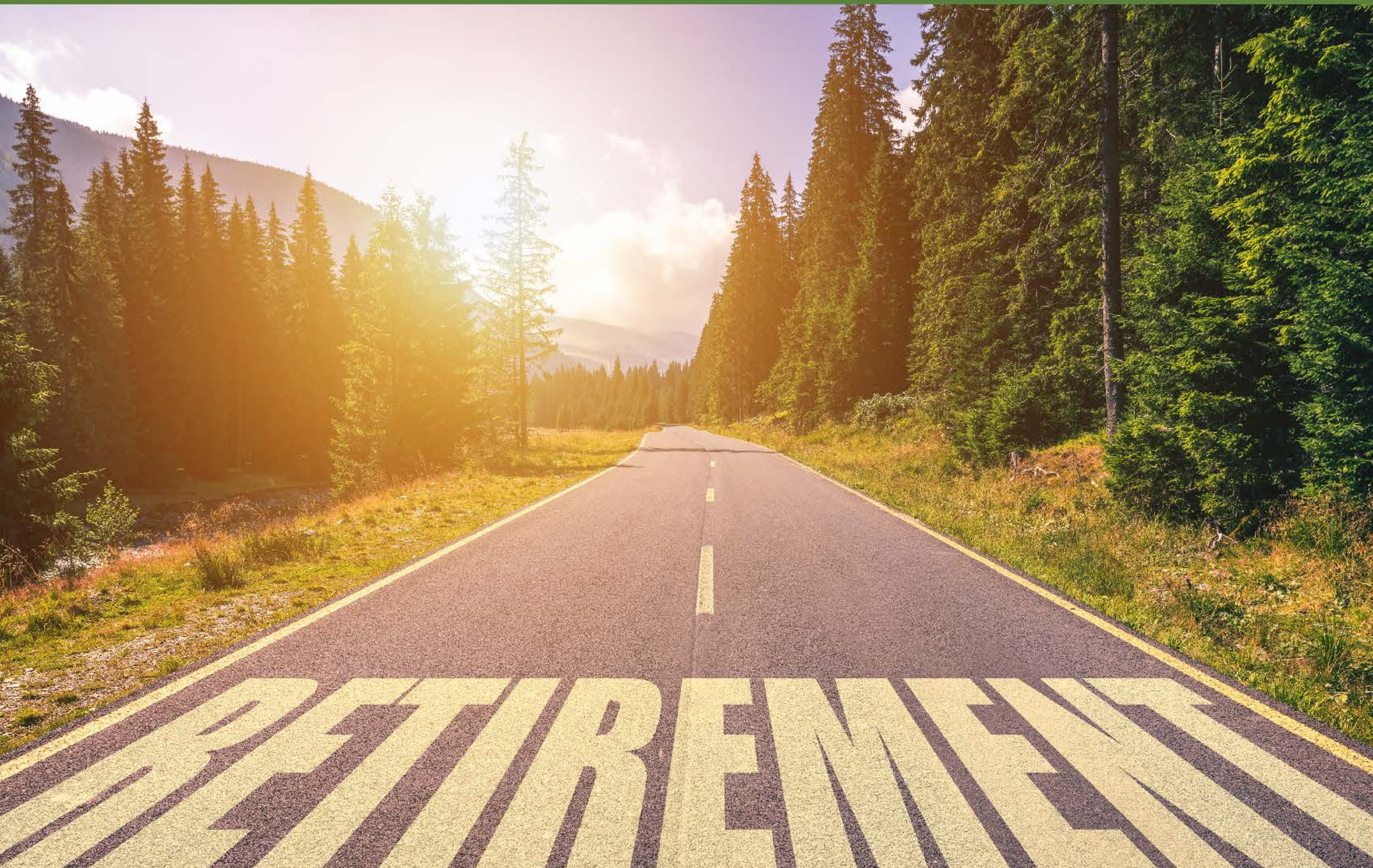
Illinois State Retirement Systems

Financial Condition as of June 30, 2020



Commission on Government Forecasting & Accountability

July 2021

Commission on Government Forecasting and Accountability

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Report on the Financial Condition of the State Retirement Systems FY 2020 July 2021

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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 2006 through FY 2020, the combined unfunded liabilities of the systems increased by $103.5 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 demographics and other miscellaneous actuarial factors, along with lower-than-assumed investment returns.

- 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 39.0% as of June 30, 2020.

- 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 positions. The funding projections shown in the appendices A-J of this report were prepared by the systems' actuaries and by CGFA's actuary based on the June 30, 2020 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 **$242.6** billion at the end of FY 2021 to **$325.8** billion at the end of FY 2045. At the same time, the projected actuarial value of assets is projected to increase from **$99.5** billion to **$293.3** billion. Consequently, the projected unfunded liabilities are projected to decrease from **$143.1** billion at the end of FY 2021 to **$32.6** billion at the end of FY 2045, and the projected funded ratio is expected to increase from **41.0%** in FY 2021 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 contributions as required by law. Please refer to Appendices A-F for more detailed projections.

- Each of the 5 State retirement systems provided a certification of the required State contribution for FY 2022. A certification letter of Chicago Teachers Pension Fund (CTPF) for FY 2022 is also presented in this report. These certification letters are displayed in the appendices Y-II.

- For FY 2020, all the systems, except for GARS, experienced a net actuarial loss, mostly due to actuarially insufficient employer contributions and less-than-expected investment returns. On the other hand, GARS experienced a net actuarial gain thanks to excess employer contributions as well as favorable demographic and other miscellaneous experiences. 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. 100-0023 (creation of Tier 3) and P.A. 100-0587 (authorization of two voluntary pension buyout programs), followed by P.A. 101-0010 (extension of the voluntary buyout programs) and P.A. 101-0610 (creation of the consolidated police and fire pension investment funds).

- Please note that the data contained in this report is based on the actuarial valuation reports and Comprehensive Annual Financial Reports of the five retirement systems. The systems' FY 2020 reports reflect the impact of COVID-19 through June 30, 2020. The impact of COVID-19 on the systems' investments and other various factors related to their respective unfunded liabilities after FY 2020 would be reported in their future reports.

FY 2021 Pension Appropriation by Fund [1] ($ in Millions)			
System	**General Funds**	**Other State Funds**	**Total**
TRS	$5,140.7	$0.0	$5,140.7
SURS	$1,780.8	$215.0	$1,995.8
SERS	$1,591.2	$856.8	$2,447.9
GARS	$27.3	$0.0	$27.3
JRS	$148.6	$0.0	$148.6
Total	**$8,688.6**	**$1,071.8**	**$9,760.3**

[1] The certified FY 2021 State contributions on the final certification letters of the five pension systems may not be identical to State contributions appropriated by P.A. 101-0637 (FY 2021 appropriation bill). If the appropriated contributions are lower than the final certified contributions, the pension systems could receive the remaining portion via the Continuing Appropriation Act (40 ILCS 15).

FY 2022 Pension Appropriation by Fund [2] ($ in Millions)			
System	**General Funds**	**Other State Funds**	**Total [3]**
TRS	$5,694.1	$0.0	$5,694.1
SURS	$1,883.3	$218.0	$2,101.3
SERS	$1,673.6	$901.2	$2,574.8
GARS	$27.8	$0.0	$27.8
JRS	$152.4	$0.0	$152.4
Total	**$9,431.3**	**$1,119.2**	**$10,550.4**

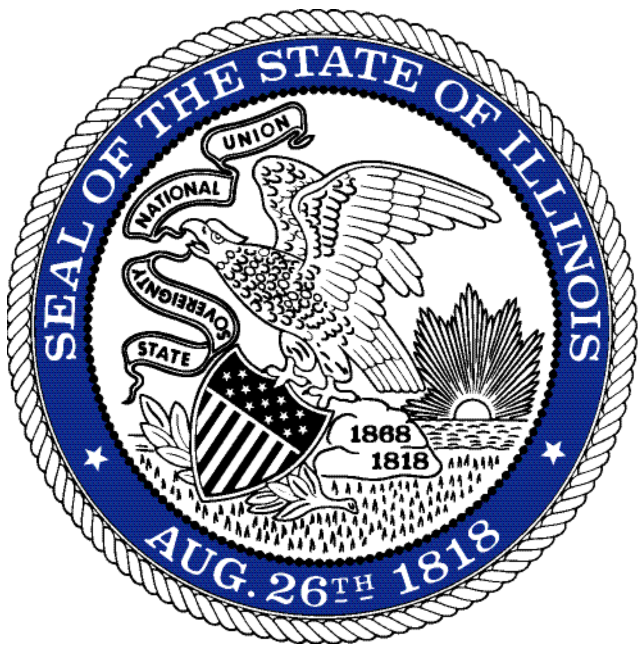
Total FY 2021 Pension Appropriation: $9,760.3 Million
Total FY 2022 Pension Appropriation: $10,550.4 Million

Total Increase, FY 2022 over FY 2021: $790.1 Million
Total GF Increase, FY 2022 over FY 2021: $742.7 Million

[2] The certified FY 2022 State contributions on the final certification letters of the five pension systems may not be identical to State contributions appropriated by P.A. 102-0017 (FY 2022 appropriation bill). If the appropriated contributions are lower than the final certified contributions, the pension systems could receive the remaining portion via the Continuing Appropriation Act (40 ILCS 15).

[3] $218 million is appropriated from the State Pension Fund to SURS, pursuant to P.A. 102-0017. SERS' FY 2022 appropriation includes a total of $104.5 million in 2003 POB debt service. Of this amount, according to SERS, $67.9 million comes from the General Revenue Fund (GRF) and $36.6 million comes from other State funds. The SERS appropriation breakdown is based upon a SERS' historical assumption that 65% of the SERS appropriation will come from GRF, while 35% will come from other State funds.

I. Public Act 96-0889 and Public Act 96-1495 (Creation of Tier II)



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 Police Officers, 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 under age 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 Police Officers, Firefighters, and Correctional Guards
- Normal Retirement: 60 years old with 20 years of service
- State Police officers, Firefighters, DOC Guards are still eligible for Alternative Formula

Annual Increases in Annuity
- Increases begin at the latter of the first anniversary of retirement or at age 67.
- Increases equal to the lesser of 3% or 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

- The act prohibits simultaneously collecting a pension and a salary with a public employer.

Chicago Teachers’ Extension of Funding Plan

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

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 one-half of 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
- 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 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 with a penalty of ½% of 1% 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
    - *P.A. 101-0610, the Downstate Police and Fire Investment Consolidation Act of 2020, provides that the final average salary for a retired Tier 2 police officer or firefighter shall be the greater of (i) the average monthly salary obtained by dividing the total salary of the employee during the highest 48 consecutive months of service within the last 60 months of employment; or (ii) the average monthly salary obtained by dividing the total salary of the employee during the highest 96 consecutive months of service within the last 120 months of employment. (For more information, please refer to the P.A. 101-0610 section on page 26)*
- 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.
    - *P.A. 101-0610, the Downstate Police and Fire Investment Consolidation Act of 2020, provides that the Tier 2 pensionable salary cap shall annually be increased by the lesser of (i) 3% of the pensionable salary cap, or (ii) the annual unadjusted percentage increase in the Consumer Price Index-Urban (CPI-U) for the previous 12 months. (For more information, please refer to the P.A. 101-0610 section on page 26)*

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% or 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
- Increases 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 a level percentage of payroll under the Projected Unit Credit Actuarial Cost Method.
- The Comptroller is authorized to redirect municipal monies directly to pension funds if municipal contributions are insufficient.

II. Public Act 100-0023 (Creation of Tier III)

Tier Three Pension Reform via the Budget Implementation Act
Public Act 100-0023*
Senate Bill 0042 – Trotter (Harris)

** As of writing, the Optional Tier 3 Hybrid Plan has been implemented by two pension funds, the Municipal Employees' Annuity and Benefit Fund of Chicago (MEABF) and Laborers' Annuity and Benefit Fund of Chicago (LABF). None of the State-funded systems have implemented the Tier 3 plan, yet.*

I. Overview of Key Provisions of Public Act 100-0023 (SB 42)

Effective Date

- July 6, 2017

Systems Impacted

- GARS, Chicago Fire, Chicago Municipal, Cook County, Cook County Forest Preserve, Chicago Laborers, Chicago Park District, SERS, SURS, TRS, Chicago Teachers, and JRS

Optional Tier 3 Hybrid Plan

<u>Tier 3 Availability</u>

- SERS, SURS, and TRS:
  - Tier 3 benefits are available as soon as the board of that respective system authorizes members to begin participation.
    - Each of these systems shall endeavor to make participation available as soon as possible. This requirement is referred to as the "implementation date."
    - Newly hired and existing Tier 2 members must make the election to participate in Tier 3 within 30 days of becoming a member or participant in the pertinent system.
- MEABF, Cook County Employees, Forest Preserve Employees, LABF, Park Employees, and CTPF
  - Tier 3 benefits are available beginning 6 months after the governing body of the unit of local government approves participation in the plan via adoption of a resolution or ordinance.
  - No later than 5 months after the resolution or ordinance approving participation in Tier 3, the affected system shall prepare and implement the defined contribution component of the Tier 3 hybrid plan.
  - Newly hired members must make the election to participate in the Tier 3 hybrid system within 30 days of becoming a member or participant in the pertinent system.

<u>Tier 3 Benefit Summary</u>

- Retirement Annuity: 1.25% for each year of service credit multiplied by final average salary
- Normal Retirement: determined by Social Security Administration, but no earlier than 67 years of age with at least 10 years of service

- COLA: Beginning 1 year after annuity start date and equal to 50% of the CPI-W
- Survivor's/Widow's Annuity: 66 2/3% of participant's retirement annuity
- Employee Contribution for the DB component: 6.2% of salary (cannot exceed normal cost)
- Employee Contribution for the DC component: 4% minimum
- Employer Contributions for the DC component: between 2% and 6% of salary
    - Employer contributions vest when they are paid into a participant's account.
    - Employee and employer contributions are transferrable into other qualified plans.
- For SURS and TRS
    - Employer Contribution: DB Normal Cost - Employee Contribution + 2% (expressed as a % of payroll)

MEABF and LABF Retirement Eligibility (New Tier 3 DB Schedule of Benefits)

- Between October 1, 2017 and November 15, 2017, existing Tier 2 members who began service prior to the effective date of this Act (July 6, 2017) shall make an irrevocable decision to be eligible for the new Tier 3 retirement options described below:
    - Those who elect to gain eligibility for the new Tier 3 schedule of benefits will be subject to the Tier 3 employee contribution rates.
- Tier 3 Employee Contribution Rates
    - After the effective date of this Act, but prior to January 1, 2018: 7.5%
    - January 1, 2018 and prior to January 1, 2019: 8.5%
    - January 1, 2019 and thereafter: the lesser of:
        - Normal Cost using the Entry Age Normal (EAN) actuarial method (no less than 6.5%), or
        - 9.5%
    - This rate (the lesser of the normal cost or 9.5%) shall resume until the systems have reached a 90% funding ratio, at which point the employee contribution shall be reduced to 5.5% of salary.
        - If the funding ratio falls below 75%, then the employee contribution shall revert to the previous amount.
- Tier 3 Benefits
    - New hires that are at least 65 years of age with at least 10 years of service credit are entitled to a retirement annuity upon written application.
    - New hires who retire between the age of 60 and 65, with at least 10 years of service credit, shall have their annuity reduced by 0.5% for each month that he or she is under age 65.

Changes in State Contributions

- For SURS and TRS**,** in fiscal years 2018 through 2020, the State shall contribute an additional 2% of payroll of each Tier 3 employee.
- For SURS and TRS, if the amount of a participant's salary exceeds the amount of the Governor's salary, the employer shall pay to the System an amount equal to the employer normal cost multiplied by the excess amount of salary.
- State contribution-altering changes in actuarial or investment assumptions shall be implemented and smoothed over a 5-year period beginning in FY 18.

Chicago Fire COLA

- Firefighters born after December 31, 1954 but before January 1, 1966 and retired after September 1, 1967 are entitled to a 3% noncompounded annuity increase upon:
  - The 1st of the month following the 1-year anniversary of retirement, and every 1st of January thereafter
  - Or following the attainment of age 55 if they were not 55 after 1 year of retirement
- Firefighters that meet the aforementioned criteria prior to this Act will receive an increase to their annuity as if they had received a 3% increase each year rather than 1.5%.
  - *P.A. 101-0673, effective April 5, 2021, removed the birthdate restriction and sets the annual Tier 1 increase to 3% non-compounded for all retirees at least 55 years of age with 20 years of service. P.A. 101-0673 further stipulates that firefighters who were not eligible for the 3% increase prior to the effective date of the bill will receive a 3% increase for each year the firefighter would have otherwise been eligible had the firefighter not received any increase.*

Chicago Municipal and Laborers Tax Levy

- Beginning in 2017, the property tax levy cannot exceed the amount of the city's total required contribution for the following year.

III. Public Act 100-0587 (HB 3342)

Voluntary Accelerated Pension Benefit Programs – SERS, TRS, and SURS
Public Act 100-0587
House Bill 3342 – Harris (Steans)

I. Overview of Key Provisions of Public Act 100-0587 (HB 3342)
Effective Date

- June 4, 2018

Systems Impacted

- SERS, TRS, and SURS

Voluntary Pension Buyout for Vested, Inactive Members
Until June 30, 2021, an eligible member in SERS, SURS, or TRS may irrevocably elect to receive an accelerated pension benefit payment equal to 60% of the present value of a member's pension benefit in lieu of receiving any pension benefit. An eligible member means a person who:

1) Is an inactive member in a DB plan;
2) Has enough credits to receive a retirement annuity (i.e. vested);
3) Has not received any retirement annuity; and
4) Has not elected the compounded 3% COLA buyout option.

The accelerated pension payments would be paid from the proceeds of the State Pension Obligation Acceleration Bonds.

Each system made assumptions regarding the total pension buyout plan for vested, inactive members in their respective 2020 valuations as follows:

- TRS : "22%" of eligible inactive members are assumed to elect the pension buyout, which is "consistent with the assumptions used by the Illinois legislation."
- SURS: "0% of eligible inactive members are assumed" to elect the buyout plan.
- SERS : "5 percent of eligible inactive members are assumed" to elect the pension buyout plan.

Voluntary Compounded 3% COLA Buyout for Tier 1 Members

An eligible member in SERS, SURS, or TRS may irrevocably elect to receive an accelerated pension benefit payment equal to 70% of the difference of the present value of the 3% compounded COLA and the present value of a reduced COLA (simple 1.5%) in exchange for receiving a simple 1.5% COLA. An eligible member means a person who:

1) Is a Tier 1 member in a DB plan;
2) Has submitted an application for retirement;
3) Meets age and service requirements to receive a retirement annuity;
4) Has not received any retirement annuity; and
5) Has not elected the inactive vested pension buyout option, which is the other voluntary buyout option mentioned above.

The accelerated pension benefit payments would be paid from the proceeds of the State Pension Obligation Acceleration Bonds.

Each system made assumptions regarding the COLA buyout plan in their respective 2020 valuations as follows:

- TRS : "15% of eligible retiring Tier 1 members are assumed" to elect the COLA buyout.
- SURS: "0% of eligible Tier 1 active members are assumed" to elect the COLA buyout plan.
- SERS : "21% of eligible Regular formula members and 28% of eligible Alternative formula members are assumed" to elect the COLA buyout plan.

Teachers' Final Salary Spiking Cap of 3%

For purposes of determining the final average salary, a teacher's annual salary increase with the same employer under SURS or TRS was capped at 3% for academic years beginning on or after July 1, 2018 and for salary under a contract or collective bargaining agreement on or after June 4, 2018 (the effective date of P.A. 100-0587). Prior to the enactment of P.A. 100-0587, the final salary cap was 6%. However, the final average salary cap rate reverted back to 6%, pursuant to P.A. 101-0010, which became effective on June 5, 2019. Please refer to the P.A. 101-0010 section on the next page.

Recertification of FY 2019 State Contributions

Between June 15, 2019, and June 30, 2019, TRS, SURS, and SERS shall recalculate and recertify State contributions for FY 2019, taking into account all changes made by P.A. 100-0587.

State Pension Obligation Acceleration Bonds

The State Pension Obligation Acceleration Bonds of $1 billion would be authorized to be issued for the accelerated pension benefit payments for SERS, SURS, and TRS.

IV. Public Act 101-0010 (SB 1814)

Extension of the Voluntary Pension Buyout Programs – SERS, TRS, and SURS
Public Act 101-0010
Senate Bill 1814 – Steans (Harris)

I. Overview of Key Provisions of Public Act 101-0010 (SB 1814)
Effective Date

- June 5, 2019

Systems Impacted

- SERS, TRS and SURS

Extension of the Two Voluntary Pension Buyout Programs
The two existing pension buyout programs for TRS, SURS, and SERS, created by P.A. 100-0587, were extended by 3 years to June 30, 2024, from June 30, 2021, as summarized below.

- Total pension buyout plan: If an eligible inactive, vested member irrevocably participates in the total pension buyout plan, the member would receive an accelerated pension benefit payment equal to 60% of the present value of a member's pension benefit in lieu of receiving any pension benefit.

- 3% COLA buyout plan: If an eligible Tier 1 member irrevocably participates in the COLA buyout plan, the member would receive a lump sum payment equal to 70% of the difference of the present value of 3% compounded COLA and the present value of a reduced COLA (simple 1.5%) in exchange for receiving a simple 1.5% COLA at the later of January 1 following age 67 or the first anniversary of retirement.

Each system made participation assumptions regarding the pension buyout plans in their respective 2020 valuations as shown in the table below:

System	Total Pension Buyout Plan	COLA Buyout
TRS	22% of eligible inactive members	15% of eligible Tier 1 members
SURS	0% of eligible inactive members	0% of eligible Tier 1 members
SERS	5% of eligible inactive members	21% of eligible Tier 1 Regular formula members; and 28% of eligible Tier 1 Alternative formula members

Reinstatement of Teachers' Final Average Salary (FAS) Cap of 6% for TRS and SURS
P.A. 94-0004, which took effect on June 1, 2005, implemented an "excess salary increase penalty" for school districts and universities in both TRS and SURS. Under the Act, for purposes of determining the final average salary, if a teacher's full-time equivalent annual salary increases more than the salary increase cap with the same employer, the (local) employer would have to make a payment to the retirement system equal to the present value of the increase in benefits

resulting from the salary increase in excess of the salary increase cap. P.A. 94-0004 established a 6% "excess salary increase penalty." P.A. 100-0587, which took effect on June 4, 2018, lowered the cap to 3%. Pursuant to P.A. 101-0010, the final salary cap reverted back to 6%.

V. Public Act 101-0610 (SB 1300)

Creation of the Consolidated Police and Fire Pension Investment Funds for Articles 3 and 4 Pension Funds

Public Act 101-0610

Senate Bill 1300 – Castro (Hoffman)

I. Overview of Key Provisions of Public Act 101-0610 (SB 1300, as Amended by HA 5 - 7)

Effective Date

- January 1, 2020

Systems Impacted

- Downstate Police (Article 3), Downstate Fire, (Article 4), TRS, SURS, IMRF, SERS

Consolidated Police and Firefighter Pension Investment Funds

Under P.A. 101-0610, as soon as practicable after the effective date (January 1, 2020) of this Act, but no later than 30 months afterwards, each Article 3 and Article 4 fund shall transfer all of its securities, funds, assets, and moneys to the newly created Police Officers' and Firefighters Pension Investment Funds (this period of time is referred to in the amendment as "the transition period"). Upon transferal, the two consolidated Funds will assume management and investment authority, and the Article 3 and Article 4 funds shall no longer exercise control over such securities, funds, assets, and moneys.

The Transition Boards for the Consolidated Funds

- For each consolidated fund, the Governor will appoint a 9 member, temporary transition board within 1 month of the Act's effective date.
- Each transition board will select a chairperson from among the trustees and will consist of the following members:
    - 3 members representing municipalities who are mayors, presidents, chief executive officers, chief financial officers, or other officers or executives of municipalities. They will be appointed from among candidates recommended by the Illinois Municipal League.
    - 3 selected from participant members, as detailed below:
        - For the Police Fund transition board, 2 will be appointed from among candidates recommended by an organization representing more than 20,000 active and retired police officers in the State of Illinois, and one will be appointed from among candidates recommended by a benevolent association representing police officers in the State of Illinois.
        - For the Firefighter Fund transition board, all 3 will be recommended by a statewide labor organization representing at least 85 municipalities and which is affiliated with the Illinois State Federation of Labor.
    - 2 employee/annuitant members, as detailed below:
        - For the Police Fund, 2 members selected from beneficiary members. One will be appointed from among candidates recommended by an organization

representing more than 20,000 active and retired police officers in the State of Illinois, and one will be appointed from among candidates recommended by a benevolent association representing police officers in the State of Illinois.

    - For the Firefighter Fund transition board, one member will be selected from beneficiary members. They will be recommended by a statewide labor organization representing at least 85 municipalities and which is affiliated with the Illinois State Federation of Labor. One will be a participant member recommended by a statewide labor organization representing at least 85 municipalities and which is affiliated with the Illinois State Federation of Labor.
  - 1 representative of the Illinois Municipal League

- The "transition period" begins on the effective date of the Act and will end when so determined by the transition board. The transition boards cannot function for a period longer than 30 months.
- The transition board members will serve until the end of the transition period and until the permanent board members are elected.
- This initial election for the permanent board will be administered and conducted by the transition board, with the permanent board determining the procedure for all future elections.

The Permanent Boards of Trustees for the Consolidated Funds

- The permanent Boards of Trustees will consist of 9 members, as follows:
  - 3 employer members who are mayors, presidents, chief executive officers, chief financial officers, or other officers or executives of municipalities. They will be elected by the mayors and presidents of municipalities with participating pension funds.
  - 3 members elected by and from active participant members
  - For the Police Board, 2 members elected by and from beneficiary members
  - For the Firefighter Board, 1 member elected by and from beneficiary members Also, for the Firefighter Board, 1 member appointed by the Governor with the advice of the Senate following recommendation by a statewide labor organization representing at least 85 municipalities and which is affiliated with the Illinois State Federation of Labor
  - 1 member recommended by the Illinois Municipal League and appointed by the Governor, subject to Senate confirmation
- The Chairperson of the permanent boards will serve 2 year terms and will be selected from among the trustees.

Consolidation Timeline of Events

- The transition board will audit the investment assets of each current Article 3 and Article 4 fund as soon as practicable after the effective date of the bill.
- Once the audit is certified by both the newly created board(s) and the existing Article 3 and Article 4 funds, the transfer of assets will begin within 10 business days.
- The interim executive directors of each newly created board, appointed by the Governor until the permanent boards appoint their own, will notify the board of trustees of existing Article 3 and Article 4 funds no less than 30 days before the consolidated Fund takes control of their assets.
- Within 90 days after the end of the transition period, all remaining assets in any Article 3 and Article 4 fund must be transferred into the consolidated Fund.
- Within 6 months after the end of the transition period, a public accountant selected by the consolidated boards will audit the consolidated funds. The report will be published on the Funds' website and filed with the Department of Insurance.
- Quarterly reports will be issued by the consolidated Funds to Article 3 and Article 4 funds detailing the status of investments.
- A yearly, more comprehensive report will be published by the consolidated funds describing their investment operations, yearly performance, and other related information. Included in this report will also be the results of an audit undertaken by an accounting firm selected by the board of the consolidated fund.

Relinquishment of Investment Authority for Article 3 and Article 4 Funds

The General Provisions article is amended so that Article 3 and Article 4 funds shall, upon transferal of assets, no longer exercise any investment authority over such investments.

Illinois Finance Authority Loan Authorization

The Illinois Finance Authority is authorized to loan up to $7,500,000 to each consolidated Fund to assist with the costs associated with the transition process. The loan shall be repaid by the Fund with an interest rate tied to the Federal Funds Rate or an equivalent market established variable rate. Such agreement will be made public record and the terms of the loan will be posted on the Fund's official website.

Department of Insurance Examinations and Investigations

Under the Pension Code, the Department of Insurance may accept, in lieu of conducting their own investigation, an audit or examination performed by an independent certified public accountant on behalf of any pension system. Such audits and examinations shall be conducted once every three years. P.A. 101-0610 grants the consolidated funds the same powers to conduct audits and/or investigations that the Department of Insurance exercises. In other words, under P.A. 101-0610, after the end of the transition period, the Department of Insurance may accept and rely upon an audit or examination performed by an independent certified public accountant retained by the consolidated funds.

Annual Financial and Actuarial Statements

After the conclusion of the transition period, each actuarial statement will be prepared by or under the supervision of an actuary retained by the consolidated funds. P.A. 101-0610 also implements 3-year "actuarial assumption smoothing" for the consolidated funds, whereby the net impact of any changes in actuarial or investment assumptions will be implemented in equal annual amounts over a 3-year period, beginning in the fiscal year in which the change first occurs. ("Actuarial assumption smoothing" was implemented for the five State systems in 2017 via P.A. 100-0023).

Article 3 and Article 4 Pension Funds, Tier 2 Final Average Salary

Prior to the effective date (January 1, 2020) of P.A. 101-0610, Tier 2 employees of Article 3 and Article 4 funds had their pensions based on their final average salaries using the 96 consecutive months of service during which their total salary is highest within their last 120 months of service. P.A. 101-0610 amends the Downstate Police and Fire Pension Code so that:

- Tier 2 employees' final average salaries are calculated using the greater of (i) the method, previously summarized, or (ii) the 48 consecutive months of service when their total salary is highest within their last 60 months of service.

Article 3 and Article 4 Pension Funds, Computation of Final Average Salary Cap

Under the Pension Code, the highest salary that can be used for calculation of a final average salary for Tier 2 employees in an Article 3 or Article 4 fund is $106,800. However, prior to the effective date (January 1, 2020) of P.A. 101-0610, that amount had been increased annually since 2011 by the lesser of (i) 3% of that amount, or (ii) 50% of the annual unadjusted percentage increase in the consumer price index-u. P.A. 101-0610 amends Pension Code so that:

- The final average salary cap increases by the lesser of (i) 3% of that amount, or (ii) 100% of the annual unadjusted percentage increase in the consumer price index-u.
- The Act does not permit retroactive changes in employee contributions.
- COLA's will still be computed at simple interest.

Article 3 and Article 4 Pension Funds, Tier 2 Survivor Pensions

For Article 3 and Article 4 fund employees in the Tier 2 system, prior to P.A. 101-0610, survivor pensions for spouses, children, or parents of a police officer or firefighter were equal to 66 2/3% of the police officer or firefighter's earned pension at the date of death. P.A. 101-0610 amends the Pension Code so that:

- The survivors are entitled to the greater of (i) the survivor benefit, previously described, or (ii) 54% of the police officer or firefighter's monthly salary at the date of death.
- If a survivor is a spouse, then the guardian of any minor children, including children not yet born, is entitled to 12% of such monthly salary for each child until they reach 18.
- A monthly pension of 20% of such monthly salary is granted upon the death of the surviving spouse, or upon the death of a police officer or firefighter leaving one or more minor children but no surviving spouse, to an appointed guardian until the children reach 18.

- The total survivor's pension provided shall not exceed 75% of the monthly salary of the deceased officer or firefighter when paid to the survivor of an officer or firefighter who:
  - Has attained 20 or more years of service credit and receives or is eligible to receive a pension.
  - Dies as a result of illness or accident.
  - Dies from any cause while in receipt of a disability pension.
  - Is a deferred pensioner.

Changes in Training Requirement for Article 3 and 4 Pension Trustees

Prior to P.A. 101-0610, all elected and appointed trustees for Downstate Police and Fire pension funds must undergo 32 hours of initial trustee training certification in a variety of areas, including fiduciary fundamentals, adjudication of pension claims, and trustee ethics, among others. P.A. 101-0610 reduces the initial hourly commitment to 16 hours of training, and deletes the requirement that trustees undergo "basic accounting and actuarial training." The Act requires all trustees elected or appointed before the effective date of this Act to undergo 4 hours of training on the changes made by this Act. In addition, the Act reduces the annual continuing education requirement for trustees from 16 hours to 8 hours.

Alternative (State Police) Formula Eligibility for Certain Police Officers

P.A. 101-0610 amends the General Provisions and State Employees articles of the Illinois Pension Code to allow Conservation police officers, Secretary of State investigators, Commerce Commission police officers, arson investigators, and investigators for the Department of Revenue or the Illinois Gaming Board to qualify for the alternative (state police) formula in SERS as of the effective date of the Act. The Act also allows these officers the opportunity to convert up to eight years of prior regular formula service credit into alternative formula service. In order to convert these years of service, the officer must apply within one year of the effective date of this Act, and pay to SERS an amount equal to the difference between what was actually paid for the regular formula service and what would have been paid had the service been accrued under the alternative formula, plus interest at the actuarially assumed rate, compounded annually, from the date of service to the date of payment.

Reinstatement of Eligibility for Certain Survivor Annuities in IMRF

P.A. 99-682 was enacted to allow those IMRF members who had retired prior to the passage of the Illinois Religious Freedom Protection and Civil Union Act (P.A. 96-1513) to reinstate a survivor benefit after retirement. P.A. 101-0610 would extend this right to the surviving spouse of an annuitant, provided the annuitant (1) retired prior to June 1, 2011, (2) was not married on the date the retirement annuity began, (3) received a refund of survivor credits; and (4) died prior to the implementation of P.A. 99-682. Eligible surviving spouses may re-establish survivor benefit rights by paying to IMRF the total amount of the refund received for survivor credits, including interest, within one year beginning 5 months after the effective date (January 1, 2020) of the Act. The surviving spouse would be required to provide documentation proving that he or she was married to the annuitant at the time of death and has not since remarried.

Optional Service Credit for Certain State Police Officers

P.A. 101-0610 allows State Police officers to establish up to 5 years of service credit for law enforcement service with the federal government, or by a state or local government located outside Illinois, provided credit for such service is not held in another public pension fund. In order to establish this service credit, the officer must pay to SERS the following amounts: 1) employee contributions based on the applicant's salary on the first day of service in Illinois following the out-of-state employment, plus 2) the employer's normal cost of the benefit for the service credit being established, plus 3) interest at the actuarial rate of return on the foregoing amounts. The officer must apply for this optional service within 3 years of the effective date of this Act. P.A. 101-0610 also added investigators for the Department of Revenue or the Illinois Gaming Board to the list of police officers now eligible for the SERS alternative (State Police) formula, and to convert up to 8 years of previous regular formula service credit into alternative formula service, as described in the pertinent section above.

Change in Retirement Eligibilities for Certain SURS Tier 2 members

SURS provides different formula rate structures to calculate retirement annuities. Among the several formula rate structures, "Rule 4" applies to police officers and firefighters. It provides a higher formula than the flat 2.2% rate under "Rule 1." Graduated formula rates for Rule 4 are as follows:

- For each of the first 10 years: 2.25%
- For each of the next 10 years: 2.50%
- For each in excess of 20 years: 2.75%

Prior to P.A. 101-0610, the Tier 2 eligibility for the Rule 4 formula was age 67 with at least 20 years of service as a police officer or a firefighter for the full retirement annuity, as opposed to age 50 with 25 years or age 55 with 20 years for Tier 1 members. Under P.A. 101-0610, the eligibility for the Rule 4 formula rates is lowered to age 60 with 20 years for Tier 2 public safety members. This change applies retroactively to January 1, 2011.

SURS Board of Trustees

Prior to P.A. 101-0610, the Chairperson of the Board of Higher Education became the Chairperson of the SURS board by statutes. Under P.A. 0610, the Governor appoints the Chairperson of the Board from among the trustees.

Change in the Structure of the TRS Board of Trustees

Prior to P.A. 101-0610, the TRS Board consisted of 13 members, as follows:

- the Superintendent of Education, ex officio, who shall be the president of the board by law;
- 6 non-members of TRS, appointed by the Governor and not to hold elected State office;
- 4 teachers elected by the TRS members; and
- 2 annuitant members elected by TRS annuitants.

Under P.A. 101-0610, the number of the TRS Board members increases to 15, with one more non-member appointed by the Governor and one more teacher elected by TRS members. In other words, the board has 7 non-members instead of 6, and 5 teachers instead of 4. In addition, the president of the board is appointed by the Governor, rather than the Superintendent of Education automatically serving as the president of the board.

VI. Pension Legislation History

86th General Assembly (1989 – 1990)

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

Public Act 86-0273, which took effect on August 23, 1989, provided for compounded 3% annual cost of living adjustments (COLAs) 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 COLAs had been calculated on a simple noncompounded basis.

88th General Assembly (1993 – 1994)

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 – 1998)

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 – 2000)

“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 – 2002)

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 noncoordinated 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 – 2004)

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.

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 those employees participating in the Money Purchase plan.

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.

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 a reduction in annuity. 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 created 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 a reduction in annuity. 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.

Note: The TRS ERO was allowed to automatically sunset on July 1 of 2016.

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 extended 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. *The Modified ERO program was allowed to sunset on July 1, 2016 because an extension was not approved by the General Assembly. According to CTPF, the effective date of the last ERO contract was 9/24/2008.*

Note - The Modified ERO program was allowed to sunset on July 1, 2016 because an extension was not approved by the General Assembly. According to CTPF, the effective date of the last ERO contract was 9/24/2008.

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.

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; and
- 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 – 2010)

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 established 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.

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 96-0006 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 96-0006 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 96-0006 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 96-0006 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 96-0006 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 96-0006 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 financial 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 96-0006 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 96-0006 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 96-0006 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 96-0006 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 96-0006 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 the Pension 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 96-0006 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 96-0006 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 96-0006 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 96-0006 amends the Illinois Pension Code to create a new section prohibiting 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 96-0006 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; and

(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 96-0006 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 96-0006 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 initially elected members shall be 2 for a term of 3 years and 2 for a term of 6 years; and

(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 initially elected members 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 96-0006 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 96-0006 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.

Two-Tier Pension Reform (P.A. 96-0889)
Public Act 96-0889, effective January 1, 2011, amends the Pension Code to create a Tier 2 schedule of benefits for IMRF, Chicago Municipal, Cook County, Cook County Forest Preserve, Chicago Laborers, Chicago Park District, Metropolitan Water, SERS, SURS, TRS, and Chicago Teachers. (Judges and GA separate; CTA, Police, and Fire excluded.)

The benefit provisions are slightly different among public safety employees including correctional guards, non-public safety employees, and Judges and General Assembly.

Except for State police officers, firefighters, and Correctional guards, the normal retirement age is 67 years old with 10 years of service. Early retirement is available at age 62 with 10 years of service, however, this results in a reduction in benefits by 6% for each year under age 67. The annuity is based on the highest 8 years out of last 10 years of service, and the pensionable salary is capped at $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.

For State Police Officers, Firefighters, and Correctional Guards, the normal retirement age is 60 years old with 20 years of service. However, State Police officers, Firefighters, and DOC Guards are still eligible for Alternative Formula.

The Tier 2 COLA will be payable at the latter of the first anniversary of retirement or age 67 with an increase rate tied to the CPI-U. The increase rate is the lesser of 3% or one-half the annual increase in the CPI-U during the preceding 12-month calendar year; if an increase in CPI is zero or if there is a decrease in CPI, then no COLA is payable. The Tier 2 COLA is not compounded.

Survivor benefits will be payable at 66.7% of the earned retirement benefit at death, and will increase annually at the same rate (the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year). Also, the annual increase will not be compounded.

As mentioned above, retirement benefit provisions for the Judges and General Assembly systems are separate from the rest of the pension systems. The normal retirement age is 67 years of age with 8 years of service, and early retirement is available at age 62 with 8 years of service. Like other pension systems, early retirement will result in a reduction in benefits by 6% for each year under age 67. The retirement annuity is based on the highest 8 out of the final 10 years of service.

For GARS and JRS, the benefit formula is also changed to 3% of Final Average Salary for each year of service, and the maximum annuity is capped at 60% of Final Average Salary. The annual increases in annuity begin after attainment of age 67, and the increase rate equals the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year, which is the same as the aforementioned funds. However, annual increases are compounded.

Survivor benefits are payable at 66.7% of the earned retirement benefit at death, and will increase annually at the rate of the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year. Also, annual increases will be compounded.

P.A. 96-0889 added two non-benefit provisions. One is that "Double Dipping" is prohibited. In some cases, retirees were allowed to simultaneously collect a pension and a salary with a public employer. The other provision is changes in the Chicago Teachers' funding plan. Contributions for FY 2011 – 2014 are specified in this Act, and the CTPF's funding plan is extended such that the pension fund must attain a 90% funded ratio by FY 2059.

Two-Tier Pension Reform for Police and Fire Pension Funds (P.A. 96-1495)
Public Act 96-1495, effective January 1, 2011, amends the Pension Code to create the Tier 2 system for Downstate Police, Downstate Fire, Chicago Police, Chicago Fire, and IMRF (SLEP). The major provisions of the Act are briefly summarized below.

The normal retirement age is 55 years old with 10 years of service. Early retirement is available at age 50 with 10 years of service, however, this results in a reduction in benefits by 6% for each year the retiree is under age 55. The annuity is calculated at the rate of 2.5% of Final Average Salary for a maximum of 75%, and is based on the highest 8 years out of last 10 years of service. The 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 retirement annuity, tied to the CPI, will begin at age 60 either on the January 1st after the police officer/firefighter retires or the first anniversary of the commencement of the pension starting date, whichever is later. The annual increase is the lesser of 3% or one-half the annual increase in the CPI-U during the preceding 12-month calendar year; if an increase in CPI is zero or if there is a decrease in CPI, then no COLA is payable. The COLA for Tier 2 annuitants is not compounded.

Similar to retirement annuity, survivor benefits are payable at 66.7% of the earned retirement benefit at death, and will increase annually at the same rate (the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year). Also, annual increases will not be compounded.

Police/Fire Municipal Funding Provisions (P.A. 96-1495)
P.A. 96-1495 changed the funding goal for Article 3 and 4 pension funds such that the funding ratio must reach 90% by FY 2040. Also, annual municipal contributions will be calculated as a level percentage of payroll under the Projected Unit Credit Actuarial Cost Method. The Comptroller is authorized to redirect funds otherwise payable directly to municipalities if municipal contributions are deemed to be actuarially insufficient.

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 – 2012)

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 the 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)
P.A. 98-0042 extended the Early Retirement Option in TRS for members who retired on or after July 1, 2013 and before July 1, 2016. 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, CGFA'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 10th, 2013.

100th General Assembly (2017 – 2018)

Creation of Tier 3 (P.A. 100-0023)
P.A. 100-0023, effective July 6, 2017, created an optional Tier 3 hybrid plan for the following pension funds: Chicago Municipal, Cook County, Cook County Forest Preserve, Chicago Laborers, Chicago Park District, SERS (non-coordinated members), SURS, TRS, and Chicago Teachers. *Please refer to the P.A. 100-0023 section for the summary of the Tier 3 plan.*

For *SERS (only for non-coordinated members), TRS, and SURS,* each system shall endeavor to make participation available "as soon as possible." This requirement is referred to as the "implementation date." Tier 3 benefits are available as soon as the board of that respective system authorizes members to begin participation. Employees hired on or after the "implementation date" and existing Tier 2 members must make the election to participate in Tier 3 within 30 days of becoming a member in the pertinent system.

For *Chicago Municipal, Cook County, Cook County Forest Preserve Employees, LABF, Chicago Park District, and Chicago Teachers*, Tier 3 benefits are available beginning 6 months after the approval of the governing body of the unit of local government. No later than 5 months after the approval of the Tier 3 plan, the affected system shall prepare and implement the defined contribution component of the Tier 3 hybrid plan. Newly hired members must make the election to participate in the Tier 3 hybrid system within 30 days of becoming a member in the pertinent system.

Governor's Salary Cap for SURS and TRS (P.A. 100-0023)
If the amount of a participant's salary exceeds the amount of the Governor's salary, the employer shall pay to the System an amount equal to the employer normal cost multiplied by the excess amount of salary.

Assumption Smoothing for the 5 State Systems (P.A. 100-0023)
State contribution-altering changes in actuarial or investment assumptions shall be implemented and smoothed over a 5-year period beginning in FY 18.

- State contribution-altering changes in actuarial or investment assumptions that first applied in fiscal year 2014, 2015, 2016, or 2017 shall be retroactively smoothed over a 5-year period, beginning with and including the year in which the actuarial change first applied.
- By November 1, 2017, the amount of the State Contribution shall be recertified to include retroactive smoothing.

Changes in Chicago Fire COLA (P.A. 100-0023)
P.A. 100-0023 amends the Chicago Fire Article of the Pension Code such that firefighters born after December 31, 1954 but before January 1, 1966 and retired after September 1, 1967 are entitled to a 3% noncompounded annuity increase upon:

- The 1st of the month following the 1-year anniversary of retirement, and every 1st of January thereafter; or
- Following the attainment of age 55 if they were not 55 after 1 year of retirement

Two Voluntary Pension Buyout Programs for SERS, TRS, and SURS (P.A. 100-0587)
P.A. 100-0587, effective June 4, 2018, amends the Pension Code to create two voluntary pension buyout programs for SERS, TRS, and SURS: The total Pension Buyout Program and the 3% COLA Buyout Program. Each program is briefly summarized as follows:

Total Pension Buyout
Until June 30, 2021, inactive, vested Tier 1 or Tier 2 members in SERS, SURS, or TRS may irrevocably elect to receive an accelerated pension benefit payment equal to 60% of the present value of a member's pension benefit in lieu of receiving any pension benefit. The accelerated pension payments would be paid from the proceeds of the State Pension Obligation Acceleration Bonds.

Voluntary Compounded 3% COLA Buyout
A vested, retiring Tier 1 defined benefit member in SERS, SURS, or TRS may irrevocably elect to receive an accelerated pension benefit payment equal to 70% of the difference of the present value of 3% compounded COLA and the present value of a reduced COLA (simple 1.5%) in exchange for receiving a simple 1.5% COLA. The accelerated pension benefit payments would be paid from the proceeds of the State Pension Obligation Acceleration Bonds.

Teachers' Final salary Spiking Cap of 3% for TRS and SURS (P.A. 100-0587)
For purposes of determining a teacher's or university employee's pensionable salary, annual salary increases with the same employer under SURS or TRS are effectively capped at a certain rate. (This "Final Average Salary Cap," as it is known, was implemented by P.A. 94-0004.) If a teacher's full-time equivalent annual salary increases by more than the specified FAS cap rate with the same employer, the (local) employer would have to make a payment to TRS or SURS equal to the present value of the increase in benefits resulting from the salary increase in excess of the capped rate. P.A. 100-0587 lowered the cap to 3% from 6% for academic years beginning on or after July 1, 2018 and for salary under a contract or collective bargaining agreement on or after June 4, 2018 (the effective date of P.A. 100-0587). However, please note that P.A. 101-0010*, summarized below*, increased the FAS cap back to 6%.

Recertification of FY 2019 State Contributions for SERS, SURS, and TRS (P.A. 100-0587)
Between June 15, 2019, and June 30, 2019, each System shall recalculate and recertify State contributions for FY 2019, taking into account all changes made by P.A. 100-0587.

101st General Assembly (2019 – 2020)

Extension of the Voluntary Pension Buyout Programs (P.A. 101-0010)
The election period for the two existing pension buyout programs, created by P.A. 100-0587, were extended by 3 years to June 30, 2024, from June 30, 2021.

Reinstatement of Teachers' Final Average Salary (FAS) Cap of 6% for TRS and SURS (P.A. 101-0010)
For purposes of determining a teacher's or university employee's pensionable salary, annual salary increases with the same employer under SURS or TRS are effectively capped at a certain rate. (This "Final Average Salary Cap," as it is known, was implemented by P.A. 94-0004.) If a teacher's full-time equivalent annual salary increases by more than the specified FAS cap rate with the same employer, the (local) employer would have to make a payment to TRS or SURS equal to the present value of the increase in benefits resulting from the salary increase in excess of the capped rate. P.A. 101-0010 effectively repealed the lower 3% FAS cap implemented by P.A. 100-0587, restoring the cap to 6% for academic years beginning on or after July 1, 2018 and for salary under a contract or collective bargaining agreement on or after June 4, 2018 (the effective date of P.A. 100-0587).

GRF Lump-sum Appropriation for SERS (P.A. 101-0010)
When State agencies make employer contributions to SERS, the contributions shall be made for each pay period by warrants by the State Comptroller against their respective funds or appropriations based on vouchers. However, contributions for the GRF payrolls are not required to be processed by the Comptroller. Since 2012 the GRF portion of State contributions has been paid by lump sum, via the Budget Implementation bill for the past several years, according to SERS. P.A. 101-0010 eliminates the need to include the appropriation process for the GRF portion of State contributions in the Budget Implementation bill every year as the process would be made permanent under this Act. SERS stated the percentage of total members who are on the GRF payrolls is approximately 65%.

Consolidated Police and Fire Pension Investment Funds (P.A. 101-0610)

Under P.A. 101-0610, as soon as practicable after the effective date (January 1, 2020) of this Act, but no later than 30 months afterwards, each Article 3 and Article 4 fund shall transfer all of its securities, funds, assets, and moneys to the newly created Police Officers' and Firefighters Pension Investment Funds (this period of time is referred to in the amendment as "the transition period"). Upon transferal, the two consolidated Funds will assume management and investment authority, and the Article 3 and Article 4 funds shall no longer exercise control over such securities, funds, assets, and moneys.

The Transition Boards for the Consolidated Funds (P.A. 101-0610)
For each consolidated fund, the Governor will appoint a 9-member, temporary transition board within 1 month of the Act's effective date. Each transition board will select a chairperson from among the trustees and will consist of 3 members representing municipalities, 3 selected from participant members, 2 employee/annuitant members, and 1 representative of the Illinois Municipal League. The "transition period" begins on the effective date (January 1, 2020) of the Act and will end when so determined by the transition board. The transition boards cannot function for a period longer than 30 months. The transition board members will serve until the end of the transition period and until the permanent board members are elected. This initial election for the permanent board will be administered and conducted by the transition board, with the permanent board determining the procedure for all future elections.

The Permanent Boards of Trustees for the Consolidated Funds (P.A. 101-0610)
The permanent Boards of Trustees will consist of a total of 9 members. More specially, the Police Board will consist of 3 employer members, 3 members elected by active participant members, 2 members elected by beneficiary members, and 1 member recommended by the Illinois Municipal League. The Firefighter Board will consist of 3 employer members, 3 members elected by active participant members, 1 member elected by beneficiary members, 1 member appointed by the Governor, and 1 member recommended by the Illinois Municipal League. The Chairperson of the permanent boards will serve 2-year terms and will be selected from among the trustees.

Consolidation Timeline of Events (P.A. 101-0610):
The transition board will audit the investment assets of each current Article 3 and Article 4 fund as soon as practicable after the effective date of the bill. Once the audit is certified by both the newly created board(s) and the existing Article 3 and Article 4 funds, the transfer of assets will begin within 10 business days. The interim executive directors of each newly created board, appointed by the Governor until the permanent boards appoint their own, will notify the board of trustees of existing Article 3 and Article 4 funds no less than 30 days before the consolidated Fund takes control of their assets. Within 90 days after the end of the transition period, all remaining assets in any Article 3 and Article 4 fund must be transferred into the consolidated Fund. Within 6 months after the end of the transition period, a public accountant selected by the consolidated boards will audit the consolidated funds. The report will be published on the Funds' website and filed with the Department of Insurance. Quarterly reports will be issued by the consolidated Funds to Article 3 and Article 4 funds detailing the status of investments. A yearly, more comprehensive report will be published by the consolidated funds describing their investment operations, yearly performance, and other related information. Included in this report will also be the results of an audit undertaken by an accounting firm selected by the board of the consolidated fund.

Relinquishment of Investment Authority for Article 3 and Article 4 Funds (P.A. 101-0610)
The General Provisions article is amended so that Article 3 and Article 4 funds shall, upon transferal of assets, no longer exercise any investment authority over such investments.

Illinois Finance Authority Loan Authorization (P.A. 101-0610)
The Illinois Finance Authority is authorized to loan up to $7,500,000 to each consolidated Fund to assist with the costs associated with the transition process. The loan shall be repaid by the Fund with an interest rate tied to the Federal Funds Rate or an equivalent market established variable rate. Such agreement will be made public record and the terms of the loan will be posted on the Fund's official website.

Department of Insurance Examinations and Investigations (P.A. 101-0610)
Under P.A. 101-0610, after the end of the transition period, the Department of Insurance may accept and rely upon an audit or examination performed by an independent certified public accountant retained by the consolidated funds. Such audits and examinations shall be conducted once every three years.

Annual Financial and Actuarial Statements (P.A. 101-0610)
After the conclusion of the transition period, each actuarial statement will be prepared annually by or under the supervision of an actuary retained by the respective investment funds. Additionally, P.A. 101-0610 implements 3-year "actuarial assumption smoothing" for the consolidated funds, whereby the net impact of any changes in actuarial or investment assumptions will be implemented in equal annual amounts over a 3-year period, beginning in the fiscal year in which the change first occurs. ("Actuarial assumption smoothing" was implemented for the five State systems in 2017 via P.A. 100-0023).

Article 3 and Article 4 Pension Funds, Tier 2 Final Average Salary (P.A. 101-0610)
Prior to the effective date (January 1, 2020) of P.A. 101-0610, Tier 2 employees of Article 3 and Article 4 funds had their pensions based on their final average salaries using the 96 consecutive months of service during which their total salary is highest within their last 120 months of service. Under P.A. 101-0610, Tier 2 employees' final average salaries are calculated using the greater of (i) the method, previously summarized, or (ii) the 48 consecutive months of service when their total salary is highest within their last 60 months of service.

Article 3 and Article 4 Pension Funds, Computation of Final Average Salary Cap (P.A. 101-0610)
The highest salary that can be used for calculation of a final average salary for Tier 2 employees in an Article 3 or Article 4 fund is $106,800. However, prior to the effective date (January 1, 2020) of P.A. 101-0610, that amount had been increased annually since 2011 by the lesser of (i) 3% of that amount, or (ii) 50% of the annual unadjusted percentage increase in the consumer price index-u. P.A. 101-610 amends Pension Code so that the final average salary cap increases by the lesser of (i) 3% of that amount, or (ii) 100% of the annual unadjusted percentage increase in the consumer price index-u. COLA's will still be computed at simple interest. Also, this Act does not permit retroactive changes in employee contributions.

Article 3 and Article 4 Pension Funds, Tier 2 Survivor Pensions (P.A. 101-0610)
For Article 3 and Article 4 fund employees in the Tier 2 system, prior to P.A. 101-0610, survivor pensions for spouses, children, or parents of a police officer or firefighter were equal to 66 2/3% of the police officer or firefighter's earned pension at the date of death.

Under P.A. 101-0610, the survivors are entitled to the greater of (i) the survivor benefit, previously described, or (ii) 54% of the police officer or firefighter's monthly salary at the date of death. If a survivor is a spouse, then the guardian of any minor children, including children not yet born, is entitled to 12% of such monthly salary for each child until they reach 18. A monthly pension of 20% of such monthly salary is granted upon the death of the surviving spouse, or upon the death of a police officer or firefighter leaving one or more minor children but no surviving spouse, to an appointed guardian until the children reach 18. The total survivor's pension provided shall not exceed 75% of the monthly salary of the deceased officer or firefighter when paid to the survivor of an officer or firefighter who (1) has attained 20 or more years of service credit and receives or is eligible to receive a pension, (2) dies as a result of illness or accident, (3) dies from any cause while in receipt of a disability pension; and (4) is a deferred pensioner.

Changes in Training Requirement for Article 3 and 4 Pension Trustees (P.A. 101-0610)
Prior to P.A. 101-0610, all elected and appointed trustees for Downstate Police and Fire pension funds must undergo 32 hours of initial trustee training certification in a variety of areas, including fiduciary fundamentals, adjudication of pension claims, and trustee ethics, among others. P.A. 101-0610 reduces the initial hourly commitment to 16 hours of training, and deletes the requirement that trustees undergo "basic accounting and actuarial training." The Act requires all trustees elected or appointed before the effective date of this Act to undergo 4 hours of training on the changes made by this Act. In addition, the Act reduces the annual continuing education requirement for trustees from 16 hours to 8 hours.

Alternative (State Police) Formula Eligibility for Certain Police Officers (P.A. 101-0610)
P.A. 101-0610 amends the General Provisions and State Employees articles of the Illinois Pension Code to allow Conservation police officers, Secretary of State investigators, Commerce Commission police officers, arson investigators, and investigators for the Department of Revenue or the Illinois Gaming Board to qualify for the alternative (state police) formula in SERS as of the effective date (January 1, 2020) of the Act. This Act also allows these officers the opportunity to convert up to eight years of prior regular formula service credit into alternative formula service. In order to convert these years of service, the officer must apply within one year of the effective date of this Act, and pay to SERS an amount equal to the difference between what was actually paid for the regular formula service and what would have been paid had the service been accrued under the alternative formula, plus interest at the actuarially assumed rate, compounded annually, from the date of service to the date of payment.

Reinstatement of Eligibility for Certain Survivor Annuities in IMRF (P.A. 101-0610)
P.A. 99-682 was enacted to allow those IMRF members who had retired prior to the passage of the Illinois Religious Freedom Protection and Civil Union Act (P.A. 96-1513) to reinstate a survivor benefit after retirement. P.A. 101-0610 extends this right to the surviving spouse of an annuitant, provided the annuitant (1) retired prior to June 1, 2011, (2) was not married on the

date the retirement annuity began, (3) received a refund of survivor credits; and (4) died prior to the implementation of P.A. 99-0682. Eligible surviving spouses may re-establish survivor benefit rights by paying to IMRF the total amount of the refund received for survivor credits, including interest, within one year beginning 5 months after the effective date (January 1, 2020) of the Act. The surviving spouse will be required to provide documentation proving that he or she was married to the annuitant at the time of death and has not since remarried.

Optional Service Credit for Certain State Police Officers (P.A. 101-0610)
P.A. 101-0610 allows State Police officers to establish up to 5 years of service credit for law enforcement service with the federal government, or by a state or local government located outside Illinois, provided credit for such service is not held in another public pension fund. In order to establish this service credit, the officer must pay to SERS the following amounts: 1) employee contributions based on the applicant's salary on the first day of service in Illinois following the out-of-state employment, plus 2) the employer's normal cost of the benefit for the service credit being established, plus 3) interest at the actuarial rate of return on the foregoing amounts. The officer must apply for this optional service within 3 years of the effective date of this Act.

Change in Retirement Eligibilities for Certain SURS Tier 2 members (P.A. 101-0610)
SURS provides different formula rate structures to calculate retirement annuities. Among the several formula rate structures, "Rule 4" applies to police officers and firefighters. It provides a higher formula than the flat 2.2% rate under "Rule 1." Graduated formula rates for Rule 4 are as follows:

- For each of the first 10 years: 2.25%
- For each of the next 10 years: 2.50%
- For each year in excess of 20 years: 2.75%

Prior to P.A. 101-0610, the Tier 2 eligibility for the Rule 4 formula was age 67 with at least 20 years of service as a police officer or a firefighter for the full retirement annuity, as opposed to age 50 with 25 years or age 55 with 20 years for Tier 1 members. Under P.A. 101-0610, the eligibility for the Rule 4 formula rate is lowered to age 60 with 20 years for Tier 2 public safety members. This change applies retroactively to January 1, 2011.

SURS Board of Trustees (P.A. 101-0610)
Prior to P.A. 101-0610, the Chairperson of the Board of Higher Education became the Chairperson of the SURS board by statute. Under P.A. 101-0610, the Governor appoints the Chairperson of the Board from among the trustees.

Change in the Structure of the TRS Board of Trustees (P.A. 101-0610)
Prior to P.A. 101-0610, the TRS Board consisted of 13 members, who are (a) the Superintendent of Education, ex officio, who shall be the president of the board by law, (b) 6 non-members of TRS, appointed by the Governor and not to hold elected State office, (c) 4 teachers elected by the TRS members; and (d) 2 annuitant members elected by TRS annuitants.

Under P.A. 101-0610, the number of the TRS Board members increases to 15, with one more non-member appointed by the Governor and one more teacher elected by TRS members. In other words, the board has 7 non-members instead of 6, and 5 teachers instead of 4. In addition, the president of the board is appointed by the Governor, rather than the Superintendent of Education automatically serving as the president of the board.

Chicago Fire Pension Fund - Elimination of birthdate requirement for Tier One 3% non-compounded COLA's (P.A. 101-0673)

Prior to the enactment of P.A. 101-0673 (HB 2451), Tier 1 firefighters born before January 1, 1966 with at least 20 years of service received an annual non-compounded increase of 3% on or after the age of 55, not subject to a 30% increase maximum. Those Tier 1 firefighters born after January 1, 1966 received 1.5% increases on or after the age of 60 with at least 20 years of service, subject to a maximum of 30% (hence, after 15 years of retirement, no annual increases were payable). The Act removed the birthdate restriction and sets the annual Tier 1 increase to 3% non-compounded for all retirees at least 55 years of age with 20 years of service. The Act further stipulates that firefighters who were not eligible for the 3% increase prior to the effective date of the bill (April 5th, 2021) will receive a 3% increase for each year the firefighter would have otherwise been eligible had the firefighter not received any increase.

VII. Current Combined Financial Condition of the State Retirement Systems

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 (TRS), State Employees' Retirement System (SERS), State Universities' Retirement System (SURS), Judges' Retirement System (JRS), and General Assembly Retirement System (GARS). 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, 2020. This section of the report covers the period from FY 1996 to FY 2020.

TABLE 2

Summary of Appropriations Authorized
State Retirement Systems
FY 1996 - FY 2021
($ 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
2017	$3,986.6	$1,671.4	$2,097.4	$131.3	$21.7	$7,908.5
2018	$4,095.3	$1,629.3	$2,115.3	$135.6	$21.2	$7,996.7
2019	$4,466.2	$1,655.2	$2,233.9 **	$140.5	$23.2	$8,518.9
2020	$4,813.6	$1,854.7	$2,385.3	$144.2	$25.8	$9,223.5
2021	$5,140.7	$1,995.8	$2,447.9	$148.6	$27.3	$9,760.3
Totals	**$57,361.7**	**$22,212.3**	**$28,911.7**	**$1,946.0**	**$307.0**	**$110,738.7**

** FY 2004 State appropriations authorized include $7.3 Billion in proceeds from the sale of pension obligation bonds.*
*** The FY 2019 recertified State contributions for SERS decreased by approximately $20 million from $2,254.1 million to $2,233.9 million after reflecting the provisions of P.A. 100-0587 that created the voluntary pension buyout programs.*

Over the last 26 years, the State of Illinois has appropriated $110.7 billion to the five retirement systems as shown in Table 2. 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 $57.4 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.

Based upon the actuarial value of assets, the total unfunded liabilities of the State systems totaled $141.0 billion on June 30, 2020, led by the Teachers' Retirement System (TRS) whose unfunded liabilities amounted to $80.7 billion. As the largest of the State systems, TRS accounts for approximately 57.2% 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. The figures on this table are calculated using the asset smoothing method required by Public Act 96-0043, a technique that averages the annual fluctuation in investment performance over a period of 5 years.

TABLE 3

Summary of Financial Condition FY 2020
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	$135,598.5	$54,891.0	$80,707.6	40.5%
SERS	$50,145.8	$19,389.5	$30,756.3	38.7%
SURS	$47,580.5	$20,091.7	$27,488.8	42.2%
JRS	$2,849.9	$1,121.3	$1,728.6	39.3%
GARS	$373.5	$63.9	$309.6	17.1%
TOTAL	**$236,548.2**	**$95,557.3**	**$140,990.9**	**40.4%**

However, a 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 the market value of assets, the combined unfunded liabilities of the State systems totaled $144.2 billion on June 30, 2020. TRS, whose unfunded liabilities amounted to $83.3 billion, represents approximately 57.7% 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 2020 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	$135,598.5	$52,316.5	$83,282.1	38.6%
SERS	$50,145.8	$19,191.4	$30,954.4	38.3%
SURS	$47,580.5	$19,617.0	$27,963.5	41.2%
JRS	$2,849.9	$1,112.5	$1,737.3	39.0%
GARS	$373.5	$63.0	$310.5	16.9%
TOTAL	**$236,548.2**	**$92,300.5**	**$144,247.7**	**39.0%**

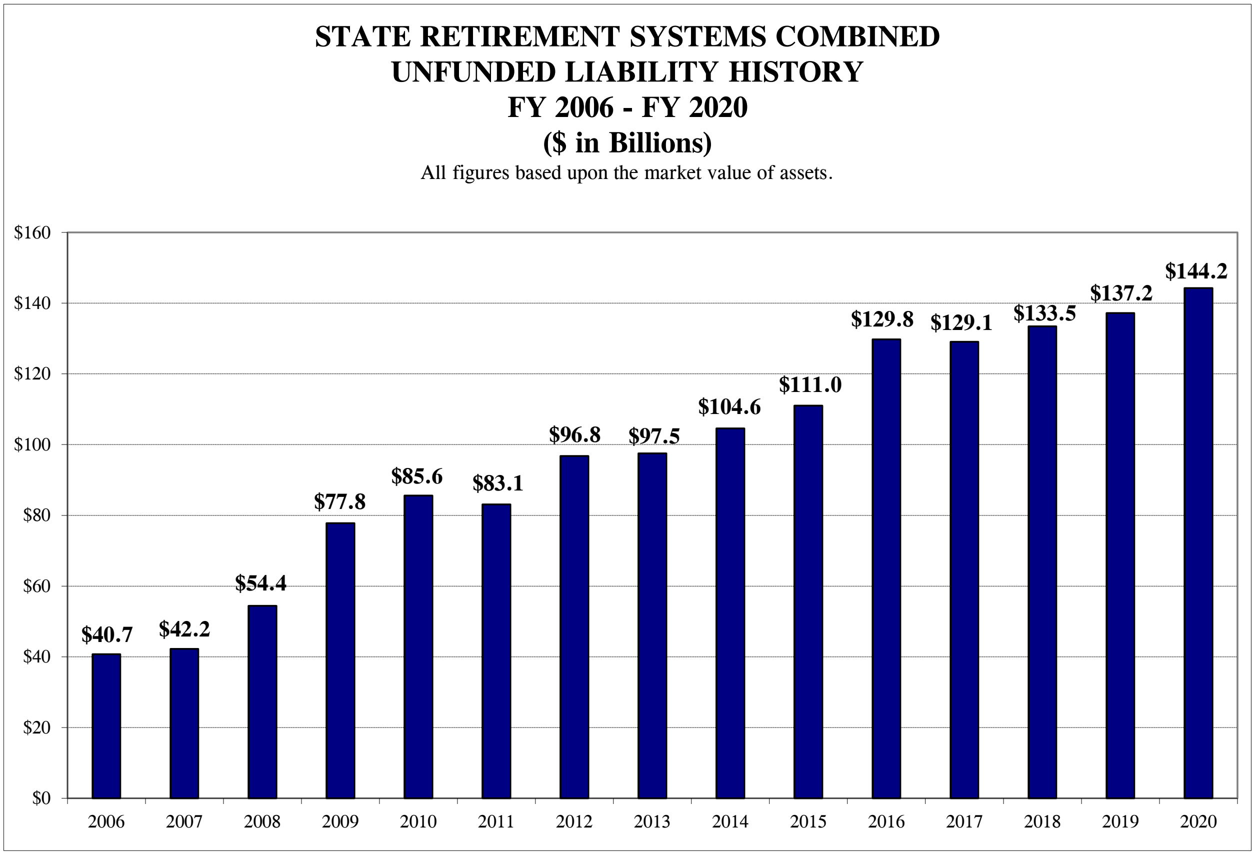
The funded ratios based on the market value of assets for each of the five State retirement systems may be compared to the aggregate funded ratio of 39.0% for the five systems. While the General Assembly Retirement System (GARS) has the lowest funded ratio, the other four systems are approximately 40% funded.

Chart 1 on the following page shows a 15-year history of the cumulative unfunded State pension liability and is based upon calculations performed by the retirement systems' actuaries using the market value of assets for all years, including FY 2020. In other words, the asset smoothing method was not used. Therefore, it is a more realistic representation of the retirement systems' true financial condition than the one using the asset smoothing method.

The aggregate unfunded liability has been growing significantly over the past decade. One of the main drivers continues to be actuarially insufficient State contributions determined by the current pension funding policy under P.A. 88-0593. (More information on P.A. 88-0593 is discussed on page 33.) As the actuaries for the State retirement systems have noted in the respective annual actuarial valuation reports, the funding plan under P.A. 88-0593 produces employer (State) contributions that are actuarially insufficient, meaning if all other actuarial assumptions are met, unfunded liabilities will increase due to the State contributing an amount that is not sufficient to stop the growth in the unfunded liability. Hence, there is a distinction between contributions that are statutorily sufficient and contributions that are considered actuarially sufficient (the annual reports of the State Actuary have noted this distinction as well).

Other reasons for an increase in unfunded liability would be actuarial losses from actuarial assumptions changes, including lowering assumed investment rates, or poor investment performance. Further details on the main factors affecting unfunded liability can be found in Charts 2 and 3.

CHART 1



When taking a close look at the unfunded liability during recent past 5 years, it has worsened, except for FY 2017. The main driver behind the continued growth during the recent years was, again, actuarially insufficient state contributions under the statutory funding plan while each fiscal year saw some other factors that worsened the financial condition of the retirement systems.

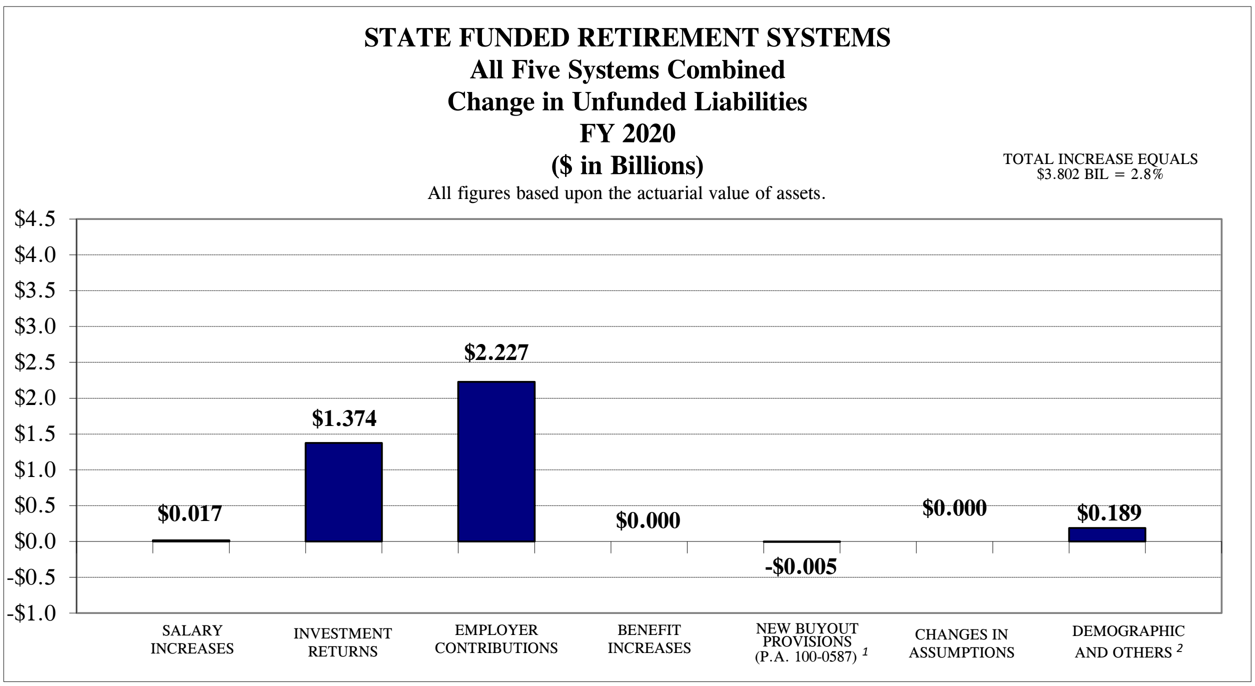
The sharp uptick in FY 2016 was largely attributable to lowering of investment assumption rates by all the systems except SURS, which resulted in a significant increase in the combined unfunded liability of $9.67 billion. The fact that all the five systems experienced lower-than-assumed investment returns also did not help. In FY 2017, the unfunded liability decreased for the first time since FY 2011. This was mainly caused by higher-than-expected investment returns by all the systems. However, the unfunded liability began to increase again in FY 2018 and FY 2019, and it reached $144.2 billion in FY 2020.

A slight increase during FY 2018 was partially affected by a reduction in SURS' investment assumption rate as well as the five systems' unfavorable actuarial experiences from demographic and other factors. The unfunded liability further grew to $137.2 billion in FY 2019, in part due to lower-than-expected investment returns. However, actuarial gains from SERS members who elected to participate in the pension buyout plans and net actuarial gains reported by two systems, SERS and GARS, slightly helped offset the cumulative actuarial losses of the five systems combined.

One of the common reasons for the increase between FY 2019 and 2020 was lower-than-expected investment returns, which means all the five systems did not meet their respective actuarially assumed rates of return in both years. All the five systems experienced poorer investment performances in FY 2020, due to the national and global economic turmoil associated with the COVID-19 pandemic.

Details on the factors affecting the combined unfunded liabilities of the five State systems in FY 2020 can be found in Chart 2 on the following page. All the factors shown as positive amounts represent increases in the unfunded liability and negative amounts represent decreases in the unfunded liability.

CHART 2



[1] *P.A. 100-0587 created the two voluntary pension buyout programs for TRS, SURS, and SERS, and P.A. 101-0010 extended the buyout plans by 3 years to June 30th, 2024. The combined liability decreased by $5.2 million during FY 2020, coming from SURS.*

[2] *The combined liability increased by $1 million due to the effect of P.A. 101-610, solely coming from SURS. Under P.A. 101-610, effective January 1, 2020, an unreduced retirement (full retirement annuity) eligibility for Tier 2 police officers and firefighters at SURS was lowered to age 60 with 20 years of service from age 67 with 20 years of service.*

At the end of FY 2019, the aggregate unfunded liability based on the actuarial value of assets was $137.189 billion. The unfunded liability based on the actuarial value of assets stood at $140.991 billion as of FY 2020. It grew by $3.802 billion during FY 2020, an increase of 2.8%

over FY 2019. The primary reason was, again, actuarially insufficient State contributions, which increased the unfunded liability by $2.227 billion, accounting for 58.6% of the total increase.

There were mainly three more factors that worsened the unfunded liability. One was an actuarial loss that resulted from lower-than-assumed investment returns by all the five systems due to the COVID-19 pandemic. It brought the combined unfunded liability up by $1.374 billion, accounting for 36.1% of the total increase. The other two factors, which are demographic/other factors and salary increases, had a relatively slight impact on the unfunded liability. The unfavorable experiences from demographic and other factors, mainly by TRS and SURS such as earlier retirement than assumed, led to an increase of $189 million in the unfunded liability. Higher-than-assumed salary increases caused the unfunded liability to grow by $17 million.

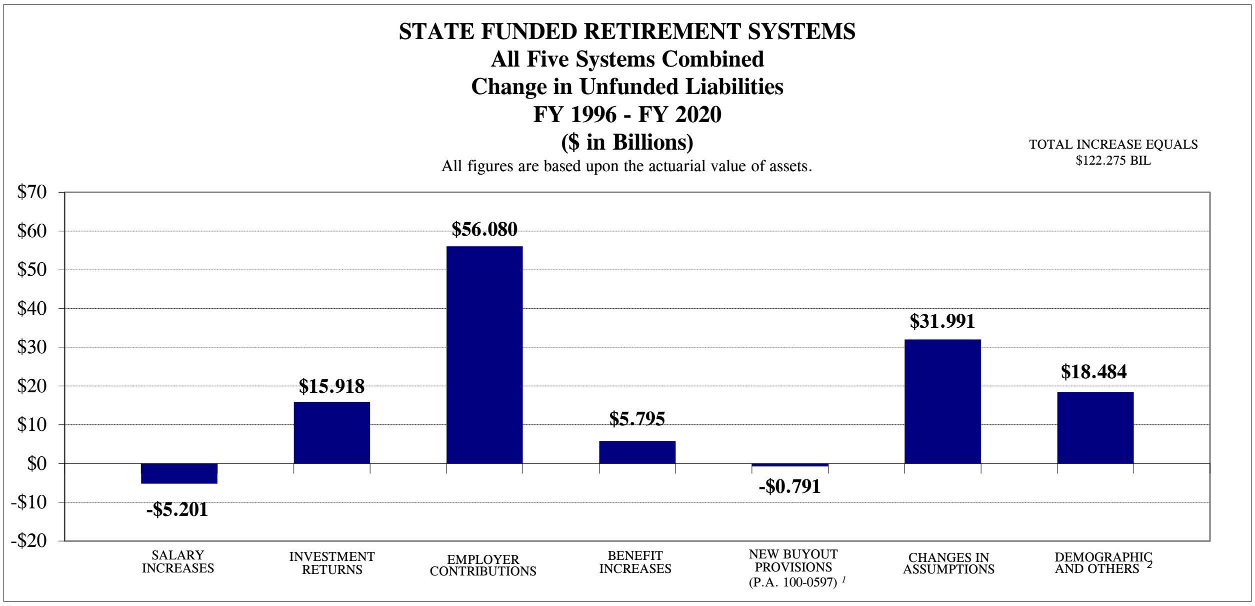
In FY 2020, the unfunded liability slightly decreased by the buyout programs. The $5.2 million decrease came from SURS due to the impact of the buyout programs. TRS and SERS did not report any actuarial gains or losses associated with the programs in FY 2020.

Chart 3 below shows the change in the unfunded liability since the enactment of P.A. 88-0593 in FY 1996, which created the 50-year funding policy that governs annual State contributions to the five State systems.

In FY 2020, none of the five systems changed their respective investment return assumptions. The last time SERS, JRS, and GARS changed their investment rates assumption was FY 2019 while SURS last changed their rate in FY 2018. TRS last revised their investment return assumption in FY 2016. All the five systems' actual rates of return in FY 2020 did not satisfy their actuarially assumed rates of return as shown below, and thus actuarial losses occurred due to lower-than-assumed investment returns.

System	Actual Rate of Return	Assumed Rate of Return
TRS	0.6%	7.00%
SERS	4.6%	6.75%
SURS	2.6%	6.75%
JRS	4.5%	6.50%
GARS	4.3%	6.50%

CHART 3



[1] *P.A. 100-0587 created the two voluntary pension buyout programs for TRS, SURS, and SERS, and P.A. 101-0010 extended the buyout plans by 3 years to June 30th, 2024. The total reduction in the combined liability of $791 million came from TRS in FY 2018 ($381 million), SERS in FY 2019 ($405 million) and SURS in FY 2020 ($5.2 million), respectively. More information on the pension buyout plans is discussed on page 15.)*

[2] *The combined liability increased by $1 million due to the effect of P.A. 101-610, solely coming from SURS. Under P.A. 101-610, effective January 1, 2020, an unreduced retirement (full retirement annuity) eligibility for Tier 2 police officers and firefighters at SURS was lowered to age 60 with 20 years of service from age 67 with 20 years of service.*

The above chart provides an analysis of the causative factors for the increase in unfunded liabilities since FY 1996. From FY 1996 through FY 2020, the unfunded liability, based on the actuarial value of assets, increased by $122.3 billion to $141.0 billion. Actuarially insufficient State contributions contributed the most to the increase in unfunded liability, accounting for approximately 45.9% of the total increase of $122.3 billion. Actuarial assumption changes caused a $32.0 billion increase, or 26.2% of the total increase. “Demographic and other factors” and investment returns that didn’t meet assumed rates of return were the next factors that served to worsen the unfunded liability over time. The only factors resulting in an actuarial gain were salary increases being less than assumed and gains from TRS, SERS and SURS due to the new pension buyout programs pursuant to P.A. 100-0587.

As mentioned previously, investment gains or losses of the last five years are subject to smoothing by the asset smoothing method. Despite actuarial investment gains in FY 2017 and 2018, the cumulative effects of asset smoothing in FY 2020 resulted in recognized investment losses for all the systems, due to poor investment performances in FY 2016, 2019, and 2020. (Please refer to Appendix W.)

CHART 4

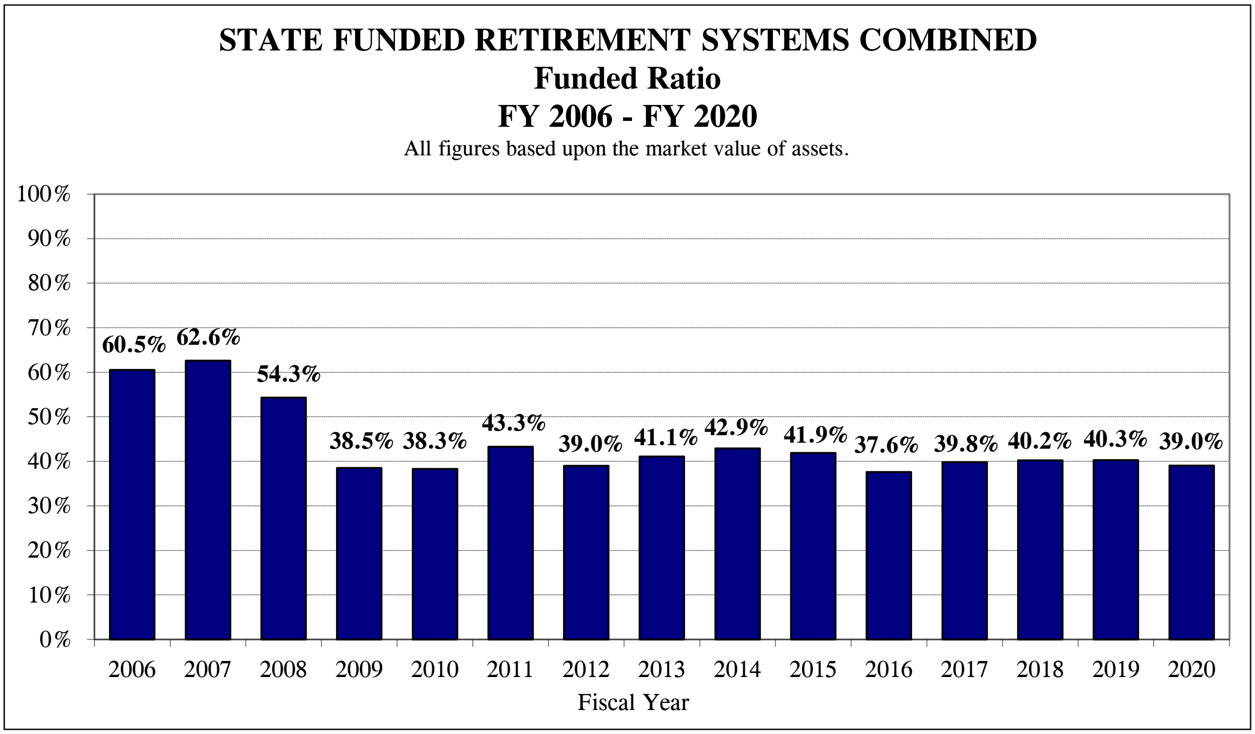
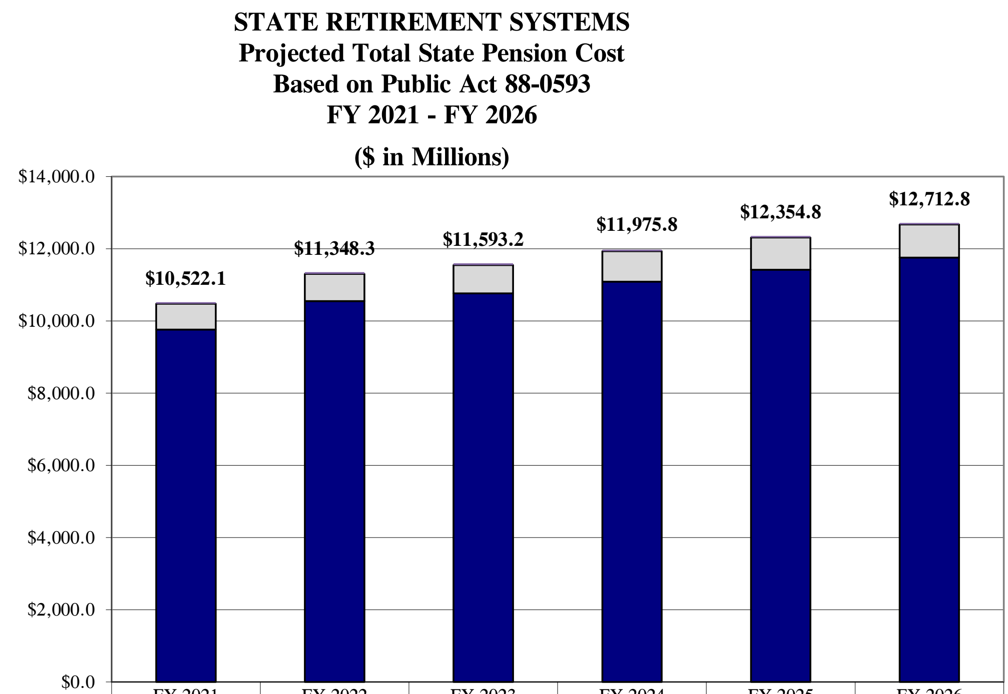


Chart 4 above shows the systems' funded ratio based on the market value of assets, without the asset smoothing method. A funded ratio is the most commonly recognized measure of a retirement system's financial health, and the trend of the funded ratio over time is more important than the ratio at any single point in time. As both the unfunded liability (Chart 1) and funded ratio (Chart 4) illustrate the financial condition of the retirement systems, all the aforementioned factors that affected the unfunded liability of the systems also influence the funded ratio. The major common factor that worsened the funded ratio is actuarially insufficient State contributions under the current pension funding law, as mentioned earlier.

In FY 2004, the State sold $10 billion in pension obligation bonds and used part of the proceeds to pay all the contributions for FY 2004. The bond sale generated $7.3 billion to reduce unfunded liabilities of the state-funded retirement systems. In the wake of the bond sale, the funded ratio remained relatively stable from FY 2004 through FY 2007. In FY 2008 and 2009, the funded ratio fell significantly due to much lower-than-expected investment returns during the 2007-2009 recession. In FY 2009, it slipped to 38.5%. While exceptionally strong investment returns helped increase the funded ratio to 43.3% in FY 2011, these gains were largely erased by poor investment returns in the following year as well as TRS' reduction in investment return assumption from 8.5% to 8.0%. Since then, the combined funded ratio has been hovering around 40% in the past decade.

The funded ratio slightly improved in FY 2013 and 2014, which mainly resulted from higher-than-expected investment returns. However, the upward movement did not last long. In FY 2015 and 2016, the funding ratio went down again. The sudden drop in the funding ratio in FY 2016 was due to the actuarial assumptions changes by TRS, SERS, JRS, and GARS including lowering their respective assumed investment rates, along with lower-than-projected investment returns. It ticked upwards slightly in FY 2017 and 2018. Robust investment performances in FY 2017, well above the respective systems' assumed rates of return, helped to push the funded ratio up to 39.8%. Also, FY 2018 was another good year in terms of investment performances, although returns were not as strong as they were in FY 2017. It is worth noting that FY 2019 was the first year that SERS and GARS were able to reduce their unfunded liability since FY 2015 and FY 2004, respectively. In FY 2020, the funded ratio stood at 39%, a slight drop from FY 2019, in part because of lower investment returns caused by the pandemic as mentioned previously.

CHART 5



	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
FY 2019 - 2020 Buyout Debt Service	$48.4	$48.1	$47.2	$46.2	$45.2	$44.2
FY 2003 POB Debt Service	$713.4	$749.8	$783.7	$840.2	$892.2	$915.4
Regular Contribution	$9,760.3	$10,550.4	$10,762.4	$11,089.4	$11,417.4	$11,753.3

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, including both the $300 million pension acceleration bonds issued in FY 2019 and $225 million in FY 2020 to fund the voluntary buyout programs created by P.A. 100-0587. The FY 2010 and FY 2011 Pension Obligation Notes were paid off in FY 2015 and FY 2019, respectively.

Pubic Act 93-0002 authorized the 2003 issuance of the pension obligation bonds and established the resulting debt service requirements. Public Act 96-0043 issued the 2010 pension obligation notes, and additional pension obligation notes were issued in 2011, pursuant to Public Act 96-1497. P.A. 100-0587 authorized the 2019 and 2020 issuance of the pension acceleration bonds to fund the buyout programs. Please note that more information regarding the combined debt service of the bonds/notes can be found in Appendix N.

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 2020 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	Employee Contributions	Employer Normal Cost	Employer Normal Cost as a % of Payroll
2021	$3,329.0	16.1%	$479.8	2.3%	$3,808.9	18.4%	$1,562.2	$2,246.6	10.8%
2022	$3,267.1	15.5%	$555.4	2.6%	$3,822.5	18.1%	$1,599.5	$2,223.0	10.5%
2023	$3,212.1	14.9%	$631.9	2.9%	$3,844.0	17.8%	$1,634.6	$2,209.5	10.2%
2024	$3,138.8	14.2%	$711.7	3.2%	$3,850.5	17.4%	$1,671.3	$2,179.2	9.8%
2025	$3,057.3	13.5%	$793.5	3.5%	$3,850.7	17.0%	$1,708.9	$2,141.8	9.4%
2026	$2,967.4	12.8%	$879.2	3.8%	$3,846.6	16.6%	$1,746.4	$2,100.2	9.1%
2027	$2,867.9	12.1%	$968.7	4.1%	$3,836.5	16.2%	$1,784.3	$2,052.2	8.6%
2028	$2,762.3	11.4%	$1,063.0	4.4%	$3,825.3	15.8%	$1,822.3	$2,003.1	8.2%
2029	$2,652.6	10.7%	$1,160.4	4.7%	$3,813.0	15.3%	$1,862.2	$1,950.8	7.8%
2030	$2,536.6	10.0%	$1,262.1	5.0%	$3,798.7	14.9%	$1,903.5	$1,895.3	7.5%
2031	$2,413.1	9.3%	$1,367.9	5.3%	$3,781.1	14.5%	$1,946.2	$1,834.8	7.0%
2032	$2,279.6	8.6%	$1,477.4	5.5%	$3,757.1	14.1%	$1,989.7	$1,767.4	6.6%
2033	$2,138.8	7.8%	$1,590.7	5.8%	$3,729.5	13.7%	$2,033.7	$1,695.8	6.2%
2034	$1,992.1	7.1%	$1,707.4	6.1%	$3,699.5	13.2%	$2,078.9	$1,620.6	5.8%
2035	$1,838.5	6.4%	$1,827.8	6.4%	$3,666.4	12.8%	$2,125.7	$1,540.7	5.4%
2036	$1,680.0	5.7%	$1,952.4	6.7%	$3,632.4	12.4%	$2,174.0	$1,458.4	5.0%
2037	$1,517.9	5.1%	$2,079.9	6.9%	$3,597.8	12.0%	$2,224.7	$1,373.2	4.6%
2038	$1,349.1	4.4%	$2,210.1	7.2%	$3,559.2	11.6%	$2,277.3	$1,281.9	4.2%
2039	$1,173.7	3.7%	$2,343.0	7.4%	$3,516.7	11.2%	$2,331.2	$1,185.5	3.8%
2040	$996.5	3.1%	$2,479.5	7.7%	$3,476.0	10.8%	$2,387.1	$1,088.9	3.4%
2041	$823.2	2.5%	$2,617.6	7.9%	$3,440.8	10.4%	$2,445.4	$995.3	3.0%
2042	$660.4	1.9%	$2,755.8	8.1%	$3,416.2	10.0%	$2,506.4	$909.8	2.7%
2043	$510.8	1.5%	$2,893.6	8.3%	$3,404.5	9.8%	$2,569.3	$835.2	2.4%
2044	$377.7	1.1%	$3,030.2	8.5%	$3,407.9	9.5%	$2,633.8	$774.1	2.2%
2045	$267.6	0.7%	$3,165.0	8.6%	$3,432.5	9.3%	$2,700.3	$732.2	2.0%

CHART 6

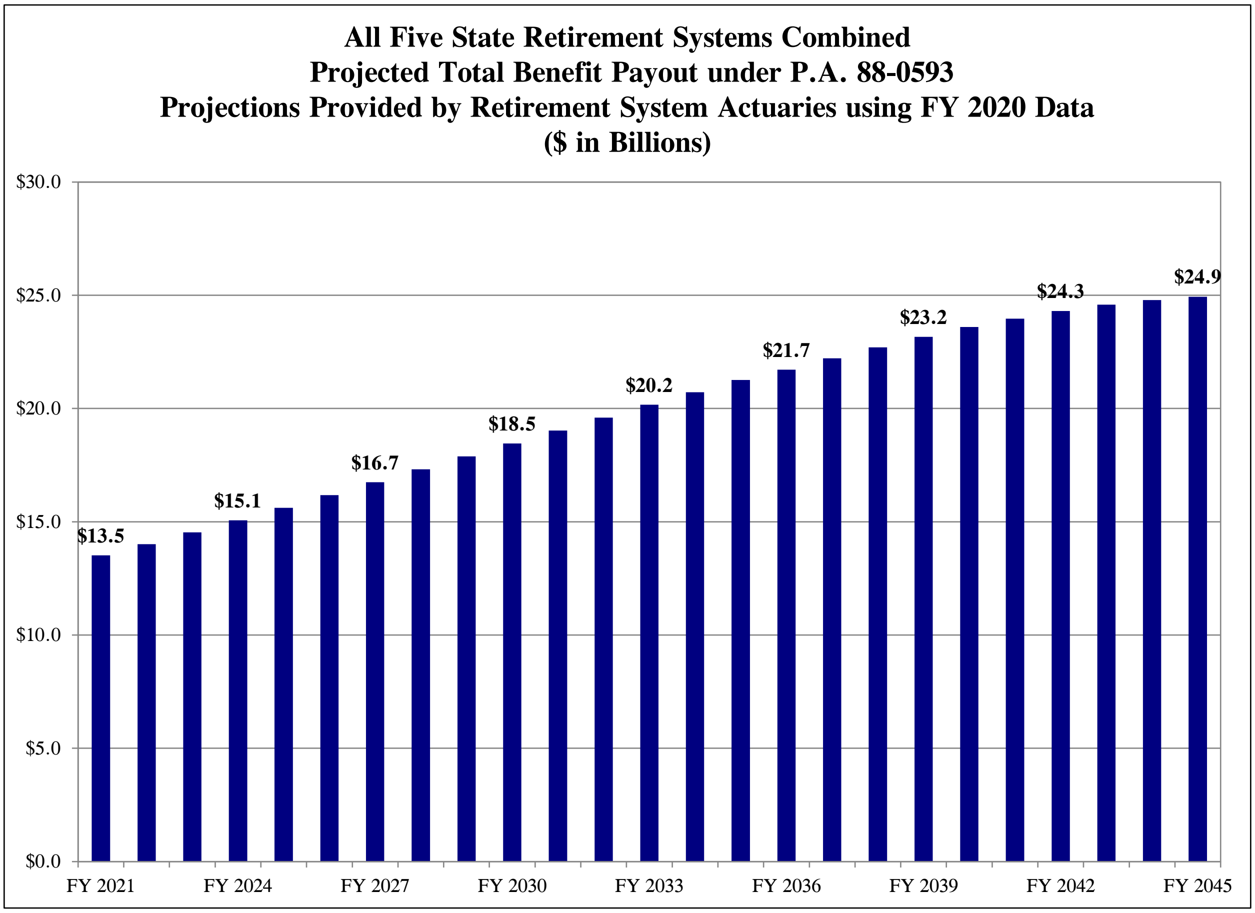


Chart 6 shows the projected total retirement benefits to be paid to annuitants.

VIII. The Teachers' Retirement System

- Plan Summary
- FY 2020 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 Liabilities
- Changes in Net Assets
- Investment Return History
- Reduction in State Contributions
- Tier 1 & Tier 2 Normal Cost Projections

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

* Early Retirement Option (ERO) expired on July 1, 2016. The last day ERO was available to a TRS member was June 30, 2016.

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

- 9.0% of salary
  - 7.5% for retirement benefit, 0.5% for annual COLA, and 1% for death benefit (It was 9.4% before ERO expired. The additional 0.4% of salary was contributed for ERO.)

The benefits shown do not reflect P.A. 96-0889 (2 Tier Act of 2011). Please refer to Section I earlier in this report for details.

Teachers' Retirement System
Tier 2 Defined Benefit Plan Summary

Retirement Age

- Age 67 with 10 years of service credit
- Age 62 with 10 years of service credit (reduced annuity)

Retirement Formula

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

Maximum Annuity

- 75% of final average salary

Salary Used to Calculate Pension

- Average of the eight highest consecutive annual salary rates within the last 10 years of service
- Pensionable Salary is limited by an amount tied to the 2010 Social Security Wage Base of $106,800. This amount increases annually by 3% or ½ of the increase in the Consumer Price Index-U, whichever is less. The salary limit for calendar year 2020 is $115,929.

Annual COLA

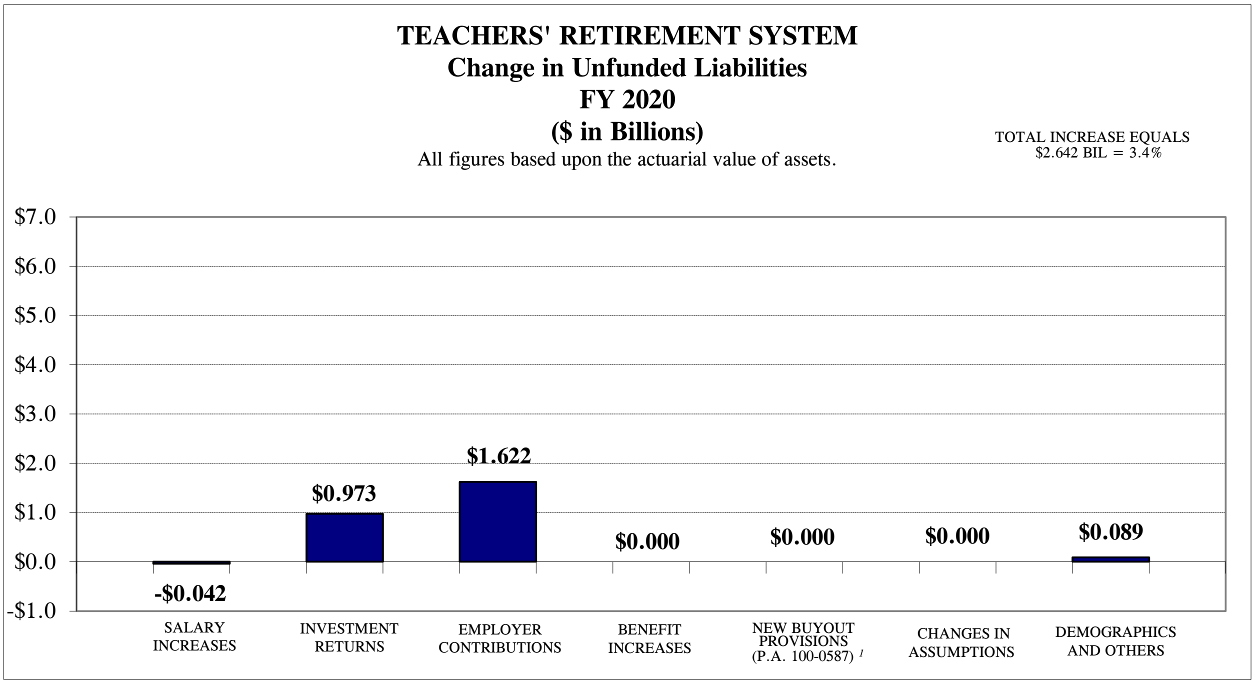
- Simple 3% or ½ of the increase in the Consumer Price Index-U, whichever is less

Employee Contributions

- 9.0% of salary
  - 7.5% for retirement benefit, 0.5% for annual COLA, and 1% for death benefit

The benefits shown reflect P.A. 96-0889 (2 Tier Act of 2011) and are for Tier 2 members who first contribute to the system on or after January 1, 2011. Please refer to Section I earlier in this report for details.

CHART 7



[1] *The two voluntary buyout programs were created by P.A. 100-0587 and extended by 3 years to June 30, 2024 by P.A. 101-0010.*

CHART 8

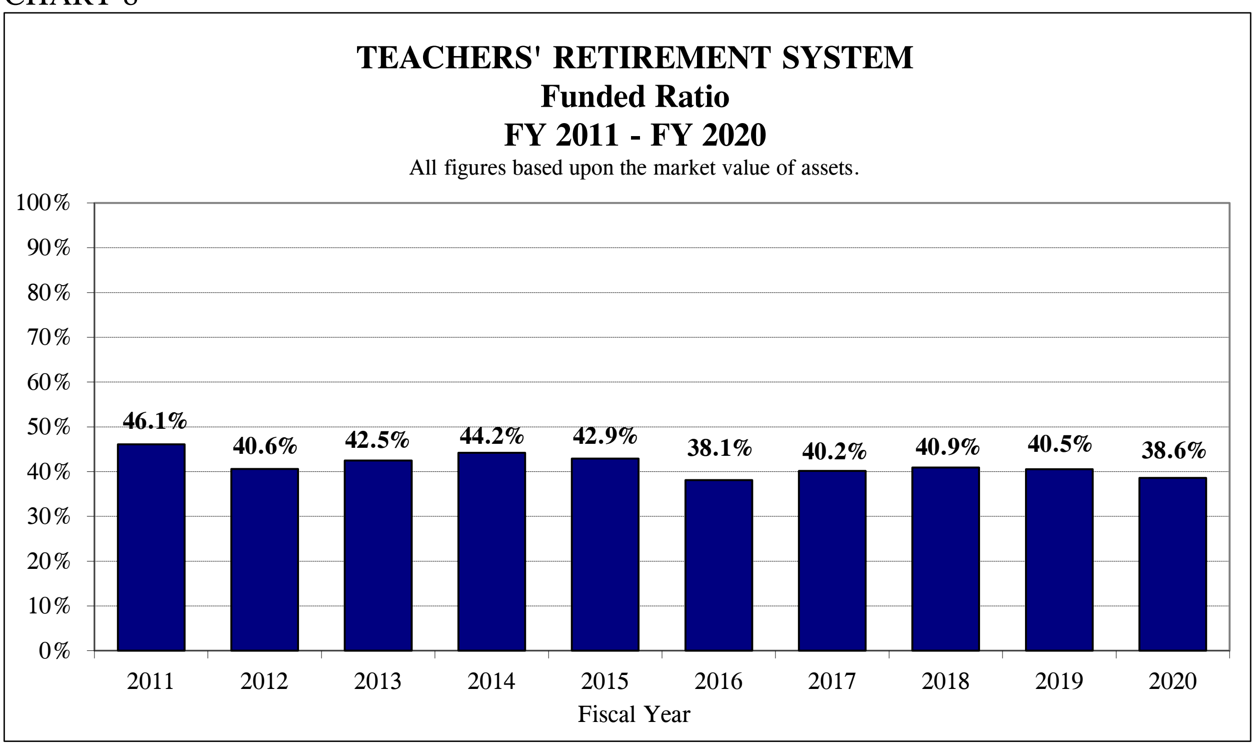
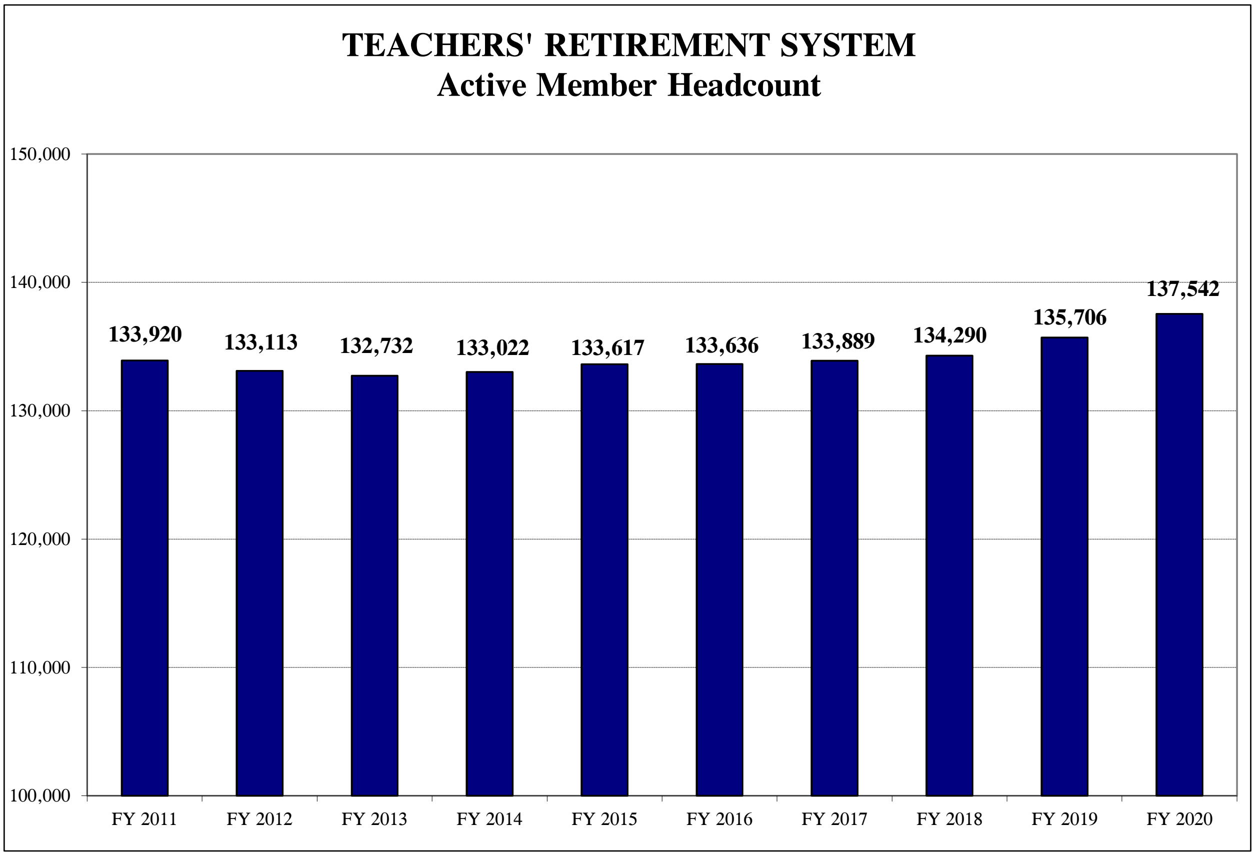
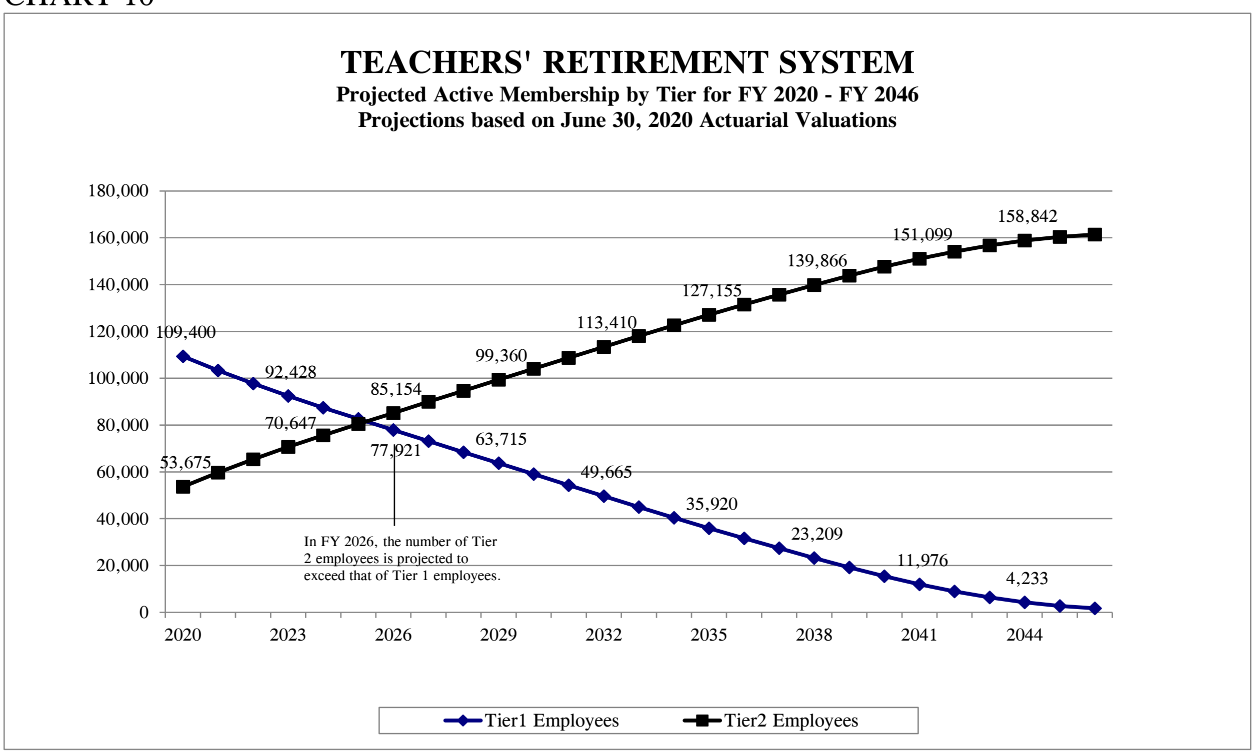


CHART 9



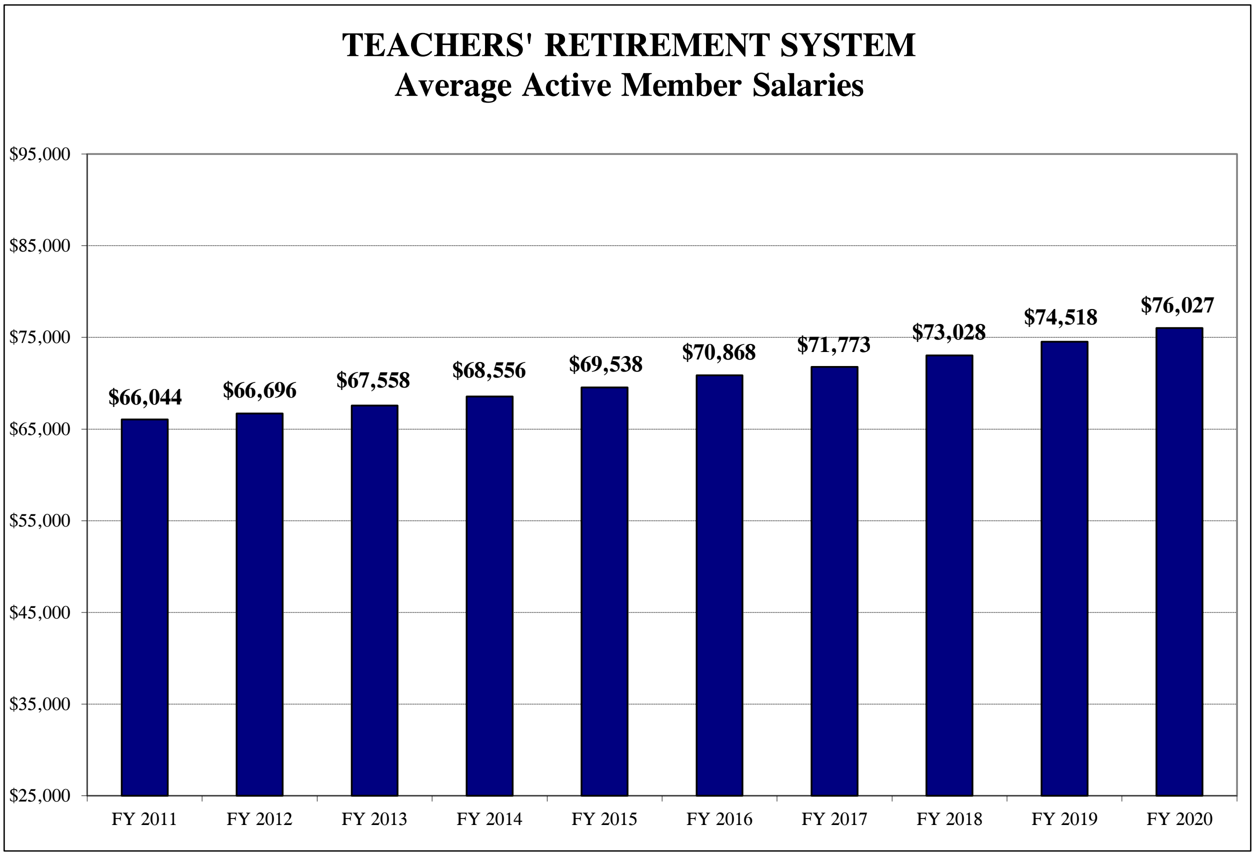
Note: Includes full- and part-time members only. All the data is based on TRS' Comprehensive Annual Financial Reports (CAFRs).

CHART 10



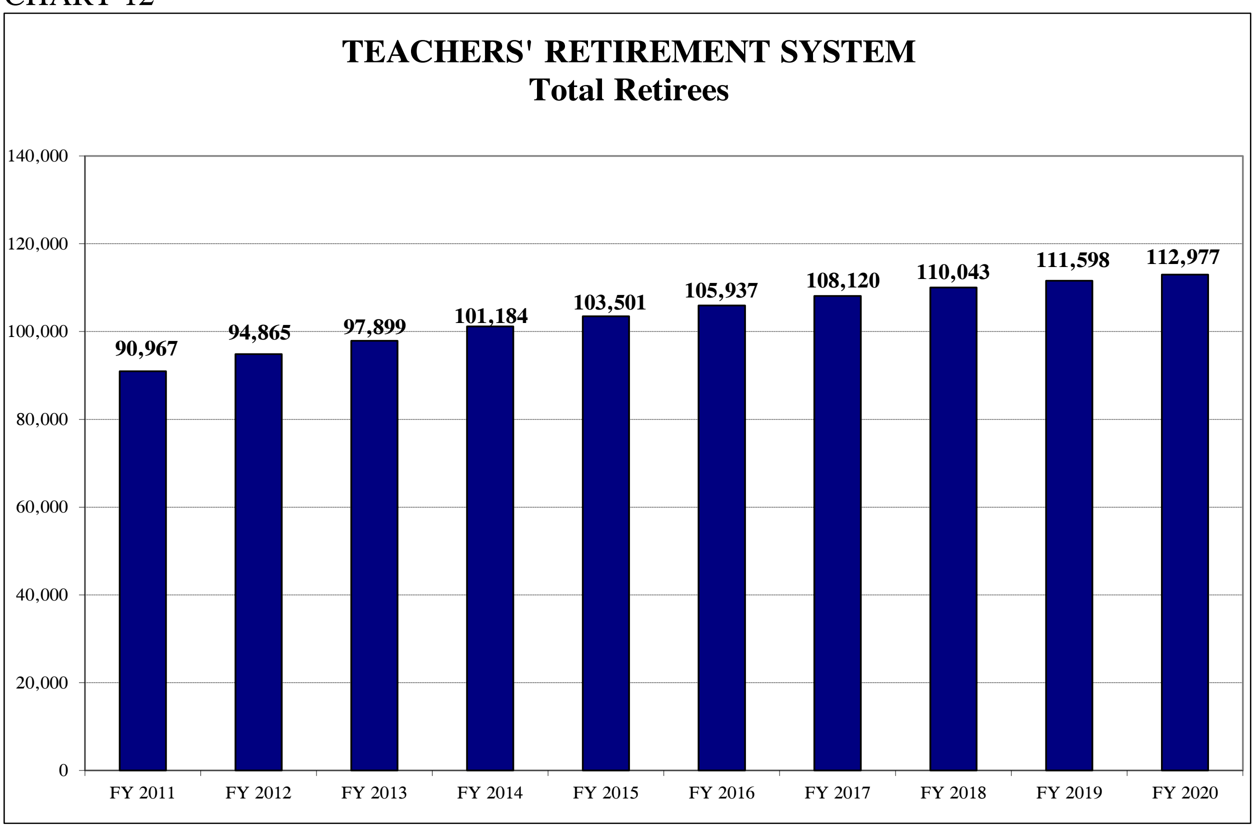
NOTE: The above membership projections include all active employees such as full-time, part-time, substitute, and hourly employees.

CHART 11



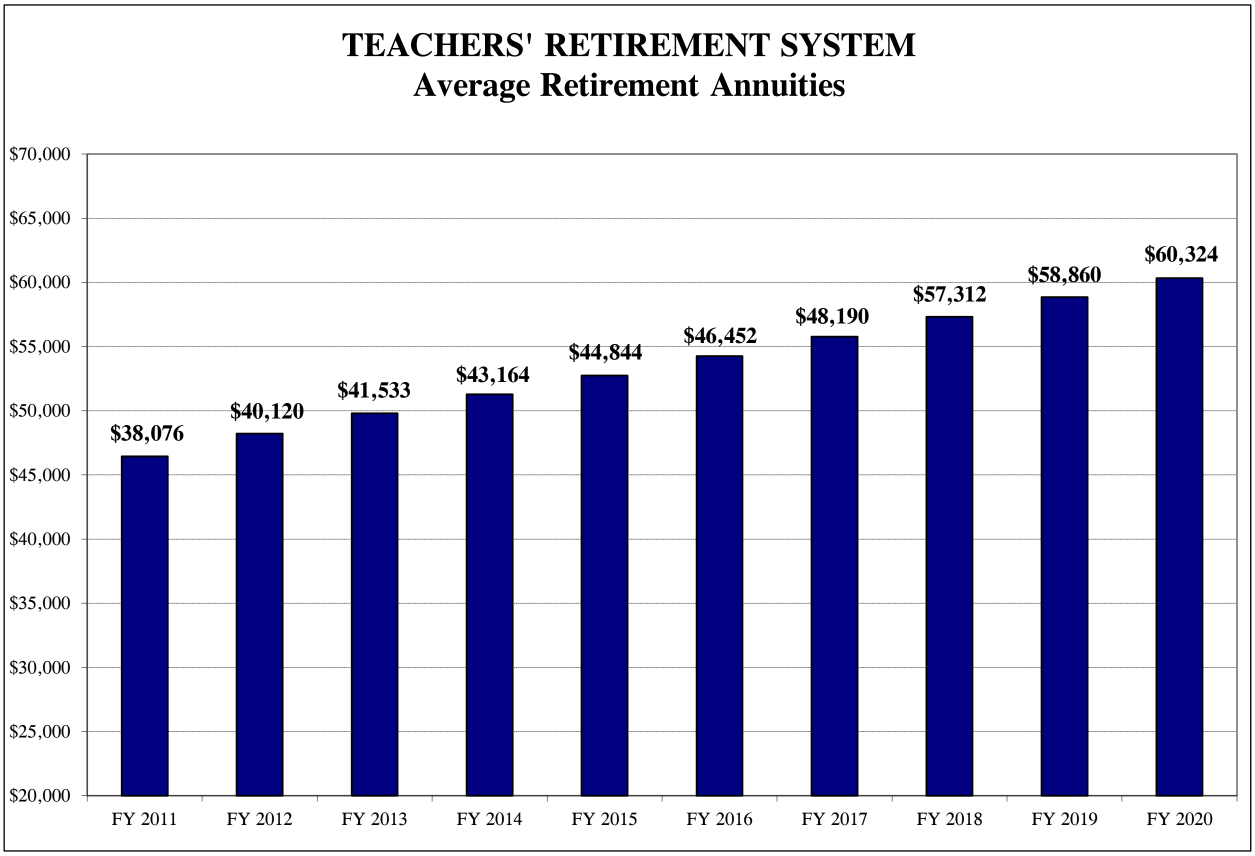
NOTE: All the data is based on TRS' Comprehensive Annual Financial Reports (CAFRs).

CHART 12



NOTE: All the data is based on TRS' Comprehensive Annual Financial Reports (CAFRs).

CHART 13



NOTE: All the data is based on TRS' Comprehensive Annual Financial Reports (CAFRs).

CHART 14

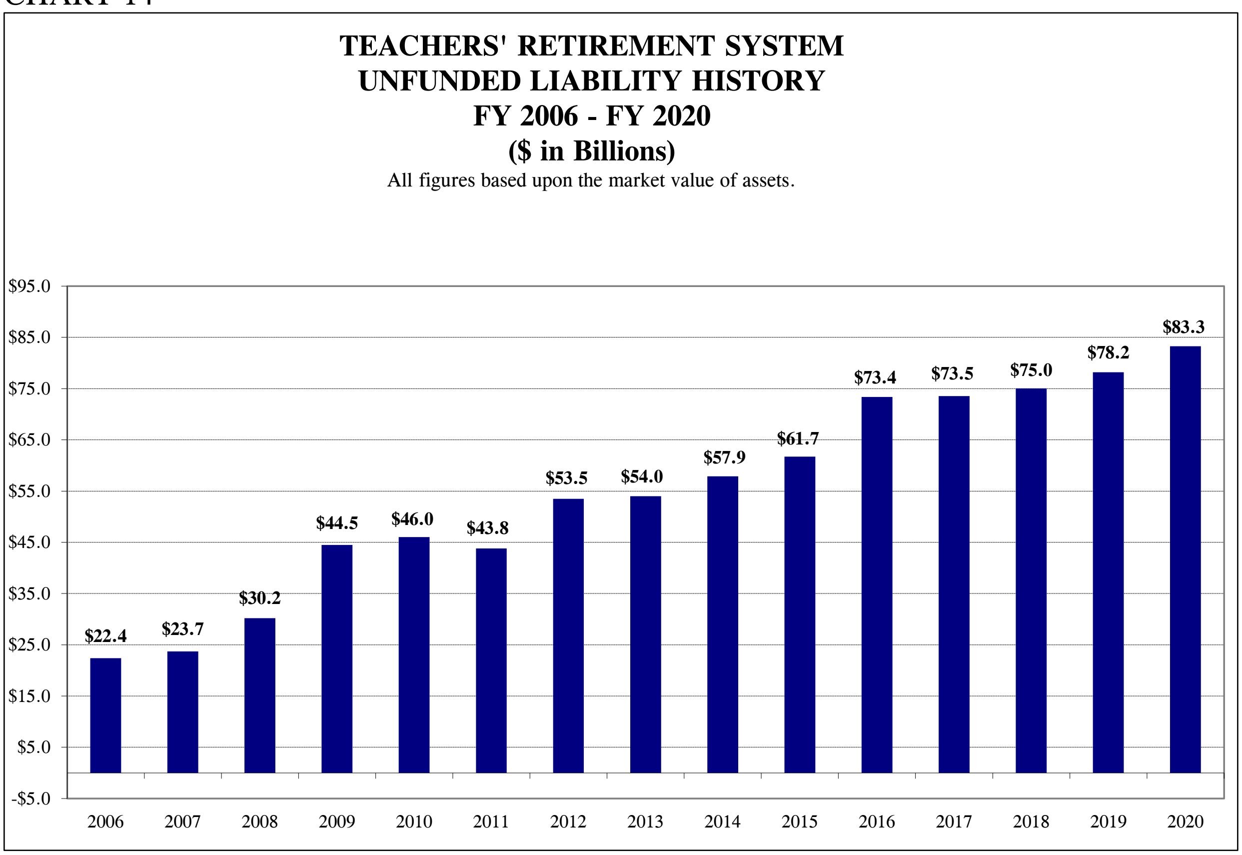
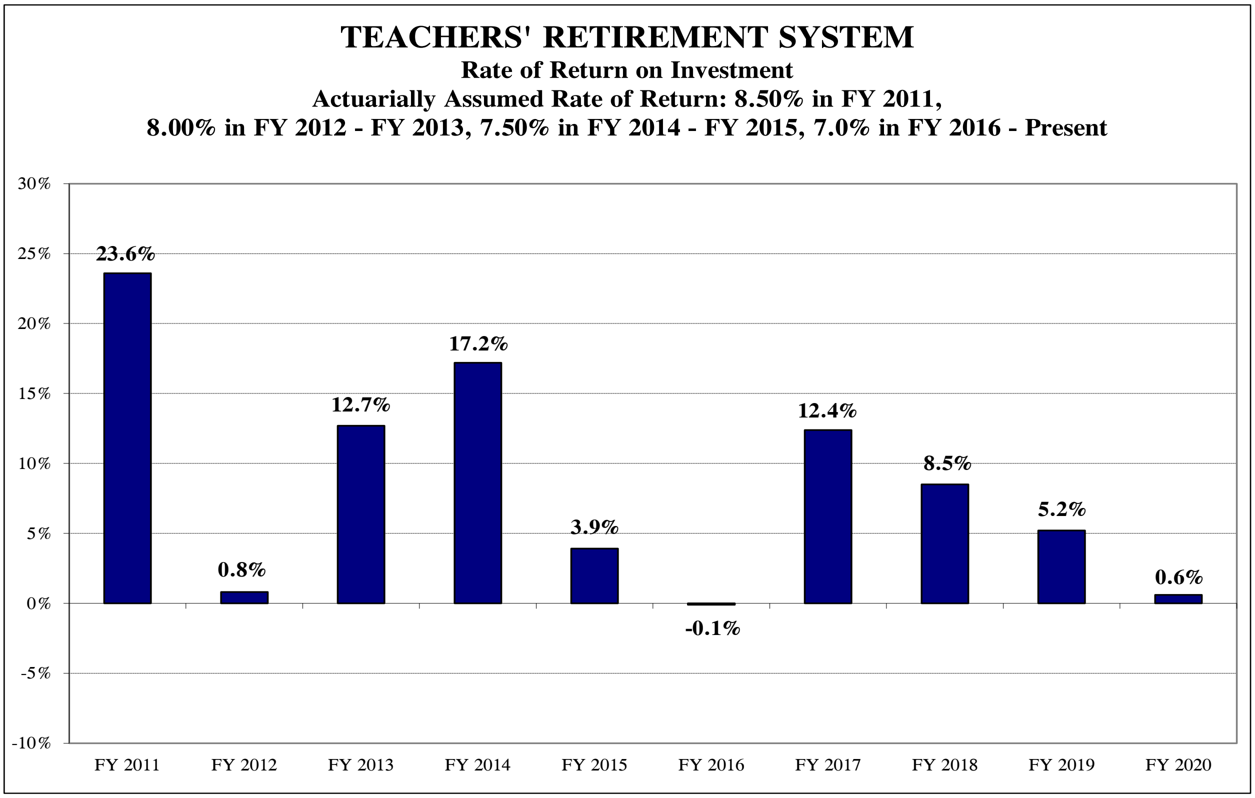
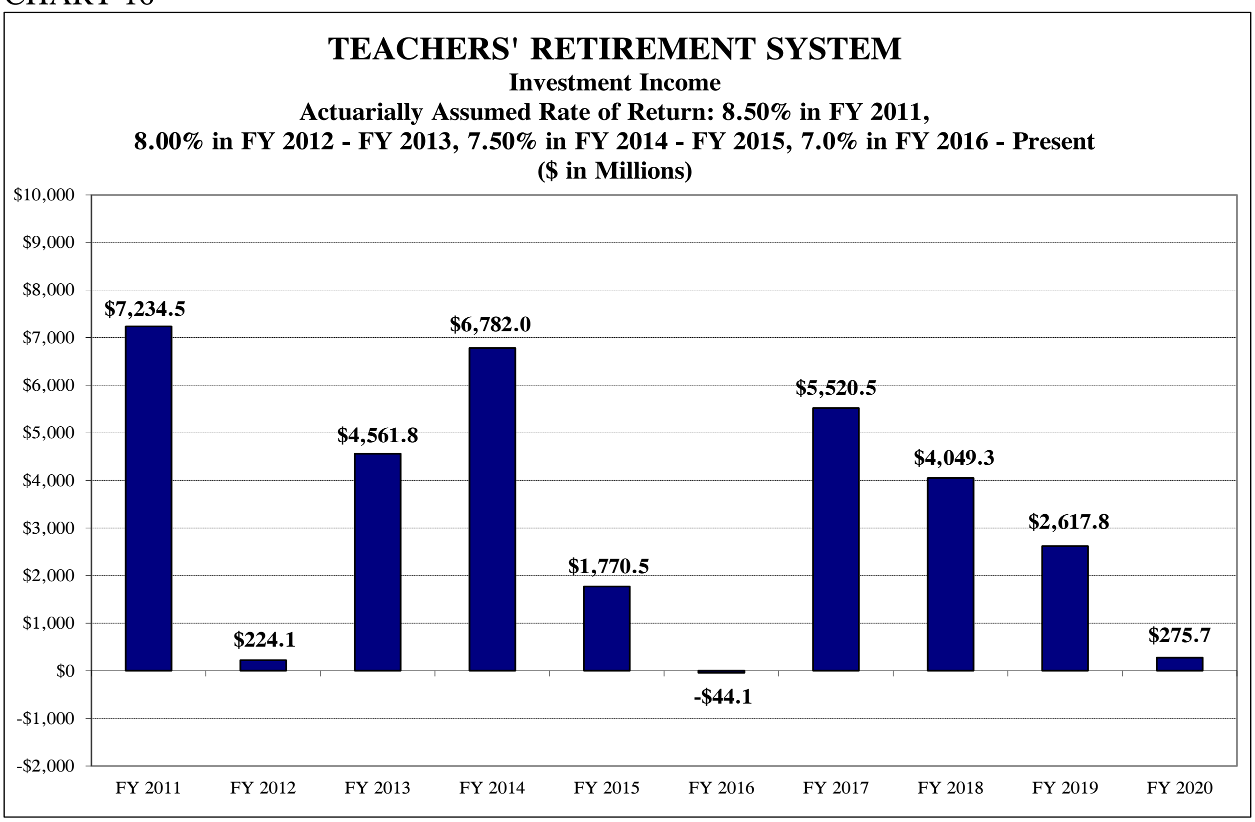


CHART 15



Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 16



Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 17

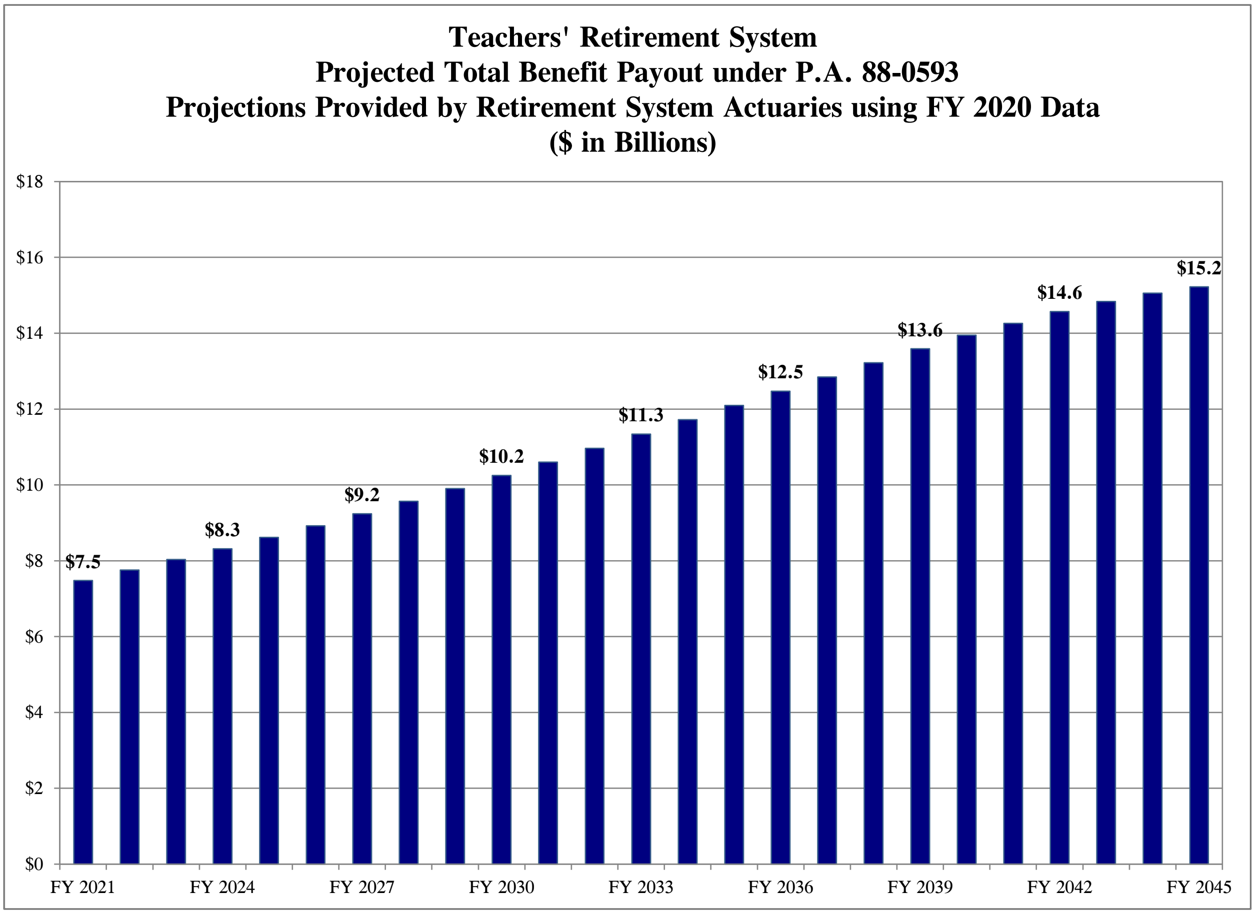

Teachers' Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2020 Data
($ in Billions)
$18
$16
$14
$12
$10
$8
$6
$4
$2
$0
$7.5
$8.3
$9.2
$10.2
$11.3
$12.5
$13.6
$14.6
$15.2
FY 2021
FY 2024
FY 2027
FY 2030
FY 2033
FY 2036
FY 2039
FY 2042
FY 2045

TABLE 6

TEACHERS' RETIREMENT SYSTEM CHANGES IN UNFUNDED LIABILITY FY 1996 - FY 2020								
YEAR ENDED	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N.C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	NEW BUYOUT PROVISIONS (P.A. 100-0587)	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
6/30/2016	(65,504,184)	467,184,012	1,635,079,237	0		5,654,841,998	1,029,558,907	8,721,159,970
6/30/2017	29,518,579	(384,476,850)	1,808,876,910	0		0	574,797,924	2,028,716,563
6/30/2018	(40,293,935)	(306,966,173)	1,909,537,067	0	(380,955,376)	(711,686,423)	1,382,295,985	1,851,931,145
6/30/2019	(84,011,865)	589,910,262	1,754,692,033	0	0	80,717,984	436,027,601	2,777,336,015
6/30/2020	(41,780,212)	972,850,068	1,622,083,905	0	0	0	88,641,204	2,641,794,965
TOTALS	**($2,563,325,047)**	**$9,243,471,043**	**$33,506,200,857**	**$1,105,792,000**	**($380,955,376)**	**$16,950,888,488**	**$11,506,740,931**	**$69,368,812,896**

NOTE: All 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	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additions to Assets										
State of Illinois	$2,170.9	$2,406.4	$2,703.3	$3,438.4	$3,377.7	$3,742.5	$3,986.4	$4,095.1	$4,466.0	$4,813.5
Pension Obligation Bonds	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Employees	$909.6	$917.7	$921.4	$928.7	$935.5	$951.8	$929.1	$938.0	$964.0	$994.4
School Districts	$89.1	$92.5	$88.3	$83.9	$75.8	$73.5	$73.8	$64.6	$70.0	$69.4
Federal	$66.0	$62.3	$68.9	$74.5	$69.8	$74.5	$75.7	$20.0	$18.5	$23.2
Net Investment Income	$7,234.5	$224.1	$4,561.8	$6,782.0	$1,770.6	-$44.1	$5,520.5	$4,049.3	$2,617.8	$275.7
Total Asset Additions (A)	$10,470.1	$3,703.0	$8,343.6	$11,307.5	$6,229.3	$4,798.2	$10,585.4	$9,167.1	$8,136.3	$6,176.2
Deductions from Assets										
Benefits	$4,228.2	$4,553.8	$4,893.1	$5,225.2	$5,536.4	$5,848.2	$6,152.9	$6,458.7	$6,745.5	$7,035.3
Refunds	$76.6	$84.6	$88.4	$95.5	$88.6	$83.0	$285.1	$92.9	$73.2	$64.2
Subsidy Payments	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Administrative Expenses	$17.8	$19.0	$20.3	$21.2	$21.7	$23.0	$22.7	$21.6	$24.3	$23.0
Other	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Asset Deductions (B)	$4,322.6	$4,657.4	$5,001.7	$5,341.9	$5,646.7	$5,954.2	$6,460.7	$6,573.2	$6,843.1	$7,122.5
Change in Net Assets (A-B=C)	$6,147.5	-$954.4	$3,341.9	$5,965.6	$582.5	-$1,156.0	$4,124.7	$2,593.9	$1,293.2	-$946.3

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
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%
2016	$45,251.0	-$44.1	-0.1%
2017	$49,375.7	$5,520.5	12.4%
2018	$51,969.5	$4,049.3	8.5%
2019	$53,262.8	$2,617.8	5.2%
2020	$52,316.5	$275.7	0.6%

TABLE 9

TEACHERS' RETIREMENT SYSTEM Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2020 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	Employee Contributions	Employer Normal Cost	Employer Normal Cost as a % of Payroll
2021	$1,968.3	17.6%	$171.8	1.5%	$2,140.1	19.1%	$1,009.3	$1,130.8	10.1%
2022	$1,971.5	17.2%	$203.1	1.8%	$2,174.6	19.0%	$1,032.3	$1,142.2	10.0%
2023	$1,980.1	16.8%	$235.8	2.0%	$2,215.9	18.8%	$1,063.5	$1,152.4	9.8%
2024	$1,971.7	16.2%	$270.1	2.2%	$2,241.8	18.4%	$1,094.9	$1,146.9	9.4%
2025	$1,958.1	15.6%	$305.2	2.4%	$2,263.4	18.1%	$1,126.7	$1,136.7	9.1%
2026	$1,937.8	15.1%	$342.7	2.7%	$2,280.5	17.7%	$1,157.4	$1,123.1	8.7%
2027	$1,908.5	14.5%	$382.5	2.9%	$2,291.0	17.4%	$1,188.2	$1,102.7	8.4%
2028	$1,869.8	13.8%	$425.4	3.1%	$2,295.2	17.0%	$1,218.5	$1,076.7	8.0%
2029	$1,824.2	13.1%	$470.9	3.4%	$2,295.1	16.5%	$1,249.6	$1,045.5	7.5%
2030	$1,771.2	12.4%	$519.1	3.6%	$2,290.3	16.1%	$1,281.1	$1,009.2	7.1%
2031	$1,709.9	11.7%	$570.2	3.9%	$2,280.2	15.6%	$1,313.6	$966.6	6.6%
2032	$1,639.2	11.0%	$624.3	4.2%	$2,263.5	15.1%	$1,346.2	$917.3	6.1%
2033	$1,558.7	10.2%	$681.7	4.4%	$2,240.4	14.6%	$1,379.1	$861.3	5.6%
2034	$1,469.4	9.4%	$742.1	4.7%	$2,211.5	14.1%	$1,412.4	$799.1	5.1%
2035	$1,373.2	8.5%	$805.6	5.0%	$2,178.8	13.6%	$1,446.7	$732.0	4.6%
2036	$1,272.4	7.7%	$872.0	5.3%	$2,144.4	13.0%	$1,482.5	$661.9	4.0%
2037	$1,165.4	6.9%	$940.9	5.6%	$2,106.3	12.5%	$1,520.0	$586.3	3.5%
2038	$1,048.5	6.1%	$1,012.7	5.8%	$2,061.2	11.9%	$1,558.9	$502.3	2.9%
2039	$921.0	5.2%	$1,087.4	6.1%	$2,008.4	11.3%	$1,598.7	$409.8	2.3%
2040	$786.9	4.3%	$1,165.3	6.4%	$1,952.2	10.7%	$1,639.7	$312.5	1.7%
2041	$651.2	3.5%	$1,244.9	6.7%	$1,896.2	10.1%	$1,682.5	$213.6	1.1%
2042	$519.9	2.7%	$1,325.6	6.9%	$1,845.6	9.6%	$1,727.3	$118.3	0.6%
2043	$396.3	2.0%	$1,406.9	7.1%	$1,803.2	9.2%	$1,773.4	$29.8	0.2%
2044	$284.6	1.4%	$1,488.1	7.4%	$1,772.7	8.8%	$1,820.7	-$48.1	-0.2%
2045	$192.5	0.9%	$1,569.0	7.6%	$1,761.5	8.5%	$1,869.9	-$108.4	-0.5%
2046	$124.3	0.6%	$1,647.1	7.7%	$1,771.4	8.3%	$1,921.3	-$149.9	-0.7%

IX. The State Employees' Retirement System

- **Plan Summaries**
- **FY 2020 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 Liabilities**
- **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
  - 3.5% for retirement benefit and 0.5% for survivors' benefit
- 8.0% of salary for members not covered by Social Security
  - 7.0% for retirement benefit and 1.0% for survivors' benefit

The benefits shown do not reflect P.A. 96-0889 (Tier 2 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
    - 8.0% for retirement benefit and 0.5% for survivors' benefit
- 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
    - 11.5% for retirement benefit and 1.0% for survivors' benefit

State Employees' Retirement System
Tier 2 Regular Formula - Plan Summary

Retirement Age

- Age 67 with 10 years of service credit
- Age 62 with 10 years of service (reduced one-half of one percent for each month the member is under age 67)

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 96 consecutive months of service within the last 120 months of service
- Pensionable Salary is limited by an amount tied to the 2010 Social Security Wage Base of $106,800. This amount increases annually by 3% or ½ of the increase in the Consumer Price Index-U, whichever is less. The salary limit for calendar year 2020 is $115,929.

Annual COLA

- Simple 3% or ½ of the increase in the Consumer Price Index-U, whichever is less

Employee Contributions

- 4.0% of salary for members covered by Social Security
    - 3.5% for retirement benefit and 0.5% for survivors' benefit
- 8.0% of salary for members not covered by Social Security
    - 7.0% for retirement benefit and 1.0% for survivors' benefit

The benefits shown reflect P.A. 96-0889 (2 Tier Act of 2011) and are for Tier 2 members who first contribute to the system on or after January 1, 2011. Please refer to Section I earlier in this report for details.

State Employees' Retirement System
Tier 2 Alternative Formula - Plan Summary

Retirement Age

- Age 60 with at least 20 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

- Highest 96 consecutive months of service within the last 120 months of service
- Pensionable Salary is limited by an amount tied to the 2010 Social Security Wage Base of \$106,800. This amount increases annually by 3% or ½ of the increase in the Consumer Price Index-U, whichever is less. The salary limit for calendar year 2020 is \$115,929.

Annual COLA

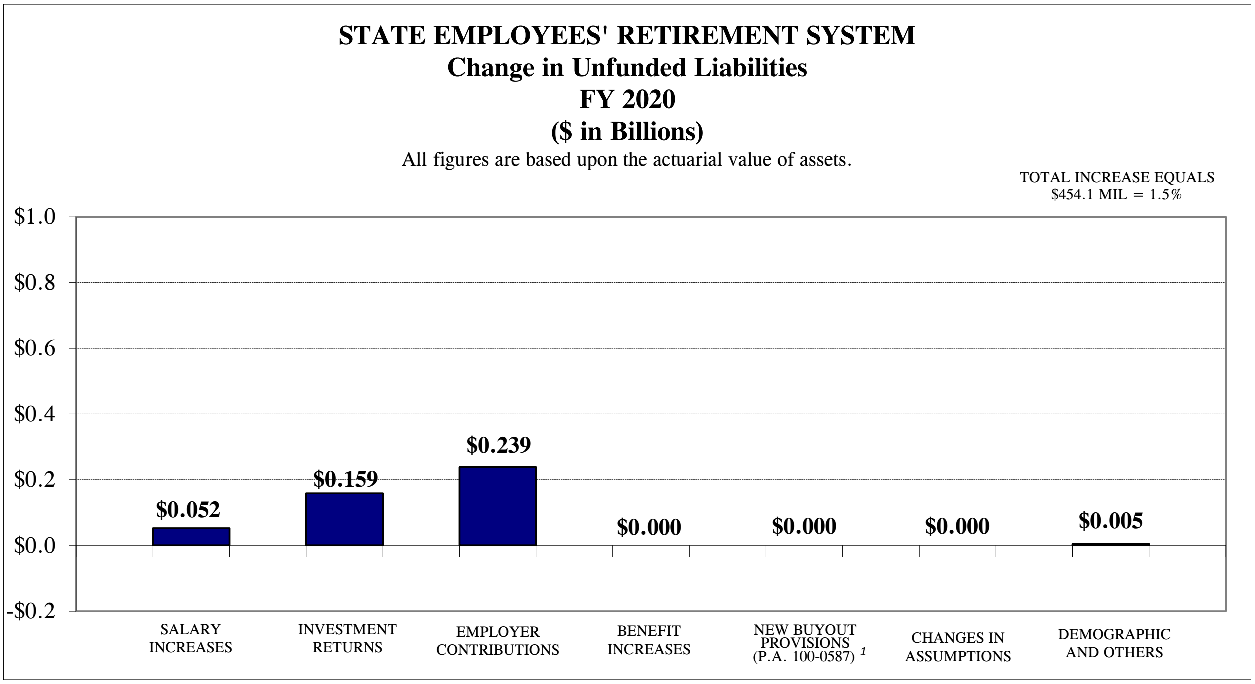
- Simple 3% or ½ of the increase in the Consumer Price Index-U, whichever is less

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
    - 8.0% for retirement benefit and 0.5% for survivors' benefit
- 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
    - 11.5% for retirement benefit and 1.0% for survivors' benefit

The benefits shown reflect P.A. 96-0889 (2 Tier Act of 2011) and are for Tier 2 members who first contribute to the system on or after January 1, 2011. Please refer to Section I earlier in this report for details.

CHART 18



[1] *The two voluntary buyout programs were created by P.A. 100-0587 and extended by 3 years to June 30, 2024 by P.A. 101-0010.*

CHART 19

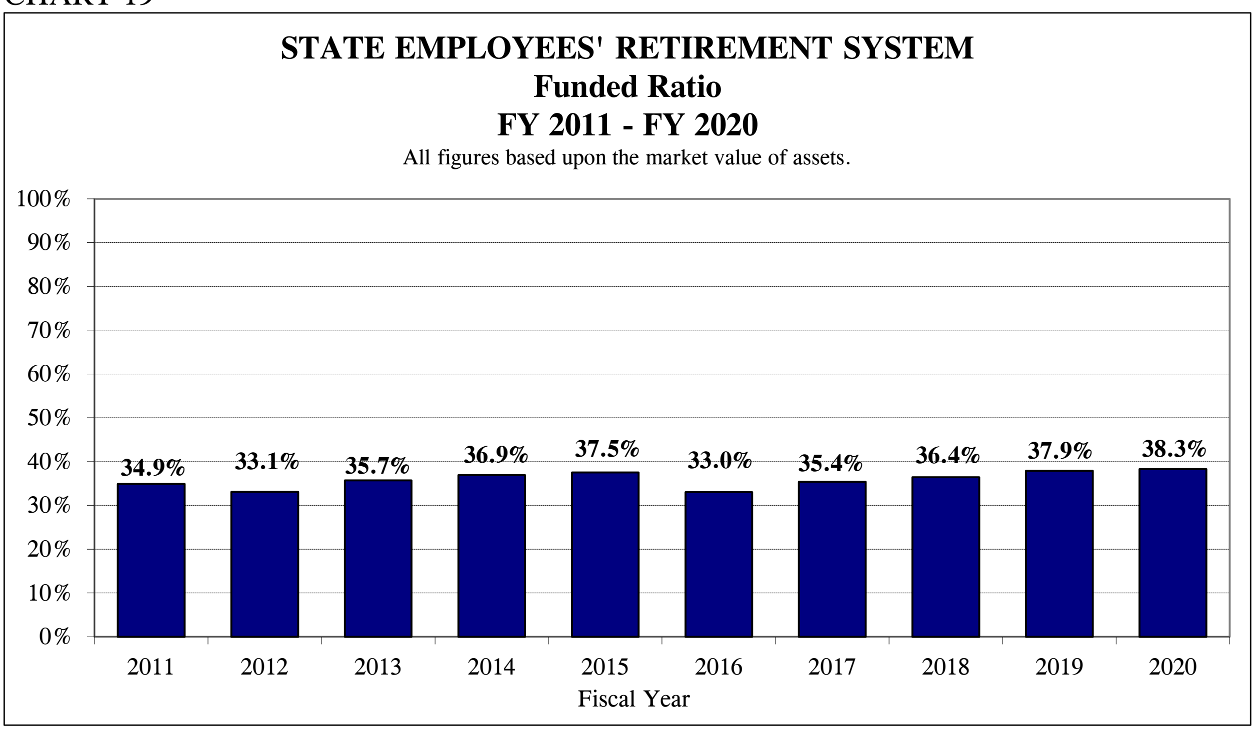


CHART 20

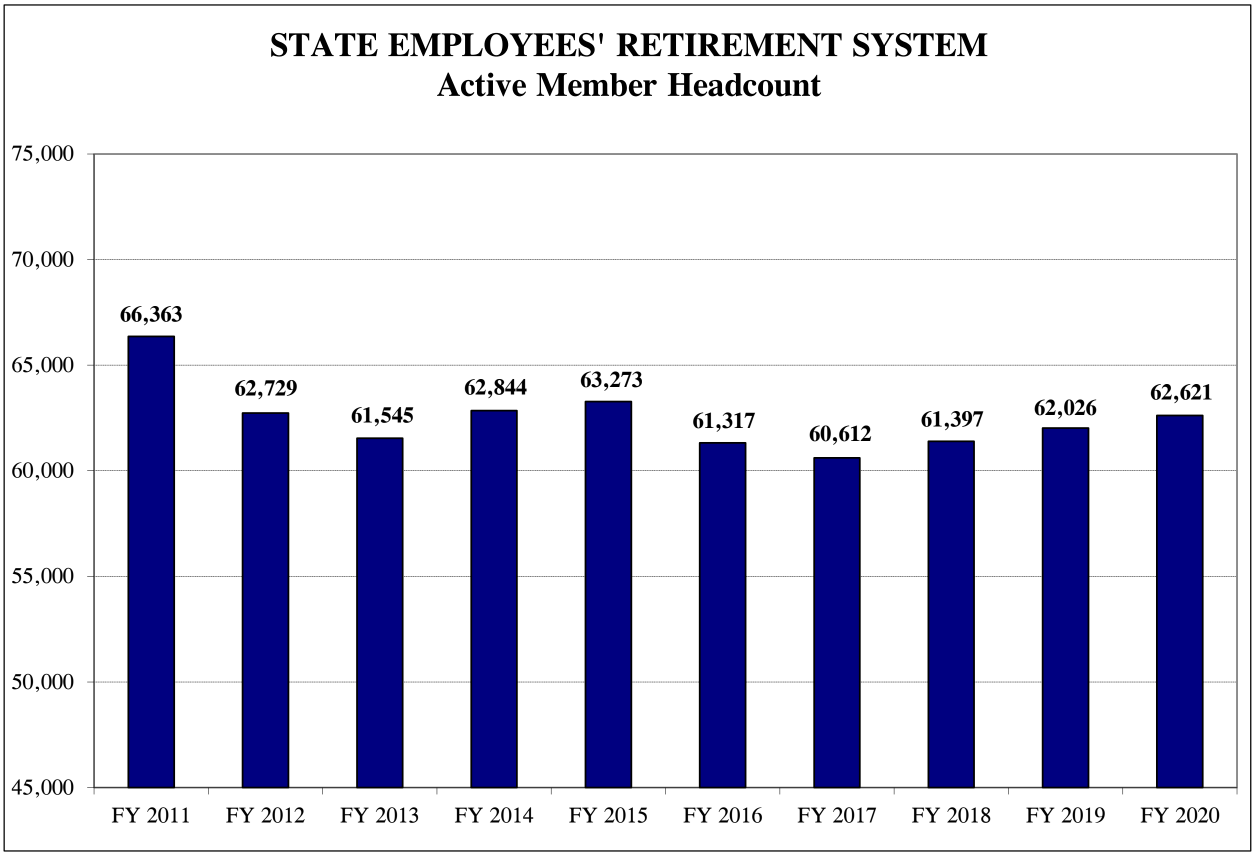


CHART 21

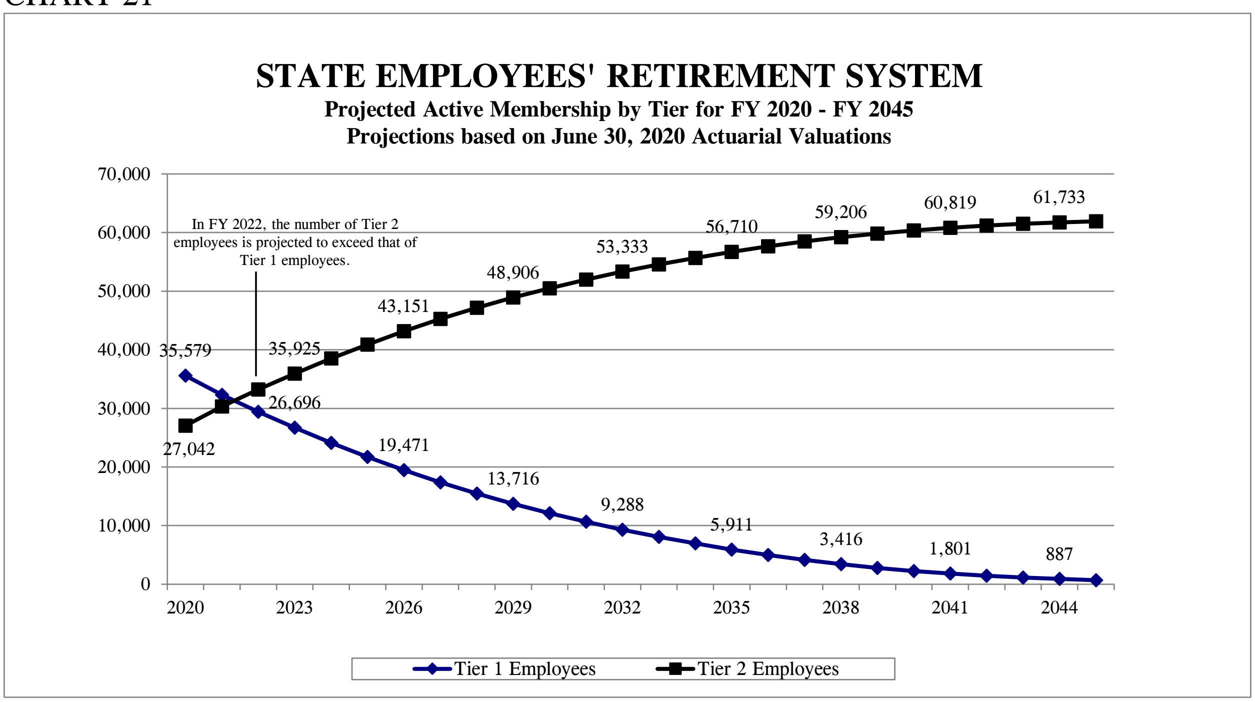


CHART 22

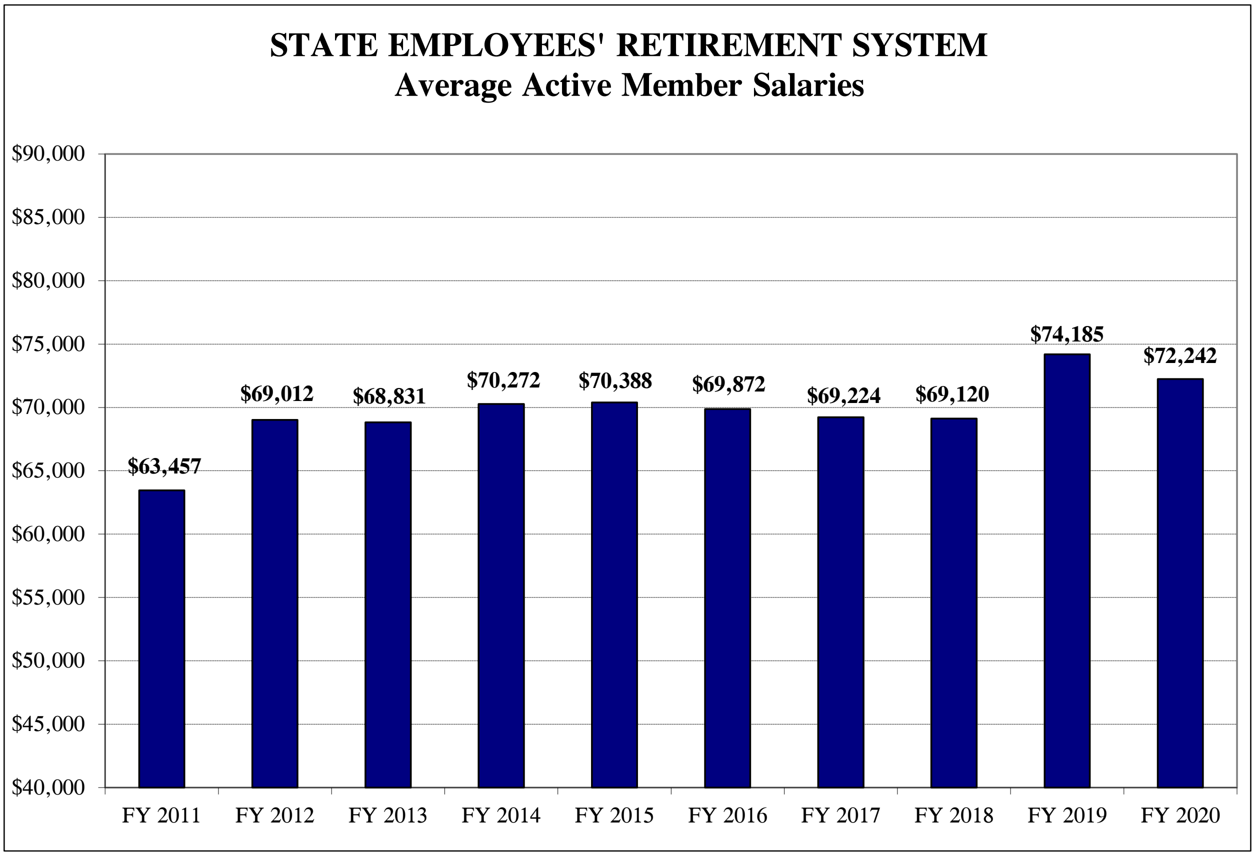


CHART 23

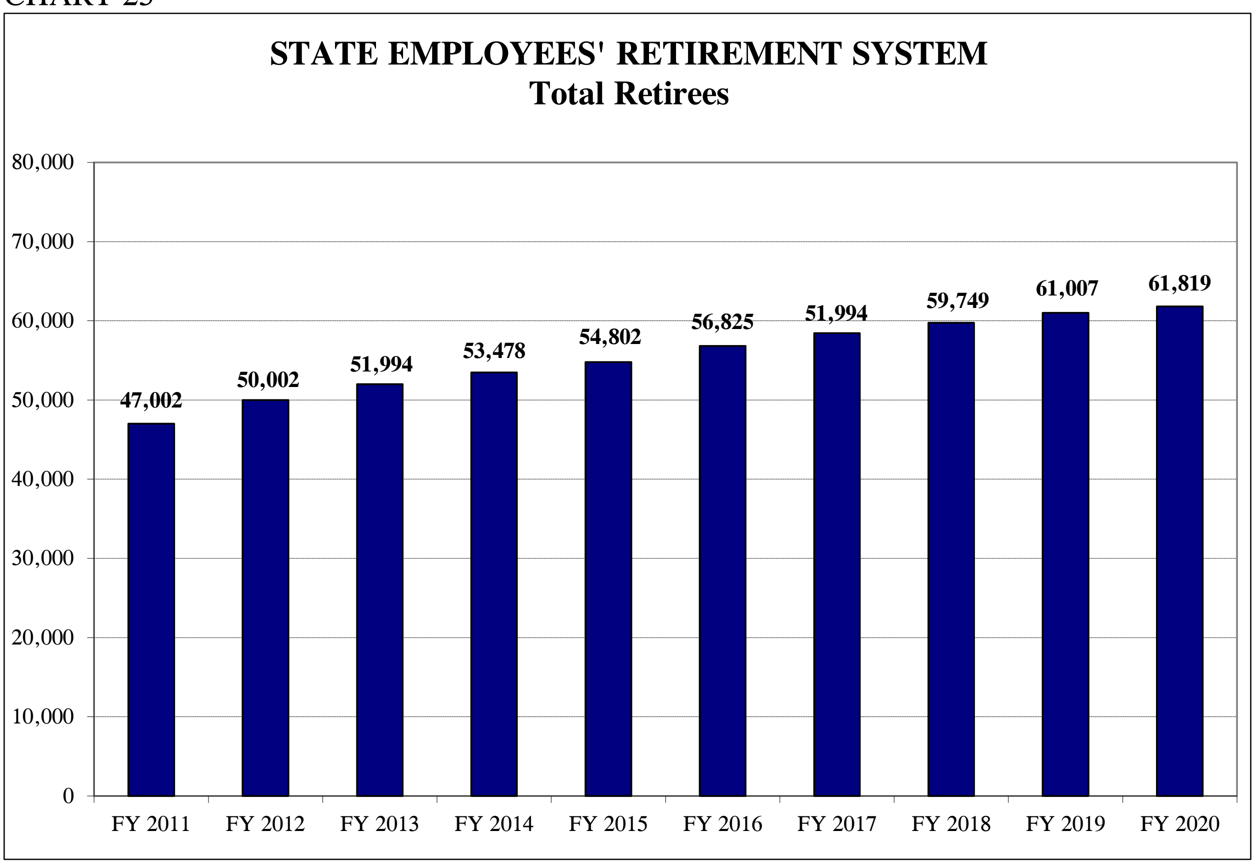


CHART 24

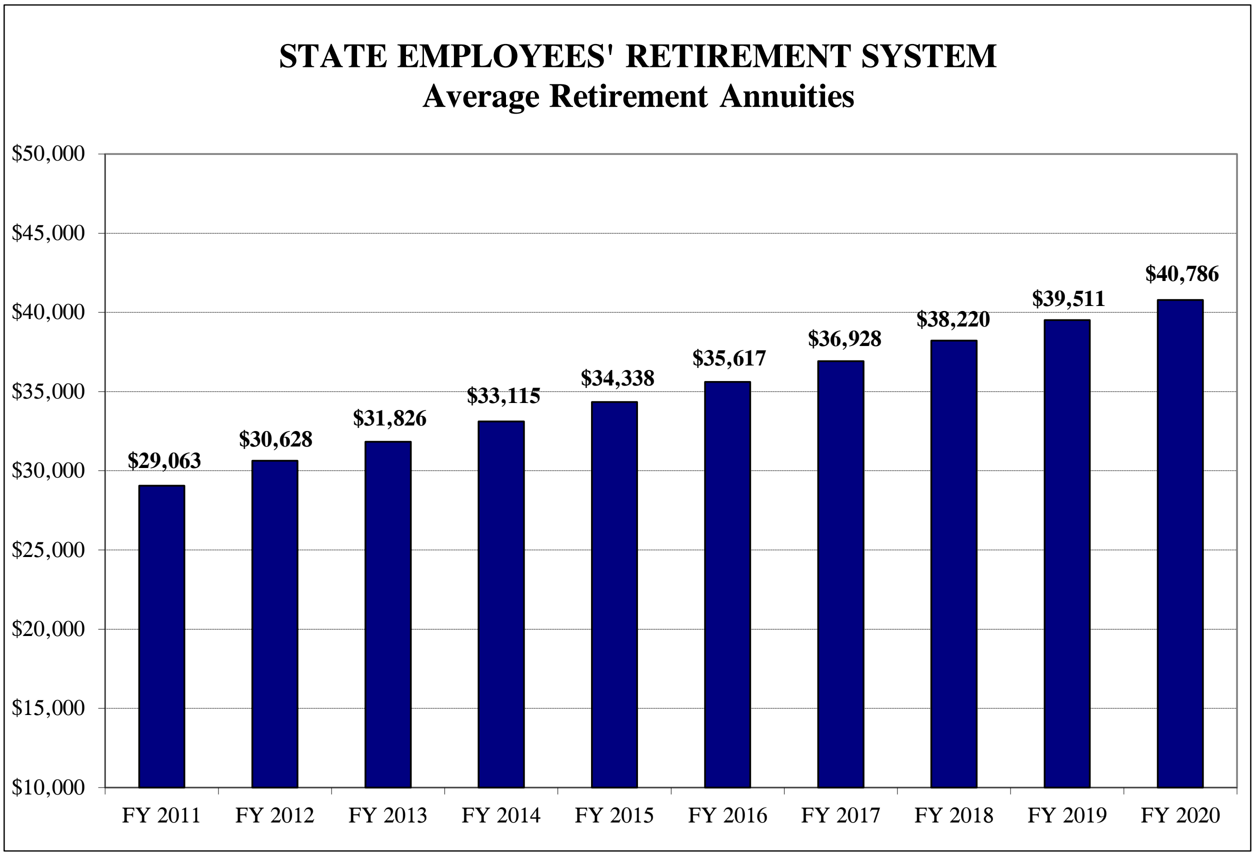


CHART 25

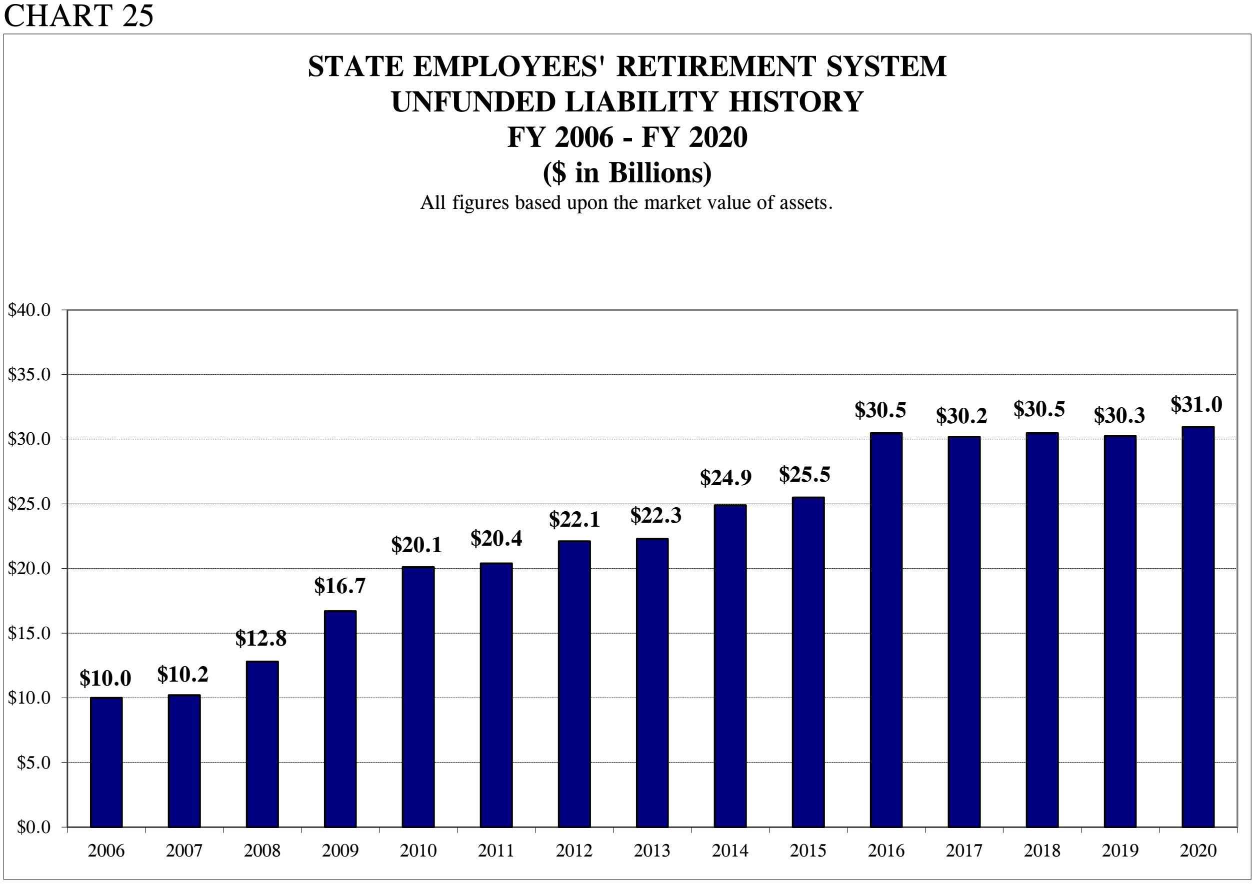
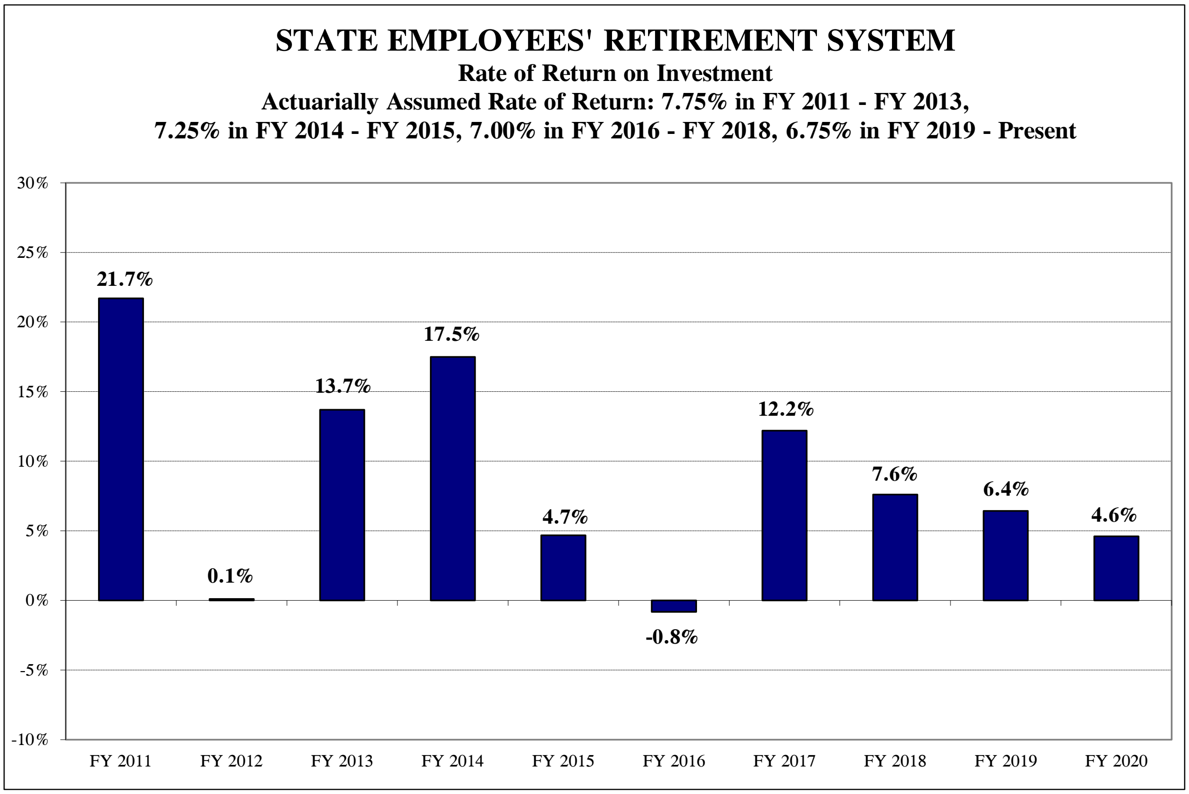
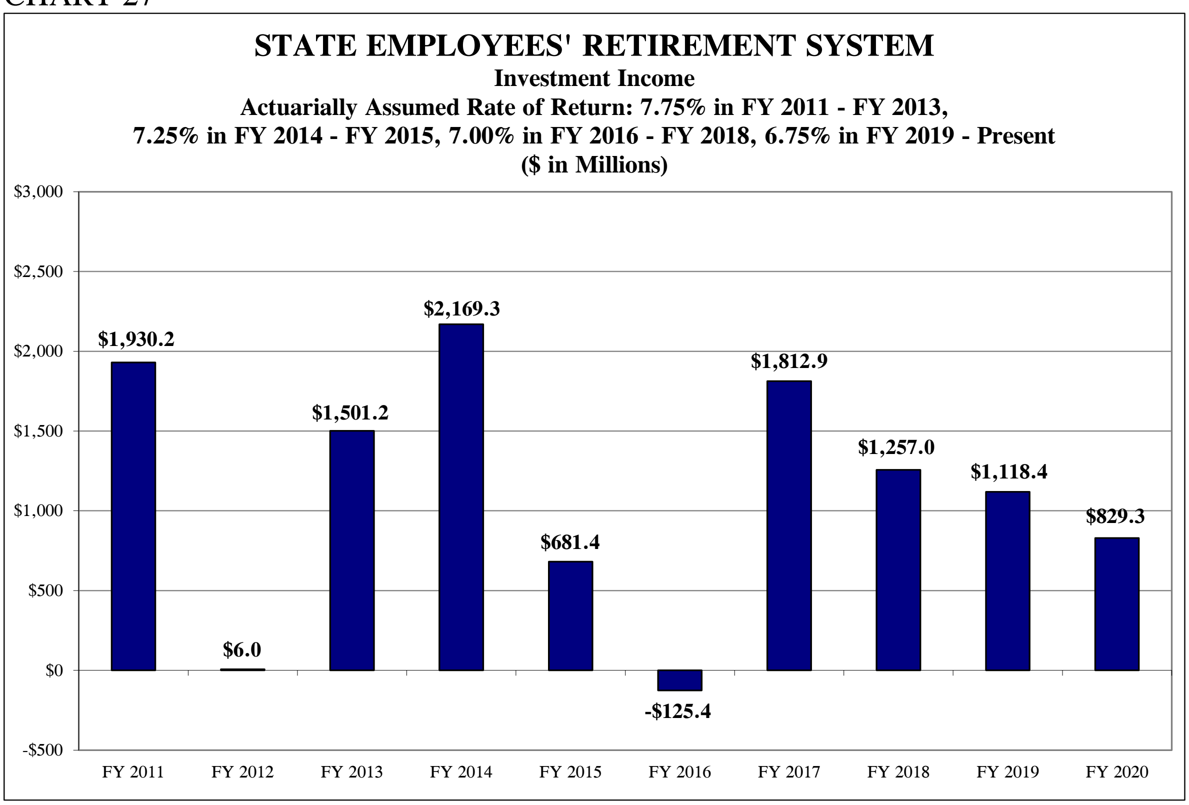


CHART 26



Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 27



Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 28

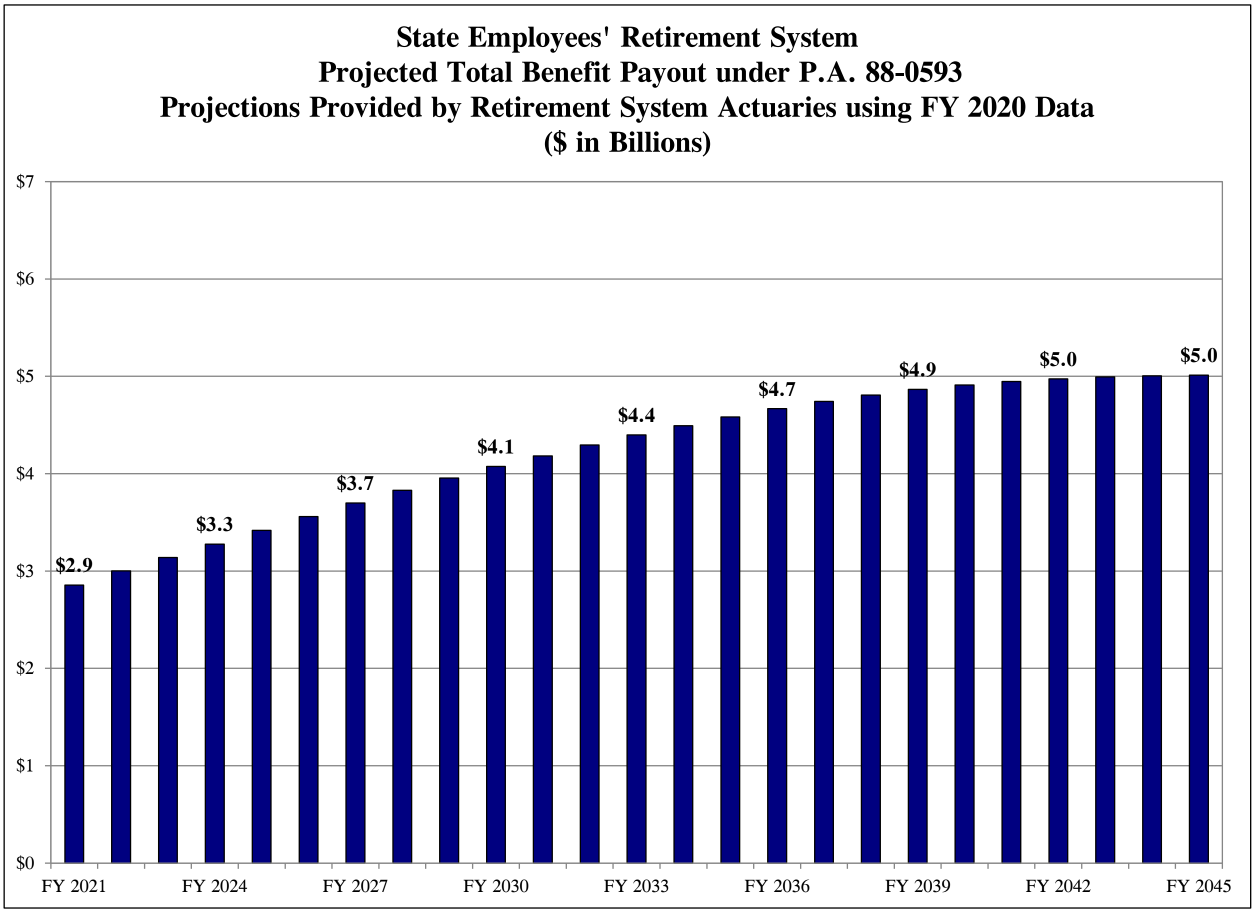

State Employees' Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2020 Data
($ in Billions)
$7
$6
$5
$4
$3
$2
$1
$0
$2.9
$3.3
$3.7
$4.1
$4.4
$4.7
$4.9
$5.0
$5.0
FY 2021
FY 2024
FY 2027
FY 2030
FY 2033
FY 2036
FY 2039
FY 2042
FY 2045

TABLE 10

YEAR ENDED	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N.C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	NEW BUYOUT PROVISIONS (P.A. 100-0587)	CHANGES IN ACTUARIAL ASSUMPTIONS	OTHER FACTORS MISC.	TOTAL CHANGE IN UNFUNDED LIABILITY FROM PREVIOUS YEAR
STATE EMPLOYEES' RETIREMENT SYSTEM CHANGES IN UNFUNDED LIABILITY FY 1996 - FY 2020								
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)
6/30/2016	(744,045,004)	79,632,491	613,771,983	0		3,824,257,624	107,475,059	3,881,092,153
6/30/2017	(475,475,873)	(164,266,681)	933,395,000	0		0	(33,944,016)	259,708,430
6/30/2018	(287,352,188)	(95,232,463)	806,137,890	0	0	(213,956,554)	95,471,795	305,068,480
6/30/2019	(22,147,976)	164,421,442	438,041,644	0	(404,655,016)	(293,913,072)	(27,036,676)	(145,289,654)
6/30/2020	52,104,683	158,910,288	238,552,463	0	0	0	4,508,857	454,076,291
TOTALS	**($1,907,887,650)**	**$3,198,787,812**	**$10,262,059,451**	**$4,444,266,446**	**($404,655,016)**	**$9,892,026,437**	**$2,988,111,434**	**$28,472,708,914**

TABLE 11

Fiscal Years	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
STATE EMPLOYEES' RETIREMENT SYSTEM Changes in Net Assets ($ in Millions)										
Additions to Assets										
State of Illinois	$1,127.9	$1,391.4	$1,531.9	$1,699.4	$1,804.3	$1,882.2	$1,798.3	$1,929.2	$2,269.8	$2,368.9
Pension Obligation Bonds	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Employees	$254.2	$259.1	$248.2	$269.2	$266.1	$256.2	$251.6	$254.4	$274.3	$271.7
Net Investment Income	$1,930.2	$6.0	$1,501.2	$2,169.3	$681.4	-$125.4	$1,812.9	$1,257.0	$1,118.4	$829.3
Total Asset Additions (A)	$3,312.3	$1,656.5	$3,281.3	$4,138.0	$2,751.8	$2,013.0	$3,862.8	$3,440.7	$3,662.5	$3,470.0
Deductions from Assets										
Benefits	$1,492.1	$1,627.4	$1,799.9	$1,917.1	$2,034.9	$2,190.5	$2,328.6	$2,464.8	$2,601.3	$2,727.8
Refunds	$37.6	$23.5	$24.3	$23.1	$23.1	$26.7	$26.6	$27.5	$31.3	$19.4
Subsidy Payments	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Administrative Expenses	$13.7	$15.7	$17.5	$16.6	$16.5	$16.1	$16.0	$15.3	$14.9	$17.4
Other	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Asset Deductions (B)	$1,543.4	$1,666.6	$1,841.7	$1,956.8	$2,074.5	$2,233.3	$2,371.2	$2,507.6	$2,647.5	$2,764.6
Change in Net Assets (A-B=C)	$1,768.9	-$10.1	$1,439.6	$2,181.3	$677.3	-$220.3	$1,491.7	$933.1	$1,015.0	$705.4

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
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%
2016	$15,038.5	-$125.4	-0.8%
2017	$16,530.2	$1,812.9	12.2%
2018	$17,463.3	$1,257.0	7.6%
2019	$18,478.3	$1,118.4	6.4%
2020	$19,191.4	$829.3	4.6%

TABLE 13

STATE EMPLOYEES' RETIREMENT SYSTEM Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2020 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	Employee Contributions	Employer Normal Cost	Employer Normal Cost as a % of Payroll
2021	$725.5	16.0%	$152.2	3.4%	$877.7	19.4%	$255.5	$622.2	13.8%
2022	$693.4	15.1%	$175.3	3.8%	$868.7	19.0%	$257.6	$611.1	13.3%
2023	$661.3	14.2%	$198.9	4.3%	$860.2	18.5%	$259.8	$600.3	12.9%
2024	$627.1	13.3%	$223.5	4.7%	$850.6	18.0%	$262.3	$588.3	12.4%
2025	$589.7	12.3%	$249.5	5.2%	$839.2	17.5%	$264.6	$574.6	12.0%
2026	$550.2	11.3%	$276.3	5.7%	$826.6	16.9%	$267.4	$559.1	11.5%
2027	$509.7	10.3%	$304.3	6.1%	$814.0	16.4%	$270.5	$543.5	10.9%
2028	$471.0	9.3%	$333.1	6.6%	$804.1	15.9%	$273.7	$530.3	10.5%
2029	$434.7	8.4%	$362.1	7.0%	$796.7	15.5%	$277.7	$519.1	10.1%
2030	$399.7	7.6%	$392.1	7.5%	$791.8	15.1%	$282.0	$509.9	9.7%
2031	$365.8	6.8%	$422.7	7.9%	$788.5	14.7%	$286.8	$501.7	9.3%
2032	$331.3	6.0%	$453.6	8.3%	$785.0	14.3%	$291.6	$493.3	9.0%
2033	$298.0	5.3%	$485.0	8.7%	$783.0	14.0%	$296.5	$486.5	8.7%
2034	$266.5	4.7%	$516.5	9.0%	$783.0	13.7%	$301.7	$481.3	8.4%
2035	$234.5	4.0%	$548.4	9.4%	$782.9	13.4%	$307.2	$475.7	8.1%
2036	$202.0	3.4%	$581.1	9.7%	$783.1	13.1%	$312.7	$470.4	7.9%
2037	$171.8	2.8%	$614.1	10.0%	$785.8	12.8%	$318.4	$467.4	7.6%
2038	$144.2	2.3%	$646.6	10.3%	$790.8	12.6%	$324.6	$466.2	7.4%
2039	$119.3	1.9%	$678.8	10.6%	$798.1	12.4%	$330.9	$467.2	7.3%
2040	$97.4	1.5%	$711.4	10.8%	$808.8	12.3%	$337.6	$471.2	7.2%
2041	$78.5	1.2%	$743.8	11.0%	$822.3	12.2%	$344.7	$477.6	7.1%
2042	$63.0	0.9%	$775.7	11.2%	$838.6	12.1%	$352.2	$486.4	7.0%
2043	$50.4	0.7%	$806.7	11.4%	$857.1	12.1%	$359.9	$497.2	7.0%
2044	$40.1	0.6%	$837.0	11.5%	$877.1	12.1%	$367.7	$509.4	7.0%
2045	$31.8	0.4%	$866.0	11.6%	$897.7	12.1%	$375.5	$522.2	7.0%

X. The State Universities Retirement System

- Plan Summary
- FY 2020 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 Liabilities
- Changes in Net Assets
- Investment Return History
- Reduction in State Contributions
- Tier 1 & Tier 2 Normal Cost Projections

State Universities Retirement System
Tier 1 Traditional Defined Benefit Formula Plan

Retirement Age

- Age 62 with at least 5 years of service
- Age 60 with at least 8 years of service
- Age 55 with at least 8 years of service (reduced annuity)
- 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
  - 6.5% for retirement benefit, 0.5% for annual COLA, and 1% for survivors' insurance

The benefits shown do not reflect P.A. 98-0599 (SB 1), or P.A. 96-0889 (2 Tier Act of 2011). Please refer to Section I earlier in this report for details.

State Universities Retirement System
Tier 2 Traditional Defined Benefit Formula Plan

Retirement Age

- Age 67 with at least 10 years of service
- Age 62 with at least 10 years of service (reduced annuity)

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

- Highest 96 consecutive months of service within the last 120 months of service
- Pensionable Salary is limited by an amount tied to the 2010 Social Security Wage Base of $106,800. This amount increases annually by 3% or ½ of the increase in the Consumer Price Index-U, whichever is less. The salary limit for calendar year 2020 is $115,929.

Annual COLA

- Simple 3% or ½ of the increase in the Consumer Price Index-U, whichever is less

Employee Contributions

- 8.0% of salary
    - 6.5% for retirement benefit, 0.5% for annual COLA, and 1% for survivors' insurance

The benefits shown reflect P.A. 96-0889 (2 Tier Act of 2011) and are for Tier 2 members who first contribute to the system on or after January 1, 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 Self-Managed Plan (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.

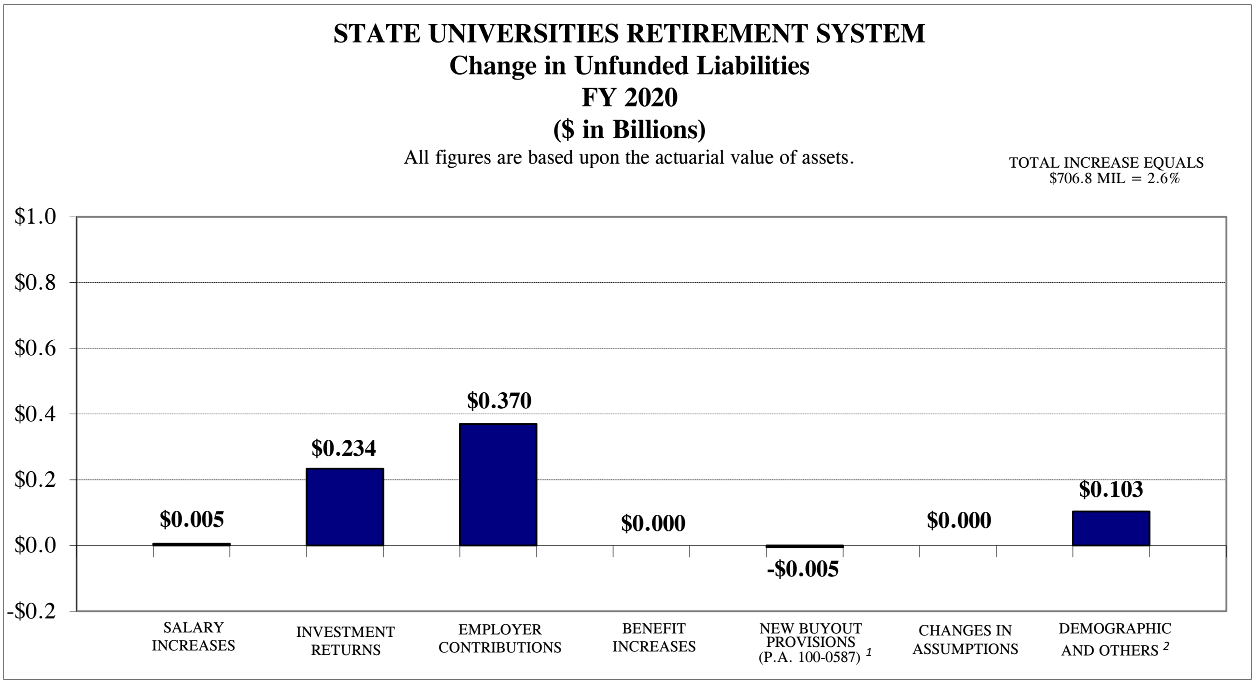
- If SURS-covered employment ends before retirement with less than 5 years of service (Tier 1) or 10 years (Tier 2), an employee is entitled to a lump sum of the value of their employee contributions and the investment return earned.

- If SURS-covered employment ends before retirement with greater than 5 years of service (Tier 1) or 10 years (Tier 2), 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



[1] *The actuarial liability decreased by $5.2 million due to the buyout programs. SURS made 0% participation rates assumption for the both buyout programs.*

[2] *The actuarial liability increased by $1 million due to the effect of P.A. 101-0610, effective January 1, 2020. Under P.A. 101-0610, an unreduced retirement (full retirement annuity) eligibility for Tier 2 police officers and firefighters was lowered to age 60 with 20 years of service from age 67 with 20 years of service.*

CHART 30

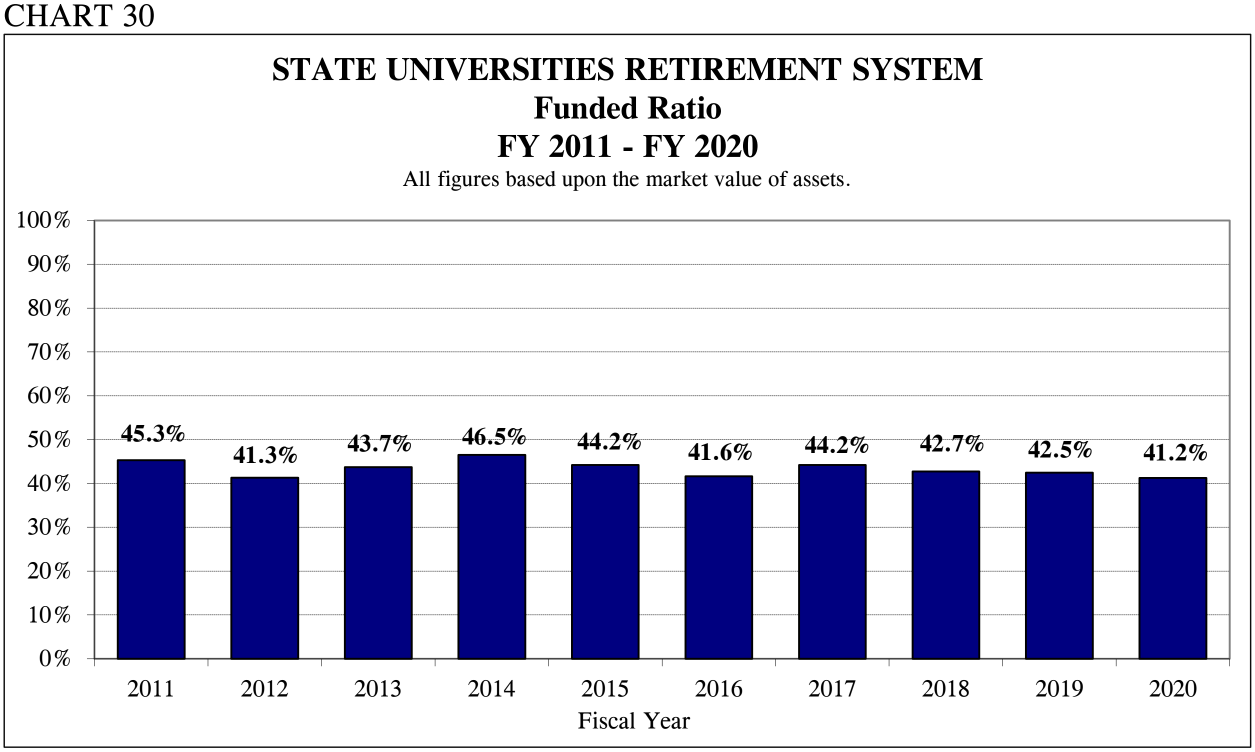


CHART 31

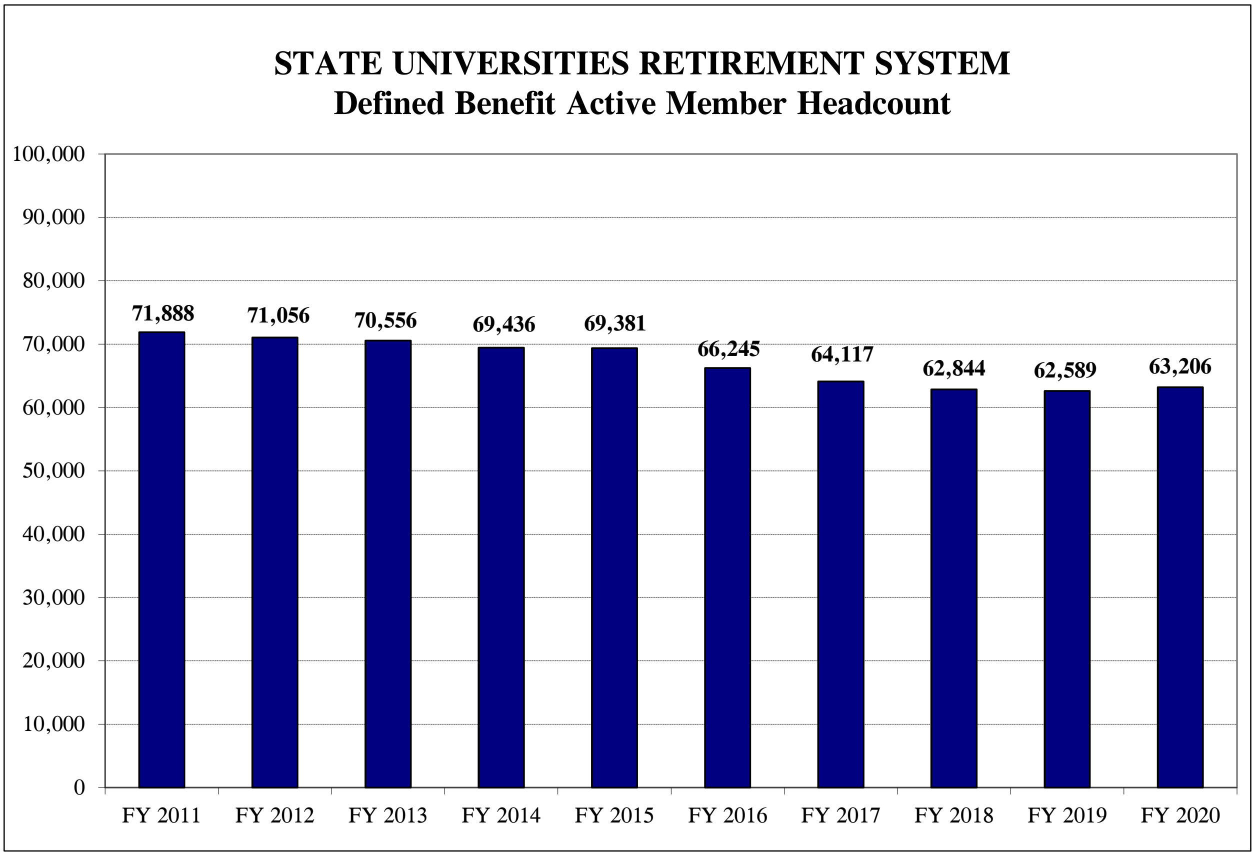


CHART 32

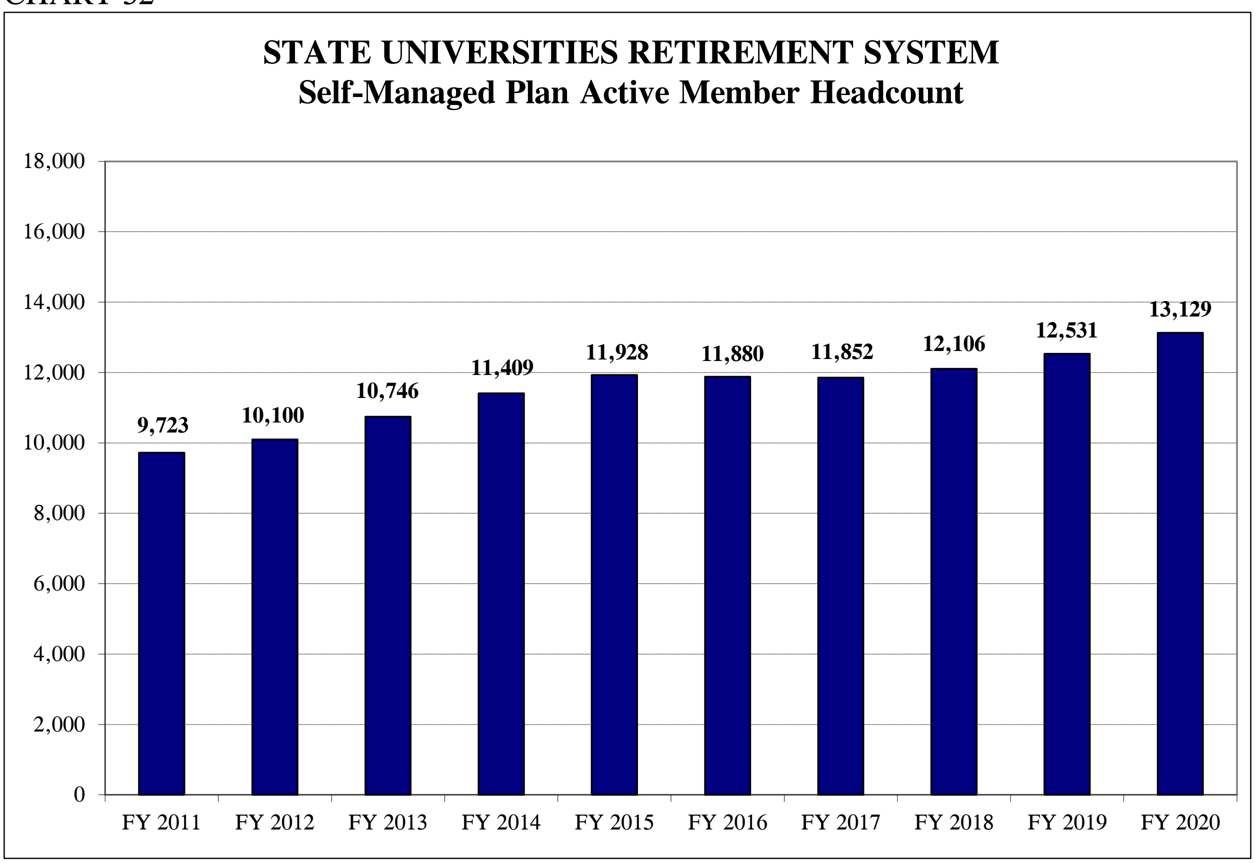


CHART 33

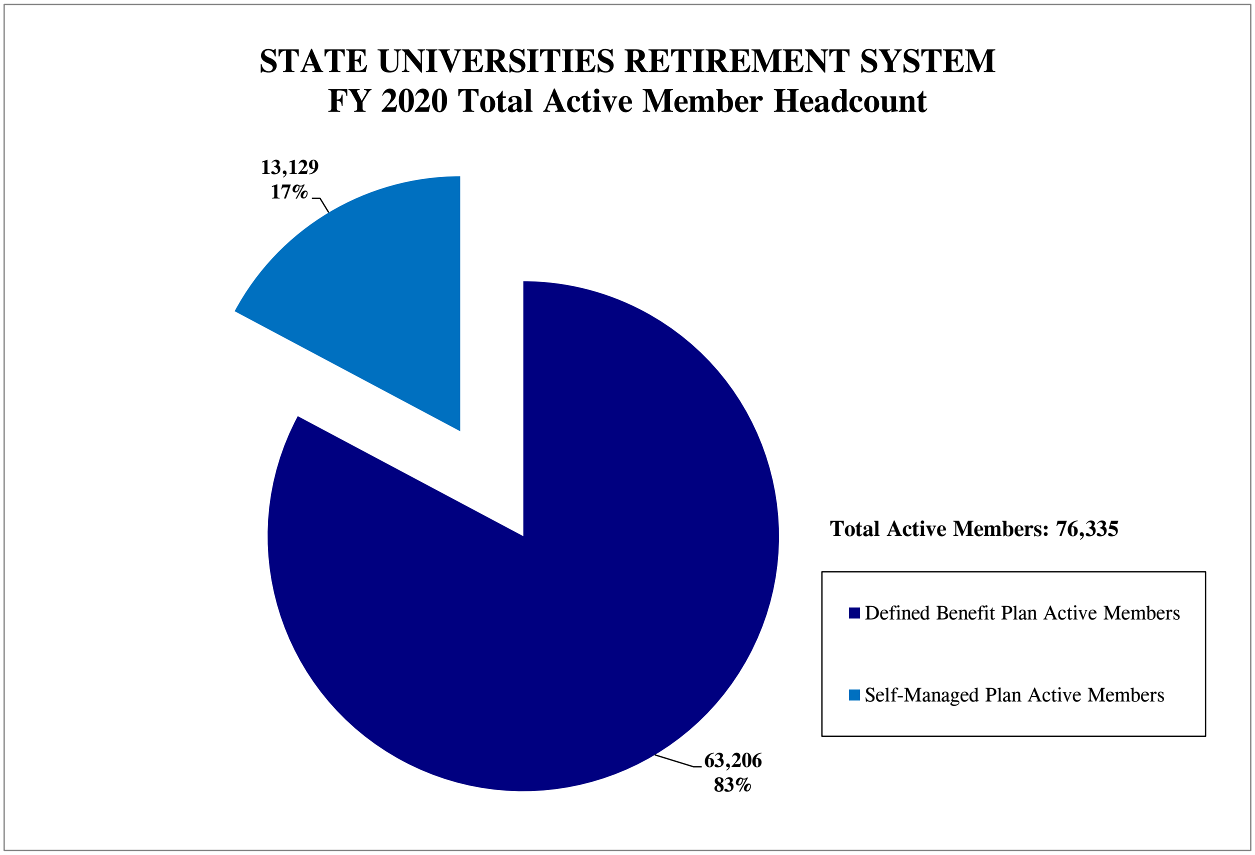
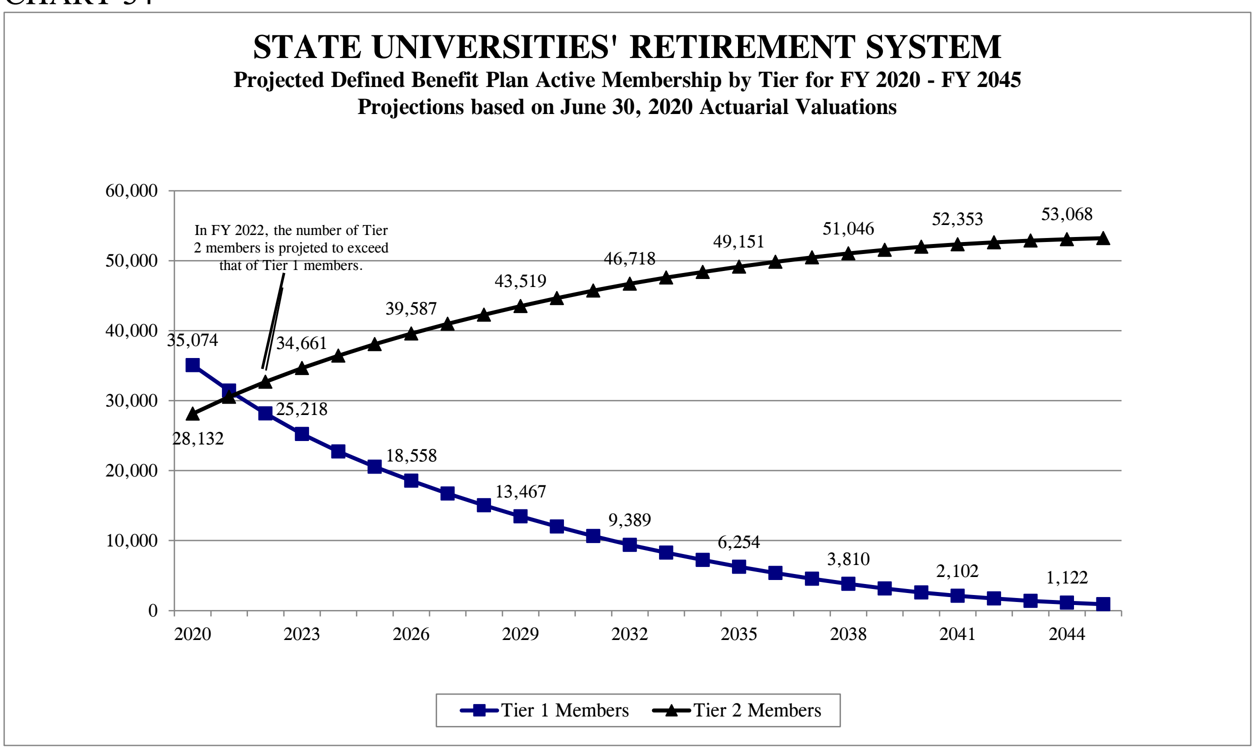


CHART 34



Note: The number of projected takers of the Optional Hybrid Plan (OHP) created by P.A. 100-0023 is not included in the 2020 valuation as the OHP has not been implemented yet.

CHART 35

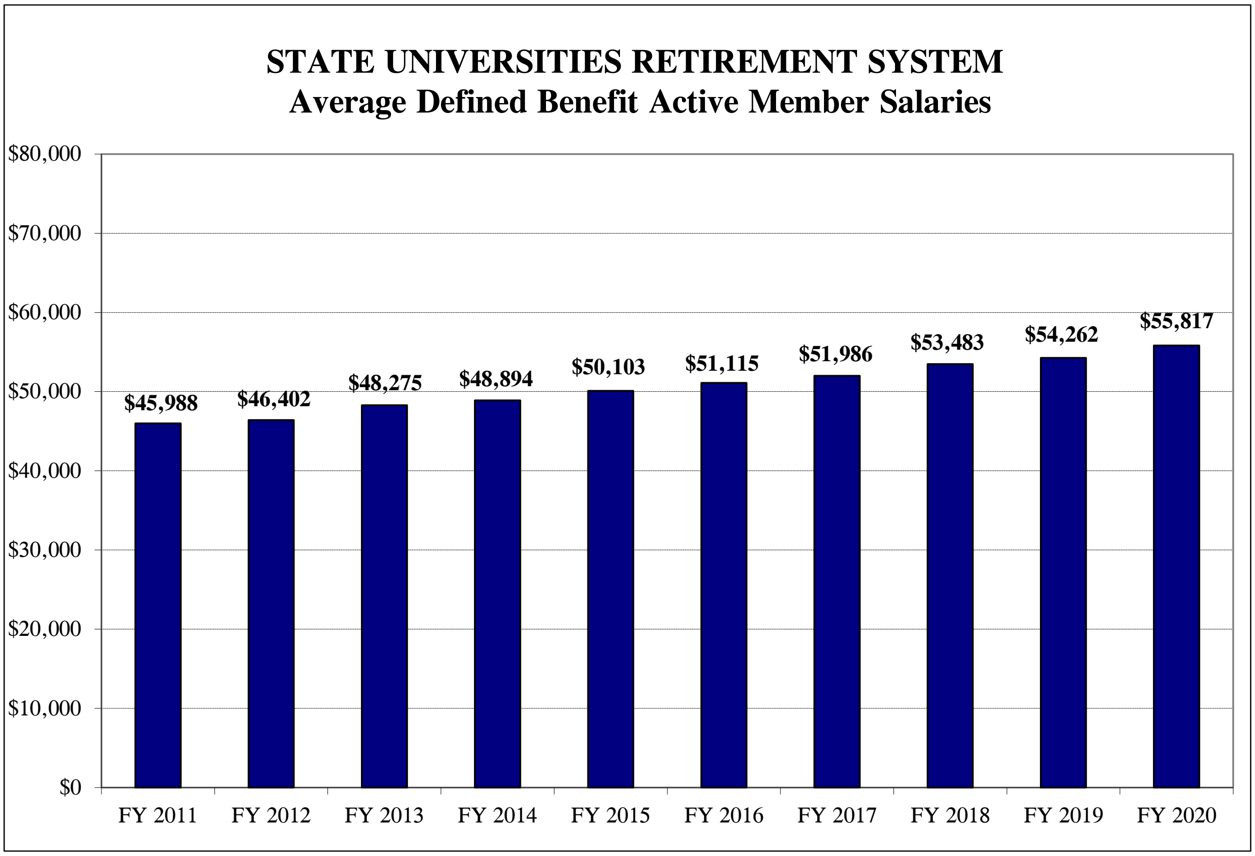


CHART 36

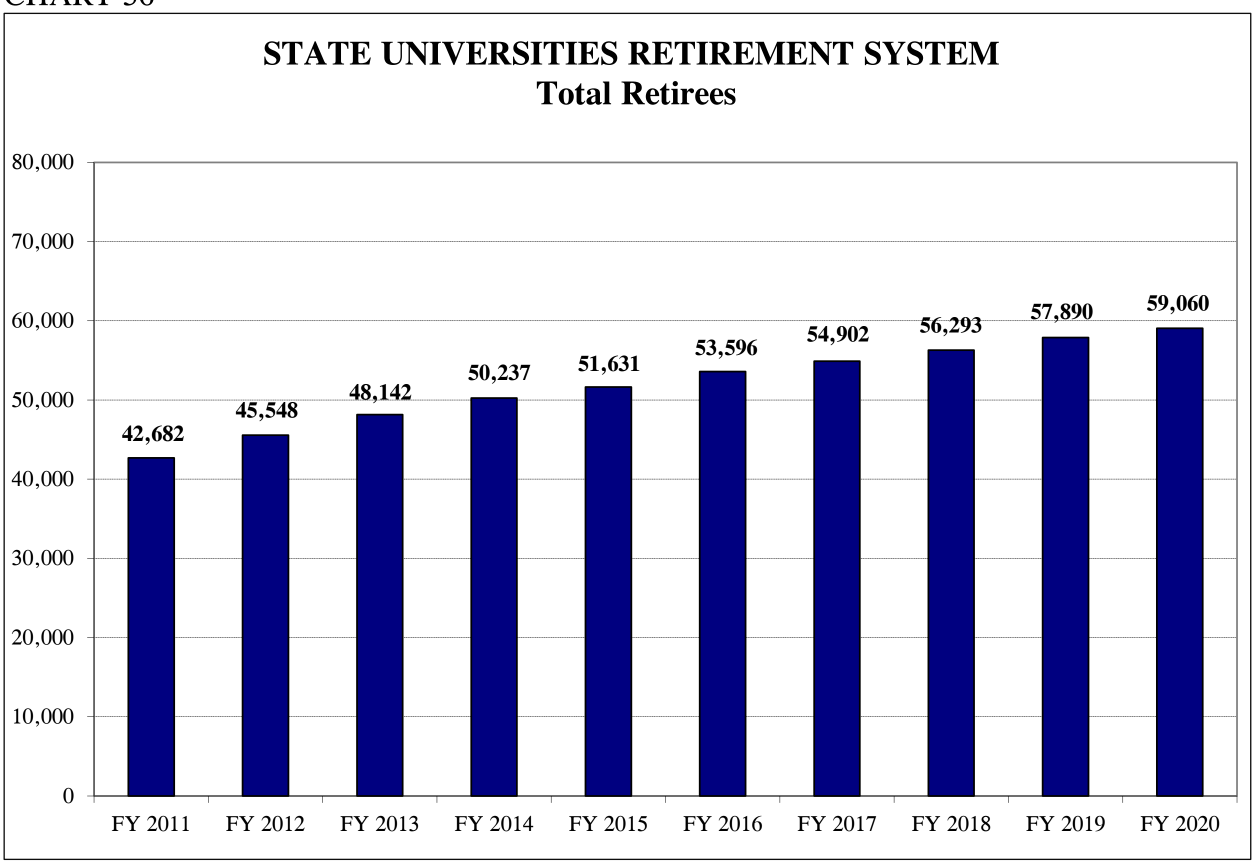


CHART 37

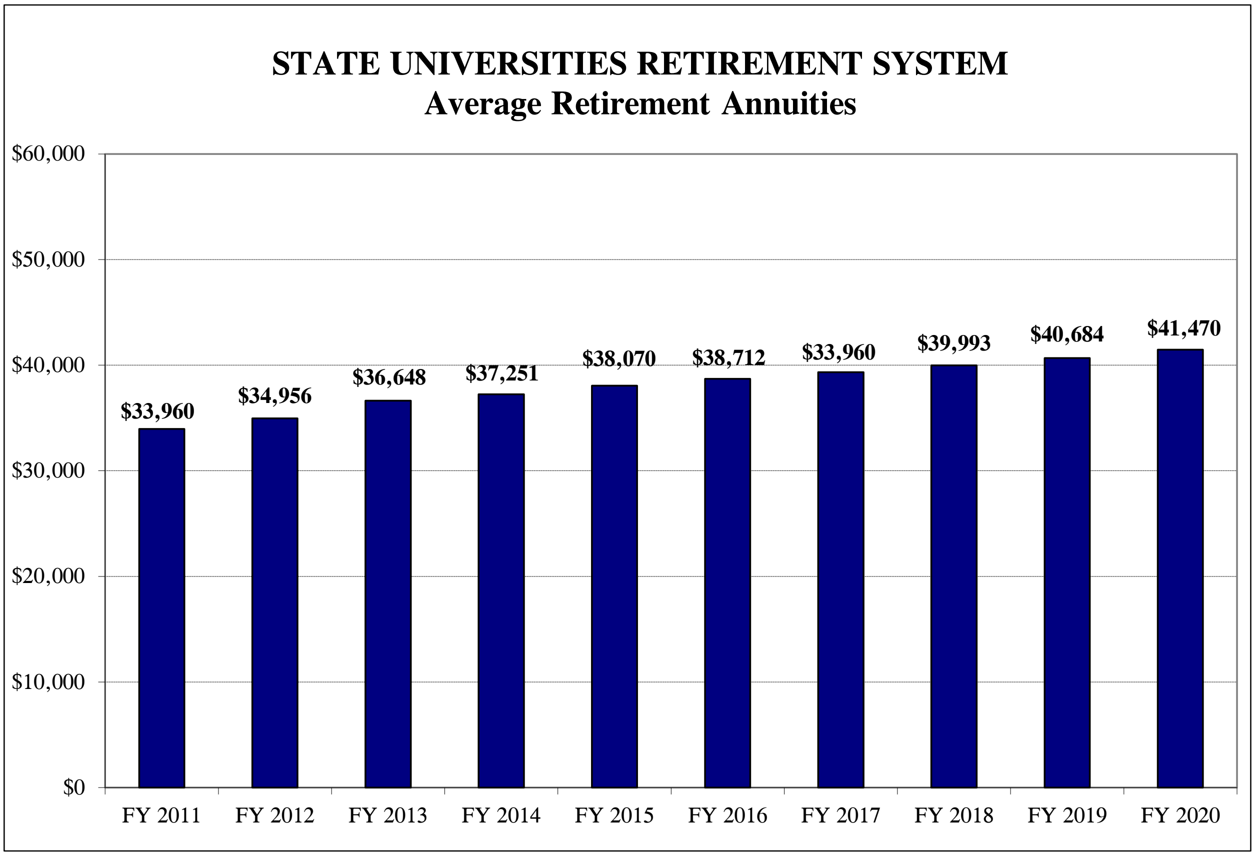


CHART 38

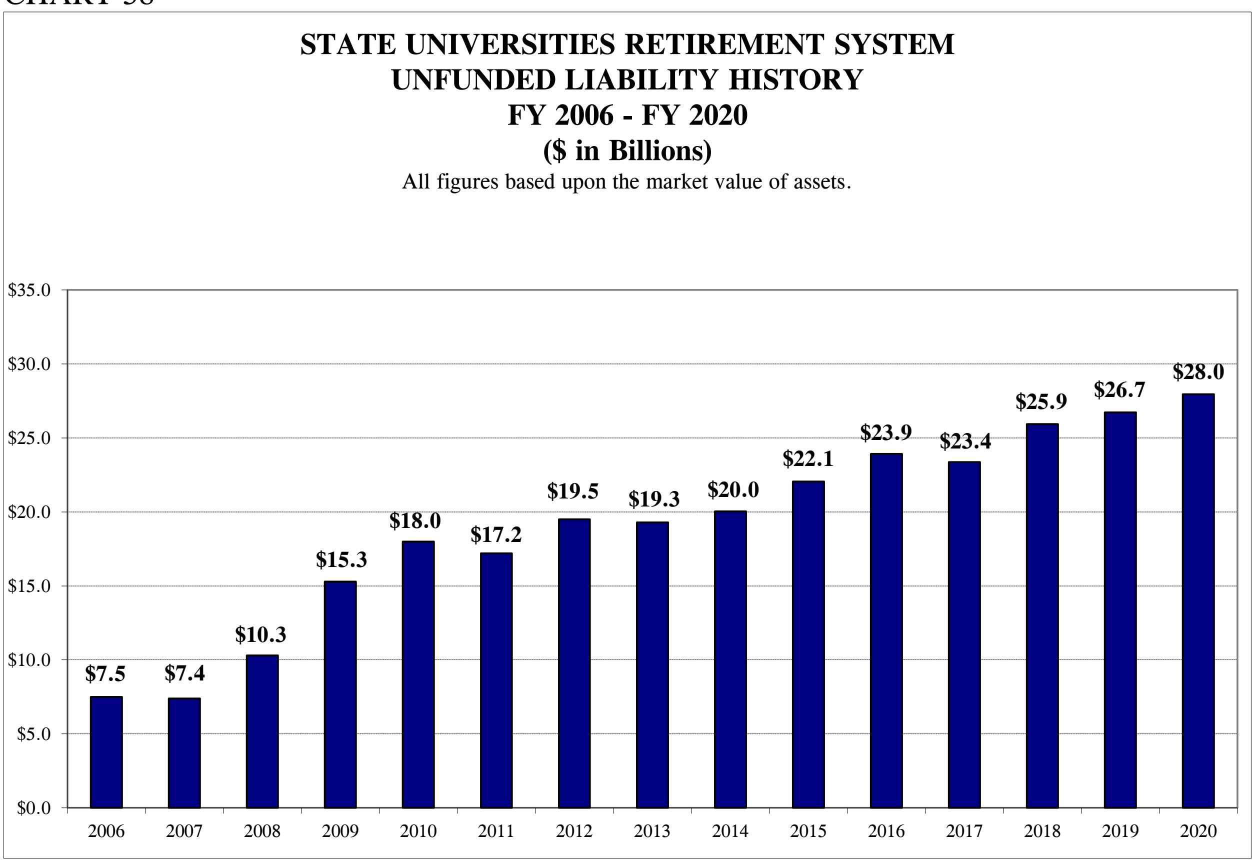
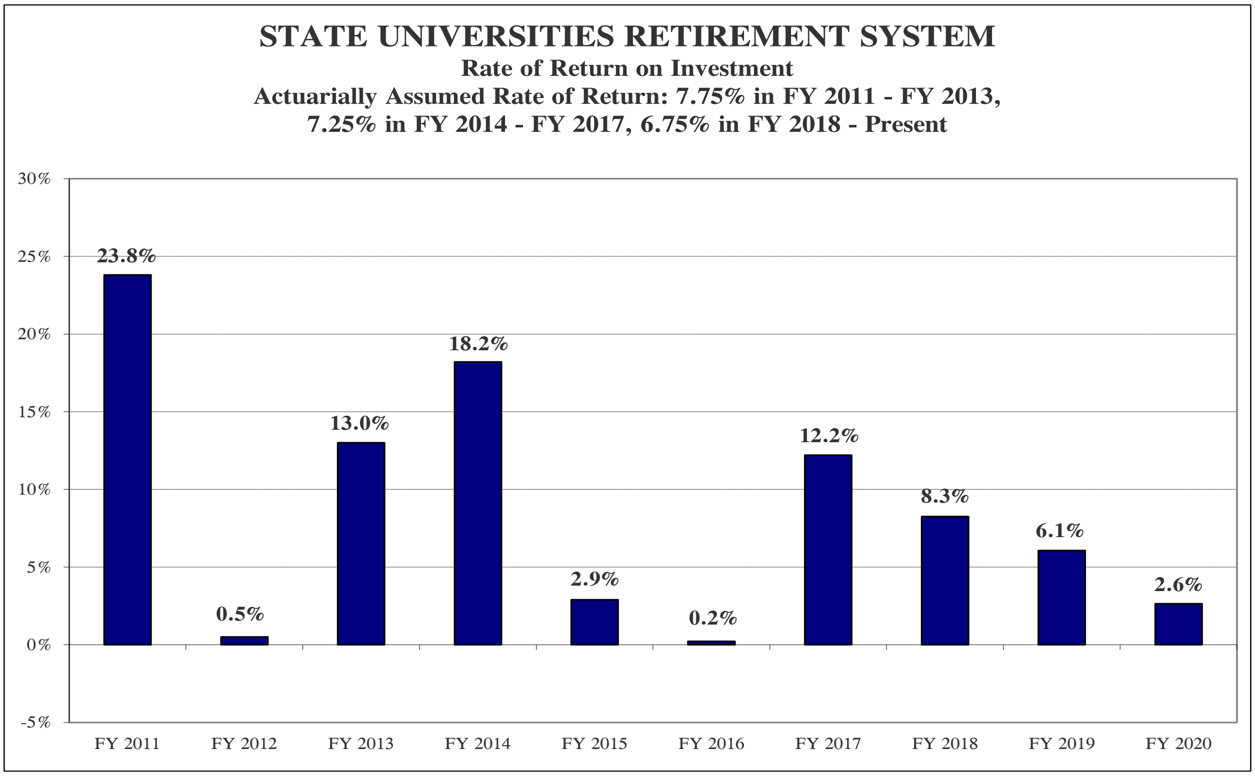
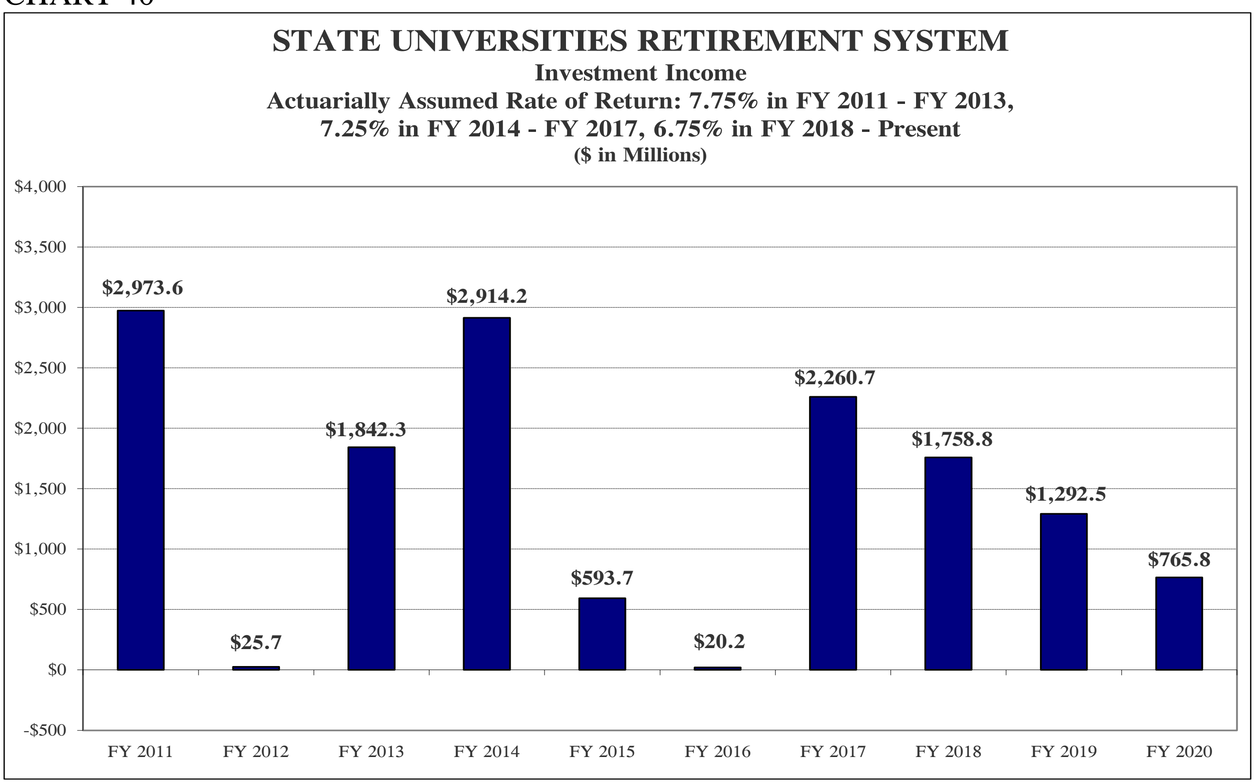


CHART 39



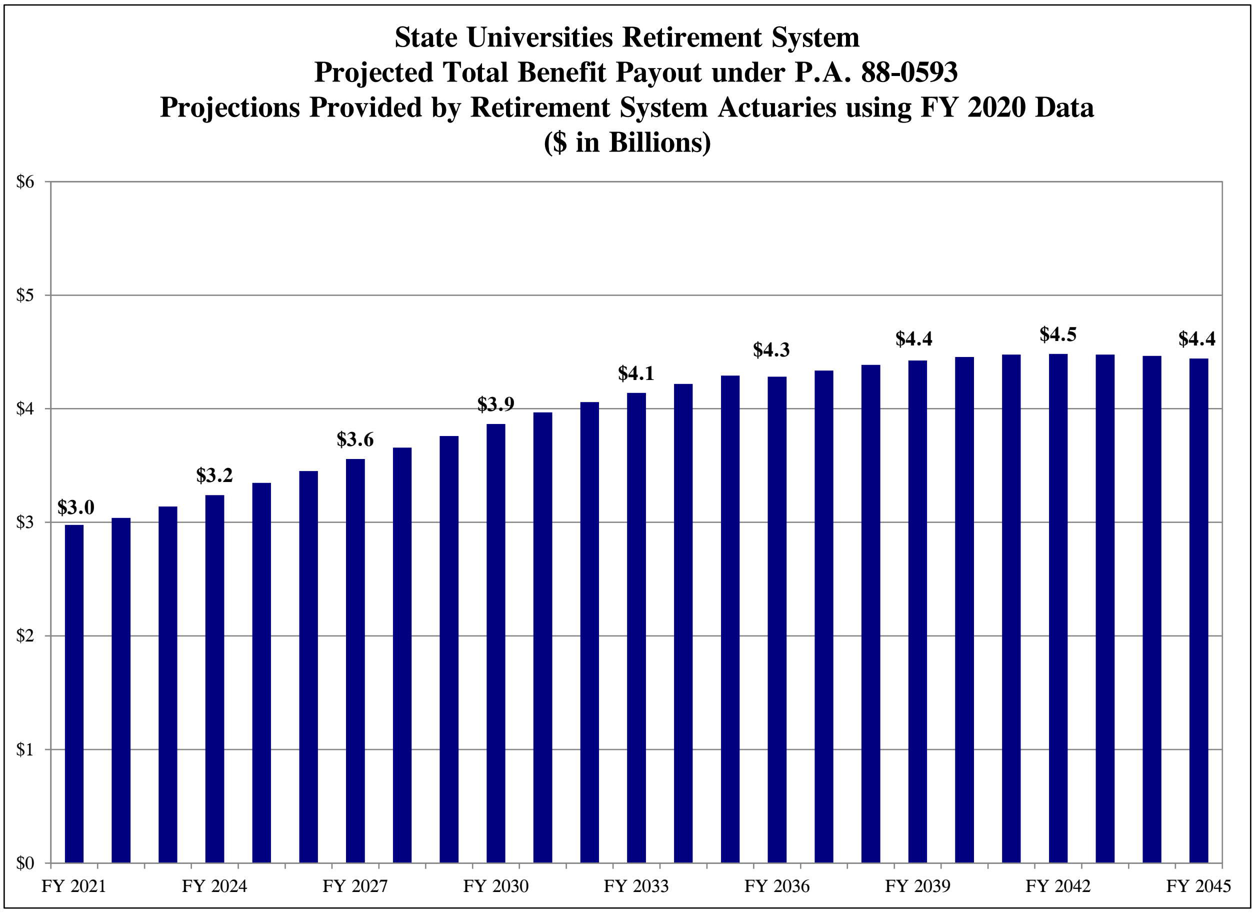
Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 40



Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 41



State Universities Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2020 Data
($ in Billions)
$6
$5
$4
$3
$2
$1
$0
$3.0
$3.2
$3.6
$3.9
$4.1
$4.3
$4.4
$4.5
$4.4
FY 2021
FY 2024
FY 2027
FY 2030
FY 2033
FY 2036
FY 2039
FY 2042
FY 2045

TABLE 14

STATE UNIVERSITIES RETIREMENT SYSTEM CHANGES IN UNFUNDED LIABILITY FY 1996 - FY 2020								
YEAR ENDED	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N.C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	NEW BUYOUT PROVISIONS (P.A. 100-0587)	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)	(558,100,000)	460,700,000	0		972,900,000	1,100,000	831,300,000
6/30/2016	(135,000,000)	151,800,000	463,600,000	0		0	325,200,000	805,600,000
6/30/2017	(144,700,000)	(142,800,000)	430,500,000	0		0	(105,700,000)	37,300,000
6/30/2018	(8,500,000)	(92,700,000)	455,200,000	0	0	2,181,300,000	116,500,000	2,651,800,000
6/30/2019	(55,200,000)	234,100,000	517,600,000	0	0	0	174,700,000	871,200,000
6/30/2020	5,400,000	233,500,000	369,800,000	0	(5,200,000)	0	103,300,000	706,800,000
TOTALS	$ (500,123,000)	$ 3,330,459,000	$ 11,460,400,000	$ 242,117,000	$ (5,200,000)	$ 4,642,005,000	$ 3,614,166,000	$ 22,783,824,000

Note: All figures in this table are based upon the actuarial value of assets, i.e., With Asset Smoothing.

TABLE 15

STATE UNIVERSITIES RETIREMENT SYSTEM Changes in Net Assets ($ in Millions)										
Fiscal Years	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additions to Assets										
State of Illinois	$776.6	$989.8	$1,408.8	$1,518.1	$1,544.2	$1,601.5	$1,671.4	$1,629.3	$1,655.2	$1,854.7
Pension Obligation Bonds	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Employees	$309.9	$312.4	$305.1	$348.6	$340.0	$355.3	$363.9	$366.9	$368.6	$378.1
Federal/trust/other funds	$41.9	$41.9	$41.9	$41.9	$46.7	$46.2	$46.0	$48.0	$58.1	$62.3
Net Investment Income	$2,973.6	$25.7	$1,842.3	$2,914.2	$593.7	$20.2	$2,260.7	$1,758.8	$1,292.5	$765.8
Total Asset Additions (A)	$4,102.0	$1,369.8	$3,598.1	$4,822.8	$2,524.5	$2,023.2	$4,342.0	$3,803.1	$3,374.3	$3,061.0
Deductions from Assets										
Benefits	$1,622.5	$1,748.7	$1,934.1	$2,021.2	$2,160.8	$2,281.8	$2,383.8	$2,497.9	$2,617.2	$2,744.1
Refunds	$73.9	$94.2	$101.6	$107.7	$108.6	$111.6	$118.9	$123.8	$115.1	$104.4
Subsidy Payments	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Administrative Expenses	$12.6	$13.5	$13.9	$14.3	$14.5	$15.2	$15.3	$14.8	$16.7	$19.2
Other	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Asset Deductions (B)	$1,709.0	$1,856.4	$2,049.6	$2,143.2	$2,284.0	$2,408.6	$2,518.1	$2,636.6	$2,748.9	$2,867.8
Change in Net Assets (A-B=C)	$2,393.0	-$486.6	$1,548.5	$2,679.6	$240.5	-$385.4	$1,823.9	$1,166.5	$625.4	$193.2

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
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	$593.7	2.9%
2016	$17,005.6	$20.2	0.2%
2017	$18,484.8	$2,260.7	12.2%
2018	$19,321.1	$1,758.8	8.3%
2019	$19,717.3	$1,292.5	6.1%
2020	$19,617.0	$765.8	2.6%

TABLE 17

STATE UNIVERSITIES RETIREMENT SYSTEM Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2020 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	Employee Contributions	Employer Normal Cost	Employer Normal Cost as a % of Payroll
2021	$597.2	12.4%	$142.5	3.0%	$739.7	15.3%	$282.4	$457.3	9.5%
2022	$567.5	11.6%	$162.0	3.3%	$729.5	14.9%	$294.6	$434.9	8.9%
2023	$539.4	10.8%	$180.8	3.6%	$720.2	14.5%	$296.4	$423.8	8.5%
2024	$511.8	10.1%	$200.2	3.9%	$712.0	14.0%	$299.1	$412.9	8.1%
2025	$484.3	9.3%	$219.6	4.2%	$703.9	13.6%	$302.6	$401.3	7.7%
2026	$457.2	8.6%	$239.5	4.5%	$696.7	13.2%	$306.4	$390.3	7.4%
2027	$430.7	8.0%	$260.0	4.8%	$690.7	12.8%	$310.6	$380.2	7.0%
2028	$405.0	7.3%	$281.2	5.1%	$686.2	12.4%	$315.1	$371.1	6.7%
2029	$379.5	6.7%	$302.7	5.4%	$682.2	12.1%	$320.0	$362.2	6.4%
2030	$353.5	6.1%	$324.8	5.6%	$678.4	11.7%	$325.1	$353.2	6.1%
2031	$327.0	5.5%	$347.5	5.9%	$674.5	11.4%	$330.5	$344.1	5.8%
2032	$300.5	5.0%	$370.7	6.1%	$671.2	11.1%	$335.9	$335.3	5.6%
2033	$274.9	4.4%	$394.0	6.4%	$668.9	10.8%	$341.7	$327.2	5.3%
2034	$250.3	4.0%	$417.5	6.6%	$667.8	10.5%	$347.8	$320.0	5.1%
2035	$225.9	3.5%	$441.5	6.8%	$667.3	10.3%	$354.2	$313.2	4.8%
2036	$201.5	3.0%	$465.8	7.0%	$667.3	10.0%	$360.8	$306.6	4.6%
2037	$177.4	2.6%	$490.4	7.2%	$667.8	9.8%	$367.6	$300.2	4.4%
2038	$153.7	2.2%	$515.2	7.4%	$668.9	9.6%	$374.6	$294.3	4.2%
2039	$131.2	1.8%	$540.2	7.6%	$671.4	9.4%	$381.9	$289.5	4.1%
2040	$110.4	1.5%	$565.2	7.7%	$675.6	9.2%	$389.4	$286.2	3.9%
2041	$91.9	1.2%	$590.2	7.9%	$682.1	9.1%	$397.2	$284.9	3.8%
2042	$76.4	1.0%	$614.9	8.0%	$691.3	9.0%	$405.5	$285.8	3.7%
2043	$63.2	0.8%	$639.4	8.1%	$702.6	8.9%	$414.0	$288.6	3.7%
2044	$52.2	0.6%	$663.6	8.2%	$715.8	8.8%	$422.8	$293.0	3.6%
2045	$42.8	0.5%	$687.5	8.3%	$730.2	8.8%	$431.8	$298.4	3.6%

Note: The number of projected takers of the Optional Hybrid Plan (OHP) created by P.A. 100-0023 is not included in the 2020 valuation as the OHP has not been implemented yet.

XI. The Judges' Retirement System

- **Plan Summary**
- **FY 2020 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 Liabilities**
- **Changes in Net Assets**
- **Investment Return History**
- **Tier 1 & Tier 2 Normal Cost Projections**

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
    - 7.5% for retirement benefit, 1.0% for annual COLA, and 2.5% for survivor's benefit

For 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.

Judges' Retirement System
Tier 2 Plan Summary

Retirement Age

- Age 67 with 8 years of service
- Age 62 with 8 years of service (reduced ½ of 1% for each month under 67)

Retirement Formula

- 3% of final average salary for each year of service

Maximum Annuity

- 60% of final average salary

Salary Used to Calculate Pension

- Highest 96 consecutive months of service within the last 120 months of service
- Pensionable Salary is limited by an amount tied to the Social Security Wage Base of $106,800. This amount increases annually by 3% or the increase in the Consumer Price Index-U, whichever is less. The salary limit for calendar year 2020 is $124,630.

Annual COLA

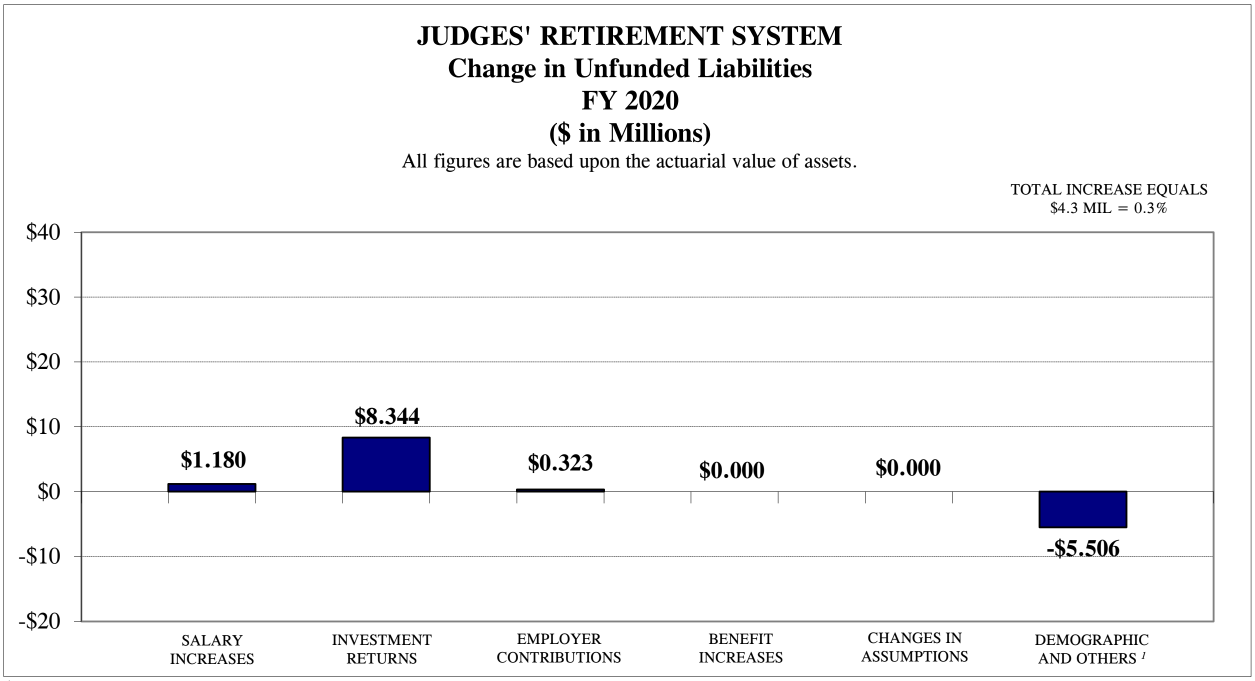
- Simple 3% or the increase in the Consumer Price Index-U, whichever is less

Employee Contributions

- 11.0% of salary
    - 7.5% for retirement benefit, 1.0% for annual COLA, and 2.5% for survivor's benefit

The benefits shown reflect P.A. 96-0889 (2 Tier Act of 2011) and are for Tier 2 members who first contribute to the system on or after January 1, 2011. Please refer to Section I earlier in this report for details.

CHART 42



[1] *The liability decreased by $5.506 million due to actuarial gains from actual experiences, some of which include favorable experiences from retiree mortality and other factors.*

CHART 43

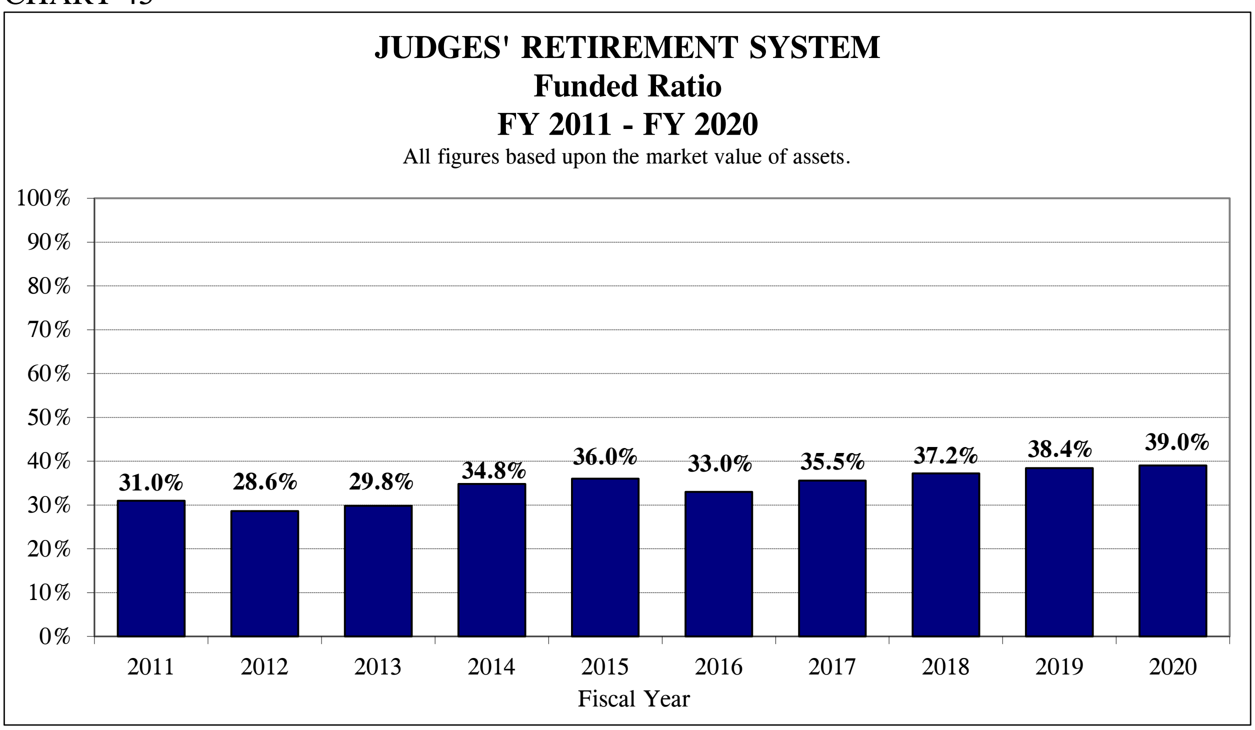


CHART 44

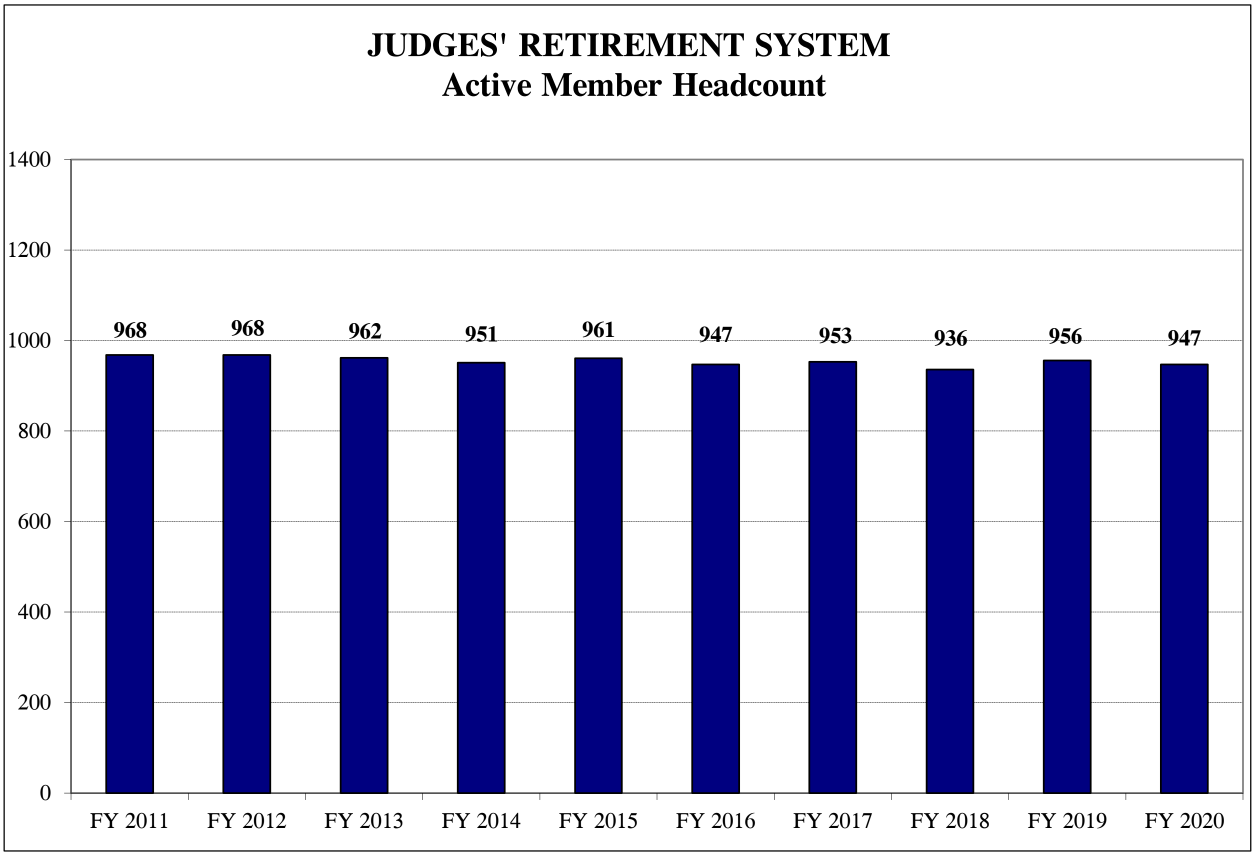


CHART 45

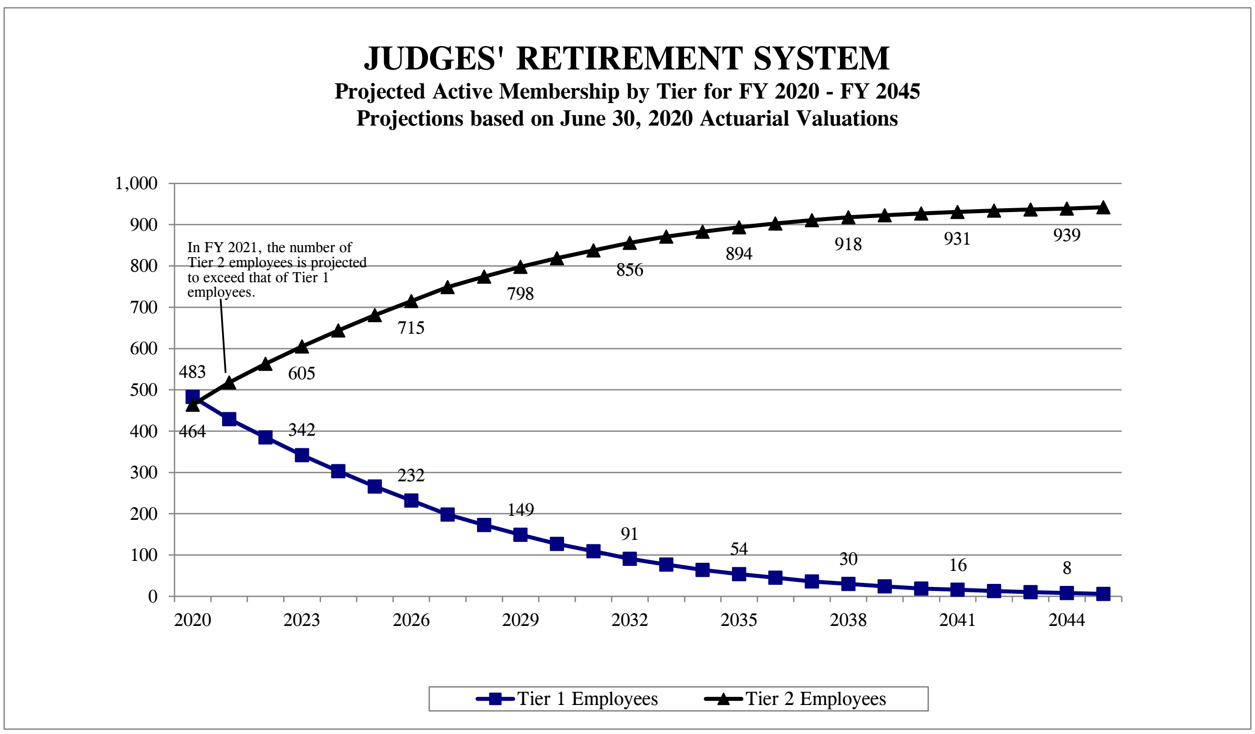


CHART 46

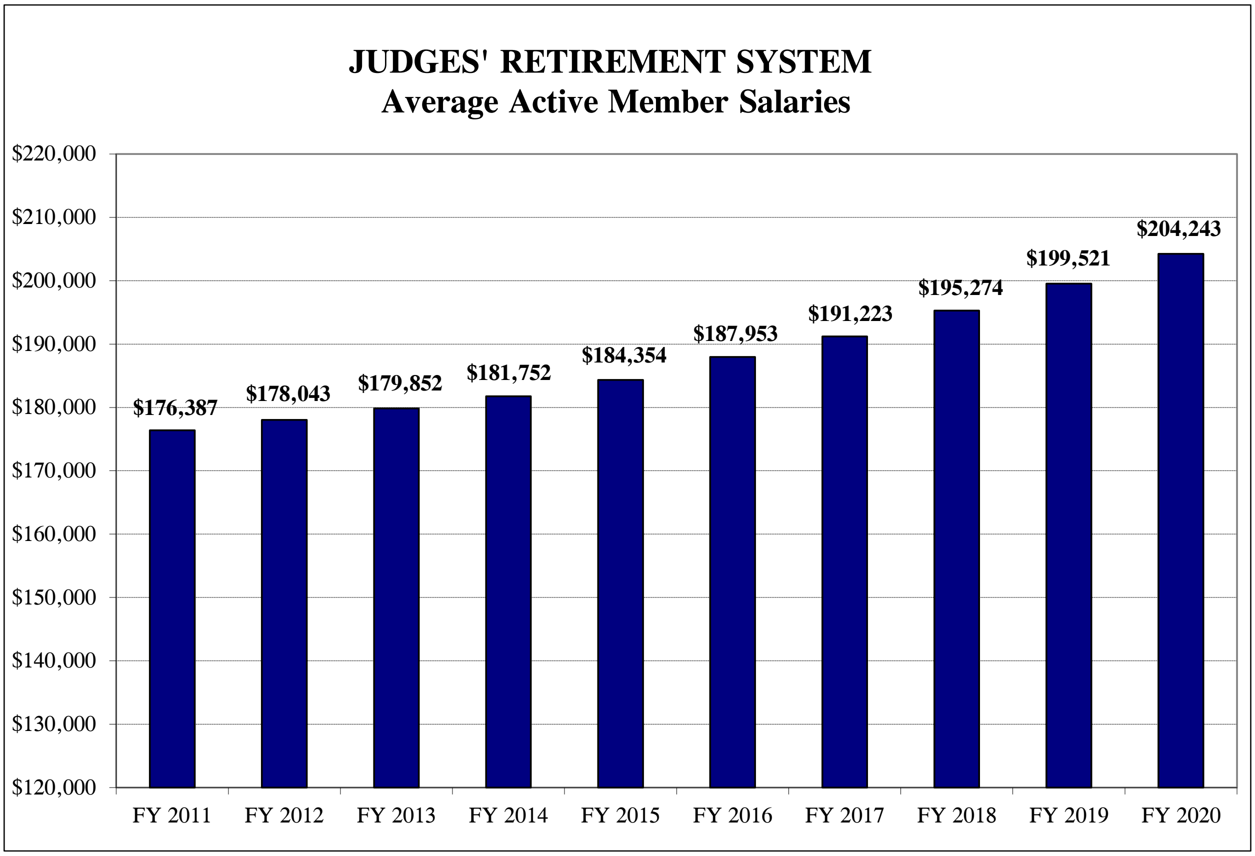


CHART 47

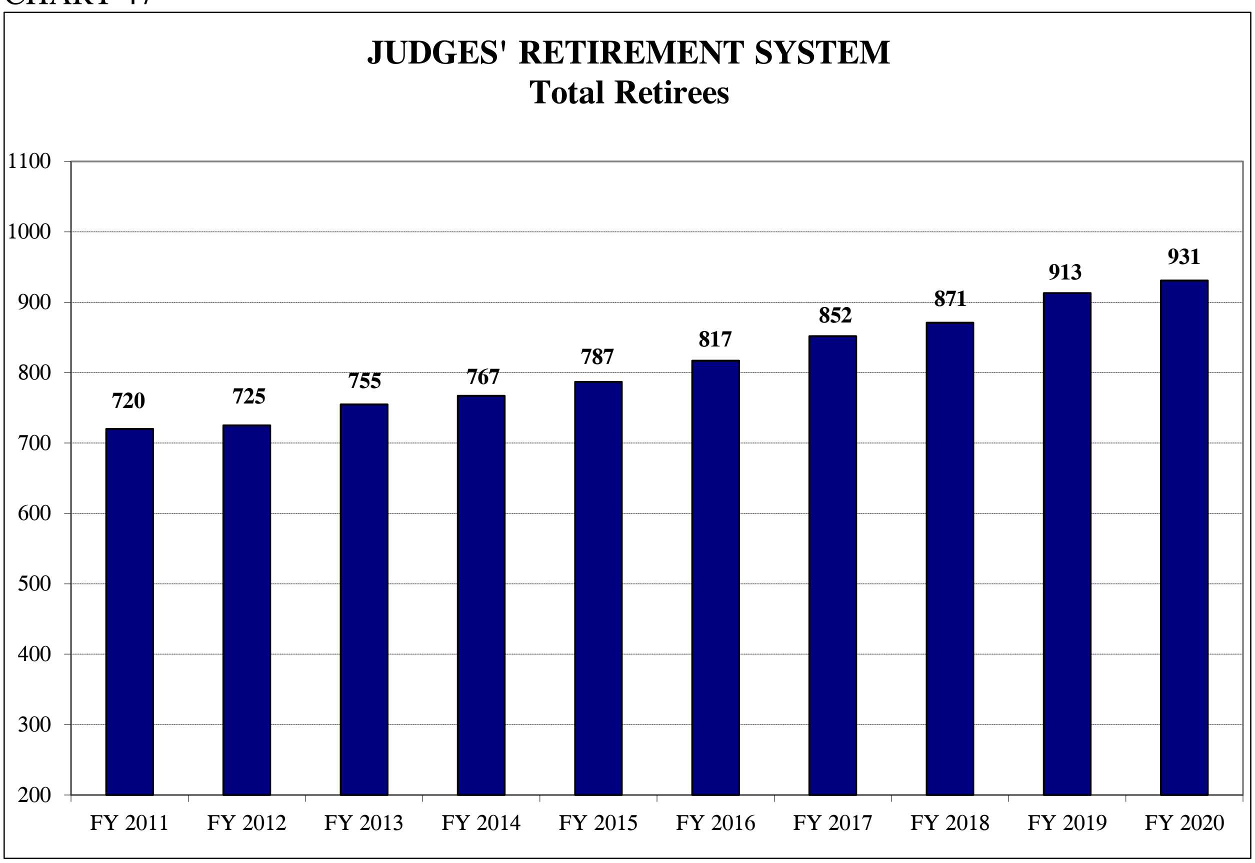


CHART 48

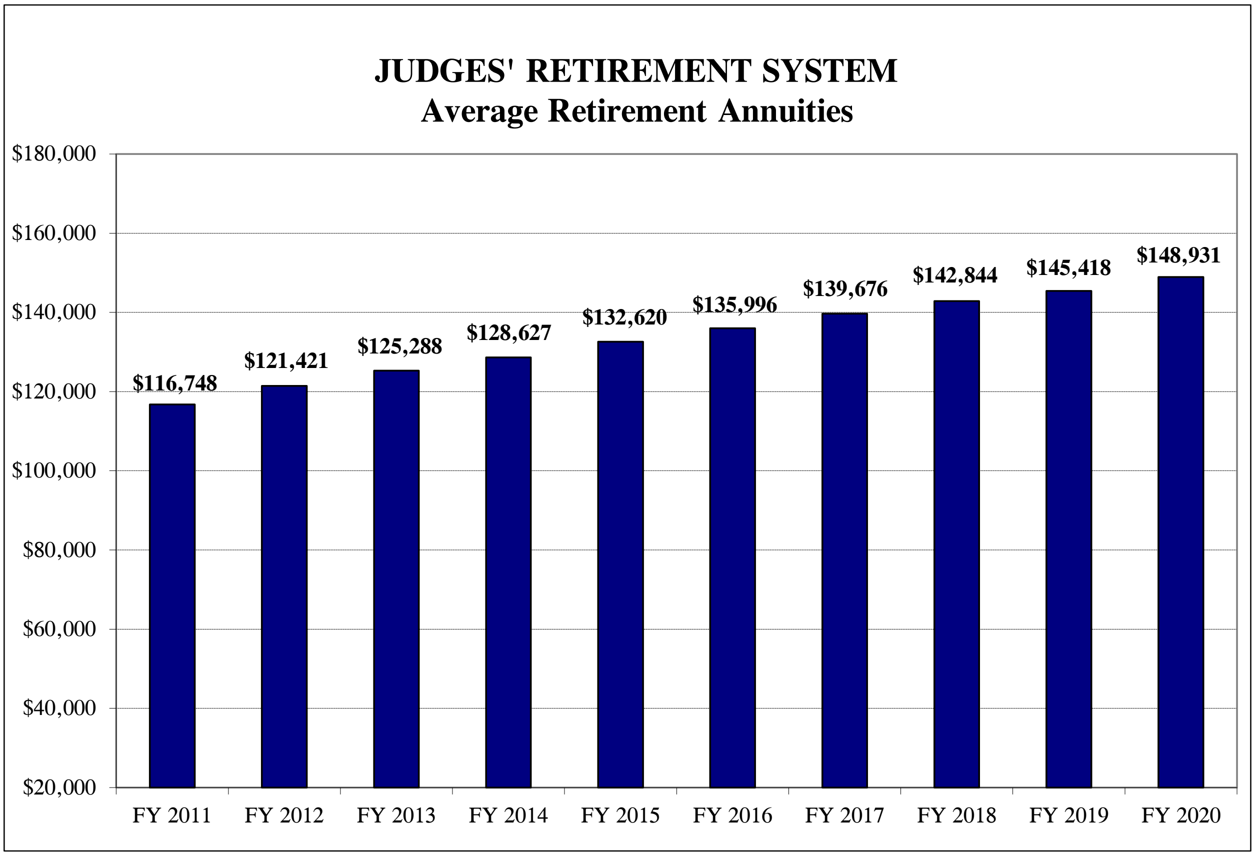


CHART 49

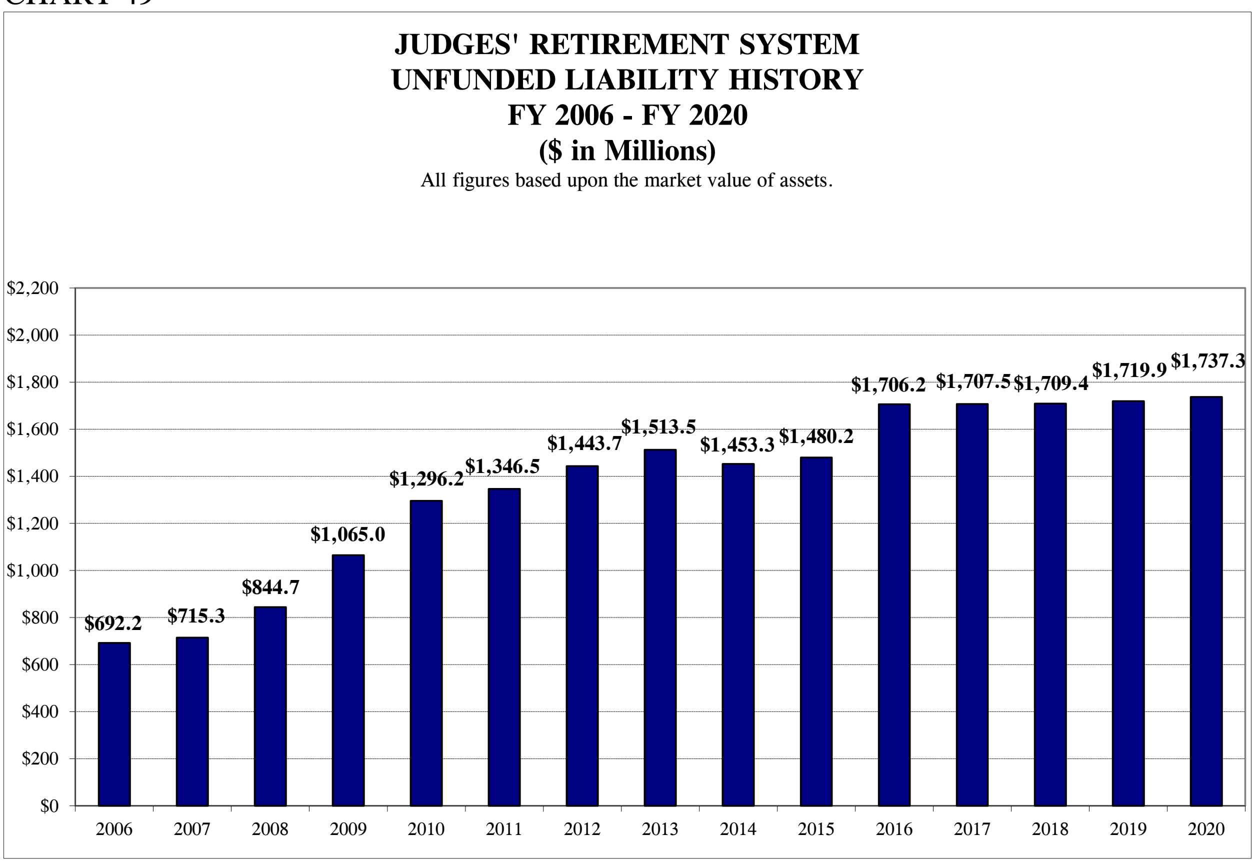
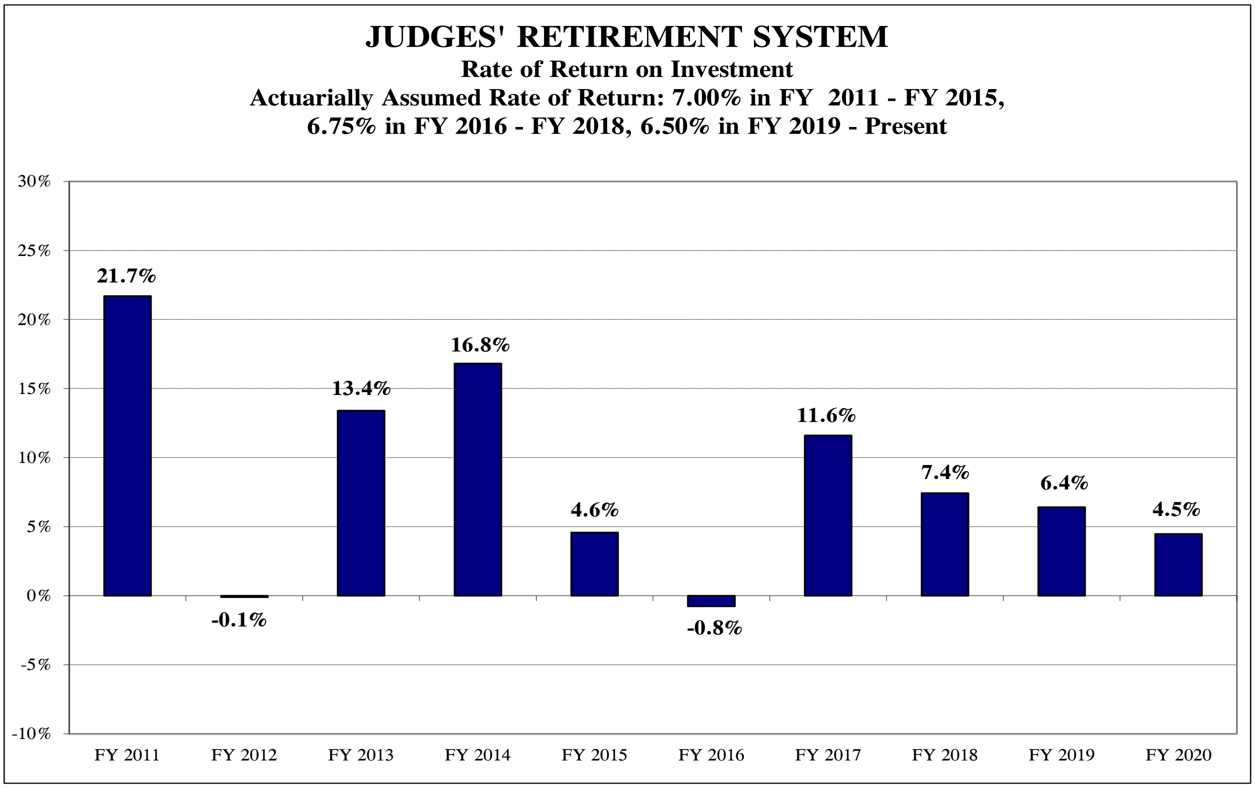
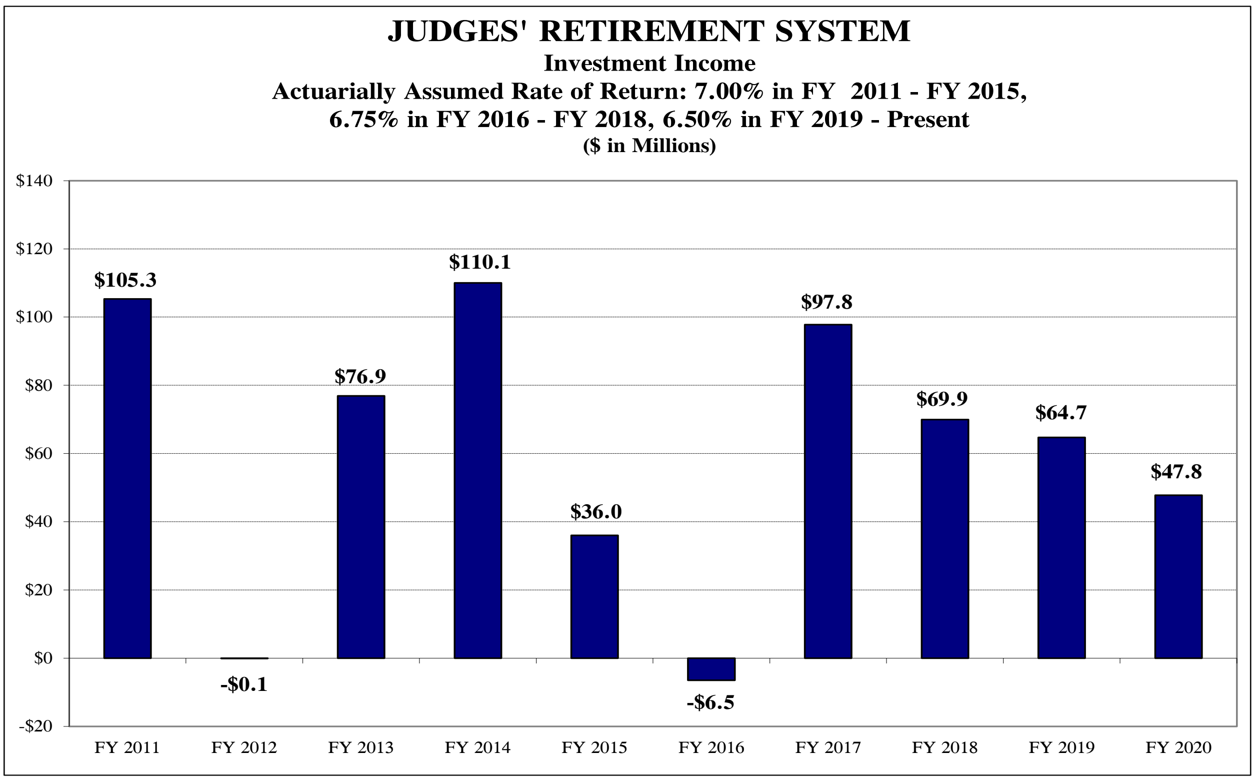


CHART 50



Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 51



Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 52

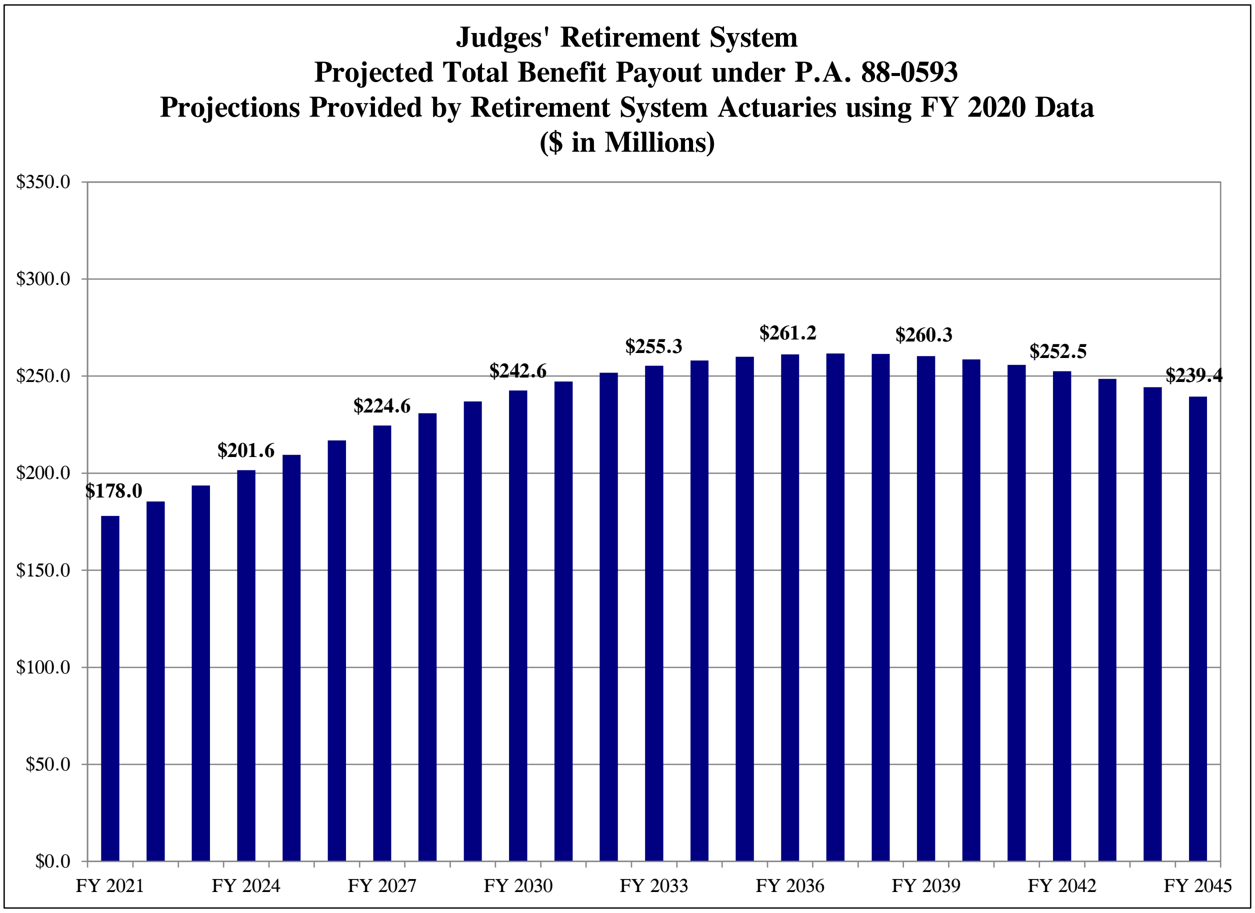

Judges' Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2020 Data
($ in Millions)
$350.0
$300.0
$250.0
$200.0
$150.0
$100.0
$50.0
$0.0
$178.0
$201.6
$224.6
$242.6
$255.3
$261.2
$260.3
$252.5
$239.4
FY 2021
FY 2024
FY 2027
FY 2030
FY 2033
FY 2036
FY 2039
FY 2042
FY 2045

TABLE 18

JUDGES' RETIREMENT SYSTEM
CHANGES IN UNFUNDED LIABILITY
FY 1996 - FY 2020

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	$9,999,484	($13,671,404)	$24,518,236	$0	$0	$14,931,343	$35,777,659
6/30/1997	(7,658,092)	(28,145,182)	27,156,529	0	37,922,093	15,264,216	44,539,564
6/30/1998	(10,160,914)	(30,497,137)	34,123,085	0	0	7,218,733	683,767
6/30/1999	456,439	(16,539,663)	32,504,330	0	0	8,821,168	25,242,274
6/30/2000	2,215,672	(14,134,561)	33,196,266	2,848,501	0	8,268,502	32,394,380
6/30/2001	(7,464,258)	61,790,163	35,767,996	0	0	17,044,333	107,138,234
6/30/2002	(11,821,953)	54,489,350	42,170,792	0	28,381,924	8,609,434	121,829,547
6/30/2003	(26,392,926)	27,183,676	49,293,246	0	0	18,906,930	68,990,926
6/30/2004	6,291,883	(36,709,772)	(92,295,242)	0	0	(1,952,146)	(124,665,277)
6/30/2005	(15,087,614)	(8,899,756)	46,427,305	0	0	27,509,646	49,949,581
6/30/2006	(18,612,759)	(17,213,516)	55,344,402	0	(11,189,825)	12,319,701	20,648,003
6/30/2007	(3,952,822)	(51,310,984)	50,305,409	0	0	28,046,308	23,087,911
6/30/2008	(8,834,671)	90,806,378	42,511,153	0	0	4,924,005	129,406,865
6/30/2009	(6,661,210)	33,322,668	40,870,123	0	0	19,481,669	87,013,250
6/30/2010	(14,285,209)	48,213,678	30,639,057	0	188,889,493	14,404,557	267,861,576
6/30/2011	(17,743,557)	31,451,544	66,647,892	0	15,622,518	42,442,760	138,421,157
6/30/2012	(19,671,785)	27,522,701	75,313,560	0	0	(611,876)	82,552,600
6/30/2013	(18,934,843)	21,180,279	54,355,269	0	62,945,069	6,567,836	126,113,610
6/30/2014	(17,039,560)	(28,938,605)	22,548,920	0	0	846,615	(22,582,630)
6/30/2015	(16,202,872)	(26,929,814)	11,756,584	0	0	17,307,796	(14,068,306)
6/30/2016	(11,845,679)	2,880,479	13,018,248	0	153,176,767	8,368,408	165,598,223
6/30/2017	(8,300,358)	(9,469,124)	20,817,805	0	0	27,664,563	30,712,886
6/30/2018	(4,972,437)	(5,360,651)	16,112,995	0	(9,641,833)	6,687,881	2,825,955
6/30/2019	(2,071,872)	8,101,850	9,504,274	0	(37,738,684)	37,385,688	15,181,256
6/30/2020	1,179,778	8,344,155	323,033	0	0	(5,505,538)	4,341,428
TOTALS	**$ (227,572,135)**	**$ 127,466,752**	**$ 742,931,267**	**$ 2,848,501**	**$ 428,367,522**	**$ 344,952,532**	**$ 1,418,994,439**

Note: All figures in this table are based upon the actuarial value of assets, i.e., With Asset Smoothing.

TABLE 19

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

Fiscal Years	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additions to Assets										
State of Illinois	$62.7	$63.7	$88.2	$126.8	$134.0	$132.1	$131.3	$136.0	$140.5	$144.2
Pension Obligation Bonds	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Employees	$16.7	$16.4	$16.4	$15.9	$15.4	$15.0	$14.8	$14.3	$14.7	$14.5
Net Investment Income	$105.3	-$0.1	$76.9	$110.1	$36.0	-$6.5	$97.8	$69.9	$64.7	$47.8
Total Asset Additions (A)	$184.7	$80.0	$181.5	$252.8	$185.5	$140.6	$243.9	$220.2	$219.9	$206.5
Deductions from Assets										
Benefits	$100.7	$106.6	$113.6	$118.6	$125.7	$132.6	$140.5	$148.1	$157.3	$165.5
Refunds	$0.7	$0.6	$1.7	$0.7	$0.9	$0.7	$1.0	$0.5	$1.0	$0.4
Subsidy Payments	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Administrative Expenses	$0.6	$0.8	$0.8	$0.8	$1.0	$0.9	$0.9	$0.9	$0.9	$1.0
Other	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Asset Deductions (B)	$102.0	$108.0	$116.1	$120.1	$127.6	$134.2	$142.4	$149.5	$159.3	$167.0
Change in Net Assets (A-B=C)	$82.7	-$28.0	$65.4	$132.7	$57.9	$6.4	$101.5	$70.7	$60.6	$39.4

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
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	4.6%
2016	$840.3	-$6.5	-0.8%
2017	$941.8	$97.8	11.6%
2018	$1,012.5	$69.9	7.4%
2019	$1,073.1	$64.7	6.4%
2020	$1,112.5	$47.8	4.5%

TABLE 21

JUDGES' RETIREMENT SYSTEM Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2020 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	Employee Contributions	Employer Normal Cost	Employer Normal Cost as a % of Payroll
2021	$36.1	22.9%	$12.2	7.7%	$48.3	30.6%	$13.9	$34.4	21.8%
2022	$33.1	21.1%	$13.8	8.8%	$46.9	29.9%	$13.9	$33.0	21.1%
2023	$29.9	19.1%	$15.2	9.7%	$45.1	28.8%	$13.8	$31.3	20.0%
2024	$27.0	17.2%	$16.6	10.6%	$43.5	27.8%	$13.9	$29.6	18.9%
2025	$24.0	15.3%	$17.8	11.4%	$41.8	26.7%	$14.0	$27.9	17.8%
2026	$21.1	13.5%	$19.3	12.3%	$40.4	25.8%	$14.1	$26.3	16.8%
2027	$18.1	11.5%	$20.5	13.0%	$38.6	24.6%	$14.1	$24.6	15.6%
2028	$15.8	10.0%	$21.9	13.9%	$37.7	23.9%	$13.9	$23.8	15.1%
2029	$13.6	8.6%	$23.3	14.7%	$36.9	23.3%	$14.0	$22.9	14.4%
2030	$11.6	7.3%	$24.6	15.4%	$36.3	22.7%	$14.3	$22.0	13.7%
2031	$9.9	6.1%	$26.0	16.1%	$35.9	22.3%	$14.4	$21.5	13.4%
2032	$8.2	5.0%	$27.3	16.8%	$35.5	21.8%	$14.9	$20.6	12.6%
2033	$6.8	4.2%	$28.5	17.3%	$35.4	21.5%	$15.5	$19.9	12.1%
2034	$5.7	3.4%	$29.7	17.8%	$35.3	21.2%	$16.0	$19.3	11.6%
2035	$4.7	2.8%	$30.8	18.2%	$35.5	21.0%	$16.6	$18.9	11.2%
2036	$3.9	2.3%	$31.9	18.6%	$35.8	20.9%	$17.1	$18.6	10.9%
2037	$3.2	1.8%	$32.9	18.9%	$36.1	20.7%	$17.7	$18.4	10.6%
2038	$2.6	1.5%	$34.0	19.2%	$36.5	20.6%	$18.2	$18.3	10.3%
2039	$2.1	1.2%	$34.9	19.4%	$37.0	20.6%	$18.8	$18.2	10.1%
2040	$1.7	0.9%	$35.9	19.6%	$37.6	20.5%	$19.3	$18.3	10.0%
2041	$1.4	0.7%	$36.9	19.8%	$38.3	20.5%	$19.9	$18.5	9.9%
2042	$1.1	0.6%	$37.9	19.9%	$39.0	20.4%	$20.4	$18.6	9.7%
2043	$0.9	0.4%	$38.8	20.0%	$39.7	20.4%	$20.9	$18.8	9.7%
2044	$0.7	0.3%	$39.8	20.0%	$40.4	20.4%	$21.4	$19.0	9.6%
2045	$0.5	0.2%	$40.7	20.1%	$41.2	20.3%	$22.0	$19.2	9.5%

XII. The General Assembly Retirement System

- **Plan Summary**
- **FY 2020 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 liabilities**
- **Changes in Net Assets**
- **Investment Return History**
- **Reduction in State Contributions**
- **Tier 1 & Tier 2 Normal Cost Projections**

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
  - 8.5% for retirement benefit, 1.0% for annual COLA, and 2.0% for survivor's benefit

The benefits shown do not reflect P.A. 96-0889 (2 Tier Act of 2011). Please refer to Section I earlier in this report for details.

General Assembly Retirement System
Tier 2 Plan Summary

Retirement Age

- Age 67 with 8 years of service
- Age 62 with at least 8 years of service (reduced ½ of 1% for each month under 67)

Retirement Formula

- 3% of final average salary for each year of service

Maximum Annuity

- 60% of final average salary

Salary Used to Calculate Pension

- Highest 96 consecutive months of service within the last 120 months of service
- Pensionable Salary is limited by an amount tied to the Social Security Wage Base of $106,800. This amount increases annually by 3% or the increase in the Consumer Price Index-U, whichever is less. The salary limit for calendar year 2020 is $124,630.

Annual COLA

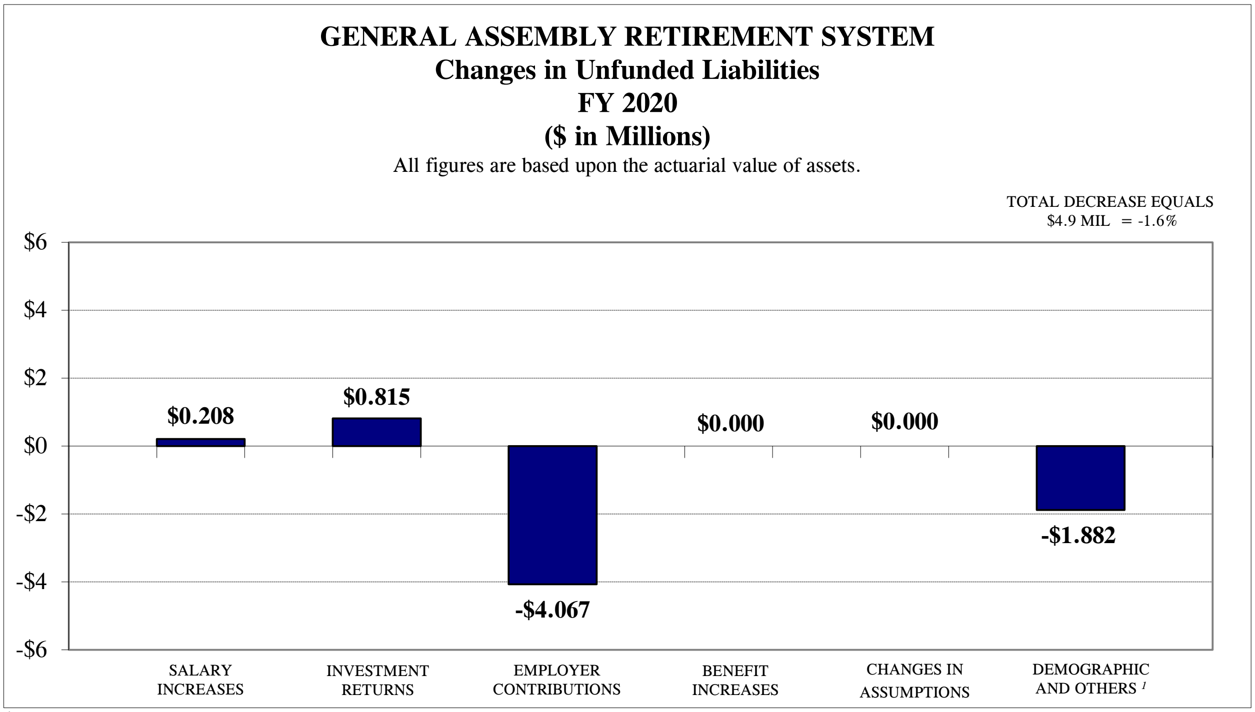
- Simple 3% or the increase in the Consumer Price Index-U, whichever is less

Employee Contributions

- 11.5% of salary
  - 8.5% for retirement benefit, 1.0% for annual COLA, and 2.0% for survivor's benefit

The benefits shown reflect P.A. 96-0889 (2 Tier Act of 2011) and are for Tier 2 members who first contribute to the system on or after January 1, 2011. Please refer to Section I earlier in this report for details.

CHART 53



[1] The liability decreased by $1.882 million due to the net effect of actual experiences from demographic and other factors. An actuarial gain of approximately $2.5 million was realized from favorable retiree experience and other factors, which was slightly offset by unfavorable experiences from terminations, retirements, etc.

CHART 54

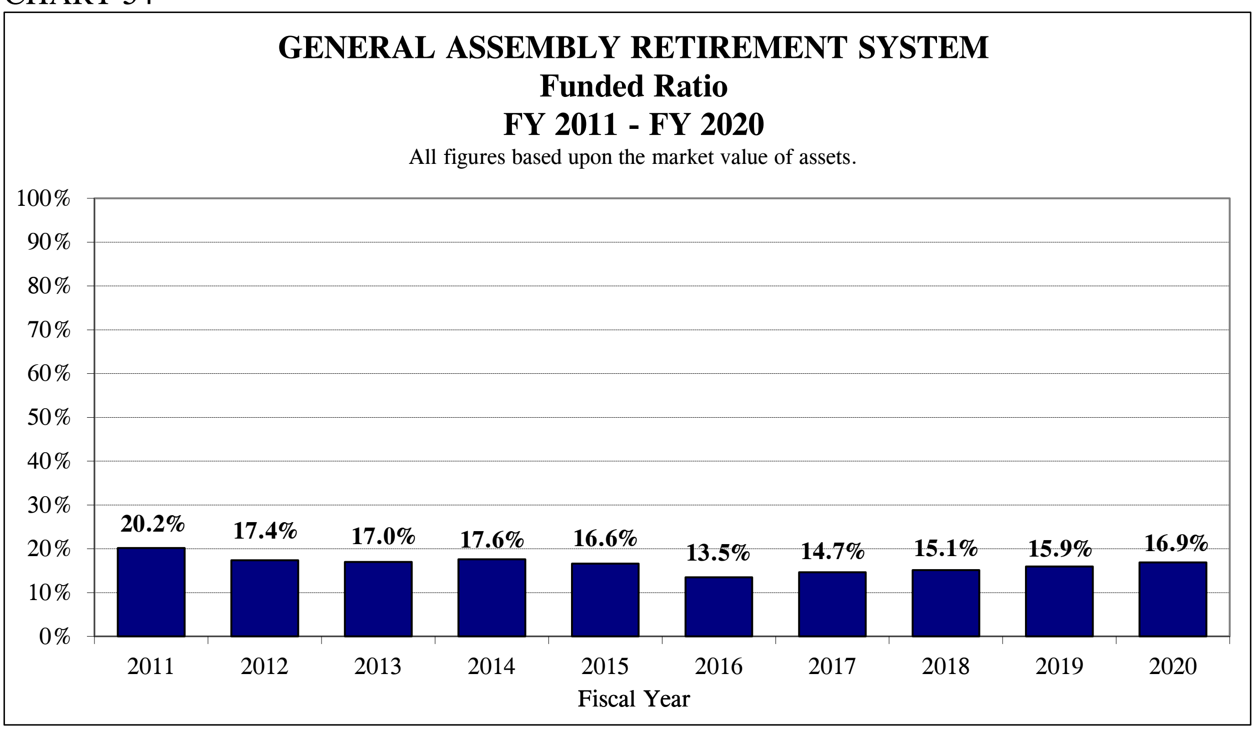


CHART 55

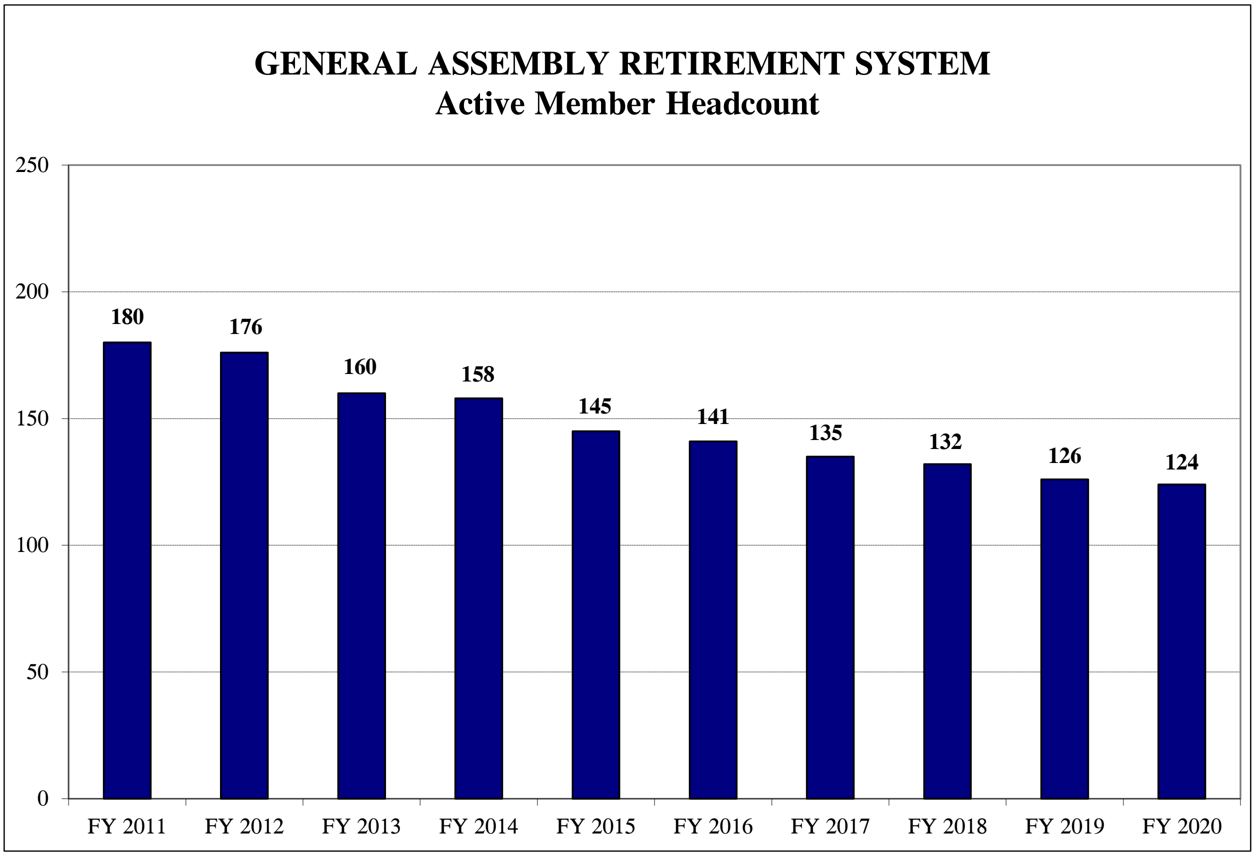


CHART 56

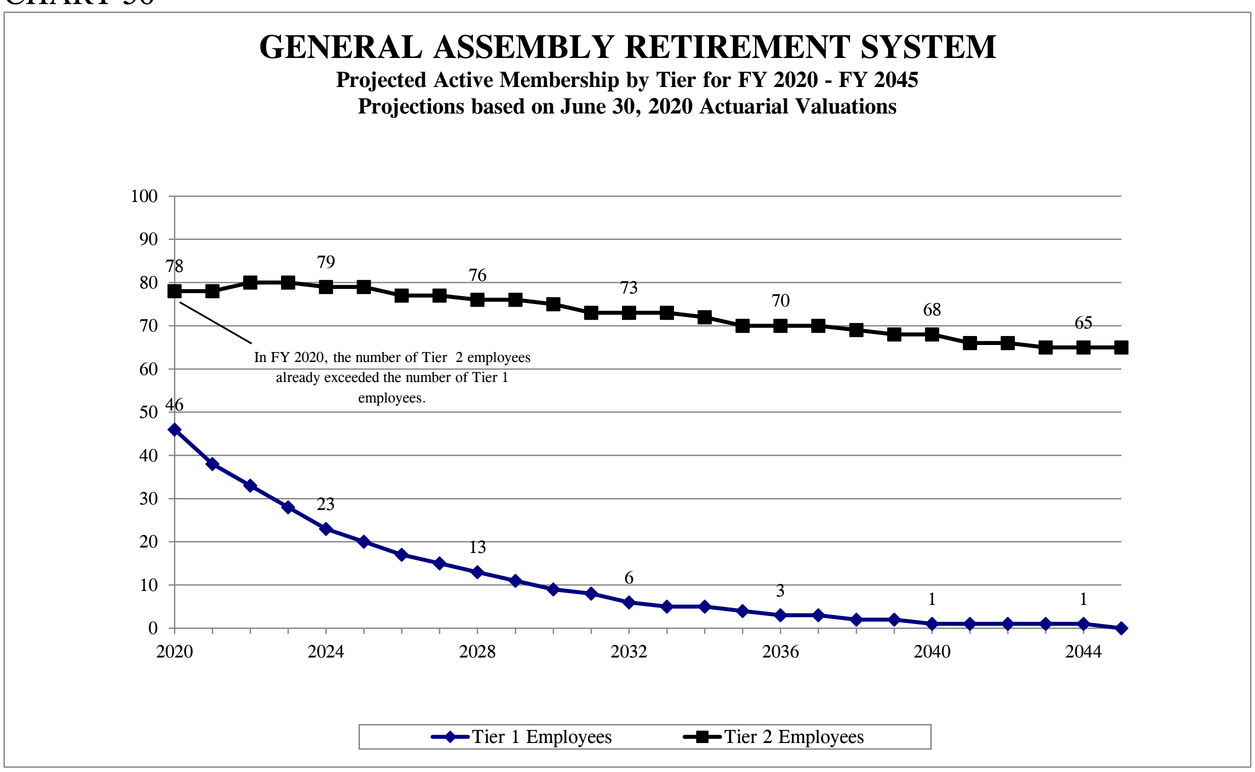


CHART 57

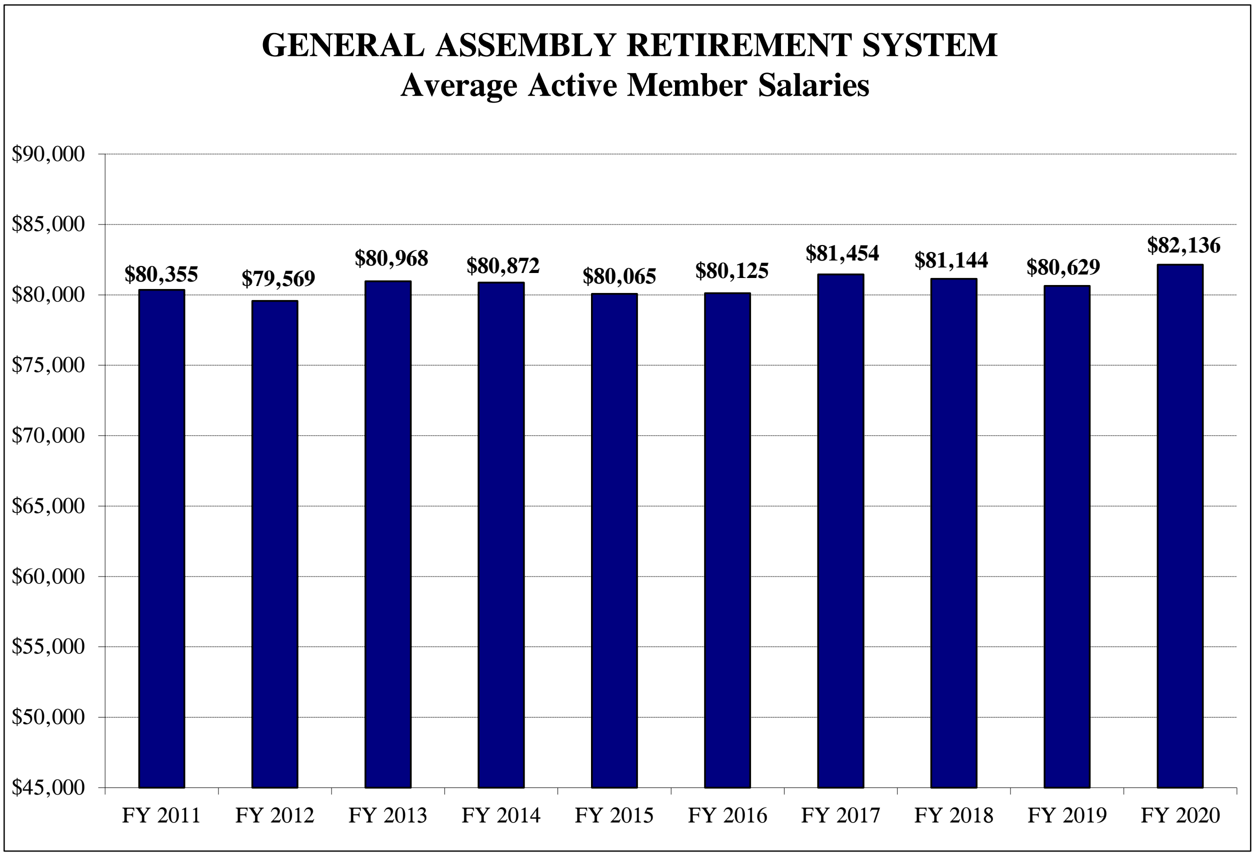


CHART 58

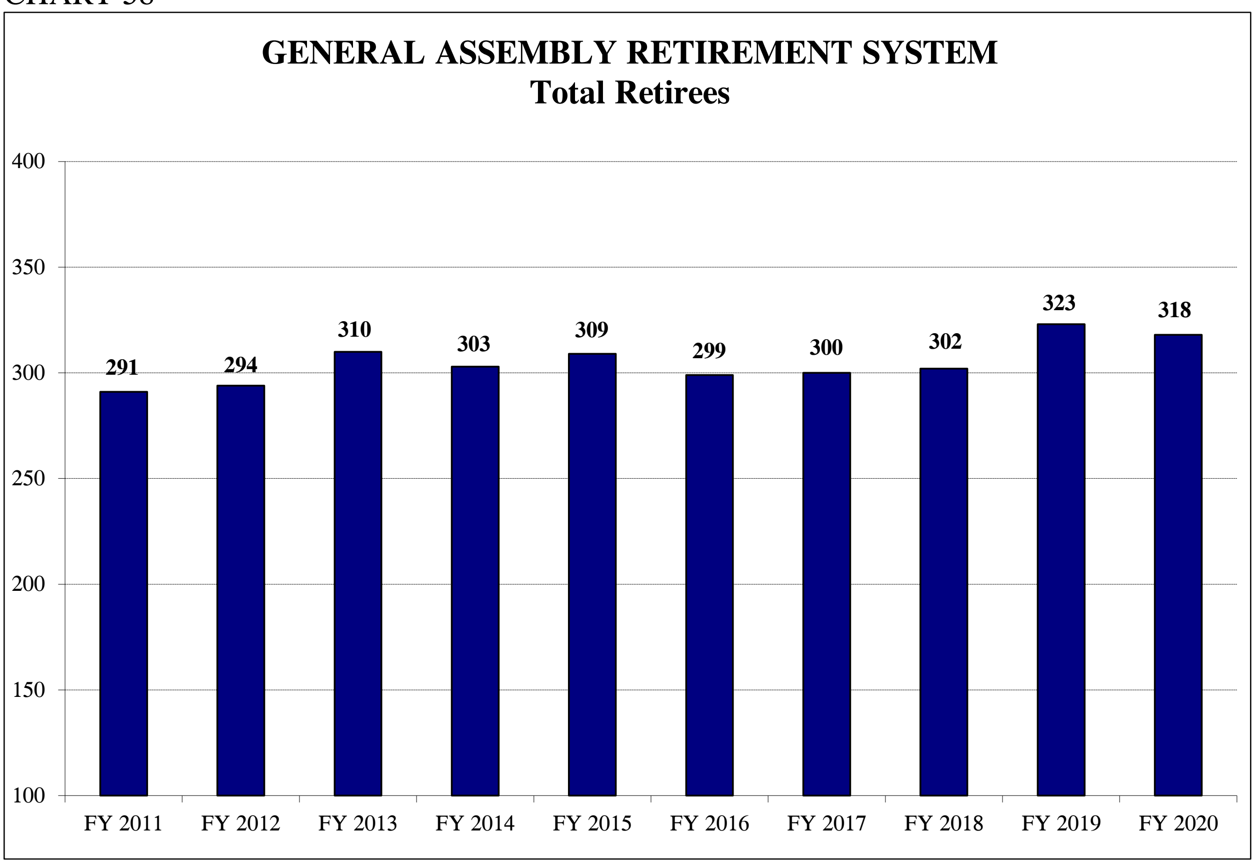


CHART 59

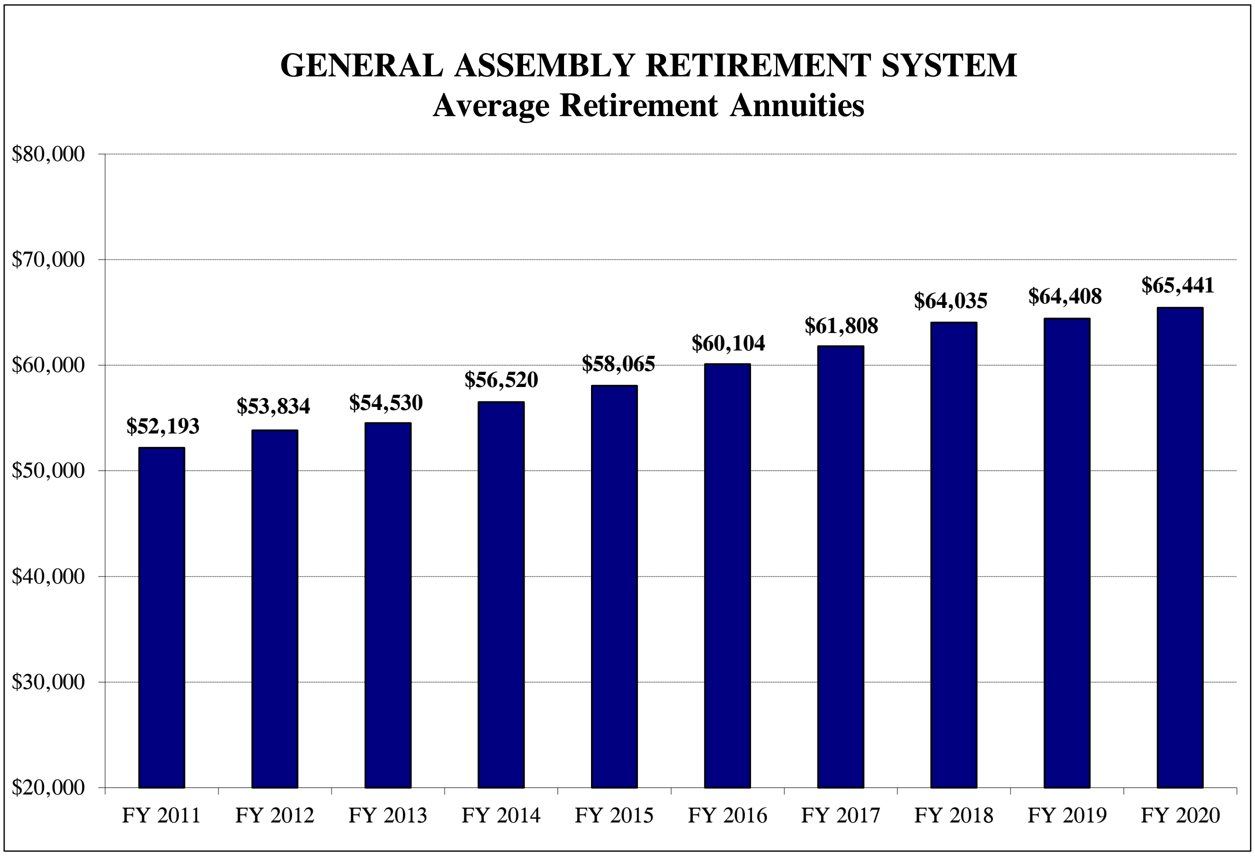


CHART 60

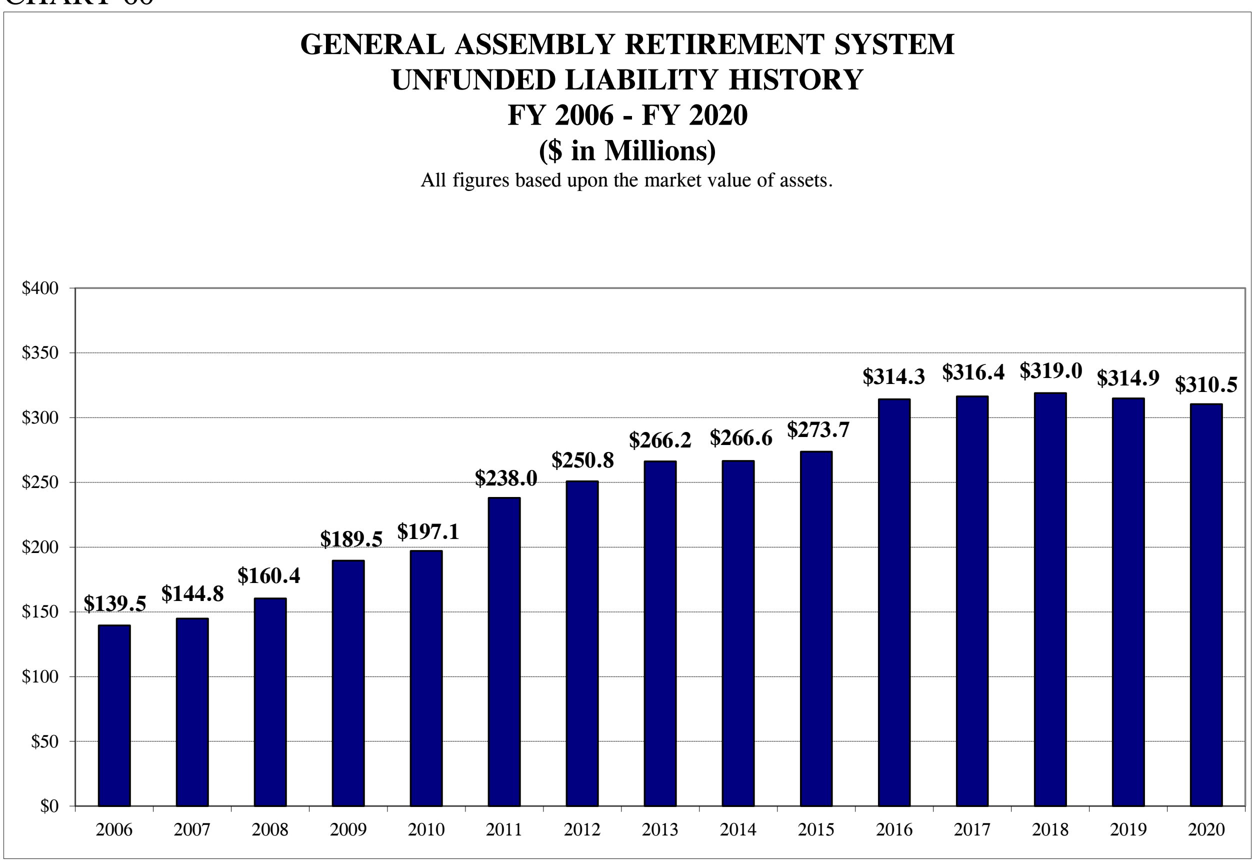
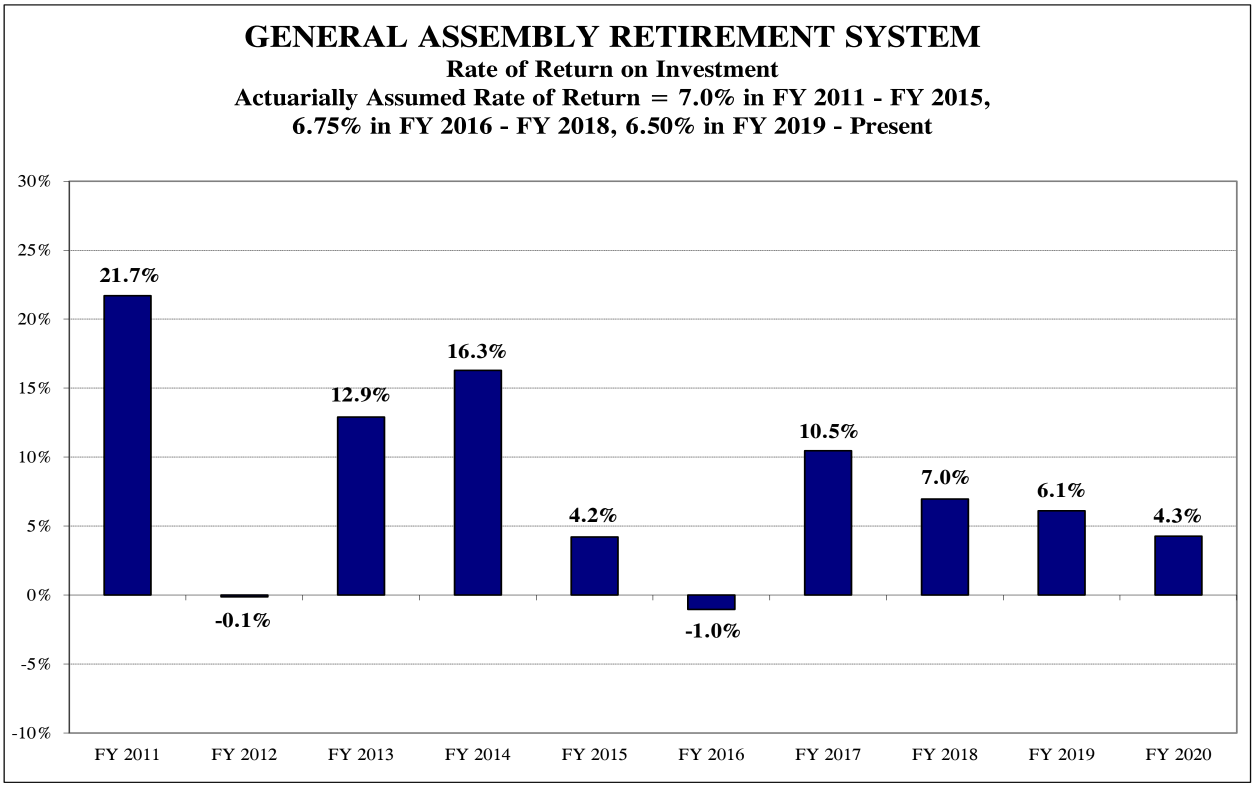
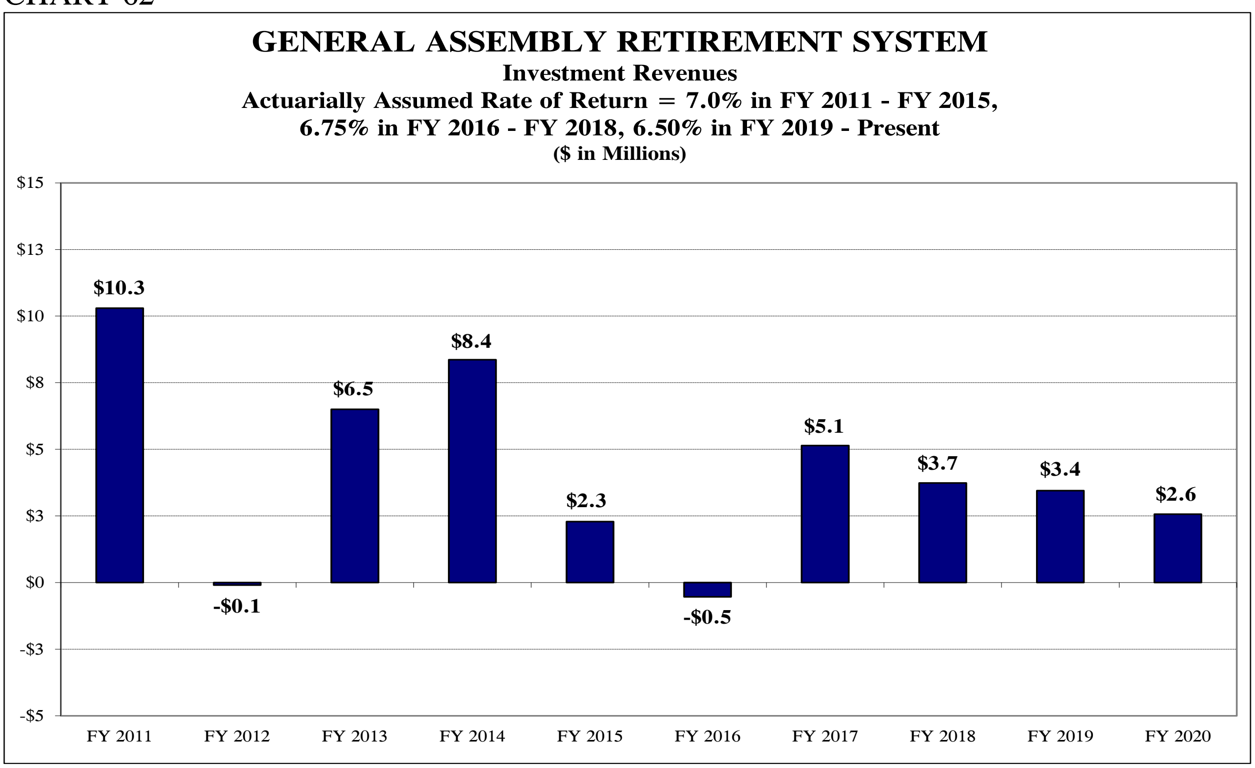


CHART 61



Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 62



Note: The years associated with investment rate assumption changes above reflect the actuarial valuation years, not the fiscal year in which the State contribution was calculated using the new rate.

CHART 63

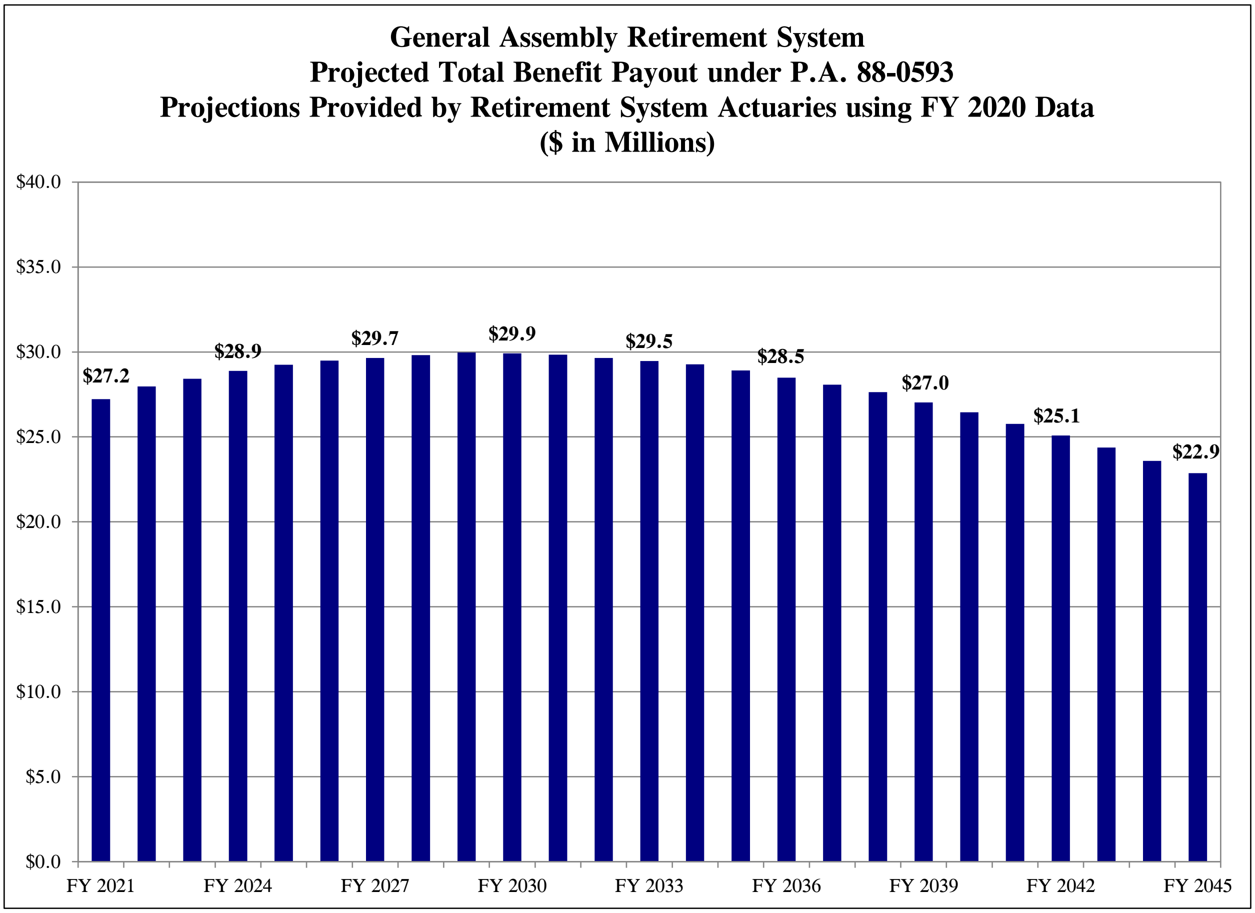

General Assembly Retirement System
Projected Total Benefit Payout under P.A. 88-0593
Projections Provided by Retirement System Actuaries using FY 2020 Data
($ in Millions)
$40.0
$35.0
$30.0
$25.0
$20.0
$15.0
$10.0
$5.0
$0.0
$27.2
$28.9
$29.7
$29.9
$29.5
$28.5
$27.0
$25.1
$22.9
FY 2021
FY 2024
FY 2027
FY 2030
FY 2033
FY 2036
FY 2039
FY 2042
FY 2045

TABLE 22

GENERAL ASSEMBLY RETIREMENT SYSTEM CHANGES IN UNFUNDED LIABILITY FY 1996 - FY 2020							
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
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	402,083	(2,243,841)	7,000,449	0	0	(1,989,310)	3,169,381
6/30/2015	(976,354)	(2,012,721)	5,315,003	0	0	1,571,772	3,897,700
6/30/2016	(1,548,273)	266,861	4,938,834	0	36,729,162	(3,551,840)	36,834,744
6/30/2017	125,546	(647,450)	1,622,673	0	0	2,080,708	3,181,477
6/30/2018	(935,739)	(146,446)	2,167,882	0	(729,983)	2,109,485	2,465,199
6/30/2019	1,042,570	831,434	74,068	0	(8,784,207)	3,215,855	(3,620,280)
6/30/2020	207,874	815,183	(4,067,280)	0	0	(1,882,100)	(4,926,323)
TOTALS	$ (2,175,609)	$ 17,839,978	$ 107,918,301	$ -	$ 77,309,205	$ 30,062,222	$ 230,954,097

TABLE 23

GENERAL ASSEMBLY RETIREMENT SYSTEM Changes in Net Assets ($ in Millions)										
Fiscal Years	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additions to Assets										
State of Illinois	$11.4	$10.5	$14.1	$14.0	$15.9	$16.1	$21.7	$21.2	$23.2	$25.8
Pension Obligation Bonds	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Employees	$2.0	$1.6	$1.5	$1.5	$1.5	$1.3	$1.3	$1.3	$1.3	$1.2
Net Investment Income	$10.3	-$0.1	$6.5	$8.4	$2.3	-$0.5	$5.1	$3.7	$3.4	$2.6
Total Asset Additions (A)	$23.7	$12.0	$22.1	$23.8	$19.6	$16.8	$28.1	$26.1	$28.0	$29.5
Deductions from Assets										
Benefits	$17.6	$19.3	$20.1	$20.8	$21.3	$21.8	$22.4	$23.3	$24.6	$25.7
Refunds	$0.1	$0.1	$0.1	$0.2	$0.2	$0.1	$0.1	$0.0	$0.2	$0.1
Subsidy Payments	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Administrative Expenses	$0.3	$0.3	$0.3	$0.3	$0.4	$0.4	$0.4	$0.3	$0.4	$0.4
Other	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Asset Deductions (B)	$18.0	$19.7	$20.5	$21.4	$21.9	$22.4	$22.8	$23.7	$25.1	$26.2
Change in Net Assets (A-B=C)	$5.7	-$7.7	$1.6	$2.4	-$2.2	-$5.5	$5.3	$2.5	$2.9	$3.3

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
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%
2016	$49.1	-$0.5	-1.0%
2017	$54.3	$5.1	10.5%
2018	$56.8	$3.7	7.0%
2019	$59.7	$3.4	6.1%
2020	$63.0	$2.6	4.3%

TABLE 25

GENERAL ASSEMBLY RETIREMENT SYSTEM Projected Normal Costs based on Public Act 88-0593 Projections Provided by Retirement System Actuaries using FY 2020 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	Employee Contributions	Employer Normal Cost	Employer Normal Cost as a % of Payroll
2021	$1.9	19.3%	$1.1	11.3%	$3.0	30.7%	$1.1	$1.9	19.1%
2022	$1.7	17.2%	$1.2	12.1%	$2.9	29.3%	$1.1	$1.7	17.8%
2023	$1.5	15.3%	$1.2	13.0%	$2.7	28.3%	$1.1	$1.6	16.8%
2024	$1.3	13.6%	$1.3	13.5%	$2.5	27.2%	$1.1	$1.5	15.7%
2025	$1.1	12.2%	$1.3	14.4%	$2.4	26.6%	$1.1	$1.4	15.1%
2026	$1.0	11.0%	$1.4	15.1%	$2.4	26.0%	$1.0	$1.3	14.5%
2027	$0.9	9.7%	$1.4	15.6%	$2.2	25.3%	$1.0	$1.2	13.8%
2028	$0.8	8.5%	$1.4	16.0%	$2.2	24.5%	$1.0	$1.1	13.0%
2029	$0.7	7.5%	$1.4	16.5%	$2.1	24.0%	$1.0	$1.1	12.5%
2030	$0.6	6.4%	$1.5	17.0%	$2.0	23.4%	$1.0	$1.0	11.9%
2031	$0.5	5.4%	$1.5	17.5%	$2.0	22.9%	$1.0	$1.0	11.5%
2032	$0.4	4.6%	$1.5	17.8%	$1.9	22.4%	$1.0	$0.9	10.8%
2033	$0.3	4.0%	$1.6	18.2%	$1.9	22.2%	$1.0	$0.9	10.7%
2034	$0.3	3.4%	$1.6	18.3%	$1.9	21.7%	$1.0	$0.9	10.2%
2035	$0.3	2.9%	$1.6	18.5%	$1.8	21.4%	$1.0	$0.9	9.9%
2036	$0.2	2.4%	$1.6	18.7%	$1.8	21.2%	$1.0	$0.8	9.7%
2037	$0.2	2.1%	$1.6	18.9%	$1.8	20.9%	$1.0	$0.8	9.4%
2038	$0.2	1.7%	$1.7	18.9%	$1.8	20.6%	$1.0	$0.8	9.1%
2039	$0.1	1.3%	$1.7	19.1%	$1.8	20.4%	$1.0	$0.8	9.0%
2040	$0.1	1.1%	$1.7	19.1%	$1.8	20.2%	$1.0	$0.8	8.7%
2041	$0.1	0.9%	$1.8	19.3%	$1.8	20.1%	$1.1	$0.8	8.6%
2042	$0.1	0.7%	$1.8	19.3%	$1.8	19.9%	$1.1	$0.8	8.4%
2043	$0.1	0.5%	$1.8	19.4%	$1.9	19.9%	$1.1	$0.8	8.3%
2044	$0.0	0.4%	$1.8	19.4%	$1.9	19.8%	$1.1	$0.8	8.3%
2045	$0.0	0.3%	$1.9	19.5%	$1.9	19.8%	$1.1	$0.8	8.3%

Appendices

APPENDIX A

FUNDING PROJECTIONS FOR THE STATE RETIREMENT SYSTEMS All Five Systems Combined Projections Based on the Retirement Systems' FY 2020 Actuarial Valuations ($ 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**
2021	$20,722.2	$9,760.3	47.1%	$1,574.5	$242,600.1	$99,463.9	$143,136.3	41.0%
2022	**$21,113.8**	**$10,550.4**	**50.0%**	**$1,601.3**	**$248,606.5**	**$103,146.7**	**$145,459.8**	**41.5%**
2023	$21,618.1	$10,762.4	49.8%	$1,637.3	$254,720.7	$106,751.5	$147,969.1	41.9%
2024	$22,138.2	$11,089.4	50.1%	$1,674.7	$260,717.3	$110,757.3	$149,960.0	42.5%
2025	$22,669.0	$11,417.4	50.4%	$1,712.7	$266,559.3	$115,833.4	$150,725.8	43.5%
2026	$23,200.3	$11,753.3	50.7%	$1,750.6	$272,225.2	$121,069.5	$151,155.7	44.5%
2027	$23,741.4	$12,028.4	50.7%	$1,788.8	$277,685.1	$126,398.8	$151,286.3	45.5%
2028	$24,287.1	$12,282.2	50.6%	$1,827.2	$282,926.1	$131,809.4	$151,116.8	46.6%
2029	$24,854.0	$12,552.1	50.5%	$1,867.4	$287,931.1	$137,325.0	$150,606.1	47.7%
2030	$25,434.4	$12,808.5	50.4%	$1,908.8	$292,671.9	$142,930.9	$149,741.0	48.8%
2031	$26,036.4	$13,082.3	50.2%	$1,951.7	$297,136.0	$148,660.1	$148,475.9	50.0%
2032	$26,651.4	$13,393.2	50.3%	$1,995.4	$301,299.0	$154,561.3	$146,737.7	51.3%
2033	$27,280.4	$13,739.9	50.4%	$2,039.8	$305,142.1	$160,688.3	$144,453.8	52.7%
2034	$27,925.6	$15,107.8	54.1%	$2,085.3	$308,651.3	$168,127.1	$140,524.2	54.5%
2035	$28,592.7	$15,469.2	54.1%	$2,132.3	$311,810.4	$175,936.3	$135,874.1	56.4%
2036	$29,282.7	$15,842.4	54.1%	$2,180.9	$314,691.2	$184,252.1	$130,439.1	58.6%
2037	$30,003.1	$16,233.4	54.1%	$2,231.7	$317,219.1	$193,075.9	$124,143.2	60.9%
2038	$30,750.9	$16,639.5	54.1%	$2,284.6	$319,377.8	$202,470.8	$116,907.0	63.4%
2039	$31,519.1	$17,056.6	54.1%	$2,338.8	$321,165.5	$212,518.7	$108,646.8	66.2%
2040	$32,314.4	$17,488.5	54.1%	$2,394.9	$322,592.5	$223,312.5	$99,280.0	69.2%
2041	$33,144.0	$17,939.0	54.1%	$2,453.7	$323,705.7	$234,992.3	$88,713.4	72.6%
2042	$34,006.9	$18,407.4	54.1%	$2,514.9	$324,527.0	$247,672.3	$76,854.7	76.3%
2043	$34,894.7	$18,889.6	54.1%	$2,578.1	$325,107.9	$261,498.6	$63,609.3	80.4%
2044	$35,804.7	$19,382.9	54.1%	$2,642.8	$325,518.9	$276,632.0	$48,886.9	85.0%
2045	$36,740.7	$19,891.7	54.1%	$2,709.5	$325,835.8	$293,250.9	$32,585.0	90.0%

APPENDIX B

FUNDING PROJECTIONS FOR THE TEACHERS' RETIREMENT SYSTEM Projections Based on the Retirement System's FY 2020 Final Actuarial Valuation Actuarially Assumed Rate of Return: 7.00% ($ 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
2021	$11,214.6	$5,140.7	45.8%	$1,009.3	$139,358.8	$57,012.9	$82,345.9	40.9%
2022	**$11,470.4**	**$5,694.1**	**49.6%**	**$1,032.3**	**$143,162.8**	**$59,128.4**	**$84,034.4**	**41.3%**
2023	$11,816.4	$5,874.5	49.7%	$1,063.5	$147,201.7	$61,249.6	$85,952.0	41.6%
2024	$12,165.6	$6,077.5	50.0%	$1,094.9	$151,258.7	$63,728.0	$87,530.7	42.1%
2025	$12,518.4	$6,309.1	50.4%	$1,126.7	$155,316.3	$67,077.9	$88,238.4	43.2%
2026	$12,860.2	$6,535.4	50.8%	$1,157.4	$159,362.0	$70,615.6	$88,746.4	44.3%
2027	$13,202.5	$6,711.6	50.8%	$1,188.2	$163,373.1	$74,287.7	$89,085.3	45.5%
2028	$13,539.2	$6,871.4	50.8%	$1,218.5	$167,331.1	$78,076.2	$89,255.0	46.7%
2029	$13,884.0	$7,037.9	50.7%	$1,249.6	$171,219.8	$81,988.5	$89,231.2	47.9%
2030	$14,234.4	$7,194.9	50.5%	$1,281.1	$175,018.7	$86,014.0	$89,004.8	49.1%
2031	$14,595.5	$7,360.9	50.4%	$1,313.6	$178,706.5	$90,160.3	$88,546.2	50.5%
2032	$14,958.3	$7,545.6	50.4%	$1,346.2	$182,260.0	$94,446.9	$87,813.1	51.8%
2033	$15,323.8	$7,748.8	50.6%	$1,379.1	$185,652.7	$98,892.4	$86,760.4	53.3%
2034	$15,693.3	$8,665.1	55.2%	$1,412.4	$188,864.8	$104,243.1	$84,621.7	55.2%
2035	$16,075.0	$8,875.9	55.2%	$1,446.7	$191,876.4	$109,830.1	$82,046.4	57.2%
2036	$16,471.9	$9,095.0	55.2%	$1,482.5	$194,677.3	$115,685.1	$78,992.2	59.4%
2037	$16,888.8	$9,325.2	55.2%	$1,520.0	$197,251.0	$121,842.3	$75,408.7	61.8%
2038	$17,321.1	$9,563.9	55.2%	$1,558.9	$199,569.1	$128,327.7	$71,241.4	64.3%
2039	$17,762.9	$9,807.8	55.2%	$1,598.7	$201,615.6	$135,179.8	$66,435.8	67.0%
2040	$18,219.0	$10,059.7	55.2%	$1,639.7	$203,379.1	$142,444.7	$60,934.4	70.0%
2041	$18,694.7	$10,322.4	55.2%	$1,682.5	$204,883.6	$150,207.5	$54,676.0	73.3%
2042	$19,192.0	$10,597.0	55.2%	$1,727.3	$206,125.5	$158,526.7	$47,598.8	76.9%
2043	$19,704.1	$10,879.7	55.2%	$1,773.4	$207,134.8	$167,490.5	$39,644.3	80.9%
2044	$20,230.5	$11,170.4	55.2%	$1,820.7	$207,960.5	$177,206.9	$30,753.5	85.2%
2045	$20,776.7	$11,471.9	55.2%	$1,869.9	$208,661.5	$187,795.3	$20,866.1	90.0%
2046	$21,347.7	$1,145.8	5.4%	$1,921.3	$209,304.9	$188,374.4	$20,930.5	90.0%

* Total State Contributions for FY 2021 and 2022 both include the minimum benefit reimbursements of $400,000.

APPENDIX C

FUNDING PROJECTIONS FOR THE STATE EMPLOYEES' RETIREMENT SYSTEM

Projections Based on the Retirement System's FY 2020 Final Actuarial Valuation
Actuarially Assumed Rate of Return: 6.75%
($ 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
2021	$4,520.5	$2,447.9	54.2%	$255.5	$51,487.0	$20,527.0	$30,960.0	39.9%
2022	**$4,584.1**	**$2,574.8**	**56.2%**	**$257.6**	**$52,759.0**	**$21,530.0**	**$31,229.0**	**40.8%**
2023	$4,653.6	$2,502.0	53.8%	$259.8	$53,966.0	$22,478.0	$31,488.0	41.7%
2024	$4,726.0	$2,543.0	53.8%	$262.3	$55,102.0	$23,418.0	$31,684.0	42.5%
2025	$4,800.3	$2,584.0	53.8%	$264.6	$56,157.0	$24,410.0	$31,747.0	43.5%
2026	$4,881.2	$2,632.0	53.9%	$267.4	$57,124.0	$25,377.0	$31,747.0	44.4%
2027	$4,966.5	$2,678.0	53.9%	$270.5	$58,001.0	$26,316.0	$31,685.0	45.4%
2028	$5,056.2	$2,721.0	53.8%	$273.7	$58,790.0	$27,229.0	$31,561.0	46.3%
2029	$5,154.6	$2,770.0	53.7%	$277.7	$59,496.0	$28,130.0	$31,366.0	47.3%
2030	$5,257.7	$2,818.0	53.6%	$282.0	$60,120.0	$29,022.0	$31,098.0	48.3%
2031	$5,368.1	$2,871.0	53.5%	$286.8	$60,671.0	$29,922.0	$30,749.0	49.3%
2032	$5,482.0	$2,932.0	53.5%	$291.6	$61,141.0	$30,836.0	$30,305.0	50.4%
2033	$5,600.0	$3,000.0	53.6%	$296.5	$61,534.0	$31,779.0	$29,755.0	51.6%
2034	$5,724.3	$3,318.0	58.0%	$301.7	$61,854.0	$33,022.0	$28,832.0	53.4%
2035	$5,854.1	$3,393.0	58.0%	$307.2	$62,103.0	$34,339.0	$27,764.0	55.3%
2036	$5,986.4	$3,469.0	57.9%	$312.7	$62,282.0	$35,742.0	$26,540.0	57.4%
2037	$6,124.3	$3,549.0	57.9%	$318.4	$62,398.0	$37,251.0	$25,147.0	59.7%
2038	$6,268.9	$3,633.0	58.0%	$324.6	$62,460.0	$38,887.0	$23,573.0	62.3%
2039	$6,418.8	$3,720.0	58.0%	$330.9	$62,473.0	$40,671.0	$21,802.0	65.1%
2040	$6,575.6	$3,811.0	58.0%	$337.6	$62,451.0	$42,628.0	$19,823.0	68.3%
2041	$6,739.4	$3,906.0	58.0%	$344.7	$62,405.0	$44,786.0	$17,619.0	71.8%
2042	$6,908.5	$4,004.0	58.0%	$352.2	$62,345.0	$47,170.0	$15,175.0	75.7%
2043	$7,082.3	$4,105.0	58.0%	$359.9	$62,279.0	$49,808.0	$12,471.0	80.0%
2044	$7,259.5	$4,207.0	58.0%	$367.7	$62,218.0	$52,725.0	$9,493.0	84.7%
2045	$7,438.6	$4,311.0	58.0%	$375.5	$62,166.0	$55,948.0	$6,218.0	90.0%

Note: Pursuant to P.A. 93-0589, State contributions for FY 2021 and FY 2022 include $99.425 million and $104.517 million, respectively for debt service for the 2003 Pension Obligation Bonds authorized by P.A. 93-0002. State contribution amounts shown for FY 2023 - 2045 do not include 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 2020 Actuarial Valuation
Actuarially Assumed Rate of Return: 6.75%
($ 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
2021	$4,819.585	$1,995.8	41.4%	$294.6	$48,480.2	$20,672.6	$27,807.6	42.6%
2022	**$4,892.989**	**$2,101.3**	**42.9%**	**$296.4**	**$49,366.7**	**$21,179.3**	**$28,187.3**	**42.9%**
2023	$4,981.962	$2,207.0	44.3%	$299.1	$50,199.1	$21,665.1	$28,533.9	43.2%
2024	$5,080.891	$2,290.5	45.1%	$302.6	$50,975.1	$22,207.5	$28,767.6	43.6%
2025	$5,184.626	$2,347.0	45.3%	$306.4	$51,685.2	$22,898.3	$28,786.9	44.3%
2026	$5,293.145	$2,409.0	45.5%	$310.6	$52,327.7	$23,591.9	$28,735.8	45.1%
2027	$5,406.414	$2,462.6	45.5%	$315.1	$52,897.8	$24,278.4	$28,619.4	45.9%
2028	$5,525.376	$2,514.5	45.5%	$320.0	$53,397.8	$24,961.6	$28,436.2	46.7%
2029	$5,648.061	$2,568.9	45.5%	$325.1	$53,821.9	$25,642.6	$28,179.4	47.6%
2030	$5,773.801	$2,620.6	45.4%	$330.5	$54,161.0	$26,314.3	$27,846.7	48.6%
2031	$5,903.125	$2,675.3	45.3%	$335.9	$54,414.0	$26,983.7	$27,430.3	49.6%
2032	$6,039.836	$2,739.6	45.4%	$341.7	$54,587.8	$27,673.0	$26,914.7	50.7%
2033	$6,183.587	$2,813.1	45.5%	$347.8	$54,685.4	$28,400.4	$26,285.0	51.9%
2034	$6,332.784	$2,937.7	46.4%	$354.2	$54,708.2	$29,226.4	$25,481.8	53.4%
2035	$6,486.230	$3,011.1	46.4%	$360.8	$54,656.7	$30,110.0	$24,546.7	55.1%
2036	$6,644.488	$3,086.7	46.5%	$367.6	$54,611.4	$31,142.4	$23,469.0	57.0%
2037	$6,807.163	$3,164.5	46.5%	$374.6	$54,506.7	$32,269.5	$22,237.1	59.2%
2038	$6,975.119	$3,244.9	46.5%	$381.9	$54,344.9	$33,506.1	$20,838.8	61.7%
2039	$7,148.364	$3,327.7	46.6%	$389.4	$54,134.3	$34,872.7	$19,261.6	64.4%
2040	$7,327.371	$3,413.3	46.6%	$397.2	$53,882.0	$36,390.0	$17,492.1	67.5%
2041	$7,513.880	$3,502.3	46.6%	$405.5	$53,598.7	$38,082.7	$15,516.0	71.1%
2042	$7,706.500	$3,594.3	46.6%	$414.0	$53,299.3	$39,980.5	$13,318.8	75.0%
2043	$7,904.557	$3,688.8	46.7%	$422.8	$52,996.4	$42,111.2	$10,885.2	79.5%
2044	$8,106.900	$3,785.3	46.7%	$431.8	$52,700.2	$44,501.2	$8,199.0	84.4%
2045	$8,313.292	$3,883.7	46.7%	$441.0	$52,422.7	$47,180.4	$5,242.3	90.0%

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

** Includes Self-Managed Plan (SMP) Contributions.

APPENDIX E

FUNDING PROJECTIONS FOR THE JUDGES' RETIREMENT SYSTEM
Projections Based on the Retirement System's FY 2020 Actuarial Valuation
Actuarially Assumed Rate of Return: 6.50%
($ 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
2021	$157.7	$148.6	94.2%	$13.9	$2,901.3	$1,182.1	$1,719.3	40.7%
2022	**$156.6**	**$152.4**	**97.3%**	**$13.9**	**$2,947.0**	**$1,234.6**	**$1,712.4**	**41.9%**
2023	$156.6	$151.7	96.9%	$13.8	$2,985.2	$1,280.1	$1,705.1	42.9%
2024	$156.4	$151.8	97.0%	$13.9	$3,016.2	$1,321.7	$1,694.5	43.8%
2025	$156.6	$151.6	96.8%	$14.0	$3,039.2	$1,362.2	$1,677.0	44.8%
2026	$156.8	$151.3	96.5%	$14.1	$3,054.6	$1,397.6	$1,657.0	45.8%
2027	$157.2	$151.4	96.3%	$14.1	$3,061.3	$1,427.4	$1,633.9	46.6%
2028	$157.5	$150.9	95.8%	$13.9	$3,060.9	$1,452.0	$1,609.0	47.4%
2029	$158.6	$151.3	95.4%	$14.0	$3,053.4	$1,472.4	$1,581.0	48.2%
2030	$159.7	$151.3	94.7%	$14.3	$3,039.0	$1,488.7	$1,550.3	49.0%
2031	$161.1	$151.7	94.2%	$14.4	$3,018.4	$1,501.7	$1,516.7	50.3%
2032	$162.8	$153.1	94.0%	$14.9	$2,991.4	$1,512.9	$1,478.5	50.6%
2033	$164.5	$155.0	94.2%	$15.5	$2,958.9	$1,523.7	$1,435.2	51.5%
2034	$166.5	$162.3	97.5%	$16.0	$2,921.3	$1,540.5	$1,380.9	52.7%
2035	$168.9	$164.6	97.5%	$16.6	$2,879.6	$1,559.3	$1,320.3	54.1%
2036	$171.4	$167.1	97.5%	$17.1	$2,834.1	$1,581.2	$1,252.9	55.8%
2037	$174.1	$169.7	97.5%	$17.7	$2,785.5	$1,607.3	$1,178.2	57.7%
2038	$177.0	$172.5	97.5%	$18.3	$2,734.5	$1,638.9	$1,095.6	59.9%
2039	$180.1	$175.6	97.5%	$18.8	$2,681.8	$1,677.4	$1,004.4	62.5%
2040	$183.5	$178.8	97.5%	$19.3	$2,628.1	$1,724.1	$904.0	65.6%
2041	$186.9	$182.2	97.5%	$19.9	$2,574.4	$1,780.7	$793.8	69.2%
2042	$190.6	$185.8	97.5%	$20.4	$2,521.4	$1,848.6	$672.8	73.3%
2043	$194.5	$189.5	97.5%	$20.9	$2,469.7	$1,929.4	$540.3	78.1%
2044	$198.4	$193.4	97.5%	$21.4	$2,419.9	$2,024.4	$395.4	83.7%
2045	$202.5	$197.4	97.5%	$22.0	$2,372.6	$2,135.3	$237.3	90.0%

APPENDIX F

FUNDING PROJECTIONS FOR THE GENERAL ASSEMBLY RETIREMENT SYSTEM Projections Based on the Retirement System's FY 2020 Actuarial Valuation Actuarially Assumed Rate of Return: 6.50% ($ 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**
2021	$9.8	$27.3	278.0%	$1.1	$372.8	$69.3	$303.5	18.6%
2022	**$9.7**	**$27.8**	**285.9%**	**$1.1**	**$371.1**	**$74.4**	**$296.7**	**20.0%**
2023	$9.5	$27.2	285.1%	$1.1	$368.7	$78.7	$290.0	21.3%
2024	$9.3	$26.5	285.1%	$1.1	$365.4	$82.2	$283.2	22.5%
2025	$9.1	$25.8	283.3%	$1.1	$361.5	$85.0	$276.5	23.5%
2026	$9.0	$25.5	282.2%	$1.0	$357.0	$87.5	$269.5	24.5%
2027	$8.9	$24.9	280.6%	$1.0	$351.9	$89.3	$262.6	25.4%
2028	$8.8	$24.5	278.6%	$1.0	$346.3	$90.7	$255.6	26.2%
2029	$8.7	$24.1	276.5%	$1.0	$340.0	$91.6	$248.4	26.9%
2030	$8.6	$23.6	273.4%	$1.0	$333.3	$92.0	$241.3	27.6%
2031	$8.6	$23.4	270.9%	$1.0	$326.2	$92.4	$233.8	28.3%
2032	$8.5	$23.0	269.3%	$1.0	$318.8	$92.5	$226.3	29.0%
2033	$8.5	$23.0	269.6%	$1.0	$311.0	$92.8	$218.2	29.8%
2034	$8.6	$24.7	286.4%	$1.0	$303.0	$95.2	$207.8	31.4%
2035	$8.6	$24.7	286.4%	$1.0	$294.8	$98.0	$196.8	33.2%
2036	$8.6	$24.6	286.5%	$1.0	$286.4	$101.4	$185.0	35.4%
2037	$8.7	$24.9	286.5%	$1.0	$277.9	$105.7	$172.2	38.0%
2038	$8.8	$25.2	286.4%	$1.0	$269.3	$111.1	$158.2	41.3%
2039	$8.9	$25.5	286.4%	$1.0	$260.8	$117.8	$143.0	45.2%
2040	$9.0	$25.8	286.3%	$1.0	$252.3	$125.8	$126.5	49.9%
2041	$9.1	$26.1	286.6%	$1.1	$244.0	$135.4	$108.6	55.5%
2042	$9.2	$26.3	286.5%	$1.1	$235.9	$146.6	$89.3	62.1%
2043	$9.3	$26.6	286.5%	$1.1	$228.0	$159.5	$68.5	70.0%
2044	$9.4	$26.9	286.4%	$1.1	$220.4	$174.4	$46.0	79.1%
2045	$9.6	$27.6	286.5%	$1.1	$213.1	$191.8	$21.3	90.0%

APPENDIX G

FUNDING PROJECTIONS FOR THE STATE RETIREMENT SYSTEMS
All Five Systems Combined
CGFA Projection Based on the Laws in Effect on June 30, 2020*
($ 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
2021	20,497.8	9,677.9	47.2%	1,590.6	243,616.3	99,542.2	144,074.1	40.9%
2022	**20,995.4**	**10,574.8**	**50.4%**	**1,610.2**	**249,992.7**	**103,415.5**	**146,577.2**	**41.4%**
2023	21,444.6	10,906.4	50.9%	1,642.4	256,265.6	107,190.5	149,075.1	41.8%
2024	21,917.4	11,214.6	51.2%	1,676.6	262,407.0	111,339.0	151,068.0	42.4%
2025	22,413.7	11,531.9	51.5%	1,712.3	268,383.2	116,537.0	151,846.2	43.4%
2026	22,914.3	11,859.5	51.8%	1,748.5	274,168.4	121,871.5	152,296.9	44.5%
2027	23,428.9	12,126.8	51.8%	1,785.5	279,740.8	127,286.1	152,454.8	45.5%
2028	23,948.3	12,374.0	51.7%	1,822.6	285,080.3	132,760.5	152,319.8	46.6%
2029	24,493.9	12,639.4	51.6%	1,861.9	290,179.8	138,328.2	151,851.6	47.7%
2030	25,059.8	12,894.9	51.5%	1,902.8	295,014.7	143,980.4	151,034.4	48.8%
2031	25,651.2	13,169.7	51.3%	1,945.4	299,557.9	149,740.5	149,817.4	50.0%
2032	26,259.4	13,483.8	51.3%	1,988.8	303,789.7	155,663.6	148,126.1	51.2%
2033	26,879.4	13,833.1	51.5%	2,033.1	307,697.0	161,813.4	145,883.6	52.6%
2034	27,521.1	15,210.6	55.3%	2,078.6	311,273.9	169,288.4	141,985.5	54.4%
2035	28,189.8	15,579.4	55.3%	2,126.2	314,502.9	177,144.6	137,358.4	56.3%
2036	28,885.6	15,963.4	55.3%	2,175.6	317,372.8	185,440.7	131,932.1	58.4%
2037	29,612.7	16,364.3	55.3%	2,227.5	319,879.4	194,250.4	125,629.0	60.7%
2038	30,371.1	16,782.6	55.3%	2,281.8	322,011.0	203,647.1	118,363.9	63.2%
2039	31,155.5	17,214.8	55.3%	2,337.6	323,762.3	213,711.9	110,050.4	66.0%
2040	31,972.8	17,664.6	55.2%	2,395.9	325,137.9	224,541.5	100,596.4	69.1%
2041	32,828.3	18,135.3	55.2%	2,457.0	326,192.2	236,284.4	89,907.8	72.4%
2042	33,727.2	18,629.4	55.2%	2,521.3	326,944.8	249,059.4	77,885.4	76.2%
2043	34,655.0	19,138.9	55.2%	2,587.9	327,448.8	263,020.4	64,428.4	80.3%
2044	35,613.7	19,665.0	55.2%	2,656.4	327,773.4	278,337.0	49,436.4	84.9%
2045	36,608.0	20,210.6	55.2%	2,727.6	327,994.4	295,194.9	32,799.6	90.0%

The retirement system projections for GARS and JRS were used for purposes of arriving at a CGFA projection for all 5 systems combined.

APPENDIX H

FUNDING PROJECTIONS FOR THE TEACHERS RETIREMENT SYSTEM CGFA Projection Based on the Laws in Effect on June 30, 2020* Actuarially Assumed Rate of Return: 7.00% ($ 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
2021	10,990.3	5,140.3	46.8%	1,009.3	140,234.5	57,006.0	83,228.5	40.7%
2022	**11,241.0**	**5,763.2**	**51.3%**	**1,032.3**	**144,302.8**	**59,183.0**	**85,119.8**	**41.0%**
2023	11,580.0	5,946.1	51.3%	1,063.5	148,407.6	61,368.2	87,039.4	41.4%
2024	11,922.3	6,151.2	51.6%	1,094.9	152,530.9	63,913.1	88,617.8	41.9%
2025	12,268.0	6,384.9	52.0%	1,126.7	156,654.3	67,331.1	89,323.2	43.0%
2026	12,603.0	6,613.3	52.5%	1,157.4	160,764.1	70,937.6	89,826.5	44.1%
2027	12,938.4	6,791.5	52.5%	1,188.2	164,837.4	74,679.1	90,158.3	45.3%
2028	13,268.4	6,953.4	52.4%	1,218.5	168,855.8	78,537.6	90,318.2	46.5%
2029	13,606.3	7,121.9	52.3%	1,249.6	172,802.5	82,520.7	90,281.8	47.8%
2030	13,949.7	7,281.1	52.2%	1,281.1	176,657.2	86,617.5	90,039.7	49.0%
2031	14,303.6	7,449.3	52.1%	1,313.6	180,397.7	90,835.7	89,562.0	50.4%
2032	14,659.1	7,636.2	52.1%	1,346.2	184,001.0	95,194.6	88,806.4	51.7%
2033	15,017.3	7,841.6	52.2%	1,379.1	187,439.3	99,712.3	87,727.0	53.2%
2034	15,379.5	8,760.2	57.0%	1,412.4	190,693.4	105,135.7	85,557.7	55.1%
2035	15,753.5	8,973.2	57.0%	1,446.7	193,742.7	110,795.6	82,947.1	57.2%
2036	16,142.4	9,194.8	57.0%	1,482.5	196,576.6	116,723.9	79,852.7	59.4%
2037	16,551.1	9,427.5	57.0%	1,520.0	199,178.0	122,954.5	76,223.5	61.7%
2038	16,974.7	9,668.8	57.0%	1,558.9	201,517.9	129,513.2	72,004.7	64.3%
2039	17,407.6	9,915.4	57.0%	1,598.7	203,579.7	136,438.5	67,141.2	67.0%
2040	17,854.6	10,170.0	57.0%	1,639.7	205,351.4	143,776.3	61,575.1	70.0%
2041	18,320.8	10,435.6	57.0%	1,682.5	206,856.6	151,612.3	55,244.3	73.3%
2042	18,808.2	10,713.2	57.0%	1,727.3	208,091.4	160,004.8	48,086.6	76.9%
2043	19,310.0	10,999.0	57.0%	1,773.4	209,086.3	169,043.6	40,042.7	80.8%
2044	19,825.9	11,292.9	57.0%	1,820.7	209,890.5	178,837.5	31,053.0	85.2%
2045	20,361.1	11,597.7	57.0%	1,869.9	210,563.3	189,506.9	21,056.4	90.0%

*** Not reflecting buyout provisions per Public Act 100-0587 and 101-0010**

APPENDIX I

FUNDING PROJECTIONS FOR THE STATE EMPLOYEES' RETIREMENT SYSTEM
CGFA Projection Based on the Laws in Effect on June 30, 2020
Actuarially Assumed Rate of Return: 6.75%
($ 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
2021	4,520.4	2,377.9	52.6%	271.7	51,537.9	20,554.0	30,983.9	39.9%
2022	**4,584.3**	**2,486.6**	**54.2%**	**257.6**	**52,855.5**	**21,586.0**	**31,269.5**	**40.8%**
2023	4,653.5	2,516.1	54.1%	259.8	54,098.0	22,553.8	31,544.2	41.7%
2024	4,726.3	2,558.0	54.1%	262.3	55,256.5	23,507.5	31,749.0	42.5%
2025	4,799.8	2,598.3	54.1%	264.6	56,322.9	24,503.7	31,819.2	43.5%
2026	4,877.4	2,645.4	54.2%	267.4	57,288.3	25,463.6	31,824.7	44.4%
2027	4,960.2	2,689.3	54.2%	270.5	58,149.2	26,383.7	31,765.5	45.4%
2028	5,045.9	2,730.7	54.1%	273.7	58,906.4	27,263.8	31,642.6	46.3%
2029	5,141.0	2,778.2	54.0%	277.7	59,565.1	28,115.5	31,449.6	47.2%
2030	5,243.6	2,826.1	53.9%	282.0	60,131.0	28,946.0	31,185.0	48.1%
2031	5,354.0	2,879.3	53.8%	286.8	60,604.2	29,766.3	30,837.9	49.1%
2032	5,471.0	2,942.2	53.8%	291.6	60,986.4	30,592.1	30,394.3	50.2%
2033	5,590.2	3,011.7	53.9%	296.5	61,278.3	31,438.0	29,840.3	51.3%
2034	5,716.5	3,330.6	58.3%	301.7	61,485.2	32,572.6	28,912.6	53.0%
2035	5,848.7	3,407.5	58.3%	307.2	61,612.5	33,773.2	27,839.3	54.8%
2036	5,984.9	3,486.9	58.3%	312.7	61,658.7	35,051.6	26,607.1	56.8%
2037	6,123.9	3,567.9	58.3%	318.4	61,628.6	36,423.1	25,205.5	59.1%
2038	6,271.0	3,653.6	58.3%	324.6	61,531.3	37,911.2	23,620.1	61.6%
2039	6,425.2	3,743.4	58.3%	330.9	61,373.0	39,537.3	21,835.7	64.4%
2040	6,586.1	3,837.1	58.3%	337.6	61,160.7	41,325.8	19,834.9	67.6%
2041	6,755.1	3,935.6	58.3%	344.7	60,906.9	43,305.1	17,601.8	71.1%
2042	6,932.3	4,038.9	58.3%	352.2	60,622.6	45,502.7	15,119.9	75.1%
2043	7,114.7	4,145.1	58.3%	359.9	60,312.7	47,945.6	12,367.1	79.5%
2044	7,302.4	4,254.5	58.3%	367.7	59,985.1	50,661.4	9,323.7	84.5%
2045	7,495.3	4,366.9	58.3%	375.5	59,642.6	53,678.3	5,964.3	90.0%

*** Not reflecting buyout provisions per Public Act 100-0587 and 101-0010**

APPENDIX J

FUNDING PROJECTIONS FOR THE STATE UNIVERSITIES RETIREMENT SYSTEM CGFA Projection Based on the Laws in Effect on June 30, 2020* Actuarially Assumed Rate of Return: 6.75% ($ 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
2021	4,819.6	1,983.8	41.2%	294.6	48,569.8	20,730.9	27,838.9	42.7%
2022	**5,003.7**	**2,144.8**	**42.9%**	**305.3**	**49,516.3**	**21,337.5**	**28,178.8**	**43.1%**
2023	5,045.0	2,265.4	44.9%	304.2	50,406.1	21,909.7	28,496.4	43.5%
2024	5,103.0	2,327.1	45.6%	304.4	51,238.0	22,514.5	28,723.5	43.9%
2025	5,180.2	2,371.4	45.8%	306.0	52,005.3	23,255.0	28,750.3	44.7%
2026	5,268.1	2,424.0	46.0%	308.6	52,704.4	23,985.3	28,719.1	45.5%
2027	5,364.2	2,469.7	46.0%	311.7	53,341.0	24,706.6	28,634.4	46.3%
2028	5,467.7	2,514.5	46.0%	315.4	53,910.9	25,416.4	28,494.5	47.1%
2029	5,579.3	2,563.9	46.0%	319.6	54,418.8	26,128.1	28,290.7	48.0%
2030	5,698.1	2,612.7	45.9%	324.4	54,854.3	26,836.2	28,018.1	48.9%
2031	5,823.9	2,666.0	45.8%	329.6	55,211.4	27,544.4	27,667.0	49.9%
2032	5,958.0	2,729.4	45.8%	335.1	55,492.1	28,271.5	27,220.6	50.9%
2033	6,098.9	2,801.8	45.9%	341.0	55,709.5	29,046.6	26,662.9	52.1%
2034	6,249.9	2,932.8	46.9%	347.5	55,871.0	29,944.5	25,926.5	53.6%
2035	6,410.1	3,009.5	46.9%	354.7	55,973.4	30,918.5	25,054.9	55.2%
2036	6,578.3	3,090.0	47.0%	362.3	56,017.0	31,982.6	24,034.4	57.1%
2037	6,754.9	3,174.3	47.0%	370.4	56,009.4	33,159.8	22,849.6	59.2%
2038	6,939.6	3,262.5	47.0%	379.0	55,958.0	34,472.7	21,485.3	61.6%
2039	7,133.7	3,354.9	47.0%	388.2	55,867.0	35,940.9	19,926.1	64.3%
2040	7,339.6	3,452.9	47.0%	398.2	55,745.4	37,589.5	18,155.9	67.4%
2041	7,556.4	3,555.8	47.1%	408.9	55,610.2	39,450.9	16,159.3	70.9%
2042	7,786.9	3,665.1	47.1%	420.4	55,473.5	41,556.7	13,916.8	74.9%
2043	8,026.6	3,778.6	47.1%	432.6	55,352.1	43,942.3	11,409.8	79.4%
2044	8,277.6	3,897.3	47.1%	445.5	55,257.6	46,639.3	8,618.3	84.4%
2045	8,539.4	4,021.0	47.1%	459.1	55,202.9	49,682.6	5,520.3	90.0%

*** Not reflecting buyout provisions per Public Act 100-0587 and 101-0010**

APPENDIX K

STATE RETIREMENT SYSTEMS CHANGES IN UNFUNDED LIABILITY FY 1996 - FY 2020								
	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N. C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	NEW BUYOUT PROVISIONS (P.A. 100-0587)	CHANGES IN ASSUMPTIONS ACTUARIAL	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
6/30/2016	(65,504,184)	467,184,012	1,635,079,237	0		5,654,841,998	1,029,558,907	8,721,159,970
6/30/2017	29,518,579	(384,476,850)	1,808,876,910	0		0	574,797,924	2,028,716,563
6/30/2018	(40,293,935)	(306,966,173)	1,909,537,067	0	(380,955,376)	(711,686,423)	1,382,295,985	1,851,931,145
6/30/2019	(84,011,865)	589,910,262	1,754,692,033	0	0	80,717,984	436,027,601	2,777,336,015
6/30/2020	(41,780,212)	972,850,068	1,622,083,905	0	0	0	88,641,204	2,641,794,965
Total	**(2,563,325,047)**	**9,243,471,043**	**33,506,200,857**	**1,105,792,000**	**(380,955,376)**	**16,950,888,488**	**11,506,740,931**	**69,368,812,896**
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)
6/30/2016	(744,045,004)	79,632,491	613,771,983	0		3,824,257,624	107,475,059	3,881,092,153
6/30/2017	(475,475,873)	(164,266,681)	933,395,000	0		0	(33,944,016)	259,708,430
6/30/2018	(287,352,188)	(95,232,463)	806,137,890	0	0	(213,956,554)	95,471,795	305,068,480
6/30/2019	(22,147,976)	164,421,442	438,041,644	0	(404,655,016)	(293,913,072)	(27,036,676)	(145,289,654)
6/30/2020	52,104,683	158,910,288	238,552,463	0	0	0	4,508,857	454,076,291
Total	**(1,907,887,650)**	**3,198,787,812**	**10,262,059,451**	**4,444,266,446**	**(404,655,016)**	**9,892,026,437**	**2,988,111,434**	**28,472,708,914**
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)	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)	(558,100,000)	460,700,000	0		972,900,000	1,100,000	831,300,000
6/30/2016	(135,000,000)	151,800,000	463,600,000	0		0	325,200,000	805,600,000
6/30/2017	(144,700,000)	(142,800,000)	430,500,000	0		0	(105,700,000)	37,300,000
6/30/2018	(8,500,000)	(92,700,000)	455,200,000	0	0	2,181,300,000	116,500,000	2,651,800,000
6/30/2019	(55,200,000)	234,100,000	517,600,000	0	0	0	174,700,000	871,200,000
6/30/2020	5,400,000	233,500,000	369,800,000	0	(5,200,000)	0	103,300,000	706,800,000
Total	**(500,123,000)**	**3,330,459,000**	**11,460,400,000**	**242,117,000**	**(5,200,000)**	**4,642,005,000**	**3,614,166,000**	**22,783,824,000**

NOTE: All figures 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 2020

	SALARY INCREASES	INVESTMENT RETURNS (HIGHER)/LOWER THAN ASSUMED	EMPLOYER CONTRIBUTIONS N. C. + INTEREST (HIGHER)/LOWER	BENEFIT INCREASES	NEW BUYOUT PROVISIONS (P.A. 100-0587)	CHANGES IN ASSUMPTIONS ACTUARIAL	OTHER FACTORS MISC.	TOTAL CHANGE IN UNFUNDED LIABILITY FROM PREVIOUS YR
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	(17,039,560)	(28,938,605)	22,548,920	0		0	846,615	(22,582,630)
6/30/2015	(16,202,872)	(26,929,814)	11,756,584	0		0	17,307,796	(14,068,306)
6/30/2016	(11,845,679)	2,880,479	13,018,248	0		153,176,767	8,368,408	165,598,223
6/30/2017	(8,300,358)	(9,469,124)	20,817,805	0		0	27,664,563	30,712,886
6/30/2018	(4,972,437)	(5,360,651)	16,112,995	0	N/A	(9,641,833)	6,687,881	2,825,955
6/30/2019	(2,071,872)	8,101,850	9,504,274	0	N/A	(37,738,684)	37,385,688	15,181,256
6/30/2020	1,179,778	8,344,155	323,033	0	N/A	0	(5,505,538)	4,341,428
Total	**(227,572,135)**	**127,466,752**	**742,931,267**	**2,848,501**	**N/A**	**428,367,522**	**344,952,532**	**1,418,994,439**
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	402,083	(2,243,841)	7,000,449	0		0	(1,989,310)	3,169,381
6/30/2015	(976,354)	(2,012,721)	5,315,003	0		0	1,571,772	3,897,700
6/30/2016	(1,548,273)	266,861	4,938,834	0		36,729,162	(3,551,840)	36,834,744
6/30/2017	125,546	(647,450)	1,622,673	0		0	2,080,708	3,181,477
6/30/2018	(935,739)	(146,446)	2,167,882	0	N/A	(729,983)	2,109,485	2,465,199
6/30/2019	1,042,570	831,434	74,068	0	N/A	(8,784,207)	3,215,855	(3,620,280)
6/30/2020	207,874	815,183	(4,067,280)	0	N/A	0	(1,882,100)	(4,926,323)
Total	**(2,175,609)**	**17,839,978**	**107,918,301**	**0**	**N/A**	**77,309,205**	**30,062,222**	**230,954,097**
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)	3,321,010,982	0		2,735,156,000	1,138,267,050	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	(1,294,402,748)	2,844,844,380	4,307,999,907	0		4,624,970,000	1,191,273,619	11,674,685,158
6/30/2013	(630,932,227)	2,398,672,819	3,353,064,642	0		(85,631,926)	884,045,656	5,919,218,964
6/30/2014	(228,985,081)	(3,130,508,160)	2,685,384,841	0		11,107,020,265	247,676,175	10,680,588,040
6/30/2015	(820,341,102)	(2,406,887,523)	3,212,804,274	0		1,559,318,960	163,697,225	1,708,591,834
6/30/2016	(957,943,140)	701,763,843	2,730,408,302	0		9,669,005,551	1,467,050,534	13,610,285,090
6/30/2017	(598,832,106)	(701,660,105)	3,195,212,388	0		0	464,899,179	2,359,619,356
6/30/2018	(342,054,299)	(500,405,733)	3,189,155,834	0	(380,955,376)	1,245,285,207	1,603,065,146	4,814,090,779
6/30/2019	(162,389,143)	997,364,988	2,719,912,019	0	(404,655,016)	(259,717,979)	624,292,468	3,514,807,337
6/30/2020	17,112,123	1,374,419,694	2,226,692,121	0	(5,200,000)	0	189,062,423	3,802,086,361
Total	**(5,201,083,441)**	**15,918,024,585**	**56,079,509,876**	**5,795,023,947**	**(790,810,392)**	**31,990,596,652**	**18,484,033,119**	**122,275,294,346**

NOTE: All figures 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
2016	45,251.0	15,038.5	17,005.6	840.3	49.1	78,184.5
2017	49,375.7	16,530.2	18,484.8	941.8	54.3	85,386.8
2018	51,969.5	17,463.3	19,321.1	1,012.5	56.8	89,823.2
2019	53,262.8	18,478.3	19,717.3	1,073.1	59.7	92,591.3
2020	52,316.5	19,191.4	19,617.0	1,112.5	63.0	92,300.5
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
2016	118,629.9	45,515.4	40,923.3	2,546.4	363.3	207,978.3
2017	122,904.0	46,701.3	41,853.3	2,649.3	370.8	214,478.7
2018	127,019.3	47,925.7	45,258.8	2,721.9	375.8	223,301.4
2019	131,457.0	48,731.4	46,443.9	2,793.0	374.6	229,800.0
2020	135,598.5	50,145.8	47,580.5	2,849.9	373.5	236,548.2

APPENDIX M

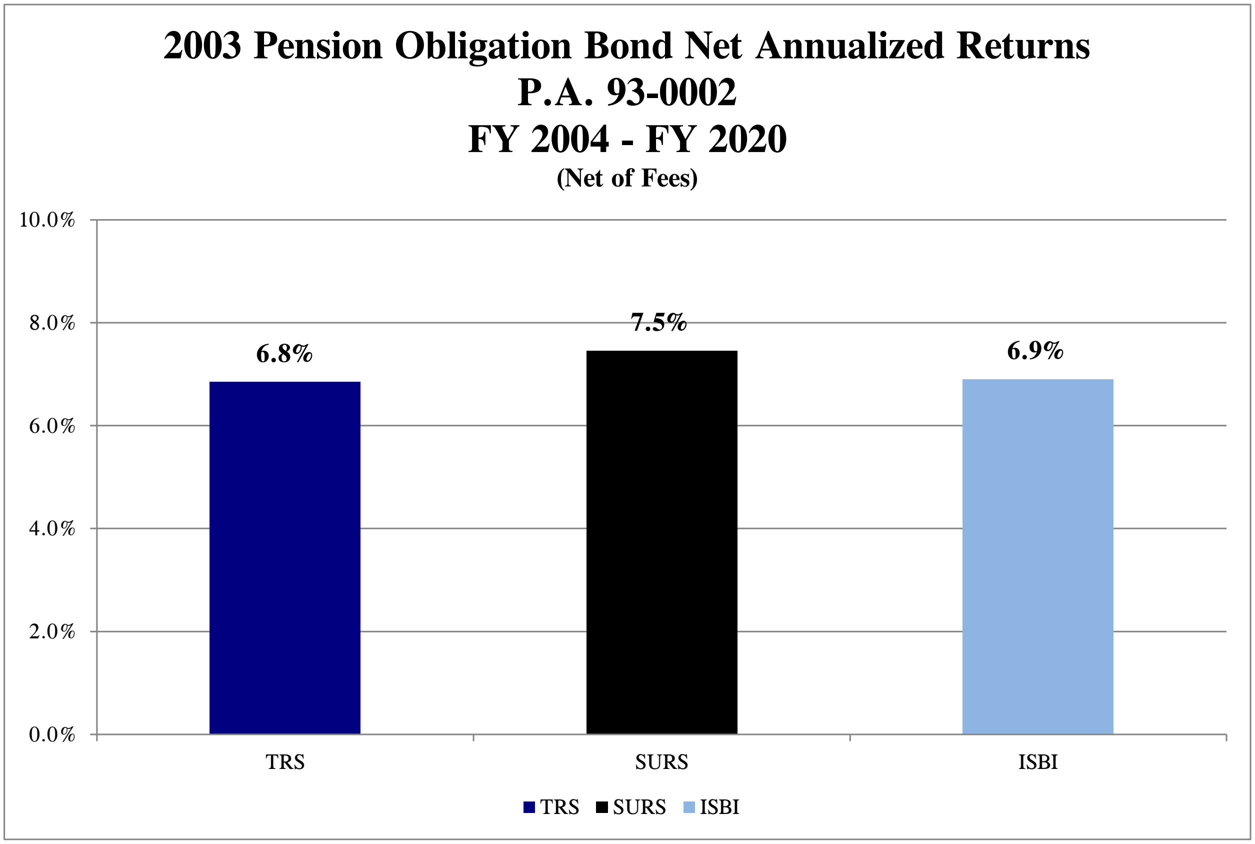
FINANCIAL CONDITION OF THE STATE RETIREMENT SYSTEMS
($ in Millions)

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
2016	73,378.9	30,476.8	23,917.7	1,706.2	314.3	129,793.9
2017	73,528.4	30,171.2	23,368.5	1,707.5	316.4	129,091.9
2018	75,049.8	30,462.4	25,937.7	1,709.4	319.0	133,478.2
2019	78,194.2	30,253.1	26,726.6	1,719.9	314.9	137,208.7
2020	83,282.1	30,954.4	27,963.5	1,737.3	310.5	144,247.7
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%
2016	38.1%	33.0%	41.6%	33.0%	13.5%	37.6%
2017	40.2%	35.4%	44.2%	35.5%	14.7%	39.8%
2018	40.9%	36.4%	42.7%	37.2%	15.1%	40.2%
2019	40.5%	37.9%	42.5%	38.4%	15.9%	40.3%
2020	38.6%	38.3%	41.2%	39.0%	16.9%	39.0%

APPENDIX N

COMBINED DEBT SERVICE OF 2003, 2010, 2011, 2019 and 2020 PENSION BONDS AND NOTES																		
Fiscal Year	FY2003 $10 Billion Pension Obligation Bonds			FY 2010 $3.466 Billion Pension Obligation Notes			FY 2011 $3.7 Billion Pension Obligation Notes			FY 2019 $300 Million Pension Acceleration Bonds			FY 2020 $225 Million Pension Acceleration Bonds			COMBINED TOTALS		
	2003 Principal	2003 Interest	2003 POB Total	2010 Principal	2010 Interest	2010 PON Total	2011 Principal	2011 Interest	2011 POB Total	2019 Principal	2019 Interest	2019 Total	2020 Principal	2020 Interest	2020 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							$12,000,000	$15,640,533	$27,640,533				$237,000,000	$465,190,533	$702,190,533
FY 2021	$275,000,000	$438,412,500	$713,412,500							$12,000,000	$15,546,000	$27,546,000	9,000,000	11,822,781	20,822,781	$296,000,000	$465,781,281	$761,781,281
FY 2022	$325,000,000	$424,800,000	$749,800,000							$12,000,000	$15,096,000	$27,096,000	9,000,000	11,970,000	20,970,000	$346,000,000	$451,866,000	$797,866,000
FY 2023	$375,000,000	$408,712,500	$783,712,500							$12,000,000	$14,646,000	$26,646,000	9,000,000	11,508,750	20,508,750	$396,000,000	$434,867,250	$830,867,250
FY 2024	$450,000,000	$390,150,000	$840,150,000							$12,000,000	$14,166,000	$26,166,000	9,000,000	11,025,000	20,025,000	$471,000,000	$415,341,000	$886,341,000
FY 2025	$525,000,000	$367,200,000	$892,200,000							$12,000,000	$13,662,000	$25,662,000	9,000,000	10,530,000	19,530,000	$546,000,000	$391,392,000	$937,392,000
FY 2026	$575,000,000	$340,425,000	$915,425,000							$12,000,000	$13,122,000	$25,122,000	9,000,000	10,035,000	19,035,000	$596,000,000	$363,582,000	$959,582,000
FY 2027	$625,000,000	$311,100,000	$936,100,000							$12,000,000	$12,552,000	$24,552,000	9,000,000	9,540,000	18,540,000	$646,000,000	$333,192,000	$979,192,000
FY 2028	$700,000,000	$279,225,000	$979,225,000							$12,000,000	$11,952,000	$23,952,000	9,000,000	9,045,000	18,045,000	$721,000,000	$300,222,000	$1,021,222,000
FY 2029	$775,000,000	$243,525,000	$1,018,525,000							$12,000,000	$11,328,000	$23,328,000	9,000,000	8,550,000	17,550,000	$796,000,000	$263,403,000	$1,059,403,000
FY 2030	$875,000,000	$204,000,000	$1,079,000,000							$12,000,000	$10,680,000	$22,680,000	9,000,000	8,055,000	17,055,000	$896,000,000	$222,735,000	$1,118,735,000
FY 2031	$975,000,000	$159,375,000	$1,134,375,000							$12,000,000	$10,008,000	$22,008,000	9,000,000	7,560,000	16,560,000	$996,000,000	$176,943,000	$1,172,943,000
FY 2032	$1,050,000,000	$109,650,000	$1,159,650,000							$12,000,000	$9,324,000	$21,324,000	9,000,000	7,065,000	16,065,000	$1,071,000,000	$126,039,000	$1,197,039,000
FY 2033	$1,100,000,000	$56,100,000	$1,156,100,000							$12,000,000	$8,628,000	$20,628,000	9,000,000	6,570,000	15,570,000	$1,121,000,000	$71,298,000	$1,192,298,000
FY 2034										$12,000,000	$7,920,000	$19,920,000	9,000,000	6,075,000	15,075,000	$21,000,000	$13,995,000	$34,995,000
FY 2035										$12,000,000	$7,200,000	$19,200,000	9,000,000	5,580,000	14,580,000	$21,000,000	$12,780,000	$33,780,000
FY 2036										$12,000,000	$6,480,000	$18,480,000	9,000,000	5,085,000	14,085,000	$21,000,000	$11,565,000	$32,565,000
FY 2037										$12,000,000	$5,760,000	$17,760,000	9,000,000	4,590,000	13,590,000	$21,000,000	$10,350,000	$31,350,000
FY 2038										$12,000,000	$5,040,000	$17,040,000	9,000,000	4,095,000	13,095,000	$21,000,000	$9,135,000	$30,135,000
FY 2039										$12,000,000	$4,320,000	$16,320,000	9,000,000	3,600,000	12,600,000	$21,000,000	$7,920,000	$28,920,000
FY 2040										$12,000,000	$3,600,000	$15,600,000	9,000,000	3,105,000	12,105,000	$21,000,000	$6,705,000	$27,705,000
FY 2041										$12,000,000	$2,880,000	$14,880,000	9,000,000	2,587,500	11,587,500	$21,000,000	$5,467,500	$26,467,500
FY 2042										$12,000,000	$2,160,000	$14,160,000	9,000,000	2,070,000	11,070,000	$21,000,000	$4,230,000	$25,230,000
FY 2043										$12,000,000	$1,440,000	$13,440,000	9,000,000	1,552,500	10,552,500	$21,000,000	$2,992,500	$23,992,500
FY 2044										$12,000,000	$720,000	$12,720,000	9,000,000	1,035,000	10,035,000	$21,000,000	$1,755,000	$22,755,000
FY 2045													9,000,000	$517,500	9,517,500	$9,000,000	$517,500	$9,517,500
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	$300,000,000	$223,870,533	$523,870,533	$225,000,000	$163,169,031	$388,169,031	$17,691,000,000	$13,982,294,006	$31,673,294,006

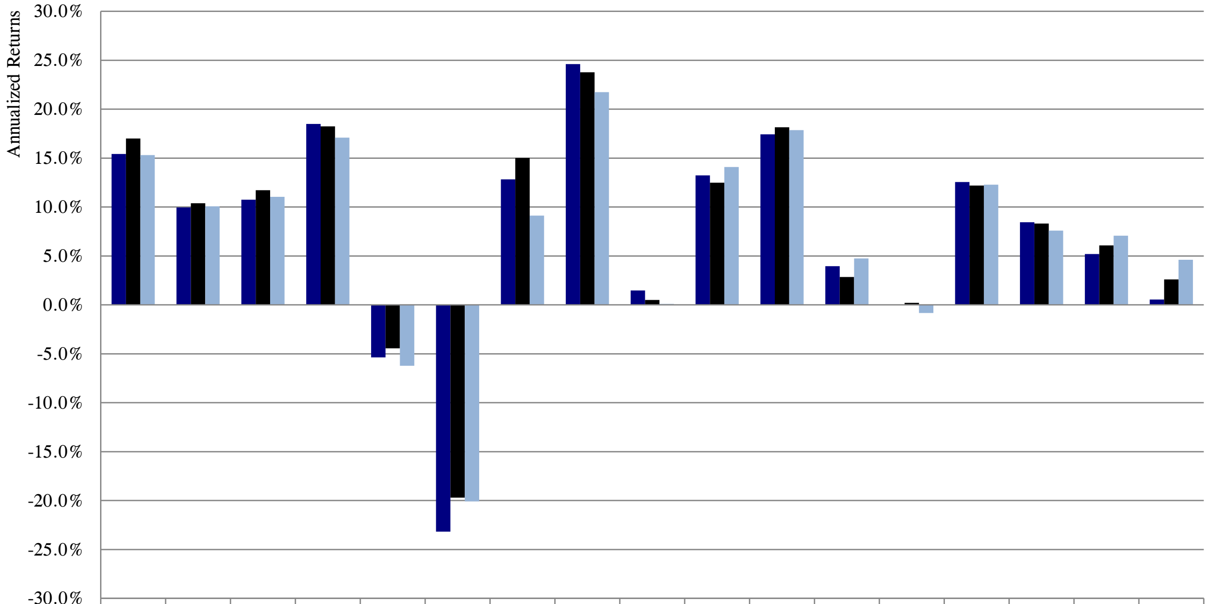
APPENDIX O



As shown in the charts above, the annualized return from FY 2004 through FY 2020, 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.

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



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
TRS	15.4%	10.0%	10.7%	18.5%	-5.4%	-23.2%	12.8%	24.6%	1.5%	13.2%	17.4%	4.0%	0.0%	12.6%	8.5%	5.2%	0.6%
SURS	17.0%	10.4%	11.7%	18.3%	-4.5%	-19.7%	15.0%	23.8%	0.5%	12.5%	18.2%	2.9%	0.2%	12.2%	8.3%	6.1%	2.6%
ISBI	15.3%	10.1%	11.0%	17.1%	-6.2%	-20.1%	9.1%	21.7%	0.1%	14.1%	17.9%	4.7%	-0.8%	12.3%	7.6%	7.1%	4.6%

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 Q

SUMMARY OF TRS APPROPRIATIONS BY FUND: FY 1996 - 2021								
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		-	$3,411,878,000	$1,000,000	-	-	-	$3,412,878,000
2016		-	$3,741,802,194	$800,000	-	-	-	$3,742,602,194
2017		-	$3,985,783,351	$800,000	-	-	-	$3,986,583,351
2018		-	$4,094,616,146	$700,000	-	-	-	$4,095,316,146
2019		-	$4,374,305,509	$600,000	-	-	-	$4,466,178,109
2020		-	$4,813,077,696	$500,000	-	-	-	$4,813,577,696
2021		-	$5,140,336,721	$400,000				$5,140,736,721

*** 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 R

SUMMARY OF SURS APPROPRIATIONS BY FUND: FY 1996 - 2021						
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
2017	$170,000,000	-		$1,501,426,000	-	$1,671,426,000
2018	$215,000,000	-		$1,414,307,606	-	$1,629,307,606
2019	$215,000,000	-	-	$1,440,154,000	-	$1,655,154,000
2020	$215,000,000	-	-	$1,639,692,000	-	$1,854,692,000
2021	$215,000,000	-	-	$1,780,767,000	-	$1,995,767,000

APPENDIX S

SUMMARY OF SERS APPROPRIATIONS BY FUND: FY 1996 - 2021							
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
2017	*	-	-	-	$1,363,329,500	$734,100,500	$2,097,430,000
2018	*	-	-	-	$1,374,932,650	$740,348,350	$2,115,281,000
2019	*	-	-	-	$1,452,052,550	$781,874,450	$2,233,927,000
2020	*	-	-	-	$1,550,426,150	$834,844,850	$2,385,271,000
2021	*	-	-	-	$1,591,150,600	$856,773,400	$2,447,924,000

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

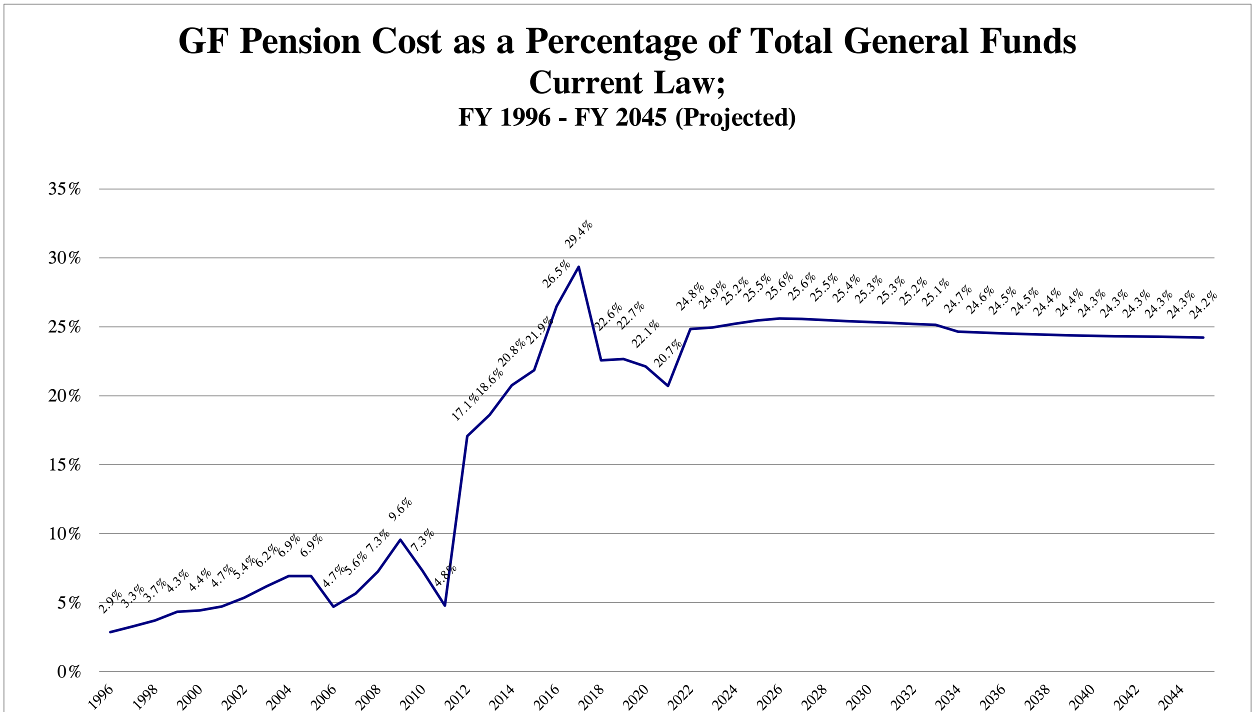
APPENDIX T

SUMMARY OF JRS APPROPRIATIONS BY FUND: FY 1996 - 2021						
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
2017	-	-	-	$131,334,000	-	$131,334,000
2018	-	-	-	$135,622,000	-	$135,622,000
2019	-	-	-	$140,469,000	-	$140,469,000
2020	-	-	-	$144,160,000	-	$144,160,000
2021	-	-	-	$148,618,000	-	$148,618,000

APPENDIX U

SUMMARY OF GARS APPROPRIATIONS BY FUND: FY 1996 - 2021						
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
2017	-	-	-	$21,721,000	-	$21,721,000
2018	-	-	-	$21,155,000	-	$21,155,000
2019	-	-	-	$23,221,000	-	$23,221,000
2020	-	-	-	$25,754,000	-	$25,754,000
2021	-	-	-	$27,299,000	-	$27,299,000

APPENDIX V



Notes: **All future projections of State pension contributions are based on the actuarial valuations of *the five retirement systems.***
Only the *General Funds portion of the regular pension appropriation plus pension bond debt service* is shown here.
The debt service payments on the FY 2003 Pension Obligation Bonds and FY 2010 & FY 2011 Pension Obligation Notes as well as the FY 2019 & FY 2020 Pension Obligation Acceleration Bonds for the buyout programs are shown here.
The actual amounts of the proceeds of the pension bonds/notes are not reflected in this chart.
General Funds revenue projections are provided by CGFA's revenue staff.
Approximately 65% of SERS' total annual appropriation is assumed to come from GF in projected FY's while the rest comes from other state funds not shown here.
For FY 2023 through FY 2045, SURS is assumed to receive an appropriation from other state funds in the same amount that SURS is expected to receive from other state funds in FY 2022 although SURS' historical appropriation from other state funds varies from year to year.

APPENDIX W

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

Beginning of Year		
Market Value of Assets	$	53,263
Actuarial value of Assets	$	53,391
End of Year		
Market Value of Assets	$	52,316
Net of Contributions and Disbursements	$	(1,222)
Projected Investment Income	$	3,686

Excess Investment Income Recognized (5-year recognition)

FY		Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent		Recognized Amount
2020	$	(3,410)	20%	80%	$	(682)
2019	$	(974)	20%	60%	$	(195)
2018	$	644	20%	40%	$	129
2017	$	2,402	20%	20%	$	480
2016	$	(3,483)	20%	0%	$	(697)
Total Recognized Investment Gain/(Loss)					$	(964)

Change in Actuarial Value of Assets	$	1,499
Actuarial Value of Assets as of June 30, 2020	**$**	**54,891**

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

Beginning of Year		
Market Value of Assets	$	18,478.30
Market Value Adjustment	$	13.59
Actuarial value of Assets	$	18,429.19
End of Year		
Market Value of Assets	$	19,191.43
Net of Contributions and Disbursements	$	(123.95)
Projected Investment Income	$	1,244.09

Excess Investment Income Recognized (5-year recognition)

FY		Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent		Recognized Amount
2020	$	(420.60)	20%	80%	$	(84.12)
2019	$	(100.44)	20%	60%	$	(20.09)
2018	$	111.07	20%	40%	$	22.21
2017	$	771.23	20%	20%	$	154.25
2016	$	(1,228.33)	20%	0%	$	(245.67)
Total Recognized Investment Gain/(Loss)					$	(173.41)

Change in Actuarial Value of Assets	$	960.32
Actuarial Value of Assets as of June 30, 2020	**$**	**19,389.50**

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

Beginning of Year		
Market Value of Assets	$	19,717.35
Actuarial value of Assets	$	19,661.89
End of Year		
Market Value of Assets	$	19,617.02
Net of Contributions and Disbursements	$	(642.51)
Projected Investment Income	$	1,309.59

Excess Investment Income Recognized (5-year recognition)

FY		Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent		Recognized Amount
2020	$	(767.41)	20%	80%	$	(153.48)
2019	$	(150.01)	20%	60%	$	(30.00)
2018	$	183.31	20%	40%	$	36.66
2017	$	779.75	20%	20%	$	155.95
2016	$	(1,232.13)	20%	0%	$	(246.43)
Total Recognized Investment Gain/(Loss)					$	(237.30)

Change in Actuarial Value of Assets	$	429.78
Actuarial Value of Assets as of June 30, 2020	**$**	**20,091.67**

APPENDIX W

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

Beginning of Year	
Market Value of Assets	$ 1,073.10
Actuarial value of Assets	$ 1,068.74
End of Year	
Market Value of Assets	$ 1,112.55
Net of Contributions and Disbursements	$ (8.35)
Projected Investment Income	$ 69.48

Excess Investment Income Recognized (5-year recognition)

FY	Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent	Recognized Amount
2020	$ (21.69)	20%	80%	$ (4.34)
2019	$ (3.47)	20%	60%	$ (0.69)
2018	$ 6.35	20%	40%	$ 1.27
2017	$ 40.95	20%	20%	$ 8.19
2016	$ (65.29)	20%	0%	$ (13.06)
Total Recognized Investment Gain/(Loss)				$ (8.63)

Change in Actuarial Value of Assets	$ 52.51
Actuarial Value of Assets as of June 30, 2020	**$ 1,121.25**

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

Beginning of Year	
Market Value of Assets	$ 59.72
Actuarial value of Assets	$ 60.06
End of Year	
Market Value of Assets	$ 62.99
Net of Contributions and Disbursements	$ 0.71
Projected Investment Income	$ 3.90

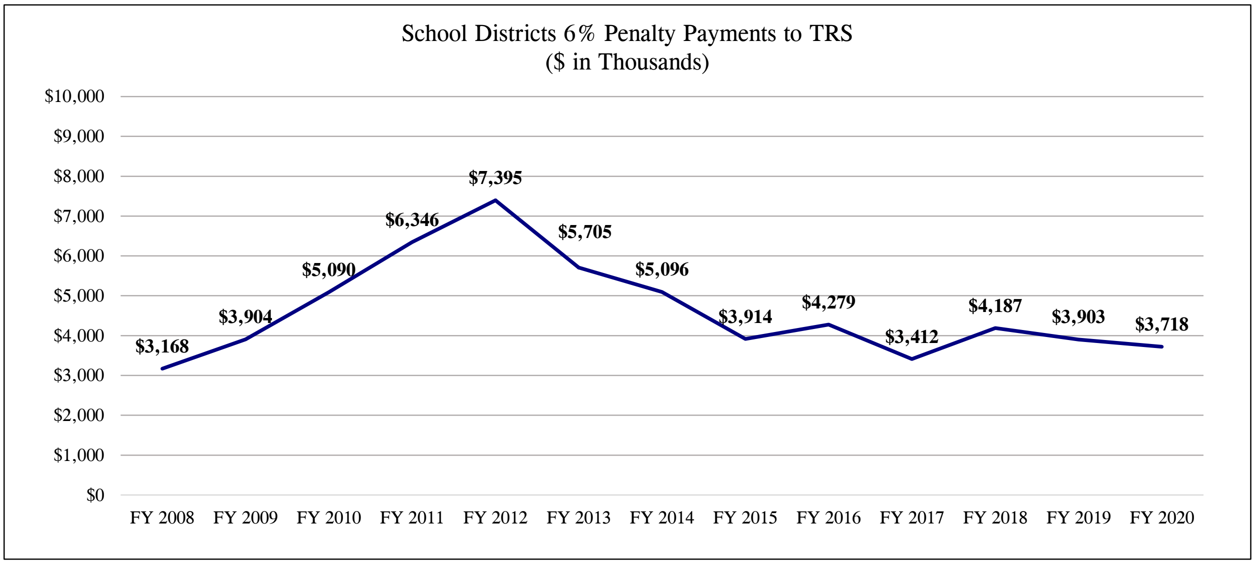
Excess Investment Income Recognized (5-year recognition)

FY	Excess/(Deficient) of Projected Income	Recognized Percent	Remaining Unrecognized Percent	Recognized Amount
2020	$ (1.34)	20%	80%	$ (0.27)
2019	$ (0.37)	20%	60%	$ (0.07)
2018	$ 0.11	20%	40%	$ 0.02
2017	$ 1.82	20%	20%	$ 0.36
2016	$ (4.19)	20%	0%	$ (0.84)
Total Recognized Investment Gain/(Loss)				$ (0.79)

Change in Actuarial Value of Assets	$ 3.82
Actuarial Value of Assets as of June 30, 2020	**$ 63.9**

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 X



Pursuant to P.A. 94-0004, a teacher's annual salary increase with the same employer was capped at 6% for purposes of determining the Final Average Salary (FAS). However, P.A. 100-0587, effective June 4, 2018, lowered the salary increase cap to 3%. Then, the cap rate reverted back to 6%, pursuant to P.A. 101-0010 that became effective June 5, 2019, and it is currently capped at 6%. If a teacher's annual salary increase exceeds the salary increase cap, the teacher's employer is required to make additional contributions to TRS for the cost of the present value of the increase in benefits resulting from the salary increases exceeding the salary increase cap. This requirement is commonly known as the "excess salary increase penalty."

APPENDIX Y

TRS Preliminary Certification Letter for FY 2022

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS
2815 West Washington Street | P.O. Box 19253 | Springfield, Illinois 62794-9253
R. Stanley Rupnik, Interim Executive Director
http://www.trsil.org
877-927-5877 (877-9-ASK-TRS)

October 30, 2020

The Honorable JB Pritzker, Governor
Senator Bill Brady, Senate Minority Leader
Senator Don Harmon, President of the Senate
Representative Jim Durkin, House Minority Leader
Representative Michael Madigan, Speaker of the House
Mr. Gene Kalwarski, Cheiron, State Actuary

Re: Preliminary Certification of TRS FY 2022 State Funding Requirement

Gentlemen:

At its board meeting on October 30, 2020, TRS board of trustees certified the preliminary FY 2022 state contribution requirements and results of the preliminary June 30, 2020 actuarial valuation.

The contribution requirements and actuarial valuation results are being submitted to the state actuary for review. If the state actuary agrees with the documentation we submit, the trustees will be asked to provide final certification at the December 2020 board meeting.

As directed by the TRS Legislative Platform, we certify two state funding requirements. One is based on Illinois statute and the other is based on the funding policy adopted by the TRS board. The board's policy, described below, is based on the TRS actuary's recommended methodology for determining contributions to a severely underfunded plan.

The proposed certifications for FY 2022 both include $400,000 in minimum benefit reimbursements and are detailed in attached Exhibit A:

- **Based on Illinois statute: $5,694,106,973**
- **Based on TRS Board Actuarial Funding Policy: $8,850,455,308**

Assumptions. The preliminary June 30, 2020 actuarial valuation report includes assumptions about the impact of the accelerated pension benefit programs originally contained in Public Act 100-0587 and extended by Public Act 101-0010.

Board Funding Policy. The TRS board's funding policy is based on an actuarial cost method (entry age normal) that assigns costs evenly over a teacher's career instead of backloading them like the statutory cost method (projected unit credit). The board policy funds all of the benefits earned rather than 90 percent of them, and it amortizes the unfunded liability over a closed 20-year period, with subsequent increases in the unfunded liability amortized over subsequent 20-year periods. In contrast, the amortization period required by Illinois statute is a closed 50-year period.

Under the board's policy, state contributions are not limited by the state's debt service on the 2003 pension obligation bonds, and changes in actuarial assumptions are not retroactively phased in. The TRS actuary, Segal Consulting, estimates that compared to contributions required under the statutory method, the state would save about $40 billion in financing costs for the period FY 2021-FY 2045 under the TRS board's funding policy.

Please contact TRS Director of Research Amy Z. Reynolds (areynolds@trsil.org) at 217.814.2272 with any questions about our certifications.

Sincerely,

R. Stanley Rupnik
Interim Executive Director

Attachments:
- TRS board resolution from October 2020 meeting and Exhibit A showing calculations
- June 30, 2020 Preliminary Actuarial Valuation, prepared by Segal Consulting

APPENDIX Z
SURS Preliminary Certification Letter for FY 2022

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

To:	Administration Committee
From:	Tara R. Myers
Date:	October 15, 2020
Re:	Proposed State Contribution for Fiscal Year 2022

The preliminary proposed State contribution for Fiscal Year 2022 will be certified at $2,102,981,000.

Section 15-165 (a-5) of the Illinois Pension Code requires the SURS Board of Trustees each year to certify to the State Actuary, Governor and the General Assembly by November 1st the proposed State contribution for the following fiscal year which begins July 1. The System anticipates receiving finalized financial information that is material which will require us to modify this contribution amount.

The Statutory contribution calculated by Gabriel Roeder Smith & Company (GRS) for Fiscal Year 2022 is $2,165,350,000. This includes $86,033,000 projected Self-Managed (SMP) State contribution[1] and $21,500,000 for the Excess Benefit Arrangement (EBA) contribution. The contribution is 42.05% of the $4.9 billion, the assumed pensionable payroll Fiscal Year 2022.[2]

The estimated trust, federal, and other funds is projected to be $57,000,000 for Fiscal Year 2022. The State contribution is reduced by the projected trust, federal and other funds and the employer normal cost contribution of the pensionable earnings that exceed the Governor's salary.

Combined State and Employer Contribution Amount	**$2,165,350,000**
Less projected trust, federal and other funds	**57,000,000**
Less projected contributions from earnings that exceed Governor's salary	**5,369,000**
Net State contribution (including EBA) to be certified	**$2,102,981,000**

Recommendation

Based on the recommendation of Gabriel Roeder Smith & Company, the amount of $2,102,981,000 should be certified for Fiscal Year 2022 as the proposed State Contribution.

[1]This is the gross State contribution. The certified State contribution will be this amount less amounts estimated to be received from "trust, federal, and other" funds including contributions from earnings that exceed Governor's salary.

[2]Table 15 of the GRS Actuarial Valuation as of June 30, 2020.

SERS srs.illinois.gov
State Employees' Retirement System

October 27, 2020

Governor JB Pritzker
207 Statehouse
Springfield, IL 62706

Dear Governor Pritzker:

Pursuant to Public Act 88-593, as amended, at a meeting held October 27, 2020, the Board of Trustees of the State Employees' Retirement System (SERS) preliminarily certified an FY 2022 State contribution rate of 56.169% of projected payroll, or $2,574,820,000. The FY 2022 preliminary certification includes $2,470,303,000 for the State contribution to SERS and $104,517,000 for debt service on the 2003 pension obligation bonds. Of the $2,470,303,000 for the State contribution to SERS, $611,137,000 is for the employer's portion of the expected FY 2022 normal cost. The remaining $1,859,166,000 is due to the unfunded liabilities.

Consistent with the Governmental Accounting Standards Board (GASB) Statement No. 67, the SERS Board of Trustees adopted a funding policy, or Actuarially Determined Contribution (ADC) policy in 2015. The ADC provides for annual contributions that are equal to the annual normal cost of benefits earned plus amortization of the unfunded actuarial liability over a 25-year period as a level percent of payroll. The remaining amortization period is 20 years. The FY 2022 ADC is $2,976,657,067, or $506.4 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 2020 actuarial valuation along with the FY 2022 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 B. Blair

Timothy Blair
Executive Secretary

cc: Governor JB Pritzker, Chicago Office
Susana A. Mendoza, Comptroller
Alexis Sturm, Director, Governor's Office of Management & Budget
Marc Staley, Governor's Office of Management & Budget
Bob Steere, Governor's Office of Management & Budget
Thomas Reitz, Governor's Office of Management & Budget
Cory Burris, Governor's Office of Management & Budget
John Hollman, House Clerk

APPENDIX BB
JRS Preliminary Certification Letter for FY 2022

JRS
Judges' Retirement System
srs.illinois.gov

October 30, 2020

Governor JB Pritzker
207 Statehouse
Springfield, IL 62706

Dear Governor Pritzker:

Pursuant to Public Act 88-593, as amended, at a meeting held on October 30, 2020, the Board of Trustees of the Judges' Retirement System (JRS) preliminarily certified an FY 2022 State contribution of $152,422,000, or 97.319% of projected payroll. Of the $152,422,000, $33,008,000 is for the employer's portion of the expected FY 2021 normal cost. The additional $119,414,000 is due to the unfunded liabilities.

Consistent with Governmental Accounting Standards Board (GASB) Statement No. 67, the JRS Board of Trustees adopted a funding policy, or Actuarially Determined Contribution (ADC) policy in 2015. The ADC provides for annual contributions that are equal to the annual normal cost of benefits earned plus amortization of the unfunded actuarial liability over a 25-year period, as a level percent of payroll. The remaining amortization period is 20 years. The FY 2022 ADC is $175,823,406, or $23.4 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 JRS, which is calculated and certified by the Board pursuant to the statutory funding plan.

Attached is the draft FY 2020 actuarial valuation along with the FY 2022 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 B. Blair

Timothy Blair
Executive Secretary

cc: Governor JB Pritzker, Chicago Office
Susana A. Mendoza, Comptroller
Alexis Sturm, Director, Governor's Office of Management & Budget
Marc Staley, Governor's Office of Management & Budget
Bob Steere, Governor's Office of Management & Budget
Thomas Reitz, Governor's Office of Management & Budget
Cory Burris, Governor's Office of Management & Budget
John Hollman, House Clerk
Brad Bolin, Assistant House Clerk.

APPENDIX CC
GARS Preliminary Certification Letter for FY 2022

GARS srs.illinois.gov
General Assembly Retirement System

October 30, 2020

Governor JB Pritzker
207 Statehouse
Springfield, IL 62706

Dear Governor Pritzker:

Pursuant to Public Act 88-593, as amended, at a meeting of the Board of Trustees of the General Assembly Retirement System (GARS) held on October 30, 2020, the Board preliminarily certified an FY 2022 State contribution of $27,820,000, or 286.061% of projected payroll. Of the $27,820,000, $1,729,000 is for the employer's portion of the expected FY 2022 normal cost. The remaining $26,091,000 is due to the unfunded liabilities.

Consistent with Governmental Accounting Standards Board (GASB) Statement No. 67, the GARS Board of Trustees adopted a funding policy, or Actuarially Determined Contribution (ADC) policy in 2015. The ADC provides for annual contributions that are equal to the annual normal cost of benefits earned plus amortization of the unfunded actuarial liability over a 20-year period, as a level percent of payroll. The remaining amortization period is 15 years. The FY 2022 ADC is $35,005,692, or almost $7.2 million higher than the amount calculated under the statutory funding plan.

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

Attached is the draft FY 2020 actuarial valuation along with the FY 2022 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 B. Blair

Timothy Blair
Executive Secretary

cc: Governor JB Pritzker, Chicago Office
Susana A. Mendoza, Comptroller
Alexis Sturm, Director, Governor's Office of Management & Budget
Marc Staley, Governor's Office of Management & Budget
Bob Steere, Governor's Office of Management & Budget
Thomas Reitz, Governor's Office of Management & Budget
Cory Burris, Governor's Office of Management & Budget
John Hollman, House Clerk
Brad Bolin, Assistant House Clerk.
Tim Anderson, Senate Clerk

APPENDIX DD

TRS Final Certification Letter for FY 2022

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS
2815 West Washington Street | P.O. Box 19253 | Springfield, Illinois 62794-9253
R. Stanley Rupnik, Interim Executive Director
http://www.trsil.org
877-927-5877 (877-9-ASK-TRS)

January 15, 2021

The Honorable J.B. Pritzker, Governor
Senator Don Harmon, President of the Senate
Senator Dan McConchie, Senate Minority Leader
Representative Jim Durkin, House Minority Leader
Representative Emanuel Chris Welch, Speaker of the House
Mr. Gene Kalwarski, Cheiron, State Actuary
Mr. William R. Hallmark, Cheiron, State Actuary

Re: Final Certification of TRS FY 2022 State Funding Requirement

Gentlemen:

At its meeting on December 9, 2020, the TRS board of trustees provided final certification to the FY 2020 state contribution requirements and results of the June 30, 2020 actuarial valuation.

The contribution requirements and actuarial valuation results were submitted to the state actuary (Cheiron) for review, in accordance with Public Act 97-0694. The contribution requirements and the report were accepted by the state actuary. Cheiron continues to emphasize its concern about state pension financing. It recommends that the statutory "funding method be changed to fully fund plan benefits." (*State Actuary's Report, December 2020, page 6*)

TRS certifies two state funding requirements. One is based on Illinois statute and the other is based on the funding policy adopted by the TRS board. The board's policy, described below, is based on the TRS actuary's recommended methodology for determining contributions to a severely underfunded plan.

The certified contributions for FY 2022 both include $400,000 in minimum benefit reimbursements and are detailed in attached Exhibit A:

- **Based on Illinois statute: $5,694,106,973**
- **Based on TRS Board Actuarial Funding Policy: $8,850,455,308**

Assumptions. The preliminary June 30, 2020 actuarial valuation report includes revised assumptions about the impact of the accelerated pension benefit programs originally contained in Public Act 100-0587 and extended by Public Act 101-0010.

Board Funding Policy. The TRS board's funding policy is based on an actuarial cost method (entry age normal) that assigns costs evenly over a teacher's career instead of backloading them like the statutory cost method (projected unit credit). The board policy funds all of the benefits earned rather than 90 percent of them, and it amortizes the unfunded liability over a closed 20-year period, with subsequent increases in the unfunded liability amortized over subsequent 20-year periods. In contrast, the amortization period required by Illinois statute is a closed 50-year period.

Under the board's policy, state contributions are not limited by the state's debt service on the 2003 pension obligation bonds, and changes in actuarial assumptions are not retroactively phased in. The TRS actuary, Segal Consulting, estimates that compared to contributions required under the statutory method, the state would save about $40 billion in financing costs for the period FY 2021-FY 2045 under the TRS board's funding policy.

Please contact TRS Director of Research Amy Z. Reynolds (areynolds@trsil.org) at 217.814.2272 with any questions about our certifications.

Sincerely,

R. Stanley Rupnik
Interim Executive Director

Attachments:

- TRS board resolution from December 2020 meeting and Exhibit A showing calculations
- June 30, 2020 Final Actuarial Valuation, prepared by Segal Consulting

APPENDIX EE

SURS Final Certification Letter for FY 2022

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

Martin Noven, Executive Director

December 16, 2020

The Honorable J B Pritzker
Governor of the State of Illinois
207 State House
Springfield, Illinois 62706

Re: Certification of Required State Contribution to the State Universities Retirement System for State Fiscal Year 2022

Dear Governor Pritzker:

As required by 40 ILCS 5/15-165, the Board of Trustees of the State Universities Retirement System has certified that $2,101,279,000 is the total net required State contribution for State Fiscal Year 2022. An official certification and a copy of the actuarial recommendation upon which the certification is based are enclosed.

The State Actuary has reviewed the actuarial assumptions used in the State Universities Retirement System's 2020 actuarial valuation. The State Actuary has concluded that the assumptions are reasonable for the June 30, 2020 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.

Please note that the actuarial valuation results recommend an actuarially determined funding policy that funds the normal cost of the plan, as well as an amortization payment that would seek to pay the total unfunded accrued liability over a closed period to attain 100% funding by 2045 (24 years remaining in the actuarial valuation as of June 30, 2020) or earlier. 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. While 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.

The Board of Trustees has received and agrees with all the proposed recommendations of the State Actuary.

Sincerely,

Martin Noven
Executive Director

APPENDIX FF
SERS Final Certification Letter for FY 2022

SERS srs.illinois.gov
State Employees' Retirement System

January 14, 2021

Governor JB Pritzker
207 Statehouse
Springfield, IL 62706

Dear Governor Pritzker:

Pursuant to Public Act 88-593, as amended, at a meeting held January 12, 2021, the Board of Trustees of the State Employees' Retirement System (SERS) certified an FY 2022 State contribution rate of 56.169% of projected payroll, or $2,574,820,000. The FY 2022 certification includes $2,470,303,000 for the State contribution to SERS and $104,517,000 for debt service on the 2003 pension obligation bonds. Of the $2,470,303,000 for the State contribution to SERS, $611,137,000 is for the employer's portion of the expected FY 2022 normal cost. The remaining $1,859,166,000 is due to the unfunded liabilities.

Consistent with the Governmental Accounting Standards Board (GASB) Statement No. 67, the SERS Board of Trustees adopted a funding policy, or Actuarially Determined Contribution (ADC) policy in 2015. The ADC provides for annual contributions that are equal to the annual normal cost of benefits earned plus amortization of the unfunded actuarial liability over a 25-year period as a level percent of payroll. The remaining amortization period is 20 years. The FY 2022 ADC is $2,976,657,067, or $506.4 million higher than the amount calculated under the statutory funding plan.

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

Attached is the FY 2020 actuarial valuation along with the FY 2022 certification letter prepared by the System's actuaries. The actuarial valuation, membership data used in the valuation, and all calculations have been reviewed by the State Actuary.

Very truly yours,

Timothy B. Blair

Timothy Blair
Executive Secretary

cc: Governor JB Pritzker, Chicago Office
Susana A. Mendoza, Comptroller
Alexis Sturm, Director, Governor's Office of Management & Budget
Marc Staley, Governor's Office of Management & Budget
Bob Steere, Governor's Office of Management & Budget
Thomas Reitz, Governor's Office of Management & Budget
Cory Burris, Governor's Office of Management & Budget
John Hollman, House Clerk

APPENDIX GG
JRS Final Certification Letter for FY 2022

JRS Judges' Retirement System srs.illinois.gov

January 15, 2021

Governor JB Pritzker
207 Statehouse
Springfield, IL 62706

Dear Governor Pritzker:

Pursuant to Public Act 88-593, as amended, at a meeting held today, the Board of Trustees of the Judges' Retirement System (JRS) certified an FY 2022 State contribution of $152,422,000, or 97.319% of projected payroll. Of the $152,422,000, $33,008,000 is for the employer's portion of the expected FY 2022 normal cost. The additional $119,414,000 is due to the unfunded liabilities.

Consistent with Governmental Accounting Standards Board (GASB) Statement No. 67, the JRS Board of Trustees adopted a funding policy, or Actuarially Determined Contribution (ADC) policy in 2015. The ADC provides for annual contributions that are equal to the annual normal cost of benefits earned plus amortization of the unfunded actuarial liability over a 25-year period, as a level percent of payroll. The remaining amortization period is 20 years. The FY 2022 ADC is $175,823,406, or $23.4 million higher than the amount calculated under the statutory funding plan.

The ADC is used in financial reporting but does not affect the certified employer contributions, which was calculated and certified by the Board pursuant to the statutory funding plan.

Attached is the FY 2020 actuarial valuation along with the FY 2022 certification letter prepared by the System's actuaries. The actuarial valuation, membership data used in the valuation, and all calculations were reviewed by the State Actuary.

Very truly yours,

Timothy B. Blair

Timothy Blair
Executive Secretary

cc: Governor JB Pritzker, Chicago Office
Susana A. Mendoza, Comptroller
Alexis Sturm, Director, Governor's Office of Management & Budget
Marc Staley, Governor's Office of Management & Budget
Bob Steere, Governor's Office of Management & Budget
Thomas Reitz, Governor's Office of Management & Budget
Cory Burris, Governor's Office of Management & Budget
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Tim Anderson, Senate Clerk

APPENDIX HH
GARS Final Certification Letter for FY 2022

GARS srs.illinois.gov
General Assembly Retirement System

January 14, 2021

Governor JB Pritzker
207 Statehouse
Springfield, IL 62706

Dear Governor Pritzker:

Pursuant to Public Act 88-593, as amended, at a meeting of the Board of Trustees of the General Assembly Retirement System (GARS) held on January 12, 2021, the Board certified an FY 2022 State contribution of $27,820,000, or 286.061% of projected payroll. Of the $27,820,000, $1,729,000 is for the employer's portion of the expected FY 2022 normal cost. The remaining $26,091,000 is due to the unfunded liabilities.

Consistent with Governmental Accounting Standards Board (GASB) Statement No. 67, the GARS Board of Trustees adopted a funding policy, or Actuarially Determined Contribution (ADC) policy in 2015. The ADC provides for annual contributions that are equal to the annual normal cost of benefits earned plus amortization of the unfunded actuarial liability over a 20-year period, as a level percent of payroll. The remaining amortization period is 15 years. The FY 2022 ADC is $35,005,692, or almost $7.2 million higher than the amount calculated under the statutory funding plan.

The ADC is used in financial reporting but does not affect the certified employer contributions to GARS, which was certified by the Board pursuant to the statutory funding plan.

Attached is the FY 2020 actuarial valuation along with the FY 2022 certification letter prepared by the System's actuaries. The actuarial valuation, membership data used in the valuation, and all calculations were reviewed by the State Actuary.

Very truly yours,

Timothy B. Blair

Timothy Blair
Executive Secretary

cc: Governor JB Pritzker, Chicago Office
Susana A. Mendoza, Comptroller
Alexis Sturm, Director, Governor's Office of Management & Budget
Marc Staley, Governor's Office of Management & Budget
Bob Steere, Governor's Office of Management & Budget
Thomas Reitz, Governor's Office of Management & Budget
Cory Burris, Governor's Office of Management & Budget
John Hollman, House Clerk
Brad Bolin, Assistant House Clerk.
Tim Anderson, Senate Clerk

Chicago Teachers' Pension Fund
425 S. Financial Place, Suite 1400 | Chicago, IL 60605-1000

January 28, 2021

The Honorable JB Pritzker
Illinois Governor
207 State House
Springfield, IL 62706

The Honorable Emanuel Chris Welch
Speaker of the House
300 Capitol Building
Springfield, IL 62706

The Honorable Susana A. Mendoza
Illinois Comptroller
201 State House
Springfield, IL 62706

The Honorable Don Harmon
Senate President
327 Capitol Building
Springfield, IL 62706

The Honorable Jim Durkin
House Republican Leader
316 Capitol Building
Springfield, IL 62706

The Honorable Dan McConchie
Senate Republican Leader
309H Capitol Building
Springfield, IL 62706

RE: **Fiscal Year 2022 Certified Normal Cost and Health Insurance Contribution for the Public Schools Teachers' Pension and Retirement Fund of Chicago**

Dear Governor Pritzker and Leaders of the Illinois General Assembly:

Pursuant to 40 ILCS 5/17-127(f) of the Illinois Pension Code, this letter and the enclosed Actuarial Report shall serve as formal notification of the fiscal year 2022 State of Illinois contribution for normal cost and health insurance contribution to be made to the Public School Teachers' Pension and Retirement Fund of Chicago ("CTPF" or the "Fund").

The certified fiscal year 2022 State of Illinois contribution to the CTPF is $264,848,000 as noted in the table below:

Fiscal Year 2022	Dollar Amount
Certified FY 2022 Normal Cost and Health Insurance Contribution Pursuant to Sections 17-127(d)(2) and (e) of the Illinois Pension Code	$ 264,848,000

Enclosed is a copy of the Actuarial Report prepared by the Fund's actuary, Gabriel Roeder, Smith & Company, detailing the State contribution requirements pursuant to Sections 17-127(d)(2) and (e) of the Illinois Pension Code for fiscal year 2022. For additional information, please see pages 7 and 8 of the Actuarial Report. The Actuarial Report contains the actuarial certification, recommendations, and assumptions.

If you have any questions, please do not hesitate to contact me at 312-604-1224.

Best regards,

Daniel J. Hurtado

Daniel Hurtado
Chief Legal Officer

Encl.
Cc: (w/ enclosure)
Dan Hankiewicz – Commission on Government Forecasting & Accountability

Cc: (via email: w/o enclosure)
Lance Weiss – GRS, CTPF Actuary (Lance.Weiss@grsconsulting.com)
Michael Puthoff (mtputhoff@cps.edu)
Walter Stock (wmstock@cps.edu)
Lenny Moore – CPS Controller (lrmoore6@cps.edu)
Miguel del Valle – CPS Board of Education (mdelvalle2@cps.edu)
Dwayne Truss – CPS Board of Education (dtruss1@cps.edu)
Alise White – CTPF Chief Financial Officer (WhiteA@ctpf.org)

Chicago Teachers' Pension Fund

425 S. Financial Place, Suite 1400 | Chicago, IL 60605-1000

January 28, 2021

The Honorable JB Pritzker
Illinois Governor
207 State House
Springfield, IL 62706

The Honorable Emanuel Chris Welch
Speaker of the House
300 Capitol Building
Springfield, IL 62706

The Honorable Susana A. Mendoza
Illinois Comptroller
201 State House
Springfield, IL 62706

The Honorable Don Harmon
President of the Senate
327 Capitol Building
Springfield, IL 62706

The Honorable Jim Durkin
House Republican Leader
316 Capitol Building
Springfield, IL 62706

The Honorable Dan McConchie
Senate Republican Leader
309H Capitol Building
Springfield, IL 62706

RE: State of Illinois Additional Contribution Pursuant to 40 ILCS 5/17-127(c) for Fiscal Year 2022: **$12,649,000**

Governor Pritzker, Comptroller Mendoza, and Leaders Welch, Harmon, Durkin and McConchie:

This letter and the enclosed Actuarial Report shall serve as formal notification of the additional State contribution pursuant to Section 17-127(c) of the Illinois Pension Code to be made to the Public School Teachers' Pension and Retirement Fund of Chicago ("CTPF" or the "Fund") for Fiscal Year 2022.

Additional State Contributions
According to Section 17-127(c) of the Illinois Pension Code (the "Code"), the State shall make additional contributions of 0.544% of payroll to the Fund to offset a portion of the cost of benefit increases resulting from Public Act 90-0582, provided that no additional contributions are required if for the previous fiscal year the ratio of the Fund's assets to total actuarial liabilities was at least 90%. (This contribution is in addition to the State's normal cost and health insurance contribution pursuant to Section 17-127(d)(2) of the Code.)

Based on the June 30, 2020, actuarial valuation, the ratio of the Fund's actuarial value of assets to total actuarial liabilities is 46.69%. Accordingly, additional State contributions pursuant to Section 17-127(c) of the Code, will be made for Fiscal Year 2022. The Fund's actuary determined that the additional State contributions under Section 17-127(c) of the Code will be **$12,649,000**.

Members: 312 641 4464 | General: 312 604 1400 | Fax: 312 641 7185 | www.ctpf.org

Enclosed is a copy of the Actuarial Report prepared by the Fund's actuary, Gabriel Roeder, Smith & Company, detailing the additional State contribution requirements pursuant to Section 17-127(c) of the Code for Fiscal Year 2022. For example, please see pages 6, 7, and 8 of the Actuarial Report. The Actuarial Report contains the actuarial certification, recommendations, and assumptions.

If you have any questions, please do not hesitate to contact me at 312-604-1224.

Best regards,

Daniel J. Hurtado

Daniel Hurtado
Chief Legal Officer

Encl.
Cc: (w/enclosure)
Dan Hankiewicz – Commission on Government Forecasting & Accountability

Cc: (via email: w/o enclosure)
Lance Weiss – GRS, CTPF Actuary (Lance.Weiss@grsconsulting.com)
Michael Puthoff (mtputhoff@cps.edu)
Walter Stock (wmstock@cps.edu)
Lenny Moore – CPS Controller (lrmoore6@cps.edu)
Miguel del Valle – CPS Board of Education (mdelvalle2@cps.edu)
Dwayne Truss – CPS Board of Education (dtruss1@cps.edu)
Alise White – CTPF Chief Financial Officer (WhiteA@ctpf.org)

COMMISSION OVERVIEW

The Commission on Government Forecasting & Accountability is a bipartisan legislative support service agency responsible for advising the Illinois General Assembly on economic and fiscal policy issues and for providing objective policy research for legislators and legislative staff. The Commission's board is comprised of twelve legislators—split evenly between the House and Senate and between Democrats and Republicans. Effective December 10, 2018, pursuant to P.A. 100-1148 the former Legislative Research Unit was merged into the Commission.

The Commission has three internal units—Revenue, Pensions, and Research, each of which has a staff of analysts and researchers who analyze policy proposals, legislation, state revenues & expenditures, and benefit programs, and who provide research services to members and staff of the General Assembly. The Commission's staff fulfills the statutory obligations set forth in the Commission on Government Forecasting and Accountability Act (25 ILCS 155/), the State Debt Impact Note Act (25 ILCS 65/), the Illinois Pension Code (40 ILCS 5/), the Pension Impact Note Act (25 ILCS 55/), the State Facilities Closure Act (30 ILCS 608/), the State Employees Group Insurance Act of 1971 (5 ILCS 375/), the Public Safety Employee Benefits Act (820 ILCS 320/), the Legislative Commission Reorganization Act of 1984 (25 ILCS 130/), and the Reports to the Commission on Government Forecasting and Accountability Act (25 ILCS 110/).

- The **Revenue Unit** issues an annual revenue estimate, reports monthly on the state's financial and economic condition, and prepares bill analyses and debt impact notes on proposed legislation having a financial impact on the State. The Unit publishes a number of statutorily mandated reports, as well as on-demand reports, including the *Monthly Briefing* newsletter and annually, the *Budget Summary*, *Capital Plan Analysis*, *Illinois Economic Forecast Report*, *Wagering in Illinois Update*, and *Liabilities of the State Employees' Group Insurance Program*, among others. The Unit's staff also fulfills the agency's obligations set forth in the State Facilities Closure Act.
- The **Pension Unit** prepares pension impact notes on proposed pension legislation and publishes several statutorily mandated reports including the *Financial Condition of the Illinois State Retirement Systems*, the *Financial Condition of Illinois Public Pension Systems* and the *Fiscal Analysis of the Downstate Police & Fire Pension Funds in Illinois*. The Unit's staff also fulfills the statutory responsibilities set forth in the Public Safety Employee Benefits Act.
- The **Research Unit** primarily performs research and provides information as may be requested by members of the General Assembly or legislative staffs. Additionally, the Unit maintains a research library and, per statute, collects information concerning state government and the general welfare of the state, examines the effects of constitutional provisions and previously enacted statutes, and considers public policy issues and questions of state-wide interest. Additionally, the Unit publishes *First Reading*, a quarterly newsletter which includes abstracts of annual reports or special studies from other state agencies, the *Illinois Tax Handbook for Legislators*, *Federal Funds to State Agencies*, various reports detailing appointments to State Boards and Commissions, the *1970 Illinois Constitution Annotated for Legislators*, the *Roster of Illinois Legislators*, and numerous special topic publications.

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