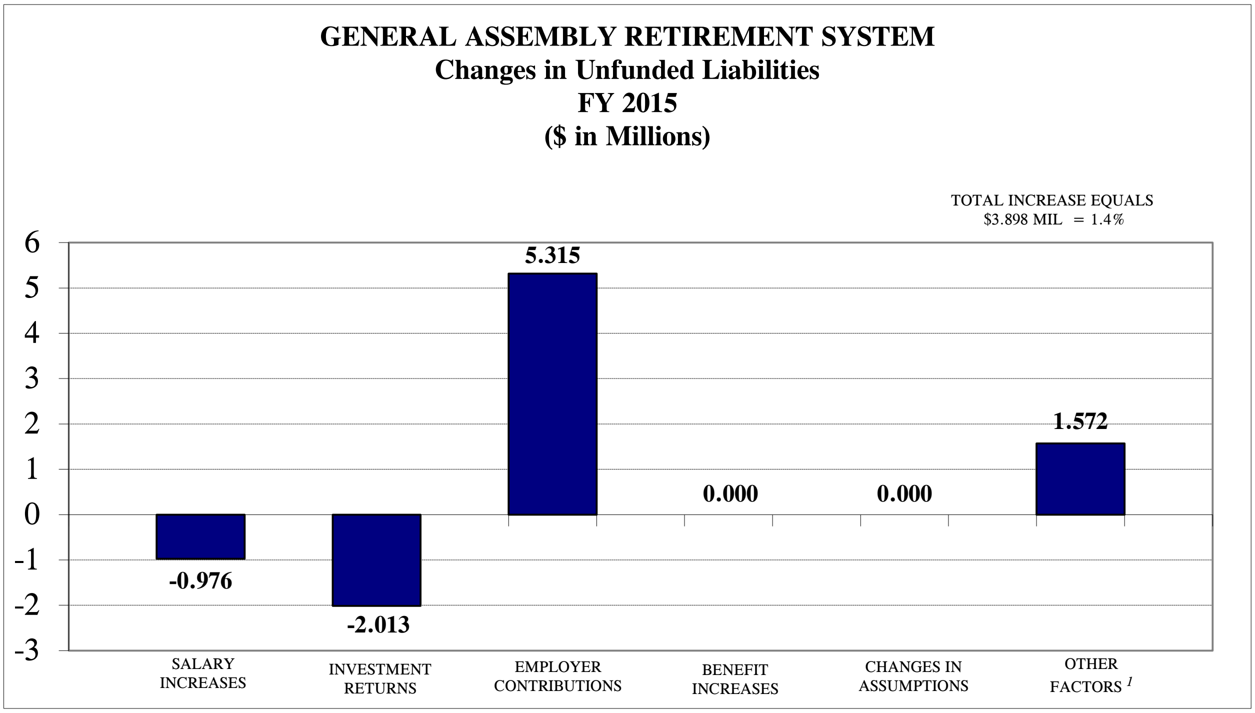
- 3% compounded

Employee Contributions

- 11.5% of salary.

The benefits shown do not reflect P.A. 96-0899 (2 Tier Act of 2011). Please refer to Section I earlier in this report for details.

CHART 53



NOTE: The above chart is based upon actuarial value of assets.
[1] Other Factors losses from retirements, terminations, and retiree mortality.

CHART 54

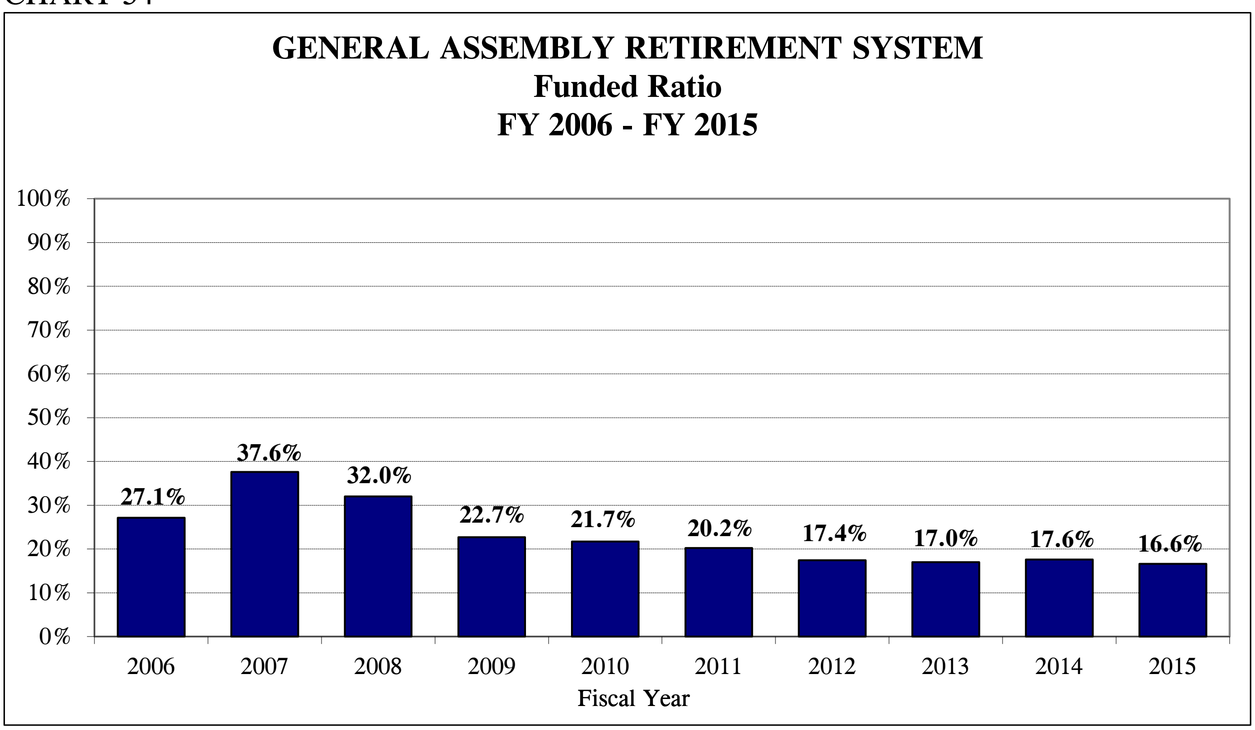


CHART 55

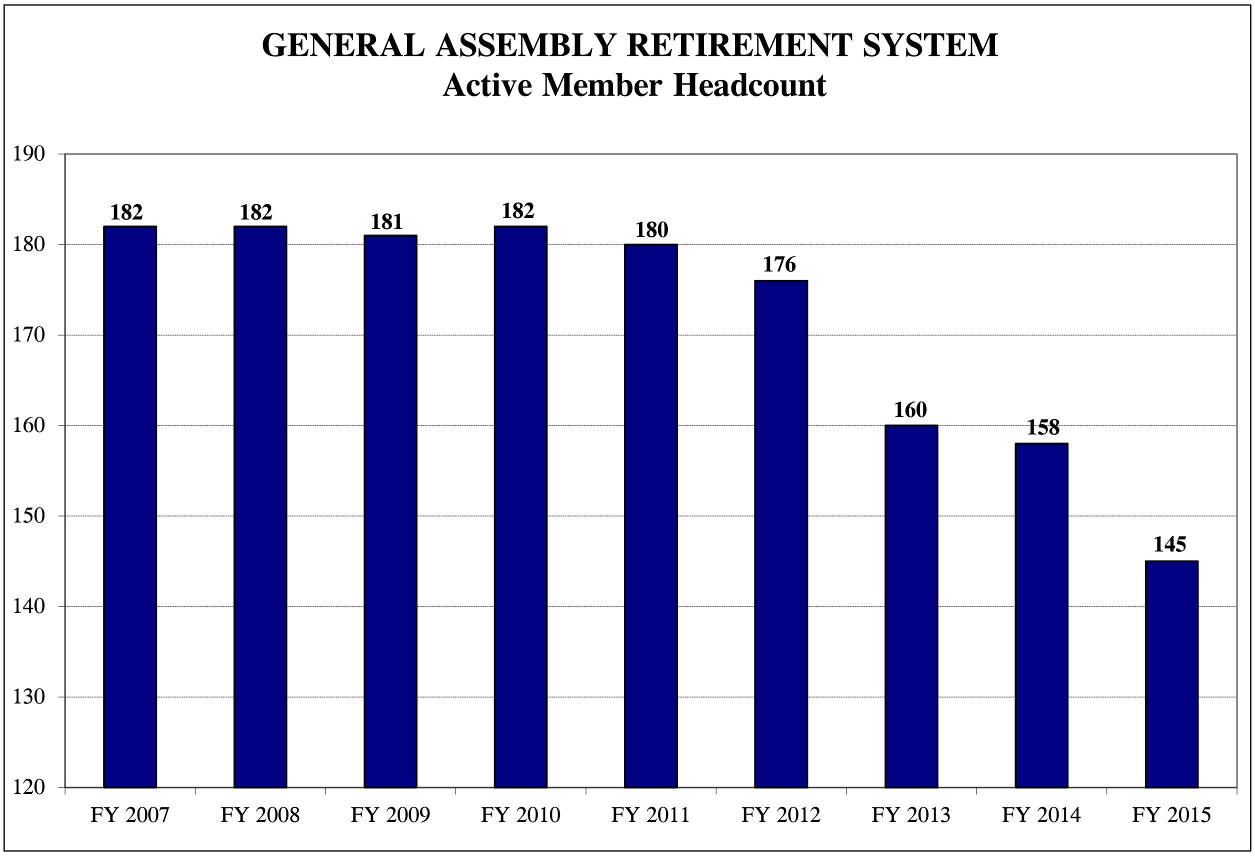


CHART 56

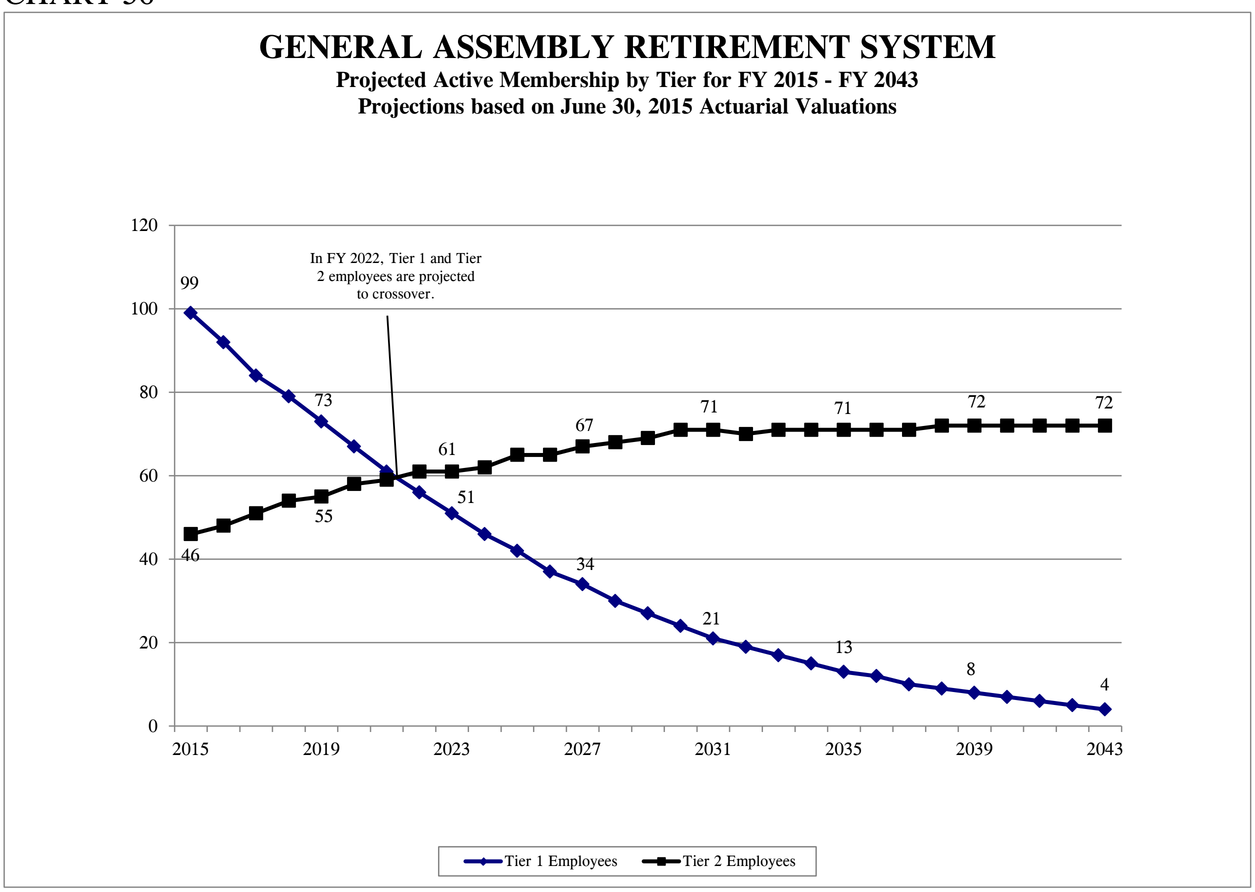


CHART 57

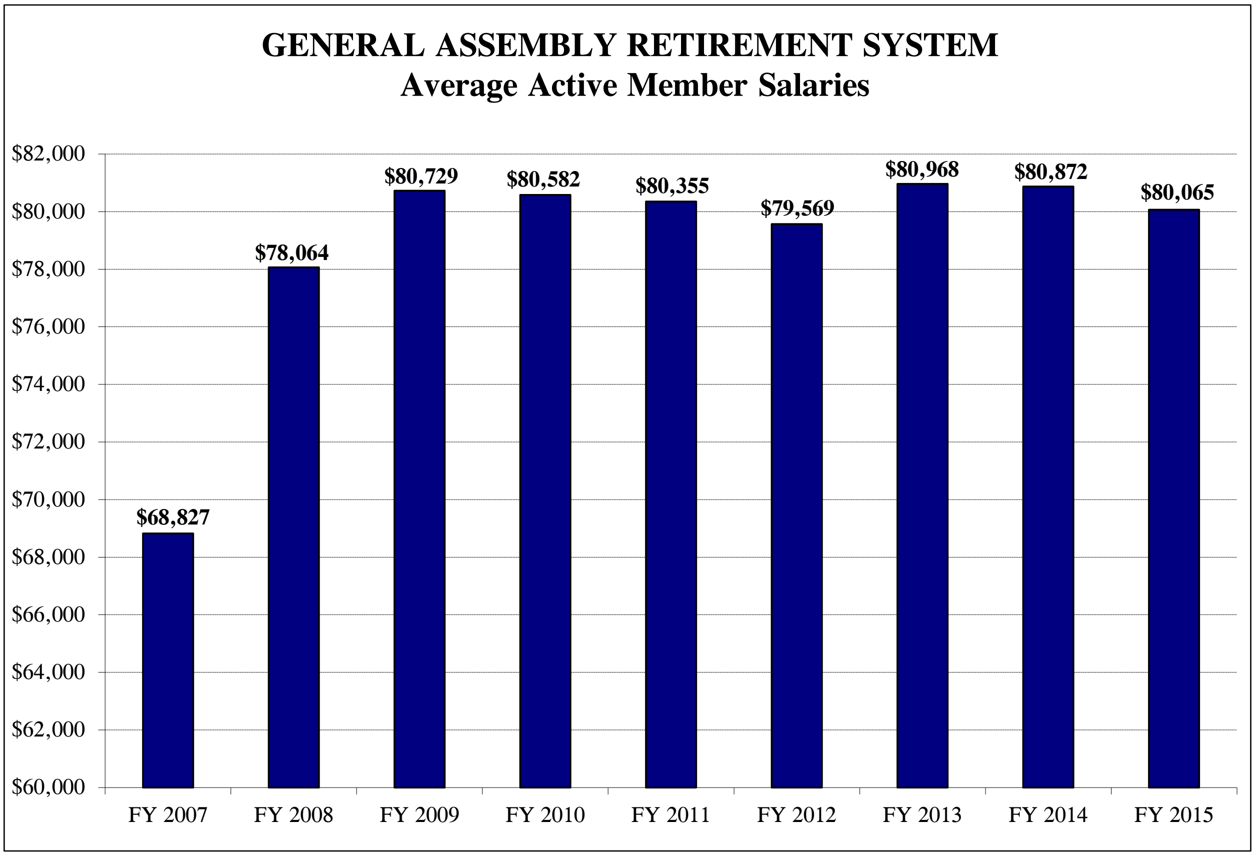


CHART 58

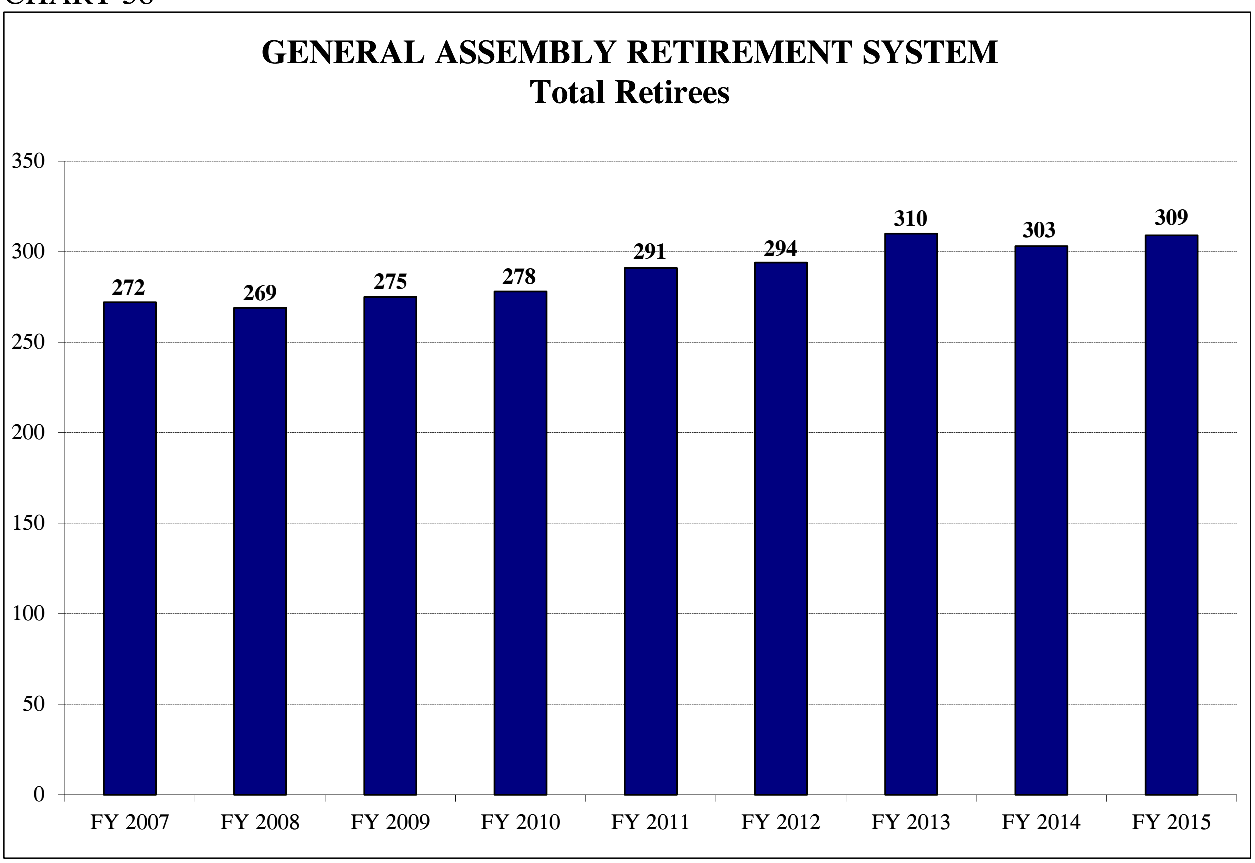


CHART 59

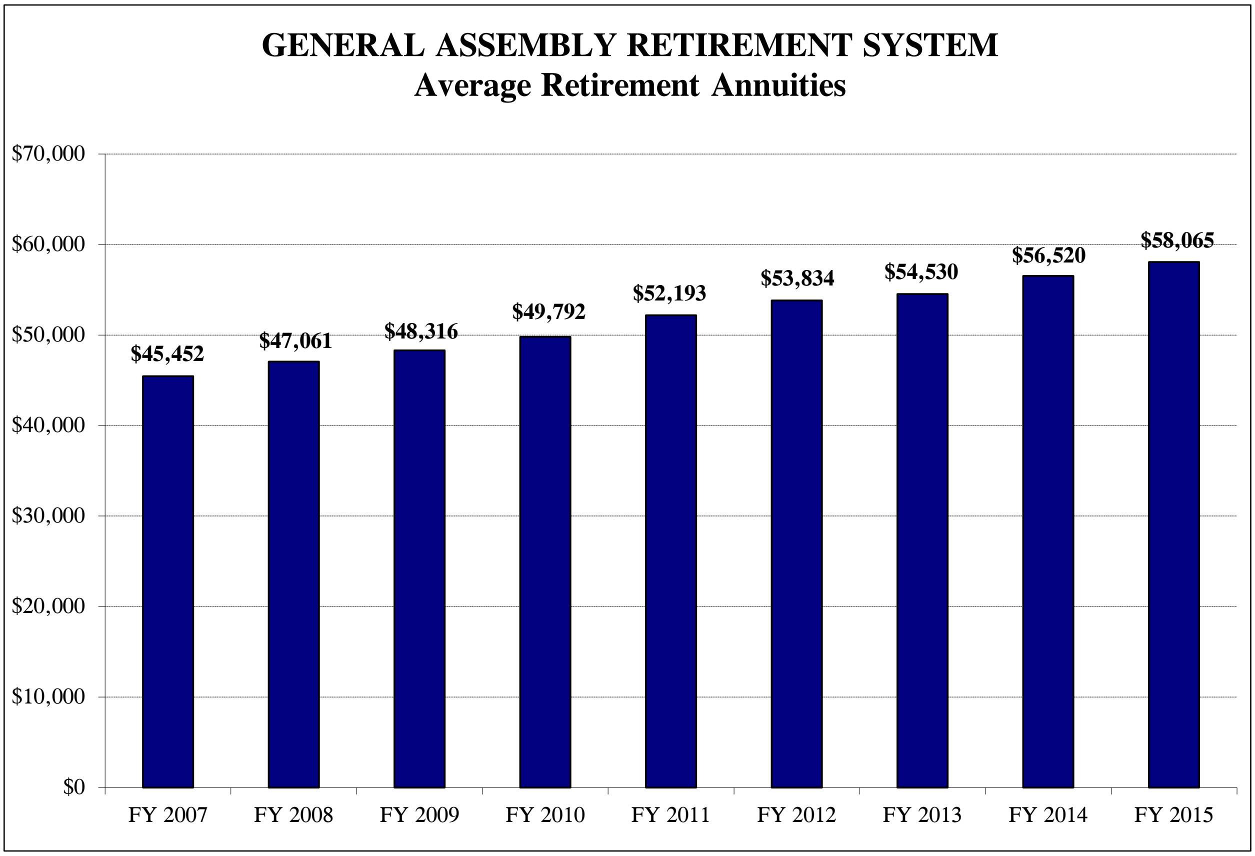


CHART 60

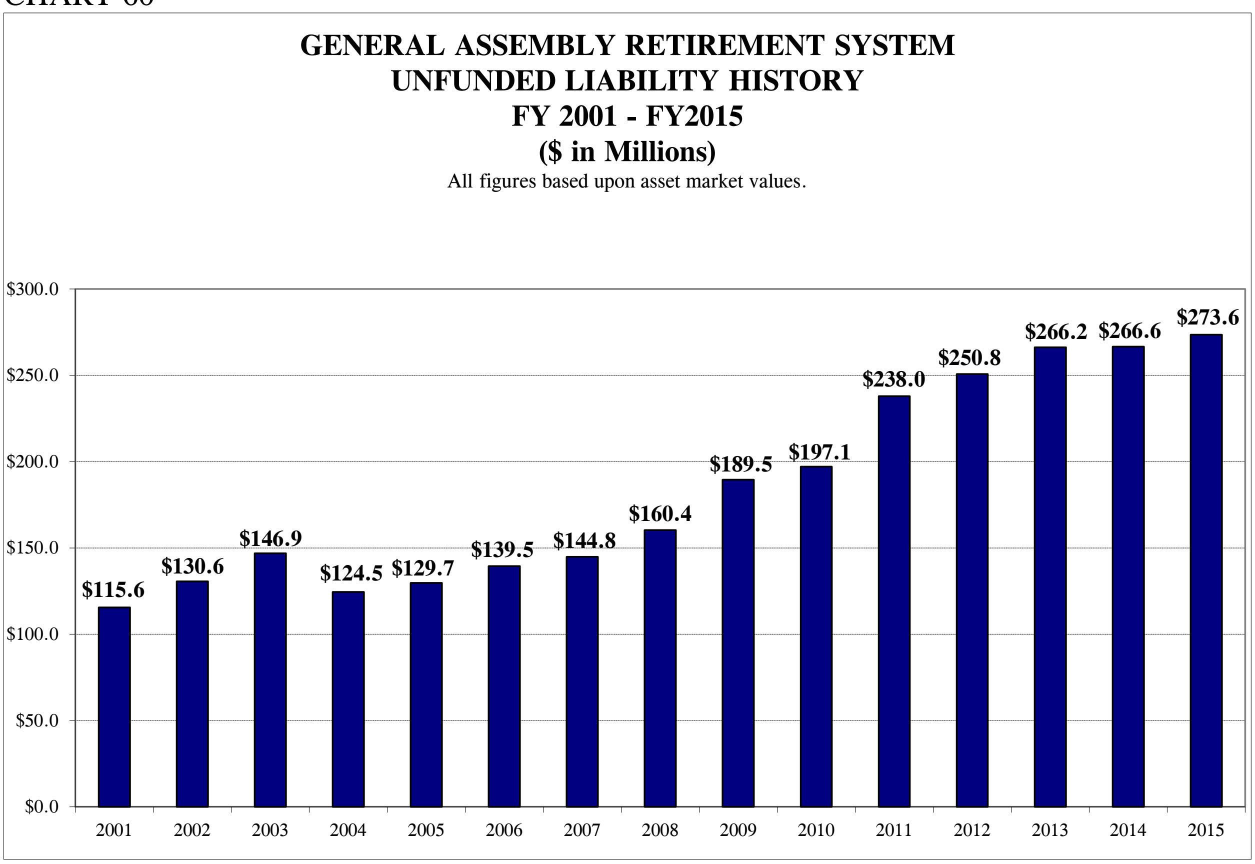


CHART 61

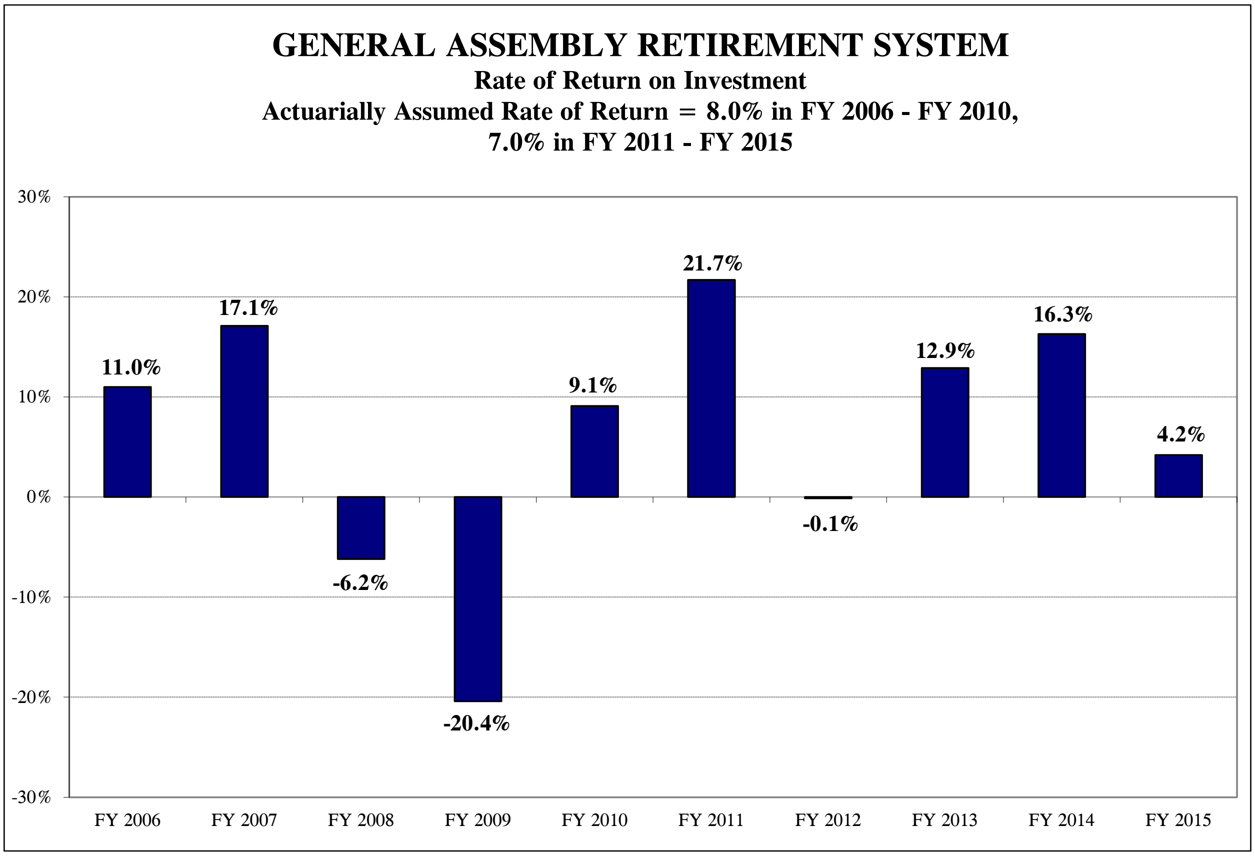


CHART 62

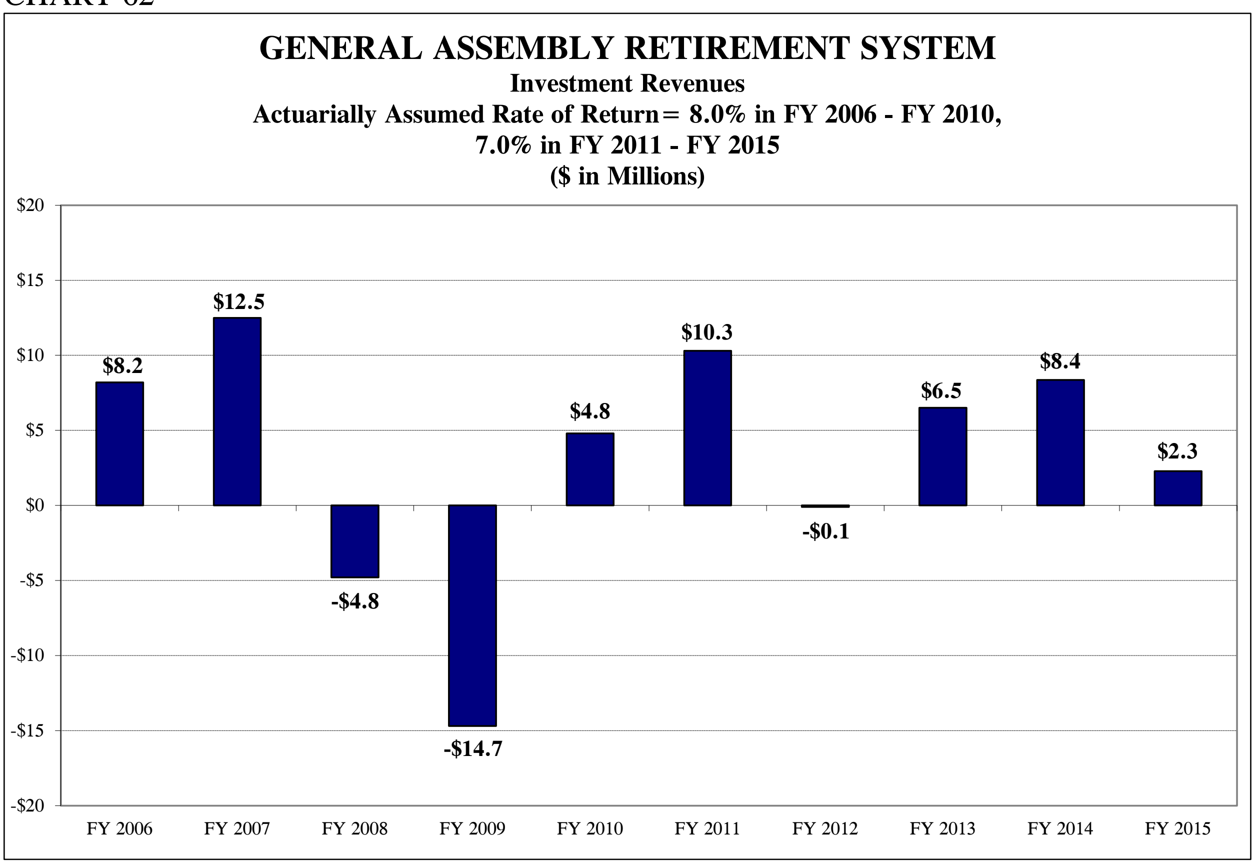


CHART 63

General Assembly Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2015 Data
($ in Millions)

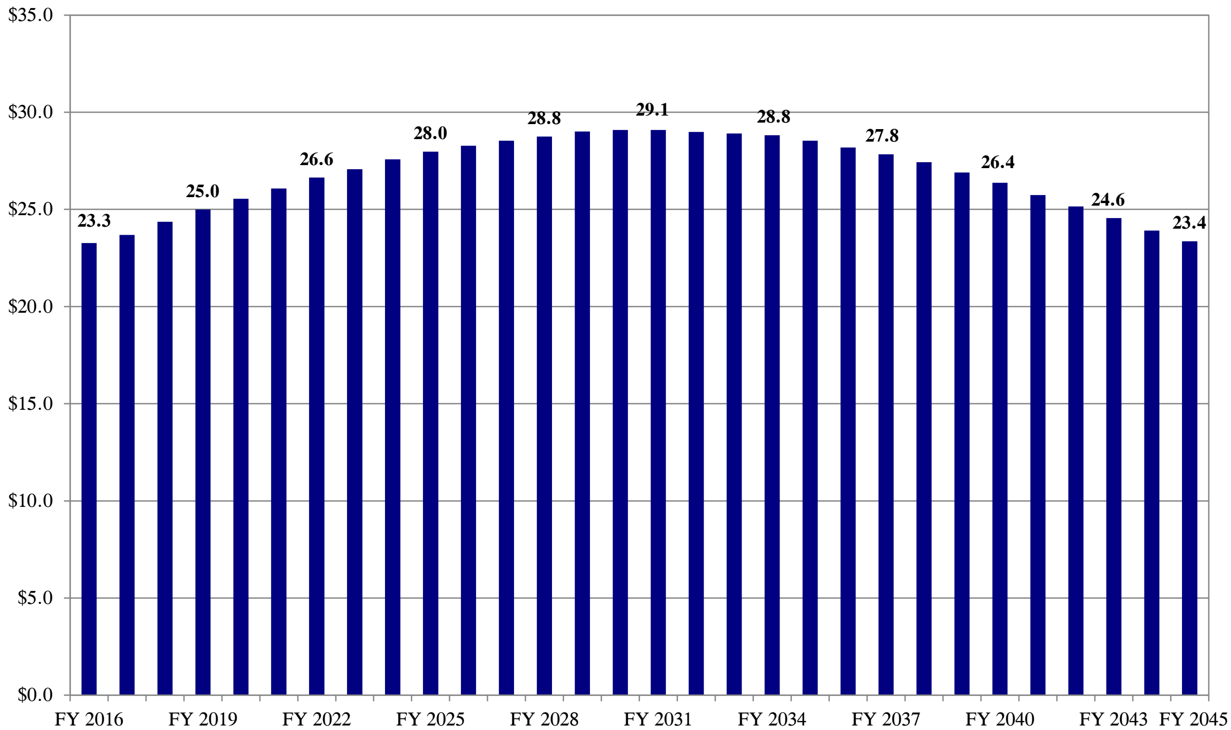


TABLE 22

GENERAL ASSEMBLY RETIREMENT SYSTEM CHANGES IN UNFUNDED LIABILITY FY 1996 - FY 2015							
YEAR ENDED	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N.C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	CHANGES IN ACTUARIAL ASSUMPTIONS	OTHER FACTORS MISC.	TOTAL CHANGE IN UNFUNDED LIABILIITY FROM PREVIOUS YEAR
GARS							
6/30/1996	$1,926,843	($2,564,790)	$5,271,809	$0	$0	$1,441,644	$6,075,506
6/30/1997	1,298,457	(5,057,646)	5,529,869	0	(136,881)	753,138	2,386,937
6/30/1998	(233,098)	(5,394,158)	5,710,203	0	0	460,957	543,904
6/30/1999	846,137	(2,808,175)	5,298,511	0	0	3,030,916	6,367,389
6/30/2000	(431,214)	(2,371,993)	5,576,440	0	0	2,079,991	4,853,224
6/30/2001	(555,323)	10,135,725	5,803,227	0	0	1,273,197	16,656,826
6/30/2002	(1,520,756)	8,713,370	6,741,725	0	1,211,951	(162,610)	14,983,680
6/30/2003	(1,793,094)	4,391,493	7,217,512	0	0	6,485,877	16,301,788
6/30/2004	(2,633,642)	(5,927,446)	(19,174,182)	0	0	5,286,195	(22,449,075)
6/30/2005	(645,631)	(1,288,918)	7,445,358	0	0	(262,887)	5,247,922
6/30/2006	(3,113,674)	(1,566,794)	8,528,558	0	4,786,991	1,190,775	9,825,856
6/30/2007	3,962,835	(6,733,144)	7,670,304	0	0	373,350	5,273,345
6/30/2008	(2,217,940)	11,400,154	7,073,235	0	0	(613,134)	15,642,315
6/30/2009	1,737,809	3,991,729	6,172,942	0	0	1,380,596	13,283,076
6/30/2010	(307,349)	5,709,168	5,666,343	0	0	831,994	11,900,156
6/30/2011	4,796,187	3,577,042	5,621,165	0	35,809,167	(108,827)	49,694,734
6/30/2012	(1,912,815)	3,662,246	8,818,897	0	0	1,563,530	12,131,858
6/30/2013	302,952	3,109,095	5,894,756	0	8,423,005	3,502,950	21,232,758
6/30/2014	0	(2,243,841)	7,000,449	0	0	(1,587,227)	3,169,381
6/30/2015	(976,354)	(2,012,721)	5,315,003	0	0	1,571,772	3,897,700
TOTALS	$ (1,469,670)	$ 16,720,396	$ 103,182,124	$0	$ 50,094,233	$ 28,492,197	$ 197,019,280

NOTE: All of the calculations in this table are based upon actuarial value of assets,i.e., WITH Asset Smoothing.

TABLE 23

GENERAL ASSEMBLY RETIREMENT SYSTEM Changes in Net Assets ($ in Millions)									
Fiscal Years	2015	2014	2013	2012	2011	2010	2009	2008	2007
Additions to Assets									
State of Illinois	15.9	14.0	14.1	10.5	11.4	10.4	8.9	6.8	5.4
Pension Obligation Bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employees	1.5	1.5	1.5	1.6	2.0	1.7	1.7	1.8	1.7
Net Investment Income	2.3	8.4	6.5	-0.1	10.3	4.8	-14.7	-4.7	13.0
Total Asset Additions (A)	19.6	23.8	22.1	12.0	23.7	16.9	-4.1	3.9	20.1
Deductions from Assets									
Benefits	21.3	20.8	20.1	19.3	17.6	16.8	15.8	15.3	14.7
Refunds	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.3
Subsidy Payments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative Expenses	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Asset Deductions (B)	21.9	21.4	20.5	19.7	18.0	17.3	16.2	15.7	15.2
Change in Net Assets (A-B=C)	-2.2	2.4	1.6	-7.7	5.7	-0.4	-20.3	-11.8	4.9

TABLE 24

GENERAL ASSEMBLY RETIREMENT SYSTEM Historical Investment Revenues ($ in Millions)			
Fiscal Year	Market Value of Assets at Year End	Net Investment Revenue	Rate of Return Earned
2004	81.3	11.7	16.4%
2005	80.8	7.5	10.1%
2006	79.0	8.2	11.0%
2007	83.9	12.5	17.1%
2008	71.9	-4.8	-6.2%
2009	55.6	-14.7	-20.1%
2010	54.7	4.8	9.1%
2011	60.4	10.3	11.7%
2012	52.7	-0.1	-0.1%
2013	54.3	6.5	12.9%
2014	56.8	8.4	16.3%
2015	54.6	2.3	4.2%

TABLE 25

GENERAL ASSEMBLY RETIREMENT SYSTEM Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2015 Data ($ in Millions)						
Fiscal Year	Tier 1 Normal Cost	Tier 1 Normal Cost as a % of Payroll	Tier 2 Normal Cost	Tier 2 Normal Cost as a % of Payroll	Total Normal Cost	Total Normal Cost as a % of Payroll
2016	3.0	26.5%	0.6	5.4%	3.6	31.8%
2017	2.8	25.3%	0.7	6.2%	3.5	31.5%
2018	2.7	24.1%	0.8	6.7%	3.5	30.9%
2019	2.6	23.0%	0.8	7.3%	3.4	30.3%
2020	2.4	21.3%	0.9	7.8%	3.3	29.1%
2021	2.3	20.2%	1.0	8.5%	3.3	28.7%
2022	2.2	18.8%	1.0	8.9%	3.2	27.7%
2023	2.0	17.5%	1.1	9.5%	3.1	27.1%
2024	1.9	16.1%	1.2	10.1%	3.0	26.1%
2025	1.7	14.6%	1.3	10.8%	3.0	25.5%
2026	1.6	13.4%	1.3	11.4%	2.9	24.8%
2027	1.4	12.1%	1.4	12.1%	2.9	24.2%
2028	1.3	10.9%	1.5	12.5%	2.8	23.4%
2029	1.2	9.6%	1.6	13.2%	2.8	22.8%
2030	1.1	8.8%	1.7	13.6%	2.8	22.4%
2031	1.0	7.9%	1.7	13.9%	2.7	21.8%
2032	0.9	7.0%	1.8	14.2%	2.7	21.2%
2033	0.8	6.2%	1.9	14.5%	2.7	20.8%
2034	0.7	5.6%	1.9	14.8%	2.7	20.4%
2035	0.7	5.0%	2.0	15.2%	2.7	20.2%
2036	0.6	4.4%	2.1	15.4%	2.7	19.7%
2037	0.5	3.8%	2.2	15.7%	2.7	19.5%
2038	0.5	3.4%	2.3	16.0%	2.8	19.4%
2039	0.4	3.0%	2.3	16.1%	2.8	19.1%
2040	0.4	2.6%	2.4	16.4%	2.8	19.0%
2041	0.3	2.2%	2.5	16.6%	2.9	18.8%
2042	0.3	1.8%	2.6	16.8%	2.9	18.6%
2043	0.2	1.4%	2.7	17.0%	2.9	18.5%

Appendices

APPENDIX A

FUNDING PROJECTIONS FOR THE STATE RETIREMENT SYSTEMS
All Five Systems Combined
Projections Based on the Retirement System's FY 2015 Actuarial Valuation
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution*	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	19,957.4	7,534.9	37.8%	1,602.4	197,917.6	83,129.4	114,788.2	42.0%
2017	**20,033.2**	**7,908.5**	**39.5%**	**1,597.6**	**204,826.5**	**89,206.8**	**115,619.7**	**43.6%**
2018	20,593.6	8,013.8	38.9%	1,639.1	211,724.1	94,715.5	117,008.6	44.7%
2019	21,180.6	8,155.0	38.5%	1,681.9	218,600.5	98,920.1	119,680.5	45.3%
2020	21,784.8	8,326.0	38.2%	1,727.4	225,424.0	103,670.9	121,753.1	46.0%
2021	22,411.9	8,592.3	38.3%	1,774.6	232,194.2	108,511.3	123,682.9	46.7%
2022	23,062.4	8,831.8	38.3%	1,824.3	238,894.8	113,414.8	125,480.0	47.5%
2023	23,740.3	9,084.1	38.3%	1,877.7	248,515.3	118,398.9	130,116.4	47.6%
2024	24,443.5	9,329.6	38.2%	1,931.7	252,034.8	123,448.5	128,586.3	49.0%
2025	25,166.6	9,585.3	38.1%	1,988.2	258,441.1	128,582.0	129,859.1	49.8%
2026	25,916.3	9,875.3	38.1%	2,046.3	264,717.1	133,835.0	130,882.2	50.6%
2027	26,691.9	10,178.3	38.1%	2,107.2	270,835.0	139,218.9	131,616.1	51.4%
2028	27,487.0	10,471.7	38.1%	2,164.4	276,771.7	144,711.3	132,060.4	52.3%
2029	28,312.1	10,779.7	38.1%	2,227.5	282,508.1	150,343.7	132,164.4	53.2%
2030	29,165.7	11,077.1	38.0%	2,291.6	288,032.0	156,118.6	131,913.4	54.2%
2031	30,046.9	11,391.5	37.9%	2,360.6	293,387.1	162,136.3	131,250.8	55.3%
2032	30,950.1	11,744.7	37.9%	2,431.0	298,497.1	168,397.4	130,099.6	56.4%
2033	31,870.2	12,133.7	38.1%	2,499.7	303,342.4	174,953.0	128,389.4	57.7%
2034	32,800.8	13,232.1	40.3%	2,569.7	307,909.5	182,578.1	125,331.4	59.3%
2035	33,736.5	13,612.3	40.3%	2,639.2	312,178.5	190,601.4	121,577.1	61.1%
2036	34,674.6	13,993.7	40.4%	2,706.3	316,131.3	199,056.8	117,074.6	63.0%
2037	35,609.4	14,373.9	40.4%	2,775.8	319,764.0	207,999.4	111,764.7	65.0%
2038	36,535.7	14,751.6	40.4%	2,842.8	323,066.8	217,472.5	105,594.4	67.3%
2039	37,450.5	15,124.7	40.4%	2,904.8	326,040.1	227,522.9	98,517.2	69.8%
2040	38,354.1	15,493.9	40.4%	2,966.1	328,681.9	238,204.6	90,477.3	72.5%
2041	39,253.5	15,860.2	40.4%	3,023.7	331,013.5	249,590.6	81,423.0	75.4%
2042	40,147.8	16,226.1	40.4%	3,079.1	333,078.8	261,779.6	71,299.2	78.6%
2043	41,047.4	16,593.6	40.4%	3,134.4	334,937.0	274,897.5	60,039.6	82.1%
2044	41,953.7	16,962.2	40.4%	3,187.1	336,675.5	289,093.2	47,582.3	85.9%
2045	42,859.2	17,333.7	40.4%	3,245.9	338,367.8	304,530.4	33,837.4	90.0%

APPENDIX B

FUNDING PROJECTIONS FOR THE TEACHERS RETIREMENT SYSTEM
Projections Based on the Retirement System's FY 2015 Actuarial Valuation
Actuarially Assumed Rate of Return: 7.50%
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution*	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	10,599.8	3,741.8	35.3%	1,041.8	112,058.4	48,134.1	63,924.3	43.0%
2017	**10,541.2**	**3,986.6**	**37.8%**	**1,034.3**	**116,053.6**	**51,567.8**	**64,485.8**	**44.4%**
2018	10,870.0	4,096.2	37.7%	1,066.5	120,100.7	54,735.3	65,365.3	45.6%
2019	11,209.1	4,178.0	37.3%	1,099.1	124,194.2	57,214.5	66,979.7	46.1%
2020	11,560.4	4,272.4	37.0%	1,134.2	128,327.6	60,066.3	68,261.3	46.8%
2021	11,925.9	4,418.6	37.1%	1,170.4	132,508.6	63,029.6	69,479.0	47.6%
2022	12,307.4	4,552.1	37.0%	1,208.8	136,736.0	66,099.1	70,636.9	48.3%
2023	12,706.8	4,694.3	36.9%	1,250.5	141,008.8	69,294.2	71,714.6	49.1%
2024	13,121.0	4,829.4	36.8%	1,292.4	145,320.5	72,605.8	72,714.6	50.0%
2025	13,547.9	4,972.1	36.7%	1,336.5	149,677.3	76,059.5	73,617.8	50.8%
2026	13,988.2	5,137.1	36.7%	1,380.9	154,056.3	79,665.4	74,390.8	51.7%
2027	14,441.4	5,308.7	36.8%	1,427.8	158,440.0	83,434.5	75,005.6	52.7%
2028	14,904.4	5,471.3	36.7%	1,470.9	162,803.7	87,334.1	75,469.6	53.6%
2029	15,379.6	5,641.0	36.7%	1,518.4	167,124.6	91,378.0	75,746.6	54.7%
2030	15,870.2	5,804.8	36.6%	1,566.7	171,391.4	95,566.1	75,825.4	55.8%
2031	16,374.4	5,976.9	36.5%	1,617.9	175,586.4	99,918.5	75,667.9	56.9%
2032	16,890.1	6,171.2	36.5%	1,670.8	179,687.7	104,458.3	75,229.4	58.1%
2033	17,411.9	6,384.7	36.7%	1,721.8	183,666.8	109,200.2	74,466.6	59.5%
2034	17,932.2	7,084.6	39.5%	1,772.7	187,497.8	114,660.8	72,837.0	61.2%
2035	18,447.9	7,288.4	39.5%	1,822.9	191,156.7	120,360.4	70,796.3	63.0%
2036	18,960.9	7,491.0	39.5%	1,870.5	194,623.5	126,306.8	68,316.7	64.9%
2037	19,465.7	7,690.5	39.5%	1,920.4	197,884.3	132,524.3	65,360.0	67.0%
2038	19,951.2	7,882.3	39.5%	1,966.5	200,918.1	139,017.1	61,901.0	69.2%
2039	20,413.7	8,065.0	39.5%	2,008.1	203,706.3	145,787.2	57,919.1	71.6%
2040	20,856.9	8,240.1	39.5%	2,047.9	206,226.3	152,842.2	53,384.1	74.1%
2041	21,282.7	8,408.3	39.5%	2,083.3	208,476.0	160,199.2	48,276.8	76.8%
2042	21,694.7	8,571.1	39.5%	2,116.1	210,467.1	167,896.6	42,570.4	79.8%
2043	22,100.9	8,731.6	39.5%	2,148.5	212,235.4	176,002.9	36,232.4	82.9%
2044	22,504.3	8,891.0	39.5%	2,177.3	213,845.9	184,608.5	29,237.4	86.3%
2045	22,905.0	9,049.3	39.5%	2,211.9	215,355.6	193,820.0	21,535.6	90.0%

* Pursuant to TRS' preliminary FY 2017 certification letter dated October 16, 2015, the FY 2017 required State Contribution includes $.8 million payable from the Guaranteed Minimum Annuity Reserve.

APPENDIX C

FUNDING PROJECTIONS FOR THE STATE EMPLOYEES' RETIREMENT SYSTEM
Projections Based on the Retirement System's FY 2015 Actuarial Valuation
Actuarially Assumed Rate of Return: 7.25%
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	4,660	2,045	43.9%	254	42,390	16,109	26,281.0	38.0%
2017	**4,706**	**2,097**	**44.6%**	**255**	**44,024**	**17,567**	**26,457.0**	**39.9%**
2018	4,830	2,057	42.6%	261	45,640	18,886	26,754.0	41.4%
2019	4,958	2,091	42.2%	267	47,233	19,943	27,290.0	42.2%
2020	5,087	2,130	41.9%	273	48,790	21,049	27,741.0	43.1%
2021	5,220	2,187	41.9%	279	50,305	22,143	28,162.0	44.0%
2022	5,356	2,241	41.8%	285	51,765	23,216	28,549.0	44.8%
2023	5,494	2,296	41.8%	291	56,163	24,263	31,900.0	43.2%
2024	5,639	2,350	41.7%	297	54,489	25,279	29,210.0	46.4%
2025	5,787	2,405	41.6%	303	55,732	26,260	29,472.0	47.1%
2026	5,943	2,470	41.6%	310	56,892	27,220	29,672.0	47.8%
2027	6,106	2,539	41.6%	317	57,960	28,156	29,804.0	48.6%
2028	6,273	2,605	41.5%	324	58,938	29,072	29,866.0	49.3%
2029	6,454	2,678	41.5%	332	59,831	29,982	29,849.0	50.1%
2030	6,644	2,751	41.4%	340	60,642	30,892	29,750.0	50.9%
2031	6,842	2,829	41.3%	350	61,373	31,814	29,559.0	51.8%
2032	7,044	2,914	41.4%	359	62,022	32,762	29,260.0	52.8%
2033	7,249	3,006	41.5%	368	62,593	33,751	28,842.0	53.9%
2034	7,459	3,319	44.5%	378	63,094	35,026	28,068.0	55.5%
2035	7,673	3,414	44.5%	388	63,526	36,388	27,138.0	57.3%
2036	7,887	3,509	44.5%	398	63,888	37,849	26,039.0	59.2%
2037	8,099	3,603	44.5%	408	64,186	39,423	24,763.0	61.4%
2038	8,314	3,699	44.5%	419	64,428	41,132	23,296.0	63.8%
2039	8,532	3,796	44.5%	429	64,625	42,999	21,626.0	66.5%
2040	8,751	3,894	44.5%	440	64,788	45,046	19,742.0	69.5%
2041	8,973	3,992	44.5%	451	64,927	47,300	17,627.0	72.9%
2042	9,196	4,092	44.5%	462	65,057	49,789	15,268.0	76.5%
2043	9,423	4,193	44.5%	473	65,190	52,542	12,648.0	80.6%
2044	9,652	4,294	44.5%	485	65,337	55,588	9,749.0	85.1%
2045	9,881	4,396	44.5%	497	65,504	58,953	6,551.0	90.0%

* Pursuant to P.A. 93-0589, the FY 2017 State Contribution includes $83 million for debt service for the 2003 Pension Obligation Bonds authorized by P.A. 93-0002. State contribution amounts shown for FY 2018 - 2045 do not include projected debt service as these amounts are not known until the annual SERS preliminary certification letters are issued pursuant to P.A. 97-0694 (State Actuary Law).

APPENDIX D

FUNDING PROJECTIONS FOR THE STATE UNIVERSITIES RETIREMENT SYSTEM
Projections Based on the Retirement System's FY 2015 Actuarial Valuation
Actuarially Assumed Rate of Return: 7.25%
($ in Millions)

Fiscal Year	Annual Payroll*	Total State Contribution**	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	4,520.0	1,600.0	35.4%	290.5	40,745.9	17,955.8	22,790.1	44.1%
2017	**4,610.0**	**1,671.4**	**36.3%**	**292.7**	**41,949.0**	**19,057.8**	**22,891.2**	**45.4%**
2018	4,716.5	1,707.4	36.2%	295.9	43,112.6	20,008.7	23,103.8	46.4%
2019	4,835.3	1,733.5	35.9%	300.0	44,237.0	20,625.0	23,611.9	46.6%
2020	4,958.0	1,771.1	35.7%	304.4	45,311.2	21,367.0	23,944.2	47.2%
2021	5,085.6	1,832.8	36.0%	309.2	46,333.9	22,103.2	24,230.7	47.7%
2022	5,217.6	1,884.1	36.1%	314.4	47,302.5	22,822.3	24,480.3	48.2%
2023	5,356.7	1,938.1	36.2%	319.9	48,215.4	23,526.8	24,688.6	48.8%
2024	5,499.4	1,993.3	36.2%	325.8	49,067.7	24,215.9	24,851.8	49.4%
2025	5,645.9	2,050.0	36.3%	331.8	49,852.6	24,886.6	24,965.9	49.9%
2026	5,797.6	2,108.6	36.4%	338.2	50,575.8	25,549.5	25,026.3	50.5%
2027	5,954.9	2,169.2	36.4%	344.9	51,236.0	26,208.4	25,027.6	51.2%
2028	6,117.7	2,232.0	36.5%	351.9	51,832.7	26,868.8	24,963.9	51.8%
2029	6,284.2	2,295.3	36.5%	359.2	52,364.1	27,533.8	24,830.3	52.6%
2030	6,454.3	2,354.3	36.5%	366.5	52,826.0	28,199.8	24,626.2	53.4%
2031	6,630.1	2,416.8	36.5%	374.1	53,276.9	28,934.1	24,342.8	54.3%
2032	6,812.0	2,487.8	36.5%	381.7	53,664.3	29,698.3	23,965.9	55.3%
2033	7,001.6	2,567.7	36.7%	389.8	53,992.3	30,512.0	23,480.3	56.5%
2034	7,197.8	2,648.4	36.8%	398.0	54,264.7	31,386.6	22,878.2	57.8%
2035	7,399.3	2,726.3	36.8%	406.5	54,483.6	32,328.8	22,154.8	59.3%
2036	7,605.7	2,806.0	36.9%	415.1	54,650.9	33,351.6	21,299.4	61.0%
2037	7,818.4	2,888.3	36.9%	424.0	54,770.1	34,469.9	20,300.2	62.9%
2038	8,038.6	2,973.5	37.0%	433.0	54,843.6	35,699.2	19,144.5	65.1%
2039	8,267.1	3,061.9	37.0%	442.5	54,878.3	37,059.5	17,818.8	67.5%
2040	8,502.2	3,152.8	37.1%	452.2	54,883.2	38,573.3	16,309.9	70.3%
2041	8,747.4	3,247.5	37.1%	462.5	54,871.0	40,267.9	14,603.1	73.4%
2042	9,000.0	3,344.9	37.2%	473.2	54,857.9	42,173.6	12,684.3	76.9%
2043	9,259.3	3,445.0	37.2%	484.2	54,854.8	44,317.0	10,537.8	80.8%
2044	9,525.9	3,547.2	37.2%	495.3	54,872.2	46,725.6	8,146.6	85.2%
2045	9,793.8	3,651.6	37.3%	506.5	54,920.2	49,428.2	5,492.0	90.0%

* Payroll projections include SMP payroll - 30% of new SURS members are assumed to enter SMP

** State Contribution Only - Includes Self-Managed Plan (SMP) Contributions - Excludes Estimated $47.5 Million In Federal Funds in All Years Shown

APPENDIX E

FUNDING PROJECTIONS FOR THE JUDGES' RETIREMENT SYSTEM Projections Based on the Retirement System's FY 2015 Actuarial Valuation Actuarially Assumed Rate of Return: 7.0% ($ in Millions)								
Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	164.93	132.06	80.1%	14.63	2,392.36	879.56	1,512.80	36.8%
2017	**164.82**	**131.33**	**79.7%**	**14.37**	**2,466.62**	**959.07**	**1,507.55**	**38.9%**
2018	165.94	131.38	79.2%	14.38	2,535.81	1,027.14	1,508.67	40.5%
2019	166.92	130.66	78.3%	14.43	2,600.07	1,077.43	1,522.64	41.4%
2020	168.04	130.75	77.8%	14.46	2,658.38	1,126.82	1,531.56	42.4%
2021	169.01	131.85	78.0%	14.62	2,709.76	1,172.12	1,537.64	43.3%
2022	169.94	132.58	78.0%	14.77	2,754.88	1,213.13	1,541.75	44.0%
2023	171.22	133.58	78.0%	14.93	2,792.90	1,249.68	1,543.22	44.7%
2024	172.62	134.67	78.0%	15.23	2,824.25	1,282.08	1,542.17	45.4%
2025	174.21	135.91	78.0%	15.51	2,848.30	1,310.17	1,538.13	46.0%
2026	175.92	137.24	78.0%	15.87	2,865.15	1,334.31	1,530.84	46.6%
2027	177.84	138.74	78.0%	16.10	2,874.69	1,354.47	1,520.22	47.1%
2028	179.96	140.40	78.0%	16.16	2,877.02	1,370.82	1,506.20	47.6%
2029	182.36	142.27	78.0%	16.50	2,872.79	1,384.40	1,488.39	48.2%
2030	185.10	143.65	77.6%	16.98	2,862.16	1,395.18	1,466.98	48.7%
2031	188.09	145.24	77.2%	17.27	2,845.86	1,403.87	1,441.99	49.3%
2032	191.47	147.75	77.2%	17.99	2,823.99	1,412.20	1,411.79	50.0%
2033	195.03	150.99	77.4%	18.75	2,797.29	1,421.77	1,375.52	50.8%
2034	198.97	155.22	78.0%	19.53	2,766.50	1,434.63	1,331.87	51.9%
2035	203.23	158.55	78.0%	20.35	2,732.49	1,451.05	1,281.44	53.1%
2036	207.86	162.16	78.0%	21.13	2,696.03	1,472.41	1,223.62	54.6%
2037	212.79	166.01	78.0%	21.94	2,657.63	1,500.00	1,157.63	56.4%
2038	218.02	170.09	78.0%	22.75	2,618.10	1,535.30	1,082.80	58.6%
2039	223.55	174.40	78.0%	23.56	2,578.33	1,579.96	998.37	61.3%
2040	229.41	178.97	78.0%	24.37	2,538.92	1,635.50	903.42	64.4%
2041	235.50	183.73	78.0%	25.20	2,500.70	1,703.59	797.11	68.1%
2042	241.95	188.75	78.0%	26.03	2,464.30	1,785.91	678.39	72.5%
2043	248.62	193.96	78.0%	26.88	2,430.46	1,884.19	546.27	77.5%
2044	255.61	199.34	78.0%	27.74	2,399.87	2,000.23	399.64	83.3%
2045	262.88	205.08	78.0%	28.62	2,373.01	2,135.74	237.27	90.0%

APPENDIX F

FUNDING PROJECTIONS FOR THE GENERAL ASSEMBLY RETIREMENT SYSTEM Projections Based on the Retirement System's FY 2015 Actuarial Valuation Actuarially Assumed Rate of Return: 7.0% ($ in Millions)								
Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	12.69	16.07	126.6%	1.46	330.92	50.88	280.04	15.4%
2017	**11.14**	**21.72**	**195.0%**	**1.28**	**333.26**	**55.08**	**278.18**	**16.5%**
2018	11.21	21.81	194.6%	1.29	335.05	58.30	276.75	17.4%
2019	11.27	21.79	193.3%	1.30	336.26	60.09	276.17	17.9%
2020	11.32	21.83	192.8%	1.30	336.91	61.78	275.13	18.3%
2021	11.45	22.11	193.1%	1.32	336.97	63.38	273.59	18.8%
2022	11.39	22.00	193.2%	1.31	336.38	64.36	272.02	19.1%
2023	11.51	22.22	193.0%	1.32	335.23	65.23	270.00	19.5%
2024	11.53	22.26	193.1%	1.33	333.39	65.66	267.73	19.7%
2025	11.53	22.26	193.1%	1.33	330.92	65.72	265.20	19.9%
2026	11.63	22.46	193.1%	1.34	327.90	65.69	262.21	20.0%
2027	11.71	22.62	193.2%	1.35	324.35	65.57	258.78	20.2%
2028	11.90	22.98	193.1%	1.37	320.30	65.61	254.69	20.5%
2029	11.96	23.10	193.1%	1.38	315.60	65.52	250.08	20.8%
2030	12.14	23.31	192.0%	1.40	310.46	65.56	244.90	21.1%
2031	12.33	23.53	190.8%	1.42	304.96	65.87	239.09	21.6%
2032	12.50	23.82	190.6%	1.44	299.15	66.63	232.52	22.3%
2033	12.69	24.24	191.0%	1.46	292.98	67.98	225.00	23.2%
2034	12.85	24.82	193.2%	1.48	286.45	70.14	216.31	24.5%
2035	13.03	25.15	193.0%	1.50	279.74	73.11	206.63	26.1%
2036	13.20	25.49	193.1%	1.52	272.93	77.02	195.91	28.2%
2037	13.52	26.11	193.1%	1.55	266.00	82.22	183.78	30.9%
2038	13.85	26.74	193.1%	1.59	259.04	88.91	170.13	34.3%
2039	14.18	27.38	193.1%	1.63	252.19	97.32	154.87	38.6%
2040	14.51	28.02	193.1%	1.67	245.44	107.57	137.87	43.8%
2041	14.85	28.68	193.1%	1.71	238.90	119.91	118.99	50.2%
2042	15.19	29.34	193.2%	1.75	232.55	134.44	98.11	57.8%
2043	15.54	30.01	193.1%	1.79	226.42	151.34	75.08	66.8%
2044	15.90	30.69	193.0%	1.83	220.59	170.84	49.75	77.4%
2045	16.46	31.79	193.1%	1.89	214.99	193.48	21.51	90.0%

APPENDIX G

FUNDING PROJECTIONS FOR THE STATE RETIREMENT SYSTEMS
All Five Systems Combined
CoGFA Projection Based on the Laws in Effect on June 30, 2015
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	19,735.0	7,536.3	38.2%	1,602.5	197,892.5	83,023.8	114,868.6	42.0%
2017	**19,802.6**	**7,779.0**	**39.3%**	**1,592.3**	**204,774.3**	**88,848.1**	**115,926.2**	**43.4%**
2018	20,374.9	7,877.7	38.7%	1,634.3	211,648.3	94,090.4	117,557.8	44.5%
2019	20,964.0	8,033.7	38.3%	1,677.3	218,494.5	98,031.5	120,463.0	44.9%
2020	21,581.6	8,232.7	38.1%	1,723.8	225,282.9	102,539.5	122,743.4	45.5%
2021	22,207.8	8,486.8	38.2%	1,770.7	232,028.6	107,135.7	124,892.9	46.2%
2022	22,851.8	8,723.9	38.2%	1,820.0	238,689.3	111,774.8	126,914.5	46.8%
2023	23,525.3	8,974.9	38.1%	1,872.9	245,249.8	116,476.5	128,773.3	47.5%
2024	24,223.4	9,218.2	38.1%	1,926.7	251,687.0	121,223.5	130,463.5	48.2%
2025	24,946.1	9,475.1	38.0%	1,983.4	257,977.8	126,026.6	131,951.2	48.9%
2026	25,699.1	9,766.5	38.0%	2,041.5	264,095.3	130,913.4	133,181.9	49.6%
2027	26,477.3	10,070.4	38.0%	2,102.8	270,014.1	135,901.3	134,112.8	50.3%
2028	27,279.5	10,365.0	38.0%	2,160.7	275,718.6	140,970.1	134,748.5	51.1%
2029	28,116.2	10,675.7	38.0%	2,225.3	281,197.9	146,158.2	135,039.7	52.0%
2030	28,988.9	10,980.1	37.9%	2,292.0	286,445.4	151,478.8	134,966.6	52.9%
2031	29,895.1	11,303.6	37.8%	2,362.8	291,432.9	156,968.4	134,464.5	53.9%
2032	30,825.3	11,667.1	37.8%	2,436.0	296,144.2	162,686.4	133,457.8	54.9%
2033	31,787.6	12,072.7	38.0%	2,508.5	300,573.0	168,701.6	131,871.4	56.1%
2034	32,775.6	13,207.7	40.3%	2,582.8	304,709.3	175,813.5	128,895.8	57.7%
2035	33,799.6	13,623.0	40.3%	2,659.2	308,555.3	183,370.9	125,184.5	59.4%
2036	34,839.2	14,044.6	40.3%	2,734.4	312,101.7	191,423.6	120,678.0	61.3%
2037	35,879.2	14,466.6	40.3%	2,812.1	315,344.4	200,035.8	115,308.6	63.4%
2038	36,933.2	14,894.0	40.3%	2,888.9	318,278.3	209,272.1	109,006.2	65.8%
2039	37,992.7	15,324.2	40.3%	2,963.2	320,889.3	219,186.6	101,702.7	68.3%
2040	39,043.1	15,750.8	40.3%	3,035.9	323,200.8	229,869.5	93,331.3	71.1%
2041	40,084.8	16,173.7	40.3%	3,105.0	325,255.5	241,420.5	83,835.0	74.2%
2042	41,127.6	16,596.8	40.4%	3,172.9	327,104.3	253,955.1	73,149.2	77.6%
2043	42,176.0	17,021.8	40.4%	3,241.7	328,817.7	267,618.3	61,199.4	81.4%
2044	43,226.1	17,447.0	40.4%	3,307.2	330,477.5	282,557.2	47,920.3	85.5%
2045	44,278.3	17,873.5	40.4%	3,379.2	332,153.5	298,938.1	33,215.4	90.0%

The retirment system projections for GARS and JRS were used for purposes of arriving at a COFGA projection for all 5 systems combind.

APPENDIX H

FUNDING PROJECTIONS FOR THE TEACHERS RETIREMENT SYSTEM CoGFA Projection Based on the Laws in Effect on June 30, 2015 Actuarially Assumed Rate of Return: 7.50% ($ in Millions)								
Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	10,377.2	3,741.8	36.1%	1,041.8	112,089.7	48,074.6	64,015.1	42.9%
2017	**10,203.5**	**3,854.5**	**37.8%**	**1,020.5**	**116,088.2**	**51,275.6**	**64,812.6**	**44.2%**
2018	10,551.1	3,973.2	37.7%	1,055.3	120,116.0	54,197.8	65,918.2	45.1%
2019	10,910.4	4,064.2	37.3%	1,090.6	124,172.2	56,425.3	67,746.9	45.4%
2020	11,281.1	4,167.0	36.9%	1,128.3	128,247.3	59,018.2	69,229.1	46.0%
2021	11,650.1	4,314.6	37.0%	1,165.5	132,348.1	61,706.2	70,641.9	46.6%
2022	12,032.0	4,448.5	37.0%	1,204.7	136,472.3	64,482.4	71,989.9	47.2%
2023	12,431.0	4,590.8	36.9%	1,247.1	140,614.3	67,363.9	73,250.4	47.9%
2024	12,845.1	4,726.1	36.8%	1,289.7	144,765.3	70,341.0	74,424.3	48.6%
2025	13,273.4	4,869.7	36.7%	1,334.8	148,915.3	73,423.6	75,491.7	49.3%
2026	13,720.1	5,037.6	36.7%	1,380.6	153,049.3	76,634.5	76,414.8	50.1%
2027	14,176.6	5,210.9	36.8%	1,428.8	157,144.5	79,980.5	77,164.0	50.9%
2028	14,643.4	5,375.3	36.7%	1,473.1	161,182.9	83,434.4	77,748.5	51.8%
2029	15,128.9	5,549.6	36.7%	1,522.6	165,151.5	87,020.0	78,131.5	52.7%
2030	15,631.5	5,718.4	36.6%	1,573.0	169,035.3	90,735.9	78,299.4	53.7%
2031	16,148.7	5,896.2	36.5%	1,626.5	172,815.4	94,602.4	78,213.0	54.7%
2032	16,678.8	6,096.7	36.6%	1,681.9	176,474.0	98,646.9	77,827.1	55.9%
2033	17,220.2	6,318.6	36.7%	1,735.8	179,990.3	102,892.6	77,097.7	57.2%
2034	17,771.8	7,034.7	39.6%	1,790.9	183,346.7	107,870.7	75,476.0	58.8%
2035	18,336.5	7,258.2	39.6%	1,846.9	186,531.6	113,117.8	73,413.8	60.6%
2036	18,906.8	7,484.0	39.6%	1,901.3	189,539.5	118,658.0	70,881.5	62.6%
2037	19,474.1	7,708.6	39.6%	1,958.4	192,364.0	124,526.0	67,838.0	64.7%
2038	20,037.2	7,931.5	39.6%	2,013.2	194,985.6	130,741.4	64,244.2	67.1%
2039	20,596.8	8,152.9	39.6%	2,065.4	197,392.2	137,328.1	60,064.1	69.6%
2040	21,130.2	8,364.1	39.6%	2,114.9	199,582.2	144,318.3	55,263.9	72.3%
2041	21,649.1	8,569.5	39.6%	2,160.2	201,566.5	151,750.8	49,815.7	75.3%
2042	22,159.8	8,771.6	39.6%	2,203.3	203,368.9	159,683.5	43,685.4	78.5%
2043	22,666.1	8,972.1	39.6%	2,246.1	205,032.8	168,199.5	36,833.3	82.0%
2044	23,169.6	9,171.4	39.6%	2,285.1	206,607.8	177,379.6	29,228.2	85.9%
2045	23,671.8	9,370.2	39.6%	2,330.2	208,146.2	187,331.5	20,814.7	90.0%
Projections Based on COGFA's FY 2015 Actuarial Valuation								

APPENDIX I

FUNDING PROJECTIONS FOR THE STATE EMPLOYEES' RETIREMENT SYSTEM
CoGFA Projection Based on the Laws in Effect on June 30, 2015
Actuarially Assumed Rate of Return: 7.25%
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	4,660	2,045	43.9%	254	42,306	16,049	26,256.6	37.9%
2017	**4,714**	**2,062**	**43.7%**	**256**	**43,890**	**17,435**	**26,454.6**	**39.7%**
2018	4,852	2,027	41.8%	261	45,482	18,702	26,780.4	41.1%
2019	4,992	2,066	41.4%	267	47,072	19,722	27,350.3	41.9%
2020	5,133	2,109	41.1%	273	48,646	20,806	27,840.1	42.8%
2021	5,278	2,170	41.1%	279	50,222	21,919	28,302.8	43.6%
2022	5,424	2,227	41.1%	285	51,760	23,024	28,736.0	44.5%
2023	5,572	2,286	41.0%	291	53,253	24,119	29,134.1	45.3%
2024	5,727	2,342	40.9%	297	54,693	25,199	29,493.8	46.1%
2025	5,884	2,401	40.8%	303	56,066	26,259	29,806.8	46.8%
2026	6,048	2,468	40.8%	310	57,367	27,306	30,061.0	47.6%
2027	6,220	2,539	40.8%	317	58,588	28,341	30,247.5	48.4%
2028	6,397	2,609	40.8%	324	59,730	29,365	30,364.9	49.2%
2029	6,585	2,683	40.7%	332	60,795	30,389	30,405.7	50.0%
2030	6,784	2,759	40.7%	340	61,786	31,422	30,364.6	50.9%
2031	6,991	2,839	40.6%	350	62,701	32,471	30,229.6	51.8%
2032	7,206	2,928	40.6%	359	63,537	33,553	29,984.0	52.8%
2033	7,428	3,025	40.7%	368	64,303	34,688	29,615.3	53.9%
2034	7,661	3,347	43.7%	378	65,006	36,122	28,883.9	55.6%
2035	7,903	3,452	43.7%	388	65,650	37,662	27,988.3	57.4%
2036	8,145	3,558	43.7%	398	66,233	39,317	26,916.0	59.4%
2037	8,386	3,663	43.7%	408	66,755	41,102	25,653.4	61.6%
2038	8,629	3,770	43.7%	419	67,225	43,035	24,189.1	64.0%
2039	8,878	3,878	43.7%	429	67,653	45,145	22,507.7	66.7%
2040	9,131	3,989	43.7%	440	68,048	47,455	20,592.9	69.7%
2041	9,381	4,098	43.7%	451	68,422	49,992	18,430.2	73.1%
2042	9,629	4,207	43.7%	462	68,786	52,782	16,003.9	76.7%
2043	9,871	4,312	43.7%	474	69,152	55,852	13,299.8	80.8%
2044	10,108	4,416	43.7%	485	69,534	59,232	10,302.0	85.2%
2045	10,341	4,517	43.7%	497	69,944	62,950	6,994.4	90.0%

Projections Based on COGFA's FY 2015 Actuarial Valuation

APPENDIX J

FUNDING PROJECTIONS FOR THE STATE UNIVERSITIES RETIREMENT SYSTEM
CoGFA Projection Based on the Laws in Effect on June 30, 2015
Actuarially Assumed Rate of Return: 7.25%
($ in Millions)

Fiscal Year	Annual Payroll**	Total State Contribution*	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2016	4,520.0	1,601.5	35.4%	290.5	40,773.8	17,969.7	22,804.1	44.1%
2017	**4,708.7**	**1,709.2**	**36.3%**	**300.6**	**41,996.7**	**19,123.4**	**22,873.3**	**45.5%**
2018	4,795.0	1,724.6	36.0%	302.2	43,179.1	20,105.3	23,073.8	46.6%
2019	4,883.8	1,751.3	35.9%	303.9	44,314.0	20,747.0	23,567.0	46.8%
2020	4,988.5	1,804.0	36.2%	306.8	45,394.1	21,526.6	23,867.5	47.4%
2021	5,099.2	1,848.0	36.2%	310.3	46,412.3	22,275.3	24,137.0	48.0%
2022	5,214.3	1,893.6	36.3%	314.1	47,365.8	22,991.0	24,374.8	48.5%
2023	5,339.2	1,942.8	36.4%	318.5	48,254.8	23,679.2	24,575.6	49.1%
2024	5,467.3	1,993.1	36.5%	323.2	49,071.5	24,336.0	24,735.5	49.6%
2025	5,603.5	2,046.4	36.5%	328.4	49,817.3	24,967.9	24,849.4	50.1%
2026	5,743.8	2,101.2	36.6%	333.9	50,486.4	25,573.4	24,913.0	50.7%
2027	5,891.2	2,158.7	36.6%	339.8	51,082.2	26,159.9	24,922.3	51.2%
2028	6,047.2	2,217.7	36.7%	346.3	51,608.8	26,734.6	24,874.2	51.8%
2029	6,208.2	2,277.5	36.7%	353.1	52,063.1	27,299.1	24,764.0	52.4%
2030	6,376.1	2,336.0	36.6%	360.3	52,451.3	27,860.6	24,590.7	53.1%
2031	6,554.9	2,399.9	36.6%	368.0	52,766.1	28,425.3	24,340.8	53.9%
2032	6,736.9	2,471.3	36.7%	375.7	53,010.1	29,007.7	24,002.4	54.7%
2033	6,931.7	2,553.5	36.8%	384.2	53,189.3	29,631.4	23,557.9	55.7%
2034	7,130.7	2,646.1	37.1%	392.7	53,303.4	30,315.7	22,987.7	56.9%
2035	7,344.2	2,728.8	37.2%	402.1	53,361.7	31,067.4	22,294.3	58.2%
2036	7,565.9	2,814.5	37.2%	412.0	53,360.0	31,899.0	21,461.0	59.8%
2037	7,793.0	2,902.5	37.2%	421.9	53,301.8	32,826.0	20,475.8	61.6%
2038	8,035.4	2,996.2	37.3%	432.8	53,191.1	33,871.1	19,320.0	63.7%
2039	8,280.2	3,091.1	37.3%	443.5	53,013.9	35,036.2	17,977.7	66.1%
2040	8,538.2	3,190.8	37.4%	455.1	52,786.0	36,352.8	16,433.2	68.9%
2041	8,804.1	3,293.5	37.4%	467.1	52,527.2	37,854.2	14,673.0	72.1%
2042	9,081.5	3,400.5	37.4%	479.8	52,253.0	39,569.6	12,683.4	75.7%
2043	9,374.5	3,513.3	37.5%	493.4	51,976.5	41,531.6	10,444.9	79.9%
2044	9,676.6	3,629.6	37.5%	507.5	51,715.5	43,774.8	7,940.7	84.6%
2045	9,986.6	3,749.0	37.5%	522.0	51,475.2	46,327.7	5,147.5	90.0%

Projections Based on COGFA's FY 2015 Actuarial Valuation

APPENDIX K

STATE RETIREMENT SYSTEMS
CHANGES IN UNFUNDED LIABILITY
FY 1996 - FY 2015

YEAR ENDED	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N. C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	CHANGES IN ACTUARIAL ASSUMPTIONS	OTHER FACTORS MISC.	TOTAL CHANGE IN UNFUNDED LIABILITY FROM PREVIOUS YR
TRS							
6/30/1996	400,399,000	(577,281,000)	965,961,000	17,772,000	0	166,531,000	973,382,000
6/30/1997	(59,062,000)	(830,936,000)	992,390,000	0	(2,944,771,000)	88,773,000	(2,753,606,000)
6/30/1998	(46,017,000)	(1,417,747,000)	776,189,000	1,000,300,000	0	71,152,000	383,877,000
6/30/1999	44,030,000	(389,014,000)	677,408,000	33,870,000	125,223,000	533,933,000	1,025,450,000
6/30/2000	(33,403,000)	(450,361,000)	723,606,000	0	0	197,345,000	437,187,000
6/30/2001	(10,310,000)	3,089,765,000	733,877,000	0	0	632,729,000	4,446,061,000
6/30/2002	4,934,000	2,696,199,000	1,074,422,000	0	694,736,000	360,047,000	4,830,338,000
6/30/2003	171,802,000	827,434,000	1,415,610,000	53,850,000	0	658,524,000	3,127,220,000
6/30/2004	217,255,000	(2,168,876,000)	(2,811,516,000)	0	0	357,250,000	(4,405,887,000)
6/30/2005	236,687,000	(682,294,000)	1,299,840,000	0	26,425,000	1,706,431,000	2,587,089,000
6/30/2006	68,398,000	(1,159,525,000)	1,913,368,000	0	0	(400,028,000)	422,213,000
6/30/2007	149,682,000	(3,785,653,000)	1,739,187,000	0	2,410,756,000	813,081,000	1,327,053,000
6/30/2008	(153,987,000)	5,514,988,000	1,529,701,000	0	0	(428,135,000)	6,462,567,000
6/30/2009	(29,162,000)	2,373,683,000	1,782,855,000	0	0	672,134,000	4,799,510,000
6/30/2010	(210,220,000)	2,929,300,000	1,572,250,000	0	0	561,570,000	4,852,900,000
6/30/2011	(545,612,000)	1,718,405,000	1,913,647,000	0	0	589,446,000	3,675,886,000
6/30/2012	(1,211,160,000)	1,806,150,000	2,710,710,000	0	4,624,970,000	618,880,000	8,549,550,000
6/30/2013	(412,776,000)	1,557,219,000	2,125,732,000	0	0	382,074,000	3,652,249,000
6/30/2014	(474,190,195)	(1,791,604,611)	1,648,042,240	0	6,403,256,969	72,310,315	5,857,814,718
6/30/2015	(468,541,235)	(1,354,881,665)	1,992,652,465	0	586,418,960	341,371,995	1,097,020,520
Total	(2,361,253,430)	7,904,969,724	24,775,931,705	1,105,792,000	11,927,014,929	7,995,419,310	51,347,874,238
SERS							
6/30/1996	(63,804,332)	(251,369,719)	196,620,212	0	0	47,104,123	(71,449,716)
6/30/1997	(65,121,542)	(541,583,072)	121,668,957	0	(379,894,379)	152,898,511	(712,031,525)
6/30/1998	(62,013,427)	(568,807,725)	9,431,057	1,249,883,128	0	148,729,225	777,222,258
6/30/1999	(12,536,220)	(307,064,512)	21,020,544	0	0	32,949,396	(265,630,792)
6/30/2000	14,642,937	(252,699,421)	(21,811,201)	0	0	250,182,926	(9,684,759)
6/30/2001	(8,000,000)	1,368,815,911	(29,398,605)	652,110,224	0	309,964,003	2,293,491,533
6/30/2002	52,000,000	1,247,268,792	186,860,538	171,100,000	168,144,000	496,199,643	2,321,572,973
6/30/2003	(28,282,435)	629,483,966	404,526,925	2,371,173,094	0	97,815,307	3,474,716,857
6/30/2004	(22,316,647)	(679,743,495)	(944,135,304)	0	0	6,804,783	(1,639,390,663)
6/30/2005	(166,479,933)	(123,132,472)	503,532,346	0	0	144,142,000	358,061,941
6/30/2006	33,070,000	(250,686,000)	772,374,000	0	710,976,000	(101,544,000)	1,164,190,000
6/30/2007	98,239,312	(878,435,107)	816,648,269	0	0	190,866,392	227,318,866
6/30/2008	207,247,739	1,690,697,791	615,695,516	0	0	130,264,860	2,643,905,906
6/30/2009	(70,364,604)	608,553,603	662,751,770	0	0	251,538,179	1,452,478,948
6/30/2010	(84,033,935)	894,331,428	470,035,082	0	2,606,334,218	162,864,774	4,049,531,567
6/30/2011	(116,457,671)	483,803,315	749,926,844	0	554,815,304	215,159,241	1,887,247,033
6/30/2012	(57,658,148)	530,809,433	715,357,450	0	0	190,241,965	1,378,750,700
6/30/2013	(145,924,336)	425,364,445	660,382,617	0	0	289,600,870	1,229,423,596
6/30/2014	356,142,591	(505,321,103)	578,293,232	0	2,915,263,296	23,508,555	3,367,886,571
6/30/2015	(289,320,641)	(464,963,323)	742,380,222	0	0	(197,654,338)	(209,558,080)
Total	(430,971,292)	3,055,322,735	7,232,160,471	4,444,266,446	6,575,638,439	2,841,636,415	23,718,053,214
SURS							
6/30/1996	(70,535,000)	(105,383,000)	456,044,000	0	0	86,823,000	366,949,000
6/30/1997	(44,026,000)	(312,322,000)	424,816,000	179,117,000	(3,342,395,000)	198,529,000	(2,896,281,000)
6/30/1998	5,238,000	(765,736,000)	158,840,000	0	0	48,075,000	(553,583,000)
6/30/1999	44,300,000	(273,300,000)	271,300,000	0	0	190,800,000	233,100,000
6/30/2000	171,500,000	(587,500,000)	306,700,000	0	0	(130,949,000)	(240,249,000)
6/30/2001	70,300,000	2,068,500,000	301,000,000	0	0	107,131,000	2,546,931,000
6/30/2002	90,800,000	1,568,700,000	430,800,000	63,000,000	485,300,000	38,744,000	2,677,344,000
6/30/2003	10,300,000	583,000,000	558,500,000	0	0	319,300,000	1,471,100,000
6/30/2004	(62,900,000)	(950,500,000)	(822,700,000)	0	0	17,893,000	(1,818,207,000)
6/30/2005	(19,400,000)	(218,000,000)	574,300,000	0	0	170,520,000	507,420,000
6/30/2006	28,600,000	(414,100,000)	734,900,000	0	0	164,900,000	514,300,000
6/30/2007	67,000,000	(1,342,000,000)	624,100,000	0	324,400,000	189,000,000	(137,500,000)
6/30/2008	30,600,000	2,004,400,000	590,900,000	0	0	329,100,000	2,955,000,000
6/30/2009	(1,300,000)	812,300,000	738,700,000	0	0	153,200,000	1,702,900,000
6/30/2010	(113,100,000)	940,500,000	667,500,000	0	2,413,900,000	210,800,000	4,119,600,000
6/30/2011	(172,300,000)	430,000,000	930,200,000	0	(24,900,000)	251,800,000	1,414,800,000
6/30/2012	(4,000,000)	476,700,000	797,800,000	0	0	381,200,000	1,651,700,000
6/30/2013	(53,600,000)	391,800,000	506,700,000	0	(157,000,000)	202,300,000	890,200,000
6/30/2014	(94,300,000)	(802,400,000)	429,500,000	0	1,788,500,000	153,000,000	1,474,300,000
6/30/2015	(45,300,000)	(558,100,000)	460,700,000	0	972,900,000	1,100,000	831,300,000
Total	(162,123,000)	2,946,559,000	9,140,600,000	242,117,000	2,460,705,000	3,083,266,000	17,711,124,000

NOTE: All of the calculations in this table are based upon actuarial value of assets, i.e., WITH Asset Smoothing.

APPENDIX K

STATE RETIREMENT SYSTEMS
CHANGES IN UNFUNDED LIABILITY
FY 1996 - FY 2015

	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N. C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	CHANGES IN ASSUMPTIONS ACTUARIAL	OTHER FACTORS MISC.	TOTAL CHANGE IN UNFUNDED LIABILITY FROM PREVIOUS YR
Total	(162,123,000)	2,953,859,000	9,140,600,000	242,117,000	2,460,705,000	3,083,266,000	17,718,424,000
JRS							
6/30/1996	9,999,484	(13,671,404)	24,518,236	0	0	14,931,343	35,777,659
6/30/1997	(7,658,092)	(28,145,182)	27,156,529	0	37,922,093	15,264,216	44,539,564
6/30/1998	(10,160,914)	(30,497,137)	34,123,085	0	0	7,218,733	683,767
6/30/1999	456,439	(16,539,663)	32,504,330	0	0	8,821,168	25,242,274
6/30/2000	2,215,672	(14,134,561)	33,196,266	2,848,501	0	8,268,502	32,394,380
6/30/2001	(7,464,258)	61,790,163	35,767,996	0	0	17,044,333	107,138,234
6/30/2002	(11,821,953)	54,489,350	42,170,792	0	28,381,924	8,609,434	121,829,547
6/30/2003	(26,392,926)	27,183,676	49,293,246	0	0	18,906,930	68,990,926
6/30/2004	6,291,883	(36,709,772)	(92,295,242)	0	0	(1,952,146)	(124,665,277)
6/30/2005	(15,087,614)	(8,899,756)	46,427,305	0	0	27,509,646	49,949,581
6/30/2006	(18,612,759)	(17,213,516)	55,344,402	0	(11,189,825)	12,319,701	20,648,003
6/30/2007	(3,952,822)	(51,310,984)	50,305,409	0	0	28,046,308	23,087,911
6/30/2008	(8,834,671)	90,806,378	42,511,153	0	0	4,924,005	129,406,865
6/30/2009	(6,661,210)	33,322,668	40,870,123	0	0	19,481,669	87,013,250
6/30/2010	(14,285,209)	48,213,678	30,639,057	0	188,889,493	14,404,557	267,861,576
6/30/2011	(17,743,557)	31,451,544	66,647,892	0	15,622,518	42,442,760	138,421,157
6/30/2012	(19,671,785)	27,522,701	75,313,560	0	0	(611,876)	82,552,600
6/30/2013	(18,934,843)	21,180,279	54,355,269	0	62,945,069	6,567,836	126,113,610
6/30/2014	0	(28,938,605)	22,548,920	0	0	(16,192,945)	(22,582,630)
6/30/2015	0	(26,929,814)	11,756,584	0	0	1,104,924	(14,068,306)
Total	(168,319,135)	122,970,043	683,154,912	2,848,501	322,571,272	237,109,098	1,200,334,691
GARS							
6/30/1996	1,926,843	(2,564,790)	5,271,809	0	0	1,441,644	6,075,506
6/30/1997	1,298,457	(5,057,646)	5,529,869	0	(136,881)	753,138	2,386,937
6/30/1998	(233,098)	(5,394,158)	5,710,203	0	0	460,957	543,904
6/30/1999	846,137	(2,808,175)	5,298,511	0	0	3,030,916	6,367,389
6/30/2000	(431,214)	(2,371,993)	5,576,440	0	0	2,079,991	4,853,224
6/30/2001	(555,323)	10,135,725	5,803,227	0	0	1,273,197	16,656,826
6/30/2002	(1,520,756)	8,713,370	6,741,725	0	1,211,951	(162,610)	14,983,680
6/30/2003	(1,793,094)	4,391,493	7,217,512	0	0	6,485,877	16,301,788
6/30/2004	(2,633,642)	(5,927,446)	(19,174,182)	0	0	5,286,195	(22,449,075)
6/30/2005	(645,631)	(1,288,918)	7,445,358	0	0	(262,887)	5,247,922
6/30/2006	(3,113,674)	(1,566,794)	8,528,558	0	4,786,991	1,190,775	9,825,856
6/30/2007	3,962,835	(6,733,144)	7,670,304	0	0	373,350	5,273,345
6/30/2008	(2,217,940)	11,400,154	7,073,235	0	0	(613,134)	15,642,315
6/30/2009	1,737,809	3,991,729	6,172,942	0	0	1,380,596	13,283,076
6/30/2010	(307,349)	5,709,168	5,666,343	0	0	831,994	11,900,156
6/30/2011	4,796,187	3,577,042	5,621,165	0	35,809,167	(108,827)	49,694,734
6/30/2012	(1,912,815)	3,662,246	8,818,897	0	0	1,563,530	12,131,858
6/30/2013	302,952	3,109,095	5,894,756	0	8,423,005	3,502,950	21,232,758
6/30/2014	0	(2,243,841)	7,000,449	0	0	(1,587,227)	3,169,381
6/30/2015	(976,354)	(2,012,721)	5,315,003	0	0	1,571,772	3,897,700
Total	(1,469,670)	16,720,396	103,182,124	0	50,094,233	28,492,197	197,019,280
FIVE SYSTEMS COMBINED							
6/30/1996	277,985,995	(950,269,913)	1,648,415,257	17,772,000	0	316,831,110	1,310,734,449
6/30/1997	(174,569,177)	(1,718,043,900)	1,571,561,355	179,117,000	(6,629,275,167)	456,217,865	(6,314,992,024)
6/30/1998	(113,186,439)	(2,788,182,020)	984,293,345	2,250,183,128	0	275,635,915	608,743,929
6/30/1999	77,096,356	(988,726,350)	1,007,531,385	33,870,000	125,223,000	769,534,480	1,024,528,871
6/30/2000	154,524,395	(1,307,066,975)	1,047,267,505	2,848,501	0	326,927,419	224,500,845
6/30/2001	43,970,419	6,599,006,799	1,047,049,618	652,110,224	0	1,068,141,533	9,410,278,593
6/30/2002	134,391,291	5,575,370,512	1,740,995,055	234,100,000	1,377,773,875	903,437,467	9,966,068,200
6/30/2003	125,633,545	2,071,493,135	2,435,147,683	2,425,023,094	0	1,101,032,114	8,158,329,571
6/30/2004	135,696,594	(3,841,756,713)	(4,689,820,728)	0	0	385,281,832	(8,010,599,015)
6/30/2005	35,073,822	(1,033,615,146)	2,431,545,009	0	26,425,000	2,048,339,759	3,507,768,444
6/30/2006	108,341,567	(1,843,091,310)	3,484,514,960	0	704,573,166	(323,161,524)	2,131,176,859
6/30/2007	314,931,325	(6,064,132,235)	3,237,910,982	0	2,735,156,000	1,221,367,050	1,445,233,122
6/30/2008	72,808,128	9,312,292,323	2,785,880,904	0	0	35,540,731	12,206,522,086
6/30/2009	(105,750,005)	3,831,851,000	3,231,349,835	0	0	1,097,734,444	8,055,185,274
6/30/2010	(421,946,493)	4,818,054,274	2,746,090,482	0	5,209,123,711	950,471,325	13,301,793,299
6/30/2011	(847,317,041)	2,667,236,901	3,666,042,901	0	581,346,989	1,098,739,174	7,166,048,924
6/30/2012	(1,290,402,748)	2,368,144,380	3,510,199,907	0	4,624,970,000	810,073,619	10,022,985,158
6/30/2013	(581,332,227)	2,483,572,819	3,644,164,642	0	71,368,074	1,062,945,656	6,680,718,964
6/30/2014	(171,647,604)	(1,936,308,160)	2,762,584,841	0	9,161,520,265	280,338,698	10,096,488,040
6/30/2015	(853,138,230)	(2,651,187,523)	3,181,604,274	0	2,374,918,960	299,394,353	2,351,591,834
Total	(3,078,836,527)	14,604,641,898	41,474,329,212	5,795,023,947	20,363,123,873	14,184,823,020	93,343,105,423

NOTE: All of the calculations in this table are based upon actuarial value of assets, i.e., WITH Asset Smoothing.

APPENDIX L

PENSION OBLIGATION BONDS
Debt Service Schedule & Allocation By Retirement System
($ in Millions)

FY	Principle	Interest	Total Debt Service	Allocation By System				
				TRS	SERS	JRS	GARS	SURS
2004	$0.0	$481.1	$481.1	$284.7	$91.1	$9.3	$1.8	$94.2
2005	$0.0	$496.2	$496.2	$293.6	$94.0	$9.6	$1.8	$97.1
2006	$0.0	$496.2	$496.2	$293.6	$94.0	$9.6	$1.8	$97.1
2007	$0.0	$496.2	$496.2	$293.6	$94.0	$9.6	$1.8	$97.1
2008	$50.0	$496.2	$546.2	$323.2	$103.5	$10.6	$2.0	$106.9
2009	$50.0	$495.0	$545.0	$322.5	$103.2	$10.6	$2.0	$106.7
2010	$50.0	$493.6	$543.6	$321.7	$103.0	$10.5	$2.0	$106.4
2011	$50.0	$491.9	$541.9	$320.7	$102.6	$10.5	$2.0	$106.1
2012	$100.0	$490.1	$590.1	$349.2	$111.8	$11.5	$2.2	$115.5
2013	$100.0	$486.4	$586.4	$347.0	$111.1	$11.4	$2.2	$114.8
2014	$100.0	$482.5	$582.5	$344.7	$110.3	$11.3	$2.1	$114.0
2015	$100.0	$478.6	$578.6	$342.4	$109.6	$11.2	$2.1	$113.2
2016	$100.0	$474.5	$574.5	$340.0	$108.8	$11.1	$2.1	$112.4
2017	$125.0	$470.2	$595.2	$352.2	$112.7	$11.6	$2.2	$116.5
2018	$150.0	$464.7	$614.7	$363.8	$116.4	$11.9	$2.3	$120.3
2019	$175.0	$458.2	$633.2	$374.7	$119.9	$12.3	$2.3	$123.9
2020	$225.0	$449.6	$674.6	$399.2	$127.8	$13.1	$2.5	$132.0
2021	$275.0	$438.4	$713.4	$422.2	$135.1	$13.8	$2.6	$139.6
2022	$325.0	$424.8	$749.8	$443.7	$142.0	$14.6	$2.8	$146.7
2023	$375.0	$408.7	$783.7	$463.8	$148.4	$15.2	$2.9	$153.4
2024	$450.0	$390.2	$840.2	$497.2	$159.2	$16.3	$3.1	$164.4
2025	$525.0	$367.2	$892.2	$528.0	$169.0	$17.3	$3.3	$174.6
2026	$575.0	$340.4	$915.4	$541.7	$173.4	$17.8	$3.4	$179.2
2027	$625.0	$311.1	$936.1	$554.0	$177.3	$18.2	$3.5	$183.2
2028	$700.0	$279.2	$979.2	$579.5	$185.5	$19.0	$3.6	$191.6
2029	$775.0	$243.5	$1,018.5	$602.7	$192.9	$19.8	$3.8	$199.3
2030	$875.0	$204.0	$1,079.0	$638.5	$204.4	$20.9	$4.0	$211.2
2031	$975.0	$159.4	$1,134.4	$671.3	$214.9	$22.0	$4.2	$222.0
2032	$1,050.0	$109.7	$1,159.7	$686.3	$219.7	$22.5	$4.3	$227.0
2033	$1,100.0	$56.1	$1,156.1	$684.1	$219.0	$22.4	$4.3	$226.3
TOTALS	$10,000.0	$11,933.9	$21,933.9	$12,979.9	$4,154.8	$425.7	$80.9	$4,292.7

APPENDIX M

FINANCIAL CONDITION OF THE STATE RETIREMENT SYSTEMS ($ in Millions)						
Fiscal Year	TRS	SERS	SURS	JRS	GARS	Total
Assets @ Market Value						
1996	13,829.7	5,178.7	5,082.9	232.4	42.6	24,366.3
1997	17,393.1	6,048.0	8,376.3	314.6	56.7	32,188.7
1998	19,965.9	7,064.5	9,793.8	356.7	62.7	37,243.6
1999	22,237.7	7,986.4	10,762.2	389.8	66.9	41,443.0
2000	24,481.4	8,910.9	12,063.9	422.9	70.5	45,949.6
2001	23,315.6	8,276.7	10,753.3	381.7	62.0	42,789.3
2002	22,366.3	7,673.9	9,814.7	343.7	54.0	40,252.6
2003	23,124.8	7,502.1	9,714.5	330.1	50.0	40,721.5
2004	31,544.7	9,990.2	12,586.3	534.6	83.2	54,739.0
2005	34,085.2	10,494.1	13,350.3	564.9	83.3	58,577.8
2006	36,584.9	10,899.8	14,175.1	599.2	82.2	62,341.2
2007	41,909.3	12,078.9	15,985.7	670.1	87.2	70,731.2
2008	38,430.7	10,995.4	14,586.3	612.7	75.4	64,700.5
2009	28,531.3	8,565.8	11,033.0	483.5	55.6	48,669.2
2010	31,323.8	9,201.8	12,121.5	523.3	54.7	53,225.1
2011	37,471.3	10,970.8	14,274.0	606.0	60.4	63,382.5
2012	36,516.8	10,960.7	13,705.1	578.0	52.7	61,813.3
2013	39,858.8	12,400.3	15,037.1	643.3	54.3	67,993.8
2014	45,824.4	14,581.6	17,391.3	776.0	56.8	78,630.1
2015	46,406.9	15,258.9	17,463.0	833.9	54.6	80,017.3
Liabilities						
1996	26,141.8	7,390.9	10,155.0	577.8	127.4	44,392.9
1997	26,951.6	7,548.2	10,552.2	704.5	143.9	45,900.4
1998	29,908.2	9,341.9	11,416.1	747.3	150.4	51,563.9
1999	33,205.5	9,998.2	12,617.5	805.6	160.9	56,787.7
2000	35,886.4	10,912.9	13,679.0	871.2	169.4	61,518.9
2001	39,166.7	12,572.2	14,915.3	937.1	177.5	67,768.8
2002	43,047.7	14,291.0	16,654.0	1,020.8	184.6	75,198.1
2003	46,933.4	17,593.9	18,025.0	1,076.2	196.5	83,825.0
2004	50,947.5	18,442.6	19,078.6	1,156.1	207.6	89,832.4
2005	56,075.0	19,304.6	20,349.9	1,236.5	212.9	97,178.9
2006	58,996.9	20,874.5	21,688.9	1,291.4	221.7	103,073.4
2007	65,648.4	22,280.9	23,362.1	1,385.3	231.9	112,908.6
2008	68,632.4	23,841.3	24,917.7	1,457.3	235.8	119,084.5
2009	73,027.2	25,298.3	26,316.2	1,548.5	245.2	126,435.4
2010	77,293.2	29,309.5	30,120.4	1,819.4	251.8	138,794.3
2011	81,299.7	31,395.0	31,514.3	1,952.5	298.4	146,459.9
2012	90,024.9	33,091.2	33,170.2	2,021.7	303.5	158,611.5
2013	93,887.0	34,720.8	34,373.1	2,156.8	320.5	165,458.2
2014	103,740.4	39,526.8	37,429.5	2,229.3	323.4	183,249.4
2015	108,121.8	40,743.4	39,520.7	2,314.1	328.2	191,028.2

APPENDIX M

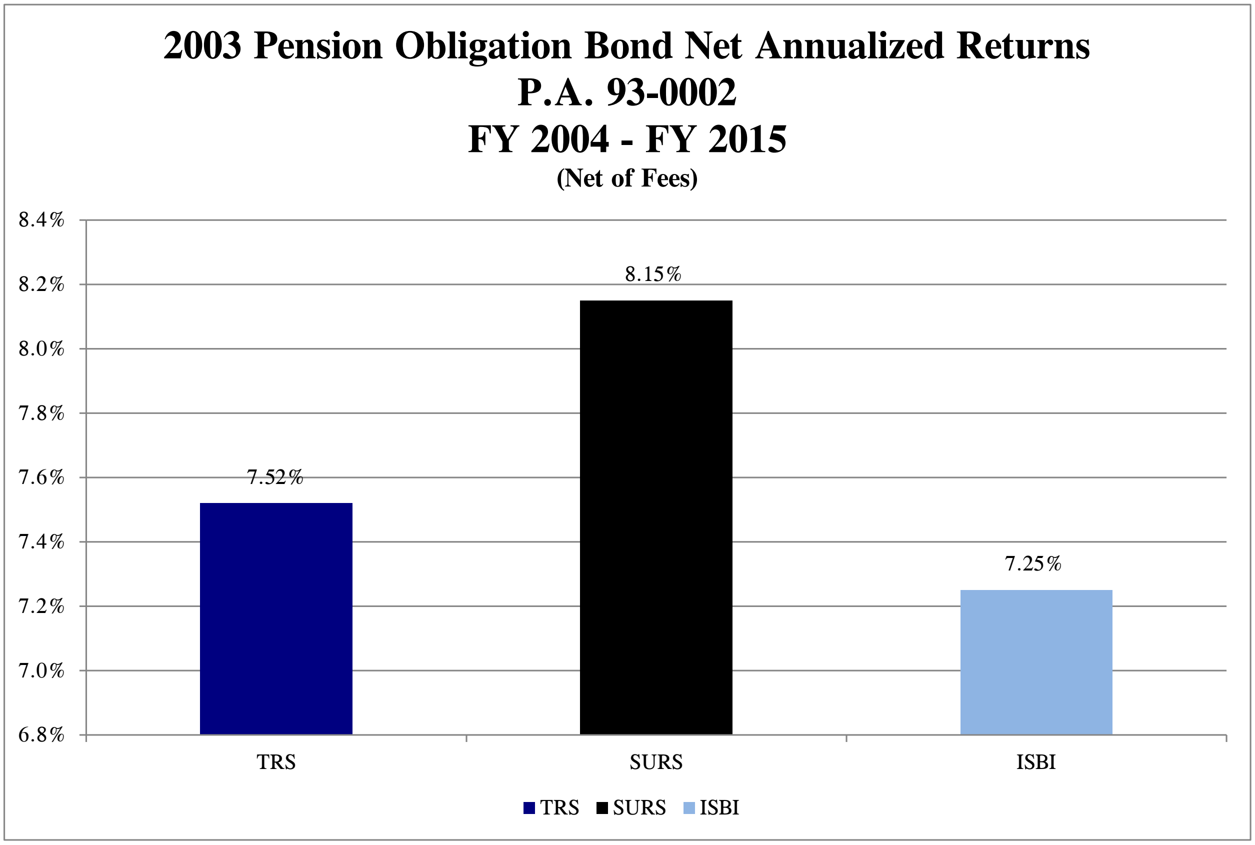
FINANCIAL CONDITION OF THE STATE RETIREMENT SYSTEMS
($ in Millions)

Fiscal Year	TRS	SERS	SURS	JRS	GARS	Total
Unfunded @ Market Value						
1996	12,312.1	2,212.2	5,072.1	345.4	84.8	20,026.6
1997	9,558.5	1,500.2	2,175.9	389.9	87.2	13,711.7
1998	9,942.3	2,277.4	1,622.3	390.6	87.7	14,320.3
1999	10,967.8	2,011.8	1,855.3	415.8	94.0	15,344.7
2000	11,405.0	2,002.0	1,615.1	448.3	98.9	15,569.3
2001	15,851.1	4,295.5	4,162.0	555.4	115.5	24,979.5
2002	20,681.4	6,617.1	6,839.3	677.1	130.6	34,945.5
2003	23,808.6	10,091.8	8,310.5	746.1	146.5	43,103.5
2004	19,402.8	8,452.4	6,492.3	621.5	124.4	35,093.4
2005	21,989.8	8,810.5	6,999.6	671.6	129.6	38,601.1
2006	22,412.0	9,974.7	7,513.8	692.2	139.5	40,732.2
2007	23,739.1	10,202.0	7,376.4	715.2	144.7	42,177.4
2008	30,201.7	12,845.9	10,331.4	844.6	160.4	54,384.0
2009	44,495.9	16,732.5	15,283.2	1,065.0	189.6	77,766.2
2010	45,969.4	20,107.7	17,998.9	1,296.1	197.1	85,569.2
2011	43,828.4	20,424.2	17,240.3	1,346.5	238.0	83,077.4
2012	53,508.1	22,130.5	19,465.1	1,443.7	250.8	96,798.2
2013	54,028.2	22,320.5	19,336.0	1,513.5	266.2	97,464.4
2014	57,916.0	24,945.2	20,038.2	1,453.3	266.6	104,619.3
2015	61,714.9	25,484.5	22,057.7	1,480.2	273.6	111,010.9
Funded Ratios @ Market Value						
1996	52.9%	70.1%	50.1%	40.2%	33.4%	54.9%
1997	64.5%	80.1%	79.4%	44.7%	39.4%	70.1%
1998	66.8%	75.6%	85.8%	47.7%	41.7%	72.2%
1999	67.0%	79.9%	85.3%	48.4%	41.6%	73.0%
2000	68.2%	81.7%	88.2%	48.5%	41.6%	74.7%
2001	59.5%	65.8%	72.1%	40.7%	34.9%	63.1%
2002	52.0%	53.7%	58.9%	33.7%	29.3%	53.5%
2003	49.3%	42.6%	53.9%	30.7%	25.4%	48.6%
2004	61.9%	54.2%	66.0%	46.2%	40.1%	60.9%
2005	60.8%	54.4%	65.6%	45.7%	39.1%	60.3%
2006	62.0%	52.2%	65.4%	46.4%	37.1%	60.5%
2007	63.8%	54.2%	68.4%	48.4%	37.6%	62.6%
2008	56.0%	46.1%	58.5%	42.0%	32.0%	54.3%
2009	39.1%	33.9%	41.9%	31.2%	22.7%	38.5%
2010	40.5%	31.4%	40.2%	28.8%	21.7%	38.3%
2011	46.1%	34.9%	45.3%	31.0%	20.2%	43.3%
2012	40.6%	33.1%	41.3%	28.6%	17.4%	39.0%
2013	42.5%	35.7%	43.7%	29.8%	16.9%	41.1%
2014	44.2%	36.9%	46.5%	34.8%	17.6%	42.9%
2015	42.9%	37.5%	44.2%	36.0%	16.6%	41.9%

APPENDIX N

COMBINED DEBT SERVICE OF 2003, 2010 and 2011 PENSION OBLIGATION BONDS AND NOTES												
	FY2003 $10 BILLION PENSION OB BONDS			FY 2010 $3.466 BILLION PENSION OB NOTES			FY 2011 $3.7 BILLION PENSION OB NOTES			COMBINED TOTALS		
Fiscal Year	2003 Principal	2003 Interest	2003 POB Total	2010 Principal	2010 Interest	2010 PON Total	2011 Principal	2011 Interest	2011 POB Total	Total Principal	Total Interest	Grand Total
FY 2004	$0	$481,038,333	**$481,038,333**							**$0**	**$481,038,333**	**$481,038,333**
FY 2005	0	496,200,000	**$496,200,000**							**$0**	**$496,200,000**	**$496,200,000**
FY 2006	0	496,200,000	**$496,200,000**							**$0**	**$496,200,000**	**$496,200,000**
FY 2007	0	496,200,000	**$496,200,000**							**$0**	**$496,200,000**	**$496,200,000**
FY 2008	50,000,000	496,200,000	**$546,200,000**							**$50,000,000**	**$496,200,000**	**$546,200,000**
FY 2009	50,000,000	494,950,000	**$544,950,000**							**$50,000,000**	**$494,950,000**	**$544,950,000**
FY 2010	50,000,000	493,550,000	**$543,550,000**							**$50,000,000**	**$493,550,000**	**$543,550,000**
FY 2011	50,000,000	491,900,000	**$541,900,000**	$693,200,000	$109,277,049	**$802,477,049**				**$743,200,000**	**$601,177,049**	**$1,344,377,049**
FY 2012	100,000,000	490,125,000	**$590,125,000**	$693,200,000	$101,061,628	**$794,261,628**		$194,500,800	**$194,500,800**	**$793,200,000**	**$785,687,428**	**$1,578,887,428**
FY 2013	100,000,000	486,375,000	**$586,375,000**	$693,200,000	$81,887,716	**$775,087,716**		$199,488,000	**$199,488,000**	**$793,200,000**	**$767,750,716**	**$1,560,950,716**
FY 2014	100,000,000	482,525,000	**$582,525,000**	$693,200,000	$58,866,544	**$752,066,544**	$100,000,000	$199,488,000	**$299,488,000**	**$893,200,000**	**$740,879,544**	**$1,634,079,544**
FY 2015	100,000,000	478,575,000	**$578,575,000**	$693,200,000	$30,646,372	**$723,846,372**	$300,000,000	$195,462,000	**$495,462,000**	**$1,093,200,000**	**$704,683,372**	**$1,797,883,372**
FY 2016	100,000,000	474,525,000	**$574,525,000**				$600,000,000	$181,929,000	**$781,929,000**	**$700,000,000**	**$656,454,000**	**$1,356,454,000**
FY 2017	125,000,000	470,175,000	**$595,175,000**				$900,000,000	$152,163,000	**$1,052,163,000**	**$1,025,000,000**	**$622,338,000**	**$1,647,338,000**
FY 2018	150,000,000	464,737,500	**$614,737,500**				$900,000,000	$103,878,000	**$1,003,878,000**	**$1,050,000,000**	**$568,615,500**	**$1,618,615,500**
FY 2019	175,000,000	458,212,500	**$633,212,500**				$900,000,000	$52,893,000	**$952,893,000**	**$1,075,000,000**	**$511,105,500**	**$1,586,105,500**
FY 2020	225,000,000	449,550,000	**$674,550,000**							**$225,000,000**	**$449,550,000**	**$674,550,000**
FY 2021	275,000,000	438,412,500	**$713,412,500**							**$275,000,000**	**$438,412,500**	**$713,412,500**
FY 2022	325,000,000	424,800,000	**$749,800,000**							**$325,000,000**	**$424,800,000**	**$749,800,000**
FY 2023	375,000,000	408,712,500	**$783,712,500**							**$375,000,000**	**$408,712,500**	**$783,712,500**
FY 2024	450,000,000	390,150,000	**$840,150,000**							**$450,000,000**	**$390,150,000**	**$840,150,000**
FY 2025	525,000,000	367,200,000	**$892,200,000**							**$525,000,000**	**$367,200,000**	**$892,200,000**
FY 2026	575,000,000	340,425,000	**$915,425,000**							**$575,000,000**	**$340,425,000**	**$915,425,000**
FY 2027	625,000,000	311,100,000	**$936,100,000**							**$625,000,000**	**$311,100,000**	**$936,100,000**
FY 2028	700,000,000	279,225,000	**$979,225,000**							**$700,000,000**	**$279,225,000**	**$979,225,000**
FY 2029	775,000,000	243,525,000	**$1,018,525,000**							**$775,000,000**	**$243,525,000**	**$1,018,525,000**
FY 2030	875,000,000	204,000,000	**$1,079,000,000**							**$875,000,000**	**$204,000,000**	**$1,079,000,000**
FY 2031	975,000,000	159,375,000	**$1,134,375,000**							**$975,000,000**	**$159,375,000**	**$1,134,375,000**
FY 2032	1,050,000,000	109,650,000	**$1,159,650,000**							**$1,050,000,000**	**$109,650,000**	**$1,159,650,000**
FY 2033	1,100,000,000	56,100,000	**$1,156,100,000**							**$1,100,000,000**	**$56,100,000**	**$1,156,100,000**
TOTAL	**$10,000,000,000**	**$11,933,713,333**	**$21,933,713,333**	**$3,466,000,000**	**$381,739,309**	**$3,847,739,309**	**$3,700,000,000**	**$1,279,801,800**	**$4,979,801,800**	**$17,166,000,000**	**$13,595,254,442**	**$30,761,254,442**

APPENDIX O

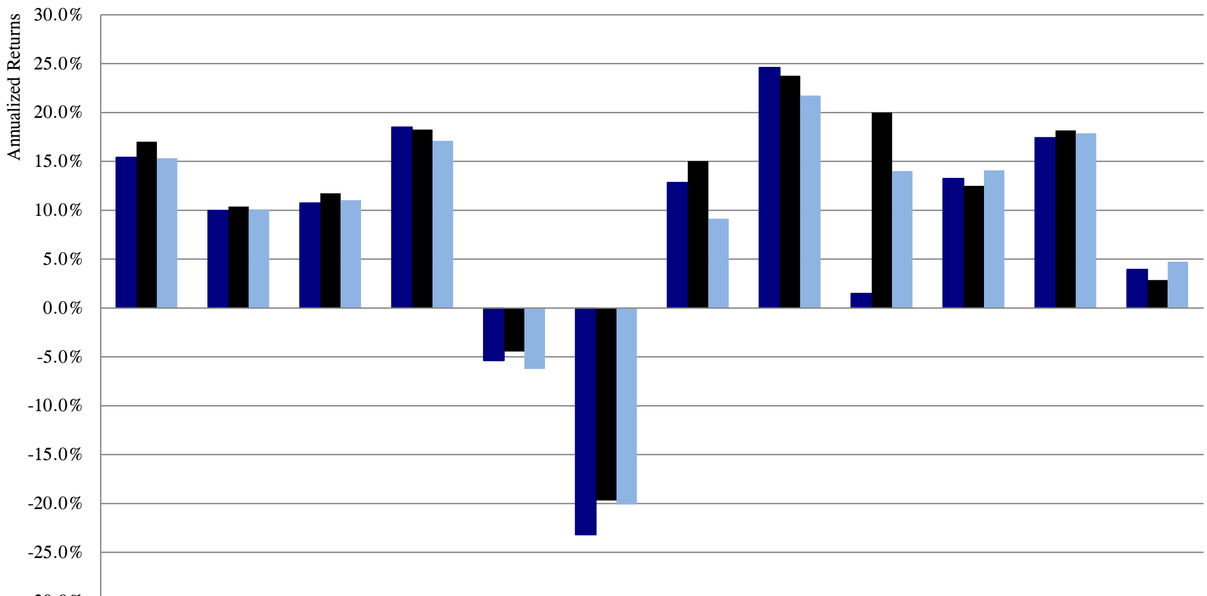


As shown in the charts above, the annualized return from FY 2004 through FY 2015, net of fees for the 2003 Pension Obligation Bonds distributed, according to P.A. 93-0002, has exceeded the true interest cost of 5.047%.

Illinois State Board of Investment (ISBI) is the investment arm of the State Retirement Systems, which encompasses the State Employees' Retirement System, Judges' Retirement System, and the General Assembly Retirement System.

APPENDIX O

2003 Pension Obligation Bond Returns
P.A. 93-0002
(Net of Fees)



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
TRS	15.42%	9.96%	10.74%	18.50%	-5.38%	-23.19%	12.83%	24.60%	1.48%	13.24%	17.42%	3.95%
SURS	17.01%	10.38%	11.73%	18.25%	-4.45%	-19.70%	15.02%	23.77%	20.00%	12.49%	18.16%	2.85%
ISBI	15.31%	10.08%	11.04%	17.10%	-6.23%	-20.09%	9.13%	21.74%	14.00%	14.08%	17.87%	4.74%

This chart shows annualized returns of 2003 Pension Obligation Bond for each fiscal year since FY 2004.

Illinois State Board of Investment (ISBI) is the investment arm of the State Retirement Systems, which encompasses the State Employees' Retirement System, Judges' Retirement System, and the General Assembly Retirement System.

APPENDIX P

SUMMARY OF TRS APPROPRIATIONS BY FUND: FY 1996 - 2016								
Fiscal Year		State Pension Fund	Common School Fund	Education Assistance Fund	Pension Notes 2010	General Revenue Fund	Min & Supp Reserves through FY 2000, then Min Only	Total
1996	*	$30,958,800	$293,317,200	-	-	-	$6,542,000	$330,818,000
1997		$31,403,500	$346,565,500	-	-	-	$8,179,000	$386,148,000
1998		$37,868,300	$422,570,700	-	-	-	$7,443,000	$467,882,000
1999	**	$54,310,700	$480,740,900	-	-	$32,016,000	$6,440,000	$573,507,600
2000		$55,600,000	$520,595,100	-	-	$57,843,900	$6,035,000	$640,074,000
2001		$57,180,000	$617,977,000	-	-	$44,200,000	$5,500,000	$724,857,000
2002		$58,600,000	$477,019,000	$275,000,000	-	-	$4,800,000	$815,419,000
2003		$63,455,000	$550,000,000	$300,000,000	-	$12,595,000	$4,000,000	$930,050,000
2004		$47,360,000	$575,000,000	$345,000,000	-	$60,889,000	$3,400,000	$1,031,649,000
2005		-	$422,763,000	$300,000,000	-	$181,165,000	$3,100,000	$907,028,000
2006		-	$531,827,700	-	-	-	$2,800,000	$534,627,700
2007		-	$735,514,500	-	-	-	$2,500,000	$738,014,500
2008		-	$1,039,195,000	-	-	-	$2,100,000	$1,041,295,000
2009		-	$1,449,889,000	-	-	-	$1,900,000	$1,451,789,000
2010		-	$834,862,000	-	$1,245,867,000	-	-	$2,080,729,000
2011		-	$110,000,000	$2,060,918,000	-	-	-	$2,170,918,000
2012		-	$2,405,172,000	$1,300,000	-	-	-	$2,406,472,000
2013		-	$2,702,278,000	$1,200,000	-	-	-	$2,703,478,000
2014		-	$3,437,478,000	$1,100,000	-	-	-	$3,438,578,000
2015		-	$3,412,878,000	$1,000,000	-	-	-	$3,413,878,000
2016		-	$3,741,802,194	$800,000	-	-	-	$3,742,602,194

* 1996 minimum benefit amount includes additional $2,200,000 due to minimum benefit increase enacted after certification submitted (increase effective January 1, 1996).

** 1999 includes $32,016,000 for state share of 2.2 formula enacted after original certification submitted and additional $9,695,600 in State Pensions Fund appropriations.

APPENDIX Q

SUMMARY OF SURS APPROPRIATIONS BY FUND: FY 1996 - 2016						
Fiscal Year	**State Pension Fund**	**Bond Issue Proceeds**	**Education Assistance Fund**	**General Revenue Fund**	**Common School Fund**	**Total**
1996	$13,134,800	-	-	$110,776,200	-	$123,911,000
1997	$13,031,400	-	-	$146,515,600	-	$159,547,000
1998	$15,600,400	-	-	$186,023,600	-	$201,624,000
1999	$10,156,100	-	-	$205,268,900	-	$215,425,000
2000	$9,040,000	-	-	$215,547,000	-	$224,587,000
2001	$9,670,000	-	-	$222,934,000	-	$232,604,000
2002	$8,300,000	-	-	$232,124,000	-	$240,424,000
2003	$16,600,000	-	-	$252,986,000	-	$269,586,000
2004	$15,660,000	$1,431,994,224	-	$296,080,000	-	$1,743,734,224
2005	$222,630,000	-	-	$47,352,000	-	$269,982,000
2006	$80,000,000	-	-	$86,641,900	-	$166,641,900
2007	$134,235,922	-	$65,065,395	$52,762,783	-	$252,064,100
2008	$186,998,705	-	$153,321,295	-	-	$340,320,000
2009	$223,890,000	-	$150,072,000	$76,254,000	-	$450,216,000
2010	$139,000,000	$552,668,057	-	$8,542,833	-	$700,210,890
2011	$63,000,000	$713,478,354	-	-	-	$776,478,354
2012	$230,000,000	-	$750,485,000	-	-	$980,485,000
2013	$150,000,000	-	$1,252,800,000	-	-	$1,402,800,000
2014	$198,000,000	-	$1,311,766,000	-	-	$1,509,766,000
2015	$197,000,000	-		$1,347,200,000	-	$1,544,200,000
2016 *	$190,000,000	-		$1,411,480,000	-	$1,601,480,000

* The amount appropriated from the State Pension Fund might change because SURS cannot confirm the exact amount until the end of FY 2016. Assuming that $ 190,000,000 will be paid, $ 1,411,480 would be paid from the General Revenue Fund.

APPENDIX R

SUMMARY OF SERS APPROPRIATIONS BY FUND: FY 1996 - 2016							
Fiscal Year		State Pension Fund	Common School Fund	Education Assistance Fund	General Revenue Fund	Other State Funds	Total
1996	*	$8,823,800	-	-	$87,871,550	$47,315,450	$144,010,800
1997	*	$8,489,800	-	-	$97,874,400	$52,701,600	$159,065,800
1998	*	$9,208,400	-	-	$103,279,322	$55,611,943	$168,099,665
1999	*	$8,523,961	-	-	$193,289,330	$104,078,870	$305,892,161
2000	*	$12,720,000	-	-	$203,444,540	$109,547,060	$325,711,600
2001	*	$10,490,000	-	-	$215,437,325	$116,004,714	$341,932,039
2002	*	$10,290,000	-	-	$230,360,000	$124,040,000	$364,690,000
2003	*	$17,195,000	-	-	$252,383,300	$135,898,700	$405,477,000
2004	*	$15,150,000	-	-	$325,436,800	$175,235,200	$515,822,000
2005	*	-	-	-	$324,057,500	$174,492,500	$498,550,000
2006	*	-	-	-	$132,459,535	$71,324,365	$203,783,900
2007	*	-	-	-	$223,706,860	$120,457,540	$344,164,400
2008	*	-	-	-	$358,558,200	$193,069,800	$551,628,000
2009	*	-	-	-	$492,196,250	$265,028,750	$757,225,000
2010	*	-	-	-	$773,162,687	$395,788,354	$1,168,951,041
2011	*	-	-	-	$772,448,140	$447,275,486	$1,219,723,626
2012	*	-	-	-	$957,537,240	$493,276,760	$1,450,814,000
2013	*	-	-	-	$1,095,300,000	$564,300,000	$1,659,600,000
2014	*	-	-	-	$1,097,400,000	$646,500,000	$1,743,900,000
2015	*	-	-	-	$1,136,479,500	$692,606,500	$1,829,086,000
2016	*	-	-	-	$1,381,209,700	$743,728,300	$2,124,938,000

*Estimated GRF and Other State Funds based on annual certified State contributions are 65% GRF and 35% Other State Funds.

APPENDIX S

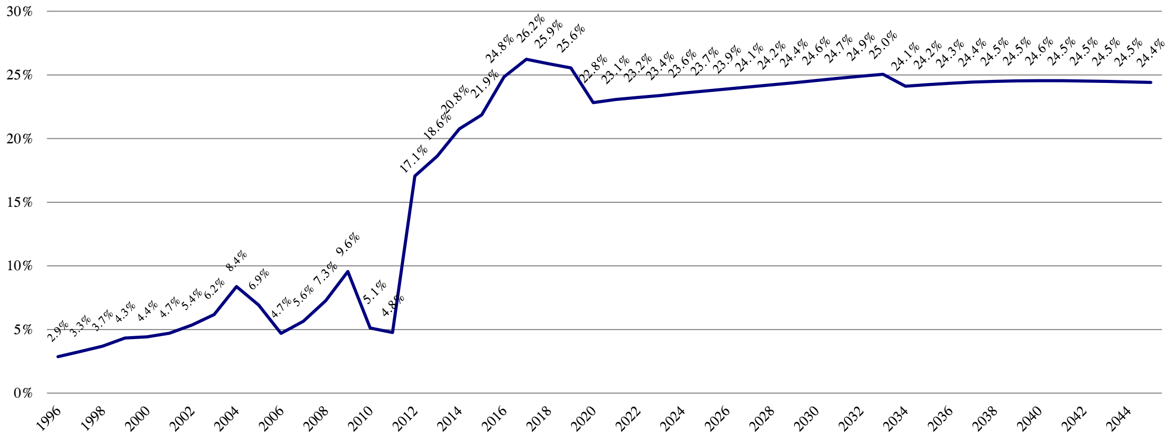
SUMMARY OF JRS APPROPRIATIONS BY FUND: FY 1996 - 2016						
Fiscal Year	State Pension Fund	Common School Fund	Education Assistance Fund	General Revenue Fund	Other State Funds	Total
1996	$861,000	-	-	$12,129,000	-	$12,990,000
1997	$857,400	-	-	$13,747,000	-	$14,604,400
1998	$1,062,200	-	-	$15,664,000	-	$16,726,200
1999	$2,215,716	-	-	$18,293,000	-	$20,508,716
2000	$2,160,000	-	-	$21,388,000	-	$23,548,000
2001	$2,170,000	-	-	$24,218,000	-	$26,388,000
2002	$2,300,000	-	-	$27,532,000	-	$29,832,000
2003	$2,225,000	-	-	$31,373,000	-	$33,598,000
2004	$609,769	-	-	$36,526,000	-	$37,135,769
2005	-	-	-	$31,991,000	-	$31,991,000
2006	-	-	-	$29,189,400	-	$29,189,400
2007	-	-	-	$35,236,800	-	$35,236,800
2008	-	-	-	$46,872,500	-	$46,872,500
2009	-	-	-	$59,983,000	-	$59,983,000
2010	-	-	-	$78,509,810	-	$78,509,810
2011	-	-	-	$62,699,460	-	$62,699,460
2012	-	-	-	$63,644,099	-	$63,644,099
2013	-	-	-	$88,210,000	-	$88,210,000
2014	-	-	-	$126,808,000	-	$126,808,000
2015	-	-	-	$133,982,000	-	$133,982,000
2016	-	-	-	$132,060,000	-	$132,060,000

APPENDIX T

SUMMARY OF GARS APPROPRIATIONS BY FUND: FY 1996 - 2016						
Fiscal Year	State Pension Fund	Common School Fund	Education Assistance Fund	General Revenue Fund	Other State Funds	Total
1996	$221,600	-	-	$2,400,000	-	$2,621,600
1997	$217,900	-	-	$2,738,000	-	$2,955,900
1998	$260,700	-	-	$3,113,000	-	$3,373,700
1999	$494,718	-	-	$3,504,000	-	$3,998,718
2000	$480,000	-	-	$3,951,000	-	$4,431,000
2001	$490,000	-	-	$4,305,000	-	$4,795,000
2002	$510,000	-	-	$4,678,000	-	$5,188,000
2003	$465,000	-	-	$5,163,000	-	$5,628,000
2004	$300,000	-	-	$5,790,000	-	$6,090,000
2005		-	-	$4,674,000	-	$4,674,000
2006	-	-	-	$4,157,000	-	$4,157,000
2007	-	-	-	$5,220,300	-	$5,220,300
2008	-	-	-	$6,809,800	-	$6,809,800
2009	-	-	-	$8,847,000	-	$8,847,000
2010	-	-	-	$10,411,274	-	$10,411,274
2011	-	-	-	$11,443,614	-	$11,443,614
2012	-	-	-	$10,502,000	-	$10,502,000
2013	-	-	-	$14,150,000	-	$14,150,000
2014	-	-	-	$13,856,000	-	$13,856,000
2015	-	-	-	$15,809,000	-	$15,809,000
2016	-	-	-	$16,073,000	-	$16,073,000

APPENDIX U

GRF Pension Cost as a Percentage of Total General Funds
Current Law;
FY 1996 - FY 2045 (Projected)



Notes: **All future projections of State pension contributions come from the *Retirement System Actuaries.***
Only the *GRF portion of the regular pension appropriation plus pension bond debt service* is shown here.
GRF FY 2016-2045 projections provided by CoGFA's revenue staff.
Approximately 65% of SERS' total annual appropriation is assumed to come from GRF in projected FY's while the rest comes from other State Funds not shown here.
FY 2010 and FY 2011 amount do not reflect the pension bond/note proceeds pursuant to P.A. 96-0043 and P.A. 96-1497.

APPENDIX V

TEACHERS' RETIREMENT SYSTEM
Summary of Recognized Investment Income, P.A. 96-0043
($ in Millions)

Beginning of Year		
Market Value of Assets	$	45,824.4
Actuarial value of Assets	$	42,150.8
End of Year		
Market Value of Assets	$	46,406.9
Net of Contributions and Disbursements	$	(1,188.0)
Projected Investment Income	$	3,392.3

Excess Investment Income Recognized (5-year recognition)

FY	Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent	Recognized Amount
2015	(1,621.73)	20%	80%	(324.35)
2014	3,625.99	20%	60%	725.20
2013	1,689.22	20%	40%	337.84
2012	(2,910.86)	20%	20%	(582.17)
2011	4,618.22	20%	0%	923.64
Total Recognized Investment Gain				1,080.17

Change in Actuarial Value of Assets	3,284.43
Actuarial Value of Assets	**45,435.19**

STATE EMPLOYEES' RETIREMENT SYSTEM
Summary of Recognized Investment Income, P.A. 96-0043
($ in Millions)

Beginning of Year		
Market Value of Assets	$	14,581.6
Actuarial value of Assets	$	13,315.6
End of Year		
Market Value of Assets	$	15,258.9
Net of Contributions and Disbursements	$	(4.1)
Projected Investment Income	$	1,057.0

Excess Investment Income Recognized (5-year recognition)

FY	Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent	Recognized Amount
2015	(375.64)	20%	80%	(75.13)
2014	1,207.87	20%	60%	241.57
2013	654.13	20%	40%	130.83
2012	(843.65)	20%	20%	(168.73)
2011	1,223.20	20%	0%	244.64
Total Recognized Investment Gain				373.18

Change in Actuarial Value of Assets	1,426.12
Actuarial Value of Assets	**14,741.74**

STATE UNIVERSITIES RETIREMENT SYSTEM
Summary of Recognized Investment Income, P.A. 96-0043
($ in Millions)

Beginning of Year		
Market Value of Assets	$	17,391.3
Actuarial value of Assets	$	15,844.7
End of Year		
Market Value of Assets	$	17,463.0
Net of Contributions and Disbursements	$	(431.6)
Projected Investment Income		1,245.50

Excess Investment Income Recognized (5-year recognition)

FY	Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent	Recognized Amount
2015	(742.30)	20%	80%	(148.46)
2014	1,514.45	20%	60%	302.89
2013	646.42	20%	40%	129.28
2012	(1,075.19)	20%	20%	(215.04)
2011	1,886.36	20%	0%	377.27
Total Recognized Investment Gain				445.95

Change in Actuarial Value of Assets	1,259.89
Actuarial Value of Assets	**17,104.61**

JUDGES' RETIREMENT SYSTEM
Summary of Recognized Investment Income, P.A. 96-0043
($ in Millions)

Beginning of Year					
Market Value of Assets					$ 776.0
Actuarial value of Assets					$ 705.3
End of Year					
Market Value of Assets					$ 833.9
Net of Contributions and Disbursements					$ 21.9
Projected Investment Income					55.07

Excess Investment Income Recognized (5-year recognition)

FY	Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent	Recognized Amount
2015	(19.06)	20%	80%	(3.81)
2014	64.25	20%	60%	12.85
2013	36.82	20%	40%	7.36
2012	(41.53)	20%	20%	(8.31)
2011	69.40	20%	0%	13.88
Total Recognized Investment Gain				21.98

Change in Actuarial Value of Assets	98.94
Actuarial Value of Assets	$ 804.2

GENERAL ASSEMBLY RETIREMENT SYSTEM
Summary of Recognized Investment Income, P.A. 96-0043
($ in Millions)

Beginning of Year	
Market Value of Assets	$ 56.8
Actuarial value of Assets	$ 51.6
End of Year	
Market Value of Assets	$ 54.6
Net of Contributions and Disbursements	$ (4.5)
Projected Investment Income	$ 3.8

Excess Investment Income Recognized (5-year recognition)

FY	Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent	Recognized Amount
2015	(1.53)	20%	80%	(0.3)
2014	4.76	20%	60%	1.0
2013	2.97	20%	40%	0.6
2012	(4.05)	20%	20%	(0.8)
2011	6.10	20%	0%	1.2
Total Recognized Investment Gain				1.6

Change in Actuarial Value of Assets	1.0
Actuarial Value of Assets	**$ 52.6**

P.A. 96-0043 establishes that as of June 30, 2008, the actuarial value of each system’s assets will be equal to their market value. In determining the actuarial value of the systems’ assets for fiscal years after June 30, 2008, any unexpected gains or losses from investment returns incurred in a fiscal year will be recognized in equal annual amounts over the five year period following that fiscal year. An unexpected gain or loss will be defined as any deviation from the forecasted return on invested assets.

APPENDIX W

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS
Richard W. Ingram, Executive Director
2815 West Washington Street, P.O. Box 19253
Springfield, Illinois 62794-9253

October 30, 2015

The Honorable Bruce Rauner, Governor
Senator John Cullerton, President of the Senate
Senator Christine Radogno, Minority Leader
Representative Michael Madigan, Speaker of the House
Representative Jim Durkin, Minority Leader
Mr. Gene Kalwarski, Cheiron, State Actuary

RE: Proposed Certification of FY 2017 TRS State Contribution Requirement

In accordance with 40 ILCS 5/16-158 (a-1), we are submitting a resolution adopted by the TRS board of trustees during its regular board meeting yesterday. The resolution accepts the results of the June 30, 2015 actuarial valuation and certifies the proposed total normal cost and employer normal cost rates for FY 2017. It also certifies two amounts for the proposed FY 2017 state contribution to TRS.

The first state contribution is the amount required under the current statutory funding plan. The second is consistent with a 2012 TRS board resolution stating that the board will certify funding requirements based on sound actuarial principles and standards. We refer to this second figure as the amount determined under "Actuarial Math 2.0" because it is based on more current guidance from the actuarial profession than the less stringent actuarially-based amounts we have certified in the past.

- Under current law, the proposed FY 2017 state contribution is **$3,986,583,351.**
- Under Actuarial Math 2.0, the proposed FY 2017 state contribution is **$6,070,973,314.**

Actuarial Math 2.0 uses the entry age normal actuarial cost method rather than the projected unit credit cost method required by Illinois law. It employs a shorter amortization period for the unfunded liability (a 20-year closed period) and, most importantly, begins lowering the unfunded liability immediately. Future increases in the unfunded liability would be amortized over subsequent 20-year periods, and the minimum total employer contribution would never be less than the employer's normal cost.

We will submit our final FY 2017 certification on or before January 15, 2016, after it is reviewed by the state actuary. Please direct questions to me or Kathleen Farney, Director of Research (217/753-0970).

Sincerely,

Richard W. Ingram
Executive Director

Enc. (3)
1. Certification of TRS board resolution on proposed FY 2017 funding amount & Exhibit A
2. TRS board resolution on actuarial standards and benefit changes, 3/30/12 (amended 4/30/12)
3. June 30, 2015 preliminary actuarial valuation report for the Teachers' Retirement System of the State of Illinois, Buck Consultants

APPENDIX X

State Universities Retirement System of Illinois

Serving Illinois Community Colleges and Universities

P.O. Box 2710 • Champaign, IL 61825-2710
(217) 378-8855 • (217) 378-9801 (fax)

W. Bryan Lewis
Executive Director

October 30, 2015

The Honorable Bruce Rauner
Governor of the State of Illinois
207 Statehouse
Springfield, Illinois 62706

Mrs. Jennifer Hamburg
Cheiron, Incorporated
200 West Monroe Street, Suite 1800
Chicago, Illinois 60606

Re: Proposed Certification of Required State Contribution to the State Universities Retirement System for State Fiscal Year 2017

Ladies and Gentlemen:

Pursuant to Section 15-165 of the Illinois Pension Code, the Board of Trustees of the State Universities Retirement System (the "System") hereby submits the System's proposed certification of the required State contribution for Fiscal Year 2017 for the purposes of the System.

The Board expects to certify $1,671,944,000 as being the total net required contribution for Fiscal Year 2017.

As required by Section 15-165 of the Illinois Pension Code, a copy of the preliminary actuarial recommendation, upon which the proposed certification is based, is also enclosed.

Please note that the preliminary actuarial valuation recommends a funding policy that contributes normal cost plus a 30-year closed amortization period for paying the current unfunded accrued liability in full. The current statutory contribution does not comply with this recommendation. Underfunding the System creates a risk that, ultimately, benefit obligations cannot be met from the trust.

Additionally, the proposed actuarial valuation recommends that an asset corridor on the actuarial value of assets be implemented. This will reduce the risk of the System not being able to satisfy its obligations in the event of a global market downturn, similar to what was experienced during Fiscal Year 2009, forcing the State to access other resources as previously mentioned.

While the State statute governs funding policy, it is important to highlight the differences between the current statutory appropriation and the recommended actuarially determined funding policy so that potential risks and additional ramifications of underfunding are fully understood.

Sincerely,

W. Bryan Lewis
Executive Director

Enclosures: Proposed Certification
Actuarial Valuation Report (draft)

STATE RETIREMENT SYSTEMS
● State Employees' Retirement System of Illinois
● General Assembly Retirement System
● Judges' Retirement System of Illinois
Internet: http://www.srs.illinois.gov E-Mail: ser@srs.illinois.gov
2101 South Veterans Parkway, P.O. Box 19255, Springfield, IL 62794-9255

October 28, 2015

Governor Bruce Rauner
207 Statehouse
Springfield, IL 62706

Dear Governor Rauner:

Pursuant to Public Act 97-694, at a meeting of the Board of Trustees of the State Employees' Retirement System held on October 27, 2015, the Board certified a State contribution for fiscal year 2017 of $2,097,430,000, or 44.568% of payroll. This contribution level is based on provisions contained in Public Act 88-0593, as amended. The FY 2017 certification includes $2,014,461,000 for SERS and $82,969,000 for debt service on the 2003 pension obligation bonds. Of the $2,014,461,000 certified for SERS, $658,501,000 is for the employer's portion of the expected normal cost and $1,355,960,000 for the amortization of the unfunded liabilities.

Consistent with the recent implementation of the Governmental Accounting Standards Board (GASB) Statement No. 67, the SERS Board of Trustees adopted a funding policy at the April 21, 2015 Board meeting. The adopted funding policy, or the Actuarially Determined Contribution (ADC), provides for annual contributions that are equal to the annual normal cost of benefits earned plus amortization of the unfunded actuarial liability over 25 years as a level percent of payroll. The FY 2017 ADC is $2,388,509,050, or about $374 million higher than the amount calculated under the statutory funding plan.

The ADC is used in financial reporting but will not affect the certified employer contributions to SERS, which will still be certified by the Board pursuant to the statutory funding plan.

Attached is the draft FY 2015 actuarial valuation along with the certification letter prepared by the System's actuaries. The actuarial valuation, membership data used in the valuation, and all calculations will be forwarded to the State Actuary for review.

Very truly yours,

Timothy Blair
Executive Secretary

cc: Governor Bruce Rauner, Chicago Office
Leslie Geissler Munger, Comptroller
Mike Mahoney, Governor's Office
Tim Nuding, Director, Governor's Office of Management & Budget
Kim Fowler, Governor's Office of Management & Budget
Cory Burris, Governor's Office of Management & Budget
Dan Long, Director, Commission on Government Forecasting & Accountability
Dan Hankiewicz, Commission on Government Forecasting & Accountability

GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

20 North Clark Street
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Chicago, IL 60602-5111

312.456.9800 phone
312.456.9801 fax
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October 28, 2015

Board of Trustees and Executive Secretary
Judges' Retirement System of Illinois
P. O. Box 19255
2101 S. Veterans Parkway
Springfield, Illinois 62794-9255

Re: Actuarial Certification

At your request, we have performed the annual actuarial valuation of the assets and liabilities of the Judges' Retirement System of Illinois ("JRS") as of June 30, 2015. This valuation has been performed to measure the funding status of the System and determine the employer statutory contribution rate for the year beginning July 1, 2016, and ending June 30, 2017. This valuation also provides historical information through fiscal year 2014 as required by the Governmental Accounting Standards Board ("GASB") Statements Nos. 25 and 27. Effective with fiscal year ending June 30, 2014, GASB Statement No. 67 replaced GASB Statement No. 25 for pension plan financial reporting requirements. Effective with fiscal year ending June 30, 2015, GASB Statement No. 68 is replacing GASB Statement No. 27 for employer financial reporting. Information required by GASB Statements Nos. 67 and 68 is provided in a separate report.

The required statutory contribution rate has been determined under the Projected Unit Credit Cost Method, providing for a 90 percent funding of total actuarial liabilities by fiscal year 2045 as required by 40 ILCS Section 5/18-131(c). Contribution rates are determined according to P.A. 93-0589 reflecting the infusion of the proceeds from the sale of general obligation bonds. The contribution rates reflect the impact of P.A. 96-0889, which created a second tier for members of JRS hired after December 31, 2010.

For the actuarial valuation as of June 30, 2015, the assumed rate of return used to discount liabilities and project assets was 7.0 percent.

The required statutory contribution rates and amounts for fiscal year beginning July 1, 2016, as determined in the June 30, 2015, actuarial valuation are shown below.

	Employer's Normal Cost [1]	Amortization Payment [2]	Total
Required Rate	24.993%	54.690%	79.683%
Required Contribution	41,194,000	90,140,000	131,334,000

[1] *Includes Administrative Expenses.*
[2] *Under the Statutory funding policy an amortization payment is not directly calculated. The amortization payment is the difference between the total statutory contribution and the employer normal cost contribution.*

Based on the provisions of P.A. 97-0694, the required statutory contribution for the fiscal year beginning July 1, 2016, is submitted to the state actuary, governor, and General Assembly. Under the act, the state actuary is required to review the assumptions and methods used to perform the actuarial valuation and develop the required statutory contributions. The final certification of the required statutory contribution is due by January 15, 2016.

Pursuant to P.A. 96-0043, for purposes of determining the statutory contribution rate, an actuarial value of the System's assets was used. The actuarial value of assets is assumed to earn a rate of return equal to the System's actuarially assumed rate of return. The liabilities have been valued based on financial and employee data, which is supplied by the administrative staff of the System and verified by the System's auditor. We did not audit this data, but have reviewed the statistical support and concluded that the data is reasonable and consistent with the prior year's data.

This valuation assumes that the plan sponsor will be able to make future contributions on a timely basis. Failure to receive employer contributions on a timely basis could jeopardize the sustainability of the fund. We did not perform an analysis of the ability of the plan sponsor to make future contributions.

In our opinion, the calculations also comply with the requirements of Illinois state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The System's current contribution rate determined under the statutory funding policy may not conform to the Actuarial Standards of Practice. Therefore, the Board adopted a policy to be used to calculate the Actuarially Determined Contribution ("ADC") under GASB Statements Nos. 67 and 68 for financial reporting purposes. All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Although the statutory contribution requirements were met, the statutory funding method generates a contribution requirement that is less than a reasonable actuarially determined contribution. Meeting the statutory requirement does not mean that the undersigned agree that adequate actuarial funding has been achieved. We recommend the adherence to a funding policy, such as the Board policy used to calculate the ADC under GASB Statements Nos. 67 an 68, that finances the normal cost of the plan as well as an amortization payment that seeks to pay off any unfunded accrued liability over a closed period of 25 years, as a level percent of capped payroll.

We certify that the information presented herein is accurate and fairly portrays the actuarial position of JRS as of June 30, 2015. We prepared the accompanying Summary of Actuarial Cost Method and Major Actuarial Assumptions, but the JRS staff prepared the other supporting schedules in this section and the trend tables in the financial section, based on information supplied in our report.

This actuarial certification is provided to the intended user, the Board of Trustees, in conjunction with the JRS actuarial valuation report as of June 30, 2015. Additional information regarding actuarial assumptions and methods, and important additional disclosures are provided in the full actuarial valuation report as of June 30, 2015, which is available on the JRS website, and is an integral part of this certification.

Alex Rivera, David Kausch and Paul T. Wood are Members of the American Academy of Actuaries (MAAA) as indicated, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

Alex Rivera, FSA, EA, MAAA	David Kausch, FSA, EA, MAAA	Paul T. Wood, ASA, MAAA
Senior Consultant	Senior Consultant	Consultant

Gabriel Roeder Smith & Company

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
20 North Clark Street
Suite 2400
Chicago, IL 60602-5111
312.456.9800 phone
312.456.9801 fax
www.gabrielroeder.com

October 28, 2015

Board of Trustees and Executive Secretary
General Assembly Retirement System of Illinois
P. O. Box 19255
2101 S. Veterans Parkway
Springfield, Illinois 62794-9255

Re: Actuarial Certification

At your request, we have performed the annual actuarial valuation of the assets and liabilities of the General Assembly Retirement System of Illinois ("GARS") as of June 30, 2015. This valuation has been performed to measure the funding status of the System and determine the employer statutory contribution rate for the year beginning July 1, 2016, and ending June 30, 2017. This valuation also provides historical information through fiscal year 2014 as required by the Governmental Accounting Standards Board ("GASB") Statements Nos. 25 and 27. Effective with fiscal year ending June 30, 2014, GASB Statement No. 67 replaced GASB Statement No. 25 for pension plan financial reporting requirements. Effective with fiscal year ending June 30, 2015, GASB Statement No. 68 is replacing GASB Statement No. 27 for employer financial reporting. Information required by GASB Statements Nos. 67 and 68 is provided in a separate report.

The required statutory contribution rate has been determined under the Projected Unit Credit Cost Method, providing for a 90 percent funding of total actuarial liabilities by fiscal year 2045 as required by 40 ILCS Section 5/2-124(c). Contribution rates are determined according to P.A. 93-0589 reflecting the infusion of the proceeds from the sale of general obligation bonds. The contribution rates reflect the impact of P.A. 96-0889, which created a second tier for members of GARS hired after December 31, 2010.

For the actuarial valuation as of June 30, 2015, the assumed rate of return used to discount liabilities and project assets was 7.0 percent.

The required statutory contribution rates and amounts for fiscal year beginning July 1, 2016, as determined in the June 30, 2015, actuarial valuation are shown below.

	Employer's Normal Cost [1]	Amortization Payment [2]	Total
Required Rate	20.400%	174.549%	194.949%
Required Contribution	2,273,000	19,448,000	21,721,000

[1] *Includes Administrative Expenses.*
[2] *Under the Statutory funding policy an amortization payment is not directly calculated. The amortization payment is the difference between the total statutory contribution and the employer normal cost contribution.*

Based on the provisions of P.A. 97-0694, the required statutory contribution for the fiscal year beginning July 1, 2016, is submitted to the state actuary, governor, and General Assembly. Under the act, the state actuary is required to review the assumptions and methods used to perform the actuarial valuation and develop the required statutory contributions. The final certification of the required statutory contribution is due by January 15, 2016.

Gabriel Roeder Smith & Company

Pursuant to P.A. 96-0043, for purposes of determining the statutory contribution rate, an actuarial value of the System's assets was used. The actuarial value of assets is assumed to earn a rate of return equal to the System's actuarially assumed rate of return. The liabilities have been valued based on financial and employee data, which is supplied by the administrative staff of the System and verified by the System's auditor. We did not audit this data, but have reviewed the statistical support and concluded that the data is reasonable and consistent with the prior year's data.

This valuation assumes that the plan sponsor will be able to make future contributions on a timely basis. Failure to receive employer contributions on a timely basis could jeopardize the sustainability of the fund. We did not perform an analysis of the ability of the plan sponsor to make future contributions.

In our opinion, the calculations also comply with the requirements of Illinois state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The System's current contribution rate determined under the statutory funding policy may not conform to the Actuarial Standards of Practice. Therefore, the Board adopted a policy to be used to calculate the Actuarially Determined Contribution ("ADC") under GASB Statements Nos. 67 and 68 for financial reporting purposes. All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Although the statutory contribution requirements were met, the statutory funding method generates a contribution requirement that is less than a reasonable actuarially determined contribution. Meeting the statutory requirement does not mean that the undersigned agree that adequate actuarial funding has been achieved. We recommend the adherence to a funding policy, such as the Board policy used to calculate the ADC under GASB Statements Nos. 67 an 68, that finances the normal cost of the plan as well as an amortization payment that seeks to pay off any unfunded accrued liability over a closed period of 20 years, as a level percent of capped payroll.

We certify that the information presented herein is accurate and fairly portrays the actuarial position of GARS as of June 30, 2015. We prepared the accompanying Summary of Actuarial Cost Method and Major Actuarial Assumptions, but the GARS staff prepared the other supporting schedules in this section and the trend tables in the financial section, based on information supplied in our report.

This actuarial certification is provided to the intended user, the Board of Trustees, in conjunction with the GARS actuarial valuation report as of June 30, 2015. Additional information regarding actuarial assumptions and methods, and important additional disclosures are provided in the full actuarial valuation report as of June 30, 2015, which is available on the GARS website, and is an integral part of this certification.

Alex Rivera, David Kausch and Paul Wood are Members of the American Academy of Actuaries (MAAA) as indicated, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

Alex Rivera, FSA, EA, MAAA	David Kausch, FSA, EA, MAAA	Paul T. Wood, ASA, MAAA
Senior Consultant	Senior Consultant	Consultant

APPENDIX BB

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

Richard W. Ingram, Executive Director
2815 West Washington Street, P.O. Box 19253
Springfield, Illinois 62794-9253

January 11, 2016

The Honorable Bruce Rauner, Governor
Senator John Cullerton, President of the Senate
Senator Christine Radogno, Minority Leader
Representative Michael Madigan, Speaker of the House
Representative Jim Durkin, Minority Leader
Mr. Gene Kalwarski, Cheiron
Mr. Ken Kent, Cheiron

RE: Final Certification of FY 2017 TRS State Contribution Requirement

In accordance with 40 ILCS 5/16-158 (a-5), TRS is submitting its final state funding requirement for FY 2017. The TRS trustees adopted the attached resolution at its regular board meeting on December 10, 2015. Cheiron, the state actuary, recommended no changes to the trustees' preliminary certification dated October 30, 2015.

The first state contribution is the amount required under the current statutory funding plan. The second is consistent with a 2012 TRS board resolution stating that the board will certify funding requirements based on sound actuarial principles and standards. The second amount was determined under what we call "Actuarial Math 2.0" because it is based on more current guidance from the actuarial profession than the less stringent actuarially-based amounts we have certified in the past. Both amounts include $800,000 for reimbursements for minimum benefits.

- Under current law, the certified FY 2017 state contribution is **$3,986,583,351.**
- Under Actuarial Math 2.0, the certified FY 2017 state contribution is **$6,070,973,314.**

Actuarial Math 2.0 uses the entry age normal actuarial cost method rather than the projected unit credit cost method required by Illinois law. It employs a shorter amortization period for the unfunded liability (a 20-year closed period) and begins lowering the unfunded liability immediately. Future increases in the unfunded liability would be amortized over subsequent 20-year periods, and the minimum total employer contribution would never be less than the employer's normal cost.

The state actuary has consistent urged the adoption of sound actuarial funding practices for the Illinois state retirement systems. In its most recent report, the state actuary stated the following:

> "... Cheiron concurred with TRS' actuary's recommendations and demonstration of an alternative funding approach and agreed that it conforms to a goal of full funding within a reasonable time period and is in accordance with generally accepted actuarial principles." *(State Actuary's report, December 2015, page 11)*

If you would like to discuss either of the certified amounts, please contact me or Kathleen Farney, Director of Research (217.753.0970).

Sincerely,

Richard W. Ingram
Executive Director

Enclosures (3)

1. Certification of TRS board final resolution on FY 2017 funding amounts & Exhibit A
2. TRS board resolution on actuarial standards and benefit changes, 3/30/12 (amended 4/30/12)
3. June 30, 2015 final actuarial valuation report for the Teachers' Retirement System of the State of Illinois, Buck Consultants

APPENDIX CC

S·U·R·S
STATE UNIVERSITIES RETIREMENT SYSTEM

1901 Fox Drive, Champaign, IL 61820-7333
800-275-7877 • 217-378-8800 • (Fax) 217-378-9800
www.surs.org

W. Bryan Lewis, Executive Director

January 12, 2016

The Honorable Bruce Rauner
Governor of the State of Illinois
207 Statehouse
Springfield, Illinois 62706

Re: Certification of Required State Contribution to the State Universities Retirement System for State Fiscal Year 2017

Dear Governor Rauner:

As required by 40 ILCS 5/15-165, the Board of Trustees of the State Universities Retirement System has certified the required State contribution for State fiscal year 2017 for the purposes of the System.

The Board hereby certifies that $1,671,426,000 is the total net required State contribution for State fiscal year 2017. An official certification is enclosed. A copy of the actuarial recommendation upon which the certification is based is also enclosed, as required by Section 15-165.

Please note that the Fiscal Year 2017 contributions are based on the current 7.25% present investment return assumption. In addition, the projected normal cost for the Fiscal Year 2017 is $438,300,000 and the projected State cost for the self-managed plan for Fiscal Year 2017 is $68,906,000.

As further required by the recent amendments to Section 15-165, the State Actuary has reviewed all of the actuarial assumptions used in the State Universities Retirement System's 2015 actuarial valuation. The State Actuary has concluded that the assumptions are reasonable and no changes are needed for the June 30, 2015 valuation. Additionally, the State Actuary has verified the arithmetic used in the calculations made by the State Universities Retirement System's actuary to develop the required State contribution.

On a go forward basis the State Actuary has recommended the Board continue to annually review the economic assumptions, conduct actuarial audits, and perform additional stress testing. Given the fact that we have been performing these activities; we will take action as needed.

Additionally, the State Actuary made certain additional recommendations with respect to the State Universities Retirement System's future valuation reports. The Board of Trustees has accepted those additional proposed recommendations. The Board will take the recommendations to lower the discount rate and other proposed recommendations under advisement. A decision to act will be made after an upcoming full scope actuarial audit has been completed and the Board has had the opportunity to understand the financial impact.

Sincerely,

W. Bryan Lewis
Executive Director

APPENDIX DD

SRS STATE RETIREMENT SYSTEMS
● State Employees' Retirement System of Illinois
● General Assembly Retirement System
● Judges' Retirement System of Illinois
Internet: http://www.srs.illinois.gov E-Mail: ser@srs.illinois.gov
2101 South Veterans Parkway, P.O. Box 19255, Springfield, IL 62794-9255

January 12, 2016

The Honorable Bruce Rauner
Governor
207 Statehouse
Springfield, IL 62706

Dear Governor Rauner:

Based on Public Act 88-0593, as amended, at the meeting of the Board of Trustees of the State Employees' Retirement System (SERS) held on January 12, 2016, the Board certified an FY 2017 State contribution of \$2,097,430,000, or 44.568% of payroll. The FY 2017 certification includes \$2,014,461,000, or 42.805% of payroll, for the employer contribution to SERS and \$82,969,000, or 1.763% of payroll, for debt service on the 2003 pension obligation bonds. Even though this debt service is included in the annual certification pursuant to statute, only the non-General Revenue Fund (GRF) portion of the debt service (\$29,039,150) is remitted to SERS, which is then submitted to the General Obligation Bond Retirement and Interest (GOBRI) Fund. The GRF portion of the debt service (\$53,929,850) is transferred directly from GRF to GOBRI.

Of the \$2,014,461,000 certified as the FY 2017 State contribution to SERS, \$658,501,000 is the expected cost of benefits that will be earned by SERS members in FY 2017 and \$1,355,960,000 is to finance the unfunded liabilities.

With the recent implementation of the Governmental Accounting Standards Board (GASB) Statement No. 67, the SERS Board of Trustees adopted a funding policy at the April 21, 2015 Board meeting. The adopted funding policy, or the Actuarially Determined Contribution (ADC) policy, provides for the calculation of annual contributions that are equal to the annual cost of benefits earned by SERS members plus amortization of the unfunded actuarial liability over 25 years as a level percent of payroll. The FY 2017 ADC is \$2,388,509,050, or about \$374 million higher than the amount calculated under the statutory funding plan and certified to the Governor and General Assembly.

Attached is the FY 2015 actuarial valuation along with the FY 2017 certification letter prepared by the System's actuaries. The actuarial valuation, membership data used in the valuation, and all calculations have been reviewed the State Actuary.

Very truly yours,

Timothy B. Blair

Timothy Blair
Executive Secretary

cc: Governor Bruce Rauner, Chicago Office

APPENDIX EE

STATE RETIREMENT SYSTEMS

- State Employees' Retirement System of Illinois
- General Assembly Retirement System
- Judges' Retirement System of Illinois

Internet: http://www.srs.illinois.gov E-Mail: ser@srs.illinois.gov

2101 South Veterans Parkway, P.O. Box 19255, Springfield, IL 62794-9255

January 15, 2016

The Honorable Bruce Rauner
Governor
207 Statehouse
Springfield, IL 62706

Dear Governor Rauner:

Based on Public Act 88-0593, as amended, at the meeting of the Board of Trustees of the Judges' Retirement System (JRS) held on January 15, 2016, the Board certified an FY 2017 State contribution of $131,334,000, or 79.683% of payroll. Of the $131,334,000 certified amount, $41,194,000 is the expected cost of benefits that will be earned by JRS members in FY 2017 and $90,140,000 is to finance the unfunded liabilities.

With the recent implementation of the Governmental Accounting Standards Board (GASB) Statement No. 67, the JRS Board of Trustees adopted a funding policy at the March 27, 2015 Board meeting. The adopted funding policy, or the Actuarially Determined Contribution (ADC) policy, provides for the calculation of annual contributions that are equal to the annual cost of benefits earned by JRS members plus amortization of the unfunded actuarial liability over 25 years as a level percent of payroll. The FY 2017 ADC is $152,699,188, or $21.4 million higher than the amount calculated under the statutory funding plan and certified to the Governor and General Assembly.

Attached is the FY 2015 actuarial valuation along with the FY 2017 certification letter prepared by the System's actuaries. The actuarial valuation, membership data used in the valuation, and all calculations have been reviewed the State Actuary.

Very truly yours,

Timothy B. Blair

Timothy Blair
Executive Secretary

cc: Governor Bruce Rauner, Chicago Office
Comptroller Leslie Geissler Munger
Mike Mahoney, Governor's Office
Tim Nuding, Director, Governor's Office of Management & Budget
Kim Fowler, Governor's Office of Management & Budget
Cory Burris, Governor's Office of Management & Budget
Dan Long, Director, Commission on Government Forecasting & Accountability
Dan Hankiewicz, Commission on Government Forecasting & Accountability
Senate President John Cullerton

APPENDIX FF

STATE RETIREMENT SYSTEMS

- State Employees' Retirement System of Illinois
- General Assembly Retirement System
- Judges' Retirement System of Illinois

Internet: http://www.srs.illinois.gov E-Mail: ser@srs.illinois.gov

2101 South Veterans Parkway, P.O. Box 19255, Springfield, IL 62794-9255

January 15, 2016

The Honorable Bruce Rauner
Governor
207 Statehouse
Springfield, IL 62706

Dear Governor Rauner:

Based on Public Act 88-0593, as amended, at the meeting of the Board of Trustees of the General Assembly Retirement System (GARS) held on January 15, 2016, the Board certified an FY 2017 State contribution of $21,721,000, or 194.949% of payroll. Of the $21,721,000 certified amount, $2,273,000 is the expected cost of benefits that will be earned by GARS members in FY 2017 and $19,448,000 is to finance the unfunded liabilities.

With the recent implementation of the Governmental Accounting Standards Board (GASB) Statement No. 67, the GARS Board of Trustees adopted a funding policy at the April 15, 2015 Board meeting. The adopted funding policy, or the Actuarially Determined Contribution (ADC) policy, provides for the calculation of annual contributions that are equal to the annual cost of benefits earned by GARS members plus amortization of the unfunded actuarial liability over 20 years as a level percent of payroll. The FY 2017 ADC is $26,984,621, or $5.3 million higher than the amount calculated under the statutory funding plan and certified to the Governor and General Assembly.

Attached is the FY 2015 actuarial valuation along with the FY 2017 certification letter prepared by the System's actuaries. The actuarial valuation, membership data used in the valuation, and all calculations have been reviewed the State Actuary.

Very truly yours,

Timothy B. Blair

Timothy Blair
Executive Secretary

cc: Governor Bruce Rauner, Chicago Office
Comptroller Leslie Geissler Munger
Mike Mahoney, Governor's Office
Tim Nuding, Director, Governor's Office of Management & Budget
Kim Fowler, Governor's Office of Management & Budget
Cory Burris, Governor's Office of Management & Budget
Dan Long, Director, Commission on Government Forecasting & Accountability
Dan Hankiewicz, Commission on Government Forecasting & Accountability
Senate President John Cullerton

APPENDIX GG

STATE OF ILLINOIS • OFFICE OF THE COMPTROLLER
LESLIE GEISSLER MUNGER

RECEIVED
JAN 29 2016

January 28, 2016

Ms. Lindsay Anderson, Chairwoman
Board of Trustees
State Universities Retirement System of Illinois
1901 Fox Drive
Champaign, Illinois 61820

Mr. Dan Long
Executive Director
Commission on Government Forecasting and Accountability
703 Stratton Office Building
Springfield, Illinois 62706

Dear Madam and Sir:

Under Public Act 94-4 the State Comptroller is required to establish the Effective Rate of Interest to be used when determining the accumulated normal contributions used in calculating retirement annuities under Rule 2 of Section 15-136 of the Illinois Pension Code. (40 ILCS 5/15-136) Paragraph (2) of Section 15-125 lists the factors to be used in making this determination. (40 ILCS 5/15-125)

Based upon these factors I have determined that the applicable Effective Rate of Interest for Fiscal Year 2017 shall be 6.75 percent.

Please direct any questions regarding this issue to Josh Potts, Assistant Comptroller, in Springfield at (217) 782-6000.

Yours truly,

Leslie Geissler Munger
Comptroller

cc: W. Bryan Lewis, Executive Director, State Universities Retirement System

JAMES R. THOMPSON CENTER
100 WEST RANDOLPH, SUITE 15-500
CHICAGO, ILLINOIS 60601-3252
312/814-2451

STATE CAPITOL
SPRINGFIELD, ILLINOIS 62706-0001
217/782-6000

LAND OF LINCOLN BUILDING
325 WEST ADAMS
SPRINGFIELD, ILLINOIS 62704-1871
217/782-6084

–Printed on Recycled Paper–

BACKGROUND

The Commission on Government Forecasting and Accountability (CGFA), a bipartisan, joint legislative commission, provides the General Assembly with information relevant to the Illinois economy, taxes and other sources of revenue and debt obligations of the State. The Commission's specific responsibilities include:

1) Preparation of annual revenue estimates with periodic updates;
2) Analysis of the fiscal impact of revenue bills;
3) Preparation of State debt impact notes on legislation which would appropriate bond funds or increase bond authorization;
4) Periodic assessment of capital facility plans;
5) Annual estimates of public pension funding requirements and preparation of pension impact notes;
6) Annual estimates of the liabilities of the State's group health insurance program and approval of contract renewals promulgated by the Department of Central Management Services;
7) Administration of the State Facility Closure Act.

The Commission also has a mandate to report to the General Assembly ". . . on economic trends in relation to long-range planning and budgeting; and to study and make such recommendations as it deems appropriate on local and regional economic and fiscal policies and on federal fiscal policy as it may affect Illinois. . . ." This results in several reports on various economic issues throughout the year.

The Commission publishes several reports each year. In addition to a “Monthly Briefing”, the Commission publishes the "Revenue Estimate and Economic Outlook" which describes and projects economic conditions and their impact on State revenues. The “Legislative Capital Plan Analysis” examines the State's capital appropriations plan and debt position. “The Financial Conditions of the Illinois Public Retirement Systems” provides an overview of the funding condition of the State’s retirement systems. Also published are an Annual Fiscal Year “Budget Summary”; “Report on the Liabilities of the State Employees’ Group Insurance Program”; and “Report of the Cost and Savings of the State Employees’ Early Retirement Incentive Program”. The Commission also publishes each year special topic reports that have or could have an impact on the economic well-being of Illinois. All reports are available on the Commission’s website.

These reports are available from:
Commission on Government Forecasting and Accountability
703 Stratton Office Building
Springfield, Illinois 62706
(217) 782-5320
(217) 782-3513 (FAX)

http://cgfa.ilga.gov/