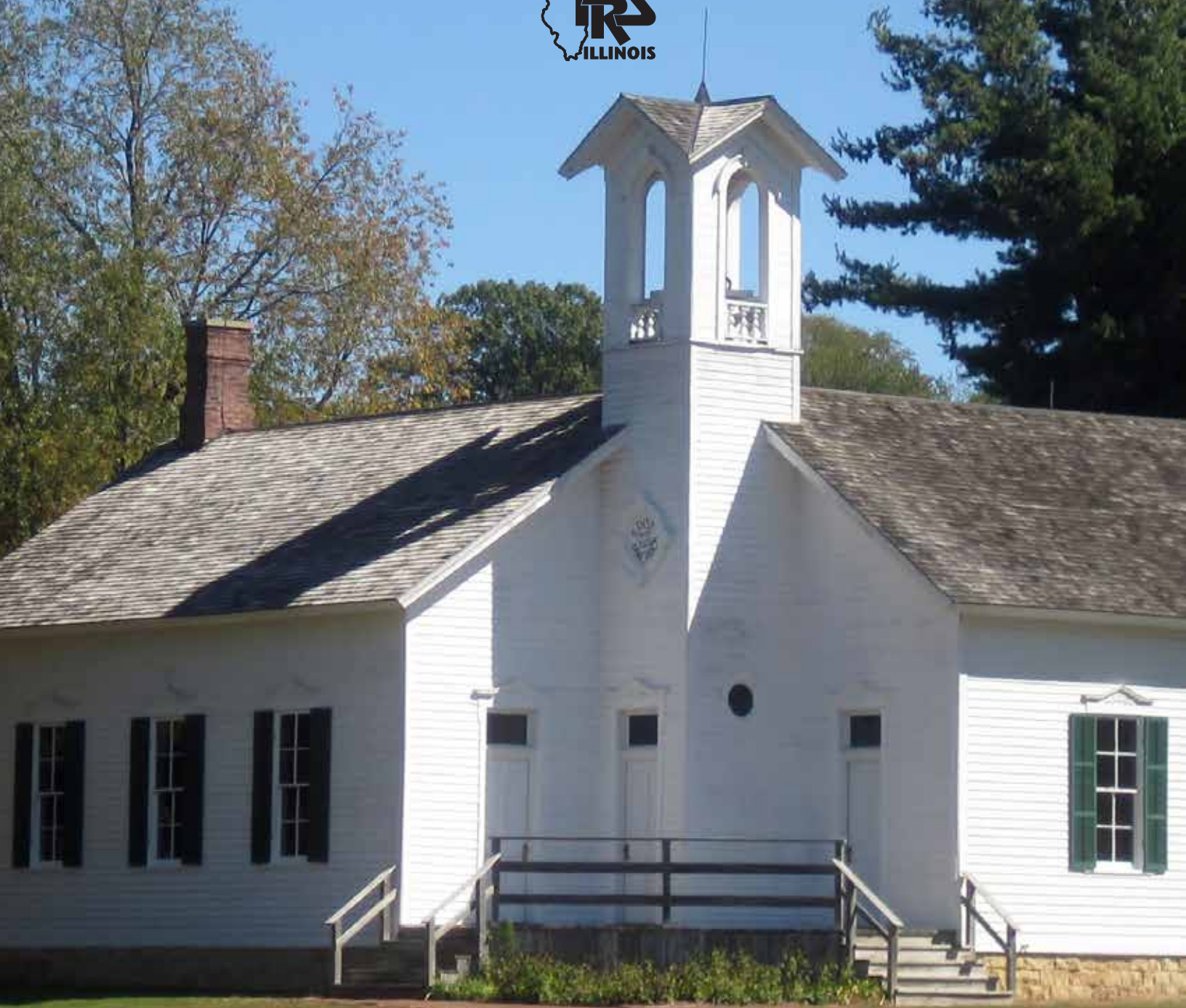


TEACHERS' RETIREMENT SYSTEM OF THE STATE OF

ILLINOIS

a component unit of the State of Illinois



COMPREHENSIVE ANNUAL FINANCIAL REPORT
FOR THE FISCAL YEAR ENDED JUNE 30

2016

MISSION STATEMENT

TRS will continually deliver the retirement security promised to our members by maintaining the highest and most efficient level of service and by living our values:

- Put the best interest of others first
- Diversity
- Teamwork
- Continuous improvement

FISCAL YEAR HIGHLIGHTS

	As of June 30, 2016
Active contributing members	159,735
Inactive noncontributing members	129,470
Benefit recipients*	117,650
Total membership	406,855
Investment return	
Total fund investment return, net of fees	0.01%
For funding purposes	
Actuarial accrued liability (AAL)	\$118,629,890,305
Less actuarial value of assets (smoothed assets)	47,222,097,809
Unfunded actuarial accrued liability	\$71,407,792,496
Funded ratio (% of AAL covered by assets, based on smoothed assets)	39.8%
For financial disclosure	
Total pension liability (TPL)	\$124,187,003,384
Less fiduciary net position (FNP)	45,250,956,731
Net pension liability (NPL)	\$78,936,046,653
FNP as a percentage of TPL	36.4%
Income	
Member contributions	\$951,809,398
Employer contributions	148,040,767
State of Illinois contributions	3,742,469,245
Total investment income	(44,103,178)
Total income	\$4,798,216,232
Expenses	
Benefits paid	\$5,848,180,208
Refunds paid	83,026,969
Administrative expenses	22,967,917
Total expenses	\$5,954,175,094

* Benefit recipients includes retiree, disability and survivor benefit recipients.

P R E F A C E



TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS
a component unit of the State of Illinois

2815 West Washington | P.O. Box 19253 | Springfield, Illinois 62794-9253 | <http://trs.illinois.gov>

COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR THE FISCAL YEAR ENDED JUNE 30, 2016

This report was prepared by the TRS Accounting, Investments, Research, and Communications Departments.

ONE-ROOM SCHOOLS IN ILLINOIS

For more than a century, one-room schools formed the backbone of public education in Illinois. Society recognized the tremendous importance of providing an education for all children, but getting them into a classroom proved to be difficult. Unlike today, students in rural areas could not easily travel long distances to centrally-located schools. To solve this problem, schools were erected where the children lived.

As late as 1935, Illinois had approximately 10,000 one-room schools, or roughly 100 schools in every county. Students ranged in age from five to 18 and class sizes were recorded at anywhere from four students to 25.

The need for qualified teachers in rural one-room schools was so great that students as young as 16 could begin college courses and graduate two years later with a “degree” that enabled them to teach in a rural school. In the mid 1800s, women teachers earned \$14 every month and male teachers earned \$28 every month. Up until the early years of the 20th Century, retirement benefits for these teachers were controlled by each school district. The State of Illinois consolidated control of teacher pensions in 1915. That year 311 retired teachers received an average annual pension of \$27.

By the 1940s and 1950s, advances in transportation and communication made the system of numerous one-room schools obsolete. A series of district consolidations gradually closed all of the one-room schools in Illinois and students began to meet in centralized locations. The last one-room rural schools were closed in the 1960s. Today, Illinois has roughly 4,500 public schools.

Throughout this *Comprehensive Annual Financial Report*, Teachers’ Retirement System honors the legacy of one-room schools in Illinois by highlighting a few of the rural schoolhouses that remain standing in the Prairie State.

Please see inside back cover for photo credits and copyrights.



Cover and Preface:

Chana School – Oregon, Ogle County

Listed on the National Register of Historic Places since 2005, Chana School was originally a one-room school house built in 1869. The second classroom – giving the Italianate-style building its unique “L” shape – was added in 1883. Classes were held in the school through the 1960s. Chana School is now an educational museum.

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INTRODUCTION



Millerburg One-Room Schoolhouse - Freeport, Stephenson County

Constructed in the 1800s in Harlem Township, the school was moved to its current location in 1975 and now serves as a museum that depicts the aspects of a rural education in the 1920s. The school is now owned by the Stephenson County Historical Society.

2012

2013

2014

2015



GOVERNMENT FINANCE OFFICERS ASSOCIATION

Certificate of Achievement
for Excellence
in Financial Reporting

Presented to

Teachers' Retirement System
of the State of Illinois

Jeffrey A. Case

Executive Director / CEO



Public Pension Coordinating Council

***Recognition Award for Administration
2016***

Presented to

Teachers' Retirement System of the State of Illinois

In recognition of meeting professional standards for
plan administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

A handwritten signature in cursive script that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator



TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

2815 West Washington Street | P.O. Box 19253 | Springfield, Illinois 62794-9253

Richard W. Ingram, Executive Director

members@trs.illinois.gov | <http://trs.illinois.gov>

(800) 877-7896 | for the hearing impaired: (866) 326-0087

LETTER OF TRANSMITTAL

December 14, 2016

To the Board of Trustees and TRS Members:

We are pleased to present the *Comprehensive Annual Financial Report (CAFR)* for the Teachers' Retirement System of the State of Illinois (TRS) for the fiscal year ended June 30, 2016. This report highlights the continuing work of TRS trustees and staff to be widely-recognized as a premier public retirement system in the United States with an absolute commitment to its members and a dedication to the highest standards of service, public accountability and the ability to overcome any challenge.

The mission of TRS is to continually deliver the retirement security promised over the last seven-and-a-half decades to our 406,855 members by Illinois state government. That TRS accomplishes this mission year-in and year-out is a reflection of the four values which guide the operations of the retirement system: Putting the best interests of others first, fostering diversity, embracing teamwork, and encouraging continuous improvement at all levels.

- TRS distributed \$5.8 billion in retirement, disability and survivor benefits during FY16 to approximately 117,650 annuitants and beneficiaries.
- TRS benefit payments largely stay in Illinois and created economic activity throughout the state that helped support more than 41,000 jobs. These jobs have an estimated payroll of \$1.6 billion. In all, economic models show that TRS benefits created a \$3.8 billion economic boost to the State of Illinois.
- TRS investments continued to post steady growth over the long-term, exceeding its 20-year and 30-year benchmarks.

TRS faced its share of challenges during FY16. The most prominent challenge was a lingering uncertainty about state government's financial condition and whether state leaders would be able to make their promised commitment to fund the System. This uncertainty affected all elements of state government.

Due to partisan differences over public policy questions, the legislative and executive branches of Illinois government failed to reach an agreement on a FY16 state budget during the entire 12-month period.

The long-term funded status of TRS continues to be among the worst in the nation. At the end of FY16, for funding purposes the System's funded ratio stood at 39.8 percent, on an actuarial basis, with a long-term unfunded liability of \$71.4 billion. The unfunded obligations owed members have increased by more than 350 percent since 2000.

For purposes of financial disclosure, the plan's fiduciary net position as a percentage of the total pension liability was 36.4 percent with a net pension liability of \$78.9 billion. With a net position of \$45.3 billion at the end of FY16, when measured by assets under management, TRS ranks as the 80th largest pension fund in the world. However, if TRS was fully funded, the System would rank within the top 25 pension systems worldwide and among the top 10 U.S. funds.

Since its founding in 1939, the State of Illinois has never, in any year, funded TRS at a level that standard actuarial practice would define as sufficient to pay its full share of the System's annual required contribution. In the last decade, for example, actual contributions from the state to TRS fell below the actuarial full-funding standard by an average of \$660 million per year. Total state contributions between fiscal years 2007 and 2016 were 21 percent below the actuarial target, despite satisfying the statutory funding formula.

The large unfunded liability carried by TRS also inflates the deep financial problems faced by Illinois state government. State officials continually rail against the size of the state's annual contribution to TRS, which in FY16 was \$3.7 billion. While this amount is approximately 10 percent of the state's total General Funds appropriation, the size of the allocation to TRS is a self-inflicted problem. Approximately 76 percent of the state's \$3.7 billion annual contribution to TRS in FY16 was dedicated to paying off a portion of the System's unfunded liability. Had the state funded TRS on a sound, actuarial basis over the years, and had actuarial assumptions remained constant with no gains or losses, the state would have owed approximately \$900 million for TRS pension costs in FY16, leaving \$2.8 billion available for other spending priorities.

The fiscal problems of Illinois state government festered at a time when the global economy became increasingly volatile and unpredictable, causing fluctuations in worldwide markets which dramatically lowered earnings for large institutional investors. At TRS, investment returns were in line with the experience of other pension plans and investors. The System's investment return of 4.57 percent, gross of fees, (3.95 percent, net of fees) at the end of FY15 declined dramatically to 0.69 percent gross of fees and 0.01 percent net of fees in FY16.

Because TRS has relationships with many members that span several decades – the oldest TRS annuitant is 107 – the most significant benchmark for the System is the long-term (30-year) rate of investment return, which at the end of FY16 was 8.2 percent, net of fees. This actual rate of return exceeded the System's assumed long-term rate of return for the fiscal year, which was 7.5 percent

TRS remained dedicated in FY16 to the prudent use of the System's assets to administer required duties and activities on behalf of its members. Administrative expenses for all of TRS increased by 5.9 percent during FY16 to \$23 million, or 0.04 percent of all TRS assets. Total expenses to manage the investment portfolio increased by 7.6 percent to \$750 million, or 1.4 percent of all TRS assets.

PROFILE OF TRS

TRS was established by the State of Illinois on July 1, 1939, to provide retirement, disability, and death benefits to teachers employed by Illinois public elementary and secondary schools outside the city of Chicago. A 13-member Board of Trustees governs TRS. The Board includes the state superintendent of education, six representatives of the public who are appointed by the governor, four members of TRS who are elected by active teachers, and two retired members who are elected by annuitants. The Board of Trustees appoints the executive director, who is responsible for the effective administration of TRS.

The annual budget for TRS administrative expenses is prepared by staff and approved by the Board of Trustees. The TRS annual operating budget request is prepared in conjunction with a review of the long-range strategic plan.

FINANCIAL INFORMATION

Our staff issues a CAFR within six months of the close of each fiscal year. The report contains financial statements presented in conformity with generally accepted accounting principles (GAAP) applied within guidelines established by the Governmental Accounting Standards Board (GASB).

A system of internal controls helps us monitor and safeguard assets and promote efficient operations. Each year TRS's financial statements, records, and internal controls are examined by a professional accounting firm that serves as a special assistant auditor employed by the Illinois Auditor General. In addition, an annual compliance attestation examination is performed to review compliance with applicable statutes and codes. The Independent Auditor's Report on TRS's financial statements is included on pages 18 and 19 in the Financial Section of this report. TRS received an unmodified auditor opinion on the fair presentation of its financial statements.

Generally accepted accounting principles require that management provide a narrative introduction, overview and analysis to accompany the financial statements in the form of a Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The MD&A can be found immediately following the report of the independent auditors.

REVENUES AND EXPENSES

The three sources of TRS funding are member contributions, investment income and employer contributions through State appropriations and payments by employers. TRS expenses include payments of benefits, refunds and administrative expenses. Negative amounts are shown in parentheses () throughout this report.

Revenues (\$ millions)

Source	2016	2015	Increase/(Decrease)	
			Amount	% Change
Member contributions	\$952	\$935	\$17	1.8%
State of Illinois	3,742	3,378	364	10.8
Employer contributions	148	145	3	2.1
Total investment (loss)/income	(44)	1,771	(1,815)	(102.5)
Total	<u>\$4,798</u>	<u>\$6,229</u>	<u>(\$1,431)</u>	(23.0%)

Expenses (\$ millions)

	2016	2015	Increase/(Decrease)	
			Amount	% Change
Benefits payments	\$5,848	\$5,536	\$312	5.3%
Refunds	83	89	(6)	(6.7)
Administrative/other	23	22	1	4.5
Total	<u>\$5,954</u>	<u>\$5,647</u>	<u>\$307</u>	5.4%

The TRS Board of Trustees and staff remain vigilant in our efforts to improve the retirement system's funded status for current and future members. We continue to invest prudently and in a disciplined manner for the benefit of our membership and for the long-term success of the retirement system. The TRS Board and staff believe the overall investment strategy remains sound and appropriate for our circumstances.

INVESTMENTS

The TRS investment portfolio returned 0.69 percent, gross of fees, for the fiscal year ended June 30, 2016. Total investment assets decreased approximately \$467 million during the year.

The TRS trust fund is invested under the authority of the Illinois Pension Code and follows the "prudent person rule," which requires investments to be managed solely in the interest of fund participants and beneficiaries. The TRS Investment Policy guides TRS's investments. Investment principles include preserving the long-term

principal of the trust fund, maximizing total return within prudent risk parameters and acting in the exclusive interest of TRS members.

The Investment Section of this report contains a summary of the portfolio and investment activities. Pages 80 to 83 provide specific details regarding fees and commissions and a list of investment professionals who provided services to TRS.

FUNDING

During the year ended June 30, 2016, the funded ratio based on the actuarial value of assets of the Teachers' Retirement System decreased to 39.8 percent from its June 30, 2015 level of 42.0 percent. The actuarial value of assets at year end was \$47.2 billion and the actuarial accrued liability was \$118.6 billion. Assumption changes, including a reduction in the assumed rate of return on investments, were adopted in the 2016 actuarial valuation that increased the unfunded liability by \$5.7 billion. Under the smoothing methodology required by Public Act 96-0043, differences between actual and expected investment earnings are recognized prospectively over a five-year period.

The Actuarial Section of this report contains the actuary's letter and further information on TRS funding.

MAJOR INITIATIVES

In FY16, TRS initiated and continued several programs and projects designed to benefit its members, enhance system operations and increase effectiveness and efficiency:

SUNSET OF THE TRS EARLY RETIREMENT OPTION AND MEMBER CONTRIBUTION REFUNDS

Because of legislative inaction, the Early Retirement Option (ERO) automatically expired on July 1, 2016, ending a 36-year-old program that enabled thousands of Illinois teachers to accelerate their retirement plans without incurring a reduction in pension benefits.

The program was created in 1980 and extended by the General Assembly many times. The last extension in 2013 required legislators to reauthorize the ERO in order for the program to continue beyond FY16. No legislation was proposed to extend the life of the program.

Due to the end of the ERO, TRS is required by state law to process active and inactive member refunds for the 0.4 percent payroll contributions members paid between 2005 and 2016 to help fund the program. Approximately 197,000 TRS members are eligible for a refund and TRS estimates that it will pay out as much as \$300 million in ERO refunds.

COMMITMENT TO DIVERSITY

TRS continued to strengthen its long-standing commitment to diversity within the management of its \$44.7 billion investment portfolio, improving access to the investment program for qualified firms owned by minorities, women and those with disabilities (WMBE).

In FY16, TRS received the "Stand-out Institutional Investor Award" from Consortium East, an annual national forum dedicated to advancing relationships between institutional investors and small and diverse money managers.

Through the end of FY16, 18.3 percent of the overall TRS investment portfolio was overseen by 34 WMBE investment managers, with assets totaling \$8.2 billion. The participation goal for the fiscal year was 16 percent. TRS exceeded its goal for assets under WMBE management by more than \$1 billion.

TRS has strengthened its relationship with the activities and programs of The Toigo Foundation of Oakland, California. The goal of the foundation is to increase diversity within the investment world. For the second consecutive year, TRS welcomed an intern sponsored by the Toigo Foundation to work within the Investment Department. In addition, TRS annually increases its diversity goals and continues to host an annual Opportunity Forum that serves as an introductory platform to TRS investment activities for minority and women-owned firms.

The System's commitment to diversity is not limited to its investment practices. TRS also seeks to increase diversity among vendors providing administrative services. Many of our vendors were not on a centralized list provided by the state that identifies them as being majority-owned by women, minorities, veterans, or disabled individuals, so we surveyed them directly to see if any of these categories applied. TRS found that 10.4 percent of the TRS vendors could be identified as WMBE companies as of December 31, 2015.

INVESTMENT FEE TRANSPARENCY

After months of research and discussion, TRS endorsed a new reporting template that standardizes the way private equity fund managers detail the fees they charge TRS and other public pension systems.

The new template, developed in 2016 by the Institutional Limited Partners Association, or ILPA, is the first major attempt to establish industry standards for reporting fees and expenses used by private equity investment managers to their investment partners. TRS, its legal counsel at Jackson Walker of Austin, Texas, and its consultant on private equity investments, TorreyCove Capital Partners of LaJolla, California, have been part of the nationwide effort to develop the template.

TRS is among the pension systems at the forefront of the growing effort to standardize the reporting of fees. The ILPA template is "a great first step" in getting the private equity industry on a level playing field in the way fees and the cost of these investments is reported and tracked.

ENHANCING COMMUNICATIONS

TRS conducted a year-long review of its communications strategies during FY16 with a special emphasis on evaluating how to better engage younger members early in their teaching careers. TRS hired Jasculca-Terman Strategic Communications of Chicago, Illinois, to help develop a new vision for its communications and to assist with implementing programs that will make sure that the System's various constituencies receive the information they desire from TRS. These efforts will begin in earnest during FY17.

ENTERPRISE RISK

TRS established an Enterprise Risk Committee comprised of representatives from all areas of the organization. Its purpose is to identify potential problems, respond to incidents quickly, and develop strategies to mitigate risk. A new series of risk matrices are being developed in conjunction with the strategic plan.

ON-GOING TECHNOLOGY ENHANCEMENTS

Health insurance benefit management - TRS worked diligently with several other state agencies to support the changes necessary for a September 2016 transfer of the enrollment and management of state-subsidized health insurance programs for retired members and active state employees from state government to a third party vendor, Morneau Shepell.

Document imaging - Over 225,000 documents have been imaged and processed through the Member Services document imaging workflows since the imaging process began in July 2013. Nearly 230,000 member records have been imaged and the back-file conversion is expected to be 80 percent complete by the end of June 2017. Of the estimated 11 million images to be scanned from nearly 400,000 records, 7.2 million images are already in the repository.

The Investment Department's electronic repository is now in use, and back-file scanning for the department began in June 2016. Importing day-forward documents into the repository is scheduled to begin in 2017.

Member Call Center - In FY15, TRS improved its technology in the Call Center to reduce abandoned calls and caller wait times. In FY16, the average wait time for members decreased 30 percent and the number of abandoned calls decreased 31 percent.

SYSTEM GOVERNANCE

FY16 was a year of significant transition in the management of TRS.

Member elections and new gubernatorial appointments resulted this past year in seven new board members on the 13-member TRS Board of Trustees. One trustee seat reserved for a gubernatorial appointment remains vacant and 12 trustees comprised the Board at the end of FY16. Three new trustees – two representing active members and one representing retired members – were elected by eligible System participants in a state-wide election. Gov. Bruce Rauner appointed five new trustees. The executive director formed a new Executive Cabinet to act as his closest advisors. The cabinet is composed of the Chief Benefits Officer, Chief Financial Officer, Chief Human Resources Officer, Chief Investment Officer, Chief Technology Officer, Chief Legal Counsel and Director of Communications.

TRS is required by law to publish a CAFR annually with information about the System's financial condition, investment methods and performance, actuarial conclusions that determine financial needs and statistical information about members, school districts, revenues and benefits. TRS management and staff are responsible for the accuracy of this report and for ensuring that all material disclosures have been made. TRS recognizes that the limitations of internal controls must be considered. These controls are designed to provide reasonable assurance regarding the safekeeping of assets, the reliability of financial records, the appropriate segregation of duties and responsibilities and the use of sound accounting and financial practices. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and that the valuation of costs and benefits requires estimates and judgments by management. The objective of internal controls at TRS is a reasonable, not absolute, assurance that the System's financial statements are free of material misstatements. Three internal auditors are employed to continually review and determine that all laws, rules, policies and procedures are followed.

AWARDS

CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE IN FINANCIAL REPORTING

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to TRS for its *Comprehensive Annual Financial Report* for the fiscal year ended June 30, 2015. This was the 27th consecutive year that the System has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government or government entity must publish an easily readable and efficiently organized *Comprehensive Annual Financial Report*. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe that our current *Comprehensive Annual Financial*

Report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

PUBLIC PENSION COORDINATING COUNCIL (PPCC), RECOGNITION AWARD FOR ADMINISTRATION

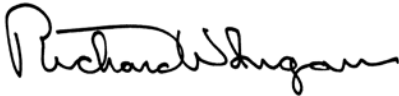
TRS received the Recognition Award for Administration in 2016 for meeting professional standards of plan administration as set forth in the Public Pension Standards of the PPCC. The award is presented by the PPCC, a confederation of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR).

ACKNOWLEDGMENTS

Information for this report was gathered by TRS staff under the leadership of the Board of Trustees and the executive director and it is the responsibility of TRS management. It is intended to provide complete and reliable information as a basis for making management decisions, to determine our compliance with legal provisions and as a means of determining responsible stewardship of the assets contributed by members, their employers and the State of Illinois.

This report is made available to members of the General Assembly, participating employers, and to other interested persons by request. The participating employers of TRS form a link between TRS and its members. Their cooperation contributes significantly to our success. We hope all recipients of this report find it informative and useful. This report is also available to the general public on our website, <http://trs.illinois.gov>.

We would like to take this opportunity to express our gratitude to staff, professional consultants, and others who have worked so diligently to ensure TRS's successful operation.



Richard Ingram
Executive Director



Jana Bergschneider, CPA
Chief Financial Officer

BOARD OF TRUSTEES
AS OF DECEMBER 14, 2016



Tony Smith, Ph.D.
President
Superintendent of Education
River Forest



Cinda Klickna
Vice President
Elected
Rochester



Mark Bailey
Elected
Palos Park



Ann S. Deters
Appointed
Effingham



Andrew Hirshman
Elected
Oak Park



Rainy Kaplan
Elected
Schaumburg



Robert Lyons
Elected
Hoffman Estates



Laura P. Pearl
Appointed
Glenview



Alexander D. Stuart
Appointed
Lake Forest



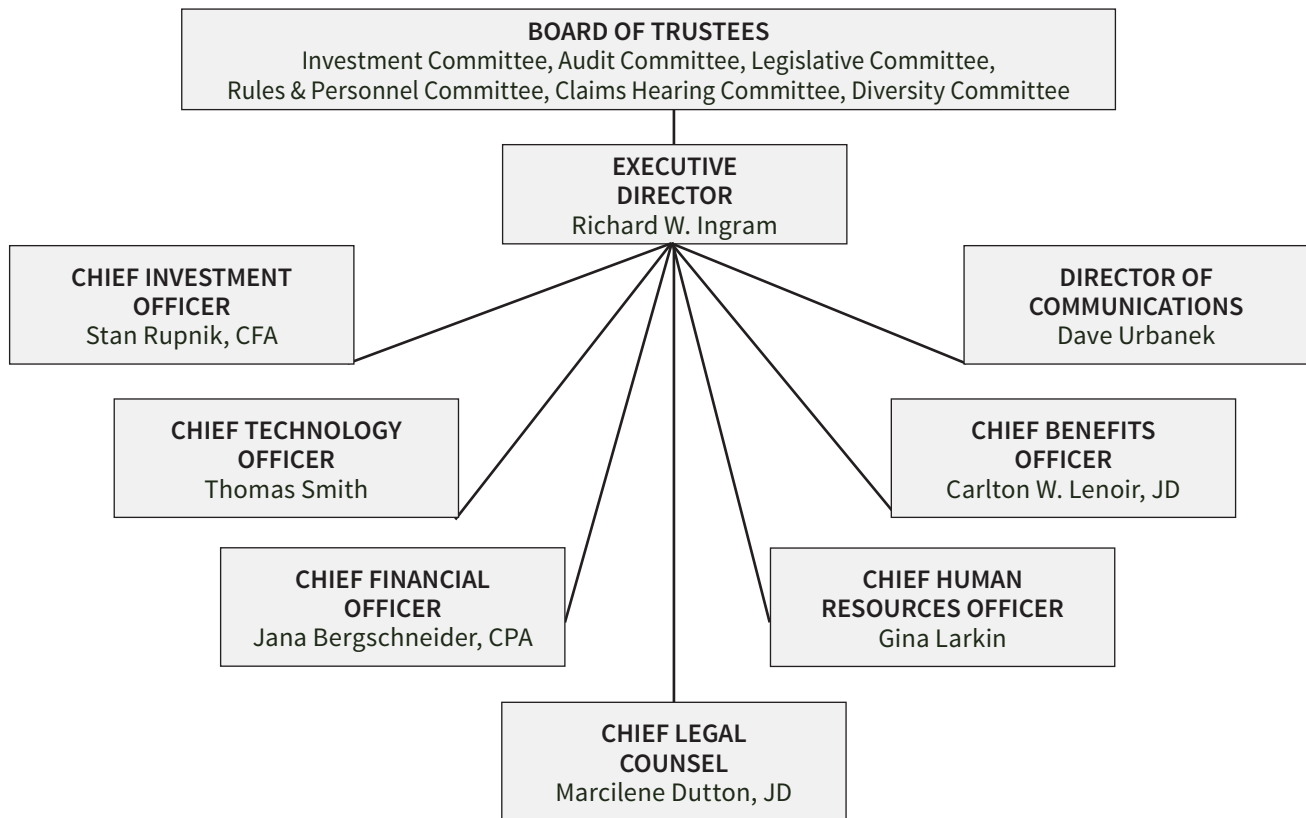
Daniel Winter
Elected
Decatur



Randall S. Winters
Appointed
Highland Park

TRS ORGANIZATION

EXECUTIVE CABINET AS OF DECEMBER 14, 2016



Sitting, left to right:

Chief Human Resources Officer Gina Larkin, Chief Legal Counsel Marcilene Dutton and Chief Financial Officer Jana Bergschneider

Standing, left to right:

Director of Communications Dave Urbanek, Chief Technology Officer Thomas Smith, Executive Director Dick Ingram, Chief Benefits Officer Carlton Lenoir and Chief Investment Officer Stan Rupnik

OFFICE OF THE EXECUTIVE DIRECTOR AS OF DECEMBER 14, 2016



Sitting, left to right:

Director of Investment Accounting Deron Bertolo; Chief Financial Officer Jana Bergschneider, CPA; Senior Legal Counsel Cynthia Fain, JD; Chief Legal Counsel Marcilene Dutton, JD; Director of Internal Audit Stacy Smith, CPA, CIDA; Chief Human Resources Officer Gina Larkin and Director of Communications Dave Urbanek

Standing, left to right:

Chief Investment Officer Stan Rupnik, CFA; Director of Investments Greg Turk; Executive Director Dick Ingram; Chief Technology Officer Thomas Smith; Chief Benefits Officer Carlton Lenoir, JD and Director of Outreach Rich Frankenfeld

Not pictured:

Director of Research Kathleen Farney, CEBS

CONSULTING AND PROFESSIONAL SERVICES

ACTUARY

Buck Consultants, L.L.C. **Segal Consulting**
Chicago, Illinois Chicago, Illinois

MASTER TRUSTEE

State Street Bank and Trust Company
Boston, Massachusetts

EXTERNAL AUDITORS

(Special assistants to the Office of the Auditor General)

RSM US LLP
Schaumburg, Illinois

SECURITIES LENDING AGENT

Citibank, N.A.
New York, New York

INFORMATION TECHNOLOGY

Brent Ozar Unlimited **Heat Software, Inc.**
Las Vegas, Nevada Milpitas, California

Cloud2Spec
Richmond, Virginia

**Icon Integration
and Design, Inc.**
Overland Park, Kansas

**Guide Point
Security, L.L.C.**
Herndon, Virginia

Sentinel Technologies
Downers Grove, Illinois

INVESTMENT CONSULTANTS

Albourne America, L.L.C. **TAVE & Associates, L.L.C.**
(Absolute return) (Insurance brokerage
San Francisco, California services)
Northbrook, Illinois

Courtland Partners, Ltd.
(Real estate)
Cleveland, Ohio

**TorreyCove Capital
Partners, L.L.C.**
(Private equity)
San Diego, California

RVK, Inc.
(General investment)
Portland, Oregon

LEGISLATIVE

Leinenweber Baroni & Daffada Consulting, L.L.C.
Springfield, Illinois

CO-INVESTMENT ADVISORS

**LP Capital
Advisors, L.L.C.**
(Private equity)
Sacramento, California

**Real Asset Portfolio
Management, L.L.C.**
(Real estate)
Portland, Oregon

LEGAL SERVICES

Cavanagh & O'Hara **Kopec White & Spooner**
Springfield, Illinois Springfield, Illinois

Holland & Knight, L.L.P. **Loewenstein Hagen
& Smith, P.C.**
Chicago, Illinois Springfield, Illinois

**Howard & Howard
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& Dowd, L.L.P.**
San Diego, California

Jackson Walker, L.L.P.
Austin, Texas

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Management, L.L.C.**
(Real estate)
Cleveland, Ohio

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(Private equity)
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Cogent Partners
Dallas, Texas

UBS Securities, L.L.C.
New York, New York

Park Hill Group, L.L.C.
Chicago, Illinois

FINANCIAL



Olive Branch School - Fairfield, Wayne County

Built in the 1930s to replace an earlier structure that had burned, the only remaining undisturbed one-room school house in Wayne County was donated to the Fairfield Park District in the 1960s, refurbished and is now used as a museum. During the renovation, however, the building's original white paint was covered with red in order to emulate the legendary "little red schoolhouse."

Independent Auditor's Report

RSM US LLP

Honorable Frank J. Mautino, Auditor General – State of Illinois

Board of Trustees, Teachers' Retirement System of the State of Illinois

Report on the Financial Statements

As Special Assistant Auditors for the Auditor General, we have audited the accompanying Statement of Net Position of the Teachers' Retirement System of the State of Illinois (System), a component unit of the State of Illinois, as of and for the year ended June 30, 2016, and the Statement of Changes in Net Position for the year then ended, and the related notes to the financial statements which collectively comprise the financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2016, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

The actuarially determined pension liability, calculated as required by GASB Statement No. 67, is dependent on several assumptions including the assumption that future required contributions from all sources are made based on statutory requirements in existence as of the date of this report. These assumptions are discussed in Note A, Section 6 of the financial statements on pages 30 through 32. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information:

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 20 through 24 and the required supplementary information as listed in the table of contents on pages 56 and 57 be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information:

Our audit for the year ended June 30, 2016 was conducted for the purpose of forming an opinion on the System's financial statements. The other supplementary information in the financial section on pages 58 through 60, and the accompanying introduction, investments, actuarial, and statistical sections as listed in the table of contents are presented for purposes of additional analysis and are not a required part of the financial statements.

The other supplementary information in the financial section for the year ended June 30, 2016 is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The other supplementary information has been subjected to the auditing procedures applied in the audit of the financial statements for the year ended June 30, 2016 and certain additional procedures, including comparing and reconciling such information directly to underlying accounting and other records used to prepare the financial statements, or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated in all material respects, in relation to the financial statements as a whole for the year ended June 30, 2016. The introduction, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

We have also previously audited, in accordance with auditing standards generally accepted in the United States of America, the System's financial statements as of and for the year ended June 30, 2015 (not presented herein), and have issued our report thereon dated December 17, 2015, which contained an unmodified opinion on those financial statements. The accompanying other supplementary information which consists of supporting schedules for the year ended June 30, 2015 is presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the 2015 financial statements. The other supplementary information has been subjected to the auditing procedures applied in the audit of the 2015 financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare those financial statements or to those financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the financial statements as a whole for the year ended June 30, 2015.

RSM US LLP

Schaumburg, Illinois
December 14, 2016

MANAGEMENT'S DISCUSSION AND ANALYSIS

This discussion and analysis of the Teachers' Retirement System of the State of Illinois provides an overview of financial activities for the fiscal year ended June 30, 2016. Please read it in conjunction with the Letter of Transmittal in the Introduction Section on page 6 and the Financial Statements and related notes that follow this discussion.

FINANCIAL HIGHLIGHTS

- The net position of TRS at June 30, 2016 was \$45.3 billion.
- During FY16, the net position of TRS decreased \$1.2 billion.
- Contributions from members, employers, and the State were \$4.8 billion, an increase of \$384 million or 8.6 percent for FY16.
- Total net investment loss was \$44 million, compared to \$1.8 billion in income for FY15, a decrease of \$1.8 billion.
- Benefits and refunds paid to members and annuitants were \$5.9 billion, an increase of \$306 million or 5.4 percent.
- The total actuarial accrued liability was \$118.6 billion at June 30, 2016.
- The unfunded actuarial accrued liability was \$71.4 billion at June 30, 2016. The funded ratio was 39.8 percent at June 30, 2016. The unfunded liability and funded ratio are calculated using a smoothed value of assets, as required under Public Act 96-0043.
- The total pension liability was \$124.2 billion at June 30, 2016.
- The net pension liability was \$78.9 billion at June 30, 2016. The plan fiduciary net position, as a percentage of total pension liability, was 36.4 percent.

The Financial Statements contained in this section of the *Comprehensive Annual Financial Report* consist of:

Statement of Fiduciary Net Position. This statement reports the pension trust fund's net position which represents the difference between the other statement elements comprised of assets and liabilities. It is the balance sheet for the pension system and reflects the financial position of the Teachers' Retirement System as of June 30, 2016.

Statement of Changes in Fiduciary Net Position. This statement details transactions that occurred during the fiscal year. It is the income statement of TRS and reflects the additions and deductions to net position recorded throughout the fiscal year. This statement supports the change in the value of net position reported on the Statement of Fiduciary Net Position.

Notes to the Financial Statements. The notes are an integral part of the financial statements and include additional information not readily evident in the statements themselves.

Required Supplementary Information and Other Supplementary Information. The required supplementary information and other financial information following the notes to the financial statements provide historical and additional detailed information considered useful in evaluating the pension system's financial condition.

The following are condensed comparative financial statements of the TRS pension trust fund.

Condensed Comparative Statements of Fiduciary Net Position as of June 30

	2016	Percentage Change	2015
Cash	\$40,637,848	(11.1%)	\$45,709,535
Receivables and prepaid expenses	5,279,564,166	(8.1)	5,747,410,436
Investments	45,632,926,356	(1.0)	46,099,664,885
Invested securities lending collateral	3,134,036,175	6.5	2,943,517,231
Capital assets	3,605,993	(8.7)	3,947,730
Total assets	54,090,770,538	(1.4)	54,840,249,817
Total liabilities	8,839,813,807	4.8	8,433,334,224
Net position restricted for pensions	<u>\$45,250,956,731</u>	(2.5%)	<u>\$46,406,915,593</u>

Condensed Comparative Statements of Changes in Fiduciary Net Position for the Years Ended June 30

	2016	Percentage Change	2015
Contributions	\$4,842,319,410	8.6%	\$4,458,707,579
Net investment (loss)/income	(44,103,178)	(102.5)	1,770,549,533
Total additions	4,798,216,232	(23.0)	6,229,257,112
Benefits and refunds	5,931,207,177	5.4	5,625,037,173
Administrative expenses	22,967,917	5.9	21,686,860
Total deductions	5,954,175,094	5.4	5,646,724,033
Net (decrease)/increase in net position	(1,155,958,862)		582,533,079
Net position restricted for pensions - beginning of year	46,406,915,593	1.3	45,824,382,514
Net position restricted for pensions - end of year	<u>\$45,250,956,731</u>	(2.5%)	<u>\$46,406,915,593</u>

FINANCIAL ANALYSIS

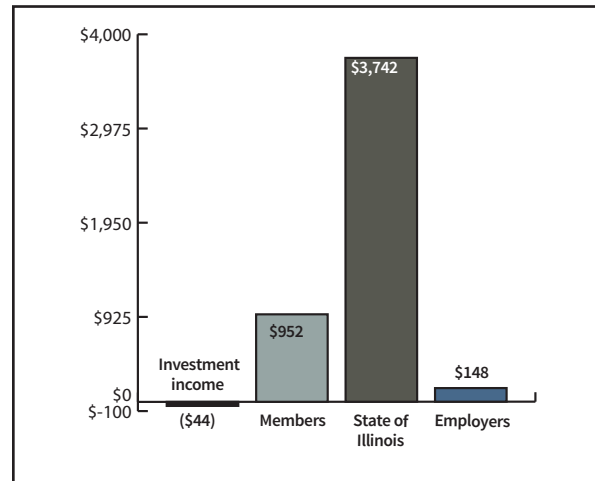
TRS was created to provide retirement, survivor, and disability benefits to qualified members. Increases or decreases in the plan's net position serve as useful indicators of TRS's financial position. The net position available to pay benefits was \$45.3 billion at June 30, 2016.

CONTRIBUTIONS

Contributions increased \$384 million during FY16. During FY16, contributions from the State of Illinois increased \$364 million and employer contributions from school districts increased \$2.4 million. The net increase in employer contributions from school districts in FY16 is attributable to an increase in contributions from federal funds that offset decreases in other employer contributions.

The State of Illinois makes appropriations to TRS. Receipts from the State of Illinois increased \$365 million in FY16. The increase in FY16 was mainly due to the reduction in the assumed rate of return from 8.0 to 7.5 percent that was adopted in the June 30, 2014 actuarial valuation. The assumption change increased the June 30, 2014 unfunded liability by \$6.4 billion and increased funding requirements for FY16. Investment gains based on the actuarial value of assets, salary increases lower than assumed, and other factors offset some of the increase due to the assumption changes. State funding law provides for a 50-year funding plan that includes a 15-year phase-in period and a goal of 90 percent funding in the year 2045.

Revenues by Type for the Year Ended June 30, 2016 (\$ millions)

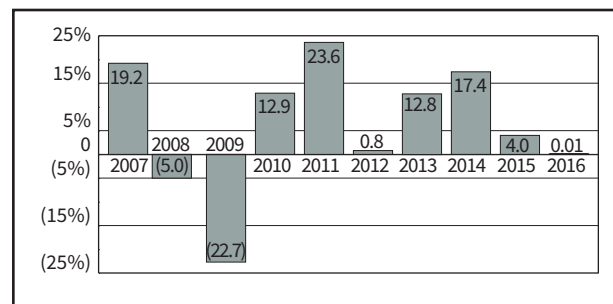


INVESTMENTS

The TRS trust fund is invested according to law under the "prudent person rule" requiring investments to be managed solely in the interest of fund participants and beneficiaries. Principles guiding the investment of funds include preserving the long-term principal of the trust fund and maximizing total return within prudent risk parameters.

The TRS investment portfolio returned 0.01 percent, net of fees, for the fiscal year ended June 30, 2016. Total TRS investment assets decreased approximately \$467 million during the year.

Annual Rate of Return (net of investment expenses)

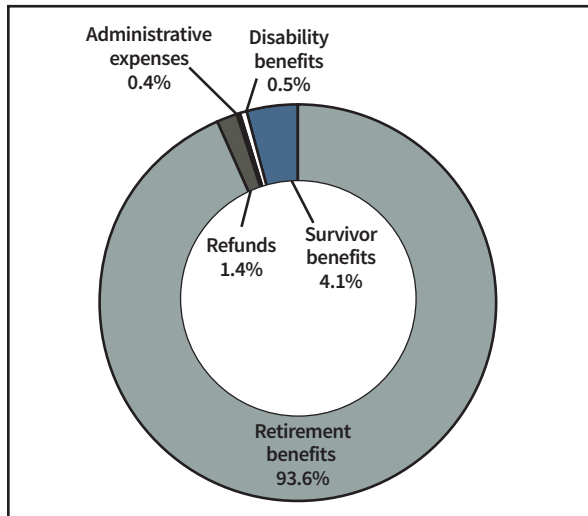


BENEFITS AND REFUNDS

Retirement, survivor, and disability benefit payments increased \$312 million during FY16. Benefit payments increased to \$5.8 billion with 117,650 recipients in FY16. The overall increase in benefit payments for FY16 is due to an increase in retirement and survivor benefits as well as the number of retirees. Retirement benefits were higher as a result of annual increases in retirement benefits and an increase in the number of retirees from 103,501 as of June 30, 2015 to 105,937 as of June 30, 2016.

Refunds of contributions decreased \$5.6 million in FY16. The decrease during FY16 is the result of lower member and retirement refunds.

Deductions by Type for the Year Ended June 30, 2016



ACTUARIAL

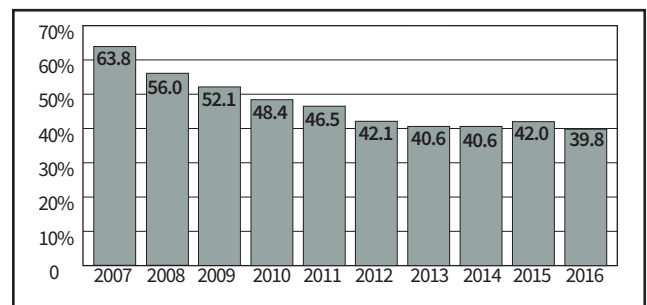
For statutory funding and financial reporting, an actuarial valuation is performed annually and measures the total liability for all benefits earned to date. The actuarial accrued liability is a present value estimate of all the benefits that have been earned to date but not yet paid. The actuarial accrued liability based on statutory funding requirements increased \$10.5 billion in FY16 to \$118.6 billion at June 30, 2016. The actuarial unfunded liability is the present value of future benefits payable that are not covered by the actuarial value of assets as of the valuation date. The

actuarial unfunded liability increased \$8.7 billion during FY16 to \$71.4 billion at June 30, 2016. The funded ratio reflects the percentage of the actuarial accrued liability covered by the actuarial value of assets. The funded ratio decreased from 42.0 percent on June 30, 2015 to 39.8 percent on June 30, 2016.

In FY16, the actuarial unfunded liability and funded ratio are based on a smoothed value of assets. Public Act 96-0043 required the five state retirement systems to begin smoothing actuarial gains and losses on investments over a five-year period, beginning with the valuation for the year ended June 30, 2009.

When the funded ratio was based on the fair value of assets, the reported funded ratio was impacted immediately by changes in market conditions. State funding requirements based on fair value assets also were impacted immediately and therefore were more volatile. Using the smoothed value of assets results in more stable reported funded ratios and State funding requirements over time.

Funded Ratio Based on Actuarial Value of Assets



The funded ratio in this chart is the ratio of actuarial assets to the actuarial liability. An increase in this ratio indicates an improvement in TRS's ability to meet future benefit obligations. The actuarial value of assets was based on fair value through 2008 with five-year smoothing beginning in 2009.

During FY14, TRS implemented GASB Statement No. 67, "Financial Reporting for Pension Plans." As a result of implementing the new statement, TRS is required to disclose the net pension liability and total pension liability in the Financial Statement Notes and Required Supplementary Information in

accordance with criteria which differ from criteria used to disclose the actuarial accrued liability and actuarial unfunded liability. The total pension liability is \$124.2 billion at June 30, 2016, while the net pension liability is \$78.9 billion at June 30, 2016.

LEGISLATIVE

During FY16, the few decisions made by the General Assembly regarding public pension systems had a significant impact on the Teachers' Retirement System and its members.

EARLY RETIREMENT OPTION ENDS

The legislature decided not to renew the authorization of the TRS Early Retirement Option (ERO) and the program automatically expired on July 1, 2016. The program enabled members to accelerate their retirement plans without incurring a reduction in pension benefits.

The program was created in 1980 and extended by the General Assembly many times. The last extension in 2013 required legislators to reauthorize the ERO in order for the program to continue beyond FY16.

Because of the ERO sunset, TRS must offer active and inactive members a refund of the 0.4 percent payroll contributions they paid between 2005 and 2016 to help fund the program.

OPTION TO REPAY SURVIVOR BENEFIT REFUND

A new law took effect in 2016 that reverses a situation within the Illinois Pension Code that prevented some TRS members in same-sex marriages and civil union partnerships from receiving survivor benefits.

Retired TRS members who took refunds of their survivor benefit contributions prior to the legalization of same-sex marriages and civil union partnerships in Illinois found themselves with spouses, civil union partners or eligible dependents, but ineligible for a survivor benefit that most retired TRS members can provide.

The new law gives these members a year-long opportunity to repay their survivor benefit refund, with interest, and reclaim eligibility for survivor benefits.



Lincoln School - Martinsville, Clark County

The soft-mud bricks for this 1888 one-room school were made by a neighboring farmer and donated for the building, which replaced a wood-frame school constructed in 1843. The school was closed in 1950 when all 102 one-room schools in Clark County were consolidated. The school, now owned by the Martinsville Chamber of Commerce, serves the community as a museum.

FINANCIAL STATEMENTS

Teachers' Retirement System of the State of Illinois

Statement of Fiduciary Net Position

June 30, 2016

	2016
Assets	
Cash	\$40,637,848
Receivables and prepaid expenses:	
Member contributions	53,246,316
Employer contributions	14,904,808
State of Illinois	473,533,699
Investment income	110,892,567
Pending investment sales	4,622,648,071
Prepaid expenses	4,338,705
Total receivables and prepaid expenses	<u>5,279,564,166</u>
Investments, at fair value:	
Fixed income	9,887,153,436
Equities	16,083,525,866
Real estate	6,943,206,220
Short-term investments	1,127,440,142
Private equity investments	5,465,171,512
Real return	2,889,159,873
Absolute return	3,196,766,195
Foreign currency	103,219,472
Derivatives	(62,716,360)
Total investments	<u>45,632,926,356</u>
Invested securities lending collateral:	
Short-term investments	3,048,892,175
Fixed income	50,000,000
Securities lending collateral with the State Treasurer	35,144,000
Total invested securities lending collateral	<u>3,134,036,175</u>
Capital assets, net of accumulated depreciation	<u>3,605,993</u>
Total assets	<u><u>54,090,770,538</u></u>
Liabilities	
Benefits and refunds payable	5,958,467
Administrative and investment expenses payable	53,025,784
Pending investment purchases	5,646,802,204
Securities lending collateral	3,134,027,352
Total liabilities	<u><u>8,839,813,807</u></u>
Net position restricted for pensions	<u><u>\$45,250,956,731</u></u>

See accompanying Notes to Financial Statements.

Teachers' Retirement System of the State of Illinois
Statement of Changes in Fiduciary Net Position
for the Year Ended June 30, 2016

	2016
Additions	
Contributions:	
Members	\$951,809,398
State of Illinois	3,742,469,245
Employers	
Early retirement	13,554,467
Federal funds	74,497,870
2.2 benefit formula	55,785,482
Excess salary/sick leave	4,202,948
Total contributions	<u>4,842,319,410</u>
Investment income:	
Net increase (decrease) in fair value of investments	(843,377,824)
Interest	240,569,604
Alternatives income	808,469,675
Dividends	435,697,251
Other investment income	47,074,975
Securities lending income	17,651,392
Less investment expenses:	
Direct investment expense	(749,609,143)
Securities lending management fees	(1,089,734)
Securities lending borrower rebates	510,626
Net investment loss	<u>(44,103,178)</u>
Total additions	<u>4,798,216,232</u>
Deductions	
Retirement benefits	5,575,129,529
Survivor benefits	242,578,458
Disability benefits	30,472,221
Refunds	83,026,969
Administrative expenses	22,967,917
Total deductions	<u>5,954,175,094</u>
Net decrease in net position	<u>(1,155,958,862)</u>
Net position restricted for pensions	
Beginning of year	<u>46,406,915,593</u>
End of year	<u>\$45,250,956,731</u>

See accompanying Notes to Financial Statements.

NOTES TO FINANCIAL STATEMENTS

A. PLAN DESCRIPTION

1. REPORTING ENTITY

The Teachers' Retirement System of the State of Illinois (TRS) is the administrator of a cost-sharing, multiple-employer defined benefit public employee retirement system (PERS). Membership is mandatory for all full-time, part-time and substitute public school personnel employed outside of Chicago in positions requiring licensure. Persons employed at certain State agencies and certain non-government entities also are members. Established by the State of Illinois, TRS is governed by the Illinois Pension Code (40 ILCS 5/16). TRS is a component unit of the State of Illinois and is included in the State's financial statements as a pension trust fund.

TRS uses criteria established by the Governmental Accounting Standards Board (GASB) to determine whether other entities should be included within its financial reporting entity. Based on the criteria, TRS includes no other entities in these financial statements.

2. EMPLOYERS

Members of TRS are employed by school districts, special districts, certain State agencies and certain non-government entities. Each employer remits member contributions to TRS. Employers are responsible for employer contributions for teachers paid from federal funds, employer contributions for the 2.2 formula increase and for the employer's portion of the Early Retirement Option contributions. As a result of Public Act 94-0004, which became law on June 1, 2005, employers are also required to pay the cost of pension benefits resulting from salary increases of more than 6 percent. Public Act 94-1057, which became law on July 31, 2006, provides additional exemptions from employer contributions for excess salary increases. Some of these exemptions are permanent while others were available for a limited time period. Employers also pay a contribution for sick leave days granted in excess of the member's normal annual allotment and used for service credit at retirement. The contributions do not apply to salary increases awarded or sick leave granted under contracts or collective bargaining agreements entered into, amended, or renewed prior to June 1, 2005. In addition, the

State of Illinois is a nonemployer contributing entity that provides employer contributions on behalf of the System's employers. For information about employer contributions made by the State of Illinois, see "Schedule of Contributions from Employers and Other Contributing Entities" within the Required Supplementary Information (RSI) section of this report.

Number of Employers (as of June 30)

	2016
Local school districts	850
Special districts	126
State agencies	16
Total	992

3. MEMBERS

TRS Membership (as of June 30)

	2016
Retirees and beneficiaries	117,650
Inactive members	129,470
Active members	159,735
Total	406,855

4. BOARD OF TRUSTEES

TRS is governed by a 13-member Board of Trustees. Trustees include the state superintendent of education, six trustees appointed by the governor, four trustees elected by contributing TRS members, and two trustees elected by TRS annuitants.

The president of the Board of Trustees, by law, is the Illinois superintendent of education. The Board of Trustees elects its vice president from among its members. The Board of Trustees appoints an executive director who also serves as the secretary of the Board of Trustees. The executive director is responsible for daily operations at TRS.

5. BENEFIT PROVISIONS

Governed by the Illinois Pension Code (40 ILCS 5/16), which is subject to amendment by the Illinois General Assembly and approval by the governor, TRS provides retirement, death and disability benefits. Membership is mandatory for all full-time, part-time, and substitute public school personnel employed in Illinois outside the city of Chicago.

Public Act 96-0889, which was signed into law in the spring of 2010, added a new section to the Pension Code that applies different benefits to anyone who first contributes to TRS on or after January 1, 2011 and does not have any previous service credit with one of the reciprocal retirement systems in Illinois. Members who first participate on or after that date are members of Tier II.

The act does not apply to anyone who made contributions to TRS prior to January 1, 2011. They remain participants of Tier I.

TIER I BENEFITS

A member qualifies for an age retirement annuity after meeting one of the following requirements: age 62 with five years of service credit; age 60 with 10 years; or age 55 with 20 years. If a member retires between the ages of 55 and 60 with fewer than 35 years of service, the annuity will be reduced at the rate of 0.50 percent for each month the member is under age 60. A member who is age 55 and has at least 20 but fewer than 35 years of service credit may use the Early Retirement Option (ERO) to avoid a discount for early retirement if retirement occurs within six months of the last day of service requiring contributions and if the member and employer both make a one-time contribution to TRS. The ERO program expired on July 1, 2016, eliminating the enhanced benefit and decreasing the member benefit by 0.4 percent. A member with fewer than five years of creditable service and service on or after July 1, 1947, is entitled to a single-sum benefit payable at age 65.

A retirement benefit is determined by the average of the four highest years of creditable earnings within the last 10 years of creditable service and the percentage of average salary to which the member is entitled. Most members retire under a formula that provides 2.2 percent of final average salary up to a maximum of 75 percent with 34 years of service. The 2.2 percent formula became effective July 1, 1998 but service earned before that date can be upgraded to the 2.2 formula with a member contribution. The cost of the upgrade can be reduced if members upgrade and continue teaching after 1998. A graduated formula applies to service earned before 1998

and provides a maximum benefit of 75 percent of average salary with 38 years of service.

Tier I members who contributed to TRS before July 1, 2005 receive a money purchase (actuarial) benefit if it provides a higher benefit than the 2.2 or graduated formulas. The 75 percent cap does not apply to the money purchase benefit.

Essentially all Tier I retirees receive an annual 3 percent increase in the current retirement benefit beginning January 1 following the attainment of age 61 or on January 1 following the member's first anniversary in retirement, whichever is later.

Disability and death benefits are provided.

If a member leaves covered employment, TRS will refund a member's retirement contributions upon request. The refund consists of actual contributions, excluding the 1 percent death benefit contribution.

As of July 1, 2016, Tier I members contribute 9.0 percent of their creditable earnings to TRS and an additional contribution to a retiree health insurance program that is not administered by TRS.

TIER II BENEFITS

Changes from Tier I include raising the minimum eligibility to draw a retirement benefit to age 67 with 10 years of service. A discounted annuity can be paid at age 62 with 10 years of service. The Tier II law caps creditable earnings and contributions used for retirement purposes at a level that is lower than the Social Security Wage Base. Tier II annual increases will be the lesser of 3 percent of the original benefit or ½ percent of the rate of inflation beginning January 1 following attainment of age 67 or on January 1 following the member's first anniversary in retirement, whichever is later.

The 2.2 retirement formula also applies to Tier II but the final average salary is based on the highest consecutive eight years of creditable service rather than the highest consecutive four years of salary. The single-sum benefit is also payable at age 65 to Tier II members with fewer than five years of service. Tier II members could not retire under ERO, and the money purchase (actuarial) benefit is not available to them.

Disability and refund provisions for Tier II are identical to those that apply to Tier I. Death benefits are payable under a formula that is different from Tier I.

As of July 1, 2016, Tier II members contribute 9.0 percent of their creditable earnings to TRS and an additional contribution to a retiree health insurance program that is not administered by TRS.

6. ACTUARIAL MEASUREMENTS

The Schedule of Changes in the Net Pension Liability, Schedule of the Net Pension Liability, and the Schedule of Contributions from Employers and Other Contributing Entities may be found in the Required Supplementary Information. Other schedules pertaining to the System’s funded status are in the Actuarial section.

Member, employer, and State contributions are statutorily defined by the Illinois Pension Code (40 ILCS 5/16), which is subject to amendment by the Illinois General Assembly and approval by the governor. Since July 1, 1995, State appropriations have been made through a continuing appropriation.

Effective July 1, 2005, member contributions increased from 9 percent to 9.4 percent of salary. These contributions are allocated as follows: 7.5 percent for retirement; 0.5 percent for post-retirement increases; 1 percent for death benefits; and 0.4 percent to help cover the cost of Early Retirement Option (ERO), which is refundable if the member does not retire using ERO or if the ERO program is terminated. Effective July 1, 2016, the member contribution decreased to 9.0 percent.

Employer contributions are made by or on behalf of employers from several sources. The State of Illinois provides the largest source of contributions through State appropriations from the Common School Fund. Employers also make contributions for the 2.2 benefit formula and for teachers who are paid from federal funds. Additionally, employers contribute their portion of the cost of ERO and any excess salary increase or sick leave costs due.

State funding law provides for a 50-year funding plan that includes a 15-year phase-in period.

Public Act 96-0043, which was effective July 15, 2009, requires TRS to use a five-year smoothing method for asset valuation beginning on June 30, 2009. It first affected State contribution requirements in FY11.

Administrative expenses are budgeted and approved by the TRS Board of Trustees. Funding for these expenses is included in the employer contribution, as determined by the annual actuarial valuation.

PENSION LIABILITY

The actuarial assumptions adopted in the June 30, 2016 actuarial valuation were used to calculate the June 30, 2016 total pension liability. Different assumptions were used to calculate the June 30, 2015 total pension liability. The investment return assumption for both years are based on a 2014 asset allocation study conducted by the TRS investment consultant and additional analyses in 2015 and 2016 conducted by the TRS actuary.

As of June 30, 2016, the assumption for future investment returns was 7.0 percent. As of June 30, 2015, it was 7.5 percent. GASB Statement No. 67 requires a different rate to be used to discount future benefit streams if assets are insufficient to cover payments to current participants. To calculate the June 30, 2016 total pension liability, the discount rate was 6.83 percent. To calculate the June 30, 2015 total pension liability, it was 7.47 percent.

The TRS actuary used the following assumed rates of returns by asset class, excluding 2.50 percent for the assumed rate of inflation and excluding investment expenses.

Expected Arithmetic Real Returns Over 20 Years

Asset Class	Allocation	Return
U.S. equities large cap	14.4%	6.94%
U.S. equities small/mid cap	3.6	8.09
International equities developed	14.4	7.46
Emerging market equities	3.6	10.15
U.S. bonds core	10.7	2.44
International debt developed	5.3	1.70
Real estate	15.0	5.44
Commodities (real return)	11.0	4.28
Hedge funds (absolute return)	8.0	4.16
Private Equity	14.0	10.63

If the plan's assets are not sufficient to cover all benefit payments to current plan members, GASB Statement No. 67 requires the discount rate to be a blended rate, which includes the long-term expected rate of return and a municipal bond rate (the S & P Municipal Bond 20-Year High Grade Rate Index) as of the end of the current fiscal year. Based on projections discussed below, the System is using a blended rate as the discount rate for the year ended June 30, 2016. The expected rate of return on investments is 7.0 percent after June 30, 2016 but the discount rate on benefit payments after June 30, 2016 is 6.83 percent.

TRS, with the assistance of the actuary, projected that the Plan's fiduciary net position will not be sufficient to provide for all benefit payments to current plan members. From FY2080 through FY2128, projected plan assets do not cover benefit payments, requiring the utilization of the June 30, 2016 S&P Municipal Bond 20-Year High Grade Rate Index of 2.85 percent for discounting benefit payments due during that 49-year period.

The calculation of the discount rate assumes that all statutorily required contributions are made for all years in the future which includes projected contributions from members, employers, and the State of Illinois (nonemployer contributing entity).

Estimated contributions from employers and the State of Illinois, of which the majority of the contributions (approximately 95 percent) are provided by the State of Illinois, are projected to be \$4.6 billion in 2018 and grow to \$10.6 billion in 2045 based on current statutory requirements for current members. Tier I's liability is partially funded by Tier II members, as the Tier II member contributions are higher than the cost of Tier II benefits. Due to this subsidy, contributions from future members in excess of the service cost are also included in the determination of the discount rate.

The actuarial cost method required for financial reporting purposes is the entry age normal method. For TRS, total pension liability (TPL) is developed and rolled forward to the fiscal year end based on a valuation date and member census one year prior. TPL is projected to June 30, 2016, based on a valuation date of June 30, 2015. Assets, referred to as plan fiduciary net position, are measured at fair value.

Net Pension Liability

	June 30, 2016
Total pension liability	\$124,187,003,384
Plan fiduciary net position	45,250,956,731
Net pension liability	<u>\$78,936,046,653</u>
Plan fiduciary net position as a percentage of the total pension liability	36.4%

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

	1% Decrease	Current	1% Increase
Discount rate	5.83%	6.83%	7.83%
Net pension liability	\$96,541,989,944	\$78,936,046,653	\$64,556,661,223

For the June 30, 2016 actuarial valuation, the Board of Trustees lowered the assumed rate of return from 7.5 percent to 7.0 percent and reduced the assumed inflation rate from 3.0 percent to 2.5 percent. The reduction in the inflation assumption also reduced assumptions for salary increases and Tier II salary caps and post-retirement cost-of-living increases. Most of the other actuarial assumptions are based on the actuarial experience analysis dated August 2015 that covered the period July 1, 2011 through June 30, 2014. Its recommendations were adopted in the June 30, 2015 actuarial valuation.

Additional Information Regarding Assumptions used for Financial Reporting Disclosure and the Actuarial Valuation follow:

Actuarial Valuation Date	June 30, 2016
Census Date:	June 30, 2015 with total pension liability projected to June 30, 2016
Actuarial Cost Method:	
For financial reporting purposes	Entry age normal
Amortization Method:	
For financial reporting purposes	Level percent of payroll
Remaining Amortization Period:	
For financial reporting purposes	30 years, open
Asset Valuation Method:	
For financial reporting purposes	Fair value as of valuation date
Actuarial Assumptions:	
Investment rate of return	7.0% on earnings after June 30, 2016
Real rate of investment return	4.5%
Projected salary increases	9.25% with 1 year of service to 3.25% with 20 or more years of service. Includes inflation and real wage growth (productivity) assumptions.
Group size growth rate	0%
Assumed inflation rate	2.5%
Real wage growth (productivity)	0.75%
Post-retirement increase	Tier I: 3%, compounded; Tier II: 1.25%, not compounded
Mortality table	RP - 2014 with future mortality improvements on a fully generational basis using projection table MP-2014.

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1. BASIS OF ACCOUNTING

The financial transactions of TRS are recorded using the economic resources measurement focus and the accrual basis of accounting. Member and employer contributions are recognized as revenues when due pursuant to statutory or contractual requirements. Benefits and refunds are recognized as expenses when they are due and payable in accordance with the terms of the plan.

2. USE OF ESTIMATES

The preparation of financial statements in conformity with accounting principles generally accepted in the

United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions to and deductions from net position during the reporting period. Actual results could differ from these estimates. TRS uses an actuary to determine the total pension liability for the defined benefit plan and to determine the actuarially-required contribution.

3. RISKS AND UNCERTAINTIES

TRS investments are diversified and include various investment securities. Investment securities are exposed to a variety of risk including credit, market and interest rate risk. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that value changes will occur in the near-term and such changes could materially affect the amounts reported in the Statement of Fiduciary Net Position.

4. NEW ACCOUNTING PRONOUNCEMENTS

GASB Statement No. 72, "Fair Value Measurement and Application," was established to provide guidance for determining a fair value measurement for financial reporting purposes. This statement also provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements. TRS implemented this statement for the year ended June 30, 2016.

GASB Statement No. 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions," was established to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits of OPEB) and improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. TRS is currently evaluating the financial statement impact of GASB Statement No. 75. If applicable, this statement will be implemented for the year ended June 30, 2018.

GASB Statement No. 76, "The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments," was established to identify the hierarchy of generally accepted accounting principles (GAAP). This hierarchy consists of the sources of accounting principles used to prepare financial statements of state and local governmental entities in conformity with GAAP and the framework for selecting these principles. This statement reduces the GAAP hierarchy to two categories of authoritative GAAP and addresses the use of authoritative and nonauthoritative literature in the event that the accounting treatment for a transaction or other event is not specified within the scope of authoritative GAAP. TRS implemented this statement for the year ended June 30, 2016.

GASB Statement No. 82, "Pension Issues," was established to improve consistency in the application of pension accounting and financial reporting requirements by addressing certain issues that were raised with respect to Statement No. 67, "Financial Reporting for Pension Plans," Statement No. 68, "Accounting and Financial Reporting for Pensions," and Statement No. 73, "Accounting and Financial Reporting for Pension and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68." This statement established accounting and financial reporting requirements for pensions provided to employees of state or local governmental employers. This statement also establishes financial reporting requirements for pension plans administered through trusts that meet the criteria in paragraph three of Statement No. 67. TRS early implemented this statement for the year ended June 30, 2016.

5. METHOD USED TO VALUE INVESTMENTS

TRS reports investments at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value for publicly traded real return funds, equities, foreign currency and exchange traded derivatives is determined by using the closing price listed on national securities exchanges as of June 30.

Fair value for the majority of fixed income securities and over-the-counter derivatives is determined primarily by using quoted market prices provided by independent pricing services. Short-term investments are generally reported at amortized cost, which approximates fair value. Appraisals are used to determine fair value on directly-owned real estate investments. Fair value for private equity investments, absolute return funds, non-publicly traded real return funds and partnership interests in real estate funds is determined by TRS staff and the general partners or investment managers in accordance with the provisions in the individual agreements. These agreements also require that an independent audit be performed on an annual basis.

6. CAPITAL ASSETS

Equipment is stated on the basis of historical cost. Depreciation is computed using the straight-line method based upon the estimated useful lives of the assets. Capital assets activity for the year ended June 30, 2016 was as follows:

	Beginning Balance	Additions/ Transfers In	Disposals/ Transfers Out	Ending Balance
Land	\$235,534	\$ -	\$ -	\$235,534
Mineral Lease Rights	2,643	-	-	2,643
Office building	7,665,431	338,530	-	8,003,961
Site improvement	1,088,635	-	-	1,088,635
Equipment and furniture	2,658,599	158,353	129,052	2,687,900
Software	1,722,016	269,980	-	1,991,996
	<u>13,372,858</u>	<u>766,863</u>	<u>129,052</u>	<u>14,010,669</u>
Less accumulated depreciation:				
Office building	5,852,668	428,568	-	6,281,236
Site improvement	609,776	72,812	-	682,588
Equipment and furniture	2,013,939	517,886	120,928	2,410,897
Software	948,745	81,210	-	1,029,955
	<u>9,425,128</u>	<u>1,100,476</u>	<u>120,928</u>	<u>10,404,676</u>
	<u>\$3,947,730</u>	<u>(\$333,613)</u>	<u>(\$8,124)</u>	<u>\$3,605,993</u>
The estimated useful lives for depreciable capital assets are as follows:				
Office building and site improvements (\$25,000 or greater capitalized)				40 years
Equipment and furniture (\$5,000 or greater capitalized)				3-10 years
Software (\$25,000 or greater capitalized)				3-5 years

7. COMPENSATED ABSENCES

When employment is terminated, TRS employees are entitled to receive compensation for all accrued unused vacation time and one-half of all unused sick leave earned through December 31, 1997. (Lump-sum payments for sick leave earned prior to January 1, 1984, are subject to a maximum of 60 days or 420 hours.) Sick time earned after December 31, 1997 is not compensable at termination.

At June 30, 2016, the System had a liability of \$1,958,269 for compensated absences. The liability is included in administrative and investment expenses payable on the Statement of Fiduciary Net Position. For non-investment staff, the increase or decrease in liability is reflected in the financial statements as administrative expense. For investment staff, the increase or decrease is reflected as investment expense. Compensated absences payable for the year ended June 30, 2016 was as follows:

	Beginning Balance	Additions	Reductions	Ending Balance
Compensated absences payable	\$2,030,085	\$1,048,454	\$1,120,270	\$1,958,269
The estimated amount due within one year is:			\$108,732	

8. RECEIVABLES

Receivables consist primarily of 1) member and employer contributions owed and yet to be remitted by the employing districts, 2) interest, dividends, real estate and private equity income owed to TRS, 3) appropriations not yet received from the State of Illinois as of June 30, and 4) pending investment sales.

TRS assesses penalties for late payment of contributions and may collect any unpaid amounts from the employing districts by filing a claim with the appropriate regional superintendent of education or the Office of the Comptroller against future state aid payments to the employer. TRS considers these amounts to be fully collectible.

9. RISK MANAGEMENT

TRS, as a component unit of the State of Illinois, provides for risks of loss associated with workers' compensation and general liability through the State's self-insurance program. TRS obtains commercial insurance for fidelity, surety and property. No material commercial insurance claims have been filed in the last three fiscal years.

C. CASH

Custodial credit risk for deposits is the risk that, in the event of a bank failure, TRS's deposits may not be returned. TRS has a formal policy to address custodial credit risk. The policy is designed to minimize custodial credit risk through proper due diligence of custody financial institutions and investment advisors; segregate safekeeping of TRS assets; establish investment guidelines; and work to have all investments held in custodial accounts through an agent, in the name of custodian's nominee, or in a corporate depository or federal book entry account system. For those investment assets held outside of the custodian, TRS will follow the applicable regulatory rules.

The non-investment bank balance and carrying amount of TRS's deposits was \$40,637,848 at June 30, 2016. Of the bank balance, \$40,637,723 was on deposit with the State treasurer at June 30, 2016. State treasurer deposits are in an internal investment pool collateralized at a third party custodial bank and are not subject to custodial credit risk. Certain investments of TRS with maturities of 90 days or less would be considered cash equivalents; these consist of bank-sponsored, short-term investment funds, commercial paper and repurchase agreements. For financial statement presentation and investment purposes, TRS reports its cash equivalents as short-term investments in the Statement of Fiduciary Net Position. Included in the reported balances is the State Street Global Advisors Short-Term Investment Fund (STIF) with a value of \$935,274,279 at June 30, 2016. The STIF fund has an average credit quality rating of A1P1 and a weighted average maturity of 24.0 days.

For purposes of this disclosure, foreign currency held by investment managers is considered a deposit. However, for financial statement presentation and investment purposes, TRS considers foreign currency an investment asset. Uncollateralized foreign currency subject to custodial credit risk was \$103,219,472 at June 30, 2016.

D. INVESTMENTS

1. INVESTMENT POLICIES

Through the Board of Trustees, as authorized in the Illinois Pension Code, TRS serves as fiduciary for the members' trust funds and is responsible for investment of those funds by authority of the "prudent person rule." This rule establishes a standard for all fiduciaries by specifying fiduciary responsibility with regard to the members' trust funds.

LONG-TERM ASSET ALLOCATION

The Board of Trustees has the responsibility of establishing and maintaining broad policies and objectives for all aspects of the System's operations, including the allocation of invested assets. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully-funded status for the benefits provided through the pension plan. The following table summarizes the Board-adopted, long-term allocation targets in effect as of June 30, 2016.

Long-term Asset Allocation Policy Mix	
Global equity	36%
Global fixed income	16
Real estate	15
Private equity	14
Real return	11
Absolute return	8
Short-term	0
Total	<u>100%</u>

2. INVESTMENT RISK

CUSTODIAL CREDIT RISK

Custodial credit risk for investments is the risk that, in the event of a financial institution failure, TRS would not be able to recover the value of the investments in the possession of an outside party. The TRS investment policy adopted by the Board of Trustees includes a formal process to address custodial credit risk. This policy requires the custodian to provide safekeeping of the System's assets in segregated accounts and to have the assets registered in TRS's name, custodian's nominee name or in a corporate depository or federal book entry system.

CONCENTRATION OF CREDIT RISK

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of an investment in any one issuer. Investment parameters established in the Investment Management Agreements with external managers restrict holdings to no more than 5 percent of a single issuer within an account. The TRS portfolio has no investments in any one issuer that comprise 5 percent or more of the System's total investments or fiduciary net position.

CREDIT RISK

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to TRS. Credit risk exposure is dictated by each investment manager's agreement. Each portfolio is managed in accordance with investment guidelines that are specific as to permissible credit quality ranges, exposure levels within individual security quality rating tiers and/or the average credit quality of the overall portfolio. Most guidelines allow managers to hold bonds rated Caa2 or better. However, in circumstances where position downgrades occur, investment managers have been given permission to hold securities below this rating due to circumstances such as a higher peer group rating from another nationally-recognized statistical rating organization, the investment manager's internal ratings or other mitigating factors.

As of June 30, 2016, TRS held the following fixed income investments with respective Moody's quality ratings or equivalent rating. Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk.

Quality Rating	Corporate Debt Securities	Foreign Debt Securities	U.S. Agency Obligations	U.S. Government Backed		Commingled Funds	Securities Lending Collateral	Total
				Mortgages	Municipals			
Aaa	\$315,980,214	\$201,324,902	\$331,249,309	\$811,200,590	\$15,275,590	\$ -	\$ -	\$1,675,030,605
Aa1	30,688,727	278,574,179	16,499,769	-	12,200,016	-	-	337,962,691
Aa2	23,911,795	219,287,177	-	-	3,098,738	-	-	246,297,710
Aa3	37,415,581	20,700,551	-	-	14,315,148	-	-	72,431,280
A1	142,105,421	53,983,135	-	-	4,877,560	61,172,356	-	262,138,472
A2	115,131,076	43,149,697	-	-	4,508,390	16,667,002	50,000,000	229,456,165
A3	291,110,317	314,575,324	-	-	2,039,765	112,538,846	-	720,264,252
Baa1	254,095,745	30,351,939	-	-	211,042	-	-	284,658,726
Baa2	274,502,442	299,753,157	-	-	-	60,136,763	-	634,392,362
Baa3	310,040,767	311,665,051	-	-	-	-	-	621,705,818
Ba1	122,498,961	130,013,511	-	-	-	-	-	252,512,472
Ba2	106,474,636	285,889,599	-	-	-	38,469,800	-	430,834,035
Ba3	133,258,641	36,192,818	-	-	-	-	-	169,451,459
B1	109,737,919	104,684,571	-	-	-	952,026,570	-	1,166,449,060
B2	30,796,602	20,296,632	-	-	-	79,024,559	-	130,117,793
B3	60,016,387	134,828,414	-	-	-	35,857,026	-	230,701,827
Caa1	27,738,213	-	-	-	-	-	-	27,738,213
Caa2	9,362,102	5,094,831	-	-	-	-	-	14,456,933
Caa3	13,292,192	58,966,000	-	-	-	-	-	72,258,192
Ca	6,754,465	2,963,956	-	-	-	-	-	9,718,421
C	5,590,013	-	-	-	-	-	-	5,590,013
Not available	-	-	-	-	-	905,591,730	-	905,591,730
Not rated	14,767,186	23,579,723	-	-	-	-	-	38,346,909
Withdrawn	852,708	66	-	-	-	-	-	852,774
Total credit risk, bonds, corporate notes and government obligations	2,436,122,110	2,575,875,233	347,749,078	811,200,590	56,526,249	2,261,484,652	50,000,000	8,538,957,912
U.S. Treasuries								1,398,195,524
Total bonds, corporate notes & government obligations	2,436,122,110	2,575,875,233	347,749,078	811,200,590	56,526,249	2,261,484,652	50,000,000	9,937,153,436

INTEREST RATE RISK

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. TRS's fixed income investments are managed in accordance with operational guidelines that are specific as to the degree of interest rate risk that can be taken. TRS manages the interest rate risk within the portfolio using various methods including effective duration, option adjusted duration, average maturity and segmented time distribution, which reflect the total fair value of investments maturing during a given time period.

The segmented time distribution of the various investment types of TRS debt securities as of June 30, 2016 is as follows:

Type	Maturity in Years						Other*
	2016 Fair Value	Less Than 1 year	1 to 5 years	5 to 10 years	10 to 20 years	More Than 20 years	
U.S. treasuries	\$711,095,711	\$27,474,336	\$250,645,027	\$174,395,253	\$13,021,863	\$245,559,232	\$ -
U.S. federal agencies	347,749,078	55,039,445	288,790,419	2,753,790	1,048,936	116,488	-
U.S. government index-linked bonds	687,099,813	42,441,433	308,739,391	203,314,172	58,137,762	74,467,055	-
U.S. government-backed mortgages	811,200,590	505,718,421	11,076,383	60,276,242	66,277,935	167,851,609	-
Municipals	56,526,249	-	3,721,822	16,727,702	11,217,726	24,858,999	-
Asset-backed securities	223,987,181	200,575	109,994,615	32,735,082	52,697,503	28,359,406	-
Commercial mortgage-backed securities	77,541,311	-	-	-	24,559,079	52,982,232	-
Collateralized mortgage obligations	155,081,390	-	4,387,316	22,174,013	73,403,262	55,116,799	-
Commingled funds (U.S. & international)**	2,261,484,652	61,172,356	398,743,173	704,436,814	-	-	1,097,132,309
Corporate convertible bonds	14,417,747	-	8,328,984	885,504	1,451,712	3,751,547	-
Domestic credit obligations	1,965,094,481	251,909,507	794,225,255	719,703,129	52,769,914	146,486,676	-
Foreign debt/corporate obligations	2,575,875,233	489,223,897	752,623,644	813,654,637	235,292,827	285,080,228	-
Total bonds, corporate notes and government obligations	9,887,153,436	1,433,179,970	2,931,276,029	2,751,056,338	589,878,519	1,084,630,271	1,097,132,309
Derivatives	(62,716,360)	667,771	(3,274,050)	(32,325,158)	(248,899)	(27,536,024)	-
Securities-lending collateral	50,000,000	50,000,000	-	-	-	-	-
Total bonds, corporate notes, government obligations, securities lending collateral and derivatives	\$9,874,437,076	\$1,483,847,741	\$2,928,001,979	\$2,718,731,180	\$589,629,620	\$1,057,094,247	\$1,097,132,309

* Maturity date is not available or applicable.

** Weighted average maturity figures were used if available to plot the commingled funds within the schedule.

FOREIGN CURRENCY RISK

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. TRS's currency risk exposure, or exchange rate risk, is primarily derived from its holdings in foreign currency-denominated equity, fixed income and derivative investments, as well as foreign currency. According to TRS's Investment Policy and investment manager agreements, international equity and global fixed income managers, at their discretion, may or may not hedge the portfolio's foreign currency exposures with currency forward contracts or options, depending upon their views on a specific country or foreign currency relative to the U.S. dollar. TRS's exposure to foreign currency risk in U.S. dollars as of June 30, 2016 is as follows:

Currency	Foreign Currency	Equities	Fixed Income	Derivatives	Total
Argentine Peso	\$ -	\$ -	\$2,791,914	\$ -	\$2,791,914
Australian Dollar	4,132,773	319,461,831	45,739,168	214,518	369,548,290
Brazilian Real	1,346,206	100,639,195	237,664,412	(235,306)	339,414,507
British Pound	11,542,003	1,100,280,718	262,372,367	(56,592)	1,374,138,496
Canadian Dollar	3,599,362	378,891,676	36,861,914	(279,220)	419,073,732
Chilean Peso	261,336	5,797,039	-	-	6,058,375
Chinese Yuan Renminbi	-	-	-	-	-
Columbia Peso	707,919	219,653	30,209,661	-	31,137,233
Czech Koruna	1,816	1,658,243	-	-	1,660,059
Danish Krone	1,612,466	104,481,903	21,946,232	-	128,040,601
Egyptian Pound	330,126	1,653,954	-	-	1,984,080
Emirati Dirham	4,208	8,065,456	-	-	8,069,664
Euro	25,035,699	1,544,505,636	220,020,234	(240,706)	1,789,320,863
Ghana Cedi	12,880	-	22,265,935	-	22,278,815
Hong Kong Dollar	1,101,305	523,867,811	-	2,146,144	527,115,260
Hungarian Forint	116,355	6,705,227	-	-	6,821,582
Indian Rupee	1,355,970	139,594,610	1,661,178	-	142,611,758
Indonesian Rupiah	234,519	68,148,330	104,415,722	-	172,798,571
Israeli Shekel	376,405	36,835,295	-	(182,931)	37,028,769
Japanese Yen	20,028,327	1,217,553,763	23,846,323	(1,072,851)	1,260,355,562
Malaysian Ringgit	725,997	32,680,024	67,959,382	-	101,365,403
Mexican Peso	1,316,241	83,229,762	227,596,909	67,954	312,210,866
Moroccan Dirham	506	-	-	-	506
New Taiwan Dollar	4,738,550	198,625,544	-	(26,060)	203,338,034
New Zealand Dollar	266,715	30,111,454	55,608,782	-	85,986,951
Norwegian Krone	1,903,949	41,689,017	16,655,351	-	60,248,317
Philippine Peso	90,432	28,969,809	45,610,062	-	74,670,303
Polish Zloty	107,158	16,144,866	18,930,391	3,377	35,185,792
Qatari Rial	2,759	3,371,081	-	-	3,373,840
Russian Ruble	-	5,413,887	1,243,913	-	6,657,800
Serbian Dinar	449,995	-	31,752,793	-	32,202,788
Singapore Dollar	1,025,398	141,368,659	17,692,496	-	160,086,553
South African Rand	3,014,466	110,267,434	-	(51,216)	113,230,684
South Korean Won	2,589,647	268,914,548	116,547,160	(239,271)	387,812,084
Sri Lanka Rupee	1,716	-	4,934,099	-	4,935,815
Swedish Krona	823,957	157,520,512	12,899,237	-	171,243,706
Swiss Franc	4,396,219	544,160,388	-	-	548,556,607
Thailand Baht	8,323,119	95,340,882	-	-	103,664,001
Turkish Lira	1,736,964	29,069,805	3,233,947	141	34,040,857
Ukraine Hryvnia	(93,991)	-	-	-	(93,991)
Uruguayo Peso	-	-	42,768,701	-	42,768,701
Total subject to foreign currency risk	103,219,472	7,345,238,012	1,673,228,283	47,981	9,121,733,748
Investments in international securities payable in U.S. dollars	-	1,269,488,195	919,447,568	(4,972,917)	2,183,962,846
Total international investment securities (including domestic securities payable in foreign currency)	103,219,472	8,614,726,207	2,592,675,851	(4,924,936)	11,305,696,594
Domestic investments (excluding securities payable in foreign currency)	-	7,468,799,659	7,294,477,585	(57,791,424)	14,705,485,820
Total fair value	\$103,219,472	\$16,083,525,866	\$9,887,153,436	(\$62,716,360)	\$26,011,182,414

In addition to the previous table, the fair value of TRS's investments in foreign currency denominated real estate and private equity funds was \$39,702,787 and \$451,892,722 at June 30, 2016, respectively. Currencies included euro, British pound, Canadian dollar, Japanese yen and South Korean won.

3. SECURITIES LENDING PROGRAM

The Board of Trustees' policies permit TRS to use investments to enter into securities lending transactions, which are loans of securities to broker-dealers or other approved entities. The borrower of a security must post collateral in excess of the fair value of the security. TRS receives both cash and non-cash (*i.e.*, securities) collateral. Eligible forms of collateral include cash consisting of U.S. dollar, euro, sterling and yen, U.S. treasuries, government agency securities, certificates of deposit, letters of credit issued by approved banks and specific types of corporate debt obligations and common stock. Initial collateral received from the borrower must be at least 102 percent of the fair value of all loaned securities except non-U.S. securities which require 105 percent. Securities on loan are marked to market daily and collateral for the loan is required not to fall below minimum levels established by TRS and its lending agent. Agreements are in place for TRS to return the collateral in exchange for the original securities upon demand or when the security is no longer borrowed. TRS does not have the authority to pledge or sell collateral securities, without borrower default; as such, the collateral security or non-cash collateral is not reported in TRS's financial statements in accordance with GASB Statement No. 28.

As of June 30, 2016, Citibank, N.A. served as the third-party securities lending agent for the fixed income, domestic equity and international equity lending programs. In this capacity, TRS reduces credit risk by allowing Citibank to lend securities to a diverse group of dealers on behalf of TRS. At fiscal-year end, TRS has no credit risk exposure to borrowers because the amount TRS owes the borrowers exceeds the amount the borrowers owe TRS. The contract with TRS's lending agent requires the agent to indemnify TRS if the borrowers fail to

return the securities (and if the collateral is inadequate to replace the securities lent) or fail to pay TRS for income distributions by the securities issuers while the securities are on loan. Securities on loan can be recalled on demand by TRS or the borrower can return the loaned securities at any time, although the weighted average term of the loans is 35 days. Since loans are terminable at will, the maturity of loans generally does not match the maturity of collateral investments. TRS may enter into term loan agreements, which are evaluated on an individual basis. As of June 30, 2016, there was one 95-day term loan with a loan market value of \$282,262,005.

The cash collateral received is invested in a separate account managed by the lending agent, with a weighted average maturity of 54 days at June 30, 2016. There were no significant violations of legal or contractual provisions, and there were no borrower or lending agent default losses known to the securities lending agent.

As of June 30, 2016, TRS had outstanding loaned investment securities with a fair value of \$3,295,327,441 against which it had received cash and non-cash collateral with a fair value of \$3,410,965,856. The securities on loan remain on TRS's Statement of Fiduciary Net Position in their respective investment categories. As of June 30, 2016, TRS cash collateral received and reported as securities lending obligation on the Statement of Fiduciary Net Position totaled \$3,134,027,352. The fair value of reinvested cash collateral reported as securities lending collateral was \$3,134,036,175. The change in fair value of the reinvested cash collateral is included as net appreciation/depreciation within investment income in the Statement of Changes in Fiduciary Net Position. The cash collateral received and reinvested includes securities lending collateral with the Office of the Illinois State Treasurer. Further detail on the State Treasurer amounts can be obtained by calling the Office of the Illinois State Treasurer at (217) 558-1250 or by visiting www.treasurer.il.gov.

Income earned and costs related to securities lending activities are reported on the statements of changes in net position. For FY16, the system earned net income of \$17,072,284 from securities lending. Additional detail regarding securities lending activity is included within the investments section.

4. DERIVATIVES

TRS, through its investment managers, invests in derivative securities as a fundamental part of the overall investment process. All TRS derivatives are considered investments and the fair value is reported in the Statement of Fiduciary Net Position. TRS does not directly invest in derivatives but allows certain external managers to utilize these instruments within the investment portfolio for a variety of purposes. TRS managers may hold derivatives to hedge investment transactions accounted for at fair value. The term “hedge” in this context denotes the broad economic activity of entering into contracts intended to offset risks associated with certain transactions, such as the changes in interest rates on investments in debt securities, commodities or instruments denominated in a foreign currency. Assets and liabilities that are measured at fair value, such as investments, do not qualify as hedgeable items and do not meet the requirements for hedge accounting.

A derivative security is an investment whose return depends upon the value of another financial instrument or security such as stocks, bonds, commodities, or a market index. The derivative investments in TRS’s portfolio are used primarily to enhance performance and reduce volatility. TRS’s investments in derivatives are not leveraged through borrowing. In the case of an obligation to purchase (long a financial future or call option), the full value of the obligation is primarily held in cash or cash equivalents. For obligations to sell (short a financial future or put option), the reference security is held in the portfolio.

To varying degrees, derivative transactions involve credit risk, sometimes known as default or counterparty risk, and market risk. Credit risk is the

possibility that a loss may occur because a party to a transaction fails to perform according to the established contract terms. To eliminate credit risk, derivative securities can be acquired through a clearinghouse that guarantees delivery and accepts the risk of default by either party. The Commodity Futures Trading Commission (CFTC) mandates that any entity that trades or is counterparty to OTC (over-the-counter) derivatives must have a Global Market Entity Identifier (GMEI). TRS is registered and maintains a legal entity identifier.

Market risk is the possibility that a change in interest, currency, or other pertinent market rates will cause the value of a financial instrument to decrease or become more costly to settle. Imposing limits on the types, amounts, and degree of risk that investment managers may undertake restricts the market risk associated with the constantly fluctuating prices of derivatives. These limits are approved by the Board of Trustees and senior management, and the derivative positions of the investment managers are reviewed on a regular basis to monitor compliance.

As of June 30, 2016, derivative investments in the TRS investment portfolio included currency forward contracts, rights, warrants, futures, options, swaps, and swaptions. Within the financial statements, currency forward contracts are reflected as investment payables/receivables, rights and warrants are reflected as equities, and all futures, options, swaps and swaptions are classified as derivatives. The change in fair value of derivative investments is included in investment income on the Statement of Changes in Fiduciary Net Position.

The following tables summarize the derivatives held within the TRS investment portfolio and the change in fair value of derivative investments, realized and unrealized, during the fiscal year. The notional amounts shown represent TRS’s financial exposure to these instruments in U.S. dollars. Investments in limited partnerships and commingled funds may include derivatives that are not covered in the following disclosure.

As of June 30, 2016, the TRS investment portfolio held the following derivatives.

Investment Derivatives	Fair Value at June 30, 2016	Change in Fair Value	Shares/Par	Notional
Rights	\$392,678	(\$548,205)	6,271,805	\$6,271,805
Warrants	20,512,077	(539,585)	3,734,745	3,734,745
Currency forwards	(35,206,878)	(50,805,587)	-	-
Equity futures long	-	(28,532,298)	132,395,465	99,039,595
Equity futures short	-	3,354,230	(14,362)	(46,827,564)
Fixed income futures long	-	28,392,935	336,178,747	414,352,916
Fixed income futures short	-	(32,165,439)	(1,219,512,674)	(1,302,219,212)
Commodity futures long	-	(11,400,809)	4,974,010	18,661,788
Commodity futures short	-	12,157,066	(2,412,125)	(29,438,309)
Equity options purchased	-	(808,050)	-	-
Equity options written	-	57,346	-	-
Currency forward options purchased	3,338,634	123,057	216,788,872	72,839,153
Currency forward options written	(496,724)	2,947,739	(69,264,472)	20,657,507
Options on futures purchased	-	(378,801)	285,597,888	23,079,518
Options on futures written	-	1,070,160	(69,920,893)	8,579,734
Swaptions purchased	4,527,513	(6,319,239)	1,279,756,589	25,714,572
Swaptions written	(4,474,073)	5,268,712	(622,407,723)	44,165,539
Inflation options	(116,309)	703,714	(146,643,507)	3,498,280
Credit default swaps buying protection	(401,413)	(175,607)	12,500,000	12,920,510
Credit default swaps selling protection	(1,919,914)	1,394,852	234,133,763	232,284,335
Index and variance swaps	1,487,863	(4,027,738)	19,932,967	22,755,967
Pay fixed interest rate swaps	(67,563,460)	(108,317,228)	1,257,704,472	1,258,000,241
Receive fixed interest rate swaps	3,914,693	2,173,658	139,241,429	143,226,336
Pay fixed inflation swaps	(5,797,484)	(3,016,521)	219,034,663	213,237,552
Receive fixed inflation swaps	4,784,314	6,347,179	77,835,525	82,725,959
Grand total	<u>(\$77,018,483)</u>	<u>(\$183,044,459)</u>		<u>\$1,327,260,967</u>

CURRENCY FORWARD CONTRACTS

Objective: Currency forward contracts are agreements to exchange one currency for another at an agreed upon price and settlement date. TRS's investment managers use these contracts primarily to hedge the currency exposure of its investments.

Terms: Currency forward contracts are two-sided contracts in the form of either forward purchases or forward sales. Forward purchases obligate TRS to purchase specific currency at an agreed upon price. Forward sales obligate TRS to sell specific currency at an agreed upon price. As of June 30, 2016, TRS had currency forward purchase or sale contracts for 32 different currencies with various settlement dates.

Fair Value: As of June 30, 2016, TRS's open currency forward contracts had a net fair value (unrealized loss) of \$35,206,878.

FINANCIAL FUTURES

Objective: Financial futures are agreements to purchase or sell a specific amount of an asset at a specified delivery or maturity date for an agreed upon price. These derivative securities are used to improve yield, adjust the duration of the fixed income portfolio, protect against changes in interest rates, or replicate an index.

Terms: Futures contracts are standardized and traded on organized exchanges, thereby minimizing TRS's credit risk. As the daily market value of the futures contract varies from the original contract price, a gain or loss is recognized and paid to, or received from, the clearinghouse. As of June 30, 2016, TRS had outstanding futures contracts with a notional value, or exposure, of (\$846,430,786). Notional values do not represent the actual values in the Statement of Fiduciary Net Position. The contracts have various expiration dates through June 2018.

Fair Value: Gains and losses on futures contracts are settled daily based on the change of the index or commodity price for the underlying notional value. Because of daily settlement, the futures contracts have no fair value. TRS's realized loss on futures contracts was \$28,194,315 during FY16.

Type	Number of Contracts	Notional Principal
Commodity Futures		
Commodity futures - long	371	\$18,661,788
Commodity futures - short	(446)	(29,438,309)
Equity Futures		
U.S. stock index futures - long	16	667,760
International equity index futures - long	3,056	98,371,835
International equity index futures - short	(1,994)	(46,827,564)
Fixed Income/Cash Equivalent Futures		
Fixed income index futures - long	1,984	275,439,867
Fixed income index futures - short	(1,820)	(313,936,313)
International fixed income index futures - long	155	24,937,611
International fixed income index futures - short	(376)	(68,360,737)
Cash equivalent (eurodollar) futures - long	459	113,975,438
Cash equivalent (eurodollar) futures - short	(3,707)	(919,922,162)
Total futures (net)	<u>(2,302)</u>	<u>(\$846,430,786)</u>

FINANCIAL OPTIONS

Objective: Financial options are agreements that give one party the right, but not the obligation, to buy or sell a specific amount of an asset for a specified price, called the strike price, on or before a specified expiration date. The owner (buyer) of an option has all the rights, while the seller (writer) of an option has the obligations of the agreement. As a writer of financial options, TRS receives a premium at the outset of the agreement and bears the risk of an unfavorable change in the price of the financial instrument underlying the option.

Premiums received are recorded as a liability when the financial option is written. The Options Clearing Corporation (OCC) performs much the same function for options markets as the clearinghouse does for futures markets.

Terms: As of June 30, 2016, the TRS investment portfolio held currency forward options with notional value of \$93,496,660, inflation options with notional value of \$3,498,280, and options on futures with underlying notional value of \$31,659,252. Contractual principal/notional values do not represent the actual values in the Statement of Fiduciary Net Position. The contracts have various expiration dates through June 2035.

Fair Value: Fluctuations in the fair value of financial options are recognized in TRS's financial statements as incurred rather than at the time the options are exercised or expire. As of June 30, 2016, the fair value of all option contracts, gross of premiums received, was \$2,725,601. The fair value represents the amount needed to close all positions as of that date. The following table presents the aggregate contractual principal (notional value) of outstanding contracts as of June 30, 2016. Notional principal amounts are often used to express the volume of these transactions but do not reflect the extent to which positions may offset one another. Options on futures represent the corresponding futures exposure.

Type	Number of Contracts	Notional Principal
Currency Forward Options		
Currency forward call options - purchased	5	\$9,349,794
Currency forward call options - written	9	9,478,566
Currency forward put options - purchased	21	63,489,359
Currency forward put options - written	10	11,178,941
Inflation Options		
Inflation call options - purchased	2	1,476,191
Inflation call options - written	6	1,952,490
Inflation put options - written	10	69,599
Options on Futures		
Fixed income call options on futures (non-dollar)- purchased	52	4,082,157
Fixed income call options on futures (non-dollar)- written	(214)	5,377,166
Fixed income put options on futures (non-dollar)- purchased	1,692	18,997,361
Fixed income put options on futures (non-dollar)- written	(311)	3,079,598
Commodity call options on futures USD - written	(3,000)	122,970

SWAPTIONS

Objective: Swaptions are options on swaps that give the purchaser the right, but not the obligation, to enter into a swap at a specific date in the future. An interest-rate swaption gives the buyer the right to pay or receive a specified fixed interest rate in a swap in exchange for a floating rate for a stated time period. TRS has both written and purchased interest rate swaptions in its portfolio. In a written call swaption, the seller (writer) is obligated to pay a fixed rate in exchange for a floating rate for a stated period of time and in a written put swaption, the seller is obligated to receive a fixed rate in exchange for a floating rate if the swaption is exercised. A purchased (long) call swaption gives the buyer the right to receive a fixed rate in exchange for a floating rate for a stated period of time while a purchased (long) put swaption gives the buyer the right to pay a fixed rate in exchange for a floating rate if the swaption is exercised.

The TRS investment portfolio also holds credit default swaptions. A credit default swaption gives the holder the right, but not the obligation to buy (call) or sell (put) protection on a specified entity or index for a specified future time period.

As the writer of a swaption, TRS receives a premium at the outset of the agreement. Premiums are recorded as a liability when the swaption is written. As the purchaser of a swaption, TRS pays an upfront premium.

Terms: As of June 30, 2016, TRS had outstanding written call swaption exposure of \$35,079,882, written put swaption exposure of \$9,085,657, purchased call swaption exposure of \$22,001,460, and purchased put swaption exposure of \$3,713,112. The contracts have various maturity dates through March 2019. Exposure amounts for swaptions do not represent the actual values in the Statement of Fiduciary Net Position.

Fair Value: Fluctuations in the fair value of swaptions are recognized in TRS's financial statements as incurred rather than at the time the swaptions are exercised or when they expire. As of June 30, 2016, the fair value of swaption contracts was \$53,440.

CREDIT DEFAULT SWAPS/INDEX SWAPS

Objective: Credit default swaps are financial instruments used to replicate the effect of investing in debt obligations of corporate bond issuers as a means to manage bond exposure, effectively buying or selling insurance protection in case of default. Credit default swaps may be specific to an individual security or to a specific market sector (index swaps). The risk of the credit default/index swap is comparable to the credit risk of the underlying debt obligations of issuers that comprise the credit default/index swap, with the primary risk being counterparty risk. The owner/buyer of protection (long the swap) pays an agreed upon premium to the seller of protection (short the swap) for the right to sell the debt at a previously agreed upon

value in the event of a default by the bond issuer. The premium is paid periodically over the term of the swap or until a credit event of the bond issuer occurs. In the event of a default, the swap is called, and the seller of protection makes a payment to the buyer, which is usually based on a fixed percentage of total par.

Purchased credit default swaps decrease credit exposure (buying protection), providing the right to sell debt to the counterparty in the event of a default. A buyer of credit protection against a basket of securities pays an upfront or periodic payment until either maturity or default. In the event of a default, the buyer receives a lump-sum payment. If no default occurs, the buyer loses only the premium paid.

Written credit default swaps increase credit exposure (selling protection), obligating the portfolio to buy debt from counterparties in the event of a default. A seller of credit protection against a basket of securities receives an upfront or periodic payment to compensate against potential default events. If a default event occurs, the seller must pay the buyer the full notional value of the obligation in exchange for the obligation. If no default occurs, the seller will have earned the premium paid.

Terms: As of June 30, 2016, TRS had credit default/index swaps in its portfolio with various maturity dates through May 2063. The notional values as of June 30, 2016 included purchased credit default swaps (buying protection) of \$12,920,510, written credit default swaps (selling protection) of \$232,284,335 and index swaps of \$22,755,967.

Fair Value: The fair value of credit default swaps, including index swaps, held by TRS was (\$833,464) as of June 30, 2016. This represents the amount due to or (from) TRS under the terms of the counterparty agreements.

INTEREST RATE SWAPS

Objective: Interest rate swaps are agreements between parties to exchange a set of cash flow streams over a period of time. In the most common type of interest rate swap arrangement, one party agrees to pay fixed interest payments on designated dates to a counterparty who, in turn, agrees to make return interest payments that float with some reference rate. Long positions (receive fixed) increase exposure to long-term interest rates; short positions (pay fixed) decrease interest rate/risk exposure.

Terms: As of June 30, 2016, TRS held interest rate swaps in various currencies with various expiration/maturity dates ranging from 2016 to 2047. Swap agreements typically are settled on a net basis, with a party receiving or paying only the net amount of the fixed/floating payments. Payments may be made at the conclusion of a swap agreement or periodically during its term.

Fair Value: The table below presents the fair value of TRS's interest rate swap exposure as of June 30, 2016.

	As of June 30, 2016
Receive floating/pay fixed	(\$67,563,460)
Receive fixed/pay floating	3,914,693

INFLATION-LINKED SWAPS

Objective: Inflation-linked swaps are agreements where a fixed payment is exchanged for a variable payment linked to an inflation index. These swaps can protect against unfavorable changes in inflation expectations and are used to transfer inflation risk from one counterparty to another.

Terms: : As of June 30, 2016, TRS was a party to inflation-linked swaps denominated in various currencies with expiration dates through December 2044. Inflation-linked swaps initially have no net value; the value of the swap's outstanding payments will change as interest and inflation rates change. The value may be either positive or negative.

Fair value: The fair value of the inflation-linked swaps held by TRS was (\$1,013,170) as of June 30, 2016.

DERIVATIVE INTEREST RATE RISK

Interest rate risk for derivative securities is disclosed in the Financial Note D. 2. Both interest rate and inflation rate swaps have fair values that are sensitive to interest rate changes.

TRS had the following interest rate and inflation swaps at June 30, 2016.

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/16
Pay Fixed Interest rate swaps:						
Interest Rate Swap USD	41,860,000	\$41,914,454	3 month LIBOR	0.93%	10/17/2017	(\$126,802)
Interest Rate Swap USD	26,400,000	26,400,000	3 month LIBOR	1.00	4/5/2018	(60,449)
Interest Rate Swap GBP	21,920,000	29,302,658	6 month LIBOR	1.00	9/21/2018	(294,210)
Interest Rate Swap USD	173,100,000	173,147,228	3 month LIBOR	1.75	12/16/2018	(4,119,447)
Interest Rate Swap USD	143,000,000	143,000,000	3 month LIBOR	1.50	6/15/2019	(967,817)
Interest Rate Swap GBP	10,500,000	14,065,098	6 month LIBOR	2.05	9/23/2019	(685,473)
Interest Rate Swap EUR	2,000,000	2,174,619	6 month EURIBOR	0.43	12/11/2019	(46,921)
Interest Rate Swap USD	9,700,000	9,702,646	3 month LIBOR	2.00	12/16/2019	(379,540)
Interest Rate Swap USD	23,500,000	23,506,412	3 month LIBOR	2.00	12/16/2020	(1,084,262)
Interest Rate Swap USD	12,900,000	12,900,000	3 month LIBOR	1.45	6/28/2021	(42,792)
Interest Rate Swap GBP	3,100,000	4,144,080	6 month LIBOR	1.25	9/21/2021	(125,898)
Interest Rate Swap GBP	5,900,000	7,904,109	6 month LIBOR	2.00	3/18/2022	(591,266)
Interest Rate Swap USD	55,000,000	55,015,006	3 month LIBOR	2.25	12/16/2022	(3,930,427)
Interest Rate Swap USD	25,100,000	25,107,121	3 month LIBOR	2.00	6/15/2023	(1,432,013)
Interest Rate Swap USD	71,200,000	71,200,000	3 month LIBOR	1.75	12/21/2023	(2,439,247)
Interest Rate Swap USD	39,970,000	39,970,700	3 month LIBOR	2.79	3/31/2024	(4,728,243)
Interest Rate Swap USD	32,860,000	32,908,616	3 month LIBOR	2.73	7/7/2024	(3,820,708)
Interest Rate Swap EUR	2,000,000	2,221,593	6 month EURIBOR	1.00	12/15/2024	(149,091)
Interest Rate Swap USD	13,890,000	13,907,153	3 month LIBOR	1.91	1/22/2025	(732,536)
Interest Rate Swap USD	17,360,000	17,380,616	3 month LIBOR	1.97	1/23/2025	(994,931)
Interest Rate Swap USD	10,240,000	10,251,719	3 month LIBOR	1.97	1/27/2025	(589,859)
Interest Rate Swap USD	2,560,000	2,562,860	3 month LIBOR	1.94	1/29/2025	(139,854)
Interest Rate Swap USD	2,170,000	2,172,340	3 month LIBOR	1.94	1/30/2025	(119,308)
Interest Rate Swap USD	3,420,000	3,423,508	3 month LIBOR	1.82	2/3/2025	(152,282)
Interest Rate Swap EUR	1,400,000	1,554,872	6 month EURIBOR	0.95	3/25/2025	(97,226)
Interest Rate Swap USD	7,050,000	7,050,501	3 month LIBOR	1.98	3/27/2025	(410,835)
Interest Rate Swap USD	7,050,000	7,050,501	3 month LIBOR	1.99	3/27/2025	(415,188)
Interest Rate Swap USD	7,760,000	7,771,924	3 month LIBOR	2.45	7/2/2025	(770,620)
Interest Rate Swap USD	6,800,000	6,805,077	3 month LIBOR	2.33	8/19/2025	(586,877)
Interest Rate Swap USD	69,100,000	69,100,000	3 month LIBOR	2.80	10/28/2025	(3,424,305)
Interest Rate Swap USD	4,700,000	4,702,491	3 month LIBOR	2.15	12/3/2025	(332,146)
Interest Rate Swap USD	7,000,000	7,003,709	3 month LIBOR	2.30	12/3/2025	(589,855)
Interest Rate Swap CAD	6,600,000	5,083,992	3 month CDOR	2.30	12/15/2025	(491,095)
Interest Rate Swap GBP	14,660,000	19,597,489	6 month LIBOR	2.34	1/13/2026	(958,831)
Interest Rate Swap USD	58,850,000	58,850,000	3 month LIBOR	2.40	3/16/2026	(1,659,758)
Interest Rate Swap JPY	1,490,000,000	14,524,805	6 month JPY LIBOR	0.30	3/18/2026	(510,353)
Interest Rate Swap USD	17,600,000	17,600,000	3 month LIBOR	2.30	4/21/2026	(403,186)
Interest Rate Swap USD	20,100,000	20,100,000	3 month LIBOR	2.30	4/27/2026	(458,445)
Interest Rate Swap GBP	5,700,000	7,619,760	6 month LIBOR	1.90	5/18/2026	(191,923)
Interest Rate Swap EUR	430,000	477,708	6 month EURIBOR	1.10	5/20/2026	(7,211)
Interest Rate Swap JPY	190,000,000	1,852,032	6 month JPY LIBOR	0.30	5/25/2026	(23,380)
Interest Rate Swap USD	8,000,000	8,002,275	3 month LIBOR	2.25	6/15/2026	(652,836)
Interest Rate Swap GBP	5,200,000	6,951,360	6 month LIBOR	1.50	9/21/2026	(323,235)
Interest Rate Swap USD	99,640,000	99,640,000	3 month LIBOR	1.75	12/21/2026	(2,678,404)
Interest Rate Swap USD	19,030,000	19,030,334	3 month LIBOR	3.49	3/31/2044	(7,324,171)

(continued)

(continued)

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/16
Interest Rate Swap USD	25,600,000	\$25,606,985	3 month LIBOR	2.75%	12/16/2045	(\$5,382,701)
Interest Rate Swap JPY	140,000,000	1,364,656	6 month JPY LIBOR	1.50	12/21/2045	(547,506)
Interest Rate Swap USD	73,950,000	73,970,994	3 month LIBOR	2.50	6/15/2046	(11,239,910)
Interest Rate Swap GBP	1,800,000	2,406,240	6 month LIBOR	1.75	3/15/2047	(330,087)
Total pay fixed interest rate swaps:		<u>\$1,258,000,241</u>				<u>(\$67,563,460)</u>
Receive Fixed Interest rate swaps:						
Interest Rate Swap BRL	25,300,000	\$7,763,584	12.36%	3 month Brazilian CDI	1/2/2018	(\$133,412)
Interest Rate Swap CAD	34,400,000	26,502,457	0.90	3 month CDOR	4/17/2018	14,431
Interest Rate Swap MXN	70,000,000	3,858,717	5.70	28 day Mexican TIE	1/18/2019	51,909
Interest Rate Swap USD	63,000,000	65,955,723	2.00	3 month LIBOR	12/16/2020	2,903,223
Interest Rate Swap BRL	8,500,000	2,535,800	11.16	3 month Brazilian CDI	1/4/2021	(117,341)
Interest Rate Swap BRL	36,400,000	11,426,133	12.23	3 month Brazilian CDI	1/4/2021	64,448
Interest Rate Swap BRL	11,400,000	3,622,086	12.56	3 month Brazilian CDI	1/4/2021	63,756
Interest Rate Swap MXN	73,400,000	3,994,565	5.66	28 day Mexican TIE	11/9/2021	14,207
Interest Rate Swap MXN	8,600,000	469,105	5.78	28 day Mexican TIE	9/29/2022	1,839
Interest Rate Swap USD	300,000	303,926	2.10	3 month LIBOR	5/20/2026	3,926
Interest Rate Swap USD	2,100,000	2,271,622	2.25	3 month LIBOR	6/15/2026	169,522
Interest Rate Swap CAD	9,340,000	7,389,251	2.25	3 month CDOR	6/16/2026	197,444
Interest Rate Swap AUD	4,200,000	3,177,674	2.75	6 month Australian Bank Bill	6/17/2026	50,354
Interest Rate Swap EUR	250,000	287,814	0.75	6 month EURIBOR	9/21/2026	10,076
Interest Rate Swap GBP	260,000	363,730	1.50	6 month LIBOR	9/21/2026	16,162
Interest Rate Swap USD	2,700,000	3,304,149	2.81	3 month LIBOR	9/14/2046	604,149
Total receive fixed interest rate swaps:		<u>\$143,226,336</u>				<u>\$3,914,693</u>
Pay Fixed Inflation-Linked Swaps:						
Inflation Swap EUR	15,700,000	\$17,367,051	EMU HICP	0.27%	8/15/2016	(\$74,854)
Inflation Swap EUR	13,100,000	14,513,868	EMU HICP	0.31	9/15/2016	(39,569)
Inflation Swap USD	10,300,000	10,133,348	U.S. CPI URNSA	1.56	11/5/2016	(166,652)
Inflation Swap USD	500,000	474,217	U.S. CPI URNSA	2.42	2/12/2017	(25,783)
Inflation Swap USD	10,000	10,036	U.S. CPI URNSA	1.70	4/15/2017	36
Inflation Swap USD	190,000	190,654	U.S. CPI URNSA	1.72	4/15/2017	654
Inflation Swap USD	25,400,000	23,977,601	U.S. CPI URNSA	2.25	7/15/2017	(1,422,773)
Inflation Swap EUR	11,300,000	12,546,310	EMU HICP	0.29	8/15/2017	(7,418)
Inflation Swap USD	3,800,000	3,655,689	U.S. CPI URNSA	2.09	10/11/2017	(144,311)
Inflation Swap EUR	1,100,000	1,216,270	EMU HICP	0.53	10/15/2017	(5,774)
Inflation Swap EUR	600,000	663,218	EMU HICP	0.54	10/15/2017	(3,352)
Inflation Swap EUR	400,000	442,055	EMU HICP	0.55	10/15/2017	(2,324)
Inflation Swap EUR	100,000	110,469	EMU HICP	0.57	10/15/2017	(626)
Inflation Swap EUR	1,400,000	1,546,250	EMU HICP	0.58	10/15/2017	(9,079)
Inflation Swap USD	1,900,000	1,898,638	U.S. CPI URNSA	1.58	5/23/2018	(1,362)
Inflation Swap USD	1,000,000	999,530	U.S. CPI URNSA	1.57	6/7/2018	(470)
Inflation Swap EUR	6,900,000	7,659,474	EMU HICP	0.42	8/15/2018	(6,077)
Inflation Swap EUR	2,600,000	2,884,413	EMU HICP	0.44	8/15/2018	(4,056)
Inflation Swap EUR	12,600,000	13,965,467	EMU HICP	0.47	8/15/2018	(32,495)
Inflation Swap EUR	400,000	440,829	EMU HICP	0.66	8/15/2018	(3,551)

(continued)

(continued)

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/16
Inflation Swap EUR	1,300,000	\$1,434,907	EMU HICP	0.61%	9/15/2018	(\$9,327)
Inflation Swap EUR	500,000	551,615	EMU HICP	0.62	9/15/2018	(3,859)
Inflation Swap EUR	500,000	551,573	EMU HICP	0.63	9/15/2018	(3,902)
Inflation Swap EUR	300,000	330,790	EMU HICP	0.64	9/15/2018	(2,495)
Inflation Swap EUR	600,000	661,376	EMU HICP	0.65	9/15/2018	(5,194)
Inflation Swap USD	3,000,000	2,845,076	U.S. CPI URNSA	2.21	10/11/2018	(154,924)
Inflation Swap EUR	2,200,000	2,426,593	EMU HICP	0.65	10/15/2018	(17,496)
Inflation Swap EUR	500,000	550,986	EMU HICP	0.68	10/15/2018	(4,488)
Inflation Swap EUR	5,000,000	5,470,260	EMU HICP	0.74	1/26/2020	(84,487)
Inflation Swap EUR	4,900,000	5,369,402	EMU HICP	0.71	1/29/2020	(74,250)
Inflation Swap EUR	11,000,000	12,085,693	EMU HICP	0.66	1/30/2020	(134,750)
Inflation Swap EUR	4,500,000	4,933,698	EMU HICP	0.70	1/30/2020	(65,575)
Inflation Swap EUR	20,200,000	21,899,137	EMU HICP	0.99	3/30/2020	(542,041)
Inflation Swap EUR	2,000,000	2,168,525	EMU HICP	0.99	3/31/2020	(53,374)
Inflation Swap EUR	3,200,000	3,546,273	EMU HICP	0.81	4/15/2021	(8,765)
Inflation Swap EUR	5,200,000	5,751,568	EMU HICP	0.88	5/15/2021	(25,369)
Inflation Swap USD	7,000,000	7,032,961	U.S. CPI URNSA	1.49	6/30/2021	32,961
Inflation Swap USD	18,200,000	15,838,461	U.S. CPI URNSA	2.50	7/15/2022	(2,361,539)
Inflation Swap USD	2,100,000	1,813,071	U.S. CPI URNSA	2.56	5/8/2023	(286,929)
Inflation Swap USD	2,100,000	2,066,031	U.S. CPI URNSA	1.73	8/26/2025	(33,970)
Inflation Swap EUR	1,100,000	1,214,169	EMU HICP	1.09	6/15/2026	(7,875)
Total Pay Fixed Inflation-Linked Swaps:		\$213,237,552				(\$5,797,484)
Receive Fixed Inflation-Linked Swaps:						
Inflation Swap EUR	6,900,000	\$7,659,610	0.83%	EMU HICP	5/15/2018	(\$5,941)
Inflation Swap BRL	6,200,000	1,977,186	12.60	Brazil Cetip Interbank	1/4/2021	41,954
Inflation Swap USD	15,700,000	16,466,467	2.06	U.S. CPI URNSA	5/12/2025	766,467
Inflation Swap EUR	11,900,000	14,310,661	1.68	France CPI ex-Tobacco Index	6/15/2025	1,090,363
Inflation Swap EUR	1,300,000	1,464,810	1.18	EMU HICP	5/15/2026	20,576
Inflation Swap GBP	4,050,000	5,703,018	3.14	UK Retail Price Index	1/14/2030	288,977
Inflation Swap GBP	800,000	1,151,579	3.32	UK Retail Price Index	5/15/2030	82,139
Inflation Swap GBP	2,100,000	3,146,692	3.35	UK Retail Price Index	5/15/2030	233,291
Inflation Swap GBP	6,710,000	9,766,877	3.40	UK Retail Price Index	6/15/2030	796,949
Inflation Swap GBP	3,400,000	4,861,595	3.33	UK Retail Price Index	8/15/2030	316,475
Inflation Swap GBP	1,800,000	2,592,676	3.36	UK Retail Price Index	8/15/2030	186,436
Inflation Swap GBP	2,169,000	3,064,229	3.30	UK Retail Price Index	11/15/2030	164,709
Inflation Swap GBP	1,900,000	2,679,641	3.30	UK Retail Price Index	12/15/2030	139,721
Inflation Swap GBP	4,600,000	6,643,652	3.31	UK Retail Price Index	4/8/2035	494,372
Inflation Swap GBP	500,000	728,087	3.34	UK Retail Price Index	4/15/2035	59,687
Inflation Swap GBP	100,000	165,410	3.45	UK Retail Price Index	12/15/2044	31,730
Inflation Swap GBP	200,000	343,769	3.53	UK Retail Price Index	12/15/2044	76,409
Total Received Fixed Inflation-Linked Swaps:		\$82,725,959				\$4,784,314

CDI - Cetip Interbank Deposit (interbank lending rate)

CDOR - Canadian Dollar Offered Rate

CPI - Consumer Price Index

EMU HICP - European Monetary Union Harmonized Index of Consumer Prices

EURIBOR - Euro Interbank Offered Rate

LIBOR - London Interbank Offered Rate

TIIE - Mexico Interbank Equilibrium Interest Rate

URNSA - Urban Consumers NSA Index Rate

DERIVATIVE CREDIT RISK

Credit risk is the possibility that a loss may occur because a party to a transaction fails to perform according to the established terms. In order to eliminate credit risk, derivative securities are traded through a clearing house which guarantees delivery and accepts the risk of default by either party. Derivatives which are exchange traded are not subject to credit risk and are evaluated within the investment risk disclosure.

Non-exchange traded derivative instruments may expose TRS to credit/counterparty risk. TRS investment managers reduce credit risk by evaluating the credit quality and operational capabilities of the counterparties. Because the counterparty risk of a security will fluctuate with market movements, all TRS managers using non-exchange traded derivatives operate a collateral call process ensuring full collateralization of these derivatives. TRS does not have a policy regarding master netting arrangements.

As of June 30, 2016, the aggregate fair value of non-exchange traded derivative instruments in asset positions was \$63,314,359. All applicable futures, options and swaps are in compliance with Dodd-Frank requirements and cleared through the appropriate futures and swaps exchanges. The counterparty risk exposure below is primarily unsettled currency forward contracts. This represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform as contracted.

Counterparty Ratings for Non-Exchange Traded Derivatives

Quality Rating	Fair Value at June 30, 2016
Aa1	\$1,660,756
Aa2	2,409,814
Aa3	12,433,542
A1	27,255,211
A2	1,980,437
A3	10,512,275
Baa1	1,113,696
Baa2	5,948,628
Total subject to credit risk	<u>\$63,314,359</u>

Although the derivative instruments held within the TRS investment portfolio are executed with various counterparties, approximately 92 percent of the net market value exposure to credit risk is for non-exchange traded derivative contracts held with 13 counterparties.

5. INVESTMENT COMMITMENTS

Investments in certain limited partnerships commit TRS to possible future capital contributions. As of June 30, 2016, TRS had remaining unfunded commitments of \$6,307,650,888 within the real estate, private equity, global fixed income and real return asset classes.

6. SCHEDULE OF INVESTMENT RETURNS

For the year ended June 30, 2016, the annual money-weighted rate of return on pension plan investments, net of investment expense, was (0.1) percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the timing of cash flows and the changing amounts actually invested.

7. FAIR VALUE MEASUREMENT

TRS categorizes investments measured at fair value within the fair value hierarchy established by generally accepted accounting principles. The hierarchy prioritizes valuation inputs used to measure the fair value of the asset or liability into three broad categories. The inputs or methodology used for valuing securities are not necessarily an indication of the risk associated with investing in those securities. Levels 1, 2 and 3 (lowest priority level) of the fair value hierarchy are defined as follows:

- Level 1** Inputs using unadjusted quoted prices in active markets or exchanges for identical assets and liabilities.
- Level 2** Significant other observable inputs, which may include, quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in non-active markets; and inputs other than quoted prices that are observable for the assets or liabilities, either directly or indirectly.
- Level 3** Valuations for which one or more significant inputs are unobservable and may include situations where there is minimal, if any, market activity for the investment.

If the fair value is measured using inputs from different levels in the fair value hierarchy, the measurement should be categorized based on the lowest priority level input that is significant to the valuation. The System's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgement, and considers factors specific to the investment. Investments measured at fair value using net asset value (NAV) per share (or equivalent) as a practical expedient to fair value are not classified in the fair value hierarchy; however, separate disclosures for these investments are required.

Debt and equity investments classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets, to the extent these securities are actively traded.

Short-term investments consisting of money market funds, certificates of deposit and highly liquid cash equivalents are generally reported at amortized cost which approximates fair market value. These investments are not categorized in the fair value hierarchy.

Debt and investment derivatives classified in Level 2 of the fair value hierarchy are normally valued based on price data obtained from observed transactions and market price quotations from broker dealers and/or pricing vendors. Valuation estimates from service providers' internal models use observable inputs such as interest rates, yield curves, credit/risk spreads and default rates. Matrix pricing techniques value securities based on their relationship to benchmark quoted prices. Exchange traded and over-the-counter investment derivatives valued by independent pricing service providers, where the value is derived from underlying asset prices, reference rates, indices or other observable inputs are also included in Level 2.

Debt securities classified as Level 3 include valuations using significant unobservable inputs, valuations using proprietary information, inputs that cannot be corroborated by observable market data and securities valued with last trade date due to limited trading volume. Real assets classified as Level 3 include direct investments in real estate. Valuations for real estate investments are performed quarterly by investment managers. An appraisal by an independent third party member of the Appraisal Institute is obtained once every three years for each property and is used to establish fair market value.

The following table summarizes the valuation of TRS investments by the fair value hierarchy levels as of June 30, 2016.

Investments and Derivative Instruments Measured at Fair Value (\$ in thousands)

	June 30, 2016	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Investments by fair value level				
Debt securities				
Asset-backed securities	223,987	-	201,808	22,179
Commercial and collateralized mortgages	232,623	-	232,556	67
Domestic corporate obligations	1,979,512	-	1,975,940	3,572
Fixed income mutual funds	190,378	190,378	-	-
Foreign debt/corporate obligations	2,575,875	-	2,517,270	58,605
Municipals	56,526	-	56,526	-
U.S. agencies obligations	347,749	-	347,749	-
U.S. government-backed mortgages	811,201	-	811,201	-
U.S. treasuries	1,398,196	-	1,398,196	-
Total debt securities	7,816,047	190,378	7,541,246	84,423
Equity investments				
International common and preferred stock	8,322,672	8,310,636	12,036	-
U.S. common and preferred stock	7,468,800	7,454,510	14,290	-
Total equity investments	15,791,472	15,765,146	26,326	-
Real assets				
Real estate	5,103,476	-	-	5,103,476
Total real assets	5,103,476	-	-	5,103,476
Total investments by fair value level	\$28,710,995	\$15,955,524	\$7,567,572	\$5,187,899
Investments measured at the Net Asset Value (NAV)				
Absolute return	\$3,196,766			
Commingled fixed income funds	2,071,106			
International equity commingled fund	292,054			
Private equity partnerships	5,465,172			
Private real estate partnerships	1,839,730			
Real return strategies	2,889,160			
Total investments measured at the NAV	15,753,988			
Total investments measured at fair value	\$44,464,983			
Investment derivative instruments				
Credit default swaps	(\$2,321)	\$ -	(\$2,321)	\$ -
Index and variance swaps	1,488	-	1,488	-
Inflation swaps	(1,013)	-	(1,013)	-
Interest rate swaps	(63,649)	-	(63,649)	-
Options	2,726	-	2,726	-
Swaptions	53	-	53	-
Total investment derivative instruments	(\$62,716)	\$ -	(\$62,716)	\$ -
Invested securities lending collateral				
Fixed income investments	\$50,000	\$ -	\$50,000	\$ -
Short-term investments	3,048,892	310,412	2,738,480	-
Total invested securities lending collateral*	\$3,098,892	\$310,412	\$2,788,480	\$ -

* Does not include lending collateral with the State Treasurer.

Investments measured at NAV for fair value are not subject to level classification. The valuation method for investments measured at the NAV per share (or its equivalent) is presented on the following table.

Investments Measured at the Net Asset Value (NAV)
(\$ in thousands)

	Fair Value June 30, 2016	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Convergent strategies ¹	\$1,616,405	\$ -	Monthly, quarterly	20-90 days
Convex strategies ¹	1,422,731	-	Daily, monthly, quarterly	1-60 days
Long-duration fixed income partnership ²	157,630	-	Not eligible	N/A
Total absolute return	3,196,766	-		
Commingled fixed income funds ³	1,495,105	-	Daily, weekly, monthly, quarterly	1-65 days
Fixed income special situation funds ⁴	576,001	505,922	Not eligible	N/A
Total commingled fixed income funds	2,071,106	505,922		
International equity commingled fund ⁵	292,054	-	Daily	1 day
Private equity partnerships ⁶	5,465,172	3,953,889	Not eligible	N/A
Private real estate partnerships ⁶	1,839,730	1,544,436	Not eligible	N/A
Global macro/risk parity funds ⁷	2,558,508	-	Monthly	5-90 days
Real return fund ⁸	248,973	-	Monthly	30 days
Real return partnerships ⁹	81,679	303,404	Not eligible	N/A
Total real return strategies	2,889,160	303,404		
Total investments measured at the NAV	\$15,753,988	\$6,307,651		

- Absolute return (convergent and convex strategies):** The absolute return asset class applies various convergent and convex strategies that provide diversification to the total investment portfolio. Investments exhibit low correlation to traditional public equity and fixed income investments while striving to reduce overall total fund volatility. Convergent strategies consists of eight direct investments and two diversified fund of funds, focusing on long/short equity, event driven, volatility selling, risk arbitrage investments. The convex funds include direct investments in four commodity trading advisers (CTAs) investing in trend (long or short) and five managers using global macro, tail risk, market making, volatility buying strategies. The fair value of these investments has been determined using the NAV per share of the investments. The strategies maintain a liquidity profile of less than one year, ranging from daily to quarterly and require advance notice prior to redemption. Three funds, valued at \$196.6 million, include gates or maximum withdrawals per quarter. TRS has submitted full redemption notices for these three funds and anticipates complete exit by December 31, 2016. One fund valued at \$217.6 million is restricted from full redemption for 11 months as of June 30, 2016.
- Long-duration fixed income partnership:** The absolute return asset class also includes a long-duration fixed income fund in which redemptions are restricted over the life of the partnership. The partnership's interest is valued using the NAV per share (or its equivalent). The most significant element of NAV is the fair value of the underlying investment holdings which are valued on a monthly basis by the general partner. The fund does distribute any free cash from the master fund in excess of the amount needed to maintain prudent liquidity. The fund has an approximate life of 10 years and TRS has no plans to liquidate as of June 30, 2016.
- Commingled fixed income funds:** The investment strategies for the seven fixed income funds include high yield, defensive bond arbitrage, emerging market debt, relative value, and TRS customized accounts investing in opportunistic investments. The fair value of the investments has been determined using the NAV

per share (or its equivalent) of the investments. Liquidity ranges from daily to quarterly upon notice of redemption and TRS has no plans to liquidate as of June 30, 2016.

- 4) **Fixed income special situation funds:** Special situation funds consist of 15 funds investing across strategies such as stressed debt/credit, direct loans, real estate debt, bank loans and reinsurance. These funds provide additional exposure to niche and/or specific nontraditional point-in-time opportunities that are not normally targeted by traditional fixed income managers. Funds are valued using the NAV per share (or its equivalent) and are audited annually. Redemption restrictions are in place over the life of the partnership. The average life of these funds span four to eight years and distributions are received throughout the life of the fund. TRS has no plans to liquidate as of June 30, 2016, however; three of the funds, with fair value of \$126.1 million, are approaching the end of the partnership term, winding down and distributing cash as the funds sell underlying investments.
- 5) **International equity commingled fund:** Includes one fund investing in emerging market small cap equities diversified across multiple sectors. The fair value of the investment has been determined using the NAV per share of the investments. Daily liquidity is available.
- 6) **Private equity and real estate partnerships:** TRS has 183 private equity partnerships which include investments in privately held equity, such as buyouts, co-investments, venture capital and growth equity, as well privately held debt. The 44 real estate limited partnerships invest in various property types across multiple geographic regions. Investments in limited partnerships are normally long-term with an approximate life of 10 years, and considered illiquid. Investors are subject to redemption restrictions which limit and restrict the ability of limited partners to exit prior to dissolution. Partnership interests are valued using their respective NAV calculated by the general partner's fair valuation policy and are generally audited annually. The most significant element of NAV is the fair value of the investment holdings which are typically valued on a quarterly basis by the general partners. Distributions are received as the funds sell underlying portfolio company investments. TRS has no plans on liquidating the portfolio, however will opportunistically sell funds in the secondary market to reposition the portfolio and optimize returns. Four private equity funds were sold on the secondary market during the fiscal year. As of June 30, 2016, it is probable that all investments in this type will be sold at an amount different from the current NAV of the plan's ownership interest.
- 7) **Global macro/risk parity funds:** Investments consist of five funds using strategies such as global macro, concentrating on macroeconomic developments of the world, and risk parity focusing on risk levels across the investment portfolio. Redemptions are allowed monthly with advanced notice and the fair value of the investments has been determined using the NAV per share of the investments. TRS has no plans to liquidate as of June 30, 2016.
- 8) **Real return fund:** TRS holds one multi-strategy real return fund that targets assets that hedge inflation while mitigating extraneous risks (such as equities and real rates). The fund allows monthly redemptions with notice and the partnership's interest is valued using the NAV per share (or its equivalent). The most significant element of NAV is the fair value of the underlying securities which are valued on a monthly basis by the general partner. TRS has no plans to liquidate this fund as of June 30, 2016.
- 9) **Real return partnerships:** Real return strategies include four limited partnerships investing in infrastructure, project development finance, oil and gas properties and farmland. These partnerships are not eligible for redemption, considered illiquid and have an approximate life of 8 to 15 years. Distributions are received during the life of the fund as underlying investments are liquidated. Partnership interests are valued by the general partner using their respective NAV per share (or equivalent), with the most significant element of NAV being the fair value of the investment holdings. TRS has no plans to liquidate these funds. As of June 30, 2016, it is probable that all investments in this type will be sold at an amount different from the current NAV of the plan's ownership interest.

E. RESERVES

TRS maintains statutory reserve accounts in accordance with the provisions of 40 ILCS 5/16-101 et seq. In 1997, the Illinois General Assembly passed legislation that allowed the crediting of income at fair value, as opposed to book value, to the Benefit Trust Reserve.

1. BENEFIT TRUST

2016	
Balances at June 30	\$45,242,810,206

This reserve serves as a clearing account for TRS income and expenses. The reserve is credited with contributions from the State of Illinois that are not specifically allocated to the Minimum Retirement Annuity Reserve, member and employer contributions, income from TRS invested assets, and contributions from annuitants who qualify for automatic annual increases in annuity.

The reserve accumulates, with 6 percent interest, the contributions by members prior to retirement. Contributions have been 7.5 percent of salary since July 1, 1998. Contributions are fully refundable upon withdrawal from TRS, excluding interest credited thereon. The interest accrued is refundable only in the event of death. Interest is credited as of the date of retirement or death of those retiring or dying during the year and as of the end of the fiscal year for all other members. Interest is computed annually based upon the individual member's balance in the reserve at the beginning of the fiscal year.

This reserve is charged for transfers to the Minimum Retirement Annuity Reserve and all

- refunds to withdrawing members,
- retirement annuity payments (except as provided by the Minimum Retirement Annuity Reserve),
- benefits that are paid to disabled members,

- death benefits paid and
- refunds to annuitants for survivor benefit contributions.

The expected benefit payments do not equal the present value of the reserve. The additional amount needed (the unfunded actuarial accrued liability) as calculated by the actuary was \$71.4 billion in FY16, based on the actuarial value of assets.

2. MINIMUM RETIREMENT ANNUITY

2016	
Balances at June 30	\$8,146,525

The minimum annuity is set by law at \$25 per month for each year of creditable service to a maximum of \$750 per month after 30 or more years of creditable service. To qualify, annuitants are required to make a one-time contribution that is credited to the reserve. Interest at 6 percent is credited to the reserve annually based upon the average reserve balance. The State of Illinois also appropriated funds necessary to pay the minimum benefits. All benefits paid under this program are charged to the reserve. This reserve is fully funded.

F. OTHER POST-EMPLOYMENT BENEFITS FOR TRS EMPLOYEES

The State provides health, dental, vision and life insurance benefits for retirees and their dependents in a program administered by the Department of Central Management Services (CMS). Substantially all State employees become eligible for post-employment benefits if they eventually become annuitants of one of the State-sponsored pension plans. Health, dental, and vision benefits include basic benefits for annuitants and dependents under the State's self-insurance plan and insurance contracts currently in force. Annuitants may be required to contribute towards health, dental, and vision benefits with the amount based on factors such as date of retirement, years of credited service with the State, whether the annuitant is covered by Medicare, and whether the annuitant has chosen a managed health care plan. Employees

of the System who retired before January 1, 1998 and are vested in either SERS or TRS do not contribute towards health and vision benefits. A premium is required for dental. For annuitants who retired on or after January 1, 1998, the annuitant's contribution amount is reduced 5 percent for each year of credited service with the State allowing those annuitants with 20 or more years of credited service to not have to contribute towards health and vision benefits. A premium is required for dental. Annuitants also receive life insurance coverage equal to the annual salary of the last day of employment until age 60, at which time the benefit becomes \$5,000.

Public Act 97-0695 was signed into law on June 21, 2012. Effective July 1, 2013, all retirees within state retirement systems began paying a premium for health and vision benefits at a rate determined by CMS. The rate was a percentage of the retiree's annuity and differed depending on whether the retiree was enrolled in Medicare. Due to an Illinois Supreme Court decision in July of 2014, Public Act 97-0695 was suspended and the collection of premiums was stopped. All premiums collected were refunded during FY15.

The State pays the TRS portion of employer costs for the benefits provided. The total cost of the State's portion of health, dental, vision and life insurance benefits of all members, including post-employment health, dental, vision and life insurance benefits, is recognized as an expenditure by the State in the Illinois *Comprehensive Annual Financial Report*. The State finances the costs on a pay-as-you-go basis. The total costs incurred for health, dental, vision and life insurance benefits are not separated by department or component unit for annuitants and their dependents, nor for active employees and their dependents.

A summary of post-employment benefit provisions, changes in benefit provisions, employee eligibility requirements, including eligibility for vesting and the authority under which benefit provisions are established, are included as an integral part of the financial statements for CMS. A copy of the financial statements may be obtained by writing to their office, Department of Central Management Services, 704 Stratton Office Building, Springfield, IL 62706.

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in the Net Pension Liability for Fiscal Years:

	2016	2015	2014
Total pension liability			
Service cost	\$1,681,242,232	\$1,948,079,771	\$1,894,351,211
Interest	8,264,257,311	7,864,916,421	7,561,104,814
Changes of benefit terms	-	-	-
Difference between expected and actual experience	701,827,169	(90,079,446)	39,950,212
Change of assumptions	7,553,894,504	1,136,454,886	-
Benefit payments, including refund of member contributions	(5,931,207,177)	(5,625,037,173)	(5,320,662,979)
Net change in total pension liability	12,270,014,039	5,234,334,459	4,174,743,258
Total pension liability - beginning	111,916,989,345	106,682,654,886	102,507,911,628
Total pension liability - ending (a)	\$124,187,003,384	\$111,916,989,345	\$106,682,654,886
Plan fiduciary net position			
Contributions - employer	\$148,040,767	\$145,591,585	\$158,334,598
Contributions - nonemployer contributing entity	3,742,469,245	3,377,664,945	3,438,382,892
Contributions - member	951,809,398	935,451,049	928,745,853
Net investment income (loss)	(44,103,178)	1,770,549,533	6,782,031,720
Benefit payments, including refund of member contributions	(5,931,207,177)	(5,625,037,173)	(5,320,662,979)
Administrative expense	(22,967,917)	(21,686,860)	(21,218,069)
Net change in plan fiduciary net position	(1,155,958,862)	582,533,079	5,965,614,015
Plan fiduciary net position - beginning	46,406,915,593	45,824,382,514	39,858,768,499
Plan fiduciary net position - ending (b)	\$45,250,956,731	\$46,406,915,593	\$45,824,382,514
Employers' net pension liability - ending (a) - (b)	\$78,936,046,653	\$65,510,073,752	\$60,858,272,372

Schedule of the Net Pension Liability for Fiscal Years:

	2016	2015	2014
Total pension liability	\$124,187,003,384	\$111,916,989,345	\$106,682,654,886
Plan fiduciary net position	45,250,956,731	46,406,915,593	45,824,382,514
Net pension liability	\$78,936,046,653	\$65,510,073,752	\$60,858,272,372
Plan fiduciary net position as a percentage of the total pension liability	36.4%	41.5%	43.0%
Covered payroll	\$9,811,614,284	\$9,641,170,627	\$9,512,809,680
Net pension liability as a percentage of covered payroll	804.5%	679.5%	639.8%

Schedule of Investment Returns for Fiscal Years:

	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	(0.1%)	4.0%	17.4%

Note: Information is not available prior to 2014. Additional years will be added to future reports as schedules are intended to show 10 years of historical data.

Schedule of Contributions from Employers and Other Contributing Entities, Last 10 Fiscal Years (\$ thousands)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially-determined contribution (ADC)	\$4,582,530	\$4,119,526	\$4,091,978	\$3,582,033	\$3,429,945	\$2,743,221	\$2,481,914	\$2,109,480	\$1,949,463	\$2,052,396
Contributions in relation to the actuarially-determined contribution:*										
State	3,741,802	3,376,878	3,437,478	2,702,278	2,405,172	2,169,518	2,079,129	1,449,889	1,039,195	735,515
Federal & Employer Contributions	147,408	144,780	157,228	155,787	153,409	154,150	170,653	151,716	130,578	81,155
Total contributions	3,889,210	3,521,658	3,594,706	2,858,065	2,558,581	2,323,668	2,249,782	1,601,605	1,169,773	816,670
Contribution deficiency	\$693,320	\$597,868	\$497,272	\$723,968	\$871,364	\$419,553	\$232,132	\$507,875	\$779,690	\$1,235,726
Covered payroll	\$9,811,614	\$9,641,171	\$9,512,810	\$9,394,741	\$9,321,098	\$9,205,603	\$9,251,139	\$8,945,021	\$8,521,717	\$8,149,849
Contributions as a percentage of covered payroll	39.6%	36.5%	37.8%	30.4%	27.4%	25.2%	24.3%	17.9%	13.7%	10.0%

* Contributions for minimum benefits from the state and for excess sick from employers do not count towards actuarial funding requirements. Beginning in FY08, employer ERO contributions are included because the costs of the ERO program are now included in the actuarial accrued liability. In all years, employer contributions for excess salary increases are included. However, employer contributions for excess sick leave, which also began in FY06, are not included because there is no assumption for excess sick leave and it is not included in the funding requirements. Beginning in FY17, a different basis for determining the actuarially-determined contribution will be used.

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

The Schedule of Changes in Net Pension Liability and the Schedule of Net Pension Liability are affected by various factors. In FY16, changes in actuarial assumptions increased the total pension liability by \$7.6 billion.

The Schedule of Contributions from Employers and Other Contributing Entities compares actual and actuarially-determined contributions. There is a difference between these amounts because actual contributions are based on state statute under a methodology that does not conform to that used to determine the actuarially-determined contribution.

The following assumptions were used to determine the statutory and actuarially-determined contributions for FY16:

	For Funding per State Statute	For Determining the Actuarially-determined Contribution
Valuation Used to Determine Funding Amount:	June 30, 2014	June 30, 2014
Actuarial Cost Method:	Projected unit credit	Projected unit credit
Amortization Method:	15-year phase-in to a level percent of payroll reached in FY10; then level percent of payroll until a 90 percent funding level is achieved in FY45	Level percent of payroll
Remaining Amortization:	29 years, closed	30 years, open
Asset Valuation Method:	Actuarial value of assets	Actuarial value of assets

OTHER SUPPLEMENTARY INFORMATION

Schedule of Administrative Expenses for the Years Ended June 30

	2016	2015
Personnel services		
Salaries	\$11,044,974	\$10,585,536
Retirement contributions	2,521,446	2,361,769
Insurance and payroll taxes	4,018,866	3,519,449
	<u>17,585,286</u>	<u>16,466,754</u>
Professional services		
Actuarial services	205,441	272,755
External auditors	248,171	256,961
Legal services	184,641	283,973
Legislative consulting	84,000	84,000
Information systems consulting	114,125	52,883
Operations consulting	215,063	240,070
Other	9,653	6,705
	<u>1,061,094</u>	<u>1,197,347</u>
Communications		
Postage	187,630	144,639
Printing and copying	211,940	199,298
Telephone	163,318	215,442
	<u>562,888</u>	<u>559,379</u>
Other services		
Administrative services	244,403	176,684
Building operations and maintenance	558,848	509,740
EDP supplies and equipment	144,869	103,562
Equipment repairs, rental and maintenance	271,196	294,509
Insurance	370,635	385,240
Memberships and subscriptions	40,287	67,672
Office equipment and furniture	43,679	15,628
Office supplies	24,947	26,775
Software licenses and maintenance	770,930	554,341
Travel, conferences, education	188,379	167,951
	<u>2,658,173</u>	<u>2,302,102</u>
Depreciation expense	<u>1,100,476</u>	<u>1,161,278</u>
Total administrative expenses	<u>\$22,967,917</u>	<u>\$21,686,860</u>

Note: Above amounts do not include investment administrative expenses, which are deducted from investment income and shown in a separate schedule on page 59.

Schedule of Investment Expenses for the Years Ended June 30

	2016	2015
Investment manager fees	\$300,230,315	\$267,476,920
Master custodian fees		
State Street Bank and Trust Company	1,900,000	1,900,000
Consulting services		
Albourne America, L.L.C.	452,000	420,000
Callan Associates, Inc.	-	130,500
Courtland Partners, Ltd.	263,900	130,000
LP Capital Advisors, L.L.C.	135,000	-
ORG Portfolio Management, L.L.C.	-	28,500
RVK, Inc.	431,375	425,000
Real Asset Portfolio Management, L.L.C.	-	57,500
Risk Resources	-	55,055
Stout Risius Ross, Inc.	396,781	165,000
Tave and Associates, L.L.C.	15,000	-
TorreyCove Capital Partners, L.L.C.	911,583	1,022,500
	<u>2,605,639</u>	<u>2,434,055</u>
Legal services		
Jackson Walker, L.L.P.	518,027	330,377
Tax advisory services		
Ernst & Young Private, Ltd.	52,081	90,153
KPMG Limited	-	7,263
	<u>52,081</u>	<u>97,416</u>
Other investment expense		
Alternatives expenses	418,308,185	387,875,075
Foreign tax expenses	13,250,094	21,400,903
Investment activity expenses	3,753,797	5,765,606
Dividend expenses	3,401,745	4,167,917
Personnel costs	4,223,203	4,105,654
Investment analytical systems	991,122	677,194
Auditing costs	96,750	107,728
Education, meetings and travel	73,631	98,486
Research, subscriptions and memberships	83,729	16,837
Other costs	120,825	134,960
	<u>444,303,081</u>	<u>424,350,360</u>
Total investment expense	<u>\$749,609,143</u>	<u>\$696,589,128</u>

Note: Investment manager fee detail is shown on pages 81 to 83.

**Schedule of Professional Services
for the Years Ended June 30**

	2016	2015
Actuarial services		
Buck Consultants, L.L.C.	\$139,197	\$257,812
The Segal Company Midwest, Inc.	66,244	14,943
	<u>205,441</u>	<u>272,755</u>
External auditors		
Office of the Auditor General	248,171	256,961
Legal services		
Cavanagh & O'Hara	18,996	18,537
Holland & Knight, L.L.P.	134,025	222,765
Howard & Howard Attorneys P.C.	10,574	7,877
Kopec White & Spooner	10,883	19,213
Loewenstein Hagen & Smith	7,678	15,581
McDonald Hopkins, L.L.C.	2,485	-
	<u>184,641</u>	<u>283,973</u>
Legislative consulting		
Leinenweber Baroni Daffada, L.L.C.	84,000	84,000
Information systems consulting		
AT&T Global Services, Inc.	-	320
Brent Ozar PLF, L.L.C.	11,000	-
Cloud2Spec, Inc.	9,200	-
Guidepoint Security, L.L.C.	16,626	-
Heat Software USA, Inc.	30,000	-
Icon Integration & Design, Inc.	37,500	-
InMage Systems, Inc.	-	18,688
ISI Telemanagement Solutions	-	400
Novanis	-	28,675
Sentinel Technologies, Inc.	9,574	-
Swartz Consulting, L.L.C.	225	-
The Mirazon Group, L.L.C.	-	4,800
	<u>114,125</u>	<u>52,883</u>
Operations consulting		
CEM Benchmarking, Inc.	45,000	45,000
Darlington Partners, Ltd.	78,313	77,711
Graham & Hyde	-	284
Jasculca Terman Strategic Communications	65,000	-
Levi Ray & Shoup, Inc.	5,250	-
LRWL, Inc.	-	55,414
Management Association	1,500	41,661
Segal Waters Public Sector	20,000	20,000
	<u>215,063</u>	<u>240,070</u>
Other	<u>9,653</u>	<u>6,705</u>
Total professional services	<u>\$1,061,094</u>	<u>\$1,197,347</u>

INVESTMENTS



Lone Tree School – Wheatland Township, Bureau County

This one-room schoolhouse served families in the southern part of the county between 1876 and 1942. The school and the surrounding area was named “Lone Tree” after a famous 20-foot-wide oak tree that stood alone in the middle of a prairie. Visible for miles in all directions, the “Lone Tree” served as a landmark for travelers from the late 1700s. Though the giant tree was toppled by strong winds in 1866, the tree’s legacy continued on.

INTRODUCTION

Global financial markets experienced increased volatility for the fiscal year ended June 30, 2016. During the year, continued accommodative monetary policy was offset by mixed economic data, slowing worldwide growth, and political uncertainty (e.g. the U.S. election cycle and the United Kingdom's vote to exit the European Union). Within this market environment, TRS's net of fee return was essentially flat led by losses in the public equity portfolios of 1.5 percent and 9.5 percent for U.S. and international equities, respectively. The System's real estate assets continued to perform very well, again providing double digit returns to the portfolio, while global fixed income and private equity also contributed positive returns. Overall, the TRS investment portfolio posted a modest positive result, returning 0.7 percent, gross of fees, for the fiscal year ended June 30, 2016.

The TRS portfolio remains fully diversified across different asset classes. A number of investment managers are utilized within each asset class to ensure the appropriate mixture across the various investment styles, allowing the portfolio to achieve broad exposure to the market while minimizing overall risk. This broad diversification serves as the best defense against the uncertainty of volatile global markets.

The TRS trust fund is invested by authority of the Illinois Pension Code under the "prudent person rule," requiring investments to be managed solely in the interest of fund participants and beneficiaries. The TRS Investment Policy guides TRS's investments. Investment principles include preserving the long-term principal of the trust fund, maximizing total return within prudent risk parameters and acting in the exclusive interest of TRS members.

As master trustee, State Street Bank and Trust has provided to TRS, unless otherwise noted, detailed financial reports of all investments, receipts, disbursements, purchases and sales of securities, and other transactions pertinent to the fund for the period July 1, 2015 through June 30, 2016. A statement of detailed assets, along with their fair value, was also provided as of June 30, 2016.

Investment performance is calculated using a time-weighted rate of return. Returns are calculated by State Street Bank and Trust using industry best practices. Additionally, State Street Bank and Trust calculated performance rates of return by portfolio, composite, and for all respective indices used throughout this section. TRS staff, in collaboration with the staff of its custodian, prepared the Investments section.

A complete listing of investment holdings is available on request.

Summary Data as of June 30, 2016	
Total fund fair value	\$45.6 billion
1-year return (net of fees)	0.01%
3-year return (net of fees)	6.9%
5-year return (net of fees)	6.8%
10-year return (net of fees)	5.4%
Percent externally managed	100.0%
Number of external managers	160
Custodian	State Street Bank and Trust Company
General consultant	RVK, Inc.

TRS is the 37th largest pension system in the United States according to *Pensions & Investments*. Rankings are based on fair value of total assets at September 30, 2015.

FUND PERFORMANCE VS. BENCHMARKS AND FAIR VALUES

As of June 30, 2016, the fair value of TRS's investments as reported on the Statement of Fiduciary Net Position was \$45.6 billion, a decrease of \$467 million from prior year. The Investment Section provides information regarding assets held by TRS in its investment portfolio at June 30, 2016 and the performance of the portfolio during the fiscal year.

TRS had a total fund annualized return of 0.7 percent, gross of fees, and 0.01 percent, net of fees, for the one-year period ended June 30, 2016. The Performance Summary table shows the performance of the total investment portfolio versus comparative benchmarks.

As illustrated in the Performance Summary table, TRS total fund performance lagged the policy index by 240 basis points for the year ended June 30, 2016. The policy index represents a weighted average of each asset class benchmark, based on the total fund's interim target asset allocation. The fund's total return also lagged the 7.5 percent actuarial return assumption and the real rate of return expectation, which is to exceed the rate of inflation, as measured by the Consumer Price Index, by 4.5 percentage points.

Performance Summary (net of fees)

Asset Class/Index	Years ended June 30					Annualized at 6/30/16		
	2016	2015	2014	2013	2012	3 Years	5 Years	10 Years
TRS total fund	0.01%	4.0%	17.4%	12.8%	0.8%	6.9%	6.8%	5.4%
TRS weighted policy index	2.4	4.6	16.4	12.5	2.4	7.6	7.5	5.9
CPI (inflation)	1.0	0.1	2.1	1.8	1.7	1.1	1.3	1.7
TRS equity - U.S.	(1.5)	8.8	25.5	23.3	1.0	10.4	10.9	6.7
Russell 3000 Index	2.1	7.3	25.2	21.5	3.8	11.1	11.6	7.4
TRS equity - international	(9.5)	(4.7)	21.6	13.2	(11.7)	1.6	1.0	2.2
Non-U.S. Equity Index	(9.6)	(5.0)	22.3	13.9	(14.8)	1.7	0.4	2.3
TRS global fixed income	3.0	3.2	8.2	6.5	5.7	4.8	5.3	6.8
Barclays Capital Aggregate Index	6.0	1.9	4.4	(0.7)	7.5	4.1	3.8	5.1
TRS real return	(1.4)	(2.6)	10.9	0.1	2.5	2.1	1.8	-
CPI (inflation) + 5.0%*	6.1	5.1	7.2	6.8	6.7	6.1	6.4	-
TRS real estate	13.2	14.5	13.7	12.6	9.9	13.8	12.8	6.4
NCREIF Property Index	10.6	13.0	11.2	10.7	12.0	11.6	11.5	7.4
TRS private equity	1.0	8.0	23.7	15.2	3.8	10.5	10.0	9.7
Russell 3000 Index + 3.0%*	5.2	10.5	28.9	25.1	6.9	14.4	14.9	10.6
TRS absolute return	(2.6)	3.9	9.1	10.5	2.6	3.3	4.6	-
90-day Treasury Bill + 4.0%*	4.2	4.0	4.1	4.1	4.1	4.1	4.1	-

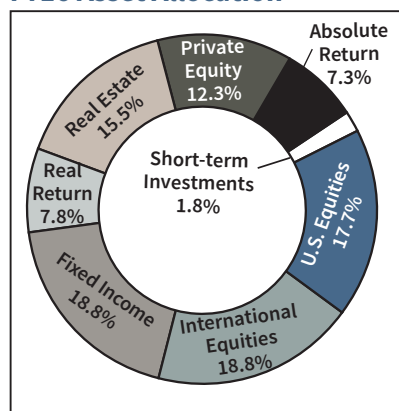
*Index compounded monthly.

Note: Performance calculations provided by State Street Bank and Trust use net-of-fee time-weighted rates of return.

ASSET ALLOCATION VS. TARGETS

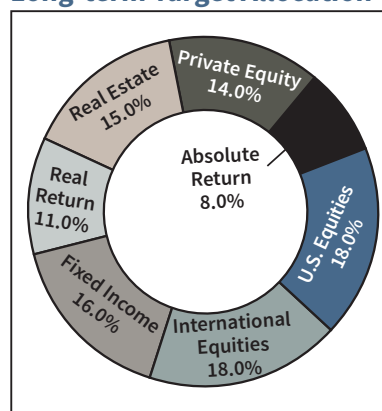
A pension fund's most important investment policy decision is the selection of its asset allocation. Similar to other large institutional funds, TRS maintains a well-diversified portfolio to manage risk effectively.

FY16 Asset Allocation



Source: TRS

Long-term Target Allocation



Source: TRS

During FY16, TRS continued implementation of the asset allocation structure adopted in June 2014. That study focused primarily on controlling the overall volatility of the investment portfolio and to accomplish that goal, the new targets called for continued evolution of the fund's diversification into the absolute return and private equity asset classes, with a gradual reduction in exposure to publicly-traded equity securities. In FY16, TRS continued reallocating assets according to this plan.

The asset mix is periodically compared to the policy targets to determine when rebalancing of the fund or changes to the interim policy targets is necessary. The following Strategic Investment Listing table shows the asset allocation targets, as adopted by the Board of Trustees, compared to the total assets assigned to each particular asset class at June 30, 2016.

Strategic Investment Listing Allocation Targets vs. Total Assets

	Total Fund 6/30/2016 \$ Million	As of June 30, 2016		
		Actual Percent	Interim Target	Long-term Policy Target
U.S. equities	\$7,913	17.7%	20.5%	18.0%
International equities	8,424	18.8	20.5	18.0
Global fixed income	8,384	18.8	17.0	16.0
Real return	3,504	7.8	10.0	11.0
Real estate	6,944	15.5	13.0	15.0
Private equity	5,489	12.3	11.0	14.0
Absolute return	3,246	7.3	7.0	8.0
Short-term investments	812	1.8	1.0	0.0
Pending settlements/expenses	917	NA	NA	NA
Total fund	\$45,633	100.0%	100.0%	100.0%

As of June 30, 2015	
Actual Percent	Long-term Policy Target
20.2%	18.0%
20.7	18.0
17.5	16.0
8.4	11.0
13.6	15.0
11.6	14.0
7.5	8.0
0.5	0.0
NA	NA
100.0%	100.0%

Sources: State Street Bank and Trust and TRS

At the August 2016 Board meeting, the TRS Board of Trustees amended and approved (effective July 1, 2016) the asset allocation structure. Long-term policy targets remained unchanged. Interim targets included decreases to real return, domestic and international equity, offset by increases to global fixed income, real estate, private equity and absolute return. The amended structure seeks to continue the focus on the balance between private and public capital, improve diversification, and enhance the overall fund's risk/return profile.

PORTFOLIO SECURITIES SUMMARY

The Portfolio Securities Summary table contains a detailed list of security types. The amounts in this table differ from the allocation percentages shown in the previous Strategic Investment Listing table. The Strategic Investment Listing represents assets assigned to managers within each asset class, whereas the Portfolio Securities Summary represents specific types of financial instruments. The principal difference can be explained by the types of investments a manager is allowed to hold. For example, cash and currency held within a manager's portfolio are categorized according to the manager's primary assignment on the Strategic Investment Listing. However, in the Portfolio Securities Summary, these investments are categorized as cash and foreign currency.

Portfolio Securities Summary for the Years Ended June 30

	2016		2015	
	Fair Value	% of Total	Fair Value	% of Total
U.S. treasuries & agencies	\$1,745,944,602	3.8%	\$1,347,259,720	2.9%
U.S. government-backed mortgages	811,200,590	1.8	294,760,391	0.6
Municipals	56,526,249	0.1	23,131,615	0.1
Asset-backed securities	223,987,181	0.5	341,421,950	0.7
Commercial & collateralized mortgages	232,622,701	0.5	246,802,683	0.5
Commingled funds (U.S. & international)	2,261,484,652	5.0	1,737,067,407	3.8
Domestic corporate obligations	1,979,512,228	4.3	2,063,159,964	4.5
Foreign debt/corporate obligations	2,575,875,233	5.7	2,643,561,328	5.7
Total bonds, corporate notes and government obligations	9,887,153,436	21.7	8,697,165,058	18.8
U.S. equities	7,468,799,664	16.3	8,659,732,256	18.8
International equities	8,614,726,202	18.9	9,815,934,063	21.3
Total equities	16,083,525,866	35.2	18,475,666,319	40.1
Absolute return	3,196,766,195	7.0	3,471,868,205	7.5
Private equity	5,465,171,512	12.0	5,281,073,621	11.5
Real estate	6,943,206,220	15.2	6,255,857,685	13.6
Real return strategies	2,889,159,873	6.3	2,994,366,309	6.5
Derivatives - options, futures and swaps	(62,716,360)	(0.1)	936,964	0.0
Cash and cash equivalents	1,127,440,142	2.5	848,587,909	1.8
Foreign currency	103,219,472	0.2	74,142,815	0.2
TRS total portfolio	<u>\$45,632,926,356</u>	<u>100.0%</u>	<u>\$46,099,664,885</u>	<u>100.0%</u>

Sources: State Street Bank and Trust and TRS

SECURITIES HOLDINGS (HISTORICAL)

Historically, TRS has adopted various asset allocation strategies. The Securities Holdings table shows the actual asset allocation based on asset types for the last five-year period.

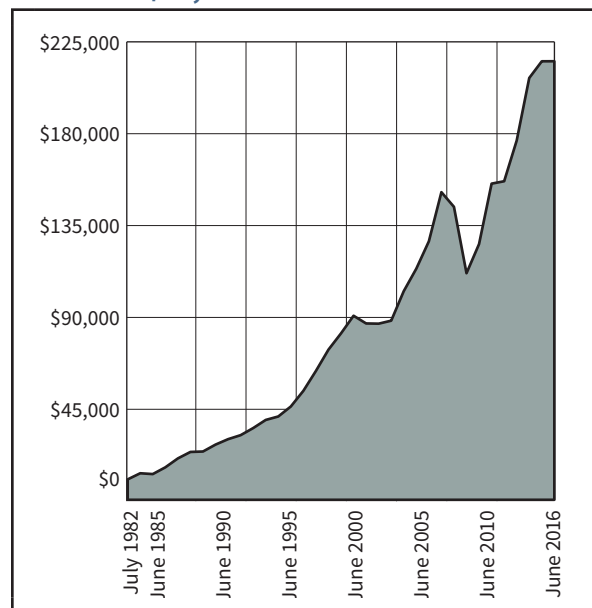
Securities Holdings for the Years Ended June 30

Asset Type	2016	2015	2014	2013	2012
Bonds, corporate notes and government obligations	21.7%	18.8%	18.5%	17.3%	18.6%
Equities - U.S.	16.3	18.8	19.9	22.0	22.8
Equities - international	18.9	21.3	22.2	21.1	20.0
Real return	6.3	6.5	6.7	6.7	7.0
Short-term investments/currency	2.6	2.0	3.4	4.0	2.6
Absolute return	7.0	7.5	5.8	5.3	5.4
Private equity	12.0	11.5	11.1	11.8	11.4
Real estate	15.2	13.6	12.4	11.8	12.2
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: TRS

TRS's asset allocation has provided consistent overall returns over the years, as represented by the following chart showing the growth of \$10,000 since July 1, 1982.

Growth of \$10,000



Source: TRS

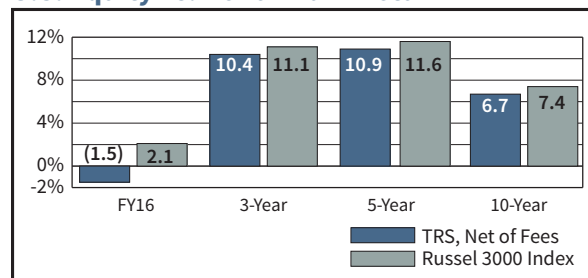
The following sections provide a brief and informative overview of the various asset classes utilized by TRS for the period ended June 30, 2016.

U.S. EQUITY

U.S. equity, or common stock, represents shares or units of ownership in public corporations domiciled within the United States. TRS invests in equities because the asset class offers the opportunity to participate in the success of the U.S. economy and specific corporations within it. Stockholders share in the growth of a company through an increase in stock price, as well as through the distribution of corporate profits in the form of dividends.

For the year ended June 30, 2016, the U.S. equity asset class declined 1.5 percent on a net of fee basis compared to the Russell 3000 Index gain of 2.1 percent. One-, three-, five-, and ten-year comparisons to this benchmark are shown in the following chart.

U.S. Equity vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

The broad U.S. equity market (Russell 3000 Index) rose 2.1 percent during the fiscal year. This followed a 7.3 percent gain in FY15. The last two fiscal years returns are more modest compared to FY14 and FY13 in which the market posted gains of 25.2 and 21.5 percent, respectively. While accommodative monetary policy remains a tailwind, tepid earnings growth and relatively expensive market valuation diminished gains. The TRS domestic equity portfolio underperformed the Russell 3000 benchmark by 3.6 percent in FY16. The portfolio's strong fundamentals (lower valuation and higher earnings growth relative to the index) were out of favor during the fiscal year as investors rotated into lower volatility stocks (e.g. utilities) which are

relatively expensive and have below market earnings growth. Portfolio outperformance is expected to return as strong fundamentals return to favor.

The top 10 U.S. equity holdings as of June 30, 2016 follow and represent 12.4 percent of the total U.S. equity holdings. These investments represent sector diversification and include companies that are dominant within their industry. A complete listing of investment holdings is available upon request.

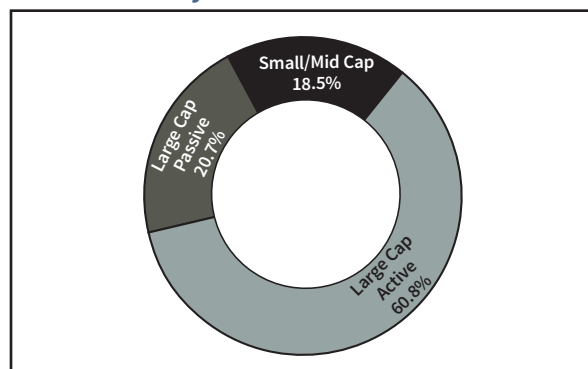
Top 10 U.S. Equity Holdings at June 30, 2016

Firm	Sector	Fair Value (USD)
Apple, Inc.	Technology	\$134,500,405
Amazon.com, Inc.	Consumer	117,673,690
Johnson & Johnson	Health Care	101,425,116
Microsoft Corp.	Technology	99,870,638
JP Morgan Chase & Co.	Financials	90,596,702
Facebook, Inc.	Technology	82,887,055
Berkshire Hathaway, Inc.	Financials	77,293,970
Exxon Mobil Corp.	Energy	76,795,839
Verizon Communications, Inc.	Telecommunication	75,000,547
Alphabet, Inc.	Technology	71,128,994
Total		<u>\$927,172,956</u>

Sources: State Street Bank and Trust and TRS

Investment managers are chosen to diversify the portfolio on both a capitalization and style basis. This diversification is important for controlling the risk of the portfolio, as well as balancing the portfolio against the broad benchmark and economy. The following charts convey the asset allocation mix, sector diversification and fundamental characteristics within the U.S. equity portfolio as of June 30, 2016.

Asset Allocation by Capitalization and Market Style



Source: TRS

U.S. Equity - Diversification by Industry Sector

Sector	TRS U.S. Equity	Russell 3000 Index
Consumer discretionary	13.7%	12.9%
Consumer staples	7.9	9.4
Energy	5.9	6.7
Financials	17.7	17.4
Health Care	14.8	14.2
Industrials	10.5	10.5
Materials	3.5	3.3
Technology	20.7	19.2
Telecommunication	2.4	2.7
Utilities	2.9	3.7
Total	<u>100.0%</u>	<u>100.0%</u>

Source: TRS

U.S. Equity Fundamental Characteristics	TRS U.S. Equity	Russell 3000 Index
Weighted average market cap (\$ billions)	\$93.4	\$107.8
Price/earnings ratio	23.3x	25.8x
Dividend yield	1.9%	2.1%
Beta	1.07	1.02
5-year EPS growth	10.2%	9.1%
Price/book ratio	4.5x	4.8x

Sources: State Street Bank and Trust

The long-term policy target for U.S. equity is 18.0 percent of total fund. As of June 30, 2016, the TRS U.S. equity asset class value was \$7.9 billion, or 17.7 percent of total fund. TRS employed the following U.S. equity managers during FY16.

U.S. Equity Managers and Assets Under Management (inception date of account)

	Assets
Large Cap Passive	
RhumbLine Advisors, L.P. (8/06)	\$1,530,729,139
Large Cap Active	
Acadian Asset Management, L.L.C. (07/15)	408,043,697
J.P. Morgan Investment Management, Inc. (12/07)	1,079,667,729
Levin Capital Strategies, L.P. (10/10)	512,685,566
LSV Asset Management (9/14)	498,490,102
MFS Institutional Advisors, Inc. (10/10)	751,807,288
OakBrook Investments, L.L.C. (11/09)	165,912,384
Robeco Boston Partners Asset Management, L.P. (3/10)	614,987,063
T. Rowe Price Associates, Inc. (11/06)	474,434,987
Small/Mid Cap	
Apex Capital Management (11/13)	174,920,779
Emerald Advisors, Inc. (11/04)	258,726,415
Fiduciary Management Associates, L.L.C. (7/08)	242,193,427
Lombardia Capital Partners, L.L.C. (11/08)	247,060,058
LSV Asset Management (12/02)	378,290,056
RhumbLine Advisors, L.P. (5/07)	73,149,002
Emerging Manager	
Affinity Investment Advisors, L.L.C. (11/14)	24,858,042
Channing Capital Management, L.L.C. (12/11)	100,845,160
RhumbLine Advisors, L.P. (5/06)	376,425,576

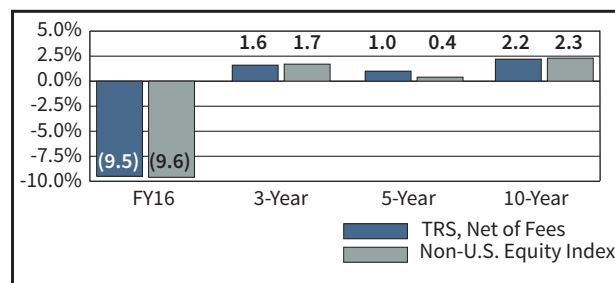
Note: The list does not include managers terminated prior to June 30, 2016 with residual assets in the account.

INTERNATIONAL EQUITY

International equity, or common stock, represents shares or units of ownership in public corporations domiciled outside the United States. International investing provides important diversification benefits to the TRS portfolio. While the international economy has increasingly become more global in nature, not all economies move in tandem. TRS's international equity managers are able to participate in the strength of individual markets, thus enhancing the TRS total portfolio. Additionally, corporations worldwide have expanded their global reach. The international equity portfolio is able to seek out superior companies operating multi-nationally, or companies that are particularly strong in their own markets or industries.

For the year ended June 30, 2016, the international equity asset class declined 9.5 percent on a net of fee basis compared to the Morgan Stanley Capital International (MSCI) All Country Excluding U.S. Investable Market Index (identified as Non-U.S. Equity Index in the following references) loss of 9.6 percent. One-, three-, five-, and 10-year comparisons to this benchmark are shown in the following chart.

International Equity vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

The broad non-U.S. equity index decline of 9.6 percent in FY16 followed prior fiscal year results of negative 5.0 percent. Previous to this, the index posted relatively strong results in FY14 and FY13, gaining 22.3 percent and 13.9 percent, respectively. Consistent with the U.S. market, monetary policy continues to provide market support despite slow economic growth and falling commodity prices. Defensive sectors like consumer staples outpaced more cyclical index sectors such as financials. The TRS international equity portfolio slightly outperformed the benchmark by 0.1 percent, net of fees, during the fiscal year. While the portfolio's modest overweight to laggard emerging markets detracted, outperformance by the portfolio's active managers provided a positive offset.

The top 10 international equity holdings as of June 30, 2016 follow and represent 7.7 percent of the total international equity holdings. These investments are diversified geographically and include companies that are dominant within their industry and familiar to the U.S. economy. A complete listing of investment holdings is available upon request.

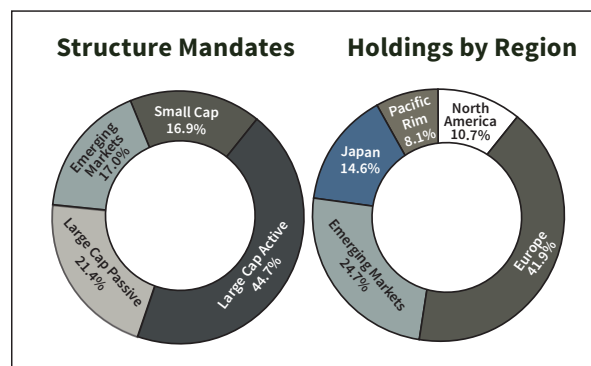
Top 10 International Holdings at June 30, 2016

Firm	Country	Fair Value (USD)
Nestle SA	Switzerland	\$86,434,457
Novartis AG	Switzerland	77,012,944
Roche Holding AG	Switzerland	74,155,961
GlaxoSmithKline PLC	United Kingdom	69,942,048
Tencent Holdings LTD	China	68,717,850
Samsung Electronics LTD	Korea	67,636,932
Sanofi	France	57,805,685
Royal Dutch Shell PLC	United Kingdom	55,192,512
ABB LTD	Switzerland	52,201,349
BP PLC	United Kingdom	52,145,780
Total		\$661,245,518

Sources: State Street Bank and Trust and TRS

Investment managers are chosen to diversify the portfolio based on capitalization, geography and style basis. The following charts convey the asset allocation mix, regional exposure and fundamental characteristics within the international equity portfolio as of June 30, 2016.

Asset Allocation by Capitalization, Market Style and Regional Exposure



Source: TRS

International Equity Fundamental Characteristics	TRS International Equity	Non-U.S. Equity Index
Weighted average market cap (\$ billions)	\$39.0	\$47.3
Price/earnings ratio	16.5x	17.2x
Dividend yield	3.1%	3.3%
Price/book ratio	3.3x	3.1x

Sources: State Street Bank and Trust

The long-term policy target for international equity is 18.0 percent of total fund. As of June 30, 2016, the TRS international equity asset class value was \$8.4 billion, or 18.8 percent of total fund. TRS employed the following international equity managers during FY16.

International Equity Managers and Assets Under Management (inception date of account)

	Assets
Large Cap Active	
Aberdeen Asset Management, Inc. (7/10)	\$414,184,610
Jarislowsky, Fraser Limited (8/05)	403,603,663
LSV Asset Management (10/12)	796,504,807
McKinley Capital Management, Inc. (8/05)	794,695,975
Mondrian Investment Partners Limited (4/93)	868,917,262
Strategic Global Advisors (3/11)	462,348,349
Large Cap Passive	
Northern Trust Investments, Inc. (8/10)	1,786,102,420
Emerging Markets	
AQR Capital Management, L.L.C. (7/13)	607,857,825
Axiom International Investors (5/15)	378,847,922
JP Morgan (8/15)	391,943,947
Northern Trust Investments, Inc. (4/13)	45,881,053
Small Cap	
DFA Investment Dimensions Group Inc. (6/11)	292,054,268
Dimensional Fund Advisors, L.P. (6/08)	364,171,336
Mondrian Investment Partners Limited (11/12)	383,196,871
Wasatch Advisors (11/14)	377,892,492
Emerging Manager	
Ativo Capital Management (3/13)	28,248,189
Lombardia Capital Partners, L.L.C. (11/14)	26,954,142

Note: The list does not include managers terminated prior to June 30, 2016 with residual assets in the account.

GLOBAL FIXED INCOME

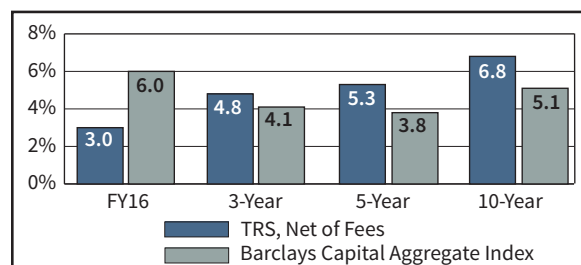
Global fixed income is a financial obligation of an entity including, but not limited to, U.S. and foreign corporations, governments, agencies, indices, or municipalities. These entities promise to pay a specified sum of money at a future date, while paying specified interest during the term of the issue. A fixed or floating income security represents a contractual obligation of a debt or a loan, with

the issuer of debt as the borrower of capital, and the purchaser, or holder of bonds, as the creditor or lender.

Global fixed income is an important asset class in a well-diversified portfolio. Fixed income investments can reduce volatility, offer low or negative correlation to other asset classes and provide income streams, or coupons, essential to the growth of the overall portfolio.

For the year ended June 30, 2016, the TRS global fixed income portfolio earned 3.0 percent on a net of fee basis compared to the Barclays Capital Aggregate Index gain of 6.0 percent. One-, three-, five-, and 10-year comparisons to this benchmark are shown in the following chart.

Global Fixed Income vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

TRS's global fixed income portfolio underperformed the Barclays Capital Aggregate Index by 3 percent, net of fees, during the fiscal year. TRS continues the bias away from U.S. and global fixed income indices as benchmark investments tend to reward governments and corporations with the highest debt levels. TRS continued increasing floating rate exposures and maintained below market weight duration in anticipation of higher interest rates. The primary detractors for the year were exposures in non-dollar issues and bank loans. Further, the System has worked to create structural flexibility within the portfolio to opportunistically address potential market dislocations.

The following table lists the top 10 global fixed income investments or funds held by TRS as of June 30, 2016. A complete listing of investment holdings is available as a separate report.

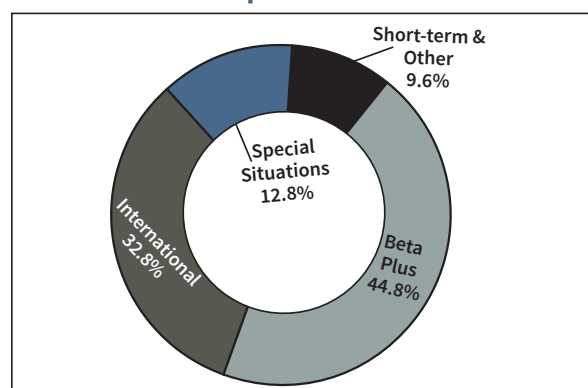
Top 10 Global Fixed Income Holdings at June 30, 2016

Security/Position	Fair Value (USD)
Franklin Templeton Emerging Market Debt Fund	\$486,716,677
PGIM Fixed Income U.S. Liquidity Relative Value Fund I, Ltd.	314,489,566
Federal National Mortgage Association TBA	311,956,835
PIMCO Horseshoe Fund, L.P.	281,349,898
Apollo Lincoln Fixed Income Fund, L.P.	205,530,810
U.S. Treasury Bond	130,466,674
PIMCO Bank Recapitalization and Value Opportunities Bravo Fund II, L.P.	116,825,061
PIMCO Asset-Backed Securities Portfolio	112,538,846
Oaktree Enhanced Income Fund, L.P.	108,573,205
PGIM Fixed Income Global Liquidity Relative Value Fund I, Ltd.	101,558,923
Total	<u>\$2,170,006,495</u>

Sources: State Street Bank and Trust and TRS

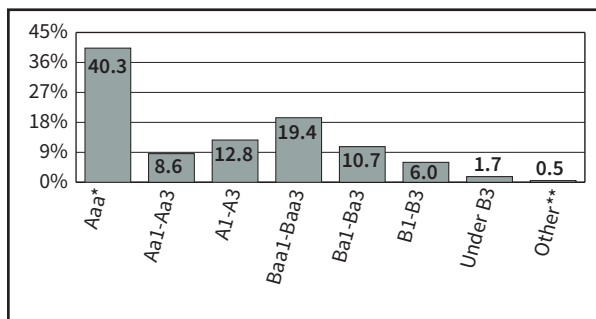
The following charts provide the asset allocation mix and statistical information on TRS's global fixed income portfolio as of June 30, 2016.

Fixed Income Composite Allocation



Source: TRS

Diversification by Quality Rating for Individual Bonds



Sources: State Street Bank and Trust and TRS

* U.S. Treasury securities are included

** Other includes unrated securities

Note: Fixed income commingled funds not included.

Global Fixed Income Fundamental Characteristics	TRS Fixed Income Portfolio	Barclays Capital Aggregate Index
Average maturity	4.9 years	7.8 years
Effective duration	3.3 years	5.4 years
Average coupon	3.5%	3.1%
Average quality rating	Baa1	Aa2

Sources: State Street Bank and Trust and TRS

The policy long-term target for global fixed income is 16.0 percent of total fund. As of June 30, 2016, the TRS global fixed income asset class value was \$8.4 billion, or 18.8 percent of total fund. TRS employed the following fixed income managers during FY16. This excludes fixed income-type assets overseen by managers in other asset classes containing fixed income securities as a small part of their overall strategies.

Global Fixed Income Managers and Assets Under Management (inception date of account)

	Assets
Apollo Lincoln Fixed Income Fund, L.P. (3/14)	\$205,530,810
AQR Risk Balanced Reinsurance Fund Ltd. (12/12)	1,948,803
Dolan McEniry Capital Management, L.L.C. (5/06)	473,290,855
Franklin Advisers, Inc. (2/08)	965,383,987
Franklin Templeton Investment Management Limited (12/10)	486,716,677
Garcia Hamilton & Associates, L.P. (6/10)	438,143,174
MacKay Shields L.L.C. (8/11)	794,076,834

(continued)

(continued)

	Assets
Manulife Asset Management, L.L.C. (8/11)	\$655,900,026
Maranon Senior Credit Fund II-B, L.P. (6/13)	38,469,800
Monroe Capital Private Credit Fund II, L.L.C. (4/16)	18,143,688
New Century Advisors, L.L.C. (2/08)	379,045,971
Northern Shipping Fund III, L.P. (1/16)	11,786,496
NXT Capital Senior Loan Fund II, L.P. (8/13)	36,852,836
NXT Capital Senior Loan Fund IV, L.P. (1/16)	42,171,723
Oaktree Enhanced Income Fund, L.P. (9/12)	108,573,205
Oaktree Enhanced Income Fund II, L.P. (5/14)	87,435,892
Oaktree Enhanced Income Fund III, L.P. (4/16)	18,447,492
Oaktree Real Estate Debt Fund, L.P. (10/13)	13,990,232
Pacific Investment Management Company, L.L.C. (7/82)	1,065,199,040
Pacific Investment Management Company Bank Recapitalization and Value Opportunities Bravo Fund, L.P. (1/11)	15,588,781
Pacific Investment Management Company-Bank Recapitalization and Value Opportunities Bravo Fund II, L.P. (3/13)	116,825,061
Pacific Investment Management Company-Corporate Opportunities Fund II, L.P. (1/16)	13,226,679
Pacific Investment Management Company-Horseshoe Fund, L.P. (12/14)	281,349,898
PGIM Fixed Income Global Liquidity Relative Value Fund I, Ltd. (12/15)	101,558,923
PGIM Fixed Income U.S. Liquidity Relative Valued Fund I, Ltd. (6/14)	314,489,566
PGIM, Inc. (12/08)	296,216,857
Riverstone Credit Partners, L.P. (12/15)	16,683,716
Taplin, Canida & Habacht (4/13)	656,968,878
TCW Asset Management Company (8/13)	621,141,214
Vista Credit Opportunities Fund I-B, L.P. (10/14)	35,857,026
Westwood Management Corp. (6/12)	72,408,691

Note: The list does not include managers terminated prior to June 30, 2016 with residual assets in the account.

REAL RETURN

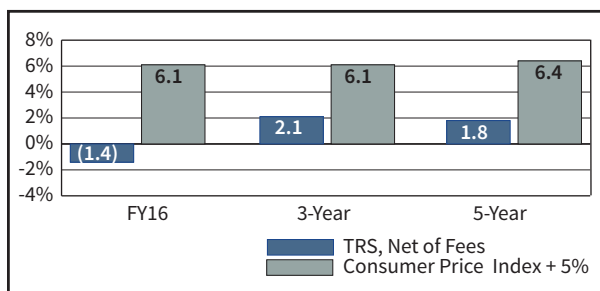
The real return asset class was established during 2007 in recognition of the significant impact inflation has on an investment portfolio and its return objectives. Traditional asset classes, such as equities and fixed income, tend to perform well in periods of stable or falling inflation yet face meaningful challenges in periods of rising inflation.

The real return asset class serves as a portfolio diversifier and protects against unanticipated and

actual inflation within the total fund. The objective of the real return asset class is to exceed the Consumer Price Index (CPI) by 5.0 percentage points over a five- to 10-year period of time. Real return strategies are generally less correlated with traditional stock and bond portfolios and provide inflation protection and excess returns during periods of rising inflation while reducing overall risk to the total fund. It should be noted that the CPI is not an investible benchmark, but is utilized as a benchmark given the inflation focus of the asset class.

The long-term policy target established for real return is 11.0 percent of total fund. As of June 30, 2016, the TRS real return asset class value was \$3.5 billion, or 7.8 percent of the total fund portfolio. For the fiscal year, TRS's real return portfolio declined 1.4 percent, net of fees, compared to the 6.1 percent return of the benchmark. Real return performance and benchmark comparisons are noted in the following chart.

Real Return vs. Benchmark Return



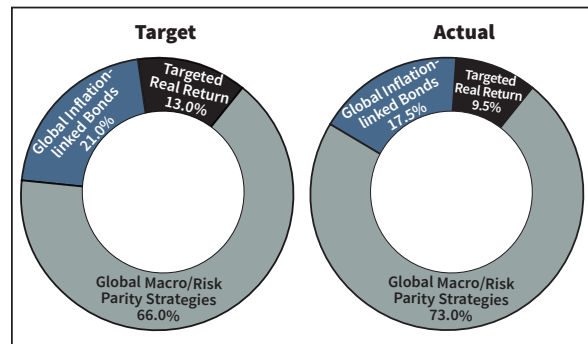
Sources: State Street Bank and Trust and TRS

The real return portfolio is expected to maintain a risk/return profile between global equities and fixed income. TRS maintained an underweight position to real assets during the fiscal year.

During FY16, TRS began modifying the real return portfolio, altering specific risk parity strategies as part of a broader diversifying strategies program. The primary components of the real return portfolio were negatively impacted by commodity weakness, led by the drop in oil prices, along with negative real rates. The dispersion between asset class returns was the lowest in history with discounted growth and inflation changing very little relative to traditional equity and fixed income asset classes.

The following charts provide allocation percentages of holdings within the subclasses of real return as of June 30, 2016.

Real Return Targets and Actual Allocation as of June 30, 2016



Source: TRS

As of June 30, 2016, TRS employed the following managers and/or funds including their respective assets under management.

Real Return Managers and Assets Under Management (inception date of account)

	Assets
Global Inflation-linked Bonds	
Pacific Investment Management Company, L.L.C. (5/07)	\$614,711,057
Global Macro/Risk Parity Strategies	
AQR Multi-Strategy Fund XIV, L.P. (7/07)	889,489,888
Bridgewater All Weather Portfolio Limited (7/07)	461,866,633
Bridgewater Optimal Portfolio, L.L.C. (4/16)	401,708,412
PIMCO Multi-Asset Volatility Fund, L.L.C. (5/13)	43,103,504
Standard Life Investments Global Asset Return Strategies Fund Ltd. (6/12)	762,379,862
Targeted Real Return	
AQR Real Return Offshore Fund, L.P. (6/12)	248,973,062
Black River Agriculture Fund 2, L.P. (6/13)	41,361,930
Sheridan Production Partners III-B, L.P. (11/14)	2,674,000
Taurus Mining Finance Fund, L.L.C. (4/15)	14,563,265
West Street Infrastructure Partners III, L.P. (1/16)	23,080,000

PRIVATE EQUITY

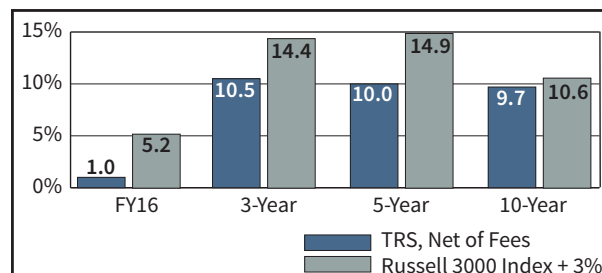
Private equity includes investments that are placed and traded outside of the stock exchanges and other public markets. Over the long term, they are

an attractive investment for pension funds, endowments, insurance companies, and other sophisticated investors. The investment class benefits the economy by providing needed capital to start-up companies and for continued growth in privately held companies and firms that are restructuring to better compete. Investing in private equity carries additional risk, but with skillful selection of managers, returns can be significantly higher than public equity investments.

The asset class is commonly referred to as private equity, even though it includes privately-placed debt instruments as well. Often, the debt includes a control position that is similar to equity because it allows the debt holder to influence the operations and management of the company. TRS is widely diversified across all subsectors within private equity, including buyout, growth equity, venture capital, and distressed debt.

TRS measures private equity performance against the Russell 3000 Index plus 300 basis points (3 percentage points). This benchmark does not specifically compare performance to the private equity industry, but rather to the TRS long-term expectation that private equity produce returns superior to the public markets. For the one-year period ended June 30, 2016, private equity earned 1.0 percent on a net of fee basis, compared to the benchmark gain of 5.2 percent. TRS's investments in private equity maintain a very strong long-term return. The long-term performance strength of the private equity program and the asset class's diversification both benefit the overall portfolio. One-, three-, five-, and 10-year comparisons relative to the benchmark follow.

Private Equity vs. Benchmark Return

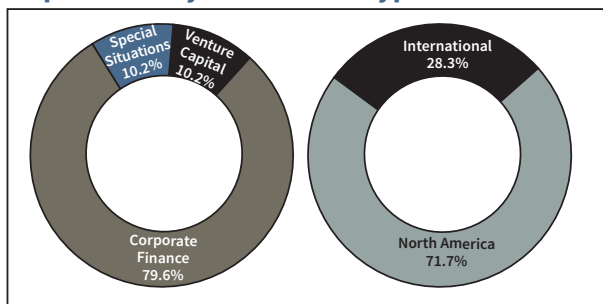


Sources: State Street Bank and Trust and TRS

In June 2014, the Board of Trustees adopted a new asset allocation study that increased the private equity long-term allocation target to 14 percent. Successful implementation of this target is subject to many factors, including public market performance and sufficient availability of high quality private equity opportunities in the market. TRS continues to prudently increase its exposure to private equity and as of June 30, 2016, \$5.5 billion or 12.3 percent of the TRS investment portfolio was assigned to the private equity asset class.

TRS approved new commitments to 19 separate private equity funds totaling approximately \$1.3 billion and four co-investments totaling \$119 million during the fiscal year. Included in this total were funds designed to broaden the program's geographic diversification, continued focus on core manager relationships and sourcing opportunities in small buyout and venture capital. TRS remains opportunistic with its private equity investment approach and continued the private equity secondary market program in which four private equity funds were sold in the secondary market. The following charts provide exposure percentage by investment type at June 30, 2016.

Exposure % by Investment Type



Source: TorreyCove Capital Partners, L.L.C.

The following table lists the private equity partnerships/funds (and the respective assets under management) that TRS has investments with as of June 30, 2016.

Private Equity Partnerships and Assets Under Management (inception date of account)

	Assets
Corporate Finance	
Advent International GPE VI, L.P. (7/08)	\$45,518,676
Advent International GPE VII-C, L.P. (12/12)	89,798,740
Apollo Investment Fund V, L.P. (5/01)	4,849,155
Apollo Investment Fund VI, L.P. (5/06)	45,140,761
Apollo Investment Fund VII, L.P. (1/08)	89,583,437
Apollo Investment Fund VII Annex A (5/12)	9,478,514
Apollo Investment Fund VIII, L.P. (12/13)	115,278,282
Apollo Investment Fund VIII Annex A (4/16)	30,475,319
Banc Fund VI, L.P. (6/02)	6,934,677
The Baring Asia Private Equity Fund V, L.P. (3/11)	87,572,839
The Baring Asia Private Equity Fund VI, L.P. (9/15)	26,221,208
Black River Capital Partners Fund (Food), L.P. (8/11)	79,863,566
Black River Food Fund 2, L.P. (6/14)	16,410,008
Blackstone Capital Partners VI, L.P. (8/11)	144,332,841
Blackstone Capital Partners VI Annex A (10/11)	42,153,715
Carlyle Japan International Partners III, L.P. (3/15)	17,715,407
Carlyle Japan International Partners III Annex A (10/14)	27,289,034
Carlyle Partners IV, L.P. (4/05)	8,527,673
Carlyle Partners V, L.P. (7/07)	94,972,672
Carlyle Partners VI, L.P. (6/13)	137,364,402
Carlyle Partners VI Annex A (12/15)	18,122,700
Carlyle/Riverstone Global Energy and Power Fund II, L.P. (1/03)	10,092,296
Carlyle/Riverstone Global Energy and Power Fund III, L.P. (4/06)	21,997,401
DLJ Merchant Banking Partners II, L.P. (3/97)	1,913
Edgewater Growth Capital Partners, L.P. (11/03)	1,839,984
Edgewater Growth Capital Partners II, L.P. (2/06)	5,540,983
Edgewater Growth Capital Partners III, L.P. (9/11)	48,625,894
EIF United States Power Fund IV, L.P. (11/11)	62,699,935
Energy Capital Partners I, L.P. (4/06)	15,308,467
Energy Capital Partners II-A, L.P. (9/09)	24,041,770
Energy Capital Partners II Annex A (10/11)	33,494,084
EnerVest Energy Institutional Fund XII-A, L.P. (12/10)	7,160,872
EQT VI, L.P. (9/11)	99,544,083
	<i>(continued)</i>

	Assets
EQT VII, L.P. (1/16)	\$18,584,009
Gamma, L.P. (4/15)	1,200,827
GI Partners Fund III, L.P. (1/09)	22,412,169
GI Partners Fund IV, L.P. (1/14)	41,913,072
Great Point Partners II, L.P. (11/13)	10,631,286
Green Equity Investors V, L.P. (8/07)	67,839,221
Green Equity Investors VI, L.P. (11/12)	169,181,532
Green Equity Investors VI Annex A (6/14)	30,034,444
GTCR Fund VIII, L.P. (7/03)	2,463,240
ICV Partners II, L.P. (1/06)	5,392,318
ICV Partners III, L.P. (10/13)	14,389,142
IL Asia Investors, L.P. (12/14)	32,912,728
J.C. Flowers II, L.P. (2/07)	9,607,644
Littlejohn Fund IV, L.P. (7/10)	67,593,870
Madison Dearborn Capital Partners V, L.P. (7/06)	32,261,311
Madison Dearborn Capital Partners VI Annex A (4/13)	4,311,355
Madison Dearborn Capital Partners VII, L.P. (1/16)	6,145,349
MBK Partners Fund II, L.P. (5/09)	20,410,363
MBK Partners Fund III, L.P. (4/13)	80,862,563
MBK Partners Fund III Annex A (12/13)	56,977,322
MBK Partners Fund III Annex B (10/15)	39,278,148
Morgan Creek Partners Asia, L.P. (1/11)	107,017,151
NGP Natural Resources IX Annex A (11/12)	149,136
NGP Natural Resources X, L.P. (5/12)	65,593,509
NGP Natural Resources XI, L.P. (11/14)	22,208,805
New Mountain Partners III, L.P. (8/07)	84,710,982
New Mountain Partners IV, L.P. (12/14)	54,115,595
Onex Partners III, L.P. (04/09)	41,752,354
PAI Europe V, L.P. (4/08)	18,725,300
Palladium Equity Partners IV, L.P. (3/14)	6,575,622
Parthenon Investors IV, L.P. (4/12)	35,837,047
Parthenon Investors IV Annex A (6/15)	31,974,352
Pine Brook Capital Partners, L.P. (1/08)	29,139,858
Providence Equity Partners VI, L.P. (3/07)	68,416,812
Providence Equity Partners VI Annex A (8/12)	46,386,522
Providence Equity Partners VII, L.P. (6/12)	131,624,462
Rhone Partners IV, L.P. (1/12)	48,008,589
Riverstone/Carlyle Global Energy and Power Fund IV, L.P. (3/08)	49,516,800
Riverstone Global Energy and Power Fund V, L.P. (6/12)	171,655,142
Riverstone Global Energy and Power Fund V Annex A (11/13)	19,624,936
RRJ Capital Master Fund III, L.P. (12/15)	2,500,208
	<i>(continued)</i>

(continued)

	Assets
Silver Lake Partners III, L.P. (8/07)	\$61,775,124
Silver Lake Partners IV, L.P. (10/13)	91,193,983
Siris Partners II, L.P. (1/12)	30,835,401
Siris Partners III, L.P. (5/15)	13,540,287
Siris Partners III Annex A (12/15)	16,700,000
TA XII, L.P. (2/16)	8,071,108
Trident V, L.P. (12/10)	77,673,925
Trident V Annex A (10/11)	44,513,262
Trident VI, L.P. (9/14)	54,349,925
Trident VI Annex A (8/15)	21,196,013
Trustbridge Partners IV, L.P. (12/11)	51,919,570
Veritas Capital Fund IV, L.P. (11/10)	87,545,228
Veritas Capital Fund IV Annex A (2/11)	13,569,045
Veritas Capital Fund V, L.P. (6/15)	67,797,076
Vicente Capital Partners Growth Equity Fund, L.P. (4/08)	13,563,977
Vista Equity Partners Fund III, L.P. (11/07)	23,249,555
Vista Equity Partners Fund IV, L.P. (10/11)	126,898,560
Vista Equity Partners Fund V, L.P. (5/14)	157,026,897
Vista Equity Partners Fund VI, L.P. (6/16)	18,171,551
VSS Communications Partners IV, L.P. (3/05)	974,717
Warburg Pincus Private Equity X, L.P. (10/07)	127,100,946
Venture Capital	
Battery Ventures XI-A, L.P. (6/16)	595,688
Battery Ventures XI-A Side Fund, L.P. (6/16)	392,657
Carlyle U.S. Growth Fund III, L.P. (6/07)	7,186,690
Carlyle Venture Partners II, L.P. (10/02)	34,333,772
Granite Ventures II, L.P. (5/05)	22,589,475
HealthpointCapital Partners, L.P. (6/04)	8,813,683
Hopewell Ventures, L.P. (6/04)	2,632,828
Illinois Emerging Technologies Fund, L.P. (6/04)	710,908
Institutional Venture Partners XV, L.P. (6/15)	9,662,926
JMI Equity Fund VII, L.P. (2/11)	20,656,728
JMI Equity Fund VIII-A, L.P. (10/15)	6,254,177
Lightspeed Venture Partners IX, L.P. (3/12)	72,251,428
Lightspeed Venture Partners X, L.P. (7/14)	7,675,803
Lightspeed Venture Partners XI, L.P. (3/16)	197,694
Lightspeed Venture Partners Select, L.P. (3/14)	13,163,453
Lightspeed Venture Partners Select II, L.P. (6/16)	948,784
LiveOak Venture Partners I, L.P. (2/13)	10,621,001
Longitude Venture Partners, L.P. (3/08)	14,376,116
Longitude Venture Partners II, L.P. (4/13)	25,128,761
Morgan Creek Partners Venture Access Fund, L.P. (1/12)	102,875,871
New Enterprise Associates 15, L.P. (3/15)	13,140,274
Scale Venture Partners V, L.P. (1/16)	4,196,805
(continued)	

(continued)

	Assets
SCP Private Equity Partners, L.P. (5/97)	\$36,366
SCP Private Equity Partners II, L.P. (6/00)	20,945,595
Shasta Ventures, L.P. (1/05)	22,593,890
Shasta Ventures IV, L.P. (10/14)	4,210,526
Sofinnova Venture Partners VIII, L.P. (8/11)	22,299,344
Sofinnova Venture Partners IX, L.P. (12/14)	13,747,832
Starvest Partners II, L.P. (1/09)	13,170,529
Sunstone Partners I, L.P. (2/16)	859,204
Union Grove Partners Direct Venture Fund, L.P. (4/14)	11,728,382
Union Grove Partners Venture Access Fund, L.P. (3/14)	31,507,811
Union Grove Partners Venture Access Fund II, L.P. (3/16)	1,189,461
Union Grove Partners Venture Access Fund II-B, L.P. (12/15)	1,275,217
VantagePoint Venture Partners IV, L.P. (6/00)	10,386,049
VantagePoint Venture Partners 2006 (Q), L.P. (12/06)	27,734,227
Special Situations	
Apollo Lincoln Private Credit Fund, L.P. (10/14)	38,099,218
Blackstone/GSO Capital Solutions Fund, L.P. (9/09)	47,772,807
Clearlake Capital Partners II, L.P. (7/09)	21,624,459
Clearlake Capital Partners III, L.P. (10/12)	57,600,441
Clearlake Capital Partners IV, L.P. (9/15)	30,263,667
Clearlake Opportunities Partners (P), L.P. (9/15)	11,051,297
Maranon Mezzanine Fund, L.P. (8/09)	4,474,789
Oaktree Opportunities Fund VIII, L.P. (3/10)	38,281,572
Oaktree Opportunities Fund VIIIb, L.P. (8/11)	35,873,533
OCM Opportunities Fund V, L.P. (6/04)	780,594
OCM Opportunities Fund VIIIb, L.P. (6/08)	9,437,089
Oaktree Opportunities Fund IX, L.P. (3/13)	95,738,192
Oaktree Opportunities Fund IX Annex A (3/13)	96,023
OCM European Principal Opportunities Fund II, L.P. (8/08)	22,085,303
Oaktree European Principal Fund III, L.P. (11/11)	58,017,714
Oaktree Real Estate Opportunities Fund VI, L.P. (6/13)	79,853,346
Prism Mezzanine Fund, L.P. (12/04)	7,344,483
SW Pelham Fund II, L.P. (9/03)	60,028
William Blair Mezzanine Capital Fund III, L.P. (1/00)	516,864

ABSOLUTE RETURN

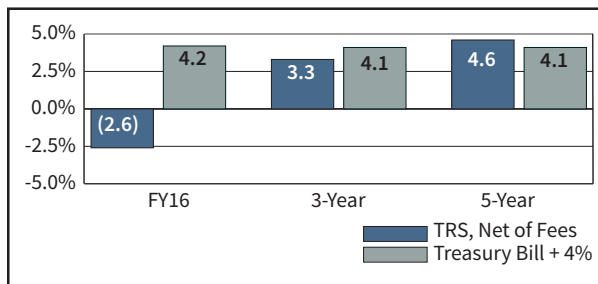
The absolute return asset class includes mandates designed to provide attractive return and risk attributes while exhibiting low correlation to traditional public equity and fixed income investments. The absolute return class was established as a result of an asset allocation study adopted in FY07.

The asset class is measured against a relative risk-free index of 90-Day Treasury Bills + 4.0 percent. While this is not an investible index, the benchmark represents the intended risk reduction characteristic of the asset class. Structurally, TRS continues to migrate away from fund of funds investments in order to lower the program's total expense ratio while increasing return expectations. Consistent with objectives, the asset class provides beneficial diversification for the total plan, while producing relatively stable returns.

The long-term policy target for absolute return is 8.0 percent of total fund. As of June 30, 2016, the TRS absolute return asset class value was \$3.2 billion, or 7.3 percent of the total fund portfolio.

For the fiscal year, TRS's absolute return portfolio declined 2.6 percent, net of fees, compared to the 4.2 percent return of the benchmark. Absolute return performance and benchmark comparisons are noted in the following chart.

Absolute Return vs. Benchmark Return

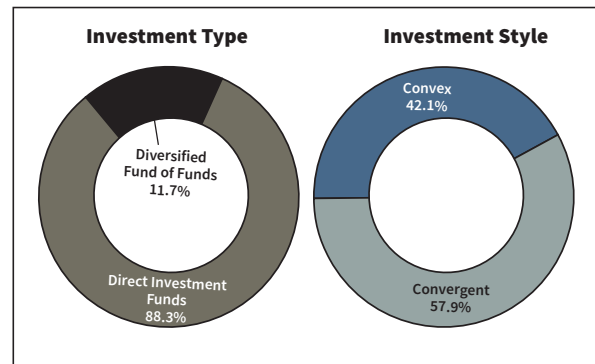


Sources: State Street Bank and Trust and TRS

Investments in absolute return are administered via both direct investment manager relationships and diversified fund of funds. The absolute return portfolio has continued to reduce exposure to fund of funds and implement direct fund investments.

The following charts provide further breakdown of TRS's actual allocation as of June 30, 2016.

Absolute Return Actual Allocation as of June 30, 2016



Source: TRS

As of June 30, 2016, TRS employed the following managers and/or funds including their respective assets under management.

Absolute Return Managers and Assets Under Management (inception date of account)

	Assets
Diversified Fund of Funds	
Bluegill Liquidating Fund, L.L.C. (1/14)	\$86,258,079
Grosvenor Monarch Fund, L.L.C. (6/07)	294,264,911
Direct Investment Funds	
Alphadyne Global Rates Fund II, LTD. (6/14)	285,218,360
Bluegill Liquidating Fund, L.L.C. (Class B) (1/14)	54,122,191
Brevan Howard Systematic Trading Fund, L.P. (6/15)	154,142,898
Bridgewater Pure Alpha Fund I (1/09)	310,995,253
AlphaTerra Fund, L.P. (12/15)	105,998,214
Grosvenor Monarch Fund, L.L.C. (Series B) (3/11)	730,195,333
ISAM Systematic Trend, L.L.C. (6/15)	156,959,102
PDT Mosaic Offshore Holdings, L.L.C. (6/15)	257,604,217
Penso Fund Platform SPC (11/15)	94,669,786
Quadratic Capital Management, L.L.C. (4/15)	97,005,662
Robeco Transtrend Diversified Fund, L.L.C. (5/15)	163,584,247
Tourbillon Global Equities, L.L.C. (12/14)	188,146,089
Varadero International, L.P. (6/14)	217,601,854

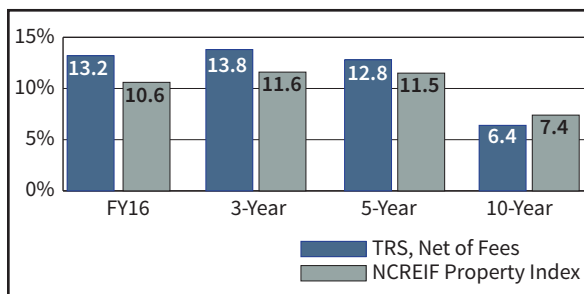
REAL ESTATE

Real estate investments are direct investments or ownership in land and buildings including apartments, offices, warehouses, shopping centers, and hotels. TRS also holds partnership interests in entities that purchase and manage property and pass rent and sale income back to TRS. The real estate asset class offers competitive returns, provides diversification benefits to portfolios of stocks and bonds, and also serves as a hedge against inflation. Investment in real estate is intended to increase the TRS total portfolio long-term rate of return and reduce year-to-year volatility. Additionally, real estate offers a strong income component to pay TRS benefits.

FY16 market conditions continued to support robust commercial property income returns and rising property valuations. TRS real estate managers have been active in the market through the year, positioning the portfolio for current and future market cycles. The TRS investment portfolio maintains a long-term target allocation of 15.0 percent to real estate.

As of June 30, 2016, TRS held \$6.9 billion in real estate assets, or 15.5 percent of the total fund portfolio. For the fiscal year, TRS's real estate portfolio earned 13.2 percent, net of fees, outpacing the National Council of Real Estate Investment Fiduciaries (NCREIF) Index by 2.6 percent. TRS's portfolio outperformed the NCREIF Index by 2.2 percent and 1.3 percent for the respective three- and five-year periods, while lagging 1.0 percent for the 10-year period. Real estate performance and benchmark comparisons are noted in the following chart.

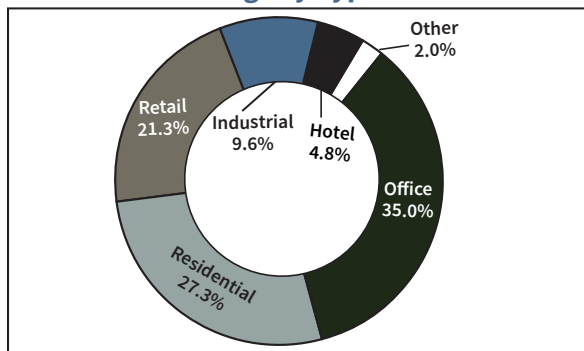
Real Estate vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

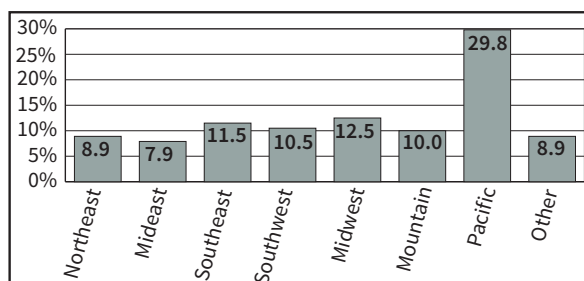
To enhance returns and reduce risk, TRS acquires high quality properties diversified geographically and by property type. TRS's real estate holdings by type and geography as of June 30, 2016 are exhibited in the following charts.

Real Estate Holdings by Type



Source: Courtland Partners, Ltd.

Geographic Diversification of Real Estate Holdings



Source: Courtland Partners, Ltd.

Professional real estate advisors manage real estate owned by TRS. Separate account managers administer TRS's direct investments in real estate assets. Closed-end and open-end accounts represent partnership interests in real estate funds including TRS's international real estate accounts. As of June 30, 2016, TRS employed the following managers including their respective assets under management.

Real Estate Managers and Assets Under Management (inception date of account)

	Assets
Separate Accounts	
Capri/Capital Advisors, L.L.C. (12/91)	\$1,019,397,397
Cornerstone Real Estate Advisors, L.L.C. (7/08)	542,052,939
Cornerstone II S/A (7/09)	11,257,352
Cornerstone III S/A (8/09)	17,543
Heitman Capital Management, L.L.C. (7/09)	1,653,734,331
Invesco Institutional (N.A.), Inc. (7/08)	573,383,064
LPC Realty Advisors I, Ltd. (7/92)	879,731,187
LPC Realty Advisors Core, Ltd. (4/07)	275,516,055
Principal Real Estate Investors, L.L.C. (10/13)	148,385,972
Closed-End Accounts	
Beacon Capital Strategic Partners V, L.P. (8/07)	7,753,683
Blackstone Real Estate Partners VI, L.P. (9/07)	28,955,819
Blackstone Real Estate Partners VII, L.P. (1/12)	206,405,188
Blackstone Real Estate Partners VIII.TE.2, L.P. (8/15)	124,263,357
Capri Capital Advisors Apartment Fund III, L.P. (11/02)	243,905
Capri Select Income Fund II, L.L.C. (12/05)	52,169
Carlyle Realty Partners IV, L.P. (6/05)	53,412,100
Carlyle Realty Partners VII, L.P. (7/14)	39,567,835
Cornerstone Hotel Income & Equity Fund II, L.P. (7/08)	3,296,923
IC Hospitality Fund II, L.P. (4/15)	6,915,227
JER Real Estate Qualified Partners III, L.P. (1/05)	823,691
Lone Star Real Estate Fund III (U.S.), L.P. (5/14)	42,157,920
Lone Star Real Estate Fund IV (U.S.), L.P. (10/15)	67,637,147
	<i>(continued)</i>

(continued)

	Assets
Rockpoint Real Estate Fund V, L.P. (8/15)	\$11,481,355
SCG Retail Management II, L.P. (11/13)	27,335,146
Southwest Multifamily Partners, L.P. (8/12)	30,265,226
Starwood X Annex A (1/15)	28,300,989
Starwood X Annex B (7/15)	16,641,590
Starwood Distressed Opportunity Fund IX, L.P. (3/13)	131,154,996
Starwood Opportunity Fund X, L.P. (10/15)	175,507,598
Thayer Hotel Investors IV, L.P. (5/04)	263,248
Walton Street Real Estate Fund IV, L.P. (7/03)	10,586,521
Walton Street Real Estate Fund VI, L.P. (4/09)	54,198,776
Walton Street Real Estate Fund VII, L.P. (6/13)	89,151,904
Open-End Accounts	
Hines U.S. Core Office Fund, L.P. (12/05)	48,110,315
Lion Industrial Trust (4/05)	308,159,259
International Real Estate Accounts	
Blackstone Real Estate Partners Asia, L.P. (12/13)	64,632,506
BlackRock Asia Property Fund III, L.P. (12/07)	51,555,702
Carlyle Europe Real Estate Partners III, L.P. (9/07)	16,866,284
CB Richard Ellis Strategic Partners Europe Fund III, L.P. (4/07)	1,017,931
CB Richard Ellis Strategic Partners UK Fund III, L.P. (5/07)	421,956
Fortress Japan Opportunity Fund III (Dollar A), L.P. (8/15)	23,172,287
Gateway Real Estate Fund IV, L.P. (7/13)	53,062,863
LaSalle Asia Opportunity Fund III, L.P. (11/07)	7,854,800
LaSalle Asia Opportunity Fund IV, L.P. (7/13)	51,858,461
Madison International Real Estate Liquidity Fund VI (TE), L.P. (3/16)	14,421,955
Niam Nordic V, L.P. (4/12)/FB	21,396,617
Oak Street Real Estate Capital Fund III, L.P. (5/16)	20,827,133

SECURITIES LENDING

As of June 30, 2016, Citibank, N.A. served as the third-party securities lending agent for the fixed income, domestic equity and international equity lending programs. The lending agent is responsible for making loans, acquiring collateral, marking loans and collateral to market on a daily basis, and investing cash collateral based on lending agreement terms. The Board of Trustees' policies permit TRS to use investments to enter into securities lending transactions, which are loans of securities to broker-dealers or other entities. Additional information regarding securities lending activity is included in the Notes to Financial Statements under "D. Investments."

The borrower of a security must post collateral in excess of the fair value of the security. TRS receives both cash and non-cash (*i.e.*, securities) collateral. The following table represents the fair values of the securities lending activity based on type of collateral as of June 30, 2016.

Collateral Type	Cash	Non-Cash	Total
Securities on loan	\$3,010,141,914	\$285,185,527	\$3,295,327,441
Collateral received*	3,098,883,352	312,082,504	3,410,965,856
Collateralized percentage	102.9%	109.4%	103.5%
Reinvested collateral*	\$3,098,892,175		

Sources: State Street Bank and Trust and Citibank, N.A.

* Does not include lending collateral with the State Treasurer.

TRS earns income from fees paid by the borrowers and interest earned from investing the cash collateral. For the year ended June 30, 2016, TRS earned net income of \$17.1 million through its securities lending program. The following table summarizes fiscal year net income from securities lending activity and the fiscal year averages regarding securities available to loan.

Lending Income for FY16	
Securities lending income	\$17,651,392
Lending agent fees	(1,089,734)
Borrower rebates	510,626
Securities lending net income	\$17,072,284
Loan Averages during FY16	
Available to loan	\$18,555,304,144
Securities on loan	3,514,892,235
Percentage on loan	18.9%

Sources: State Street Bank and Trust and Citibank, N.A.

BROKERAGE ACTIVITY

The following table shows the top 50 listed brokers used by TRS external equity managers for the year ended June 30, 2016. TRS also manages a commission recapture program as part of its trading strategies. For the year ended June 30, 2016, TRS recaptured \$0.2 million in cash that was reinvested in the fund. In addition, TRS uses commission recapture refunds to pay for Investment Department expenses. During FY16, TRS used \$0.2 million of recaptured funds to offset expenses.

Top 50 Brokers Used by TRS Managers

Broker	Shares Traded	FY16 Commission
Merrill Lynch & Co., Inc. and all Subsidiaries (Worldwide)	271,657,801	\$1,959,859
Citigroup, Inc. and all Subsidiaries (Worldwide)	437,947,431	1,173,711
ConvergEx Group, L.L.C.	76,104,634	633,972
Credit Suisse (Worldwide)	132,094,647	596,214
J.P. Morgan Securities, Inc. (Worldwide)	80,489,713	518,109
UBS AG	168,601,704	478,585
Goldman Sachs & Co. (Worldwide)	126,679,835	427,498
Instinet, L.L.C. (Worldwide)	369,680,641	402,171
Morgan Stanley & Co., Inc. and Subsidiaries (Worldwide)	111,487,437	381,833
Loop Capital Markets, L.L.C.	25,585,769	325,820
Williams Capital Group, L.P.	18,466,794	263,799
Barclays (Worldwide)	10,885,495	247,760
Deutsche Bank & Securities (Worldwide)	84,628,082	231,127
Macquarie Bank & Securities, Ltd. (Worldwide)	86,632,526	228,149
Jefferies & Company, Inc.	121,384,604	170,198
Investment Technology Group, Inc. (Worldwide)	58,284,484	158,656
Baird, Robert W., & Company, Incorporated	4,665,209	131,337
Sanford Bernstein (Worldwide)	39,205,694	129,149
Credit Lyonnais Securities	53,324,598	124,108
Topeka Capital Markets, Inc.	4,249,987	101,393
Stifel Nicolaus & Company, Inc.	3,524,977	99,361
Bloomberg Tradebook, L.L.C.	9,426,943	97,890
CL King & Associates, Inc.	3,618,535	96,509
RBC Dain Rauscher (Worldwide)	7,707,080	93,491
HSBC Bank PLC	9,670,633	90,287
Cheevers & Co., Inc.	4,827,615	89,375
Telsey Advisory Group	2,632,656	79,426
State Street Brokerage Services (Worldwide)	14,045,279	77,550
Capital Institutional Services, Inc.	2,891,508	76,993
M. Ramsey King Securities, Inc.	3,171,606	75,992
BNP Paribas Securities Services S.C.A.	20,632,486	75,339
Liquidnet, Inc.	26,394,765	73,412
Cabrera Capital Markets, Inc.	4,417,683	72,852

(continued)

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Broker	Shares Traded	FY16 Commission
Samsung Securities Co., Ltd.	372,256	\$68,901
Guzman & Company	6,129,831	63,973
CLSA Securities	28,711,252	63,419
SJ Levinson & Sons, L.L.C.	4,171,394	59,763
Nomura Securities Co., LTD	8,314,185	59,450
Mischler Financial Group	2,012,984	59,150
Jonestrading Institutional Services, L.L.C.	2,166,167	57,913
Raymond James and Associates, Inc. (Worldwide)	2,347,976	55,473
Exane, Inc.	4,282,319	53,701
Joh, Berenberg, Gossler & Co.	806,305	52,316
Kim Eng Securities (Hong Kong) Limited	18,821,326	52,093
Daiwa Securities Group, Inc.	3,691,618	49,128
CastleOak Securities, L.P.	1,635,363	48,801
Citation Financial Group, L.P.	2,359,450	47,189
KCG Americas L.L.C.	19,911,290	46,281
Penserra Securities, L.L.C.	5,253,288	45,859
Greentree Brokerage Services, Inc.	1,099,358	43,974
(All Others - 170 Brokers)	278,530,507	1,310,956
Total	2,785,635,720	\$12,020,265

Sources: State Street Bank and Trust and TRS

INVESTMENT MANAGER AND CUSTODIAN FEES

For the year ended June 30, 2016, fee payments to external investment managers and the master custodian totaled \$301.6 million.

Schedule of Fees

Investment Manager/Account	FY16
Aberdeen Asset Management, Inc.	\$1,499,000
Acadian Asset Management, L.L.C.	758,577
Advent International GPE VI Limited Partnership	317,017
Advent International GPE VII-C Limited Partnership	1,274,897
Affinity Investment Advisors, L.L.C.	135,496
Alphadyne Global Rates Fund II, Ltd.	14,373,968
AlphaTerra Fund, L.P.	262,414
Apex Capital Management, Inc.	580,670
Apollo Investment Fund VII, L.P.	400,205
Apollo Investment Fund VIII, L.P.	1,479,086
Apollo Lincoln Fixed Income Fund, L.P.	948,337
Apollo Lincoln Private Credit Fund, L.P.	235,891
AQR Capital Management, L.L.C.	10,568,470
AQR Real Return Offshore Fund, L.P.	1,698,396
Ativo Capital Management, L.L.C.	167,648
Axiom International Investors, L.L.C.	2,175,252
Banc Fund VII, L.P.	450,600
The Baring Asia Private Equity Fund V, L.P.	1,339,609
The Baring Asia Private Equity Fund VI, L.P.1	1,620,000
Battery Ventures XI-A Side Fund, L.P.	343
Battery Ventures XI-A, L.P.	31,556
Beacon Capital Strategic Partners V, L.P.	137,778
Black River Agriculture Fund 2, L.P.	1,237,500
Black River Capital Partners Fund (Food), L.P.	789,736
Black River Food Fund 2, L.P.	1,312,500
BlackRock Asia Property Fund III, L.P.	328,610
Blackstone Capital Partners VI, L.P.	1,427,440
Blackstone Real Estate Partners Asia, L.P.	1,500,000
Blackstone Real Estate Partners VI, L.P.	241,665
Blackstone Real Estate Partners VII, L.P.	2,230,057
Blackstone Real Estate Partners VIII.TE.2, L.P.	3,333,333
Blackstone/GSO Capital Solutions Fund, L.P.	737,838
BlueMountain Capital Management, L.L.C.	3,028,600
Boston Company Asset Management, L.L.C.	460,139
Brevan Howard Systematic Trading Fund, L.P.	1,512,733
Bridgewater All Weather Portfolio Offshore Limited	2,246,157
Bridgewater Optimal Portfolio, L.L.C.	1,199,718
Bridgewater Pure Alpha Funds Ltd.	9,624,044
Capri/Capital Advisors, L.L.C.	3,607,901
	(continued)

(continued)	
Investment Manager/Account	FY16
Carlson Capital, L.P.	\$6,718,164
Carlyle Europe Real Estate Partners III, L.P.	197,215
Carlyle Japan International Partners III, L.P.	471,969
Carlyle Partners IV, L.P.	26,552
Carlyle Partners V, L.P.	485,797
Carlyle Partners VI, L.P.	2,829,429
Carlyle Realty Partners IV, L.P.	643,293
Carlyle Realty Partners VII, L.P.	904,638
Carlyle U.S. Growth Fund III, L.P.	381,942
Carlyle/Riverstone Global Energy and Power Fund III, L.P.	362,418
CB Richard Ellis Strategic Partners Europe Fund III, L.P.	83,858
CB Richard Ellis Strategic Partners UK Fund III, L.P.	7,651
Channing Capital Management, L.L.C.	684,158
Claren Road Credit Partners, L.P.	2,020,147
Clearlake Capital Partners II, L.P.	211,433
Clearlake Capital Partners III, L.P.	476,668
Clearlake Capital Partners IV, L.P.	1,151,763
Clearlake Opportunities Partners (P), L.P.	496,827
Cornerstone Hotel Income & Equity Fund II, L.P.	90,763
Cornerstone Real Estate Advisors, L.L.C.	2,258,480
Cramer Rosenthal McGlynn, L.L.C.	922,487
Dimensional Fund Advisors, L.P.	4,289,641
Dolan McEniry Capital Management, L.L.C.	655,478
Edgewater Growth Capital Partners II, L.P.	126,534
Edgewater Growth Capital Partners III, L.P.	115,205
EIF United States Power Fund IV, L.P.	1,195,752
Emerald Advisers, Inc.	1,525,340
Energy Capital Partners Fund II-A, L.P.	190,877
Energy Capital Partners I, L.P.	208,238
Energy Capital Partners II Annex A	41,593
Envest Energy Institutional Fund XII-A, L.P.	251,278
EQT VI, L.P.	872,038
EQT VII, L.P.	1,283,722
Fortress Japan Opportunity Fund III (Dollar A), L.P.	869,596
Franklin Advisers, Inc.	2,683,899
Franklin Templeton Investment Management Limited	1,835,205
Gamma, L.P.	10,591
	(continued)

<i>(continued)</i>	
Investment Manager/Account	FY16
Garcia Hamilton & Associates, L.P.	\$732,236
Gateway Real Estate Fund IV, L.P.	761,554
GI Partners Fund III, L.P.	387,703
GI Partners Fund IV, L.P.	559,025
Grain Communications Opportunity Fund , L.P.	153,667
Granite Ventures II, L.P.	179,144
Great Point Partners II, L.P.	700,000
Green Equity Investors VI, L.P.	1,326,113
Grosvenor Monarch Fund, L.L.C.	2,756,945
GTCR Fund VIII, L.P.	95,781
HealthpointCapital Partners, L.P.	58,641
Heitman Capital Management, L.L.C.	6,310,438
Herndon Capital Management, L.L.C.	152,210
Hines U.S. Core Office Fund, L.P.	449,323
Hopewell Ventures, L.P.	137,985
IC Hospitality Fund II, L.P.	141,429
ICV Partners III, L.P.	141,796
IL Asia Investors, L.P.	800,000
Invesco Institutional (N.A.), Inc.	3,284,000
ISAM Systematic Trend, L.L.C.	5,387,481
J.C. Flowers II, L.P.	502,377
Jarislowsky, Fraser Limited	951,294
JMI Equity Fund VII, L.P.	418,453
JMI Equity Fund VIII-A, L.P.	328,500
JP Morgan Investment Management, Inc.	2,051,984
JP Morgan Management Associates, L.L.C.	4,067,683
LaSalle Asia Opportunity Fund III, L.P.	174,089
LaSalle Asia Opportunity Fund IV, L.P.	641,525
Levin Capital Strategies, L.P.	1,017,659
Lightspeed Venture Partners IX, L.P.	743,334
Lightspeed Venture Partners Select, L.P.	119,840
Lightspeed Venture Partners X, L.P.	259,120
Lion Industrial Trust	2,695,060
Littlejohn Fund IV, L.P.	576,230
LiveOak Venture Partners I, L.P.	450,000
Lombardia Capital Partners, L.L.C.	1,491,809
Lone Star Real Estate Fund III (U.S.), L.P.	201,972
Lone Star Real Estate Fund IV (U.S.), L.P.	1,513,117
Longitude Ventures Partners II, L.P.	439,212
Longitude Ventures Partners, L.P.	271,682
Loomis, Sayles & Company, L.P.	1,072,685
LPC Realty Advisors I, Ltd.	6,620,705
LSV Asset Management	5,722,405
MacKay Shields, L.L.C.	1,539,378
Madison Dearborn Capital Partners V, L.P.	76,234

(continued)

<i>(continued)</i>	
Investment Manager/Account	FY16
Madison Dearborn Capital Partners VII, L.P.	\$1,553,527
Madison International Real Estate Liquidity Fund VI (TE), L.P.	1,674,497
Magnetar Constellation Fund IV, L.L.C.	1,521,916
Manulife Asset Management, L.L.C.	1,190,600
Maranon Credit Fund II-B, L.P.	365,923
MBK Partners Fund II, L.P.	12,228
MBK Partners Fund III Annex B	1,043
MBK Partners Fund III, L.P.	1,871,811
McKinley Capital Management, Inc.	1,786,802
Mesirow Financial Investment Management, Inc.	1,155,768
MFS Institutional Advisors, Inc.	1,166,835
Mondrian Investment Partners Limited	5,510,322
Morgan Creek Partners Asia, L.P.	959,514
Morgan Creek Partners Venture Access Fund, L.P.	603,862
New Century Advisors, L.L.C.	634,481
New Enterprise Associates 15, L.P.	334,459
New Mountain Partners III, L.P.	461,968
New Mountain Partners IV, L.P.	1,252,510
NGP Natural Resources X, L.P.	1,156,648
NGP Natural Resources XI, L.P.	759,458
Niam Nordic V, L.P.	251,082
Northern Shipping Fund III, L.P.	375,000
Northern Trust Investments, Inc.	543,503
NXT Capital Senior Loan Fund II, L.P.	696,255
NXT Capital Senior Loan Fund IV, L.P.	281,566
Oak Street Real Estate Capital Fund III, L.P.	116,744
OakBrook Investments, L.L.C.	347,397
Oaktree Enhanced Income Fund II, L.P.	1,898,748
Oaktree Enhanced Income Fund III, L.P.	18,169
Oaktree Enhanced Income Fund, L.P.	1,909,807
Oaktree European Principal Fund III, L.P.	868,921
Oaktree Opportunities Fund IX, L.P.	1,590,810
Oaktree Opportunities Fund VIII, L.P.	661,104
Oaktree Opportunities Fund VIIIb, L.P.	614,833
Oaktree Real Estate Debt Fund, L.P.	184,889
Oaktree Real Estate Opportunities Fund VI, L.P.	1,102,098
OCM European Principal Opportunities Fund II, L.P.	598,471
OCM Opportunities Fund VIIIb, L.P.	202,878
Onex Partners III, L.P.	146,871
Pacific Investment Management Company, L.L.C.	7,743,718
PAI Europe V, L.P.	241,209
Palladium Equity Partners IV, L.P.	199,089
Parthenon Investors IV, L.P.	360,041

(continued)

<i>(continued)</i>	
Investment Manager/Account	FY16
PDT Partners, L.L.C.	\$8,977,750
Penso Advisors, L.L.C.	593,620
PGIM Fixed Income Global Liquidity Relative Value Fund I, Ltd.	259,877
PGIM Fixed Income U.S. Liquidity Relative Value Fund I, Ltd.	3,241,135
PGIM, Inc.	466,250
PIMCO BRAVO Fund II, L.P.	1,460,948
PIMCO BRAVO Fund, L.P.	337,768
Pine Brook Capital Partners, L.P.	412,309
Pine River Capital Management, L.P.	1,659,544
Principal Real Estate Investors, L.L.C.	1,353,691
Prism Mezzanine Fund, L.P.	156,301
Providence Equity Partners VI, L.P.	270,349
Providence Equity Partners VII, L.P.	2,063,526
Quadratic Capital Management L.L.C.	500,735
Rhone Partners V, L.P.	1,082,805
RhumbLine Advisers, L.P.	170,512
Riverstone Credit Partners, L.P.	114,948
Riverstone Global Energy and Power Fund V, L.P.	1,440,839
Riverstone/Carlyle Global Energy and Power Fund IV, L.P.	337,474
Robeco Boston Partners Asset Management, L.P.	1,191,546
Robeco Transtrend Diversified Fund, L.L.C.	2,168,224
Rockpoint Real Estate Fund V, L.P.	1,317,756
Scale Venture Partners V, L.P.	346,157
SCP Private Equity Partners II, L.P.	337,268
Shasta Ventures IV, L.P.	198,641
Sheridan Production Partners III-B, L.P.	1,121,909
Silver Lake Partners III, L.P.	159,725
Silver Lake Partners VI, L.P.	1,679,605
Siris Partners III, L.P.	983,268
Sofinnova Ventures Partners IX, L.P.	942,589
Sofinnova Ventures Partners VIII, L.P.	697,187
Southwest Multifamily Partners, L.P.	310,415
Standard Life Investment Global Absolute Return Strategies Master Fund Ltd.	5,595,537
StarVest Partners II, L.P.	118,206
Starwood Distressed Opportunity Fund IX Global, L.P.	1,822,968
Starwood IX Annex A	281,663
Starwood Opportunity Fund X Global, L.P.	1,703,880
Starwood X Annex A	61,319
Starwood X Annex B	73,878
State Street Bank and Trust Company (Custody)	1,900,000
Stone Point Capital Trident V, L.P.	938,844
<i>(continued)</i>	

<i>(continued)</i>	
Investment Manager/Account	FY16
Stone Point Capital Trident VI, L.P.	\$1,481,403
Strategic Global Advisors, L.L.C.	1,491,987
Sunstone Partners I, L.P.	242,876
T. Rowe Price Associates, Inc.	1,863,455
Taplin, Canida & Habacht, L.L.C.	411,260
Taurus Mining Finance Fund L.L.C.	1,689,878
TCW Asset Management Company	2,300,736
Thayer Hotel Investors IV, L.P.	34,941
Tourbillon Global Equities, L.L.C.	9,184,585
Trustbridge Partners IV, L.P.	559,687
Union Grove Partners Direct Venture Fund, L.P.	120,165
Union Grove Partners Venture Access Fund II, L.P.	126,027
Union Grove Partners Venture Access Fund, L.P.	680,937
Varadero International, Ltd.	4,504,483
Veritas Capital Fund V, L.P.	698,402
Vicente Capital Partners Growth Equity Fund, L.P.	103,498
Vista Credit Opportunities Fund I-B, L.P.	700,875
Vista Equity Partners Fund IV, L.P.	1,465,395
Vista Equity Partners Fund V, L.P.	2,246,733
Vista Foundation Fund III, L.P.	118,132
VSS Communications Partners IV, L.P.	57,994
Walton Street Real Estate Fund IV, L.P.	132,175
Walton Street Real Estate Fund VI, L.P.	734,008
Walton Street Real Estate Fund VII, L.P.	1,365,917
Warburg Pincus Private Equity X, L.P.	552,373
Wasatch Advisors, Inc.	2,293,893
West Street Global Infrastructure Partners III, L.P.	809,075
Westwood Management Corp.	581,204
Total Fees paid by TRS	<u>\$301,646,073</u>

Note: This schedule captures investment manager fees applicable to the fiscal year reported and differs from investment fees reported within the Financial Section.

ACTUARIAL

A photograph of the Charter Oak Schoolhouse, an octagonal building with a red brick main section and a white wooden section. The building features a prominent white octagonal cupola on its roof and a tall brick chimney. The background is filled with lush green trees under a clear blue sky.

Charter Oak Schoolhouse - Schuline, Randolph County

After a previous one-room school on the site was destroyed by a tornado in 1873, the school's teacher and local builders turned to an octagonal design for a new building, believing the unique shape would better withstand severe weather. Of the 53 octagonal one-room schools built in the United States, only Charter Oak and two others remain. The building, which served as a school until 1953, is now used as a museum.



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November 22, 2016

Board of Trustees
Teachers' Retirement System of the State of Illinois
2815 West Washington Street
Springfield, Illinois 62702

ACTUARIAL CERTIFICATION

Ladies and Gentlemen:

This report presents the results of the annual valuation of the assets and liabilities of the Teachers' Retirement System of the State of Illinois (TRS or System) as of June 30, 2016, prepared in accordance with the funding policy specified under the Illinois Pension Code (40 ILCS 5/16). This valuation takes into account all of the pension benefits to which members are entitled.

Actuarial Assumptions and Methods

The valuation was based on the actuarial assumptions adopted by the Board of Trustees, reflecting the three-year demographic experience review covering the period July 1, 2011, through June 30, 2014, and the economic experience review presented at the August 2016 Board meeting. In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the System and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience of the System. The methods are mandated by the Illinois Pension Code and are inadequate to appropriately fund TRS.

Assets and Membership Data

TRS reported to the actuary the individual data for members of the System as of the prior valuation date. Valuation results are projected, based upon the actuarial assumptions, to account for the one-year difference between the census data and the valuation date. The amount of assets in the trust fund taken into account in the valuation was based on statements prepared by TRS.

Funding Adequacy

The member and employer contribution rates are determined in accordance with the funding policy specified under the Illinois Pension Code (40 ILCS 5/16). The member contribution rate is 9.0%, which is comprised of 7.5% toward the cost of the retirement annuity, 0.5% toward the cost of the automatic annual increase in the retirement annuity and 1.0% for survivor benefits. The employer contributions are determined such that, together with the member contributions, the plan is projected to achieve 90% funding by 2045. The 2045 funding objective of 90% was set in 1994 as a 50-year objective. TRS members have always contributed their share. The State funding has been inadequate, resulting in TRS being among the worst funded public employee retirement systems in the United States. We strongly recommend an actuarial funding method that targets 100% funding where payments at least cover interest on the unfunded actuarial accrued liability and a portion of the principal balance. The funding policy adopted by the Board, referred to as Actuarial Math 2.0, meets this standard. The valuation indicates that for the fiscal year ending June 30, 2016, the actuarial experience of TRS was unfavorable, generating a net actuarial loss of \$1,431 million (1.2% of the actuarial accrued liability). This loss is the net result of a \$467 million loss due to unfavorable investment return experience and a \$964 million loss due to net unfavorable demographic experience in fiscal 2016.

Board of Trustees
Teachers' Retirement System of the State of Illinois
November 22, 2016

Actuarial Certification

In preparing the results presented in this report, we have relied upon information TRS provided to us regarding the benefit provisions, System members, benefit payments and unaudited plan assets. While the scope of our engagement did not call for us to perform an audit or independent verification of this information, we have reviewed this information for reasonableness. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information.

There is a schedule of Required Supplementary Information in the Financial Section of the System's Annual Financial Report. Segal has provided the Schedule of Changes in the Net Pension Liability, the Schedule of the Net Pension Liability, and the Schedule of Contributions from Employers and Other Contributing Entities. Segal reviewed this information in the Required Supplementary Information to verify its consistency with the valuation report.

The Actuarial Section of the System's Annual Financial Report contains the following schedules, which were not prepared by Segal but they were reviewed by Segal for consistency with the valuation report: Actuarial Valuation, Reconciliation of Unfunded Liability, State Funding Amounts, Unfunded Liability as a Percentage of Payroll Test, and Schedule of Contributions from Employers and Other Contributing Entities. The Actuarial Section also contains the following schedules, which were prepared by Segal: Funded Ratio Test, Solvency Test, Employer Normal Cost by Tier, and Funded Ratio by Tier. Segal neither reviewed nor prepared any items beyond those specifically listed in this paragraph and the preceding paragraph.

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the results presented also comply with the Illinois Pension Code and, where applicable, the Internal Revenue Code, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries. Both are Fellows of the Society of Actuaries, Enrolled Actuaries, and Members of the American Academy of Actuaries, and both are experienced in performing valuations for large public retirement systems. They both meet the Qualification Standards of the American Academy of Actuaries.

Respectfully submitted,

Segal Consulting, a Member of the Segal Group

By:



Kim Nicholl, FSA, MAAA, EA
Senior Vice President and Actuary



Matthew A. Strom, FSA, MAAA, EA
Vice President and Actuary

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Newman Rural School – Knoxville, Knox County

Built in 1876, the school served families until a major school district consolidation in 1948 forced the closure of many small, rural buildings. Knox County once had 177 similar rural schools. Today, hundreds of students visit the school as a museum and some spend the day learning the way their great-grandparents once did – math problems done with chalk on slate boards and letters written with pens and inkwells.

The Actuarial Section of this report discusses the System’s funded status and measures changes in its financial condition over time. The actuarial accrued liability, actuarial value of assets and unfunded liability presented in this section are used to determine state funding requirements. The total pension liability, plan fiduciary net position and net pension liability are used for financial disclosure only and are required by GASB in Statement No. 67. For the GASB disclosure, please see the Financial Section of this report: “Notes to Financial Statements, A. Plan Description, 6. Actuarial Measurements.”

Pursuant to Public Act 97-0674, the Office of the Auditor General has employed a state actuary to review the five state systems’ actuarial valuation reports beginning with the June 30, 2012 valuations. The reports are considered preliminary until the state actuary (Cheiron) has reviewed them. In its review of the June 30, 2015 preliminary report prepared by Buck Consultants, Cheiron did not recommend any changes in actuarial assumptions or calculations, but some clarifications and additional disclosures were proposed. Recommendations included in Buck’s final report were additional development of the state contribution in the report’s executive summary. Recommendations not adopted were additional stress testing on volatile investment returns.

The preliminary June 30, 2016 actuarial valuation prepared by Segal Consulting has also been submitted to the state actuary. Segal will conduct additional stress testing in spring 2017 in conjunction with the asset allocation study to be performed by the TRS general investment consultant, RVK, Inc.

ACTUARIAL ASSUMPTIONS AND METHODS

Each year the actuary reconciles the differences between major actuarial assumptions and experience to explain the change in TRS’s unfunded liability. The unfunded liability is the difference between the accrued liability (the present value of benefits including the cost of annual increases) and the assets that are available to cover the liability.

All assumptions were adopted in the FY15 valuation and are based on the 2015 experience analysis unless otherwise noted.

INVESTMENT RETURN

The investment return rate is 7.0 percent per annum, compounded annually, including inflation at 2.5 percent and real return at 4.5 percent. This is the expected rate of return on investments after June 30, 2016 and it is also used to discount benefit payments after June 30, 2016. These rates were adopted in the FY16 valuation.

SALARY INCREASES

Components of the salary increase assumption include:

- inflation of: 2.5 percent, and
- real wage growth (productivity) of: 0.75 percent.

The sample annual percentage salary increases (including merit and components of increase listed previously) are listed below and were adopted in the FY16 valuation.

Salary Increase Assumptions

Service	Male and Female
1 year	9.25%
2 years	7.25
3 years	6.75
4 years	6.45
5 years	6.25
10 years	5.25
15 years	4.25
20 years and above	3.25

For a member who works 34 years, the assumed average salary increase over the member's career is 4.44 percent per year.

INFLATION

Inflation is assumed to be 2.5 percent per annum and is implicit in investment and earnings progression assumptions. This rate was adopted in the FY16 valuation.

RETIREMENT AGE

Graduated rates are based on the age and the service of active members at retirement.

Sample annual retirement rates:

- a) Tier I is composed of members who entered service before January 1, 2011:

Tier I Retirement Assumptions

Age	Years of Service				
	5-18	19-30	31	32-33	34+
54	-%	6%	8%	38%	60%
55	-	10	8	38	60
60	14	30	48	60	40
65	26	37	50	50	40
70	100	100	100	100	100

Tier II is composed of those entering service on or after January 1, 2011:

Tier II Retirement Assumptions

Age	Years of Service				
	9-18	19-30	31	32-33	34+
62	13%	15%	20%	25%	25%
65	8	10	15	20	20
67	20	40	70	70	70
70	100	100	100	100	100

MORTALITY

The assumed mortality rates are based on the Society of Actuaries RP-2014 mortality tables with adjustments as appropriate for TRS experience. The rates are used on a fully generational basis using projection table MP-2014.

For retirees and inactive members, the RP-2014 White Collar table with female rates is multiplied by 76 percent for ages 50-77, 106 percent for ages 78 to 114, and multiplied by 115 percent for males ages 78 to 114.

For beneficiaries, the RP-2014 table is used with male and female rates multiplied by 112 percent for ages 50-114.

For disabled members, the RP-2014 Disabled table is used.

DISABILITY

Here are the sample annual disability rates:

Disability Assumptions

Age	Male	Female
25	0.029%	0.030%
30	0.023	0.061
40	0.051	0.112
50	0.117	0.192
55	0.138	0.240
60	0.179	0.227
65	0.536	0.410

TERMINATION FROM ACTIVE SERVICE

Here are the sample annual termination rates (for reasons other than death, disability or retirement):

Termination Assumptions

Age	Under 5 Yrs of Service		5 or More Yrs of Service	
	Male	Female	Male	Female
25	9.5%	8.4%	6.0%	6.5%
30	8.8	11.3	2.8	5.0
40	12.3	10.8	1.7	2.2
50	16.7	11.8	1.9	1.7
55	20.7	17.0	5.0	3.8
60	16.4	16.9	4.6	4.0
65	30.2	35.0	4.6	4.0

SEVERANCE PAY

The percent of retirees from active service assumed to receive severance pay and the amount of such severance payments are assumed to be as follows and are not applicable to Tier II.

Severance Pay Assumptions

Percent Retiring with Severance Pay	Severance Pay as a Percent of Other Pensionable Earnings in Last Year of Service
20%	2.5%

OPTIONAL SERVICE AT RETIREMENT

The accrued liability for retirement benefits for active members who have not previously purchased optional service is increased to cover the employer cost of optional service purchased in the last two years of service. The sample purchases at retirement follow.

Optional Service Assumptions

Years of Regular Service at Retirement	Maximum Service Purchased
10	0.204 years
20	0.537 years
25	1.029 years
30	1.424 years
34 or more	None

UNUSED AND UNCOMPENSATED SICK LEAVE

Unused and uncompensated sick leave varies by the amount of regular service at retirement.

The sample amounts of sick leave at retirement are:

Sick Leave Assumptions

Years of Service at Retirement	Sick Leave Service Credit
20	0.938 years
25	1.115 years
30	1.276 years
34	1.450 years
35 or more	None

POST-RETIREMENT INCREASES

Tier I: 3%, compounded.

Tier II: 1.25%, not compounded.

ACTUARIAL COST METHOD

The actuarial cost method required by the Illinois Pension Code is projected unit credit. Gains and losses are reflected in the unfunded liability, which was adopted in the FY89 valuation as required by Public Act 86-0273.

ASSET VALUATION METHOD

The practice of five-year prospective asset smoothing was adopted in the FY09 valuation as required by Public Act 96-0043.

ANNUAL ACTUARIAL VALUATION

The annual actuarial valuation measures the total liability for all benefits earned to date. The accrued liability is a present value estimate of all the benefits that have been earned to date but not yet paid. The unfunded liability is the present value of future benefits payable that are not covered by the assets on the valuation date.

The funded ratio shows the percentage of the accrued liability covered by assets. The following tables show the funded ratio based on the actuarial value of assets and the fair value of assets.

Actuarial Valuation (\$ thousands)

	Year ended June 30, 2016
Based on actuarial value of assets	
Total actuarial accrued liability	\$118,629,890
Less actuarial value of assets*	47,222,098
Unfunded liability	<u>\$71,407,792</u>
Funded ratio*	39.8%
Based on fair value of assets	
Total actuarial accrued liability	\$118,629,890
Less assets at fair value	45,250,957
Unfunded liability	<u>\$73,378,933</u>
Funded ratio	38.1%

* Five-year prospective smoothing began in FY09.

ANALYSIS OF FINANCIAL EXPERIENCE: RECONCILIATION OF UNFUNDED LIABILITY

The \$8.7 billion net increase in the 2016 unfunded liability was caused by a combination of factors.

The first factor shown in the table is the difference between actual employer/state contributions and the amount that would cover the cost of benefits earned during the year and keep the prior year's unfunded liability from growing. That shortfall was \$1.6 billion.

Changes in actuarial assumptions also increased the unfunded liability, as discussed in the following section. The net increase in the 2016 unfunded liability due to assumption changes was \$5.7 billion.

Actuarial losses occurred under most of the other assumptions, meaning that experience was less favorable (more costly) than assumed. The most significant was the actuarial loss on investments, which includes 20 percent of the difference between expected and actual returns in FY16 and increased the unfunded liability by \$467 million during the year. Other losses occurred because more teachers retired and fewer members died than expected. Also, fewer members terminated than expected and others came back into service. The most significant factor increasing the unfunded liability, shown as "other" in the following table, is primarily due to changes in actuarial firms and the software used to estimate the TRS liability. While the number itself is large, it is less than 1 percent of the TRS accrued liability and is within acceptable norms when a change in actuaries occurs.

Actuarial gains occurred under the assumptions for salary increases, disabilities and new entrants, meaning that experiences was more favorable (less costly) than assumed. The net effect of all actuarial gains and losses was to increase the unfunded liability by \$1.4 billion.

Reconciliation of Unfunded Liability

Reconciliation of Unfunded Actuarial Accrued Liability	Year Ended June 30, 2016
Unfunded liability at beginning of year	\$62,686,632,526
Additions	
Employer cost in excess of contributions	1,635,079,237
Change in actuarial assumptions and methods	5,654,841,998
Net additions	7,289,921,235
Actuarial losses (gains) compared to assumptions	
Asset loss on actuarial value of assets ¹	467,184,012
Salary increases for continuing active members	(65,504,184)
Retirements other than expected	237,492,448
Disabilities other than expected	(16,091,632)
Terminations other than expected	15,147,793
Mortality other than expected	49,779,799
Rehires	23,266,945
New entrant loss	(17,516,646)
Other ²	737,480,200
Net actuarial losses (gain)	1,431,238,735
Unfunded liability at end of year	<u>\$71,407,792,496</u>

1. Assets were expected to earn 7.5 percent during the year ended June 30, 2016 (7.0 percent thereafter). This item is the difference between the expected and the actual return on an actuarial basis. For example, in FY16, the expected actuarial returns of \$3.366 billion was greater than the \$2.899 billion actual return on assets, resulting in an actuarial loss which increased the unfunded pension benefit obligation by \$0.467 billion.
2. Other is primarily due to a change in actuarial software and firms, as explained in this section.

CHANGES IN ACTUARIAL ASSUMPTIONS ADOPTED FOR JUNE 30, 2016 VALUATION

The state actuary recommends that TRS review its investment return assumption every year. The changes adopted in the June 30, 2016 valuation were due to that review. With lower expected inflation and generally lower anticipated returns in world markets, the trustees wanted to increase the likelihood that their assumed return could be achieved. If the assumed rate of return is too high, funding requirements would be set at an artificially low level. Not making the change would have deferred funding and increased long term costs.

In the June 30, 2016 valuation, the TRS Board of Trustees accepted the actuary's recommendation to lower the assumed rate of investment return from 7.5 percent to 7.0 percent. The component of the return that was lowered was the inflation component, decreasing from 3.0 percent to 2.5 percent. This led to reductions in the actuarial assumptions for salary increases and Tier II salary caps and post-retirement annual increases which offset some of the increase in unfunded liability due to the change in the rate of return. The net effect of the economic assumptions was to increase the unfunded liability by \$6.1 billion.

Another offset to the increase in unfunded liability was the expiration of the Early Retirement Option. Previously, TRS assumed that the program continued indefinitely. The expiration reduced the unfunded liability by \$482 million. However, the change in assumption will have minimal impact on state contributions because the costs of the program were expected to be covered by member and employer contributions.

In summary, the \$6.1 billion increase in the unfunded liability due to economic assumptions was offset by ending the assumption that ERO continues. The combination of the changes in economic assumptions and ERO assumptions increased the unfunded liability by \$5.7 billion.

ACTUARIAL STANDARDS AND ILLINOIS STATE PENSION FUNDING

In 2012, the TRS Board of Trustees resolved to begin certifying state funding amounts that were in accordance with generally accepted actuarial principles and standards. These amounts have been submitted in addition to the amounts calculated under Illinois law. The Board's purpose is to illustrate the gap between sound funding policy and current practice.

Additional amounts certified by the Board from 2012 through 2014 would have begun amortizing the unfunded liability over an open 30-year period or would have stabilized it by paying the accruing interest. Over time, however, actuarial standards have evolved and become more stringent.

In 2015, the Board adopted the actuary's recommendation to shorten the amortization period under its alternative certification to 20 years. In this scenario, the amortization payments would increase by 2 percent per year, which is the actuary's estimate of the increase in Illinois revenue. Subsequent increases in the unfunded liability would be amortized over subsequent 20-year periods (layered amortization). Additionally, the actuarial accrued liability and the employer's normal cost would be calculated under the entry age normal actuarial cost method, which is widely used in the public sector. Entry age would assign costs more evenly over an employee's career. It would replace the projected unit credit actuarial cost method that is required under current law. The projected unit credit method has the effect of delaying the cost of a member's service and deferring contributions, thereby leading to higher costs in the long run.

STATE FUNDING

Public Act 88-0593 was enacted in 1994 and first affected state contributions in FY96. The law established a 50-year funding plan that includes a 15-year phase-in period. By the end of the funding

period in FY45, TRS will have a 90 percent funded ratio. A key feature of this act is the “continuing appropriation” language that requires State contributions to be made automatically to TRS, provided State funds are available.

Public Act 93-0002, the pension obligation bond legislation, was enacted in 2003 and first affected State contributions in FY05. The law requires a multi-step process that ensures that State contributions do not exceed certain maximums.

STATE FUNDING AMOUNTS

The FY16 actuarial valuation was used to determine the required FY18 State contributions and the FY18 employer’s normal cost.

The FY18 state funding requirement under the current statutory funding plan is the certification submitted by TRS to the state actuary, governor, and General Assembly pursuant to Public Act 97-0694. The act requires the state actuary to review the assumptions used to calculate the State contribution under the statutory funding plan. The final certification is due on January 15, 2017.

FY18 State Funding Requirements Under Current Statutory Funding Plan

Benefit Trust Reserve (excludes federal and school district contributions)		\$4,564,252,674
Minimum benefit reserve		700,000
Total State funding amount		<u>\$4,564,952,674</u>
Employer’s normal cost as a percentage of active member payroll		10.10%

The FY18 amount below is an additional proposed certification submitted by TRS to the state actuary, governor, and General Assembly. It was calculated under the same actuarial assumptions as the amount under the current statutory funding plan.

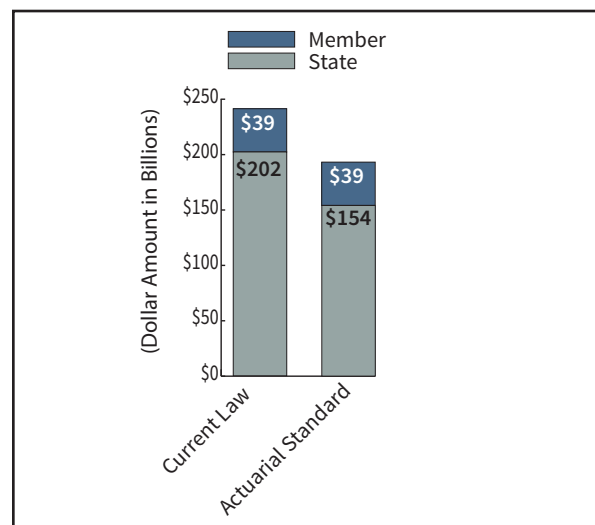
Additional FY18 State Funding Certification Under Actuarial Standards

Benefit Trust Reserve (excludes federal and school district contributions)		\$6,875,583,032
Minimum benefit reserve		700,000
Total State funding amount		<u>\$6,876,283,032</u>

The additional certification is based on the entry age normal actuarial cost method and bases the amortization payment on a 20-year closed period that began in FY17. Any increase in the unfunded liability after FY17 is based on a new 20-year closed period in a method known as layered amortization. Future amortization payments are assumed to increase by 2.0 percent per year. The funding requirement initially is much higher than current law because it begins reducing the unfunded liability.

Over time, however, funding based on this actuarial standard greatly reduces state contributions. It reduces the finance charges that occur under the current statutory plan.

State and Member Required Contributions FY18-FY45



TESTS OF FINANCIAL CONDITION

The funded ratio shows the percentage of the accrued liability covered by actuarial value of assets.

Funded Ratio Test (\$ thousands)

As of June 30	Assets			Unfunded Liability using Assets based on		Funded Ratio using Assets based on	
	Actuarial Accrued Liability	Actuarial Value (Smoothed) ¹	Fair Value ²	Actuarial Value (Smoothed) ¹	Fair Value ²	Actuarial Value (Smoothed) ¹	Fair Value ²
2007	\$65,648,395	\$41,909,318	\$41,909,318	\$23,739,077	\$23,739,077	63.8%	63.8%
2008	68,632,367	38,430,723	38,430,723	30,201,644	30,201,644	56.0	56.0
2009	73,027,198	38,026,044	28,497,729 ³	35,001,154	44,529,469	52.1	39.0
2010	77,293,198	37,439,092	31,323,784	39,854,106	45,969,414	48.4	40.5
2011	81,299,745	37,769,753	37,471,267	43,529,992	43,828,478	46.5	46.1
2012	90,024,945	37,945,397	36,516,825	52,079,548	53,508,120	42.1	40.6
2013	93,886,988	38,155,191	39,858,768	55,731,797	54,028,220	40.6	42.5
2014	103,740,377	42,150,765	45,824,383	61,589,612	57,915,994	40.6	44.2
2015	108,121,825	45,435,193	46,406,916	62,686,632	61,714,909	42.0	42.9
2016	118,629,890	47,222,098	45,250,957	71,407,792	73,378,933	39.8	38.1

1. The actuarial value of assets was the same as the fair value of assets through FY08. Five-year prospective smoothing began in FY09.
2. The fair value of assets was used as the actuarial value of assets through FY08. Beginning in FY09, the fair value of assets is no longer used for determining State funding requirements but is shown here for comparative purposes.
3. The 2009 fair value of assets is the final, actual figure. The actuary's report shows a slightly higher funded ratio of 39.1 percent for 2009 because the fair value of assets was lowered after the actuarial results were certified.

The unfunded liability as a percentage of payroll is a standard measure of the relative size of the unfunded liability. Decreases in this percentage indicate improvements in a system's financial position.

Unfunded Liability as a Percentage of Payroll Test Based on Actuarial Value of Assets (\$ thousands)

Year Ended June 30	Approximate Member Payroll*	Unfunded Liability**	Percentage of Payroll
2007	\$8,149,849	\$23,739,077	291.3%
2008	8,521,717	30,201,644	354.4
2009	8,945,021	35,001,154	391.3
2010	9,251,139	39,854,106	430.8
2011	9,205,603	43,529,992	472.9
2012	9,321,098	52,079,548	558.7
2013	9,394,741	55,731,797	593.2
2014	9,512,810	61,589,612	647.4
2015	9,641,171	62,686,632	650.2
2016	9,811,614	71,407,792	727.8

* Payroll supplied by TRS

** Unfunded liability is based on the fair value of assets through FY08 and five-year smoothing beginning in FY09.

The solvency test measures TRS's ability to cover different types of obligations if the plan was terminated and is hypothetical. The columns are in the order that assets would be used to cover certain types of obligations. Employee contributions would be refunded first, amounts due for participants currently receiving benefits would be covered next, and the employer's obligation for active members would be covered last. Columns (1) and (2) should be fully covered by assets. The portion of column (3) that is covered by assets should increase over time.

Solvency Test (\$ thousands)

Year Ended June 30	Aggregate Accrued Liabilities for			Actuarial Value of Assets*	Percentage of Benefits Covered by Net Assets		
	Members' Accumulated Contributions (1)	Participants Currently Receiving Benefits (2)	Active Members Employer Portion (3)		(1)	(2)	(3)
2007	\$6,500,318	\$39,785,368	\$19,362,709	\$41,909,318	100%	89%	-
2008	6,931,518	41,849,964	19,850,885	38,430,723	100	75	-
2009	7,320,600	44,495,917	21,210,681	38,026,044	100	69	-
2010	7,715,984	47,475,906	22,101,308	37,439,092	100	63	-
2011	8,048,689	50,567,881	22,683,175	37,769,753	100	59	-
2012	8,270,073	58,734,636	23,020,236	37,945,397	100	51	-
2013	8,569,939	61,254,334	24,062,715	38,155,191	100	48	-
2014	8,890,558	65,614,627	29,235,192	42,150,765	100	51	-
2015	9,281,893	70,545,782	28,294,150	45,435,193	100	51	-
2016	9,629,934	77,688,075	31,311,881	47,222,098	100	48	-

* Fair value through FY08. Five-year prospective smoothing began in FY09.

OTHER INFORMATION

Schedule of Contributions from Employers and Other Contributing Entities¹

(\$ in thousands)

Year Ended June 30	State Contributions ²	Federal and Employer Contributions ²	Annual Required Contribution per GASB Statement #25 Total	Percentage Contributed	Annual Required Contribution per State Statute	Percentage Contributed
2007	\$735,515	\$81,155	\$816,670	39.8%	\$822,890	99.2%
2008	1,039,195	130,578	1,169,773	60.0	1,135,127	103.1
2009	1,449,889	151,716	1,601,605	75.9	1,556,737	102.9
2010	2,079,129	170,653	2,249,782	90.6	2,217,053	101.5
2011	2,169,518	154,150	2,323,668	84.7	2,293,321	101.3
2012	2,405,172	153,409	2,558,581	74.6	2,547,803	100.4
2013	2,702,278	155,787	2,858,065	79.8	2,843,463	100.5
2014	3,437,478	157,228	3,594,706	87.8	3,592,578	100.1
2015	3,376,878	144,780	3,521,658	85.5	3,497,366	100.7
2016	3,741,802	147,408	3,889,210	84.9	3,883,544	100.1

1. Actual contributions varied slightly from contributions that are required by statute mainly because of differences between estimated and actual federal contributions. Beginning in FY08, lump-sum payments for ERO are included as employer contributions.
2. Excludes minimum retirement contributions. Excludes employer ERO contributions through FY07. Beginning in FY08, employer ERO contributions are included because the costs of the ERO program are included in the actuarial accrued liability. In all years, employer contributions for excess salary increases are included. However, employer contributions for excess sick leave are not included because there is no assumption for excess sick leave and it is not included in the funding requirements. The FY15 state contribution reflects a \$35 million reduction in the originally-certified state contribution under Public Act 98-0674, which increased federal contributions and reduced state contributions.

The Schedule of Contributions from Employers and Other Contributing Entities on the preceding page is similar to the Schedule of the Employers' Contributions shown in the Required Supplementary Information in the Financial Section. Both tables are based on an Annual Required Contribution (ARC) that would cover the employer's normal cost and amortize the System's unfunded liability over a 30-year open period, with the amortization component based on a level percent of pay. A different comparison will be used beginning in FY17 due to the Board's adoption of a more stringent actuarial funding calculation for its alternative certification.

Retirees and Beneficiaries Added to and Removed from Rolls

Year Ended June 30	Number at Beginning of Year	Number Added to Rolls	Number Removed from Rolls	Number at End of Year	End-of-Year Annual Allowances		Average Annual Allowance	
					Amount	Increase	Amount	Increase
2007	85,103	6,473	2,340	89,236	\$3,344,714,652	10.8%	\$37,482	5.7%
2008	89,236	4,912	2,686	91,462	3,551,117,836	6.2	38,826	3.6
2009	91,462	5,520	2,558	94,424	3,815,292,869	7.4	40,406	4.1
2010	94,424	5,711	2,381	97,754	4,109,018,971	7.7	42,034	4.0
2011	97,754	6,377	2,843	101,288	4,418,500,521	7.5	43,623	3.8
2012	101,288	6,943	2,784	105,447	4,781,692,373	8.2	45,347	4.0
2013	105,447	6,404	3,068	108,783	5,100,219,925	6.7	46,884	3.4
2014	108,783	6,433	2,883	112,333	5,430,104,782	6.5	48,339	3.1
2015	112,333	5,789	3,200	114,922	5,718,110,055	5.3	49,756	2.9
2016	114,922	5,723	2,995	117,650	6,024,825,507	5.4	51,210	2.9

Source: TRS

Year Ended June 30	Amount Added to Rolls		
	Annual Benefit Increases	New Benefit Recipients	Amount Removed from Rolls
2007	\$81,629,966	\$295,571,869	\$51,335,633
2008	93,731,561	174,119,867	61,448,244
2009	108,144,294	219,175,023	63,144,284
2010	114,879,927	247,234,501	68,388,326
2011	125,124,423	263,213,399	78,856,272
2012	135,604,876	311,161,467	83,574,491
2013	145,282,975	268,124,075	94,879,498
2014	153,329,242	273,690,582	97,134,967
2015	162,158,193	237,388,307	111,541,227
2016	168,459,973	250,009,083	111,753,604

Source: TRS

The schedule of Retirees and Beneficiaries Added and Removed from the Rolls shows the overall trends in the number of benefit recipients and the amounts they receive.

FUNDING ANALYSIS BY TIER

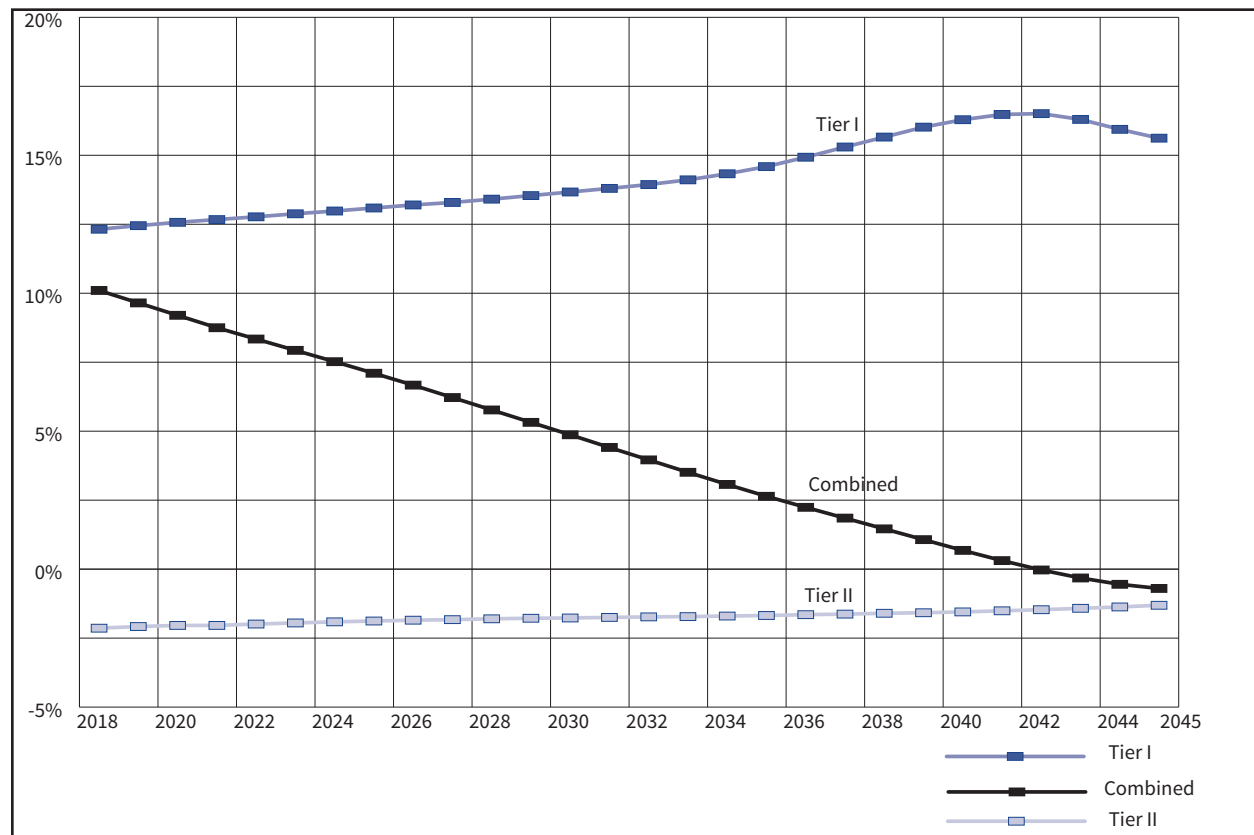
Public Act 96-0889 established a new tier of benefits for teachers who first contribute to TRS or another reciprocal pension system on or after January 1, 2011. Tier II teachers have later retirement dates, longer vesting requirements, salary caps for pensions lower than the Social Security wage base, and lower cost of living increases after retirement that are not compounded. Until June 30, 2016, both tiers paid 9.4 percent of pay towards the cost of their benefits. On July 1, 2016, the rate decreased to 9.0 percent.

The employer normal cost rate measures the employer's cost of the benefits being earned by active teachers during the year and is net of the teacher's contribution. It does not include any contributions towards the unfunded liability. The chart below shows that while the combined employer normal cost of both tiers in 2018 is just over 10 percent of pay, the cost of Tier II is negative and stays negative through 2045.

As more Tier II members enter TRS, the combined employer normal cost continues to fall. By 2042, the combined employer normal cost is negative. In the meantime, the cost of Tier I, which is a closed group, continues to increase as Tier I members age and accrue more service. Tier II members also age and accrue more service, but all new entrants are assumed to be Tier II, keeping the average age of the group constant. The increases in employer normal cost for both tiers is a function of the projected unit credit actuarial cost method required by the Illinois Pension Code. The increases in employer normal cost also reflect increased life expectancy as mortality improvements are phased in.

Since Tier II members pay more than the cost of their own benefits, they help pay for Tier I benefits.

Employer Normal Cost by Tier

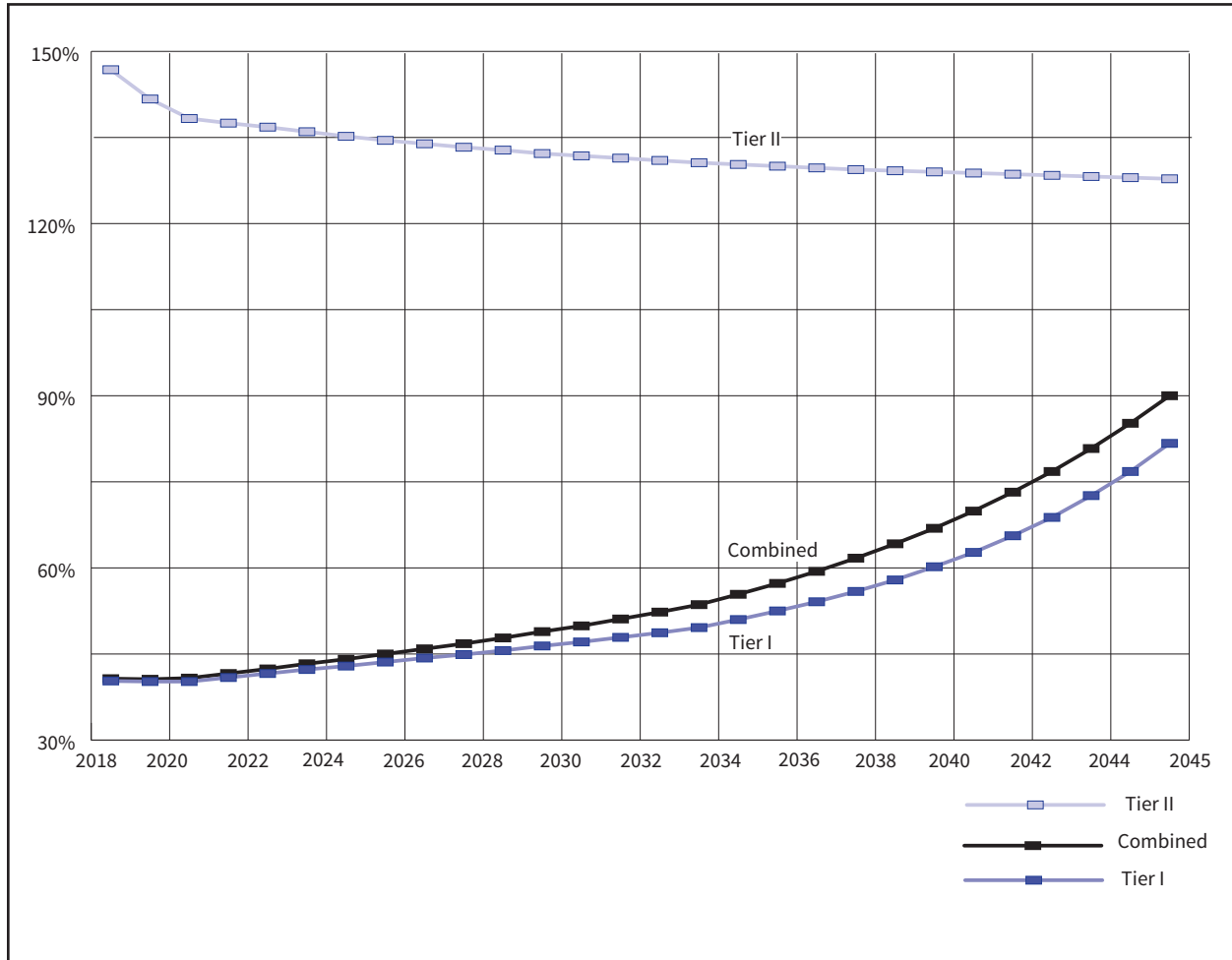


Note: Employer normal cost includes employer contributions of 0.58 percent of pay for the 2.2 formula. Combined rate includes administrative expenses.

Under the 50-year funding plan, TRS will attain a funded ratio of 90 percent by 2045. The chart below illustrates how the tiers would be funded if they were operated as separate retirement plans. Tier II would be overfunded because member contributions are higher than the cost of Tier II benefits. The surplus Tier II assets lower the employer/state contributions required for Tier I. Tier II active members are projected to outnumber Tier I active members by 2024.

By 2045, Tier I would be 82 percent funded and Tier II would be 128 percent funded, with the combined plan attaining the 90 percent target funded ratio. In practice, the two tiers are combined for administrative and funding purposes and their assets are commingled.

Funded Ratio by Tier



Average Annual Salary for Active Members (Excluding Substitutes) by Years of Service and Number of Employers

Years of Service*	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Under 5 Members Salary	26,767 \$49,464	26,698 \$47,796	25,191 \$46,845	24,812 \$46,058	25,733 \$46,222	27,960 \$47,292	33,487 \$46,324	37,293 \$45,464	42,725 \$44,916	41,244 \$43,446
5-9 Members Salary	27,845 \$59,276	29,798 \$58,935	33,028 \$58,540	34,682 \$58,027	35,071 \$57,741	34,626 \$57,416	34,529 \$57,105	33,494 \$55,945	31,959 \$55,436	30,520 \$53,062
10-14 Members Salary	29,395 \$71,140	29,214 \$70,589	28,747 \$70,233	28,503 \$69,686	28,105 \$68,751	26,865 \$67,691	25,051 \$66,788	23,133 \$65,168	21,395 \$64,705	20,469 \$62,447
15-19 Members Salary	22,894 \$81,868	21,421 \$80,737	19,917 \$79,921	19,406 \$79,295	18,610 \$78,328	17,935 \$77,268	17,790 \$76,001	17,417 \$73,770	14,753 \$71,802	14,422 \$69,368
20-24 Members Salary	14,120 \$90,942	13,877 \$89,591	13,562 \$88,037	12,280 \$86,235	11,834 \$84,904	11,682 \$83,563	11,391 \$82,184	11,084 \$79,805	10,447 \$78,080	9,814 \$74,894
25-29 Members Salary	8,087 \$96,157	7,908 \$94,510	7,827 \$93,016	7,913 \$91,735	7,940 \$89,986	7,834 \$88,416	7,786 \$86,566	7,790 \$84,282	8,654 \$82,013	9,484 \$78,831
30-34 Members Salary	3,936 \$102,896	3,970 \$100,785	3,941 \$98,807	4,247 \$96,966	4,826 \$94,665	5,839 \$93,299	6,554 \$91,077	6,858 \$87,973	5,763 \$85,738	5,301 \$82,508
35 + Members Salary	592 \$107,826	731 \$105,372	809 \$103,533	889 \$101,293	994 \$98,140	1,179 \$98,678	1,251 \$95,486	1,265 \$90,698	790 \$88,478	694 \$84,065
Total Members Salary	133,636 \$70,868	133,617 \$69,538	133,022 \$68,556	132,732 \$67,558	133,113 \$66,696	133,920 \$66,044	137,839 \$64,385	138,334 \$62,319	136,486 \$60,254	131,948 \$58,116
% Change salary	1.9%	1.4%	1.5%	1.3%	1.0%	2.6%	3.3%	3.4%	3.7%	2.1%
Total payroll full & part-time	\$9,470,516,048	\$9,291,458,946	\$9,119,456,232	\$8,967,108,456	\$8,878,104,648	\$8,844,612,480	\$8,874,727,268	\$8,620,836,546	\$8,223,827,444	\$7,668,289,968
Number of Employers	992	1,006	1,013	1,019	1,024	1,029	1,030	1,030	1,028	1,031

Source: TRS

Annual salaries are computed using full- and part-time salary rates only; substitute and hourly employee salaries are omitted. Total payroll shown will be lower than payroll figures used elsewhere in this report.

* From FY07-FY08, years of service increments were as follows: 0-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, and 35+. However, figures for those years are not restated.

TRS STAFF SUMMER 2016



LISLE OFFICE STAFF



SPRINGFIELD OFFICE STAFF

PLAN SUMMARY

ADMINISTRATION

TRS was created and is governed by Article 16 of the Illinois Pension Code, contained in the Illinois Compiled Statutes (ILCS). A 13-member board of trustees is authorized to carry out duties granted to it under the article.

MEMBERSHIP

Membership in TRS is mandatory for all full-time, part-time, and substitute school personnel employed in Illinois outside the city of Chicago in positions requiring licensure. Persons employed at certain State agencies are also members.

BENEFITS

Public Act 96-0889 established a second, lower tier of benefits for teachers who first contribute to TRS or one of the Illinois reciprocal retirement systems on or after January 1, 2011. Tier I benefits were not affected by PA 96-0889.

See the table on the following pages for a summary of Tier I and Tier II benefits.

OTHER PROVISIONS

EMPLOYMENT-RELATED

FELONY CONVICTION

Any member convicted of a felony related to or in connection with teaching is not eligible for TRS benefits. However, the member may receive a refund of contributions.

CONTINUITY OF CREDIT

WITHIN ILLINOIS

TRS is one of 13 public retirement systems that are included in the provisions of the Illinois Reciprocal Act. This act ensures continuous pension credit for public employment in Illinois.

CONFLICTS

Conditions involving a claim for benefits may require further clarification. If conflicts arise between the material in this summary and that of the law, the law takes precedence.

SUMMARY OF TIER I AND TIER II BENEFIT PROVISIONS

	Tier I
Tier I Defined	Members who first contributed to TRS or one of the other Illinois reciprocal retirement systems before January 1, 2011 are covered by Tier I. Tier I membership is retained even if a member takes a refund and does not repay it.
Retirement Eligibility (Vesting)	<p>Tier I members who meet the following age and service requirements are eligible to retire:</p> <ul style="list-style-type: none"> • Age 55 with 20 years of service (reduced 6% for every year that the member's age at retirement is under 60) - See ERO, below • Age 55 with 35 years of service (no reduction) • Age 60 and 10 years of service (no reduction) • Age 62 with 5 years of service (no reduction) <p>A member with fewer than five years of service can receive a single sum retirement benefit at age 65.</p>
Early Retirement Option (ERO)	Tier I members who are at least age 55 but under age 60 may qualify for the Early Retirement Option. Employers may limit participation. The member's contribution is 14.4% for each year that his/her age is under 60 or for each year his/her service is under 35, whichever is less. The employer's contribution is 29.3% for each year the member's age is under 60. The ERO program was not extended beyond June 30, 2016.
Retirement Formula	<p>Retirement benefits for most Tier I members are based on a formula of 2.2% times years of creditable service times final average salary. The maximum benefit is 75% of final average salary.</p> <p>Some Tier I members with service before July 1, 1998 will have benefits based on the graduated formula that was in effect before that date. The maximum benefit is also 75% under the graduated formula.</p> <p>Public Act 90-0582 changed the benefit accrual rate beginning July 1, 1998. Members could upgrade their service under the graduated formula by making a contribution to TRS. The law provides that each three full years worked after the effective date reduces the number of years to be upgraded by one. Subsequently, Public Act 91-0017 reduced the 2.2 formula upgrade cost for members with more than 34 years of service.</p> <p>The final average salary is based on the member's highest four consecutive years of service out of the last 10.</p> <p>Tier I members hired before July 1, 2005 may receive a money-purchase style "actuarial" benefit. By law, the higher of the formula benefit or the actuarial benefit is paid.</p>
Post-Retirement Increases	<p>Annual increases are 3% of the current retiree benefit.</p> <p>The first increase is the later of the January 1 following attainment of age 61 or the first anniversary of retirement.</p>
Disability Benefits	<p>Nonoccupational disability benefits are payable as disability benefits or disability retirement benefits to members who have a minimum of three years of creditable service.</p> <p>No minimum service requirement applies to occupational benefits for duty-related accidents or illnesses. Members continue to accrue service credit while they are receiving disability benefits but not while receiving disability retirement benefits.</p> <p>Generally, nonoccupational disability benefits are 40% of pay; occupational disability benefits are 60% of pay, reduced by payments received under workers' compensation; and disability retirement benefits are 35% of pay or a higher amount based on service credit and age.</p> <p>On the January 1 following the fourth anniversary of the granting of the disability benefit, the monthly benefit is increased by 7%. Thereafter, the benefit increases by 3% of the current benefit.</p> <p>Public Act 94-0539 allows individuals who have received disability benefits for at least one year to return to teaching on a limited basis if their conditions improve. Disability benefits can continue so long as the combined earnings from teaching and disability benefits do not exceed 100% of the salary rate upon which the disability is based.</p>
Survivor Benefits	<p>In most cases, survivor benefits for Tier I members' dependent beneficiaries are 50% of the retired member's benefit. The annual increase is 3% of the current survivor benefit.</p> <p>A dependent beneficiary can elect a lump sum payment instead of a monthly annuity. Nondependent beneficiaries are only eligible for lump sum payments. Refunds of member contributions not already received in retirement benefits are also payable as death benefits.</p>
Post-Retirement Employment	Tier I retirees can teach up to 100 days or 500 hours per year without having their retirement benefits suspended.
Contributions to TRS	<p>During FY16, Tier I members contributed 9.4% of pay. Of this rate, 7.5% is for retirement benefits, 1.0% is for survivor benefits, 0.5% is for the annual increase, and 0.4% is for the Early Retirement Option. As of July 1, 2016, the contribution is 9.0%.</p> <p>TRS members do not contribute to Social Security or Medicare for TRS-covered employment. However, members who were hired or changed employers after March 31, 1986 and who elected to participate in Medicare during a 2004 referendum, do contribute to Medicare.</p>
Contributions for Retiree Health Insurance	During FY16, members contributed 1.07% of pay to the Teachers' Health Insurance Security Fund.
Refunds	After a four-month waiting period from the date last taught, a member ceasing TRS-covered employment may withdraw all contributions but the 1% survivor benefit contribution. Credit can be re-established if the member returns to TRS-covered position for one year or to a reciprocal system for two years and repays the refund with interest. A member receiving disability benefits is not eligible for a refund.
Service Credit	A member is granted a maximum of one year of service credit for 170 paid days per school year, defined by statute as July 1 through June 30. Optional service credit is available for periods of public school teaching in other states or under the authority of the United States government; substitute or part-time teaching prior to July 1, 1990; leaves of absence or involuntary layoff; military service; and gaps in teaching due to pregnancy or adoption prior to July 1, 1983. Up to two years of unused, uncompensated sick leave that has been certified by former employers may also be added to service credit at retirement.

Tier II	
Tier II Defined	Members who first contributed to TRS on or after January 1, 2011 and do not have any previous service with one of the other Illinois reciprocal retirement systems are covered by Tier II.
Retirement Eligibility (vesting)	<p>Tier II members who meet the following age and service requirements are eligible to retire:</p> <ul style="list-style-type: none"> • Age 67 with 10 years of service (no reduction) • Age 62 with 10 years of service (reduced 6% for every year the member's age at retirement is under age 67) <p>A member with fewer than five years of service can receive a single sum retirement benefit at age 65.</p>
Early Retirement Option	ERO does not apply to Tier II.
Retirement Formula	<p>Retirement benefits for Tier II members are based on a formula of 2.2% times years of creditable service times final average salary. The maximum benefit is 75% of final average salary.</p> <p>Tier II creditable earnings for pension purposes are limited by an amount that is tied to the 2010 Social Security Wage Base (SSWB). The Tier II limit increases by 3% or half the increase in the Consumer Price Index, whichever is less. The FY16 Tier II limit was \$111, 571.63, unchanged from the FY15 level.</p> <p>The final average salary is based on the member's highest eight consecutive years of service out of the last 10.</p> <p>Tier II does not provide a money-purchase style "actuarial" benefit.</p>
Post-Retirement Increases	<p>Annual increases will be the lesser of 3% or one-half of the increase in the Consumer Price Index times the original retiree benefit.</p> <p>The first increase is the later of the January 1 following attainment of age 67 or the first anniversary of retirement.</p>
Disability Benefits	Same as Tier I, including increases.
Survivor Benefits	<p>In most cases, survivor benefits for Tier II members' dependent beneficiaries will be 66 2/3% of the retired member's benefit. The annual increase is the lesser of 3% or one-half of the increase in the Consumer Price Index times the original survivor benefit.</p> <p>A dependent beneficiary can elect a lump sum payment instead of a monthly annuity. Nondependent beneficiaries are only eligible for lump sum payments. Refunds of member contributions not already received in retirement benefits are also payable as death benefits.</p>
Post-Retirement Employment	The law suspends a Tier II member's retirement benefits if the member accepts full-time employment in a position covered by one of the Illinois reciprocal retirement systems.
Contributions to TRS	<p>During FY16, Tier II members also contributed 9.4% of pay, with components designated for the same purposes. However, Tier II members are not eligible for the Early Retirement Option. As of July 1, 2016, the contribution is 9.0%.</p> <p>Tier II members do not contribute to Social Security for their TRS-covered employment but do contribute to Medicare.</p>
Contributions for Retiree Health Insurance	Same as Tier I.
Refunds	Same as Tier I.
Service Credit	Same as Tier I. The purchase of optional service earned before January 1, 2011 does not change a Tier II member's status to Tier I.

STATISTICAL



Pleasant Grove School - Logan Township, Peoria County

Constructed in 1856 near a church and cemetery by a local farmer and stone mason, the school's 2 foot-thick walls consist of limestone cut from a local quarry. The building is the only remaining one-room school of the seven that once served Logan Township students. Pleasant Grove was closed in 1946 when the township's schools were consolidated. The building is now owned by the Pleasant Grove Cemetery Association, which is made up of the descendants of the area's original settlers.

STATISTICAL SECTION

The tables in this section present detailed information on benefit payments and recipients, member and employer contributions, employer contribution rates, and the largest TRS employers.

SECTION CONTENTS

RETIRED MEMBERS BY YEARS OF SERVICE AND YEARS IN RETIREMENT – PAGE 109

This schedule shows the number of retirees by their years of service and years in retirement in five-year increments. It also shows their average current monthly benefits and average benefits when they first retired. A column on the right shows the average age of retirees in each “years retired” increment.

10-YEAR FINANCIAL TRENDS – PAGES 110-111

These schedules contain information that allows the reader to view the change in net position and benefit and refund deductions from net position over a 10-year period. Both schedules help the reader understand the financial changes that have occurred over time.

EMPLOYEE AND EMPLOYER CONTRIBUTION RATES – PAGE 112

This schedule offers information on the contribution rates for employees, the State, and employers to the System over a 10-year period.

DEMOGRAPHICS OF BENEFIT RECIPIENTS AND ACTIVE MEMBERS – PAGE 113

These schedules help the reader understand characteristics of the specific groups of benefit recipients and active members of the TRS.

AVERAGE BENEFIT PAYMENTS TO CURRENT RECIPIENTS – PAGE 114

This schedule shows the average retirement, disability, and survivor benefits by benefit range. It also breaks down the retirement and disability benefits by type.

AVERAGE BENEFIT PAYMENTS TO NEW RETIREES – PAGE 115

This schedule contains information regarding the average benefits paid to new retirees over a 10-year period. The schedule also allows the reader to view those payments by increments of years of service.

PARTICIPATING EMPLOYERS – PAGE 116

This schedule allows the reader to view the 10 largest participating employers of the TRS. The reader can also view the percentages of total membership covered by the largest employers in the current year and nine years ago.

Retired Members by Years of Service and Years in Retirement as of June 30, 2016*

Years Retired	Years of Service													Weighted Average Age
	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+	Average	Age	
Under 1	193	289	329	428	659	628	727	832	95	11	11	1	4,192	
Average current benefit	\$287	\$718	\$1,465	\$2,410	\$3,457	\$4,602	\$5,721	\$6,496	\$7,394	\$10,211	\$12,184	\$12,184	\$4,135	
Average original benefit	\$287	\$715	\$1,465	\$2,407	\$3,453	\$4,600	\$5,713	\$6,496	\$7,394	\$10,211	\$12,184	\$12,184	\$4,133	
1 - 4	946	1,581	1,657	1,811	2,844	2,705	3,286	4,641	459	75	11	11	20,016	
Average current benefit	\$295	\$812	\$1,551	\$2,418	\$3,385	\$4,548	\$5,868	\$6,385	\$7,423	\$8,565	\$13,894	\$13,894	\$4,175	
Average original benefit	\$276	\$756	\$1,450	\$2,279	\$3,218	\$4,305	\$5,571	\$6,172	\$6,926	\$8,067	\$13,008	\$13,008	\$3,980	
5 - 9	956	1,870	1,741	1,703	2,660	2,638	5,438	6,129	409	70	9	9	23,623	
Average current benefit	\$322	\$774	\$1,446	\$2,472	\$3,468	\$4,695	\$6,229	\$6,625	\$7,245	\$7,848	\$10,847	\$10,847	\$4,579	
Average original benefit	\$263	\$636	\$1,186	\$2,036	\$2,870	\$3,877	\$5,093	\$5,526	\$5,963	\$6,529	\$9,050	\$9,050	\$3,783	
10 - 14	871	1,144	1,116	1,042	2,262	2,667	11,008	4,296	296	46	5	5	24,753	
Average current benefit	\$306	\$738	\$1,455	\$2,377	\$3,346	\$4,687	\$6,457	\$7,060	\$7,098	\$7,588	\$7,624	\$7,624	\$5,219	
Average original benefit	\$216	\$522	\$1,031	\$1,692	\$2,390	\$3,337	\$4,607	\$5,040	\$5,037	\$5,433	\$5,221	\$5,221	\$3,722	
15 - 19	636	632	540	499	1,274	1,447	4,095	2,474	171	20	20	-	11,788	
Average current benefit	\$328	\$756	\$1,282	\$2,186	\$3,096	\$4,480	\$6,269	\$6,847	\$6,555	\$6,982	-	-	\$4,816	
Average original benefit	\$201	\$461	\$789	\$1,355	\$1,933	\$2,796	\$3,987	\$4,284	\$4,045	\$4,320	-	-	\$3,031	
20 - 24	321	395	369	335	591	1,078	1,750	3,411	4,824	8	1	1	13,083	
Average current benefit	\$284	\$740	\$1,180	\$1,518	\$2,217	\$2,882	\$3,828	\$5,160	\$5,789	\$5,668	\$5,276	\$5,276	\$4,435	
Average original benefit	\$149	\$387	\$608	\$787	\$1,157	\$1,504	\$1,999	\$2,710	\$3,047	\$2,934	\$2,792	\$2,792	\$2,328	
25 - 29	125	236	342	343	1,030	941	1,162	928	56	7	2	2	5,172	
Average current benefit	\$244	\$627	\$1,023	\$1,622	\$2,366	\$3,167	\$4,514	\$5,607	\$6,044	\$4,914	\$4,286	\$4,286	\$3,351	
Average original benefit	\$109	\$276	\$457	\$732	\$1,090	\$1,462	\$2,080	\$2,594	\$2,814	\$2,284	\$2,074	\$2,074	\$1,544	
30 - 34	39	62	163	198	591	482	525	391	16	1	-	-	2,468	
Average current benefit	\$246	\$473	\$858	\$1,421	\$1,942	\$2,715	\$3,817	\$4,957	\$4,060	\$6,445	-	-	\$2,808	
Average original benefit	\$98	\$171	\$322	\$554	\$770	\$1,088	\$1,535	\$2,003	\$1,619	\$2,674	-	-	\$1,124	
35 - 39	13	14	38	55	194	170	136	87	12	1	-	-	720	
Average current benefit	\$245	\$391	\$722	\$1,063	\$1,473	\$1,978	\$2,857	\$3,016	\$3,048	\$2,430	-	-	\$1,954	
Average original benefit	\$88	\$95	\$229	\$346	\$510	\$695	\$1,022	\$1,064	\$1,078	\$849	-	-	\$684	
40 - 44	1	-	5	5	43	20	14	25	1	-	-	-	114	
Average current benefit	\$205	-	\$647	\$1,060	\$1,196	\$1,615	\$1,770	\$2,879	\$4,480	-	-	-	\$1,699	
Average original benefit	\$64	-	\$190	\$279	\$328	\$475	\$522	\$881	\$1,406	-	-	-	\$498	
45 - 49	-	-	-	-	3	2	3	-	-	-	-	-	8	
Average current benefit	-	-	-	-	\$1,114	\$780	\$1,569	-	-	-	-	-	\$1,201	
Average original benefit	-	-	-	-	\$178	\$117	\$365	-	-	-	-	-	\$233	
Total retirees	4,101	6,223	6,300	6,419	12,151	12,778	28,144	23,214	6,339	239	29	29	105,937	
Average current benefit	\$305	\$761	\$1,403	\$2,274	\$3,117	\$4,252	\$5,985	\$6,375	\$6,100	\$7,872	\$10,849	\$10,849	\$4,521	
Average original benefit	\$232	\$596	\$1,106	\$1,824	\$2,412	\$3,237	\$4,408	\$4,856	\$3,692	\$6,501	\$9,302	\$9,302	\$3,361	

* Represents monthly benefit

Changes in Net Position Restricted for Pensions, Last 10 Fiscal Years (\$ thousands)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Additions										
Member contributions*	\$951,809	\$935,451	\$928,746	\$921,423	\$917,661	\$909,577	\$899,401	\$876,182	\$865,400	\$826,249
State of Illinois	3,742,469	3,377,665	3,438,383	2,703,312	2,406,364	2,170,918	2,080,729	1,451,592	1,041,115	737,671
Employer contributions**	148,041	145,591	158,335	157,179	154,895	155,111	171,421	152,329	130,673	115,915
Investment income (loss)	(44,103)	1,770,550	6,782,031	4,561,768	224,107	7,234,539	3,679,643	(8,688,286)	(2,014,902)	6,831,324
Total additions to/reductions from plan net position	4,798,216	6,229,257	11,307,495	8,343,682	3,703,027	10,470,145	6,831,194	(6,208,183)	22,286	8,511,159
Deductions										
Benefit payments	5,848,180	5,536,399	5,225,207	4,893,084	4,553,822	4,228,283	3,927,838	3,653,714	3,423,982	3,111,753
Refunds	83,027	88,638	95,456	88,398	84,635	76,587	60,350	53,709	60,286	59,732
Administrative expenses	22,968	21,687	21,218	20,257	19,012	17,792	16,951	17,388	16,613	15,245
Total deductions from plan net position	5,954,175	5,646,724	5,341,881	5,001,739	4,657,469	4,322,662	4,005,139	3,724,811	3,500,881	3,186,730
Changes in net position restricted for pensions										
Beginning of year	46,406,916	45,824,382	39,858,768	36,516,825	37,471,267	31,323,784	28,497,729	38,430,723	41,909,318	36,584,889
Net increase (decrease)	(1,155,959)	582,534	5,965,614	3,341,943	(954,442)	6,147,483	2,826,055	(9,932,994)	(3,478,595)	5,324,429
End of year	\$45,250,957	\$46,406,916	\$45,824,382	\$39,858,768	\$36,516,825	\$37,471,267	\$31,323,784	\$28,497,729	\$38,430,723	\$41,909,318

* Member contributions include contributions for purchases of optional service, early retirement and upgrades to the 2.2 formula.

** Employer contributions include contributions from federal funds and for early retirement, the 2.2 formula, salary increases in excess of 6 percent used in final average salary calculations and excess sick leave used for service credit.

Benefit and Refund Deductions from Net Position by Type, Last 10 Fiscal Years (\$ thousands)

	Fiscal Year									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Type of benefit										
Retirement	\$5,575,130	\$5,281,221	\$4,986,156	\$4,670,385	\$4,347,173	\$4,036,147	\$3,749,666	\$3,486,697	\$3,268,108	\$2,965,356
Survivor	242,578	224,779	208,424	192,390	177,422	163,910	151,074	140,695	130,369	121,822
Disability	30,472	30,399	30,627	30,309	29,227	28,226	27,098	26,322	25,505	24,575
Total benefits	5,848,180	5,536,399	5,225,207	4,893,084	4,553,822	4,228,283	3,927,838	3,653,714	3,423,982	3,111,753
Type of refund										
Withdrawals	26,797	29,789	33,128	30,194	25,563	22,528	17,149	17,357	17,280	17,147
Death benefits and excess contribution refunds paid to survivors	17,094	17,881	20,633	16,764	18,415	16,404	15,161	15,076	17,182	17,081
2.2 and optional service	15,074	17,855	19,331	20,053	20,988	19,861	15,050	11,013	14,082	14,145
Survivor contributions refunded to retirees	10,458	10,197	10,990	10,780	10,358	10,252	7,967	6,916	8,522	8,808
ERO and other	13,604	12,916	11,374	10,607	9,311	7,542	5,023	3,347	3,220	2,551
Total refunds	\$83,027	\$88,638	\$95,456	\$88,398	\$84,635	\$76,587	\$60,350	\$53,709	\$60,286	\$59,732

Employee and Employer Contribution Rates, Last 10 Fiscal Years

Fiscal Year	Employee Rate (%)	Employer Rate (%) ¹			Total ⁴
		State ²	School Districts for 2.2 Formula	School Districts from Federal Sources ³	
2007	9.40%	9.26%	0.58%	0.52%	10.36%
2008	9.40	12.53	0.58	0.58	13.69
2009	9.40	16.44	0.58	0.63	17.66
2010	9.40	22.56	0.58	0.82	23.96
2011	9.40	22.38	0.58	0.72	23.68
2012	9.40	24.06	0.58	0.85	25.49
2013	9.40	27.21	0.58	0.84	28.63
2014	9.40	34.44	0.58	0.97	35.99
2015	9.40	32.42	0.58	0.58	33.58
2016	9.40	35.30	0.58	0.76	36.64

1. Employer contributions exclude lump-sum contributions for the Early Retirement Option.
2. FY07 rate was due to specific dollar appropriation specified in Public Act 94-0004 that was not based on the statutory ramp schedule. FY08 through FY10 rates are based on statutory ramp schedule. FY11 rate is based on recertification requirements of Public Act 96-1511. FY12 – FY16 were based on the statutory formula. The FY15 total employer rate is the same as originally certified by the TRS Board of Trustees but the state component is lower and the federal component is higher than originally certified due to PA 98-0674.
3. Federal contributions above are expressed as percentages of total active member payroll. The employer contribution rate paid on behalf of members paid from federal sources is the same as the employer contribution rate paid by the State of Illinois on behalf of members not paid from federal sources: 9.78 percent in FY07, 13.11 percent in FY08, 17.08 percent in FY09, 23.38 percent in FY10, 23.10 percent in FY11, 24.91 percent in FY12, 28.05 percent in FY13, 35.41 percent in FY14, 33.00 percent in FY15, and 36.06 in FY16.
4. Totals shown are rates certified by the TRS Board of Trustees based on estimated payrolls and may not total due to rounding. Actual amounts collected do not equal amounts estimated by actuaries due to differences between estimated and actual payroll.

Demographics of Benefit Recipients and Active Members as of June 30, 2016 (excludes inactive members)

Age	Retirees		Disability Benefit Recipients		Survivors		Actives		Total Retirees, Disabled, Survivors, and Active Members		Percent Distribution of Retirees, Disabled, Survivors, and Active Members			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total	
Under 20	-	-	-	-	45	9	-	-	45	9	54	83%	17%	100%
20-24	-	-	-	-	3	10	1,052	3,990	1,055	4,000	5,055	21	79	100
25-30	-	-	-	1	-	6	4,307	14,379	4,307	14,386	18,693	23	77	100
30-34	-	-	1	11	7	2	5,824	18,409	5,832	18,422	24,254	24	76	100
35-39	-	-	-	30	2	12	6,154	18,830	6,156	18,872	25,028	25	75	100
40-44	-	-	10	46	19	25	5,834	17,729	5,863	17,800	23,663	25	75	100
45-49	-	-	12	85	15	19	5,206	16,903	5,233	17,007	22,240	24	76	100
50-54	10	11	27	116	28	81	4,012	13,773	4,077	13,981	18,058	23	77	100
55-59	1,091	3,354	36	168	106	160	2,663	11,174	3,896	14,856	18,752	21	79	100
60-64	4,307	15,457	29	155	180	368	1,422	5,188	5,938	21,168	27,106	22	78	100
65-69	8,626	22,839	30	122	432	816	719	1,505	9,807	25,282	35,089	28	72	100
70-74	7,325	14,020	19	64	508	1,090	199	280	8,051	15,454	23,505	34	66	100
75-79	4,459	8,095	5	25	455	1,341	76	67	4,995	9,528	14,523	34	66	100
80-84	3,089	4,950	7	31	491	1,391	20	14	3,607	6,386	9,993	36	64	100
85-89	1,733	3,429	3	9	398	1,315	2	2	2,136	4,755	6,891	31	69	100
90+	741	2,401	-	9	338	990	-	2	1,079	3,402	4,481	24	76	100
Total:	31,381	74,556	179	872	3,027	7,635	37,490	122,245	72,077	205,308	277,385	26%	74%	100%

Benefit Recipients by Type as of June 30, 2016

Monthly Benefit Range	Number of Recipients (all)	Type of Monthly Benefit					Subtypes of Age Retirement Benefit							Retirement Total
		Retirement	Disability Retirement	Non-occupational Disability	Occupational Disability	Survivor Monthly Benefits	Regular 2.2 Flat Form.	Grad. Form.	Actuarial Benefit Style	ERO (2.2 & Grad. Form.)	ERI (State or TRS)	Other		
Under \$500	6,583	5,565	5	2	-	1,011	1,217	1,491	2,853	2	1	1	5,565	
\$500 - \$999	7,349	5,456	44	1	-	1,848	918	1,318	3,152	17	37	14	5,456	
\$1,000 - \$1,499	6,699	5,014	127	13	-	1,545	1,044	1,395	2,302	114	138	21	5,014	
\$1,500 - \$1,999	7,039	5,084	258	65	-	1,632	1,287	1,115	1,853	529	277	23	5,084	
\$2,000 - \$2,499	7,204	5,530	133	77	-	1,464	1,728	956	1,397	954	474	21	5,530	
\$2,500 - \$2,999	7,251	5,899	73	50	1	1,228	2,025	854	1,043	1,274	675	28	5,899	
\$3,000 - \$3,499	7,073	6,248	38	33	1	753	2,315	660	757	1,622	861	33	6,248	
\$3,500 - \$3,999	7,635	7,066	30	20	-	519	2,888	604	578	1,925	1,022	49	7,066	
\$4,000 - \$4,499	8,218	7,863	18	14	-	323	3,323	688	514	2,273	998	67	7,863	
\$4,500 - \$4,999	8,175	8,014	10	3	-	148	3,503	752	412	2,329	932	86	8,014	
\$5,000 - \$5,499	8,235	8,149	10	-	-	76	3,542	738	391	2,433	940	105	8,149	
\$5,500 - \$5,999	7,317	7,267	8	-	-	42	3,120	671	277	2,426	666	107	7,267	
\$6,000 - \$6,499	5,882	5,845	5	-	-	32	2,575	658	205	1,827	496	84	5,845	
\$6,500 - \$6,999	4,783	4,757	7	-	-	19	2,071	604	142	1,434	417	89	4,757	
\$7,000 - \$7,499	4,222	4,209	3	-	-	10	1,896	498	116	1,248	379	72	4,209	
\$7,500 - \$7,999	3,386	3,383	-	-	1	2	1,458	409	99	1,064	288	65	3,383	
\$8,000 - \$8,499	2,830	2,825	-	-	-	5	1,178	388	42	960	208	49	2,825	
\$8,500 - \$8,999	2,206	2,206	-	-	-	-	890	298	55	787	136	40	2,206	
\$9,000 - \$9,499	1,697	1,696	-	-	-	1	712	213	42	594	94	41	1,696	
\$9,500 - \$9,999	1,184	1,183	-	-	-	1	483	161	26	419	68	26	1,183	
\$10,000 or more	2,682	2,678	1	-	-	3	1,105	501	75	785	132	80	2,678	
Total benefit recipients:	117,650	105,937	770	278	3	10,662	39,278	14,972	16,331	25,016	9,239	1,101	105,937	

Summary Statistics, all Benefit Recipients, as of June 30, 2016

	Age Retirement	Disability Benefits (3 types)	Survivor Benefits
Average Monthly Benefit	\$4,521	\$2,308	\$1,944
Average Age	71	59	77
Average Service Credit	28	16	NA
Average Years Receiving Benefits	12	9	10

Percentage of Retirement Benefits by Subtype						
Regular 2.2 Flat Form.	Grad. Form.	Actuarial Benefit Style	ERO (2.2 & Grad. Form.)	ERI (State or TRS)	Other	Retirement Total
37%	14%	15%	24%	9%	1%	100%

Average Benefit Payments for New Retirees, Last 10 Fiscal Years

Retirement Effective Dates		Years of Service									All Fiscal Year Retirees	Average Age for all Fiscal Year Retirees	Average Service for all Fiscal Year Retirees
		Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+			
Period July 1, 2015 through June 30, 2016	Average monthly benefit	\$287	\$715	\$1,461	\$2,407	\$3,453	\$4,595	\$5,710	\$6,496	\$7,728	\$4,130	age 61	25 years
	Average final average salary	\$63,114	\$37,543	\$55,895	\$70,973	\$84,277	\$91,799	\$97,075	\$103,177	\$110,395	\$84,256		
	Number of retired members	193	289	330	429	660	630	728	832	107	4,198		
Period July 1, 2014 through June 30, 2015	Average monthly benefit	\$262	\$744	\$1,499	\$2,338	\$3,342	\$4,331	\$5,641	\$6,237	\$7,003	\$3,977	age 61	25 years
	Average final average salary	\$55,476	\$39,421	\$56,937	\$69,664	\$81,069	\$87,776	\$95,675	\$99,309	\$100,159	\$81,522		
	Number of retired members	185	277	325	466	651	591	647	882	94	4,118		
Period July 1, 2013 through June 30, 2014	Average monthly benefit	\$273	\$775	\$1,461	\$2,267	\$3,214	\$4,349	\$5,602	\$6,118	\$7,027	\$4,058	age 61	26 years
	Average final average salary	\$54,810	\$46,277	\$52,702	\$67,862	\$78,513	\$88,108	\$94,508	\$97,649	\$102,670	\$81,542		
	Number of retired members	173	313	348	403	695	574	774	1,037	133	4,450		
Period July 1, 2012 through June 30, 2013	Average monthly benefit	\$279	\$771	\$1,424	\$2,237	\$3,179	\$4,232	\$5,396	\$6,066	\$7,369	\$4,070	age 61	26 years
	Average final average salary	\$59,313	\$42,291	\$49,881	\$66,108	\$76,095	\$83,918	\$90,517	\$96,245	\$101,109	\$79,689		
	Number of retired members	149	298	353	391	673	664	750	1,115	142	4,535		
Period July 1, 2011 through June 30, 2012	Average monthly benefit	\$271	\$787	\$1,426	\$2,354	\$3,159	\$4,310	\$5,568	\$6,214	\$7,273	\$4,292	age 60	27 years
	Average final average salary	\$63,513	\$49,970	\$53,199	\$68,176	\$76,104	\$85,929	\$92,839	\$98,975	\$103,131	\$83,346		
	Number of retired members	215	358	375	380	620	702	923	1,516	177	5,266		
Period July 1, 2010 through June 30, 2011	Average monthly benefit	\$281	\$712	\$1,317	\$2,171	\$2,989	\$4,097	\$5,190	\$5,708	\$6,527	\$3,984	age 60	27 years
	Average final average salary	\$59,267	\$40,317	\$48,191	\$62,212	\$71,841	\$81,416	\$86,636	\$91,033	\$92,605	\$76,805		
	Number of retired members	160	328	349	357	599	562	905	1,359	134	4,753		
Period July 1, 2009 through June 30, 2010	Average monthly benefit	\$280	\$670	\$1,228	\$2,121	\$2,947	\$3,891	\$5,063	\$5,621	\$5,819	\$3,960	age 60	27 years
	Average final average salary	\$61,557	\$38,116	\$44,679	\$62,156	\$71,152	\$77,352	\$84,466	\$89,648	\$82,289	\$75,507		
	Number of retired members	144	312	304	335	495	536	887	1,410	118	4,541		
Period July 1, 2008 through June 30, 2009	Average monthly benefit	\$247	\$642	\$1,181	\$2,012	\$2,920	\$3,941	\$4,940	\$5,411	\$6,457	\$3,840	age 59	27 years
	Average final average salary	\$55,946	\$39,118	\$42,853	\$57,824	\$70,216	\$78,684	\$82,544	\$86,467	\$92,170	\$73,725		
	Number of retired members	155	295	240	297	472	425	779	1,301	65	4,029		
Period July 1, 2007 through June 30, 2008	Average monthly benefit	\$228	\$623	\$1,077	\$1,836	\$2,713	\$3,505	\$4,737	\$5,098	\$5,413	\$3,536	age 59	26 years
	Average final average salary	\$54,905	\$41,044	\$40,557	\$52,692	\$66,593	\$71,223	\$80,631	\$81,570	\$79,227	\$69,412		
	Number of retired members	112	197	256	251	400	398	695	884	67	3,260		
Period July 1, 2006 through June 30, 2007	Average monthly benefit	\$208	\$595	\$1,118	\$1,932	\$2,716	\$3,744	\$5,080	\$5,598	\$5,887	\$4,260	age 58	29 years
	Average final average salary	\$55,395	\$40,331	\$46,226	\$56,872	\$66,645	\$75,511	\$83,693	\$89,451	\$89,442	\$77,499		
	Number of retired members	132	212	233	286	492	575	1,858	1,506	139	5,433		

Principal Participating Employers

Participating Employer	City	Year ended June 30, 2016			Year ended June 30, 2007		
		Rank	Covered Employees	Percentage of Total TRS Membership	Rank	Covered Employees	Percentage of Total TRS Membership
School District U46	Elgin	1	2,953	1.8%	1	3,041	1.9%
Indian Prairie CUSD 204	Naperville	2	2,515	1.6	2	2,664	1.7
Plainfield SD 202	Plainfield	3	2,371	1.5	3	2,345	1.5
Rockford School District 205	Rockford	4	2,322	1.5	4	2,324	1.4
Community USD 300	Algonquin	5	1,800	1.1	7	1,553	1.0
Naperville CUSD 203	Naperville	6	1,798	1.1	5	1,739	1.1
Valley View CUSD 365	Romeoville	7	1,659	1.0	9	1,480	0.9
Schaumburg CCSD 54	Schaumburg	8	1,587	1.0	10	1,410	0.9
Oswego CUSD 308	Oswego	9	1,558	1.0	-	-	-
Waukegan CUSD 60	Waukegan	10	1,497	1.0	-	-	-
Peoria SD 150	Peoria	-	-	-	6	1,578	1.0
Springfield SD 186	Springfield	-	-	-	8	1,516	0.9
Total, largest 10 employers			20,060	12.6%		19,650	12.3%
All other (982 employers in 2016* 1,021 employers in 2007)			139,675	87.4		140,667	87.7
Grand total			159,735	100.0%		160,317	100.0%

*Other Employers by Type as of June 30, 2016	Number of Other Employers	Other Covered Employees
Local school districts	840	132,735
Special districts	126	6,309
State agencies	16	631
Total, all employers other than largest 10	982	139,675

Total Employers by Type as of June 30, 2016	Total Number of Employers	Total Covered Employees
Local school districts	850	152,795
Special districts	126	6,309
State agencies	16	631
Total, all employers	992	159,735

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