

Annual Comprehensive Financial Report

For the Fiscal Year Ended June 30, 2023



One TRS



**Teachers' Retirement System
of the State of Illinois**

a component unit of the State of Illinois

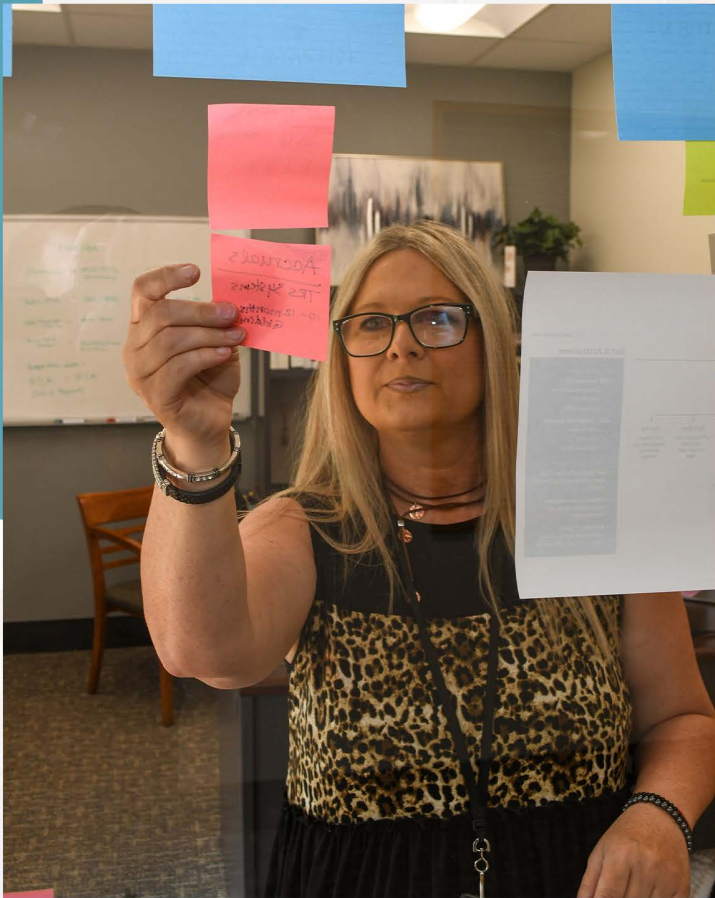


Lisle office staff, July 2023

FISCAL YEAR 2023 HIGHLIGHTS

Active contributing members	169,889
Inactive noncontributing members	147,329
Benefit recipients*	<u>131,017</u>
Total membership	448,235
Investment return	
Total fund investment return, net of fees	7.2%
Actuarial information	
Actuarial accrued liability (AAL)	\$148,398,296,080
Less actuarial value of assets (AVA)	<u>66,502,286,972</u>
Unfunded actuarial accrued liability, AVA basis (UAAL)	\$81,896,009,108
Funded ratio (AVA/AAL)	44.8%
Less fair value of assets (FVA)	<u>66,504,717,419</u>
Unfunded actuarial accrued liability, FVA basis (UAAL)	\$81,893,578,661
Funded ratio (FVA/AAL)	44.8%
GASB Statement No. 67 disclosures	
Total pension liability (TPL)	\$151,485,294,234
Less fiduciary net position (FNP)	<u>66,504,717,419</u>
Net pension liability (NPL)	\$84,980,576,815
FNP as a percentage of TPL	43.9%
Additions	
Member contributions	\$1,116,145,305
Employer contributions	124,773,577
State of Illinois contributions	6,009,158,073
Total investment income	4,427,042,975
Participant fee income	<u>31,494</u>
Total additions	\$11,677,151,424
Deductions	
Benefits paid	\$7,899,142,685
Refunds paid	68,186,830
Administrative expenses	33,371,327
Contributions sent to third-party administrator	<u>6,636,864</u>
Total deductions	\$8,007,337,066

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



*A **Product Owner** prioritizes details for an upcoming project.*

***Technical Systems staff** successfully resolve an issue together.*



PREFACE

INFORMATION TECHNOLOGY DEPARTMENT



*A **Business Analyst** reviews best practices for quality compliance.*



*The **Network & Technical Support staff** meet to discuss system upgrades.*

Annual Comprehensive Financial Report for the fiscal year ended June 30, 2023

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

**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

<https://www.trsil.org>

ONE TRS



Executive Director and Chief Investment Officer Stan Rupnik addresses employees at an All- Staff meeting.

During the fiscal year, TRS embarked on an important journey to shape our long-term future. We reached out to our valued members – active members, retirees, beneficiaries – seeking insights for what they expect from TRS. That input was instrumental in guiding our strategic planning process and we are grateful for their participation.

Internally, we sought input from TRS’s dedicated staff and Board of Trustees on how to best align the organization to meet our members’ expectations. Based on those discussions, TRS adopted revised mission and vision statements, along with new core values designed to define the qualities staff seeks to embody within their workplace.

Importantly, TRS staff set a goal of creating a “One TRS” culture that engages, inspires and motivates. It recognizes the strength of the TRS organization is our dedicated staff working together, across departments, to serve our members. And it represents a staff that supports one another and lives its core values.

Our new Strategic Plan is designed to strengthen our foundation for the future while upholding our unwavering commitment to acting in the best interests of our members. We are eager and optimistic about what the future has in store. We invite you to explore our new five-year Strategic Plan at the System’s website.

TRS MISSION

Delivering expert pension service to Illinois public educators as they earn their promised retirement security.

TRS VISION

Working together as the trusted retirement resource for generations of our members.

TRS CORE VALUES

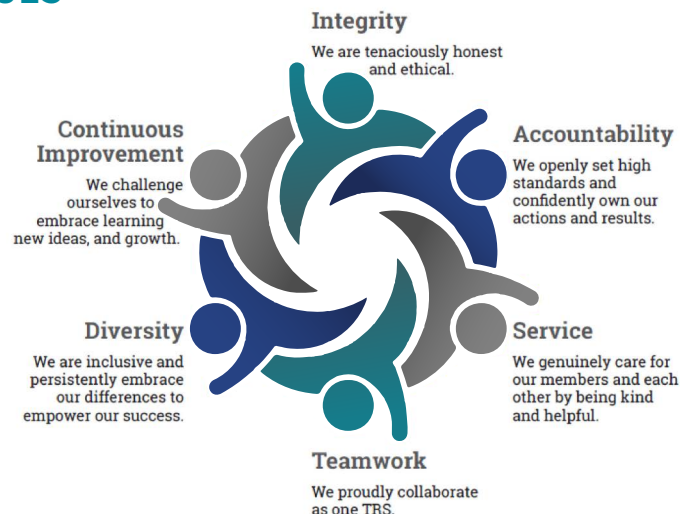


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The **Deferred Compensation team** shares the excitement of increased SSP enrollments.



A Springfield **Member Services Representative** reviews a member's service credit record.



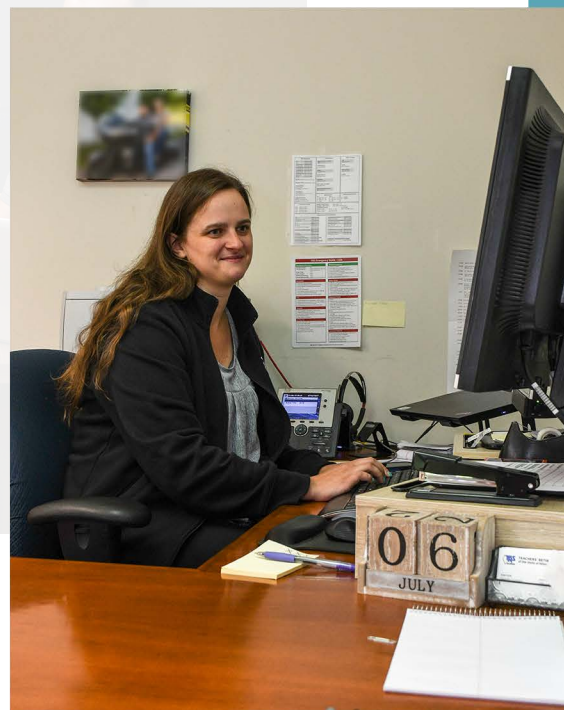
The Lisle **Office Manager** responds to a member who needed eligibility information about nonoccupational disability benefits.



A Lisle **Benefits Counselor** reviews a new law that allows optional service credit for periods of paid student teaching.



A Springfield **Benefits Counselor** speaks with a retiree about post-retirement limitations before substitute teaching.



A Lisle **Benefits Counselor** responds to a member's question about retiring with reciprocal service.



The Springfield **Outreach Coordinator** prepares for a virtual Benefit Information Meeting.

MEMBER SERVICES DEPARTMENT

INTRODUCTION



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Teachers' Retirement System of the State of Illinois

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2022

Christopher P. Morill

Executive Director/CEO



Public Pension Coordinating Council

***Recognition Award for Administration
2023***

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 black ink that reads "Alan H. Winkle". The signature is written in a cursive style with a large initial 'A'.

Alan H. Winkle
Program Administrator



TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

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R. Stanley Rupnik, Executive Director & Chief Investment Officer

LETTER OF TRANSMITTAL

December 15, 2023

To the TRS Board of Trustees and TRS Members:

We are pleased to present the Annual Comprehensive Financial Report for the Teachers' Retirement System of the State of Illinois (TRS) for the fiscal year ended June 30, 2023. This report details the on-going work of the System's trustees and staff to fulfill the TRS mission and keep the retirement promises made by the State of Illinois to educators in its public schools.

MEMBER ASSETS REMAIN STABLE

Despite recent challenges to the economy and the investment markets, TRS finances remain stable with the long-term strategic goal of protecting member assets. In keeping with that strategy, the value of the TRS investment portfolio remains at record levels, with a total value of \$66.3 billion reported at the end of June 2023.

Due to the System's low funded ratio – 44.8 percent – the TRS Board of Trustees employs a conservative investment strategy to reasonably offset further declines in the ratio should markets underperform. TRS trustees and investment staff have constructed a highly-diversified portfolio that is designed to enhance assets in good economic times and safeguard assets during economic downturns.

Another important aspect of the TRS investment philosophy is a focus on steady, long-term investment returns. The System recognizes that a majority of its members maintain relationships with TRS for decades. With that understanding in mind, despite volatile investment markets, the TRS long-term investment return of 8.8 percent over 40 years continues to exceed the System's long-term assumed investment return of 7 percent.

SYSTEM GOVERNANCE

The TRS Board of Trustees ended FY23 with 14 of 15 members following the addition in April of **Dr. Tony Sanders** to the Board. Trustee Sanders was named by the Illinois State Board of Education as the state superintendent of education, a position that by law includes an ex-officio seat on the TRS Board of Trustees. Dr. Sanders replaces **Dr. Carmen I. Ayala** who retired from the post in January after 40 years in public education. Prior to becoming state superintendent, Dr. Sanders was the superintendent in Elgin School District U-46.

In spring 2023, three trustees nominated by active members and one trustee nominated by annuitants, were re-elected for 4-year terms following expiration of their current terms. The newly elected members of the TRS Board are all current members of the Board. The trustees nominated by active members and elected are **Beth Anderson, Marsha Byas, and Andrew Hirshman**. The trustee nominated by annuitants and elected is **Doug Strand**. These trustees will each serve four-year terms, 2023-2027, beginning July 15, 2023.

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. TRS is governed by a 15-member Board of Trustees. Trustees include the state superintendent of education, seven trustees appointed by the governor, five trustees elected by contributing TRS members and two trustees

elected by TRS annuitants. The president of the Board of Trustees, by law, is appointed by the governor from among the sitting trustees. 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.

Pursuant to Section 16-204 of the Illinois Pension Code, 40 ILCS 5/16-204, the TRS Board of Trustees established the TRS Supplemental Savings Plan (SSP), effective October 29, 2019. The SSP is an eligible deferred compensation plan (DCP) under Section 457(b) of the Internal Revenue Code and is a governmental plan within the meaning of Code Section 414(d) and Section 3(32) of the Employee Retirement Income Security Act of 1974.

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

TRS staff issues an Annual Comprehensive Financial Report 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 TRS monitor and safeguard assets and promote efficient operations. Each year TRS's financial statements are audited by a professional accounting firm that serves as a special assistant auditor employed by the Illinois Auditor General. In addition, a biennial 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.

TRS is required by law to publish an Annual Comprehensive Financial Report annually with information about the System's financial condition, investment methods, performance and actuarial conclusions that determine financial needs as well as 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 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. Four internal auditors are employed to continually review and determine that all laws, rules, policies and procedures are followed.

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 and should be read in conjunction with the MD&A, which can be found immediately following the independent auditor's report.

ADDITIONS AND DEDUCTIONS

The three sources of TRS defined benefit funding are member contributions, investment income and employer contributions through state appropriations and payments by employers. TRS defined benefit deductions include payments of benefits, refunds and administrative expenses. Additions to deferred compensation

include member and employer contributions. Deferred compensation deductions are comprised of contributions sent to the third-party administrator and administrative expenses. Negative amounts are shown in parentheses () throughout this report.

Additions (\$ millions)

Source	2023	2022	Increase/(Decrease)	
			Amount	% Change
Member contributions	\$1,116	\$1,073	\$43	4.0%
Employer contributions	125	121	4	3.2%
State of Illinois contributions	6,009	5,867	142	2.4%
Total investment income (loss)	4,427	(743)	5,170	695.8%
Participant fee income	-	-	-	-
Total	<u>\$11,677</u>	<u>\$6,318</u>	<u>\$5,359</u>	84.8%

Deductions (\$ millions)

Source	2023	2022	Increase/(Decrease)	
			Amount	% Change
Benefits payments	\$7,899	\$7,607	\$292	3.8%
Refunds	68	63	5	9.0%
Administrative expenses	33	28	5	17.6%
Contributions sent to third-party administrator	7	1	6	820.0%
Total	<u>\$8,007</u>	<u>\$7,699</u>	<u>\$308</u>	4.0%

Note: % change is based on financial statement values (not rounded).

The TRS Board of Trustees and staff remain vigilant in their efforts to improve the retirement system's funded status for current and future members. TRS continues to invest prudently and in a disciplined manner for the benefit of TRS 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 their circumstances.

INVESTMENTS

The TRS investment portfolio returned 7.2 percent, net of fees, for the fiscal year ended June 30, 2023. Total investment assets increased approximately \$3.7 billion 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 which 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 72 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, 2023, the funded ratio based on the actuarial value of assets of the Teachers' Retirement System increased to 44.8 percent from its June 30, 2022 level of 43.8 percent. The actuarial value of assets at year end was \$66.5 billion and the actuarial accrued liability was \$148.4 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 funding.

MAJOR INITIATIVES AND ACCOMPLISHMENTS

TRS Strategic Plan

In August, the TRS Board of Trustees formally adopted a new five-year strategic plan focused on a shared long-term vision for TRS's future. The plan was developed through a collaborative and inclusive planning process involving our members, employer school districts, stakeholders, staff and trustees.

We will seek to realize our long-term vision by focusing on five strategic goals:

1. **Funding:** focus on operational and governance practices to prudently manage funding risks and work collaboratively with the Executive Branch and Legislature.
2. **Customer Service:** provide exceptional customer service and retirement experiences that meet the changing needs and preferences of members and employers, while also aligning with best practices.
3. **Organizational Culture:** foster an engaging and motivating work environment that harnesses the power of our team.
4. **Talent:** develop a talent management strategy, focus on professional development and training, and cultivate the next generation of TRS leaders.
5. **Information Technology:** evolve TRS's technology infrastructure to enhance operations, communication, and customer experiences.

The strategic plan is intended to be a starting point from which TRS will build and grow, and a guide for our decision-making and resource allocation. We will develop annual strategies and action plans, monitor performance, and adjust as needed within the next five years to achieve our longer-term vision.

Supplemental Savings Plan — Optional Defined Contribution Benefit Plan

TRS launched its "deferred compensation" (DC) optional savings plan — the TRS Supplemental Savings Plan (SSP) in March 2022. Beginning January 1, 2023, TRS began automatically enrolling new TRS members into the SSP, in accordance with state law.

As of June 30, 2023, 1,451 members have enrolled and \$7.35 million has been deferred thus far to participant accounts. Active TRS members in Tier 1 and Tier 2 who are full-time and part-time contractual employees are eligible to enroll. Retired and inactive TRS members are not eligible for the SSP. The SSP DC plan supplements the existing TRS defined benefit (DB) pension plan. SSP participants now have the option of two TRS sources of income in retirement – a pension that guarantees a specified benefit every month, and a DC retirement savings account. The SSP does not replace the DB plan for participating members. TRS members cannot opt out of the DB plan and place their DB contributions into the new SSP. The 457(b) plan is offered through participants' employers and contributions are deducted from members' paychecks and deposited into their accounts at the Plan recordkeeper Voya Financial. Participants choose from an array of investment options developed by TRS and Voya. To help defray the cost of administration, SSP participants pay an annual fee.

Technology

Gemini – Pension Administration System (PAS)

The System continues its initiative to replace its legacy pension administration system (STAR) with a new pension administration system known as "Gemini." During FY22, development focused on pay-period reporting by school districts and other TRS employers. The Gemini system allows employer reporting to TRS after each pay period rather than through one annual report as under the legacy system. The new pension administration

system also supports the Supplemental Savings Plan (SSP) which requires pay-period reporting. FY23 entailed further development and ongoing enhancements.

Business Intelligence Tool (BI)

Power BI, a cloud-based technology tool, is being implemented at TRS to aggregate various streams of data in a dashboard presentation for analysis and decision-making. Dashboards have been developed to better analyze Gemini pension administration system project development data and to provide an overall understanding of the project timeline and status.

Accelerated Benefit Payment Programs

The two Accelerated Pension Benefit and Accelerated Automatic Increase buyout programs enacted by the legislature for newly retired and inactive members have partially accomplished the goals set by the General Assembly to shrink the System's long-term liability and reduce the state's annual contribution to TRS.

Because of the accelerated benefit payment programs, more than \$1.04 billion has been removed from the total pension liability.

In the short term, the effect of the programs reduced the state's annual contribution to TRS in the upcoming fiscal year by approximately \$96 million. The state's total contribution to TRS in the coming fiscal year is expected to be \$6.04 billion.

From 2019 through 2023, TRS members who elected to participate in the programs mandated by the legislature received nearly \$802 million in buyout payments.

Newly retiring TRS members electing to participate in the Accelerated Automatic Increase program shared approximately \$552 million. Overall, 3,999 retiring members decided to participate.

Inactive members electing to participate in the Accelerated Pension Benefit program shared \$250 million. Overall, 2,004 eligible inactive members decided to participate in this plan.

Both programs were originally scheduled to pay buyouts through 2022. Both were extended to 2024 and now, to 2026. The new expiration date was approved by the General Assembly along with an additional \$1 billion in bonding authorization to fund the programs.

The initiatives, which apply to TRS and the retirement systems for university and state employees, are funded by state bond proceeds rather than retirement trust assets. At the inception of the programs, \$1 billion in bond sales were authorized for this purpose with an additional \$1 billion approved in the spring of 2022. The original authorization was exhausted in June 2022. Since the beginning of these program offerings, TRS has expended nearly \$823 million from the pension bond fund for buyout payments issued under both programs.

State Funding Commitment and Consistency

For two consecutive years, TRS received a state government contribution that was higher than the minimum funding level set by law.

The additional funding is further evidence of a strong commitment by Illinois **Governor J.B. Pritzker** and the General Assembly to keep the pension promises made by the State of Illinois to retired teachers and other public employees.

In FY23, the governor and lawmakers provided an additional \$230 million extra contribution through budget and supplemental bills to the minimum \$9.6 billion appropriated to TRS and the other four state-funded retirement systems. In FY22, the additional funding added \$172 million to the state pension allocation of \$9.4 billion.

Commitment to Diversity

TRS continues to strengthen its existing commitment to diversity within the management of its \$66.3 billion investment portfolio. The TRS Board of Trustees is committed to continually improving access to the investment program for qualified firms owned by minorities, women and those with disabilities.

In the last five years, the total assets in the TRS portfolio managed by Minority and Women Business Enterprises (MWBE) has increased from \$11.7 billion to \$19.6 billion. In each of the last five years, TRS has exceeded the state's annual aspirational goal to have 20 percent of total assets managed by MWBE firms. At the end of FY23, TRS commitments to MWBE firms totaled \$19.6 billion, or 29.5 percent of the System's total portfolio.

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 Annual Comprehensive Financial Report for the fiscal year ended June 30, 2022. This was the 34th 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 Annual Comprehensive 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 the current Annual Comprehensive 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 2023 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 TRS 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 TRS 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 TRS employers form a link between TRS and its members. Their cooperation contributes significantly to the System's success. We hope all recipients of this report find it informative and useful. This report is also available to the general public on <https://www.trsil.org>.

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.



R. Stanley Rupnik
Executive Director & Chief Investment Officer



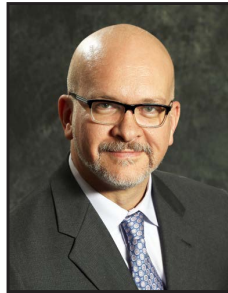
Deron Bertolo
Chief Financial Officer

TRS BOARD OF TRUSTEES

AS OF DECEMBER 1, 2023



Matthew Hunt
President
Appointed
Glen Ellyn



Andrew Hirshman
Vice President
Elected
Oak Park



Dr. Tony Sanders
Ex officio
Elected
Elgin



Beth Anderson
Elected
Kankakee



Kevin (Duffy) Blackburn
Appointed
Joliet



Joseph Blomquist
Elected
St. Charles



Marsha Byas
Elected
Marion



Michael Goetz
Appointed
Springfield



Maria "Mia" Jazo-Harris
Appointed
Bloomington



Maureen Mena
Appointed
Bolingbrook



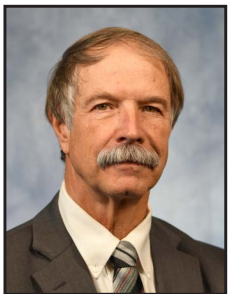
David Miller
Appointed
Lynwood



Fred Peronto
Elected
Elmhurst



Larry Pfeiffer
Elected
Carlinville



Doug Strand
Elected
East Moline

TRS ORGANIZATION
EXECUTIVE CABINET

AS OF DECEMBER 1, 2023



Stan Rupnik, CFA
Executive Director
& Chief Investment
Officer



Sally Antonacci
Executive Officer



Deron Bertolo
Chief Financial
Officer



Lori Dour
Chief Benefits
Officer



Cynthia Fain
Senior Legal Counsel



John Gerding
Director of
Information
Technology



Michelle Kissel
Director of Human
Resources



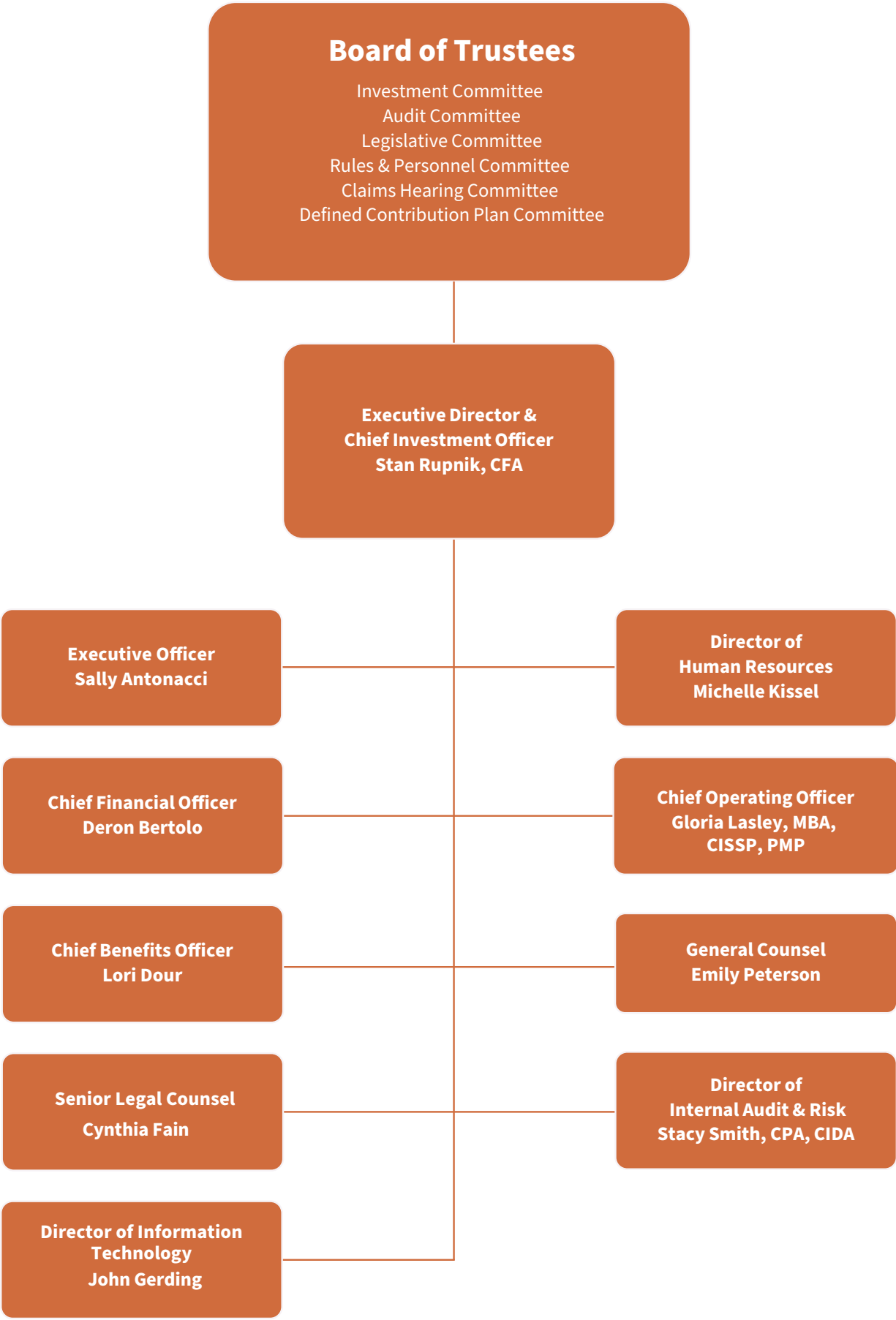
**Gloria Lasley, MBA,
CISSP, PMP**
Chief Operating Officer



Emily Peterson
General Counsel



Stacy Smith, CPA, CIDA
Director of Internal
Audit and Risk



CONSULTING AND PROFESSIONAL SERVICES

ACTUARY

The Segal Company Midwest, Inc.

EXTERNAL AUDITORS

(Special assistants to the Office of the Auditor General)

FORVIS, L.L.P.

LEGAL SERVICES

DLA Piper, L.L.P.

Elrod Friedman L.L.P.

Holland & Knight, L.L.P.

Howard & Howard Attorneys, P.L.L.C.

Ice Miller L.L.P.

Nixon Peabody L.L.P.

Reinhart Boerner Van Deuren s.c.

Whitt Law, L.L.C.

LEGISLATIVE CONSULTING

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

INFORMATION TECHNOLOGY

Apex Systems

Capitol Strategies Consulting Inc.

CapTech Ventures Inc.

Compulink Management Center Inc.

Dayagdag, Chris

Decker Innovations Inc.

Ellerman, Greg

HSO North America, L.L.C.

McDonald Hopkins L.L.C.

Promet Solutions Corporation

Sentinel Technologies, Inc.

Telos Corporation

VPMA Global Services L.L.C.

INTERNAL AUDIT

Investment Training & Consulting Institute, Inc.

OPERATIONS

CEM Benchmarking, Inc.

Higher Logic, L.L.C.

Jasculca Terman Strategic Communications

Mosaic Governance Advisors L.L.C.

Navigate 360 L.L.C.

SABA Software

MASTER TRUSTEE

State Street Bank and Trust Company

SECURITIES LENDING AGENT

Citibank, N.A.

INVESTMENT CONSULTANTS

Aksia, L.L.C. *(Diversifying strategies and private debt)*

CapFinancial Partners, L.L.C. *(Deferred compensation)*

RVK, Inc. *(General investment)*

Stepstone Group, L.P. *(Private equity)*

Stepstone Group Real Estate, L.P. *(Real estate)*

CO-INVESTMENT ADVISORS

Meketa Investment Group, Inc.

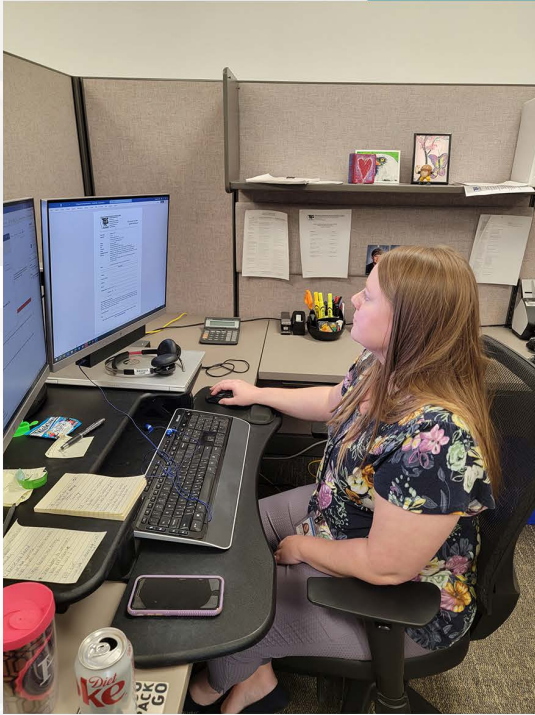
Stout Risius Ross, Inc.

SECONDARY MARKET ADVISORS

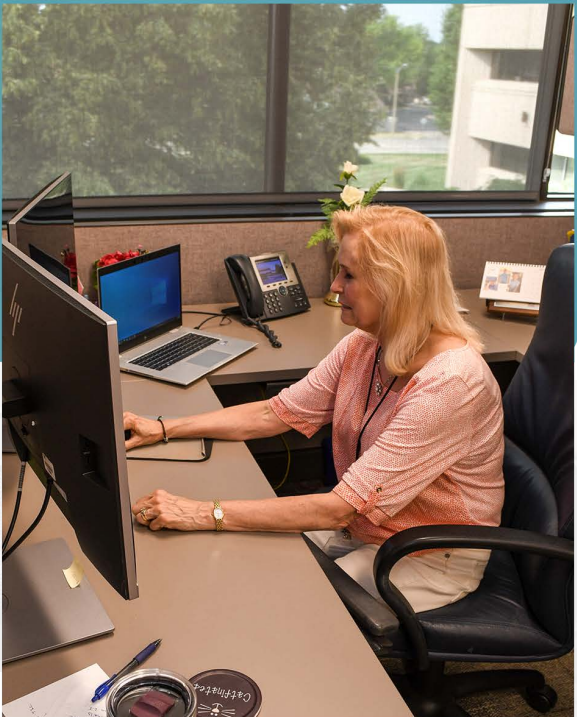
Evercore Group L.L.C.

TAX ADVISORY SERVICES

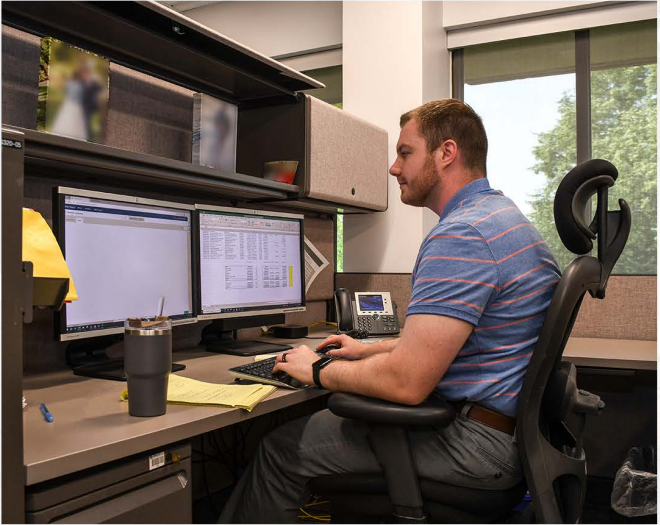
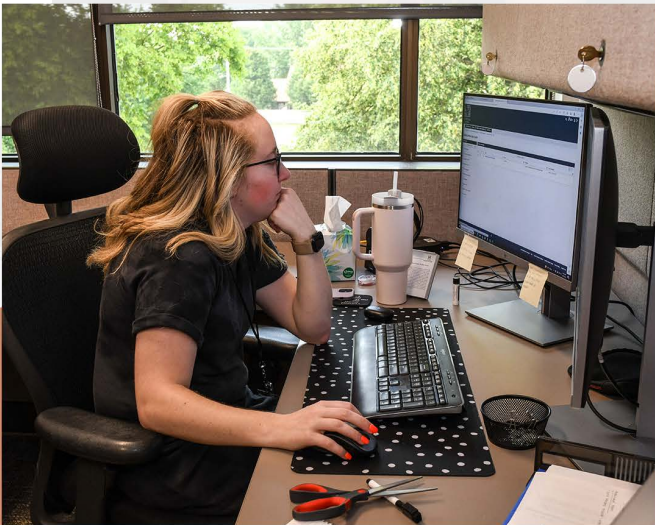
Ernst & Young Private, Ltd.



The **Procurement Analyst** evaluates bids that were received for consulting services.



An **Investment Accountant** reviews and balances investment management fees.



Two **Investment Accountants** review the TRS investment portfolio's FY23 returns.

FINANCIAL

FINANCE DEPARTMENT



An **Accountant** crunches the numbers.



The **Accounting Manager** calls the external auditor about this year's ACFR.



The department holds a staff meeting to discuss the upcoming fiscal year's budget.

Independent Auditor's Report

The Honorable Frank J. Mautino
Auditor General
State of Illinois
and
The Board of Trustees
Teachers' Retirement System of Illinois

Opinion

As Special Assistant Auditors for the Auditor General, we have audited the Statement of Fiduciary Net Position of the Teachers' Retirement System of the State of Illinois (System), a component unit of the State of Illinois, as of June 30, 2023, and the related Statement of Changes in Fiduciary Net Position for the year then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2023, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System, and to meet our ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Emphasis of Matter

The actuarially determined net pension liability, calculated as required by GASB Statement No. 67, *Financial Reporting for Pension Plans*, 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.6 of the financial statements. Our opinion is not modified with respect to this matter.

Responsibilities of Management 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgement made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- exercise professional judgement and maintain professional skepticism throughout the audit.

The Honorable Frank J. Mautino
and
The Board of Trustees
Teachers' Retirement System of Illinois

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- obtain an understanding of internal control relevant to the audit 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 System's internal control. Accordingly, no such opinion is expressed.
- evaluate the appropriateness of accounting polices used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- conclude whether, in our judgement, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedule of changes in the employer net pension liability and related ratios, the schedule of net pension liability, the schedule of investment returns, the schedule of contributions from employers and other contributing entities, and notes to the required supplementary information as listed in the table of contents be presented to supplement the financial statements. Such information, although not part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic 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 basic financial statements and other knowledge we obtained during our audit of the basic 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.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The other supplementary financial information in the financial section, as listed in the table of contents, is presented for purposes of additional analysis and is not a required part of the basic 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 basic financial statements. The other supplementary financial information in the financial section, as listed in the table of contents, has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic 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 financial information in the financial section, as listed in the table of contents, is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the introduction, investments, actuarial and statistical sections, as listed in the table of contents but does not include the basic financial statements and our auditor's report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

FORVIS, LLP

Decatur, Illinois
December 15, 2023

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, 2023. 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 fiduciary net position of TRS at June 30, 2023 was \$66.5 billion.
- During FY23, the fiduciary net position of TRS increased \$3.7 billion.
- Defined benefit contributions from members, employers and the State of Illinois were \$7.2 billion, an increase of \$183.1 million or 2.6 percent for FY23.
- Deferred compensation contributions from employers and members were \$6.7 million, an increase of \$6.0 million for FY23.
- Total net investment gain was \$4.4 billion, compared to a (\$743) million decline in FY22, an increase of \$5.2 billion.
- Defined benefits and refunds paid to members and annuitants were \$8.0 billion, an increase of \$297.8 million or 3.9 percent.
- The actuarial accrued liability was \$148.4 billion at June 30, 2023.
- The unfunded actuarial accrued liability was \$81.9 billion at June 30, 2023. The funded ratio was 44.8 percent at June 30, 2023. 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 (TPL) was \$151.5 billion at June 30, 2023.
- The net pension liability (NPL) was \$85.0 billion at June 30, 2023. The plan fiduciary net posi-

tion, as a percentage of total pension liability, was 43.9 percent.

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

Statement of Fiduciary Net Position. This statement reports the fiduciary net position which represents the difference between the financial statement elements comprised of assets and liabilities. It is the balance sheet for the pension system and reflects the June 30, 2023 net position (assets less liabilities) available for the payment of benefits and other fiduciary activities of the System.

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 fiduciary 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 supplementary information following the notes to the financial statements provide historical and additional detailed information considered useful in evaluating the pension system's financial condition.

Plan Changes. The financial statements and notes presented in the TRS FY23 ACFR will include two separately reported plans. The plans to be included are the TRS Defined Benefit Pension Plan as a fiduciary component unit of TRS and the Deferred Compensation Plan, not a component unit of TRS but a custodial fund reporting fiduciary activities.

The following are condensed comparative financial statements.

CONDENSED COMPARATIVE STATEMENTS OF FIDUCIARY NET POSITION AS OF JUNE 30

	2023	Percentage Change	2022
Cash	\$16,768,742	(14.3%)	\$19,555,871
Receivables and prepaid expenses	2,381,586,920	(55.0)	5,290,933,248
Investments	66,266,731,645	6.0	62,528,309,625
Invested securities lending collateral	1,874,005,888	(14.2)	2,183,903,100
Capital assets	<u>9,947,467</u>	20.7	<u>8,238,075</u>
Total assets	70,549,040,662	0.7	70,030,939,919
Total liabilities	<u>4,047,392,761</u>	(43.8)	<u>7,199,105,736</u>
Total fiduciary net position	<u>\$66,501,647,901</u>	5.8%	<u>\$62,831,834,183</u>

CONDENSED COMPARATIVE STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION FOR THE YEARS ENDED JUNE 30

	2023	Percentage Change	2022
Contributions	\$7,250,076,955	2.7%	\$7,061,038,548
Net investment income (loss)	4,427,042,975	695.8	(743,042,373)
Participant fee income	<u>31,494</u>	939.8	<u>3,029</u>
Total additions	<u>11,677,151,424</u>	84.8	<u>6,317,999,204</u>
Benefits and refunds	7,967,329,515	3.9	7,669,576,246
Administrative expenses	33,371,327	17.6	28,372,371
Contributions sent to third-party administrator	<u>6,636,864</u>	820.0	<u>721,424</u>
Total deductions	<u>8,007,337,706</u>	4.0	<u>7,698,670,041</u>
Net increase/decrease in fiduciary net position	3,669,813,718	365.8	(1,380,670,837)
Total fiduciary net position - beginning of year	<u>\$62,831,834,183</u>	(2.2)	<u>64,212,505,020</u>
Total fiduciary net position - end of year	<u>\$66,501,647,901</u>	5.8%	<u>\$62,831,834,183</u>

FINANCIAL ANALYSIS

TRS was created to provide retirement, survivor and disability benefits to qualified members. Increases or decreases in the plan’s fiduciary net position serve as useful indicators of TRS’s financial position. The fiduciary net position was \$66.5 billion at June 30, 2023.

CONTRIBUTIONS

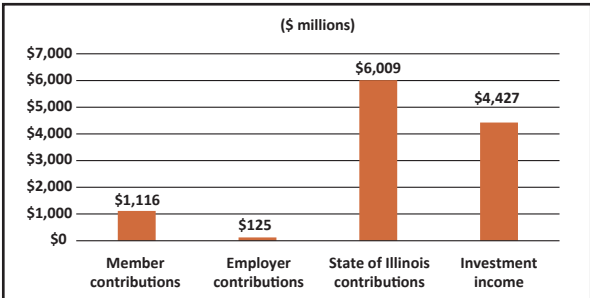
Defined benefit contributions increased \$183.1 million during FY23. Contributions from the State of Illinois increased \$142.3 million, member contributions increased \$36.9 million and employer contributions from school districts increased \$3.9 million.

The TRS Deferred Compensation Plan, a 457(b) plan, started accepting contributions in March 2022. Deferred compensation contributions totaled \$6.7 million at June 30, 2023. This was an increase of \$6.0 million.

Public Act 100-0023 requires that the impact on state contributions due to changes in actuarial assumptions be phased in over five years on a retroactive basis.

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.

Defined Benefit Revenues by Type for the Year Ended June 30, 2023



INVESTMENTS

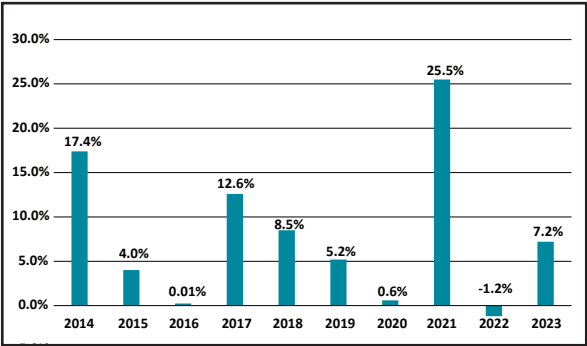
The TRS trust fund is invested according to law under the “prudent person rule” requiring investments to be managed solely in the interest of fund participants and beneficiaries. Principles

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 earned 7.2 percent, net of fees, for the fiscal year ended June 30, 2023. In another year dominated by high inflation, market volatility and global geopolitical concerns, the investment strategy employed by TRS protected assets and limited the System’s portfolio loss. TRS ended the fiscal year beating the assumed rate of return of 7.0 percent by two basis points.

During the fiscal year, total TRS investment assets increased approximately \$3.7 billion, including a net investment gain of \$4.4 billion. The material increase in investment income contributed to the portfolio’s significantly positive return.

Annual Rate of Return (net of investment expenses)

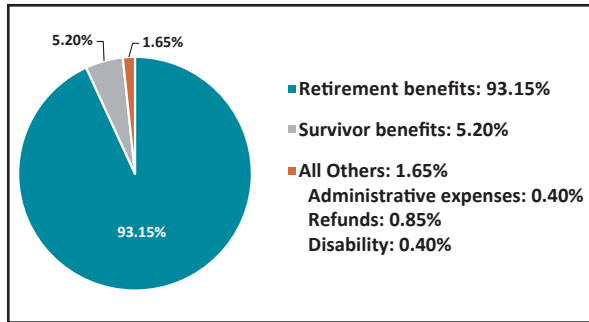


DEFINED BENEFITS AND REFUNDS

Retirement, survivor and disability benefit payments increased \$292.1 million during FY23. Benefit payments increased to \$7.9 billion with 131,017 recipients in FY23. The overall increase in benefit payments 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 115,778 as of June 30, 2022 to 116,991 as of June 30, 2023.

Refunds of contributions increased \$5.6 million in FY23. The increase during FY23 is the result of more member and retirement refunds.

Defined Benefit Deductions by Type for the Year Ended June 30, 2023



ACTUARIAL

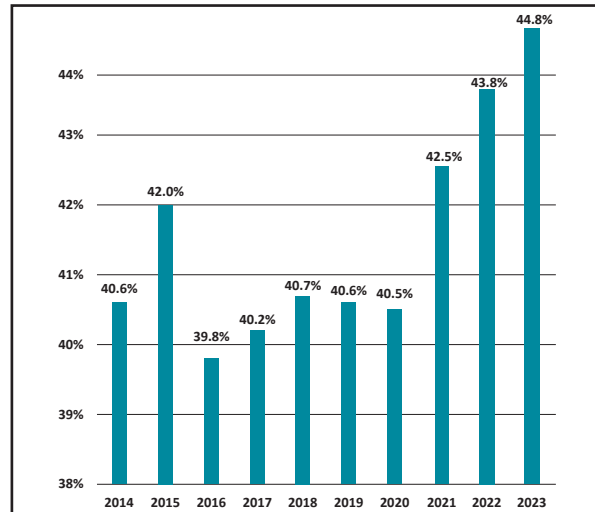
For statutory funding and financial reporting, an actuarial valuation is performed annually and measures the total liability for all benefits earned to date. The actuarial accrued liability is a present value estimate of all benefits earned to date but not yet paid. The actuarial accrued liability based on statutory funding requirements increased \$4.9 billion in FY23 to \$148.4 billion at June 30, 2023. The actuarial unfunded liability is the present value of accrued benefits payable that are not covered by the actuarial value of assets as of the valuation date. The actuarial unfunded liability based on the actuarial value of assets increased \$1.3 billion during FY23 to \$81.9 billion at June 30, 2023. The funded ratio reflects the percentage of the actuarial accrued liability covered by the actuarial value of assets. The funded ratio increased from 43.8 percent on June 30, 2022 to 44.8 percent on June 30, 2023.

The actuarial unfunded liability and funded ratio are based on the actuarial value of assets. Public Act 96-0043 requires the five state retirement systems to smooth actuarial gains and losses on investments over a five-year period.

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 actuarial 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.

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 (NPL) and total pension liability (TPL) in the Financial Statement Notes and Required Supplementary Information in accordance with criteria which differs from criteria used to disclose the actuarial accrued liability and actuarial unfunded liability. The TPL is \$151.5 billion at June 30, 2023, while the NPL is \$85 billion at June 30, 2023.

LEGISLATIVE

In addition to new programs and initiatives, TRS was affected by the enactment of several laws during FY23:

Deferred Compensation Plan AutoEnrollment — Public Act 102-0540

Enrolls all new TRS members in the Supplemental Savings Plan (SSP). TRS began auto enrollment on January 1, 2023. New TRS members who began their service in 2023 will have 3 percent of their compensation deferred into a personalized SSP account. All auto-enrolled members have the option of declining their participation in the SSP before the first payroll deferral is made. The TRS Board has the authority to increase the minimum compensation deferral.

Private School Credit Extension — Public Act 103-0017

Extends the time period in which eligible TRS members can establish up to two years of service credit for past employment as an administrator or

teacher in a private school recognized by the Illinois State Board of Education until June 30, 2028. The law was scheduled to sunset on June 30, 2023.

Post-retirement Work Limits Extension for TRS Retirees — Public Act 103-0088

Extends the June 30, 2023 sunset of the 120-paid days or 600-paid hours post- retirement work limitation to June 30, 2026. The law allows retirees to teach for 120 days or 600 hours during a school year without negatively affecting retirement benefits. Retired members who teach beyond the legal limit lose their pension benefits.

Paid Student Teaching — Public Act 103-0525

Allows optional service credit for periods of paid student teaching as described in Section 24-8.5 of the School Code.

MAINTENANCE DEPARTMENT



*Building Maintenance Technicians
keep the TRS grounds cultivated,
trimmed...*



*...and looking fresh with
new landscaping.*

FINANCIAL STATEMENTS
TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS
STATEMENT OF FIDUCIARY NET POSITION
JUNE 30, 2023

	Defined Benefit Pension Plan	Deferred Compensation Custodial Fund	Total
Assets			
Cash	\$16,768,356	\$386	\$16,768,742
Receivables and prepaid expenses:			
Member contributions	150,527,513	130,589	150,658,102
Participant DC fees	-	34,523	34,523
Employer contributions	21,529,465	277	21,529,742
State of Illinois	429,877	-	429,877
Investment income	178,530,783	-	178,530,783
Other receivables	3,141,515	-	3,141,515
Pending investment sales	2,027,262,378	-	2,027,262,378
Total receivables and prepaid expenses	2,381,421,531	165,389	2,381,586,920
Investments, at fair value:			
Fixed income	7,747,947,907	-	7,747,947,907
Public equities	22,725,959,017	-	22,725,959,017
Alternative investments	34,394,570,955	-	34,394,570,955
Derivatives	(6,255,095)	-	(6,255,095)
Short-term investments	1,307,235,638	-	1,307,235,638
Foreign currency	97,273,223	-	97,273,223
Total investments	66,266,731,645	-	66,266,731,645
Invested securities lending collateral:			
Securities lending collateral	1,847,994,888	-	1,847,994,888
Securities lending collateral with the State Treasurer	26,011,000	-	26,011,000
Total invested securities lending collateral	1,874,005,888	-	1,874,005,888
Capital assets:			
Capital assets, net of accumulated depreciation	6,875,407	-	6,875,407
Right to use assets, net of amortization	3,072,060	-	3,072,060
Total capital assets, net	9,947,467	-	9,947,467
Total assets	70,548,874,887	165,775	70,549,040,662
Liabilities			
Administrative expenses payable	4,337,347	3,141,515	7,478,862
Benefits and refunds payable	6,812,182	-	6,812,182
Lease and subscription liabilities	3,013,095	-	3,013,095
Investment expenses payable	108,984,942	-	108,984,942
Pending investment purchases	2,047,490,671	-	2,047,490,671
Securities lending collateral	1,873,519,231	-	1,873,519,231
Third-party administrator payable	-	93,778	93,778
Total liabilities	4,044,157,468	3,235,293	4,047,392,761
Total fiduciary net position (deficit) restricted for pensions and other	\$66,504,717,419	(\$3,069,518)	\$66,501,647,901

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, 2023

	Defined Benefit Pension Plan	Deferred Compensation Custodial Fund	Total
Additions			
Contributions:			
Members	\$1,109,497,833	\$6,647,472	\$1,116,145,305
State of Illinois	6,009,158,073	-	6,009,158,073
Employers			
Federal funds	43,131,719	-	43,131,719
2.2 benefit formula	69,549,642	-	69,549,642
Excess employer costs	12,066,739	-	12,066,739
Employer SSP	-	25,477	25,477
Total contributions	<u>7,243,404,006</u>	<u>6,672,949</u>	<u>7,250,076,955</u>
Investment income:			
Net increase in fair value of investments	3,142,048,720	-	3,142,048,720
Alternatives income	1,201,253,640	-	1,201,253,640
Interest and dividends	1,007,810,906	-	1,007,810,906
Other investment income	8,540,734	-	8,540,734
Securities lending income	8,128,567	-	8,128,567
Less investment expenses:			
Alternatives expense	448,515,213	-	448,515,213
Direct investment expense	491,736,657	-	491,736,657
Securities lending management fees	487,722	-	487,722
Net investment income	<u>4,427,042,975</u>	<u>-</u>	<u>4,427,042,975</u>
Other income			
Participant fees and dividends	-	31,494	31,494
Total other income	<u>-</u>	<u>31,494</u>	<u>31,494</u>
Total additions	<u>11,670,446,981</u>	<u>6,704,443</u>	<u>11,677,151,424</u>
Deductions			
Retirement benefits	7,450,997,920	-	7,450,997,920
Survivor benefits	416,259,400	-	416,259,400
Disability benefits	31,885,365	-	31,885,365
Refunds	68,186,830	-	68,186,830
Contributions sent to third-party administrator	-	6,636,864	6,636,864
Administrative expenses	32,026,386	1,344,941	33,371,327
Total deductions	<u>7,999,355,901</u>	<u>7,981,805</u>	<u>8,007,337,706</u>
Net increase/(decrease) in net position	3,671,091,080	(1,277,362)	3,669,813,718
Total fiduciary net position			
Beginning of year (deficit)	<u>62,833,626,339</u>	<u>(1,792,156)</u>	<u>62,831,834,183</u>
End of year (deficit)	<u>\$66,504,717,419</u>	<u>(\$3,069,518)</u>	<u>\$66,501,647,901</u>

See accompanying Notes to Financial Statements.

NOTES TO FINANCIAL STATEMENTS

A. PLAN DESCRIPTIONS

1. Reporting Entity

a. Defined Benefit Plan

The Teachers' Retirement System of the State of Illinois (TRS) is a public employee retirement system (PERS), that administers a cost-sharing, multiple-employer defined benefit pension plan. That pension plan is a fiduciary component unit of TRS. 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.

b. Deferred Compensation Plan

TRS also administers a deferred compensation plan. Pursuant to Section 16-204 of the Illinois Pension Code, the Board of Trustees of TRS established the TRS Supplemental Savings Plan (SSP). The SSP is an eligible deferred compensation plan (DCP) under Section 457(b) of the Internal Revenue Code. Membership is voluntary for eligible TRS members first employed in a TRS-covered position prior to Jan. 1, 2023. Eligible members first employed on or after Jan. 1, 2023 are automatically enrolled unless they opt out of the program. The assets of the SSP are maintained under a trust for the exclusive benefit of participants and beneficiaries. TRS uses a third-party administrator and acts as a pass-through entity for contributions received, thus assets in the trust are not controlled by TRS. Participating members, not TRS, direct the third-party administrator regarding use, exchange or employment of assets within their own accounts. The SSP is not a component unit of TRS. Funds held by TRS prior to being paid to the third-party administrator are reported in a custodial fund as a fiduciary activity.

The net position deficit is a result of start-up expenses and technology costs expended in order to develop and implement a new SSP. The deficit will be eliminated in future years as SSP participants increase and participation fees begin to offset plan costs.

TRS uses criteria established by the Governmental Accounting Standards Board (GASB) to determine

whether other entities should be included within its financial reporting entity.

2. Employers

Members of TRS are employed by school districts, special districts, certain state agencies and certain non-governmental entities. Each employer remits member contributions to TRS.

Employers are responsible for employer contributions for:

- Teachers paid from federal funds.
- The 2.2 formula increase.
- Salary increases in excess of 6 percent. When a member retires, the employer is required to pay TRS contributions equal to the actuarial value of a pension benefit that results from any salary increase over 6 percent that is used in a retiring member's final average salary calculation. Several permanent exemptions are in effect for excess salary increases.
- Sick leave days received in excess of the normal annual allotment and applied to service credit for members in their final four years prior to retirement.
- Any portion of a member's salary that is greater than the governor's statutory salary.

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.

The state's statutory contribution requirements are described in the Actuarial Section under "Actuarial Standards and Illinois State Pension Funding."

Number of Employers (as of June 30)

	2023
Local school districts	851
Special districts	135
State agencies	9
Total	995

3. Members

TRS Membership (as of June 30)

	2023
Retirees and beneficiaries	131,017
Inactive members	147,329
Active members	169,889
Total	<u>448,235</u>

4. Board of Trustees

TRS is governed by a 15-member Board of Trustees. Trustees include the state superintendent of education, seven trustees appointed by the governor, five trustees elected by contributing TRS members, and two trustees elected by TRS annuitants. The president of the Board of Trustees, by law, is appointed by the governor from among the sitting trustees. 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

a. Defined Benefit Plan

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 who are licensed and employed in Illinois outside the city of Chicago.

Public Act 96-0889 (Act), 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 Jan. 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 2.

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

Tier 3 was created in July 2017. It is a hybrid retirement plan with both defined benefit and defined contribution plan components.

Tier 1 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 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 consecutive annual salary rates within the last 10 years of creditable service with one exception. Public Act 102-0016 removes the consecutive years requirement for members who are retiring on or after June 1, 2021 and the 2020-21 school year is used in the member's final average salary. The final average salary will be based on the four highest years within the last 10 years of creditable service.

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 1 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.

All Tier 1 retirees receive an annual 3 percent increase in the current retirement benefit beginning Jan. 1 following the attainment of age 61 or on Jan. 1 follow-

ing 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.

Effective July 1, 2017, Tier 1 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 2 Benefits

Differences with Tier 1 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 2 law caps creditable earnings and contributions used for retirement purposes at a level that is lower than the Social Security wage base. Tier 2 annual increases will be the lesser of 3 percent or ½ percent of the rate of inflation of the original benefit beginning Jan. 1 following attainment of age 67 or on Jan. 1 following the member's first anniversary in retirement, whichever is later.

The 2.2 retirement formula also applies to Tier 2, but the final average salary is based on the member's highest average salary earned during eight consecutive years out of the last 10 years of service with one exception. Public Act 102-0016 removes the consecutive years requirement for members who are retiring on or after June 1, 2021 and the 2020-21 school year is used in the member's final average salary. The final average salary will be based on the eight highest years within the last 10 years of creditable service.

The single-sum benefit also is payable at age 65 to Tier 2 members with fewer than five years of service. The money purchase (actuarial) benefit is not available to Tier 2 members.

Disability and refund provisions for Tier 2 are identical to those that apply to Tier 1. Death benefits

are payable under a formula that is different from Tier 1.

Effective July 1, 2017, Tier 2 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 3 Benefits

Enacted in July of 2017, the Tier 3 benefit is designed to be a hybrid retirement plan with two parts – a defined benefit (DB) pension and a defined contribution (DC) savings plan.

Under the law, Tier 3 members would make payroll contributions to their DB pensions that are based on the full cost of this part of the benefit, but no more than 6.2 percent of salary. In addition, Tier 3 members would contribute a minimum of 4 percent of their pay to the DC portion of the plan.

At retirement, TRS members would receive a pension and be able to access funds from their DC savings account as they see fit.

However, an implementation date for Tier 3 has not been set. As written, the current language of the Tier 3 statute inadvertently conflicts with other provisions of the Illinois Pension Code. Until these differences are corrected by the legislative and executive branches, Tier 3 cannot be implemented.

b. Deferred Compensation Plan

The Deferred Compensation Plan provides retirement benefits to participating members. All contributions are held in Trust for the exclusive benefit of participants and beneficiaries. Participants are always 100 percent vested in all contributions and investment earnings (including employer contributions and related investment earnings), regardless of years of service credit attained. Participant is not entitled to a distribution of his/her accounts under the Plan until the earlier of the Participant's severance from employment or the calendar year in which the Participant attains age 59 and one half (59 ½). Exceptions to distribution restrictions rules include death, disability and unforeseeable financial emergency.

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 with approval by the governor. Since July 1, 1995, state appropriations have been made through a continuing appropriation.

Member contributions are allocated as follows: 7.5 percent for retirement; 0.5 percent for post-retirement increases; and 1 percent for death benefits.

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 any excess salary increase or sick leave costs due and the total employer normal cost on salaries exceeding the governor's salary.

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. State contribution requirements were first affected by this change in FY11.

Public Act 100-0023, which was effective July 6, 2017, requires the impact on state contributions due to changes in actuarial assumptions to be phased in over five years. State contribution requirements were first affected by this change in FY18. The FY18 requirement was recertified in January 2018 due to the new law.

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 included in the June 30, 2023 actuarial valuation were used to calculate the June 30, 2023 total pension liability. These assumptions were based on the latest experience study conducted by TRS actuaries, as discussed later in this section.

As of June 30, 2023, the assumption for future investment returns was 7.0 percent, a rate unchanged from June 30, 2022. The components which make up the investment return assumption, real rate of return, 4.50 percent, and inflation, 2.50 percent, were unchanged. The investment return assumption for the 2023 actuarial valuation is based on an asset allocation study conducted by the TRS investment consultant and additional analysis conducted by the actuary in 2023.

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

Expected Arithmetic Returns Over 10-20 Year Horizon

Asset Class	Return	Target Asset Allocation
Global Equity	5.35%	37.0%
Private Equity	8.03	15.0
Income	4.32	26.0
Real Assets	4.60	18.0
Diversifying Strategies	3.40	4.0
Total		100.0

If the plan's fiduciary net position is not sufficient to cover all benefit payments to current plan members, GASB Statement No. 67 requires the discount rate to be different from the assumed rate of return. Instead, the discount rate would be a blended rate, which includes the long-term expected rate of return and a municipal bond rate (the Bond Buyer's 20-Bond GO Index) as of the end of the current fiscal year. Based on the following projections, the System can use the long-term expected rate of return as

the discount rate for the year ended June 30, 2023, as it did for the prior year.

TRS, with the assistance of the System's actuary, projected that the plan's fiduciary net position will provide for all benefit payments to current plan members. Projected contributions assume that all statutorily required contributions are made, including projected contributions from members, employers and the State of Illinois (nonemployer contributing entity). Projected state contributions reflect the changes enacted in Public Acts 100-0023, 100-0340, 100-0587, 101-0010 and 102-0718. However, the projections do not include any assumptions about the utilization of Tier 3 under PA 100-0023.

Estimated contributions from employers and the State of Illinois, of which the majority of the contributions (approximately 99 percent) are provided by the State of Illinois, are projected to be \$6.0 billion in FY24 and grow to \$10.5 billion by FY45 based on present statutory requirements for current members. Tier 1's liability is partially funded by Tier 2 because the Tier 2 contributions are higher than the cost of Tier 2 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, TPL is developed and rolled forward to the valuation date based on member census data one year prior. TPL is projected to the June 30, 2023 measurement date based on census data as of June 30, 2022. Assets, included in plan fiduciary net position, are measured at fair value.

Net Pension Liability

	June 30, 2023
Total pension liability	\$151,485,294,234
Plan fiduciary net position	66,504,717,419
Net pension liability	<u>\$84,980,576,815</u>
Plan fiduciary net position as a percentage of the total pension liability	43.9%

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

	1% Decrease	Current	1% Increase
Discount rate	6.0%	7.0%	8.0%
Net pension liability	\$104,599,123,559	\$84,980,576,815	\$68,699,254,139

Most of the actuarial assumptions used in the June 30, 2023 actuarial valuation are based on the actuarial experience analysis dated September 2021 that covered the period July 1, 2017 through June 30, 2020 and the economic experience review presented at the August 2023 Board meeting. TRS system actuaries will conduct the next experience study in 2024 for the period July 1, 2020 through June 30, 2023.

Actuarial Assumptions Used for Financial Reporting Disclosure

Actuarial Valuation Date	June 30, 2023
Census Date:	June 30, 2022 with total pension liability projected to June 30, 2023.
Actuarial Cost Method:	
For financial reporting purposes	Entry age normal
Asset Valuation Method:	
For financial reporting purposes	Fair value as of valuation date
Actuarial Assumptions:	
Investment rate of return	7.0% adopted effective June 30, 2022 and reaffirmed at the August 15, 2023 Board meeting.
Real rate of investment return	4.50%
Projected salary increases	8.75% with 1 year of service to 3.75% with 20 or more years of service. Includes inflation and real wage growth (productivity) assumptions.
Group size growth rate	0%
Assumed inflation rate	2.50%
Post-retirement increase	Tier 1: 3%, compounded; Tier 2: 1.25%, not compounded.
Mortality table:	PubT - 2010 adjusted for TRS experience with future mortality improvements on a fully generational basis using projection table MP-2020.

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 additions when due pursuant to statutory or contractual requirements. Benefits and refunds are recognized as deductions 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 as well as 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. Adoption of GASB 96

GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*, became effective for fiscal year 2023. GASB 96 requires recognition of subscription-based Information technology arrangements (SBITAs) for software and IT assets over \$25,000 as a right-to-use asset. The SBITAs are

recognized by the System as a subscription liability and as an intangible right-to-use asset.

Adoption of GASB 96 had no effect on beginning fiduciary net position and was not material to the financial statements.

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 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 most 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, diversifying funds and partnership interests in real estate and real assets 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, Lease and Subscription

TRS categorizes capital assets as tangible capital assets and intangible right to use assets.

Tangible capital assets are stated on the basis of historical cost. Depreciation is computed using the straight-line method based upon the estimated useful lives of the assets (Building and building improvements: \$25,000, 10 - 40 years; Equipment and furniture \$5,000, 3 - 10 years; Computer software: \$25,000 3 - 5 years).

Intangible right-to-use assets are measured at the present value of expected payments over the term

of the contract. The capitalization threshold for lease assets and subscriptions is \$25,000 for a term greater than one year. Capital assets activity for the year ended June 30, 2023 was as follows:

	Beginning Balance	Additions/ Transfers In	Disposals/ Transfers Out	Ending Balance
Capital Assets, not depreciated:				
Land	\$235,534	\$ -	\$ -	\$235,534
Mineral lease Rights	2,643	-	-	2,643
	<u>238,177</u>	<u>-</u>	<u>-</u>	<u>238,177</u>
Capital Assets, depreciated:				
Office building	9,648,053	236,985	-	9,885,038
Site improvements	1,127,708	61,336	47,858	1,141,186
Equipment and furniture	3,316,727	78,502	39,510	3,355,719
Purchased Software	295,045	-	-	295,045
Internally Generated Software (IGS)	11,677,793	734,699	-	12,412,492
	<u>26,065,326</u>	<u>1,111,522</u>	<u>87,368</u>	<u>27,089,480</u>
Less accumulated depreciation:				
Office building	8,183,261	247,677	-	8,430,938
Site improvements	1,100,933	9,702	47,858	1,062,777
Equipment and furniture	3,016,742	157,825	39,510	3,135,057
Purchased Software	295,045	-	-	295,045
Internally Generated Software (IGS)	5,469,447	2,058,986	-	7,528,433
	<u>18,065,428</u>	<u>2,474,190</u>	<u>87,368</u>	<u>20,452,250</u>
Right to Use Assets				
Office buildings	-	1,792,579	-	1,792,579
Copiers	-	104,529	-	104,529
Computer software	-	2,116,797	-	2,116,797
	-	<u>4,013,905</u>	-	<u>4,013,905</u>
Less Accumulated Amortization:				
Office buildings	-	218,928	-	218,928
Copiers	-	34,843	-	34,843
Computer software	-	688,074	-	688,074
	-	<u>941,845</u>	-	<u>941,845</u>
Total Net Capital Assets	<u>\$8,238,075</u>	<u>\$1,709,392</u>	<u>\$ -</u>	<u>\$9,947,467</u>

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 Dec. 31, 1997. (Lump-sum payments for sick leave earned prior to Jan. 1, 1984,

are subject to a maximum of 60 days or 420 hours.) Sick time earned after Dec. 31, 1997 is not compensable at termination.

At June 30, 2023, the System had a liability of \$2,322,170 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, 2023 was as follows:

	Beginning Balance	Additions	Reductions	Ending Balance
Compensated absences payable	\$2,167,568	\$1,436,255	\$1,281,653	\$2,322,170
The estimated amount due within one year is: \$235,016				

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, 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 \$16,768,356 at June 30, 2023. Of the bank balance, \$16,768,106 was on deposit with the State Treasurer at June 30, 2023. 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 consisting of bank-sponsored, short-term investment funds, commercial paper, and certificates of deposit are reported 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 \$1,269,950,764 at June 30, 2023. The STIF fund has an average credit quality rating of A1P1 and a weighted average maturity of 25.0 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 \$97,273,223 at June 30, 2023.

D. INVESTMENTS

1. Investment Policies

Through the TRS 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 TRS 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, 2023.

Long-term Asset Allocation Policy Mix	
Equity	52%
Real assets	18
Diversifying strategies	4
Income	26
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 TRS 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 with a minimal quality S&P rating of B- or Moody's equivalent rating of B3. 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, 2023, 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	Asset-Backed Securities	Foreign Debt Securities	U.S. Agency Obligations	U.S. Government Backed Mortgages	Municipals	Commingled Funds	Total
Aaa	\$153,399,383	\$42,238,241	\$ -	\$146,085,843	\$145,698,126	\$ -	\$538,760,573	\$1,026,182,166
Aa1	-	-	-	-	-	-	118,489,160	118,489,160
Aa2	707,289	1,722,274	45,631,670	-	-	-	176,027,534	224,088,767
Aa3	2,952,262	3,659,709	49,904,756	-	-	1,170,297	9,495,663	67,182,687
A1	157,449,391	-	117,244,182	-	-	-	1,184,832,116	1,459,525,689
A2	89,733,289	3,736,875	65,899,538	-	-	-	726,262,690	885,632,392
A3	158,305,803	5,320,636	65,473,485	-	-	-	-	229,099,924
Baa1	83,797,470	2,340,483	138,167,834	-	-	-	-	224,305,787
Baa2	272,695,238	7,517,140	405,204,936	-	-	-	-	685,417,314
Baa3	329,637,711	-	200,771,556	-	-	-	-	530,409,267
Ba1	94,782,473	979,118	84,199,250	-	-	275,907	164,447,404	344,684,152
Ba2	56,649,696	3,794,004	209,192,286	-	-	-	-	269,635,986
Ba3	74,578,155	-	180,575,405	-	-	-	-	255,153,560
B1	77,009,860	-	72,153,188	-	-	-	41,115,794	190,278,842
B2	26,927,823	-	51,130,541	-	-	-	-	78,058,364
B3	28,916,163	-	62,381,166	-	-	-	-	91,297,329
Caa1	1,411,129	-	29,392,118	-	-	-	-	30,803,247
Caa2	-	-	10,293,803	-	-	-	-	10,293,803
Caa3	1,348,775	-	20,101,730	-	-	-	-	21,450,505
Ca	163,179	1,295,415	18,989,308	-	-	-	-	20,447,902
C	-	46,275	5,992,492	-	-	-	-	6,038,767
Not rated	27,800,380	7,377,297	14,780,753	-	-	-	-	49,958,430
Withdrawn	10,666,818	35,680	11,202,506	-	-	-	-	21,905,004
Total credit risk, bonds, corporate notes and government obligations	1,648,932,287	80,063,147	1,858,682,503	146,085,843	145,698,126	1,446,204	2,959,430,934	6,840,339,044
U.S. Treasuries								907,608,863
Total bonds, corporate notes & government obligations	\$1,648,932,287	\$80,063,147	\$1,858,682,503	\$146,085,843	\$145,698,126	\$1,446,204	\$2,959,430,934	\$7,747,947,907

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, 2023 is as follows:

Type	2023 Fair Value	Maturity in Years				
		Less Than 1 year	1 to 5 years	5 to 10 years	10 to 20 years	More Than 20 years
U.S. treasuries/agencies	\$1,053,694,706	\$429,692,244	\$505,672,076	\$74,847,915	\$23,827,980	\$19,654,491
U.S. government-backed mortgages	145,698,126	718	8,372	-	1,548,402	144,140,634
Municipals	1,446,204	-	275,907	-	-	1,170,297
Asset-backed securities	80,063,147	444,800	58,953,390	1,402,730	6,306,634	12,955,593
Commingled funds (U.S. & international)*	2,959,430,934	118,489,160	590,202,287	1,850,249,557	243,757,840	156,732,090
Corporate debt securities	1,648,932,287	122,350,836	1,179,645,562	151,397,251	71,795,876	123,742,762
Foreign debt/corporate obligations	1,858,682,503	47,118,192	832,426,963	528,195,558	244,697,453	206,244,337
Total bonds, corporate notes and government obligations	7,747,947,907	718,095,950	3,167,184,557	2,606,093,011	591,934,185	664,640,204
Derivatives	(6,255,095)	(2,116,189)	(3,642,668)	(496,238)	-	-
Total bonds, corporate notes, government obligations, securities lending collateral and derivatives	<u>\$7,741,692,812</u>	<u>\$715,979,761</u>	<u>\$3,163,541,889</u>	<u>\$2,605,596,773</u>	<u>\$591,934,185</u>	<u>\$664,640,204</u>

* 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, 2023 is as follows:

Currency	Foreign Currency	Equities	Fixed Income	Derivatives	Total
Australian Dollar	\$3,271,772	\$284,690,471	\$ -	\$ -	\$287,962,243
Brazilian Real	6,420,949	150,838,828	80,314,987	336,803	237,911,567
British Pound	8,380,457	1,036,463,514	-	-	1,044,843,971
Canadian Dollar	3,572,912	456,625,912	-	-	460,198,824
Chilean Peso	826,849	10,664,531	12,123,839	(116,006)	23,499,213
Chinese Yuan	179,946,909	-	-	-	179,946,909
Chinese Yuan Renminbi	(183,096,283)	381,156,344	6,361,805	107,477	204,529,343
Colombia Peso	793,179	1,355,303	50,101,051	(2,140,881)	50,108,652
Czech Koruna	(1,972,296)	783,422	45,061,846	(297,270)	43,575,702
Danish Krone	1,551,466	185,121,676	-	-	186,673,142
Dominican Peso	-	-	2,264,744	-	2,264,744
Egyptian Pound	10,536,374	3,507,589	-	-	14,043,963
Emirati Dirham	11,626	30,208,687	-	-	30,220,313
Euro	17,740,344	2,117,167,384	55,326,990	(544,284)	2,189,690,434
Hong Kong Dollar	4,678,609	574,232,750	-	(108,325)	578,803,034
Hungarian Forint	912,929	14,684,398	24,181,803	179,017	39,958,147
Indian Rupee	174,325	401,917,862	-	-	402,092,187
Indonesian Rupiah	1,485,373	81,411,244	72,024,059	-	154,920,676
Israeli Shekel	(71,770)	23,935,688	-	(327,632)	23,536,286
Japanese Yen	16,151,690	1,363,441,556	-	-	1,379,593,246
Kuwaiti Dinar	2,438	3,214,985	-	-	3,217,423
Malaysian Ringgit	449,473	27,736,228	31,187,388	(445)	59,372,644
Mexican Peso	2,106,877	72,363,706	85,562,967	214,277	160,247,827
New Taiwan Dollar	2,517,525	498,925,468	-	-	501,442,993
New Zealand Dollar	100,282	1,491,434	-	-	1,591,716
Nigerian Naira	534,379	-	-	-	534,379
Norwegian Krone	727,036	65,086,888	-	-	65,813,924
Pakistani Rupee	2,082	219,345	-	-	221,427
Peruvian Sol	1,659,429	-	41,170,020	-	42,829,449
Philippine Peso	247,723	13,465,886	-	-	13,713,609
Polish Zloty	5,161,358	34,152,651	37,130,141	1,214,112	77,658,262
Qatari Riyal	142,146	18,508,218	-	-	18,650,364
Romanian Leu	105,781	-	19,072,250	-	19,178,031
Russian Ruble	2,377,521	-	-	-	2,377,521
Singapore Dollar	691,754	104,393,102	-	67,396	105,152,252
South African Rand	953,991	65,286,825	81,443,575	164,283	147,848,674
South Korean Won	2,508,781	423,336,547	-	(480,024)	425,365,304
Swedish Krona	2,411,337	199,790,893	-	-	202,202,230
Swiss Franc	748,557	490,684,435	-	-	491,432,992
Thailand Baht	1,954,750	74,052,089	32,474,012	-	108,480,851
Turkish Lira	363,576	60,769,906	-	-	61,133,482
Ukraine Hryvnia	191,013	-	-	-	191,013
Uruguayan Peso	-	-	5,272,120	-	5,272,120
Vietnam Dong	-	2,287,022	-	-	2,287,022
Uzbekistani Som	-	-	1,137,771	-	1,137,771
Total subject to foreign currency risk	97,273,223	9,273,972,787	682,211,368	(1,731,502)	10,051,725,876
Investments in international securities payable in U.S. dollars	-	1,007,829,418	1,176,471,135	(1,295,425)	2,183,005,128
Total international investment securities (including domestic securities payable in foreign currency)	97,273,223	10,281,802,205	1,858,682,503	(3,026,927)	12,234,731,004
Domestic investments (excluding securities payable in foreign currency)	-	12,444,156,812	5,889,265,404	(3,228,168)	18,330,194,048
Total fair value	\$97,273,223	\$22,725,959,017	\$7,747,947,907	(\$6,255,095)	\$30,564,925,052

In addition to the previous table, the fair value of TRS's investments in foreign currency denominated real asset, private credit and private equity funds was \$511,008,344, \$39,082,607 and \$678,196,850 at June 30, 2023, respectively. Currencies included Euro, British pound, Canadian dollar, and South Korean won.

3. Securities Lending Program

The TRS 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 allowing TRS, upon demand, to return the collateral in exchange for the original securities. 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, "Accounting and Financial Reporting for Securities Lending Transactions."

As of June 30, 2023, Citibank, N.A. served as the third-party securities lending agent for the fixed income, domestic equity, international equity and global 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 weighted average term of the loans is one day as securities on loan can be recalled on demand by TRS or the borrower can return the loaned securities at any time. 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, evaluated on an individual basis, but as of June 30, 2023, there were no term loans outstanding.

Cash collateral received is invested in a separate account managed by the lending agent, with a weighted average maturity of 66 days at June 30, 2023. 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, 2023, TRS had outstanding loaned investment securities with a fair value of \$1,826,529,349 against which it had received cash and non-cash collateral with a fair value of \$1,869,613,027. The securities on loan remain on TRS's Statement of Fiduciary Net Position in their respective investment categories. As of June 30, 2023, TRS cash collateral received and reported as securities lending obligation on the Statement of Fiduciary Net Position totaled \$1,847,508,231; whereas the fair value of re-invested cash collateral reported as securities lending collateral was \$1,847,994,888. The net increase (decrease) in fair value of investments within the Statement of Changes in Fiduciary Net Position reflects the change in fair value of the re-invested cash collateral. TRS also reports securities lending collateral with the Office of the Illinois State Treasurer on the Statement of Fiduciary Net Position. Further detail on this amount can be obtained by calling the Office of the Illinois State Treasurer at (217) 558-1250 or by visiting www.illinoistreasurer.gov.

Income earned and costs related to securities lending activities are reported on the Statement of Changes in Fiduciary Net Position. For fiscal year 2023, the System earned net income of

\$7,640,845 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 and derivative positions of the investment managers are reviewed on a regular basis to monitor compliance.

As of June 30, 2023, 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, 2023, the TRS investment portfolio held the following derivatives.

Investment Derivatives	Fair Value at June 30, 2023	Change in Fair Value	Shares/Par	Notional
Credit default swaps buying protection	(\$2,017,768)	(\$12,144,640)	167,805,806	\$169,450,214
Credit default swaps selling protection	(987,627)	7,089,876	17,680,000	16,697,775
Index and variance swaps	(407,551)	(8,007,334)	(53,693,391)	7,444,969
Pay fixed interest rate/inflation swaps	1,441,996	(6,523,794)	228,722,583	229,678,500
Receive fixed interest rate/inflation swaps	(2,286,366)	2,030,159	344,722,822	343,409,194
Equity futures long	-	12,363,389	45,363,810	70,928,624
Equity futures short	-	(1,623,173)	(720,622)	(44,130,370)
Fixed income futures long	-	(20,096,371)	230,600,000	265,264,094
Fixed income futures short	-	5,668,162	(42,610,505)	(49,258,657)
Currency forward options purchased	411,604	(1,655,571)	109,458,863	49,679,319
Currency forward options written	(2,802,435)	1,113,693	(65,867,863)	41,605,819
Swaptions purchased	593,132	(1,245,647)	81,880,000	59,313,217
Swaptions written	(200,080)	902,720	(81,880,000)	20,007,951
FX forwards	1,437,818	14,492,118	-	-
Rights	204	(220,687)	2,242	2,242
Warrants	7,314,688	(1,624,859)	837,819	837,819
Grand total	<u>\$2,497,615</u>	<u>(\$9,481,959)</u>		<u>\$1,180,930,710</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, 2023, TRS had currency forward purchase or sale contracts for 35 different currencies with various settlement dates.

Fair Value: As of June 30, 2023, TRS's open currency forward contracts had a net fair value (unrealized gain) of \$1,437,818.

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 fair 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, 2023, TRS had outstanding futures contracts with a notional value, or exposure, of \$242,803,691. Notional values do not represent the actual values in the Statement of Fiduciary Net Position. The contracts have various expiration dates through September 2023.

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 \$3,687,993 during FY23.

Type	Number of Contracts	Notional Principal
Equity Futures		
International equity index futures - long	1,179	\$70,928,624
International equity index futures - short	(4,276)	(44,130,370)
Fixed Income/Cash Equivalent Futures		
Fixed income index futures - long	2,171	265,264,094
Fixed income index futures - short	(257)	(28,938,437)
International fixed income index futures - short	(155)	(20,320,220)

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, 2023, the TRS investment portfolio held currency forward options with notional value of \$91,285,138. Contractual principal/notional values do not represent the actual values in the Statement of Fiduciary Net Position. The contracts have various expiration dates through September 2023.

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, 2023, the fair value of all option contracts, gross of premiums received, was (\$2,390,831). 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, 2023. 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	\$9,901,362
Currency forward call options - written	1	1,828,392
Currency forward put options - purchased	11	39,777,957
Currency forward put options - written	10	39,777,427

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. 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.

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, 2023, TRS had outstanding written call swaption exposure of \$20,007,951 and purchased call swaption exposure of \$59,313,217. The contracts have various maturity dates through

August 2023. 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, 2023, the fair value of swaption contracts was \$393,052.

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, 2023, TRS had credit default/index swaps in its portfolio with various maturity dates through June 2028. The notional values as of June 30, 2023, included purchased credit default swaps (buying protection) of \$169,450,214, written credit default swaps (selling protection) of \$16,697,775 and index swaps of \$7,444,969.

Fair Value: The fair value of credit default swaps, including index swaps, held by TRS was (\$3,412,946) as of June 30, 2023. This represents the amount due to or (from) TRS under the terms of the counterparty agreements.

Interest Rate/Inflation 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. 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, 2023, TRS held interest rate swaps in various currencies with various expiration/maturity dates ranging from 2024 to 2033. 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 at right presents the fair value of TRS's interest rate swap exposure as of June 30, 2023.

	As of June 30, 2023
Receive floating/pay fixed	\$1,441,996
Receive fixed/pay floating	(2,286,366)

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, 2023.

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/23
Pay Fixed Interest Rate/Inflation Swaps:						
Interest Rate Swap PLN	22,450,000	\$5,615,760	6 month WIBOR	1.35%	10/5/2023	\$115,732
Interest Rate Swap PLN	22,450,000	5,615,760	6 month WIBOR	1.38	10/5/2023	114,377
Interest Rate Swap PLN	22,865,000	5,644,583	6 month WIBOR	2.40	12/15/2023	59,032
Interest Rate Swap CLP	38,250,000,000	47,684,348	6 month Chile Interbank Rate	7.37	11/29/2024	53,854
Interest Rate Swap PLN	31,340,000	7,932,019	6 month WIBOR	4.30	2/1/2025	279,405
Interest Rate Swap USD	55,500,000	55,577,885	SOFR	3.95	6/18/2025	965,728
Interest Rate Swap PLN	15,699,055	3,871,206	6 month WIBOR	6.02	6/21/2025	(18,528)
Interest Rate Swap ZAR	96,630,000	5,126,967	3 month JIBAR	8.25	6/21/2025	22,148
Interest Rate Swap USD	27,700,000	27,700,000	SOFR	4.42	9/17/2025	139,703
Interest Rate Swap MXN	110,030,000	6,415,556	28 day Mexican TIIE	9.14	9/18/2025	15,468
Interest Rate Swap CLP	2,602,000,000	3,252,003	6 month Chile Interbank Rate	3.17	6/23/2026	244,030
Interest Rate Swap BRL	39,497,263	8,187,658	3 month Brazilian CDI	11.12	1/4/2027	(191,749)
Interest Rate Swap COP	4,845,670,000	1,160,424	3 month IBRCO	6.85	1/12/2027	54,604
Interest Rate Swap HUF	1,970,000,000	6,028,247	6 month BUBOR	6.25	3/17/2027	559,395
Interest Rate Swap MXN	2,608,000	152,891	28 day Mexican TIIE	8.54	6/9/2027	190
Interest Rate Swap COP	7,751,620,000	1,856,331	3 month IBRCO	11.30	11/4/2027	(231,337)
Interest Rate Swap COP	6,053,540,000	1,449,681	3 month IBRCO	10.13	12/21/2027	(127,292)
Interest Rate Swap COP	18,589,540,000	4,451,758	3 month IBRCO	10.19	12/21/2027	(401,003)
Interest Rate Swap COP	11,300,020,000	2,706,089	3 month IBRCO	10.96	12/21/2027	(320,359)
Interest Rate Swap COP	9,268,290,000	2,219,538	3 month IBRCO	11.97	12/21/2027	(344,525)
Interest Rate Swap COP	15,513,910,000	3,715,217	3 month IBRCO	9.10	3/15/2028	(202,122)
Interest Rate Swap MXN	3,626,000	212,098	28 day Mexican TIIE	8.66	6/14/2028	(2,480)
Interest Rate Swap COP	15,828,030,000	3,790,441	3 month IBRCO	8.77	6/21/2028	(178,014)
Interest Rate Swap ZAR	2,691,799	142,821	3 month JIBAR	8.46	6/21/2028	1,420
Interest Rate Swap EUR	3,955,000	4,385,922	12 month ESTR	2.05	4/11/2031	236,969
Interest Rate Swap ZAR	60,660,000	3,266,317	3 month JIBAR	7.42	7/13/2031	353,742
Interest Rate Swap ZAR	45,070,000	2,387,981	3 month JIBAR	7.49	9/27/2031	259,522
Interest Rate Swap EUR	1,275,000	1,413,919	12 month ESTR	2.08	10/30/2031	76,840
Interest Rate Swap PLN	4,407,154	1,095,303	6 month WIBOR	6.41	5/10/2032	(104,814)
Interest Rate Swap CLP	1,386,730,000	1,733,695	6 month Chile Interbank Rate	5.28	6/22/2033	(26,892)

(continued)

(continued)

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/23
Interest Rate Swap CLP	2,647,750,000	\$3,300,817	6 month Chile Interbank Rate	4.79%	9/20/2033	\$32,662
Interest Rate Swap CLP	1,271,620,000	1,585,265	6 month Chile Interbank Rate	4.86	9/20/2033	6,290
Total Pay Fixed Interest Rate/Inflation Swaps:		\$229,678,500				\$1,441,996
Receive Fixed Interest Rate/Inflation Swaps:						
Interest Rate Swap PLN	15,800,000	\$3,721,931	1.80%	6 month WIBOR	7/24/2024	(\$232,365)
Interest Rate Swap CLP	5,000,000,000	6,226,208	7.37	6 month Chile Interbank Rate	11/29/2024	(7,040)
Interest Rate Swap BRL	6,307,119	1,150,912	5.76	3 month Brazilian CDI	1/2/2025	(156,533)
Interest Rate Swap BRL	17,568,466	3,591,284	11.19	3 month Brazilian CDI	1/2/2025	(50,604)
Interest Rate Swap CLP	1,812,000,000	2,068,239	1.66	6 month Chile Interbank Rate	4/23/2025	(197,877)
Interest Rate Swap COP	13,845,650,000	2,956,485	3.67	3 month IBRCO	5/7/2025	(359,223)
Interest Rate Swap USD	55,500,000	54,595,204	3.95	SOFR	6/18/2025	(965,728)
Interest Rate Swap MXN	540,000,000	31,481,960	9.27	28 day Mexican TIIE	9/17/2025	(4,003)
Interest Rate Swap BRL	22,730,580	4,731,415	10.36	3 month Brazilian CDI	1/2/2026	19,437
Interest Rate Swap BRL	69,774,825	14,765,614	11.36	3 month Brazilian CDI	1/2/2026	301,512
Interest Rate Swap CLP	2,334,600,000	2,660,280	3.51	6 month Chile Interbank Rate	7/12/2026	(298,320)
Interest Rate Swap BRL	15,828,004	3,304,187	10.35	3 month Brazilian CDI	1/4/2027	23,091
Interest Rate Swap BRL	17,752,333	3,718,856	10.54	3 month Brazilian CDI	1/4/2027	38,854
Interest Rate Swap BRL	58,489,480	12,124,685	11.24	3 month Brazilian CDI	1/4/2027	-
Interest Rate Swap BRL	10,417,637	2,240,492	11.80	3 month Brazilian CDI	1/4/2027	80,948
Interest Rate Swap BRL	65,517,026	14,136,070	11.95	3 month Brazilian CDI	1/4/2027	554,597
Interest Rate Swap KRW	5,886,500,000	4,267,020	2.18	91 day CD-KSDA	1/7/2027	(223,120)
Interest Rate Swap CNY	51,680,000	7,123,575	2.31	3 Month CNRR	8/31/2027	(4,757)
Interest Rate Swap KRW	7,806,851,769	5,822,962	3.09	91 day CD-KSDA	9/21/2027	(106,837)
Interest Rate Swap PLN	9,341,000	2,640,523	6.83	6 month WIBOR	10/6/2027	226,231
Interest Rate Swap CNY	58,469,000	8,170,705	2.68	3 Month CNRR	12/15/2027	112,235
Interest Rate Swap KRW	8,750,000,000	6,835,440	4.20	91 day CD-KSDA	12/21/2027	187,256
Interest Rate Swap PLN	31,618,000	8,864,067	6.85	6 month WIBOR	12/21/2027	801,833
Interest Rate Swap MXN	70,180,000	4,061,234	8.11	28 day Mexican TIIE	3/8/2028	(52,895)
Interest Rate Swap MXN	69,978,000	4,108,616	8.48	28 day Mexican TIIE	3/8/2028	5,332
Interest Rate Swap KRW	8,670,000,000	6,468,027	3.10	91 day CD-KSDA	3/15/2028	(120,738)
Interest Rate Swap ZAR	84,876,000	4,354,239	7.77	3 month JIBAR	3/15/2028	(153,805)
Interest Rate Swap MYR	31,100,000	6,669,328	3.44	3 month KLIBOR	6/21/2028	68,897

(continued)

(continued)

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/23
Interest Rate Swap MYR	31,400,000	\$6,702,479	3.57%	3 month KLIBOR	6/21/2028	(\$31,408)
Interest Rate Swap MYR	31,300,000	6,691,196	3.60	3 month KLIBOR	6/21/2028	(21,304)
Interest Rate Swap MYR	32,700,000	6,996,144	3.62	3 month KLIBOR	6/21/2028	(16,630)
Interest Rate Swap PLN	4,189,000	1,039,959	5.17	6 month WIBOR	6/21/2028	7,477
Interest Rate Swap PLN	7,667,191	1,914,064	5.31	6 month WIBOR	6/21/2028	24,229
Interest Rate Swap CLP	2,278,040,000	2,831,818	4.85	6 month Chile Interbank Rate	9/20/2028	(8,100)
Interest Rate Swap CLP	1,297,180,000	1,623,653	5.01	6 month Chile Interbank Rate	9/20/2028	6,524
Interest Rate Swap CLP	4,003,070,000	5,029,482	5.10	6 month Chile Interbank Rate	9/20/2028	39,056
Interest Rate Swap ILS	80,400,000	21,404,450	3.36	3 month TELBOR	9/20/2028	(261,161)
Interest Rate Swap KRW	13,950,000,000	10,553,734	3.41	91 day CD-KSDA	9/20/2028	(33,296)
Interest Rate Swap ZAR	45,142,000	2,409,361	8.98	3 month JIBAR	9/20/2028	19,789
Interest Rate Swap BRL	5,966,502	1,057,641	6.78	3 month Brazilian CDI	1/2/2029	(179,196)
Interest Rate Swap BRL	12,545,197	2,600,580	10.31	3 month Brazilian CDI	1/2/2029	-
Interest Rate Swap BRL	5,885,091	1,231,792	10.60	3 month Brazilian CDI	1/2/2029	11,831
Interest Rate Swap CZK	35,245,000	1,331,647	1.52	6 month PRIBOR	1/29/2030	(297,270)
Interest Rate Swap HUF	938,520,000	2,364,731	1.96	6 month BUBOR	5/5/2030	(380,377)
Interest Rate Swap USD	4,198,000	4,096,158	2.92	SOFR	4/11/2031	(205,355)
Interest Rate Swap USD	1,350,000	1,316,442	2.92	SOFR	10/30/2031	(66,892)
Interest Rate Swap COP	2,683,430,000	611,010	6.65	3 month IBRCO	11/9/2031	(31,609)
Interest Rate Swap CLP	1,567,600,000	1,998,882	5.38	6 month Chile Interbank Rate	12/27/2031	43,467
Interest Rate Swap MXN	45,300,000	2,777,979	8.81	28 day Mexican TIIE	6/24/2032	121,790
Interest Rate Swap MXN	27,600,000	1,691,129	8.80	28 day Mexican TIIE	6/25/2032	73,192
Interest Rate Swap MXN	46,400,000	2,727,398	8.15	28 day Mexican TIIE	7/30/2032	12,750
Interest Rate Swap ZAR	13,823,000	725,482	9.16	3 month JIBAR	11/10/2032	(15,703)
Interest Rate Swap CLP	187,800,000	234,002	5.10	6 month Chile Interbank Rate	3/15/2033	(3,662)
Interest Rate Swap ZAR	111,286,062	5,590,103	8.72	3 month JIBAR	3/15/2033	(323,097)
Interest Rate Swap USD	9,490,000	9,299,981	3.21	SOFR	3/21/2033	(276,303)
Interest Rate Swap MXN	26,000,000	1,553,033	8.43	28 day Mexican TIIE	6/8/2033	33,495
Interest Rate Swap MXN	37,050,000	2,145,306	7.87	28 day Mexican TIIE	9/7/2033	(14,981)
Total Receive Fixed Interest Rate/Inflation Swaps:		\$343,409,194				(\$2,286,366)

BUBOR - Budapest Interbank Offered Rate, CDI - Cetip Interbank Deposit (interbank lending rate), CD-KSDA - Certificates of Deposit, Korean Securities Dealer Assoc., CNRR - China Fixing Repo Rates, ESTR - Euro Short-Term Rate, IBRCO - Colombia Interbank Rate, JIBAR - Johannesburg Interbank Average Rate, KLIBOR - Kuala Lumpur Interbank Offered Rate, PRIBOR - Prague Interbank Offered Rate, TIIE - Mexico Interbank Equilibrium Interest Rate, SOFR - Secured Interbank Overnight Interest Rate, TELBOR - Tel Aviv Interbank Offered Rate, TIIE - Mexico Interbank Equilibrium Interest Rate, WIBOR - Warsaw Interbank Offered 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, 2023, the aggregate fair value of non-exchange traded derivative instruments in asset positions was \$25,488,184. 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, 2023
Aa1	\$453,894
Aa2	787,607
Aa3	8,669,850
A1	13,560,103
A2	1,188,454
A3	828,276
Total subject to credit risk	\$25,488,184

Although the derivative instruments held within the TRS investment portfolio are executed with various counterparties, approximately 99 percent of the fair value exposure to credit risk is for non-exchange traded derivative contracts held with 11 counterparties.

5. Investment Commitments

Investments in certain limited partnerships commit TRS to possible future capital contributions. As of June 30, 2023, TRS had remaining unfunded commitments of \$14,125,830,088 within the real estate, other real assets, private equity, diversifying strategies and global income asset classes.

6. Schedule of Investment Returns

For the year ended June 30, 2023, the annual money-weighted rate of return on pension plan investments, net of investment expense, was 7.2 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 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 judgment 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 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 value.

The following table summarizes the valuation of TRS investments by the fair value hierarchy levels as of June 30, 2023.

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

Investments by fair value level	June 30, 2023	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
Debt securities				
Asset-backed securities	\$80,063	\$ -	\$80,063	\$ -
Commercial/collateralized mortgages & loans	210,124	-	210,124	-
Domestic corporate obligations	1,438,809	-	1,438,809	-
Fixed income mutual funds	2,334,024	-	462,404	1,871,620
Foreign debt/corporate obligations	1,858,682	-	1,858,682	-
Municipals	1,446	-	1,446	-
U.S. agencies obligations	146,086	-	146,086	-
U.S. government-backed mortgages	145,698	-	145,698	-
U.S. treasuries	907,609	-	907,609	-
Total debt securities	7,122,541	-	5,250,921	1,871,620
Equity investments				
International common and preferred stock	10,280,980	10,253,975	27,005	-
U.S. common and preferred stock	12,444,979	12,444,725	254	-
Total equity investments	22,725,959	22,698,700	27,259	-
Real assets				
Real estate	4,967,746	-	-	4,967,746
Total real assets	4,967,746	-	-	4,967,746
Total investments by fair value level	\$34,816,246	\$22,698,700	\$5,278,180	\$6,839,366
Investments measured at the net asset value (NAV)				
Commingled fixed income funds	\$625,408			
Diversifying strategies	3,399,530			
Private debt partnerships	7,399,862			
Private equity partnerships	11,270,891			
Private real estate partnerships	5,608,109			
Real asset partnerships	1,748,432			
Total investments measured at the NAV	30,052,232			
Total investments measured at fair value	\$64,868,478			
Investment derivative instruments				
Credit default swaps	(\$3,005)	\$ -	(\$3,005)	\$ -
Index and variance swaps	(408)	-	(408)	-
Interest rate and inflation swaps	(844)	-	(844)	-
Options/swaptions	(1,998)	-	(1,998)	-
Total investment derivative instruments	(\$6,255)	\$ -	(\$6,255)	\$ -
Total invested securities lending collateral*	\$1,847,995	\$277,126	\$1,570,869	\$ -

* 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) (\$ thousands)

	Fair Value June 30, 2023	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Commingled fixed income funds ¹	\$625,408	\$ -	Monthly, quarterly	30-60 days
Diversifying funds - liquid ²	2,989,721	-	Daily, weekly, monthly, quarterly	1-90 days
Diversifying funds - illiquid ³	409,809	209,738	Not eligible	N/A
Total diversifying strategies	3,399,530	209,738		
Custom private debt partnerships	3,652,948	978,912	Monthly, quarterly, not eligible	60-90 days; N/A
Private debt partnerships	3,746,914	2,687,566	Not eligible	N/A
Total private debt partnerships⁴	7,399,862	3,666,478		
Private equity partnerships ⁵	11,270,891	6,506,839	Not eligible	N/A
Private real estate partnerships ⁵	5,608,109	2,982,803	Not eligible	N/A
Real assets partnerships ⁶	1,748,432	759,972	Not eligible	N/A
Total investments measured at the NAV	<u>\$30,052,232</u>	<u>\$14,125,830</u>		

- 1) Commingled fixed income funds:** The investment strategies for the five fixed income funds include ESG, high yield, defensive bond arbitrage, global liquidity relative value and emerging market debt. The fair value of the investments has been determined using the NAV per share (or its equivalent) of the investments. Liquidity is available monthly upon notice of redemption.
- 2) Diversifying funds (liquid strategies):** The diversifying strategies asset class applies various strategies that provide diversification to the total investment portfolio. Investments focus on reducing equity-like risk characteristics encompassed in the overall TRS portfolio by enhancing exposures to strategies that show little to no correlation to growth factors while adding positive skew and active risk management characteristics. Three factor portfolio direct investments include trend/momentum exposures and alternative risk premia. One risk parity investment focuses on optimizing Chinese beta. The systematic and discretionary macro strategies include direct investments in five funds diversifying through regional and product expertise, speed of algorithms and style of trading. Opportunistic funds, including four direct investments and one diversified fund of funds, use idiosyncratic alpha capture through liquidity and security selection. The fair value of these investments has been determined using the NAV per share of the investments. Most strategies maintain a liquidity profile of less than one year, ranging from daily to quarterly and require advance notice prior to redemption.
- 3) Diversifying funds (illiquid strategies):** The diversifying strategies asset class includes seven opportunistic alpha funds 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 either a monthly or quarterly basis by the general partner and are audited annually. The average life of these funds spans five to 10 years and the funds will distribute any free cash from the Master fund in excess of the amount needed to maintain prudent liquidity. TRS has no plans to liquidate as of June 30, 2023.

- 4) **Private debt partnerships:** Private debt funds consist of 72 funds investing across strategies such as stressed debt/credit, direct and specialty lending, real estate and real asset credit and global multi-credit strategies. Eight of these funds are custom partnerships investing in opportunistic investments. The private debt funds provide additional exposure to niche and/or specific non-traditional 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 three to 12 years and distributions are received throughout the life of the fund. Most custom partnerships allow TRS to liquidate upon giving advanced notice. TRS has no plans to liquidate as of June 30, 2023, and TRS did not sell any funds on the secondary market during the fiscal year. As of June 30, 2023, 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.
- 5) **Private equity and real estate partnerships:** TRS has 250 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 67 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 to 15 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. During the fiscal year, TRS sold full or partial interest in five private equity funds on the secondary market. As of June 30, 2023, 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.
- 6) **Real assets partnerships:** Real assets strategies include 14 limited partnerships investing in global infrastructure, direct energy, renewables, and non-U.S. agriculture. These partnerships are not eligible for redemption, considered illiquid and have an approximate life of six to 20 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, 2023, 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 additions at fair value, as opposed to book value, to the Benefit Trust Reserve.

1. Benefit Trust

2023	
Balances at June 30	\$66,492,484,642

This reserve serves as a clearing account for TRS additions and deductions. 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 \$81.9 billion in FY23 based on the actuarial value of assets.

2. Minimum Retirement Annuity

2023	
Balances at June 30	\$12,232,777

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.

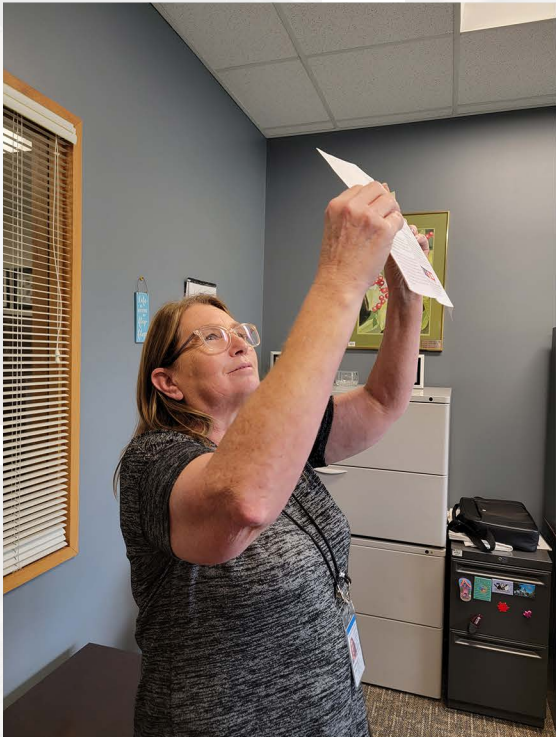
Health, dental and vision benefits include basic benefits for annuitants and dependents under the state's self-insurance plan and insurance contracts currently in force. Annuitants may be required to contribute towards health, dental and vision benefits with an amount based on factors such as date of retirement, years of credited service with the State of Illinois, 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 Jan. 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 Jan. 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 their last day of employment until age 60, at which time the benefit becomes \$5,000.

The State of Illinois 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 Annual Comprehensive Financial Report. The System adopted GASB 75, but

has chosen not to record the other post employment liability because it is deemed insignificant to the financial statements. The footnote and required supplementary information also required by GASB 75 have been excluded, as well, due to the insignificance of the liability.

A summary of post employment benefit provisions, changes in benefit provisions and 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 contacting their office, Department of Central Management Services, 704 Stratton Office Building, Springfield, IL 62706.



SUPPORT SERVICES DEPARTMENT

The **Support Services team** is shown printing a publication, checking a proof before a printing run and folding a brochure. The team receives and delivers mail to staff, sends out mail for the entire organization and scans mail into the Electronic Records system. The team is also responsible for managing the IT Batch job console, managing TRS vehicles, documenting and testing emergency procedures, Business Continuity Planning and ordering business supplies.

REQUIRED SUPPLEMENTARY INFORMATION

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

	2023	2022	2021	2020
Total pension liability				
Service cost	\$2,229,200,487	\$2,097,274,410	\$2,032,149,463	\$1,991,622,987
Interest	10,144,364,716	9,834,039,952	9,580,886,840	9,296,897,060
Changes of benefit terms	-	-	-	-
Difference between expected and actual experience	405,098,326	(260,304,587)	(370,469,646)	(28,215,833)
Change of assumptions	-	448,727,943	(162,359,084)	-
Benefit payments, including refund of member contributions	(7,967,329,515)	(7,669,576,246)	(7,388,142,712)	(7,099,524,955)
Net change in total pension liability	4,811,334,014	4,450,161,472	3,692,064,861	4,160,779,259
Total pension liability - beginning	146,673,960,220	142,223,798,748	138,531,733,887	134,370,954,628
Total pension liability - ending (a)	151,485,294,234	146,673,960,220	142,223,798,748	138,531,733,887
Plan fiduciary net position				
Contributions - employer	124,748,100	120,876,570	97,594,081	92,658,238
Contributions - nonemployer contributing entity	6,009,158,073	5,866,799,836	5,140,648,356	4,813,451,679
Contributions - member	1,109,497,833	1,072,639,330	1,023,531,951	994,400,416
Net investment income (loss)	4,427,042,975	(743,042,373)	13,046,153,685	275,669,398
Benefit payments, including refund of member contributions	(7,967,329,515)	(7,669,576,246)	(7,388,142,712)	(7,099,524,955)
Administrative expense	(32,026,386)	(26,575,798)	(23,758,112)	(22,966,372)
Net change in plan fiduciary net position	3,671,091,080	(1,378,878,681)	11,896,027,249	(946,311,596)
Plan fiduciary net position - beginning	62,833,626,339	64,212,505,020	52,316,477,771	53,262,789,367
Plan fiduciary net position - ending (b)	66,504,717,419	62,833,626,339	64,212,505,020	52,316,477,771
Employers' net pension liability - ending (a) - (b)	<u>\$84,980,576,815</u>	<u>\$83,840,333,881</u>	<u>\$78,011,293,728</u>	<u>\$86,215,256,116</u>

Schedule of the Net Pension Liability for Fiscal Years:

	2023	2022	2021	2020
Total pension liability	\$151,485,294,234	\$146,673,960,220	\$142,223,798,748	\$138,531,733,887
Plan fiduciary net position	66,504,717,419	62,833,626,339	64,212,505,020	52,316,477,771
Net pension liability	<u>\$84,980,576,815</u>	<u>\$83,840,333,881</u>	<u>\$78,011,293,728</u>	<u>\$86,215,256,116</u>
Plan fiduciary net position as a percentage of the total pension liability	43.9%	42.8%	45.1%	37.8%
Covered payroll	\$12,382,202,189	\$11,647,247,711	\$11,120,776,122	\$10,827,438,800
Net pension liability as a percentage of covered payroll	686.3%	719.8%	701.5%	796.3%

2019	2018	2017	2016	2015	2014
\$1,947,627,286	\$1,838,002,948	\$1,877,570,053	\$1,681,242,232	\$1,948,079,771	\$1,894,351,211
8,991,684,121	8,703,519,454	8,390,352,464	8,264,257,311	7,864,916,421	7,561,104,814
-	(374,603,419)	-	-	-	-
258,778,925	1,191,346,970	482,486,212	701,827,169	(90,079,446)	39,950,212
77,241,572	(666,054,719)	(2,725,599,755)	7,553,894,504	1,136,454,886	-
<u>(6,818,760,572)</u>	<u>(6,551,634,376)</u>	<u>(6,438,005,920)</u>	<u>(5,931,207,177)</u>	<u>(5,625,037,173)</u>	<u>(5,320,662,979)</u>
4,456,571,332	4,140,576,858	1,586,803,054	12,270,014,039	5,234,334,459	4,174,743,258
129,914,383,296	125,773,806,438	124,187,003,384	111,916,989,345	106,682,654,886	102,507,911,628
134,370,954,628	129,914,383,296	125,773,806,438	124,187,003,384	111,916,989,345	106,682,654,886
88,514,781	84,633,117	149,495,577	148,040,767	145,591,585	158,334,598
4,466,020,692	4,095,125,358	3,986,363,699	3,742,469,245	3,377,664,945	3,438,382,892
963,972,120	938,037,245	929,130,165	951,809,398	935,451,049	928,745,853
2,617,831,332	4,049,271,728	5,520,453,001	(44,103,178)	1,770,549,533	6,782,031,720
<u>(6,818,760,572)</u>	<u>(6,551,634,376)</u>	<u>(6,438,005,920)</u>	<u>(5,931,207,177)</u>	<u>(5,625,037,173)</u>	<u>(5,320,662,979)</u>
<u>(24,335,680)</u>	<u>(21,550,896)</u>	<u>(22,728,735)</u>	<u>(22,967,917)</u>	<u>(21,686,860)</u>	<u>(21,218,069)</u>
1,293,242,673	2,593,882,176	4,124,707,787	(1,155,958,862)	582,533,079	5,965,614,015
51,969,546,694	49,375,664,518	45,250,956,731	46,406,915,593	45,824,382,514	39,858,768,499
53,262,789,367	51,969,546,694	49,375,664,518	45,250,956,731	46,406,915,593	45,824,382,514
<u>\$81,108,165,261</u>	<u>\$77,944,836,602</u>	<u>\$76,398,141,920</u>	<u>\$78,936,046,653</u>	<u>\$65,510,073,752</u>	<u>\$60,858,272,372</u>

2019	2018	2017	2016	2015	2014
\$134,370,954,628	\$129,914,383,296	\$125,773,806,438	\$124,187,003,384	\$111,916,989,345	\$106,682,654,886
<u>53,262,789,367</u>	<u>51,969,546,694</u>	<u>49,375,664,518</u>	<u>45,250,956,731</u>	<u>46,406,915,593</u>	<u>45,824,382,514</u>
<u>\$81,108,165,261</u>	<u>\$77,944,836,602</u>	<u>\$76,398,141,920</u>	<u>\$78,936,046,653</u>	<u>\$65,510,073,752</u>	<u>\$60,858,272,372</u>
39.6%	40.0%	39.3%	36.4%	41.5%	43.0%
\$10,450,452,444	\$10,163,980,000	\$9,965,569,893	\$9,811,614,284	\$9,641,170,627	\$9,512,809,680
776.1%	766.9%	766.6%	804.5%	679.5%	639.8%

Schedule of Investment Returns for Fiscal Years:

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	7.2%	(1.2%)	25.4%	0.6%	5.1%	8.5%	12.5%	(0.1%)	4.0%	17.4%

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

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Actuarially-determined contribution (ADC)	\$9,201,648	\$8,947,919	\$8,441,258	\$7,988,612	\$7,429,037	\$7,080,756	\$6,248,879	\$4,582,530	\$4,119,526	\$4,091,978
Contributions in relation to the actuarially-determined contribution:*										
State	6,008,948	5,866,530	5,140,337	4,813,078	4,465,578	4,094,616	3,985,783	3,741,802	3,376,878	3,437,478
Federal & Employer Contributions	123,194	120,441	97,082	92,038	87,707	84,034	148,749	147,408	144,780	157,228
Total contributions	6,132,142	5,986,971	5,237,419	4,905,116	4,553,285	4,178,650	4,134,532	3,889,210	3,521,658	3,594,706
Contribution deficiency	3,069,506	\$2,960,948	\$3,203,839	\$3,083,496	\$2,875,752	\$2,902,106	\$2,114,347	\$693,320	\$597,868	\$497,272
Covered payroll	\$12,382,202	\$11,647,248	\$11,120,776	\$10,827,439	\$10,450,452	\$10,163,980	\$9,965,570	\$9,811,614	\$9,641,171	\$9,512,810
Contributions as a percentage of covered payroll	49.5%	51.4%	47.1%	45.3%	43.6%	41.1%	41.5%	39.6%	36.5%	37.8%

* Contributions for minimum benefits from the state and for excess sick from employers do not count towards actuarial funding requirements. Beginning in FY18, employer contributions on salaries exceeding the statutory salary of the governor are included and the projected excess salary contribution is included in the ADC. 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. Before FY17, the actuarially determined contribution was based on GASB Statement No. 25. Beginning in FY17, a different basis for determining the actuarially-determined contribution is used, as described in the following table. For FY22, the state contribution amount includes an additional one-time contribution of \$173 million appropriated for TRS per Public Act 102-0696. For FY23, the state contribution amount includes an additional one-time contribution of \$115 million appropriated for TRS per Public Act 102-0698. An additional \$115,215,500 was appropriated in a FY23 supplemental bill, Public Act 103-000, however, it was not received by TRS until FY24.

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 FY23, the total pension liability increased by \$4.8 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 FY23.

	For Funding per State Statute	For Determining the Actuarially-determined Contribution
Valuation Used to Determine Funding Amount:	June 30, 2021	June 30, 2021
Actuarial Cost Method:	Projected unit credit	Entry age normal
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. Amortization payments increase at the rate of future state revenue growth, assumed to be 2%.
Remaining Amortization:	22 years, closed	20 years, closed beginning with 2015 actuarial valuation; subsequent increases in the UL amortized over subsequent 20-year periods.
Asset Valuation Method:	Actuarial value of assets with five-year smoothing of investment gains and losses	Actuarial value of assets with five-year smoothing of investment gains and losses

OTHER SUPPLEMENTARY INFORMATION
SCHEDULE OF ADMINISTRATIVE EXPENSES
FOR THE YEARS ENDED JUNE 30

	2023	2022
Personnel services		
Salaries	\$14,142,121	\$12,615,302
Retirement contributions	1,541,483	1,734,781
Insurance and payroll taxes	4,969,463	4,560,695
	<u>20,653,067</u>	<u>18,910,778</u>
Professional services		
Actuarial services	166,000	162,225
External auditors	227,483	229,699
Legal services	374,144	283,682
Legislative consulting	87,000	84,000
Information systems consulting	4,795,053	2,519,746
Operations consulting	218,973	338,032
Other	21,063	23,139
	<u>5,889,716</u>	<u>3,640,523</u>
Communications		
Postage	173,794	215,229
Printing and copying	57,634	35,701
Telephone	171,544	132,339
	<u>402,972</u>	<u>383,269</u>
Other services		
Administrative services	303,435	353,549
Building operations and maintenance	399,768	422,932
EDP supplies and equipment	249,155	134,226
Equipment repairs, rental and maintenance	143,914	239,161
Insurance	677,540	447,821
Memberships and subscriptions	283,934	138,872
Office equipment and furniture	40,469	52,481
Office supplies	20,094	15,043
Software licenses and maintenance	731,639	1,299,437
Travel, conferences, education	160,172	89,575
	<u>3,010,120</u>	<u>3,193,097</u>
Depreciation expense	<u>3,415,452</u>	<u>2,244,704</u>
Total administrative expenses	<u>\$33,371,327</u>	<u>\$28,372,371</u>

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

SCHEDULE OF INVESTMENT EXPENSES FOR THE YEARS ENDED JUNE 30

	2023	2022
Investment manager fees*	<u>\$474,328,976</u>	<u>\$449,288,368</u>
Master custodian fees*		
State Street Bank and Trust Company	<u>4,071,150</u>	<u>3,952,800</u>
Investment consultants		
Aksia, L.L.C.	700,000	700,000
RVK, Inc.	465,000	465,000
Stepstone Group, L.P.	1,022,973	993,177
Stepstone Group Real Estate, L.P.	<u>339,197</u>	<u>329,317</u>
	2,527,170	2,487,494
Co-investment advisors		
Meketa Investment Group, Inc.	480,000	240,000
Stout Risius Ross, Inc.	<u>277,500</u>	<u>175,000</u>
	757,500	415,000
Secondary market advisors		
Evercore Group L.L.C.	<u>-</u>	<u>4,849,348</u>
Legal services		
DLA Piper, L.L.P.	<u>1,031,864</u>	<u>1,102,148</u>
Tax advisory services		
Ernst & Young Private, Ltd.	<u>160,589</u>	<u>255,654</u>
Other investment expense		
Auditing costs	145,250	228,530
Communication services	28,620	22,602
Education, meetings and travel	75,404	38,617
Investment activity expenses	1,929,009	1,946,218
Investment analytical systems	1,132,249	956,396
Personnel costs	5,344,295	4,767,793
Research, subscriptions and memberships	64,275	62,230
Other costs	<u>140,306</u>	<u>203,052</u>
	8,859,408	8,225,438
Total investment expenses	<u>\$491,736,657</u>	<u>\$470,576,250</u>

* Investment manager and custodian fee details are shown on pages 73 to 77.

SCHEDULE OF PROFESSIONAL SERVICES FOR THE YEARS ENDED JUNE 30

	2023	2022
Actuarial services		
The Segal Company Midwest, Inc.	\$166,000	\$162,225
External auditors		
Office of the Auditor General (FORVIS, L.L.P.)	227,483	229,699
Legal services		
Elrod Friedman L.L.P.	16,838	32,730
Holland & Knight, L.L.P.	144,057	101,397
Howard & Howard Attorneys, P.L.L.C.	23,987	65,308
Ice Miller L.L.P.	93,965	13,072
Nixon Peabody L.L.P.	17,568	2,056
Reinhart Boerner Van Deuren s.c.	76,079	67,081
Whitt Law, L.L.C.	1,650	2,038
	<u>374,144</u>	<u>283,682</u>
Legislative consulting		
Leinenweber Baroni & Daffada Consulting, L.L.C.	87,000	84,000
Information systems consulting		
AT & T Corp.	6,971	-
Apex Systems	694,756	680,076
Capitol Strategies Consulting Inc.	1,249,501	684,981
CapTech Ventures Inc.	1,293,120	-
CDW L.L.C.	9,900	-
Compulink Management Center Inc.	89,460	38,250
Dayagdag, Chris	157,575	185,844
Decker Innovations Inc.	608,238	395,895
Ellerman, Greg	169,583	137,183
HSO North America, L.L.C.	50,000	78,600
McDonald Hopkins L.L.C.	4,020	1,567
Mellor, William Thomas	-	19,800
Mythics Emergent Group Inc.	-	4,844
Promet Solutions Corporation	41,281	68,375
Sentinel Technologies, Inc.	383,398	132,911
Telos Corporation	14,500	76,800
The Segal Company Midwest Inc.	-	14,620
VPMA Global Services L.L.C.	22,750	-
	<u>4,795,053</u>	<u>2,519,746</u>
Operations consulting		
CapFinancial Partners L.L.C.	60,000	115,000
CEM Benchmarking, Inc.	50,000	50,000
Higher Logic, L.L.C.	10,812	10,812
Hudepohl & Associates Inc.	-	86,458
Jasculca Terman Strategic Communications	35,000	46,000
Management Association	-	4,100
Mosaic Governance Advisors L.L.C.	33,135	-
Navigate 360 L.L.C.	28,244	-
SABA Software	1,782	4,662
The Segal Co. Western Stats Inc.	-	21,000
	<u>218,973</u>	<u>338,032</u>
Other	21,063	23,139
Total professional services	<u>\$5,889,716</u>	<u>\$3,640,523</u>



*The **Investments Administrative Supervisor** coordinates travel arrangements for an Investment Officer to attend an upcoming due diligence meeting.*



*The **Diverse and Emerging Managers Senior Investment Officer** reviews an application from a minority-owned firm.*



*The **Global Income Strategies Investment Officer** discusses interim targets with another coworker.*



*The **Senior Real Estate Officer** reaches for a real estate law book.*

INVESTMENT DEPARTMENT

INVESTMENTS

INTRODUCTION

The Investment section of the TRS Annual Comprehensive Financial Report discloses the characteristics, structure and performance of the Teachers' Retirement System of the State of Illinois (TRS) trust fund for the fiscal year ended June 30, 2023. Included in the following section is the Defined Benefit Plan, a fiduciary component unit of TRS.

State Street Bank and Trust, as master trustee, has provided TRS a statement of detailed assets, along with their fair value as of June 30, 2023. State Street has also provided detailed financial reports of all investments, receipts, disbursements, purchases and sales of securities and other transactions pertinent to the fund for FY23. TRS investment consultants have also contributed key investment portfolio data and analysis during the fiscal year and throughout the investment process.

Investment performance calculations use time-weighted rate of return methodology. State Street calculates returns using industry best practices. Additionally, State Street calculates performance rates of return by portfolio, composite, and for all respective indices used throughout this section. The

TRS investment staff, in collaboration with the staff of its custodian, prepared the Investments section.

A complete listing of investment holdings is available upon request.

Summary Data as of June 30, 2023	
Total fund fair value	\$66.3 billion
1-year return (net of fees)	7.2%
3-year return (net of fees)	10.0%
5-year return (net of fees)	7.1%
10-year return (net of fees)	7.7%
20-year return (net of fees)	7.4%
30-year return (net of fees)	7.8%
Percent externally managed	100.0%
Number of external managers	184
Master Trustee and Custodian	State Street Bank and Trust Company
General consultant	RVK, Inc.

TRS is the 38th largest pension system in the United States according to Pensions & Investments magazine. Rankings are based on the fair value of total assets as of Sept. 30, 2022.

INVESTMENT SUMMARY

The Teachers' Retirement System of the State of Illinois ("TRS," "System") 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 Board of Trustees ("Board") has a fiduciary responsibility to the members and beneficiaries of the System. The Board, in carrying out its fiduciary duties, has adopted a clearly defined investment policy including principles, objective and strategy.

INVESTMENT POLICY

The TRS Investment Policy, approved by the Board, guides TRS's investments. The policy specifically outlines the investment philosophy and practices of TRS and has been developed to serve as a reference point for the management of System assets. In order to assist System participants in achieving their financial security objectives, the Board shall adopt a long-term plan by which the assets of the System will be maintained and enhanced through prudent investments. In developing the Investment Policy, the Board and staff understand and accept their fiduciary obligations to the members of the System. These obligations are legal in nature and are outlined in the Illinois Pension Code [40 ILCS 5].

INVESTMENT PRINCIPLES

Provisions within the Illinois Pension Code specifically referring to the definitions, duties and responsibilities of a fiduciary are the foundation for the principles guiding TRS investment activity. 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.

INVESTMENT OBJECTIVE

The investment objective is to achieve long-term investment returns from a well-diversified and prudently invested portfolio, that meet or exceed the System's assumed rate of return, net of all management fees.

INVESTMENT STRATEGY

The System's asset allocation policy is intended to reflect, and be consistent with, the return objective and risk tolerance expressed in the Investment Policy. It is designed to provide the highest probability of meeting or exceeding the System's objectives at a controlled level of risk that is acceptable to the Board. In establishing its risk tolerance, the Board considers its ability to withstand short- and intermediate-term volatility in investment performance and fluctuations in financial condition of the plan.

The Board has approved a broad, four asset class structure focused on the underlying risk profiles of the investment universe. The four classes (equity, income, real assets and diversifying strategies) are then further allocated based on the underlying characteristics (*e.g.* public equity vs. private equity). The TRS portfolio remains fully diversified across asset classes. Within each asset class, TRS utilizes a number of investment managers with various investment styles to ensure appropriate diversification, 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. Descriptions of the four asset classes follow.

Equity

TRS's equity asset class broadly includes investments in global public equity securities and private equity investments and is intended to capture return relative to economic growth risk factors.

TRS invests in public equities, or common stock, representing shares or units of ownership in specific corporations offering the opportunity to participate in the success of the global economy. 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. TRS's public equity managers are able to participate in the strength of individual markets by seeking out superior companies that are particularly

strong in their own markets or industries, as not all economies move in tandem.

Private equity includes investments that are placed and traded outside of the stock exchanges and other public markets. Over the long term, their return profile represents 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. TRS is widely diversified across all subsectors within private equity, including buyout, growth equity, venture capital and distressed debt.

Real Assets

The real assets asset class offers competitive returns derived from inflation risk factors, as well as provides diversification benefits relative to the growth risk factors inherent of portfolios of stocks and bonds. Investments in real assets are intended to increase the TRS total portfolio long-term rate of return and reduce year-to-year volatility. Additionally, real assets provide a strong income component to pay TRS benefits. Real estate investments currently represent a significant portion of the asset class and are defined as direct investments or ownership in land and buildings including apartments, offices, warehouses, shopping centers and hotels. Further, TRS holds partnership interests

in entities that purchase and manage property and pass rent and sale income back to TRS.

Income

The income asset class intends to provide modest returns to the long-term portfolio through economic growth exposure, as well as serve as a liquidity source for overall portfolio rebalancing. It is comprised of investments in the financial obligations of entities including, but not limited to, U.S. and foreign corporations, governments, agencies or municipalities and short-term investments. These investments may be publicly-traded instruments or private debt or credit investments. The majority of income assets promise to pay a specified sum of money at a future date, while paying specified interest during the term of the issue. Income generative assets and other debt-related investments can reduce volatility, offer low or negative correlation to other asset classes and provide income streams, or coupons.

Diversifying Strategies

Diversifying strategies includes mandates designed to provide attractive return and risk attributes while exhibiting low correlation to traditional public equity and fixed income investments, providing protection to the asset allocation's growth risk factors. This segment of the portfolio includes systematic macro, discretionary macro, opportunistic, risk parity and factor strategies. Investments in diversifying strategies are administered via both direct investment manager relationships and diversified fund of funds.

ASSET ALLOCATION

A pension fund's most important investment policy decision is the selection of its asset allocation. The TRS Board of Trustees adopts long-term strategic allocation targets to be implemented over several years. Recognizing the prudence of making measured movement toward long-term targets, the board also sets interim targets for shorter periods.

In determining the appropriate strategic allocation among the asset classes, the Board, with assistance from staff and the consultant, examine the historical and projected risk and return of the approved asset classes as well as the correlation among these asset classes. The Board also considers the expected impact of investment performance on the liabilities of the System for a range of reasonable investment policies. Based on its determination of the appropriate risk tolerance for the System, and its long-term return expectations, the Board authorizes the strategic and interim asset allocation targets.

TRS periodically compares the asset mix to policy targets to determine when rebalancing of the fund or changes to the interim policy targets are necessary. The 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, 2023.

Strategic Investment Listing Allocation Targets vs. Total Assets

Asset Class	As of June 30, 2023				As of June 30, 2022	
	Total Fund \$ (Million)	Actual Percent	Interim Target	Long-term Target	Actual Percent	Long-term Target
Public equity	\$23,041.4	34.7%	37.0%	37.0%	32.5%	37.0%
Private equity	11,289.4	17.0	15.0	15.0	16.3	15.0
Total Equity	34,330.8	51.7	52.0	52.0	48.8	52.0
Real estate	10,576.2	15.9	16.0	16.0	17.8	16.0
Other real assets	1,748.4	2.7	2.0	2.0	1.9	2.0
Total Real Assets	12,324.6	18.6	18.0	18.0	19.7	18.0
Total Diversifying Strategies	3,403.3	5.1	5.0	4.0	7.2	4.0
Global income	14,672.6	22.1	23.0	26.0	22.7	26.0
Short-term	1,691.3	2.5	2.0	-	1.6	-
Total Income	16,363.9	24.6	25.0	26.0	24.3	26.0
Pending settlements/expenses*	(155.9)	N/A	N/A	N/A	N/A	N/A
Total TRS Fund	<u>\$66,266.7</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Sources: State Street Bank and Trust and TRS

* This amount is included within the receivable and liability sections of the Statement of Fiduciary Net Position.

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; thus, the types of investments a manager holds explain the principal difference. 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/or foreign currency.

Portfolio Securities Summary for the Years Ended June 30

	2023		2022	
	Fair Value	% of Total	Fair Value	% of Total
U.S. treasuries & agencies	\$1,053,694,706	1.6%	\$854,339,648	1.4%
U.S. government-backed mortgages	145,698,126	0.2	93,593,103	0.1
Municipals	1,446,204	-	3,655,094	-
Asset-backed securities	80,063,147	0.1	65,662,209	0.1
Commercial/collateralized mortgages & loans	210,123,770	0.3	243,143,370	0.4
Commingled funds (U.S. & international)	2,959,430,934	4.5	2,780,199,463	4.4
Domestic corporate obligations	1,438,808,517	2.2	2,112,201,680	3.4
Foreign debt/corporate obligations	1,858,682,503	2.8	2,577,042,888	4.1
Total fixed income	7,747,947,907	11.7	8,729,837,455	13.9
U.S. equities	12,444,978,762	18.8	10,954,767,927	17.5
International equities	10,280,980,255	15.5	9,106,048,553	14.6
Total public equities	22,725,959,017	34.3	20,060,816,480	32.1
Diversifying strategies	3,399,529,897	5.1	4,447,346,399	7.1
Private debt	7,399,862,153	11.2	5,685,029,439	9.1
Private equity	11,270,891,337	17.0	10,195,515,067	16.3
Real estate	10,575,855,486	16.0	11,199,930,643	17.9
Other real assets	1,748,432,082	2.6	1,158,004,865	1.9
Total alternative investments	34,394,570,955	51.9	32,685,826,413	52.3
Derivatives	(6,255,095)	-	(4,884,136)	-
Short-term investments	1,307,235,638	2.0	959,097,903	1.5
Foreign currency	97,273,223	0.1	97,615,510	0.2
TRS total portfolio	<u>\$66,266,731,645</u>	<u>100.0%</u>	<u>\$62,528,309,625</u>	<u>100.0%</u>

Sources: State Street Bank and Trust and TRS

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	2023	2022	2021	2020	2019
Fixed income	11.7%	13.9%	16.0%	19.2%	21.6%
Public equities	34.3	32.1	35.1	32.6	33.8
Diversifying strategies	5.1	7.1	8.7	10.8	10.2
Private debt	11.2	9.1	6.4	5.7	4.3
Private equity	17.0	16.3	15.9	12.6	12.1
Real estate	16.0	17.9	13.9	15.0	13.9
Other real assets	2.6	1.9	1.1	0.7	1.0
Short-term/currency/derivatives	2.1	1.7	2.9	3.4	3.1
Total	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

INVESTMENT RESULTS

As of June 30, 2023, the fair value of TRS’s investments as reported on the Statement of Fiduciary Net Position was \$66.3 billion, an increase of \$3.7 billion from prior year. TRS had a total fund annualized return of 8.0 percent, gross of fees, and 7.2 percent, net of fees, for the one-year period ended June 30, 2023.

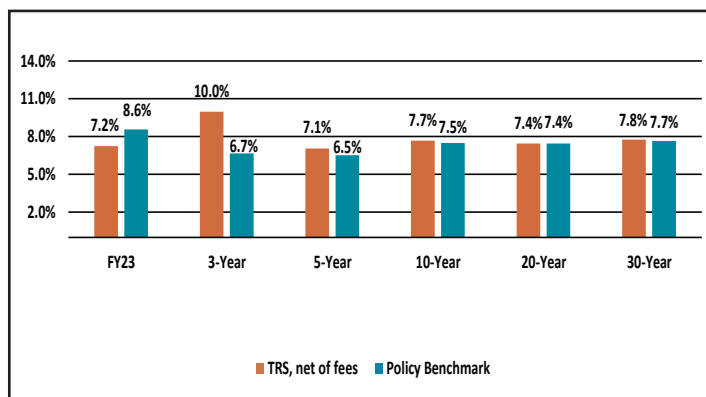
Global financial markets’ results were mixed for the year ending June 30, 2023, with equities largely positive but income markets constrained due to rising interest rates. The investment strategy employed by TRS continued to protect member assets and generated a favorable return in fiscal year 2023 of 7.2 percent net of fees. TRS’s conservative strategy performed as intended during a period of economic and geopolitical instability as market volatility, rising inflation and interest rate increases continued throughout the year.

Due to the under-funded status of TRS, the System’s primary objective is to protect member assets against large market downturns caused by economic unpredictability, as experienced within the year. A prudent investment strategy consists of a diversified portfolio that seeks to participate in the upside of the market but also is positioned to better protect assets in times of high market volatility. The investment strategy deployed by the System during the fiscal year continued to protect member assets while contributing to long term results. Because TRS has relationships with members for several decades, the System focuses its attention on its long-term investment rate of return. At the end of FY23, the 30-year rate of return, net of fee, was 7.8 percent, which bests the System’s estimated long-term investment rate of 7.0 percent.

The Performance Summary chart and table summarize total fund and asset class performance versus comparative benchmarks. As illustrated, the TRS total fund underperformed the policy index by approximately 140 basis points for the year ended June 30, 2023. The TRS 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 outperformed the 7.0 percent actuarial return assumption but underperformed 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.

Total Fund Performance Summary (net of fees)

TRS Total Fund vs. Policy Benchmark



Sources: State Street Bank and Trust and TRS

Asset Class Performance Summary (net of fees)

Asset Class/Index	Years ended June 30					Annualized at 6/30/23		
	2023	2022	2021	2020	2019	3 Years	5 Years	10 Years
TRS total fund	7.2%	(1.2)%	25.5%	0.6%	5.2%	10.0%	7.1%	7.7%
TRS weighted policy index*	8.6	(7.1)	20.3	5.5	7.2	6.7	6.5	7.5
Equity	13.4	(8.5)	45.8	(0.1)	5.5	10.0	9.7	10.6
TRS equity composite benchmark ¹	18.0	(15.1)	42.8	3.4	6.5	7.8	8.6	10.6
Real assets	(5.9)	25.8	13.5	(0.2)	2.7	12.5	9.5	9.6
TRS real asset composite benchmark ²	(5.4)	22.6	8.1	3.4	6.6	11.1	9.4	9.5
Diversifying strategies	1.9	7.5	8.6	1.2	2.1	5.7	4.7	4.3
TRS diversifying composite benchmark ³	7.7	4.2	4.1	5.7	6.4	4.7	5.2	5.2
Income	6.6	(5.4)	6.6	1.7	7.0	0.9	2.3	3.7
TRS income composite benchmark ⁴	(0.6)	(9.6)	(0.3)	8.2	7.4	(0.8)	0.9	1.5

* Policy index and TRS benchmarks represent weighted average of asset class benchmarks and interim target allocations.

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

Sources: State Street Bank and Trust and TRS

1. Equity composite includes the following asset classes and corresponding benchmarks:

Sub Asset Class	Benchmark
Public equity	MSCI ACWI Investable Market Index
Private equity	Russell 3000 index + 3.0%

2. Real Assets composite includes the following asset classes and corresponding benchmarks:

Sub Asset Class	Benchmark
Real estate	Custom Blend: NCREIF ODCE (50.0%), Burgiss Opportunistic (31.4%), Burgiss Value Add (18.6%) Indices
Other real assets	CPI (inflation) + 5.0%

3. Diversifying strategies composite includes the following asset classes and corresponding benchmarks:

Sub Asset Class	Benchmark
Diversifying Strategies	ICE BofAML 3 Month U.S. Treasury Bill Index + 4.0%

4. Income composite includes the following asset classes and corresponding benchmarks:

Sub Asset Class	Benchmark
Global fixed income	Bloomberg Aggregate Index (Hedged)
Short-term investments	ICE BofAML 91-day U.S. Treasury Bill Index

SECURITIES LENDING

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 TRS 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 "Note 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, 2023.

Collateral Type	Collateral Received	Securities on Loan	Collateral %
Cash collateral	\$1,847,508,231	\$1,806,205,519	102.3%
Non-cash collateral	22,104,796	20,323,830	108.8
Total	\$1,869,613,027	\$1,826,529,349	102.4%
Reinvested cash collateral	\$1,847,994,888		

Source: Citibank, N.A.

Note: 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, 2023, TRS earned net income of \$7.6 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 FY23	
Securities lending income	\$103,296,606
Borrower rebates	(95,168,039)
Lending agent fees	(487,722)
Securities lending net income	\$7,640,845
Loan Averages During FY23	
Available to loan	\$20,831,693,369
Securities on loan	2,508,610,258
Percentage on loan	12.0%

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

BROKERAGE ACTIVITY

The following table shows the top 50 brokers used by TRS external equity managers for the year ended June 30, 2023. TRS also manages a commission recapture program as part of its trading strategies. For the year ended June 30, 2023, TRS recaptured \$0.01 million in cash that was reinvested in the fund. In addition, TRS uses commission recapture refunds to pay for Investment Department expenses. During FY23, TRS used \$0.04 million of recaptured funds to offset expenses.

Top 50 Brokers Used by TRS Managers

Broker	Shares Traded	FY23 Commission	Commission per Share
Citigroup, Inc. and all Subsidiaries (Worldwide)	268,751,795	\$642,570	\$0.002
Instinet, L.L.C. (Worldwide)	523,225,570	502,464	0.001
Merrill Lynch & Co., Inc. and all Subsidiaries (Worldwide)	184,570,058	470,134	0.003
CLSA Securities	736,243,490	357,400	0.000
J.P. Morgan Securities, Inc. (Worldwide)	199,539,895	336,493	0.002
Goldman Sachs & Co. (Worldwide)	231,092,112	281,967	0.001
UBS AG	132,164,546	278,081	0.002
Morgan Stanley & Co., Inc. and Subsidiaries (Worldwide)	133,659,993	210,601	0.002
Barclays (Worldwide)	40,216,058	180,276	0.004
Jefferies & Company, Inc.	47,761,498	174,095	0.004
Pershing, L.L.C.	86,031,979	168,239	0.002
Loop Capital Markets, L.L.C.	16,894,384	167,243	0.010
HSBC Bank PLC	170,774,020	153,797	0.001
Credit Suisse (Worldwide)	112,853,189	145,522	0.001
Macquarie Bank & Securities, Ltd. (Worldwide)	92,481,222	144,065	0.002
KCG Americas L.L.C.	41,186,500	74,439	0.002
Societe Generale S.A. and all Subsidiaries	59,437,925	72,801	0.001
Royal Bank of Canada (Worldwide)	7,450,251	68,586	0.009
Daiwa Securities Group, Inc.	11,588,536	66,920	0.006
Sanford Bernstein (Worldwide)	8,588,483	46,662	0.005
Mizuho Corporate Bank, Ltd. And all Subsidiaries	6,516,462	41,184	0.006
Cabrera Capital Markets, Inc.	6,029,897	39,069	0.006
Penserra Securities, L.L.C.	8,114,697	36,825	0.005
BNP Paribas Securities Services S.C.A.	35,385,932	36,327	0.001

(continued)

(continued)

Broker	Shares Traded	FY23 Commission	Commission per Share
Cowen, Inc.	3,746,474	\$34,828	\$0.009
Credit Lyonnais Securities	26,326,561	32,670	0.001
Investment Technology Group, Inc. (Worldwide)	4,626,968	29,389	0.006
PEAK6 Sports L.L.C.	979,355	29,381	0.030
ICICI Brokerage Services, Ltd.	27,586,200	27,834	0.001
AllianceBernstein Holding, L.P.	13,379,287	25,323	0.002
EFG Hermes Holding S.A.E	28,846,883	24,409	0.001
Piper Jaffray Companies	2,530,280	23,353	0.009
Bank of Montreal	1,716,028	20,325	0.012
Williams Capital Group, L.P.	2,875,856	19,383	0.007
Nuvama Wealth Management Ltd.	697,913	18,753	0.027
Exane, Inc.	2,997,357	16,518	0.006
Itaú Unibanco Holding S.A.	3,646,554	14,737	0.004
Liquidnet, Inc.	4,468,899	13,776	0.003
Joh. Berenberg, Gossler & Co.	3,828,204	12,471	0.003
China International Capital Corporation, Ltd.	1,018,686	12,114	0.012
Samsung Group	395,407	11,823	0.030
BTIG, L.L.C.	1,190,028	11,592	0.010
Stifel Nicolaus & Company, Inc.	501,382	11,196	0.022
Craigs Investment Partners, Ltd.	2,963,156	10,292	0.003
Ambit Holdings Pvt., Ltd.	188,272	8,529	0.045
Banco Bradesco S.A.	4,052,038	8,441	0.002
XP Investimentos S.A.	2,276,542	8,310	0.004
Haitong Securities Co., Ltd.	682,450	8,116	0.012
Cantor Fitzgerald, L.P.	938,769	8,105	0.009
PAREL	399,408	7,779	0.019
(All Others - 95 Brokers)	29,591,952	189,091	0.006
Total	3,333,009,401	\$5,334,294	\$0.002

Sources: State Street Bank and Trust and TRS

INVESTMENT MANAGER AND CUSTODIAN FEES

For the year ended June 30, 2023, fee payments to external investment managers and the master custodian totaled \$478.4 million.

Schedule of Fees

Investment Manager/Account	FY23
A&M Capital Partners III, L.P.	\$2,549,786
Acadian Asset Management, L.L.C.	5,247,096
Advent International GPE VI Limited Partnership	80,193
Advent International GPE VII-C Limited Partnership	347,582
Advent International GPE VIII-B-2 Limited Partnership	889,948
Advent International GPE X, L.P.	2,026,158
AllianceBernstein, L.P.	2,604,506
Alphadyne Global Rates Fund II, Ltd.	7,735,153
Altaris Health Partners V, L.P.	73,573
Apollo Investment Fund IX, L.P.	1,771,293
Apollo Investment Fund VIII, L.P.	477,622
Apollo Lincoln Fixed Income Fund, L.P.	3,012,026
Apollo Lincoln Private Credit Fund, L.P.	30,210
AQR Capital Management, L.L.C.	2,173,166
Arbour Lane Credit Opportunity Fund III (A), L.P.	429,113
Ares Multi-Credit Fund (IL), L.P.	678,238
Arlington Capital Partners VI, L.P.	2,315,217
Arlington V, L.P.	977,313
Arrowstreet Capital, L.P.	2,208,281
ASP ILSTRS Asia SMA 1, L.P.	525,000
ASP ILSTRS Europe SMA 1, L.P.	525,000
Aurora Equity Partners VI, L.P.	1,296,741
Avance Investment Partners, L.P.	447,413
Axiom International Investors, L.L.C.	1,246,592
Baring Asia Private Equity Fund VIII, L.P.	2,130,511
Barings, L.L.C.	3,515,575
Barings, L.L.C. (Transition)	976,203
Battery Ventures XI-A Side Fund, L.P.	84,632
Battery Ventures XI-A, L.P.	179,484
Beach Point Sangamon, L.P.	5,910,479
Bertram Capital V (GP), L.P.	262,500
Bertram Growth Capital IV, L.P.	524,901
BIF IV Renewable Sidecar-B, L.P.	1,130,731
BIG Real Estate Fund I, L.P.	416,386
BIG Real Estate Fund II, L.P.	937,500
BioPharma Credit Investments V, L.P.	742,367
	(continued)

<i>(continued)</i>	
Investment Manager/Account	FY23
Black River Agriculture Fund 2, L.P.	\$641,428
Blackstone Infrastructure Partners, L.P.	2,550,137
Blackstone Real Estate Partners Asia II, L.P.	1,123,886
Blackstone Real Estate Partners Asia III, L.P.	1,487,500
Blackstone Real Estate Partners Asia, L.P.	463,072
Blackstone Real Estate Partners IX, L.P.	3,113,222
Blackstone Real Estate Partners VIII.TE.2, L.P.	2,039,152
Blackstone Real Estate Partners X, L.P.	1,744,583
Blantyre Special Situations Fund II, L.P.	529,466
Brasa Real Estate Fund II, L.P.	897,144
Bregal Sagemount III-B, L.P.	1,028,380
Bregal Sagemount IV-B, L.P.	2,246,575
Bregal Unternehmerkapital III-A SCSp	1,073,078
Brevan Howard Alpha Strategies Fund, L.P.	25,644,882
Brevan Howard Kankakee SP	1,314,035
Brevan Howard Systematic Trading Fund, L.P.	1,506,157
Bridgewater All Weather China, Ltd.	853,497
Brookfield Infrastructure Debt Fund III L.P.	248,260
Brookfield Infrastructure Fund IV, L.P.	1,717,774
Brookfield Infrastructure Fund V, L.P.	2,960,384
BVP Forge Institutional, L.P.	300,824
CapitalSpring Investment Partners VI, L.P.	(302,250)
Capstone Vol (US), L.P.	11,480,472
Carlyle Europe Real Estate Partners III, L.P.	8,442
Carlyle Realty Partners IX, L.P.	3,814,521
Carlyle Realty Partners VII, L.P.	229,026
Carlyle Realty Partners VIII, L.P.	1,195,541
Causeway Capital Management	2,015,071
Cerberus 2112 Loan Opportunities Fund, L.L.C.	9,381,001
Cerberus Real Estate Debt Fund II, L.P.	322,313
Cerberus Real Estate Debt Fund, L.P.	956,254
Charlesbank Equity Fund X, L.P.	749,679
Clearlake Capital Partners III, L.P.	84,675
Clearlake Capital Partners IV, L.P.	508,112
Clearlake Capital Partners V, L.P.	(68,365)
Clearlake Capital Partners VI, L.P.	321,326
	(continued)

<i>(continued)</i>	
Investment Manager/Account	FY23
Clearlake Capital Partners VII, L.P.	\$719,930
Clearlake Opportunities Partners (P), L.P.	658,996
Columbia Capital Equity Partners VIII-A, L.P.	1,096,438
Crabel Fund, L.P.	565,402
Craft Ventures Growth II, L.P.	387,692
Craft Ventures IV, L.P.	646,154
DCP Asia Credit Fund III, L.P.	1,068,750
DCP China Credit Fund II, L.P.	185,481
Dolan McEniry Capital Management, L.L.C.	1,122,410
DoubleLine Mortgage Opportunities, L.P.	427,382
EIF United States Power Fund IV, L.P.	455,052
EISAF II, L.P.	503,915
Elion Industrial Fund II, L.P.	700,891
Emerald Advisers, Inc.	1,100,159
EQT IX (No. 2) USD SCSps	2,412,482
EQT Midmarket Europe, L.P.	846,307
EQT VII, L.P.	603,867
EQT VIII, L.P.	1,118,203
EQT X (No.2) USD SCSp	2,771,739
European Property Investors Special Opportunities 5 SCSp-SIF	1,023,405
European Property Investors Special Opportunities 6 SCSp	2,038,379
Exeter Europe Industrial Core Fund S.C.Sp.	1,183,323
Exeter Industrial Core Fund III, L.P.	501,222
Exeter Industrial Value Fund V, L.P.	1,176,514
Exeter Value Fund IV, L.P.	22,184
FinTech Collective Fund III, L.P.	796,289
FinTech Collective Opportunity Fund I, L.P.	80,283
Fortress Japan Opportunity Fund III (Dollar A), L.P.	291,409
Fortress Japan Opportunity Fund IV (Dollar A), L.P.	115,670
Fundamental Partners IV, L.P.	278,085
Fvlcrum Fund, L.P.	779,891
Garcia Hamilton & Associates, L.P.	397,022
Garcia Hamilton & Associates	60,238
Gateway Real Estate Fund IV, L.P.	64,309
Gateway Real Estate Fund VII, L.P.	2,663,014
Global Transport Income Fund Master Partnership SCSp	675,552
Graham Global Investment Fund I SPC Ltd.	1,108,430
Grain Communications Opportunity Fund II, L.P.	828,553
Grain Communications Opportunity Fund III, L.P.	903,926
<i>(continued)</i>	

<i>(continued)</i>	
Investment Manager/Account	FY23
Grain Communications Opportunity Fund, L.P.	\$598,742
Grandeur Peak Global Advisors	1,607,479
Granite Ventures II, L.P.	71,071
Greenspring IL Master 2.0, L.P.	980,772
Greenspring IL Master, L.P.	2,183,240
Grosvenor Monarch Fund, L.L.C.	1,688,554
Harvest Partners Structured Capital Fund II, L.P.	458,867
Hayfin Chief, L.P.	3,801,501
Heitman Capital Management, L.L.C.	6,373,009
IC Hospitality Fund II, L.P.	132,683
ICG Santo SCSp	8,970,853
ICV Partners III, L.P.	155,122
ICV Partners IV, L.P.	430,339
IFM USIDF (Offshore) B, L.P.	355,663
IL Asia Investors, L.P.	899,734
Inflexion Buyout Fund VI L.P.	2,116,554
Inflexion Buyout Partnership V, L.P.	575,151
Inflexion Enterprise Fund V (No. 1), L.P.	153,079
Inflexion Partnership Capital II, L.P.	158,331
Inflexion Supplemental Fund V (No. 1), L.P.	282,976
Insight Partners Opportunities Fund I, L.P.	491,873
Insight Partners XII, L.P.	1,663,796
Institutional Venture Partners XV, L.P.	897,724
Institutional Venture Partners XVI, L.P.	1,397,270
Invesco Institutional (N.A.), Inc.	1,152,729
ISAF III (USD), L.P.	164,577
JP Morgan Investment Management, Inc.	1,817,329
Kirkoswald Global Macro Fund, L.P.	27,801,440
KKR Diversified Core Infrastructure USD Feeder Fund L.P.	366,628
KKR Real Estate Partners Americas III, SCSp	2,571,791
L2 Point Opportunities I, L.P.	476,395
LaSalle Asia Opportunity Fund IV, L.P.	26,409
LaSalle Asia Opportunity VI, L.P.	3,312,932
LCM Partners CO IIIa, L.P.	425,949
LCM Partners COPS 4, L.P.	812,327
LCM Partners SOLO III, L.P.	921,107
Leeds Illuminate I, L.P.	1,400,000
Lightspeed Opportunity Fund II, L.P.	35,344
Lightspeed Venture Partners IX, L.P.	427,922
Lightspeed Venture Partners Select II, L.P.	364,800
<i>(continued)</i>	

(continued)

Investment Manager/Account	FY23
Lightspeed Venture Partners Select V, L.P.	\$500,000
Lightspeed Venture Partners Select, L.P.	311,080
Lightspeed Venture Partners X, L.P.	256,424
Lightspeed Venture Partners XI, L.P.	260,271
Lightspeed Venture Partners XIV, L.P.	500,000
Lion Industrial Trust	10,583,783
LiveOak Venture Partners I, L.P.	264,763
LiveOak Venture Partners III, L.P.	750,000
Locust Point Private Credit Fund III, L.P.	978,533
Locust Point Senior Housing Debt II, L.P.	742,501
Locust Point Senior Mortgage Fund, L.P.	1,070,959
Lone Star Real Estate Fund IV (U.S.), L.P.	217,170
Lone Star Real Estate Fund V (U.S.), L.P.	217,979
Lone Star Real Estate Fund VI, L.P.	2,912,274
Longitude Venture Partners II, L.P.	177,196
Longitude Venture Partners III, L.P.	698,530
LPC Realty Advisors I, Ltd.	3,526,313
LPC Realty Advisors I, Ltd. (Transition)	228,200
LSV Asset Management	5,175,300
MaC Venture Capital II, L.P.	338,462
MacKay Shields, L.L.C.	1,648,444
Macquarie European Infrastructure Fund 6 SCSp	5,491,090
Macquarie Global Infrastructure Fund SCSp	559,694
Macquarie Infrastructure Partners V, L.P.	3,918,693
Macquarie Infrastructure Partners VI, L.P.	480,676
Madison International Real Estate Liquidity Fund VI (TE), L.P.	902,478
Magnetar Constellation Fund IV, L.L.C.	196,829
Magnetar Constellation Fund V, L.L.C.	2,568,050
Maniyar Macro Fund, L.P.	6,875,077
Maranon Senior Credit Fund II-B, L.P.	16,973
Marlin Equity V, L.P.	298,388
MBK Partners Fund IV, L.P.	1,176,340
MBK Partners Fund V, L.P.	2,489,680
MBK Special Situations II, L.P.	1,650,000
MED Platform II, S.L.P.	1,830,161
Mill Point Capital Partners II, L.P.	557,529
Monroe Capital Private Credit Fund II, L.P.	138,595
Morgan Creek Partners Asia, L.P.	452,970
New Enterprise Associates 15, L.P.	423,302
New Enterprise Associates 16, L.P.	554,651

*(continued)**(continued)*

Investment Manager/Account	FY23
New Mountain Partners IV, L.P.	\$145,512
New Mountain Partners V, L.P.	518,957
New Mountain Partners VI, L.P.	972,813
NGP Natural Resources X, L.P.	351,883
NGP Natural Resources XI, L.P.	919,299
NGP Natural Resources XII, L.P.	1,422,083
NMS Fund IV, L.P.	424,450
Northern Shipping Fund III, L.P.	87,292
Northern Shipping Fund IV, L.P.	1,647,755
Northern Trust Investments, Inc.	1,140,522
NXT Capital Senior Loan Fund IV, L.P.	538,595
NXT Capital Senior Loan Fund V, L.P.	747,696
Oak Street Real Estate Capital Fund IV, L.P.	293,057
Oak Street Real Estate Capital Fund V, L.P.	1,107,420
Oak Street Real Estate Capital Net Lease Property Fund, L.P.	3,142,584
Oaktree European Principal Fund III, L.P.	253,853
Oaktree Opportunities Fund IX, L.P.	687,981
Oaktree Opportunities Fund Xb, L.P.	1,351,218
Oaktree Real Estate Debt Fund II, L.P.	326,836
Oaktree Real Estate Debt Fund III, L.P.	436,449
Oaktree Route 66 Multi-Strategy Fund, L.P.	934,004
OceanSound Partners Fund, L.P.	20,986
Pacific Investment Management Company, L.L.C.	9,183,357
Palladium Equity Partners IV, L.P.	74,878
Pamlico Capital V, L.P.	1,000,000
Parthenon Investors VI, L.P.	627,078
Payden & Rygel	1,533,029
PDT Partners, L.L.C.	1,458,410
Pemberton Debt Fund Delaware I, L.P.	439,313
Pemberton Debt Fund Delaware II, L.P.	913,890
PGIM Fixed Income Alternatives Fund II, L.P.	1,080,643
PGIM Fixed Income Global Liquidity Relative Value Fund I (Cayman), Ltd.	4,045,686
PGIM QIF Emerging Market Debt Opportunities Fund	537,840
PGIM, Inc.	3,570,697
PIMCO BRAVO Fund III Onshore Feeder, L.P.	1,041,423
PIMCO BRAVO Fund IV Onshore Feeder, L.P.	1,261,099
PIMCO BRAVO Fund Onshore Feeder II, L.P.	(297)
PIMCO Commercial Real Estate Debt Fund II, L.P.	356,204
PIMCO Commercial Real Estate Debt Fund, L.P.	637,642

(continued)

<i>(continued)</i>	
Investment Manager/Account	FY23
PIMCO Corporate Opportunities Fund III, L.P.	\$1,765,406
PIMCO Corporate Opportunities Fund IV Onshore Feeder, L.P.	32,514
Pretium Residential Credit Fund II, L.P.	2,063,199
Principal Global Investors, L.L.C.	1,558,896
Principal Real Estate Investors, L.L.C. (Transition)	622,526
Principal Real Estate Investors, L.L.C.	2,446,765
Proterra Credit Fund 2, L.P.	327,372
Proterra Credit Fund, L.P.	394,613
Providence Equity Partners VII, L.P.	787,580
PSG V L.P.	1,451,742
RCP SBO Fund II, L.P.	610,922
RCP SBO Fund III, L.P.	223,493
RCP SBO Fund, L.P.	936,375
Rhone Partners V, L.P.	845,264
RhumbLine Advisers, L.P.	789,681
Ridgemont Equity Partners III, L.P.	92,956
Ridgemont Equity Partners IV, L.P.	896,332
Riverstone Credit Partners II, L.P.	675,147
Riverstone Credit Partners, L.P.	140,324
Riverstone Global Energy and Power Fund V, L.P.	1,199,651
Riverstone Global Energy and Power Fund VI, L.P.	1,006,906
Riverstone/Carlyle Global Energy and Power Fund IV, L.P.	13,546
Rockpoint Real Estate Fund V, L.P.	792,940
Rockpoint Real Estate Fund VI, L.P.	1,641,058
Rockpoint Real Estate Fund VII, L.P.	2,477,611
RRJ Capital Master Fund III, L.P.	431,034
Scale Venture Partners V, L.P.	468,786
Scale Venture Partners VII, L.P.	816,960
Schroder Investment Management North America, Inc.	1,312,698
SCP Private Corporate Lending Fund, L.P.	1,603,752
Sheridan Production Partners III-B, L.P.	345,657
Silver Lake Alpine II, L.P.	131,175
Silver Lake Alpine, L.P.	546,363
Silver Lake Partners III, L.P.	56,180
Silver Lake Partners IV, L.P.	938,569
Silver Lake Partners V, L.P.	1,271,631
Silver Lake Partners VI, L.P.	2,500,873
Siris Partners II, L.P.	38,282
Siris Partners III, L.P.	86,940
<i>(continued)</i>	

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Investment Manager/Account	FY23
Siris Partners IV, L.P.	\$736,421
Sixth Street Growth Partners II (A), L.P.	1,585,609
Sixth Street Mid-Stage Growth Partners (A), L.P.	16,645
Sixth Street TAO Partners (B), L.P.	1,075,262
SK Capital Catalyst Fund I, L.P.	134,828
SK Capital Partners VI-A, L.P.	1,671,111
SKCP Catalyst Fund II-A, L.P.	801,753
Sky9 Capital Fund V, L.P.	525,771
Sky9 Capital MVP Fund II, L.P.	38,860
SLR HC Onshore Fund L.P.	411,601
Sofinnova Venture Partners IX, L.P.	903,161
Sofinnova Venture Partners X, L.P.	1,110,179
StarVest Partners II, L.P.	57,583
Starwood Distressed Opportunity Fund IX Global, L.P.	361,604
Starwood Distressed Opportunity Fund XII, L.P.	4,013,987
Starwood Opportunity Fund X Global, L.P.	1,638,182
Starwood Opportunity Fund XI Global, L.P.	2,279,323
Starwood Value Add Fund, L.P.	613,626
Starwood X Annex A	(708)
Starwood X Annex B	(2,390)
State Street Bank and Trust Company (Custody)	4,071,150
Stellex Capital Partners II, L.P.	742,719
Stonepeak Infrastructure Fund IV, L.P.	1,856,401
Strategic Global Advisors, L.L.C.	1,447,056
Strategic Partners Infrastructure III, L.P.	1,800,000
Sunstone Partners I, L.P.	306,668
Sunstone Partners II, L.P.	193,672
Sunstone Partners III-Main, L.P.	1,124,990
T. Rowe Price Associates, Inc.	1,786,440
TA XII-A, L.P.	986,343
TA XIII, L.P.	1,386,732
TA XIV-A, L.P.	2,010,055
Taconic European Credit Dislocation Fund III, L.P.	794,449
Taplin, Canida & Habacht, L.L.C.	628,696
Taurus Mining Finance Fund II L.L.C.	1,562,500
TCW Asset Management Company	172,612
TDR Capital IV 'A', L.P.	687,269
TerraCotta Credit Fund, L.P.	1,601,625
The Baring Asia Private Equity Fund V, L.P.	189,236
The Baring Asia Private Equity Fund VI, L.P.1	740,916
<i>(continued)</i>	

(continued)

Investment Manager/Account	FY23
The Varde Private Debt Opportunities Fund (Onshore), L.P.	\$589,969
Thomas H. Lee Equity Fund IX, L.P.	972,841
Tilden Park Investment Fund, L.P.	2,524,507
Transition - Private Equity	320,534
Trend Macro Onshore, L.P.	6,699,971
Trident IX, L.P.	2,225,777
Trident V, L.P.	307,444
Trident VI, L.P.	196,304
Trident VII, L.P.	462,691
Trident VIII, L.P.	462,657
TRS Coriolis, L.P.	63,370
True Ventures VIII, L.P.	1,209,375
Trustbridge Partners IV, L.P.	270,567
TSG8, L.P.	1,729,625
TSG9, L.P.	2,157,116
Varadero International, Ltd.	6,014,734
Varadero Special Opportunities International, L.P.	1,352,398
Veritas Capital Fund VIII, L.P.	3,143,193
Vista Equity Partners Fund V, L.P.	1,059,972
Vista Equity Partners Fund VI, L.P.	1,587,341
Vista Equity Partners Fund VIII, L.P.	2,017,663
Vista Foundation Fund III, L.P.	612,040
Vista Foundation Fund IV, L.P.	1,000,000
Walton Street Real Estate Core-Plus Fund, L.P.	1,281,944
Walton Street Real Estate Fund VI, L.P.	94,643
Walton Street Real Estate Fund VII, L.P.	456,990
Wasatch Advisors, Inc.	1,704,861
Westbrook Real Estate Fund X, L.P.	467,387
Westbrook Real Estate Fund XI, L.P.	1,831,681
William Blair Investment Management	234,306
ZMC III, L.P.	214,321
Total fees paid by TRS	<u><u>\$478,400,126</u></u>

INVESTMENT ASSETS UNDER MANAGEMENT

	Assets
Public Equity	
Acadian Asset Management, L.L.C.	\$1,411,134,625
AQR Capital Management, L.L.C.	449,375,323
Arrowstreet Capital, L.P.	2,445,266,766
Axiom International Investors	281,558,613
Causeway Capital Management L.L.C.	742,007,600
Emerald Advisors, Inc.	238,882,494
Grandeur Peak Global Advisors, L.L.C.	255,532,330
J.P. Morgan Investment Management, Inc.	818,212,422
LSV Asset Management	1,541,688,923
Northern Trust Investments, Inc.	1,549,537,204
RhumbLine Advisors, L.P.	10,460,135,010
Schroder Investment Management, Inc.	714,853,685
Strategic Global Advisors	393,188,818
T. Rowe Price Associates, Inc.	756,036,833
Wasatch Advisors	256,070,460
William Blair Investment Management, L.L.C.	722,336,342
Private Equity	
A&M Capital Annex A	27,060,694
A&M Capital Partners II, L.P.	75,742,475
A&M Capital Partners III, L.P.	43,307,499
Advent International GPE VI Limited Partnership	4,799,341
Advent International GPE VII-C Limited Partnership	16,631,175
Advent International GPE VIII-B-2 Limited Partnership	106,304,213
Advent International GPE X, L.P.	27,575,451
Altaris Constellation Partners IV, L.P.	18,735,917
Altaris Health Partners IV, L.P.	54,315,504
Altaris Health Partners V, L.P.	61,556,443
Altaris V-4041, L.P.	13,497,199
Apollo Fund IX Annex A	10,231,644
Apollo Fund IX Annex B	30,105,213
Apollo Investment Fund VI, L.P.	2,701,837
Apollo Investment Fund VII, L.P.	3,749,027
Apollo Investment Fund VIII Annex A	18,961,744
Apollo Investment Fund VIII, L.P.	89,180,048
Apollo Investment Fund IX, L.P.	239,528,339
Apollo Lincoln Private Credit Fund, L.P.	997,708
Arlington V, L.P.	114,254,781
Arlington Capital Partners VI, L.P.	21,168,484
	<i>(continued)</i>

(continued)

	Assets
Arlington VI Annex A	\$15,000,000
ASP ILSTRS Asia SMA 1, L.P.	18,449,255
ASP ILSTRS Europe SMA 1, L.P.	12,760,012
Aurora Equity Partners VI, L.P.	49,135,349
Avance Investment Partners, L.P.	11,801,798
Bain Capital Annex A	60,000,000
Baring Asia Private Equity Fund VIII, L.P.	11,124,469
Baring Asia VIII Annex A	24,996,079
Battery Ventures XI-A, L.P.	19,403,896
Battery Ventures XI-A Side Fund, L.P.	12,317,974
Bertram Growth Capital IV, L.P.	77,923,970
Blackstone Capital Partners VI Annex A	1,808
Bregal Sagemount III-B, L.P.	67,465,662
Bregal Sagemount IV-B, L.P.	7,476,596
Bregal Unternehmerkapital III-A SCSp	43,962,408
BVP Forge Institutional, L.P.	750,000
Carlyle Partners VIII Annex A	32,966,158
Carlyle/Riverstone Global Energy and Power Fund III, L.P.	428,113
Charlesbank Equity Fund X, L.P.	30,249,486
Charlesbank Equity Overage Fund X, L.P.	37,705,830
Clearlake Capital Partners II, L.P.	36,532
Clearlake Capital Partners III, L.P.	2,249,624
Clearlake Capital Partners IV, L.P.	62,851,487
Clearlake Capital Partners V, L.P.	87,597,737
Clearlake Capital Partners VI Annex A	18,090,616
Clearlake Capital Partners VI, L.P.	150,404,671
Clearlake Capital Partners VII, L.P.	80,386,426
Clearlake Flagship Plus Partners, L.P.	82,176,893
Clearlake Opportunities Partners (P), L.P.	46,471,691
Columbia Capital Equity Partners VIII-A, L.P.	11,737,313
Craft Ventures Growth II, L.P.	1,374,128
Craft Ventures IV, L.P.	3,500,015
Edgewater Growth Capital Partners, L.P.	1,343,227
Edgewater Growth Capital Partners II, L.P.	1,487,716
Edgewater Growth Capital Partners III, L.P.	12,692,818
EIF United States Power Fund IV, L.P.	28,113,416
EQT IX (No. 2) USD SCSp	218,276,868
EQT Midmarket Europe, L.P.	66,236,663
EQT VII, L.P.	70,010,517
	<i>(continued)</i>

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	Assets
EQT VIII, L.P.	\$118,289,042
FinTech Collective Fund III, L.P.	33,434,787
FinTech Collective Opportunity Fund I, L.P.	7,905,782
Fvlcrum Fund, L.P.	6,195,848
Grain Communications Opportunity Fund, L.P.	87,045,454
Grain Communications Opportunity Fund II, L.P.	30,437,377
Grain Communications Opportunity Fund III, L.P.	104,495,917
Granite Ventures II, L.P.	13,525,264
Greenbriar Equity Fund VI, L.P.	14,994,472
Greenspring IL Master, L.P.	328,877,590
Greenspring IL Master 2.0, L.P.	74,862,453
Greenspring IL Special, L.P.	627,631,819
Greenspring IL Special II, L.P.	54,018,180
Harvest Partners Structured Capital Fund II, L.P.	57,271,761
ICV Partners III, L.P.	16,297,940
ICV Partners IV, L.P.	50,176,034
IL Asia Investors, L.P.	262,835,060
Inflexion Buyout Partnership V, L.P.	68,645,522
Inflexion Enterprise Fund V (No. 1), L.P.	13,557,167
Inflexion Supplemental Fund V (No. 1), L.P.	31,765,316
Inflexion Buyout Fund VI L.P.	14,227,743
Insight Opportunities Fund I Annex A	13,464,721
Insight Partners Opportunities Fund I, L.P.	54,689,744
Insight Partners XII, L.P.	65,193,348
Insight Vision Capital II, L.P.	368,965
Institutional Venture Partners XV, L.P.	49,652,185
Institutional Venture Partners XVI, L.P.	93,976,690
Leeds Illuminate I, L.P.	28,498,034
Lightspeed Opportunity Fund II, L.P.	8,909,058
Lightspeed Venture Partners Select, L.P.	16,344,659
Lightspeed Venture Partners Select II, L.P.	32,097,599
Lightspeed Venture Partners Select V, L.P.	7,501,502
Lightspeed Venture Partners IX, L.P.	68,761,214
Lightspeed Venture Partners X, L.P.	45,268,853
Lightspeed Venture Partners XI, L.P.	34,844,581
Lightspeed Venture Partners XIV, L.P.	10,075,210
Littlejohn Fund IV, L.P.	13,918,994
LiveOak Venture Partners I, L.P.	19,166,134
	<i>(continued)</i>

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	Assets
LiveOak Venture Partners III, L.P.	\$3,028,946
Longitude Venture Partners II, L.P.	7,540,496
Longitude Venture Partners III, L.P.	30,275,588
MaC Venture Capital II, L.P.	6,194,514
MBK Partners Fund III Annex B	29,689,921
MBK Partners Fund III, L.P.	47,938,287
MBK Partners Fund IV, L.P.	159,231,498
MBK Partners Fund V, L.P.	156,643,181
MBK Partners Special Situations II, L.P.	56,533,339
MED Platform II, S.L.P.	4,255,379
Mill Point Capital Partners II, L.P.	38,990,111
Morgan Creek Partners Asia, L.P.	43,375,858
New Enterprise Associates 15, L.P.	29,321,704
New Enterprise Associates 16, L.P.	55,317,133
New Mountain Partners III, L.P.	4,778,344
New Mountain Partners IV, L.P.	34,312,549
New Mountain Partners V, L.P.	135,105,564
New Mountain Partners VI, L.P.	111,255,480
New Mountain VI Annex A	25,000,000
NGP Natural Resources IX Annex A	204,130
NGP Natural Resources X, L.P.	10,460,142
NGP Natural Resources XI, L.P.	74,212,501
NGP Natural Resources XII, L.P.	82,670,924
NMS Fund IV, L.P.	30,782,778
Oaktree European Principal Fund III, L.P.	19,794,949
Oaktree Opportunities Fund VIII, L.P.	329,981
Oaktree Opportunities Fund IX, L.P.	80,389,862
Oaktree Opportunities Fund Xb, L.P.	112,660,887
OceanSound Partners Fund, L.P.	17,848,417
OCM Opportunities Fund VIIb, L.P.	39,501
Palladium Equity Partners IV, L.P.	14,547,848
Pamlico Capital V, L.P.	27,506,515
Parthenon Investors IV Annex A	214,609,943
Parthenon Investors IV, L.P.	62,046,579
Parthenon Investors V, L.P.	191,461,264
Parthenon Investors VI, L.P.	84,115,299
Providence Equity Partners VI Annex A	102,029
Providence Equity Partners VI International, L.P.	1,841,319
Providence Equity Partners VII, L.P.	\$186,744,534
	<i>(continued)</i>

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	Assets
PSG V L.P.	\$42,656,200
RCP Multi-Fund Feeder SBO 1.0, L.P.	60,094,761
RCP SBO Fund, L.P.	205,384,669
RCP SBO Fund II, L.P.	52,082,480
RCP SBO Fund III, L.P.	9,582,634
RCP SBO Opportunities Fund, L.P.	49,902,107
Rhone Capital V Annex A	37,269,719
Rhone Partners IV, L.P.	12,886,947
Rhone Partners V, L.P.	130,358,111
Ridgemont Annex A	48,314,808
Ridgemont Equity Partners III, L.P.	69,802,475
Ridgemont Equity Partners IV, L.P.	6,305,737
Riverstone Global Energy and Power Fund V, L.P.	73,371,991
Riverstone Global Energy and Power Fund VI, L.P.	91,128,082
Riverstone/Carlyle Global Energy and Power Fund IV, L.P.	82,037
RRJ Capital Master Fund III, L.P.	15,489,513
Scale Venture Partners V, L.P.	93,032,230
Scale Venture Partners VII, L.P.	23,776,792
Shasta Ventures, L.P.	501,220
Silver Lake Alpine, L.P.	59,624,839
Silver Lake Alpine II, L.P.	27,090,510
Silver Lake Partners III, L.P.	28,270,780
Silver Lake Partners IV, L.P.	258,032,613
Silver Lake Partners V, L.P.	207,204,139
Silver Lake Partners VI, L.P.	174,510,297
Silver Lake VI Annex A	22,502,232
Silver Lake VI Annex B	24,999,845
Siris Partners II, L.P.	6,469,967
Siris Partners III, L.P.	83,424,026
Siris Partners IV, L.P.	57,289,622
SK Capital Catalyst Fund I, L.P.	46,628,035
SK Capital Partners V-A, L.P.	90,993,123
SK Capital Partners VI-A, L.P.	47,130,183
SK Capital VI Annex A	17,018,555
SKCP Catalyst Fund II-A, L.P.	7,005,828
Sky9 Capital Fund V, L.P.	6,800,388
Sky9 Capital MVP Fund II, L.P.	1,992,223
Sofinnova Venture Partners VIII, L.P.	4,490,386
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	Assets
Sofinnova Venture Partners IX, L.P.	\$20,751,861
Sofinnova Venture Partners X, L.P.	46,410,891
Stellrex Capital Partners II, L.P.	34,553,801
StepStone VC Wabash Fund, L.P.	2,400,000
Sunstone Partners I, L.P.	29,799,225
Sunstone Partners II, L.P.	27,018,381
Sunstone Partners III-Main, L.P.	2,318,060
TA Select Opportunities Fund-A, L.P.	49,525,986
TA Select Opportunities Fund-A II, L.P.	25,779,812
TA XII-A, L.P.	83,706,634
TA XIII, L.P.	121,306,466
TA XIV-A, L.P.	76,209,415
TDR Capital IV 'A', L.P.	49,513,692
The Baring Asia Private Equity Fund V, L.P.	30,376,119
The Baring Asia Private Equity Fund VI, L.P.1	79,727,809
Thomas H. Lee Fund IX Annex A	39,374,464
Thomas H. Lee Equity Fund IX, L.P.	39,907,582
Trident IX Annex A	21,944,532
Trident V, L.P.	34,865,798
Trident VII, L.P.	33,705,077
Trident VIII, L.P.	23,151,340
Trident IX, L.P.	47,032,193
True Ventures VIII, L.P.	5,567,846
Trustbridge Partners IV, L.P.	39,859,797
TSG 8, L.P.	78,437,542
TSG9, L.P.	4,109,228
Veritas Capital Fund IV, L.P.	1,513,403
Veritas Capital Fund V, L.P.	105,725,330
Veritas Capital Fund VI, L.P.	46,395,657
Veritas Capital Fund VIII, L.P.	82,494,865
Vista Equity Partners Fund V, L.P.	170,090,271
Vista Equity Partners Fund VI, L.P.	215,581,778
Vista Equity Partners Fund VIII, L.P.	22,178,372
Vista Equity VIII Annex A	31,246,940
Vista Foundation Fund III, L.P.	49,917,541
Vista Foundation Fund IV, L.P.	36,870,959
ZMC III, L.P.	38,281,296
Real Assets	
Barings LLC	970,460,282
BIF IV Renewable Sidecar-B, L.P.	\$74,570,910
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	Assets
Black River Agriculture Fund 2, L.P.	59,988,250
Blackstone Infrastructure Partners, L.P.	270,812,173
Blackstone Infrastructure Partners (Supplemental Account), L.P.	122,507,542
Blackstone Real Estate Partners Asia, L.P.	32,810,068
Blackstone Real Estate Partners Asia II, L.P.	90,950,032
Blackstone Real Estate Partners Asia III, L.P.	12,869,325
Blackstone Real Estate Partners VI, L.P.	681,608
Blackstone Real Estate Partners VII, L.P.	35,112,485
Blackstone Real Estate Partners VIII.TE.2, L.P.	226,814,344
Blackstone Real Estate Partners IX, L.P.	355,777,777
Blackstone Real Estate Partners X, L.P.	11,285,356
Brasa Real Estate Fund II, L.P.	34,624,863
Brookfield Infrastructure Fund IV, L.P.	150,728,244
Brookfield Infrastructure Fund V, L.P.	40,478,592
Carlyle Europe Real Estate Partners III, L.P.	273,545
Carlyle Realty Partners VII, L.P.	23,423,896
Carlyle Realty Partners VIII, L.P.	110,240,832
Carlyle Realty Partners IX, L.P.	23,368,105
Dyal Capital III Annex A	107,378,458
Elion Industrial Fund II, L.P.	6,671,597
European Property Investors Special Opportunities 5 SCSp-SIF	84,819,374
European Property Investors Special Opportunities 6 SCSp	23,415,078
Exeter Europe Industrial Core Fund S.C.Sp.	157,693,092
Exeter Industrial Core Fund III, L.P.	64,521,636
Exeter Industrial Value Fund V, L.P.	150,596,404
Exeter Value Fund IV, L.P.	5,749,056
Fortress Japan Opportunity Fund III (Dollar A), L.P.	77,737,964
Fortress Japan Opportunity Fund IV (Dollar A), L.P.	62,111,182
Gateway Real Estate Fund IV, L.P.	4,048,954
Gateway Real Estate Fund VII, L.P.	20,087,395
Heitman Capital Management L.L.C.	1,901,452,290
Invesco Commercial Mortgage Income Fund, L.P.	141,065,719
KKR Diversified Core Infrastructure USD Feeder Fund L.P.	204,483,799
KKR Real Estate Partners Americas III, SCSp	103,275,349
LaSalle Asia Opportunity Fund III, L.P.	\$946,579

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	Assets
LaSalle Asia Opportunity Fund IV, L.P.	4,000,003
LaSalle Asia Opportunity VI, L.P.	-0
Lion Industrial Trust	1,359,979,732
Lone Star Real Estate Fund III (U.S.), L.P.	198,615
Lone Star Real Estate Fund IV (U.S.), L.P.	67,623,508
Lone Star Real Estate Fund V (U.S.), L.P.	30,491,260
Lone Star Real Estate Fund VI, L.P.	192,217,616
LPC Realty Advisors I, Ltd.	1,147,061,130
Macquarie European Infrastructure Fund 6 SCSp	244,712,489
Macquarie Global Infrastructure Fund SCSp	90,815,084
Macquarie Infrastructure Partners V, L.P.	204,392,538
Macquarie Infrastructure Partners VI, L.P.	57,788,256
Madison International Real Estate Liquidity Fund VI (TE), L.P.	86,944,648
Niam Nordic V, L.P.	94,766
Oak Street Real Estate Capital Fund III, L.P.	124,358
Oak Street Real Estate Capital Fund IV, L.P.	43,617,877
Oak Street Real Estate Capital Fund V, L.P.	133,332,338
Oak Street Real Estate Capital Net Lease Property Fund, L.P.	364,215,686
Principal Real Estate Investors L.L.C.	948,103,399
Rockpoint Real Estate Fund V, L.P.	48,668,979
Rockpoint Real Estate Fund VI, L.P.	167,496,214
Rockpoint Real Estate Fund VII, L.P.	52,808,948
Sheridan Production Partners III-B, L.P.	18,667,000
Starwood Distressed Opportunity Fund IX Global, L.P.	12,459,136
Starwood Distressed Opportunity Fund XII, L.P.	70,298,932
Starwood Opportunity Fund X Global, L.P.	60,701,216
Starwood Opportunity Fund XI Global, L.P.	242,531,133
Starwood Value Add Fund, L.P.	261,732,898
Starwood Value Add Fund II, L.P.	2,862,331
Starwood IX Annex A	674,734
Starwood X Annex A	81,337
Starwood X Annex B	305,690
Stonepeak Infrastructure Fund IV, L.P.	124,117,782
Strategic Partners Infrastructure III, L.P.	84,369,423
Walton Street Real Estate Core-Plus Fund, L.P.	251,214,246
Walton Street Real Estate Fund VI, L.P.	44,013,627

(continued)

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	Assets
Walton Street Real Estate Fund VII, L.P.	21,332,956
Westbrook Real Estate Fund X, L.P.	33,026,294
Westbrook Real Estate Fund XI, L.P.	86,710,220
Income	
AllianceBernstein, L.P.	619,710,573
Apollo Lincoln Fixed Income Fund, L.P.	632,210,518
Apollo Revolver Fund, L.P.	-
Arbour Lane Credit Opportunity Fund III (A), L.P.	69,697,727
Ares Multi-Credit FD (IL), LP	256,357,751
Beach Point Sangamon, L.P.	721,939,279
BIG Real Estate Fund I, L.P.	35,927,953
BIG Real Estate Fund II, L.P.	39,230,873
BioPharma Credit Investments V, L.P.	82,283,257
Blantyre Special Situations Fund II, L.P.	39,082,607
Brookfield Infrastructure Debt Fund III L.P.	49,671,442
CapitalSpring Investment Partners VI, L.P.	39,825,688
Cerberus 2112 Loan Opportunities Fund, L.L.C.	425,456,572
Cerberus Real Estate Debt Fund, L.P.	115,911,379
Cerberus Real Estate Debt Fund II, L.P.	61,436,682
DCP Asia Credit Fund III, L.P.	23,633,281
DCP China Credit Fund II, L.P.	6,667,048
Dolan McEniry Capital Management, L.L.C.	698,708,009
DoubleLine Mortgage Opportunities, L.P.	43,810,886
EISAF II, L.P.	42,340,259
ISAF III (USD), L.P.	45,081,522
Fundamental Partners IV, L.P.	91,528,453
Garcia Hamilton & Associates, L.P.	249,788,554
Garcia Hamilton Collective Investment Trust	2,271,083
Global Transport Income Fund Master Partnership SCSp	158,056,951
Hayfin Chief, L.P.	376,936,193
ICG Santo SCSp	659,913,304
IFM USIDF (Offshore) B, L.P.	58,905,215
L2 Point Opportunities I, L.P.	24,717,109
LCM Partners CO IIIa, L.P.	106,924,878
LCM Partners COPS 4, L.P.	32,153,087
LCM Partners SOLO III, L.P.	104,982,248
Locust Point Senior Mortgage Fund, L.P.	30,334,805
Locust Point Senior Housing Debt II, L.P.	\$41,258,819

(continued)

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	Assets
Locust Point Senior Mortgage Fund, L.P.	87,624,497
MacKay Shields L.L.C.	455,089,467
Maranon Senior Credit Fund II-B, L.P.	3,910,862
Monroe Capital Private Credit Fund II, L.P.	10,992,704
Northern Shipping Fund IV, L.P.	96,814,777
NXT Capital Senior Loan Fund II, L.P.	1,817,762
NXT Capital Senior Loan Fund IV, L.P.	60,363,750
NXT Capital Senior Loan Fund V, L.P.	75,053,424
Oaktree Enhanced Income Fund II, L.P.	573,096
Oaktree Enhanced Income Fund III, L.P.	15,317,961
Oaktree Real Estate Debt Fund II, L.P.	29,610,239
Oaktree Real Estate Debt Fund III, L.P.	45,501,570
Oaktree Route 66 Multi-Strategy Fund, L.P.	265,217,179
Pacific Investment Management Company, L.L.C.	1,288,050,318
Payden & Rygel	422,493,651
Pemberton Debt Fund Delaware I, L.P.	35,016,437
Pemberton Debt Fund Delaware II, L.P.	95,134,040
PGIM Fixed Income Alternatives Fund II, L.P.	138,727,819
PGIM Fixed Income Global Liquidity Relative Value Fund I (Cayman), Ltd.	425,809,823
PGIM, Inc.	449,533,357
PGIM QIF Emerging Market Debt Opportunities Fund	164,447,404
PIMCO BRAVO Fund Onshore Feeder II, L.P.	6,201,070
PIMCO BRAVO Fund III Onshore Feeder, L.P.	90,140,539
PIMCO BRAVO Fund IV Onshore Feeder, L.P.	117,521,876
PIMCO Commercial Real Estate Debt Fund, L.P.	54,699,578
PIMCO Commercial Real Estate Debt Fund II, L.P.	47,208,397
PIMCO Corporate Opportunities Fund II, L.P.	46,073,599
PIMCO Corporate Opportunities Fund III, L.P.	153,838,171
PIMCO Corporate Opportunities Fund IV Onshore Feeder, L.P.	5,166,855
PIMCO Horseshoe Fund, L.P.	704,614,497
Pretium Residential Credit Fund II, L.P.	158,542,086
Principal Global Investors, L.L.C.	359,414,259
Proterra Credit Fund, L.P.	14,620,088
Proterra Credit Fund 2, L.P.	46,394,387
Prudential Trust Company Collective Trust	1,046,306,276

(continued)

(continued)

	Assets
Riverstone Credit Partners, L.P.	\$16,846,014
Riverstone Credit Partners II, L.P.	49,061,863
SCP Private Corporate Lending Fund, L.P.	145,976,545
SLR HC Onshore Fund L.P.	39,025,698
Sixth Street Growth Partners II (A), L.P.	17,279,180
Sixth Street Mid-Stage Growth Partners (A), L.P.	4,818,642
Sixth Street TAO Partners (B), L.P.	43,144,254
Taplin, Canida & Habacht	1,090,358,031
Taurus Mining Finance Annex Fund L.L.C.	1,611,170
Taurus Mining Finance Fund L.L.C.	6,579,302
Taurus Mining Finance Fund II, L.P.	53,184,551
TerraCotta Credit Fund, L.P.	100,740,558
TRS Coriolis, L.P.	35,759,323
The Varde Private Debt Opportunities Fund (Onshore), L.P.	62,862,006
Diversifying Strategies	
Alphadyne Global Rates Fund II, Ltd.	374,840,993
AQR Multi-Strategy Fund XIV, L.P.	103,239,207
	(continued)

(continued)

	Assets
Brevan Howard Alpha Strategies Fund, L.P.	\$269,760,444
Brevan Howard Kankakee SP	88,923,502
Brevan Howard Systematic Trading Fund, L.P.	154,775,570
Bridgewater All Weather China, Ltd.	144,308,558
Capstone Vol (US), L.P.	324,624,600
Crabel Fund, L.P.	109,374,147
Facio Opportunities Fund LLC	15,459,780
Graham Global Investment Fund I SPC Ltd.	207,663,970
Grosvenor Monarch Fund, L.L.C.	152,930,847
Grosvenor Monarch Fund Series B	111,680,189
Kirkoswald Global Macro Fund, L.P.	356,981,304
Maniyar Macro Fund, L.P.	181,855,409
Taconic European Credit Dislocation Fund III, L.P.	136,205,083
Tilden Park Investment Fund, L.P.	162,669,346
Trend Macro Onshore, L.P.	201,105,831
Varadero International, Ltd.	249,311,095
Varadero Special Opportunities International, L.P.	57,620,023

Note: The list does not include managers terminated prior to June 30, 2023 with residual assets in the account.

SUPPLEMENTARY SCHEDULES

Top 10 U.S. Equity Holdings at June 30, 2023

Firm	Sector	Fair Value (USD)
Apple, Inc.	Technology	\$817,738,726
Microsoft Corp.	Technology	797,423,788
Amazon.com, Inc.	Consumer	332,018,186
NVIDIA Corp.	Technology	287,482,277
Meta Platforms, Inc. - class A	Communication	258,278,843
Alphabet, Inc. - class A	Communication	220,817,772
Alphabet, Inc. - class C	Communication	208,574,538
Tesla, Inc.	Consumer	185,778,693
UnitedHealth Group, Inc.	Health Care	167,186,779
Berkshire Hathaway, Inc.	Financials	157,286,932
Total		<u>\$3,432,586,534</u>

Sources: State Street Bank and Trust and TRS

Top 10 International Equity Holdings at June 30, 2023

Firm	Country	Fair Value (USD)
Samsung Electronics Co. Ltd.	Korea	\$136,328,822
Taiwan Semiconductor Manufacturing Co. Ltd.	Taiwan	120,213,842
Novo Nordisk A/S	Denmark	97,692,656
ASML Holding NV	Netherlands	88,125,133
Novartis AG	Switzerland	81,631,051
Roche Holding AG	Switzerland	76,966,413
Tencent Holdings Ltd.	Hong Kong	73,580,282
SAP SE	Germany	73,003,590
Linde PLC	Ireland	69,044,455
GlaxoSmithKline PLC	United Kingdom	64,247,553
Total		<u>\$880,833,797</u>

Sources: State Street Bank and Trust and TRS

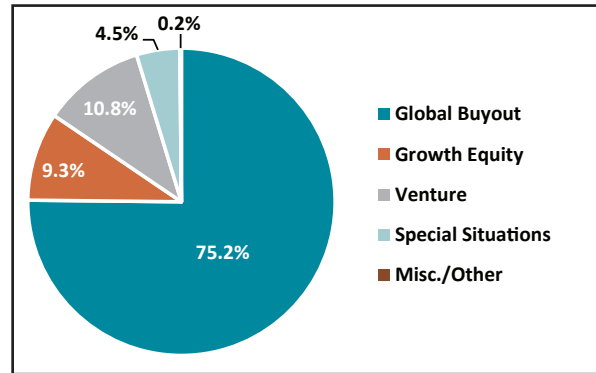
A complete list of investment holdings is available upon request.

Top 10 Income Holdings at June 30, 2023 (excludes commingled funds)

Security/position	Maturity Date	Interest Rate	Fair Value (USD)
United States Treasury Note/Bond	5/31/2025	4.25%	\$98,726,562
United States Treasury Note/Bond	1/31/2024	2.50	89,083,307
United States Treasury Note/Bond	4/15/2025	2.63	86,308,594
United States Treasury Note/Bond	3/31/2024	2.13	71,031,574
United States Treasury Floating Rate Note	10/31/2024	5.39	60,337,654
United States Treasury Note/Bond	9/30/2024	4.25	49,332,031
United States Treasury Floating Rate Note	7/31/2024	5.29	49,258,056
United States Treasury Note/Bond	6/30/2024	1.75	42,801,074
United States Treasury Note/Bond	11/30/2023	0.50	38,026,322
United States Treasury Note/Bond	11/15/2024	0.75	37,614,062
Total			<u>\$622,519,236</u>

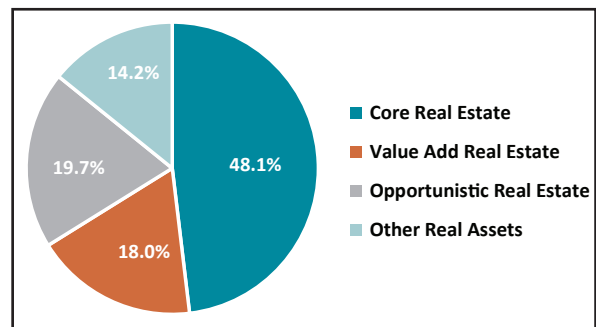
Sources: State Street Bank and Trust and TRS

Private Equity by Investment Type



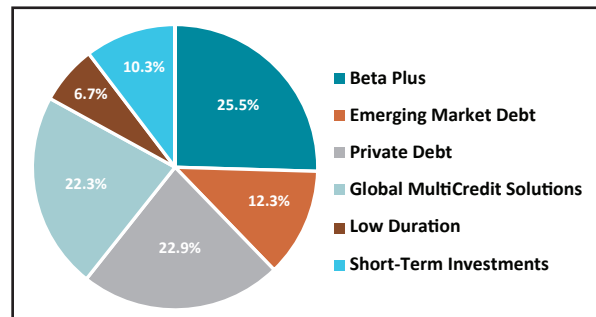
Sources: State Street Bank and Trust and TRS

Real Assets by Investment Type



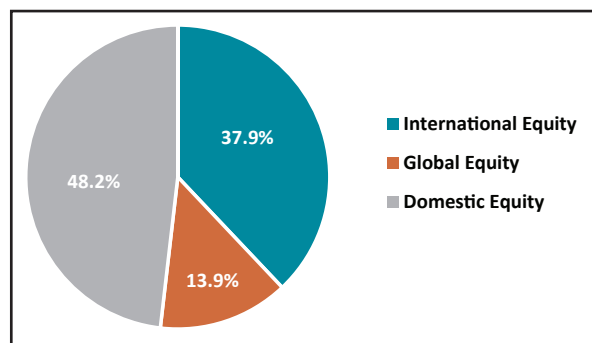
Sources: State Street Bank and Trust and TRS

Income by Investment Type



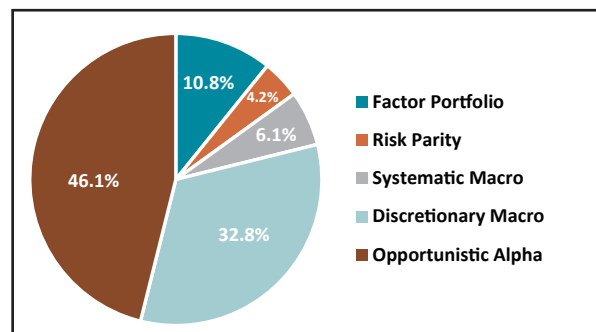
Sources: State Street Bank and Trust and TRS

Public Equity by Investment Type



Sources: State Street Bank and Trust and TRS

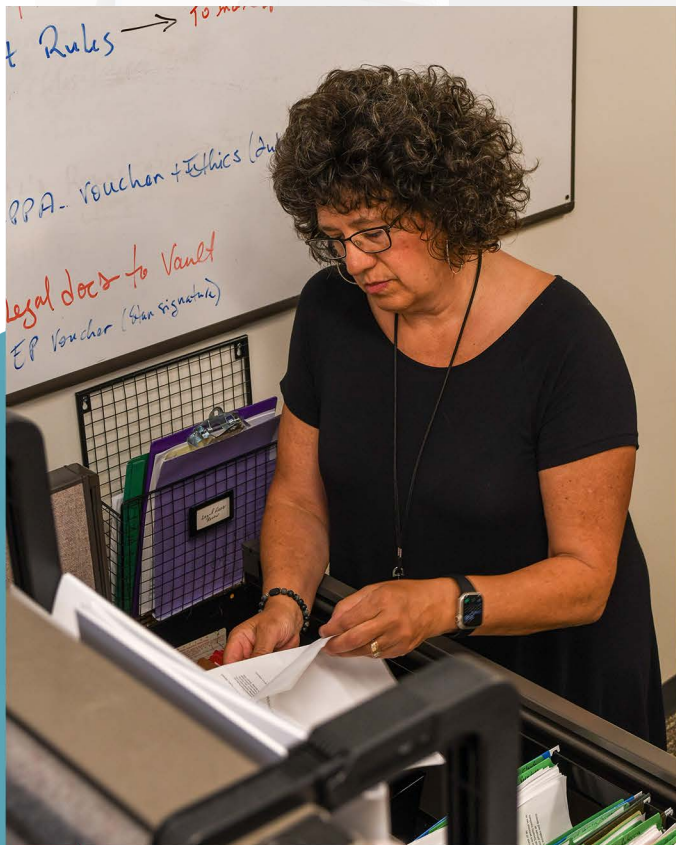
Diversifying by Investment Type



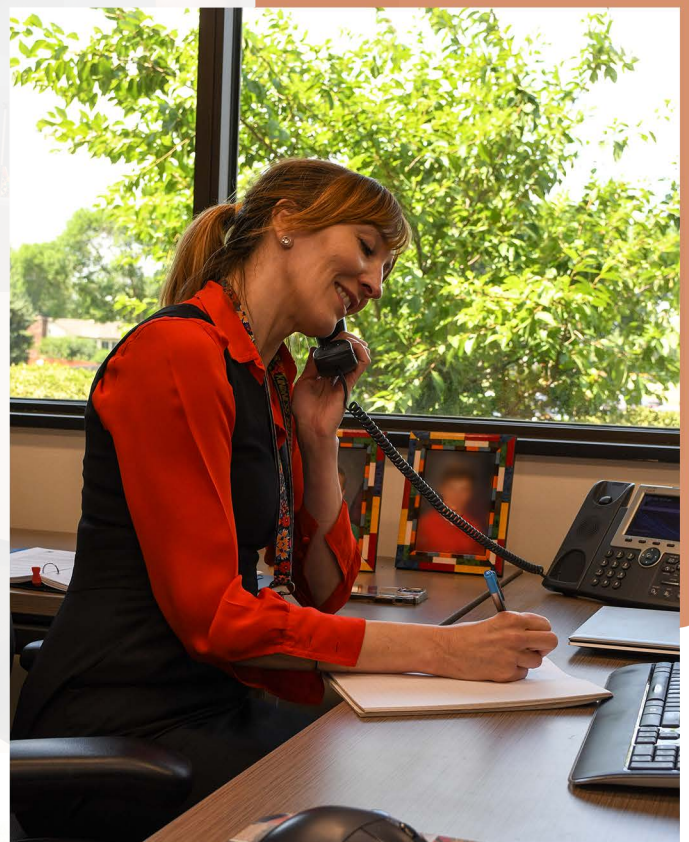
Sources: State Street Bank and Trust and TRS



The **Assistant Legal Counsel** and **Senior Legal Counsel** review a FOIA request.



The **Administrative Associate** files QILDRO documents.



The **General Counsel** discusses a new law with another coworker.

LEGAL DEPARTMENT

ACTUARIAL



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November 17, 2023

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

ACTUARIAL CERTIFICATION

Dear Board Members:

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, 2023, 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 and economic experience review covering the period July 1, 2017, through June 30, 2020, presented at the August 13, 2021, Board meeting, and the economic experience review presented at the August 15, 2023, Board meeting. In our opinion, the actuarial assumptions as approved by the Board are reasonably related to the experience of and the expectations for the System and the combined effect of these assumptions is expected to have no significant bias. The actuarial assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice. The methods mandated by the Illinois Pension Code as described in the Funding Adequacy section are inadequate to appropriately fund TRS.

Assets and Membership Data

Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results. 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 date of the census data and the valuation date. The impact on the valuation due to the census data that lags one year behind the valuation date has been studied and deemed immaterial. The amount of assets in the trust fund as of the valuation date 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. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability, and the principal balance.** The funding policy adopted by the Board, referred to as the Board-Adopted Actuarial Funding Policy, meets this standard.

The valuation indicates that for the fiscal year ended June 30, 2023, the actuarial experience of TRS generated a net actuarial loss of \$717 million. This loss is the result of a \$29 million loss due to investment return experience (on an actuarial basis, TRS experienced an investment gain of \$55 million on a fair value basis) and a loss of \$688 million (0.5% of the actuarial accrued liability) due to demographic experience for fiscal 2023.

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are prepared to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

Actuarial Certification

In preparing the results presented in this report, we have relied upon information TRS staff 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 Comprehensive 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 and the Notes to 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 were reviewed by Segal for consistency with the valuation report: Actuarial Valuation, Reconciliation of Unfunded Liability, FY24 & FY25 State Contribution Requirements, and Unfunded Liability as a Percentage of Payroll Test. The Actuarial Section also contains the following schedules, which were prepared by Segal: Funded Ratio Test, Solvency Test, Schedule of Contributions from Employers and Other Contributing Entities, 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.

In our opinion, the results presented comply with the Illinois Pension Code and, where applicable, the Internal Revenue Code, and the Statements of the Governmental Accounting Standards Board. While 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, this does not endorse the funding methodology required by the Illinois Pension Code.

The actuarial calculations were directed under the supervision of Matthew A. Strom. The undersigned are independent actuaries. They are Fellows or Associates of the Society of Actuaries, Enrolled Actuaries, and Members of the American Academy of Actuaries, and are experienced in performing valuations for large public retirement systems. They meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Respectfully submitted,

Segal



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



Tanya Dybal, FSA, MAAA, EA
Vice President and Actuary



David K. Nickerson, ASA, MAAA, EA
Actuary



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 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 employs a state actuary, Cheiron, to review the five state systems’ actuarial valuation reports. The reports are considered preliminary until the state actuary has reviewed them. In its review of the previous report prepared by Segal, Cheiron recommended some additional explanation of the new entrant assumption as well as additional information on the new entrant population used in projections. Recommendations were also made on the use of inactive vested buyout assumptions and the full-time future service accrual rate.

With regularity, Cheiron recommends the TRS Board annually review the economic assumptions for use in the valuation. The TRS Board acts on this recommendation every year with review and adoption of the investment rate of return and inflation assumptions.

Among the other assumptions, Cheiron recommended future stress testing on the impact of the state contribution.

The preliminary June 30, 2023 actuarial valuation prepared by Segal has been submitted to the state actuary.

ACTUARIAL ASSUMPTIONS AND METHODS

Each year the actuary reconciles the differences between 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.

Most assumptions used in the FY23 valuation are based on the 2021 experience study analysis. At the recommendation of the state actuary, the economic assumptions, investment return and inflation are reviewed by the TRS Board of Trustees annually for use in the next valuation. The TRS System actuary will begin the next experience study in 2024.

INVESTMENT RETURN

The investment return rate is 7.0 percent per annum, compounded annually and net of investment expenses, including inflation at 2.50 percent and real return at 4.50 percent. This is the expected rate of return on investments first adopted effective June 30, 2016 and is also used to discount benefit payments. These individual components were reaffirmed by the Board at the August 2023 meeting for the FY23 valuation.

SALARY INCREASES

Components of the salary increase assumption include:

- inflation of 2.50 percent and
- real wage growth (productivity).

The sample annual percentage salary increases (including merit and components of increase listed previously) follow.

Salary Increase Assumptions

Service	Male and Female
1 year	8.75%
2 years	7.00
3 years	6.50
4 years	6.50
5 years	6.25
10 years	5.25
15 years	4.75
20 years and above	3.75

For a member who works 34 years, the assumed average salary increase over the member's career is 4.73 percent per year. The actual average salary increase for teachers who were in full-time or regular part-time status at both June 30, 2021 and June 30, 2022 is 5.69 percent.

INFLATION

Inflation is assumed to be 2.50 percent per annum and is implicit in investment and earnings progression assumptions. This rate was first adopted in the FY22 valuation.

RETIREMENT AGE

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

Sample annual retirement rates follow. The Tier 1 rates were revised in 2021 and the Tier 2 rates were revised in 2012.

Tier 1 is composed of members who entered into service before Jan. 1, 2011:

Tier 1 Retirement Assumptions

Age	Years of Service			
	5-18	19-29	30-33	34+
54	-%	7%	8%	45%
55	-	6	8	44
60	21	33	46	44
65	27	40	52	43
70	100	100	100	31
75	100	100	100	100

Tier 2 is composed of those entering into service on or after Jan. 1, 2011:

Tier 2 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 PubT-2010 mortality tables with adjustments as appropriate for TRS experience. The rates are used on a fully generational basis using projection table MP-2020.

For retirees, the PubT-2010 Retiree Mortality table is used with the following adjustments:

- female rates are multiplied by 91 percent for ages under 75 and 109 percent for ages 75 and older and
- male rates are multiplied by 105 percent for ages under 85 and 115 percent for 85 and older.

For disabled members, the PubNS-2010 Non-Safety Disabled Retiree Mortality table is used with no adjustments to male or female rates.

For beneficiaries, the Pub-2010 Contingent Survivor Mortality table is used with female rates multiplied by 98 percent for all ages and male rates multiplied by 110 percent for all ages.

For active and inactive members, the PubT-2010 Employee Mortality table is used with male and female rates multiplied by 90 percent for all ages.

DISABILITY

Here are the sample annual disability rates:

Disability Assumptions

Age	Male	Female
25	0.01%	0.02%
30	0.01	0.03
40	0.02	0.06
50	0.08	0.15
55	0.11	0.17
60	0.14	0.23
65	0.19	0.26

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	6.50%	6.25%	4.50%	4.50%
30	6.75	6.75	3.00	4.25
40	9.50	7.25	1.50	1.25
50	11.75	8.50	1.00	1.25
55	11.25	10.25	1.75	2.00
60	12.25	13.00	3.50	2.25
65	29.25	32.50	3.50	2.50

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 2.

Severance Pay Assumptions

Percent Retiring with Severance Pay	Severance Pay as a Percent of Other Pensionable Earnings in Last Year of Service
18%	8.0%

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	0.158 years
15	0.293 years
20	0.531 years
25	0.712 years
30	0.673 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
10	0.158 years
15	0.293 years
20	0.963 years
25	1.154 years
30	1.369 years
34	1.612 years
35 or more	None

POST-RETIREMENT INCREASES

Tier 1: 3%, compounded (statutory).

Tier 2: 1.25%, not compounded (adopted in FY22 valuation).

ACTUARIAL COST METHOD

The actuarial cost method required by the Illinois Pension Code is projected unit credit, which was adopted in the FY1989 valuation as required by Public Act 86-0273. The entry age normal cost method has been the basis of the TRS board's funding policy since FY15 and is used for financial reporting under GASB Statement No. 67.

ASSET VALUATION METHOD

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

ACCELERATED BENEFIT PROGRAMS (BUYOUTS)

Under the programs established by Public Act 100-0587 and extended to June 30, 2026 by Public Act 102-0718:

- 10 percent of eligible Tier 1 and Tier 2 future inactive members are assumed to participate in the Accelerated Pension Benefit Program (adopted in the FY22 valuation).

- 20 percent of new Tier 1 retirees are assumed to participate in the Accelerated Annual Increase Program.

The Accelerated Pension Benefit Program and Accelerated Annual Increase Program participation assumptions are based on the recent TRS actuarial experience review during the period of June 30, 2017 through June 30, 2020 and monitored for each consecutive valuation through FY23.

Of the original \$1 billion bond authorization, TRS was allotted \$650 million. From the inception of the buyout programs through FY23, TRS expended approximately \$800 million from bond proceeds. An additional \$1 billion bond authorization was signed into law in PA 102-0718 to fund the “buyout” programs.

Buyouts are assumed to be paid through June 30, 2026 with additional funds being allocated to TRS to pay for all assumed buyout payments, as needed.

ACTUARIAL EXPERIENCE ANALYSIS

In an actuarial experience analysis, a retirement system’s assumptions about future events are compared to its experience to determine whether the assumptions should be revised. In 2021, TRS actuaries conducted an analysis for the three years ending June 30, 2020. Based on their study, the actuaries recommended changes in assumptions that were first adopted by the TRS Board of Trustees in the June 30, 2021 actuarial valuation. The TRS System actuary will conduct the next experience study in 2024.

The following changes in assumptions were adopted by the TRS Board of Trustees in August 2021:

- The rates of individual salary increase were decreased based on plan experience.
- The new entrant pay increase assumption was changed to equal the inflation assumption.
- The average COLA and rate of increase in the pensionable salary cap applicable to Tier 2 members was decreased based on the change in the inflation assumption.
- The percent of retirees assumed to receive severance pay and the average severance payment amount were decreased.
- The healthy, disabled, and beneficiary post-retirement and pre-retirement mortality assumption was updated to use the recently published PubT-2010 Mortality Tables with adjusted rate multipliers at various ages for males and females to better reflect plan experience.
- The mortality improvement scale was updated from Scale MP-2017 to Scale MP-2020.
- The retirement rates for active Tier 1 members were adjusted based on plan experience. The previous service groups of 30 to 31 years of service and 32 to 33 years of service were updated to 30 to 33 years of service.
- The termination rates were decreased based on plan experience.
- The disability rates were decreased based on plan experience.
- The sick leave service credit rates were adjusted based on plan experience.
- The optional service purchase rates were adjusted based on plan experience.
- The future service accrual rates were increased based on plan experience.
- The Automatic Annual Increase buyout participation rate was increased for eligible retiring Tier 1 members based on plan experience.
- The Inactive Vested buyout participation rate was decreased for eligible inactive vested members based on plan experience.
- The period which buyouts, at that time of the experience study, were assumed to be paid was extended from FY22 to FY24. Since that time,

the buyout programs were extended again from FY24 to FY26.

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.

All actuarial assumptions used to prepare the actuarial valuation are reviewed every three years. The last review, called an actuarial experience analysis, was conducted in 2021. The major economic assumptions are reviewed every year. The state actuary recommended this more frequent review.

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

Actuarial Valuation (\$ thousands)

	Year Ended June 30, 2023
Based on actuarial value of assets	
Total actuarial accrued liability	\$148,398,296
Less actuarial value of assets*	66,502,287
Unfunded liability	<u>\$81,896,009</u>
Funded ratio*	44.8%
Based on fair value of assets	
Total actuarial accrued liability	\$148,398,296
Less assets at fair value	66,504,717
Unfunded liability	<u>\$81,893,579</u>
Funded ratio	44.8%

* Five-year prospective smoothing began in FY09.

ANALYSIS OF FINANCIAL EXPERIENCE: RECONCILIATION OF UNFUNDED LIABILITY

The \$1.3 billion net increase in the 2023 unfunded liability was caused by a combination of factors.

The first factor shown in the reconciliation table is the difference between actual employer/state contributions and the amount that would cover the employer/state's cost of benefits earned during the year and prevent the prior year's unfunded liability from growing. That shortfall was \$565 million.

Actuarial gains and losses occurred under the other assumptions. The most significant gain was on buyout experience. Other actuarial gains occurred under the assumptions for retirements, disabilities, mortality and new entrants meaning that experience was more favorable (less costly) than assumed.

Actuarial losses occurred under the assumptions for salary increases, investments, terminations and rehires (members coming back into teaching service), meaning that experience was less favorable (more costly) than assumed. The loss of \$447 million in the "other" category is a balancing item.

The net effect of the actuarial gains and losses was an increase in the unfunded liability of \$717 million.

In summary, the \$1.3 billion increase in the unfunded liability is the net effect of the \$0.6 billion employer cost in excess of contributions and the \$0.7 billion loss due to experience.

Reconciliation of Unfunded Liability

Reconciliation of Unfunded Actuarial Accrued Liability	Year Ended June 30, 2023
Unfunded liability at beginning of year	\$80,613,328,781
Additions	
Employer cost in excess of contributions	565,237,635
Experience (gain)/loss from:	
Investment (gain)/loss on actuarial value of assets*	29,433,147
Salaries for continuing active members	237,171,924
Retirements other than expected	(3,778,734)
Disabilities other than expected	(13,870,284)
Terminations other than expected	27,073,060
Mortality other than expected	(15,608,188)
Rehires	45,283,039
New entrants	(154,803)
Buyout experience	(35,490,137)
Other	447,383,668
Net experience (loss)	717,442,692
Changes in actuarial assumptions	-
Net increase in unfunded liability	1,282,680,327
Unfunded liability at end of year	<u>\$81,896,009,108</u>

* Assets were expected to earn 7.0 percent during the year ended June 30, 2023. This item is the difference between the expected and the actual return on an actuarial basis.

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 to the legislative and executive branches 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 estimate of the annual increase in Illinois revenue. Future 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 the most commonly used method in the public sector. Entry age would assign costs more evenly over an employee's normal career. It would replace the projected unit credit actuarial cost method that is required under Illinois 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 FY1996. 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 through FY33 do not exceed certain maximums. After FY33 when debt service on the bonds is repaid, contributions are higher than they would have been without the maximums.

Public Act 100-0023, enacted in 2017, made two changes that affected TRS funding and required TRS to recertify the FY18 state contribution. First, changes in actuarial assumptions made since the FY12 actuarial valuation are to be phased in over five-year periods to reduce volatility in the state contribution. Second, the act requires employers to contribute to TRS an amount that covers the employer normal cost on earnings that exceed the governor’s statutory salary.

State Funding Amounts

The FY24 certified state contributions are based on the June 30, 2022 actuarial valuation and the FY25 certifications are based on the June 30, 2023 actuarial valuation. The state actuary will review the proposed certifications for FY25 as well as the preliminary June 30, 2023 valuation. Final certifications for FY25 are due Jan. 15, 2024 pursuant to Public Act 97-0674.

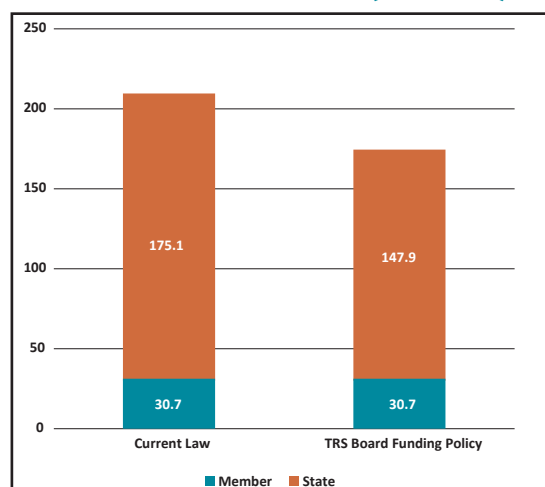
The following table shows funding requirements under the statutory funding plan and the TRS Board of Trustee's funding plan that was adopted in 2015.

FY24 & FY25 State Contribution Requirements

	FY24 Requirements	FY25 Requirements
Based on Statutory Funding Plan		
Benefit Trust Reserve	\$6,043,154,650	\$6,203,622,413
Minimum Annuity Reserve	300,000	300,000
Total State Contribution	\$6,043,454,650	\$6,203,922,413
Based on TRS Board Funding Policy		
Benefit Trust Reserve	\$9,589,816,087	\$10,105,574,758
Minimum Annuity Reserve	300,000	300,000
Total State Contribution	\$9,590,116,087	\$10,105,874,758
Employer Normal Cost Rate		
Tier 1	15.13%	15.47%
Tier 2	(1.03%)	(0.94%)
Combined	10.60%	10.34%

Under the TRS Board of Trustee’s funding policy, the state funding requirement is initially higher than under the statutory plan because it begins reducing the unfunded liability immediately. Over time, however, funding-based on this actuarial standard greatly reduces state contributions because it reduces the finance charges that occur under the statutory plan. Under the board's funding policy, total state contributions from FY25 through FY45 would be \$27.2 billion lower than under current law.

State and Member Required Contributions FY25-FY45 (\$ Billions)



TESTS OF FINANCIAL CONDITION

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

Funded Ratio Test (\$ thousands)

As of June 30	Actuarial Accrued Liability	Assets		Unfunded Liability Using Assets Based on		Funded Ratio Using Assets Based on	
		Actuarial Value	Fair Value	Actuarial Value	Fair Value	Actuarial Value	Fair Value
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
2017	122,904,034	49,467,525	49,375,665	73,436,509	73,528,369	40.2	40.2
2018	127,019,330	51,730,890	51,969,547	75,288,440	75,049,783	40.7	40.9
2019	131,456,969	53,391,193	53,262,789	78,065,776	78,194,180	40.6	40.5
2020	135,598,547	54,890,976	52,316,478	80,707,571	83,282,069	40.5	38.6
2021	138,914,275	58,979,923	64,212,505	79,934,352	74,701,770	42.5	46.2
2022	143,523,731	62,910,402	62,833,626	80,613,328	80,690,105	43.8	43.8
2023	148,398,296	66,502,287	66,504,717	81,896,009	81,893,579	44.8	44.8

The unfunded liability as a percentage of payroll is a standard measure of the relative size of the unfunded liability. Increases in this percentage indicate deterioration 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
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
2017	9,965,570	73,436,509	736.9
2018	10,163,980	75,288,440	740.7
2019	10,450,452	78,065,776	747.0
2020	10,827,439	80,707,571	745.4
2021	11,120,776	79,934,352	718.8
2022	11,647,248	80,613,329	692.1
2023	12,382,202	81,896,009	661.4

* Payroll supplied by TRS

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		
	Active Member Contributions (1)	Participants Currently Receiving Benefits) (2)	Active Members Employer Portion (3)		(1)	(2)	(3)
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	-
2017	9,683,095	80,882,353	32,338,586	49,467,525	100	49	-
2018	10,057,427	82,968,465	33,993,438	51,730,890	100	50	-
2019	10,474,097	85,788,806	35,194,066	53,391,193	100	50	-
2020	10,902,747	88,185,983	36,509,817	54,890,976	100	50	-
2021	11,320,352	88,788,971	38,804,952	58,979,923	100	54	-
2022	11,804,784	90,534,637	41,184,310	62,910,402	100	56	-
2023	12,276,856	92,515,847	43,605,593	66,502,287	100	59	-

OTHER INFORMATION

Schedule of Contributions from Employers and Other Contributing Entities (\$ thousands)

Year Ended June 30	State Contributions ¹	Federal and Employer Contributions ²	Total	Actuarially Determined Contribution ³	Percentage Contributed	Annual Required Contribution per State Statute	Percentage Contributed ⁴
2014	\$3,437,478	\$157,228	\$3,594,706	\$4,091,978	87.8%	\$3,592,578	100.1%
2015	3,376,878	144,780	3,521,658	4,119,526	85.5	3,497,366	100.7
2016	3,741,802	147,408	3,889,210	4,582,530	84.9	3,883,544	100.1
2017	3,985,783	148,749	4,134,532	6,248,879	66.2	4,124,119	100.3
2018	4,094,616	84,034	4,178,650	7,080,756	59.0	4,178,744	100.0
2019	4,465,578	87,707	4,553,285	7,429,037	61.3	4,554,862	100.0
2020	4,763,078	92,038	4,855,116	7,988,612	60.8	4,923,519	98.6
2021	5,140,337	97,082	5,237,419	8,441,258	62.0	5,237,798	100.0
2022	5,866,530 ⁵	120,441	5,986,971	8,947,919	66.9	5,791,571	103.4
2023	6,008,948 ⁵	123,194	6,132,142	9,201,648	66.6	5,994,047	102.3

1. Actual state contribution amounts paid, reflecting recertifications which may not agree with original certifications in actuarial reports. Minimum benefit reimbursements are excluded.
2. Excess sick leave and penalty employer contributions are excluded. Beginning in FY18, the federal contribution rate for salaries paid from federal funds is the same as the total employer normal cost rate. Previously, it was the same as the state contribution rate. Reflects a temporary increase in federal funds payroll resulting from the Elementary and Secondary Emergency Relief Fund (ESSER).
3. Actuarially determined contribution (ADC) through FY16 was based on GASB Statement No. 25. Beginning in FY17, the ADC is based on the TRS Board of Trustees funding policy.
4. Actual contributions varied slightly from contributions that are required by statute mainly because of differences between estimated and actual federal contributions.
5. State contributions for year ended June 30, 2022 reflect a one-time contribution of \$172 million from the Pension Stabilization Fund per PA102-0696. State contributions for year ended June 30, 2023 reflect two contributions of \$115.2 million appropriated from the Pension Stabilization Fund per PA 102-0698. One of these contributions was received in FY24.

The previous Schedule of Contributions from Employers and Other Contributing Entities is similar to the Schedule of the Employers' Contributions shown in the Required Supplementary Information in the Financial Section. Through FY16, both tables are based on an Actuarially Determined Contribution (ADC). Until FY17, the ADC includes the employer's normal cost and amortizes the System's unfunded liability over a 30-year open period, with the amortization component based on a level percent of pay pursuant to GASB Statement No. 25. Beginning in FY17, a different comparison is used due to the board's adoption of a more stringent actuarial funding calculation for its alternative certification. The board's funding policy was described earlier in this section under "Actuarial Standards and Illinois State Pension Funding."

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.

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
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
2017	117,650	5,627	3,126	120,151	6,328,506,420	5.0	52,671	2.9
2018	120,151	5,672	3,400	122,423	6,629,605,138	4.8	54,153	2.8
2019	122,423	5,238	3,362	124,299	6,915,297,528	4.3	55,634	2.7
2020	124,299	5,151	3,523	125,927	7,183,690,664	3.9	57,046	2.5
2021	125,927	5,502	3,911	127,518	7,461,806,091	3.9	58,516	2.6
2022	127,518	5,729	3,781	129,466	7,750,208,525	3.9	59,863	2.3
2023	129,466	5,396	3,845	131,017	8,044,435,268	3.8	61,400	2.6

Source: TRS

Year Ended June 30	Amount Added to Rolls		
	Annual Benefit Increases	New Benefit Recipients	Amount Removed from Rolls
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
2017	180,258,847	242,035,397	118,613,331
2018	187,737,960	249,984,285	136,623,527
2019	194,545,787	233,753,123	142,606,520
2020	203,914,182	217,817,526	153,338,572
2021	208,410,910	252,691,913	182,987,395
2022	217,281,781	259,338,852	188,218,199
2023	223,131,733	267,245,806	196,150,796

Source: TRS

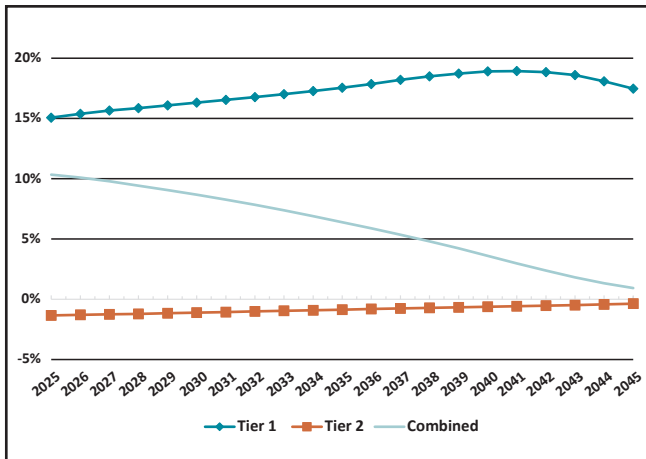
FUNDING ANALYSIS BY TIER

Public Act 96-0889 established a new tier of benefits for teachers who first contributed to TRS or another reciprocal pension system on or after Jan. 1, 2011. Tier 2 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. On July 1, 2016, the member contribution rate for both tiers decreased from 9.4 percent 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. It does not include any contributions towards the unfunded liability. The following chart shows that while the combined employer normal cost of both tiers in 2023 is over 10 percent of pay, the cost of Tier 2 is negative and stays negative through 2045.

As more Tier 2 members enter TRS, the combined employer normal cost continues to fall. In the meantime, the cost of Tier 1, which is a closed group, continues to increase, until 2042, as Tier 1 members age and accrue more service. 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.

Employer Normal Cost by Tier

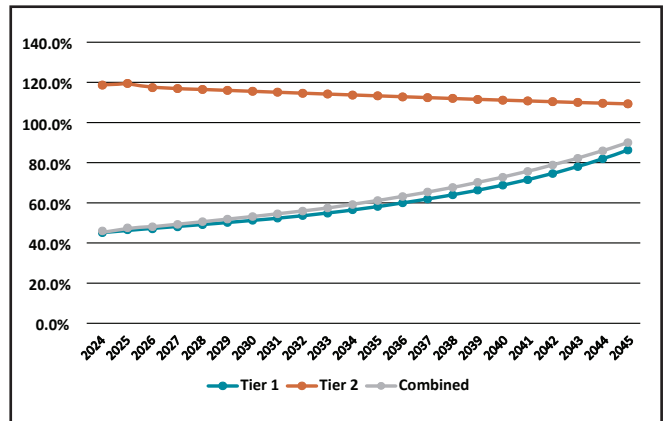


Note: Combined rate includes administrative expenses.
Source: 2023 valuation

Under the 50-year funding plan, TRS will attain a funded ratio of 90 percent by 2045. The following chart illustrates what the funded ratios would be if they were operated as separate retirement plans. Tier 2 would be overfunded because member contributions are higher than the cost of Tier 2 benefits. The surplus Tier 2 assets lower the employer/state contributions required for Tier 1. Tier 2 active members are projected to outnumber Tier 1 active members by 2028.

By 2045, Tier 1 would be 86 percent funded and Tier 2 would be 109 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



Source: 2023 valuation

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

Years of Service		2023	2022	2021	2020
Under 5	Members	29,698	28,141	27,043	26,499
	Salary	\$55,106	\$53,146	\$53,591	\$51,260
5-9	Members	26,535	27,006	27,577	27,309
	Salary	\$66,437	\$64,545	\$63,366	\$61,110
10-14	Members	22,559	23,197	24,514	25,861
	Salary	\$77,583	\$75,681	\$74,888	\$73,590
15-19	Members	25,786	25,657	25,545	25,186
	Salary	\$90,645	\$88,801	\$87,256	\$85,800
20-24	Members	20,391	19,932	19,018	17,618
	Salary	\$103,305	\$100,358	\$97,906	\$95,974
25-29	Members	11,481	11,482	10,930	10,520
	Salary	\$111,466	\$108,662	\$105,660	\$103,541
30-34	Members	4,852	4,510	4,354	4,193
	Salary	\$117,589	\$115,454	\$112,524	\$109,478
35 +	Members	297	307	326	356
	Salary	\$121,419	\$121,506	\$119,173	\$116,714
Total Members		142,553	140,232	139,307	137,542
Salary		\$81,274	\$79,002	\$77,577	\$76,027
% Change salary		2.9%	1.8%	2.0%	2.0%
Total payroll full & part-time		\$11,585,640,489	\$11,078,509,648	\$10,807,084,561	\$10,456,942,174
Number of Employers		995	992	991	990

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.

2019	2018	2017	2016	2015	2014
26,111	25,959	26,486	26,767	26,698	25,191
\$51,835	\$50,568	\$49,935	\$49,464	\$47,796	\$46,845
26,264	25,831	26,436	27,845	29,798	33,028
\$60,626	\$59,615	\$59,150	\$59,276	\$58,935	\$58,540
28,322	29,465	29,617	29,395	29,214	28,747
\$73,266	\$72,008	\$71,412	\$71,140	\$70,589	\$70,233
24,459	24,304	23,936	22,894	21,421	19,917
\$85,131	\$84,065	\$82,745	\$81,868	\$80,737	\$79,921
16,209	15,590	14,728	14,120	13,877	13,562
\$94,599	\$93,379	\$92,035	\$90,942	\$89,591	\$88,037
10,038	8,786	8,254	8,087	7,908	7,827
\$101,340	\$99,102	\$97,624	\$96,157	\$94,510	\$93,016
3,950	3,976	3,979	3,936	3,970	3,941
\$106,097	\$105,266	\$104,652	\$102,896	\$100,785	\$98,807
353	379	453	592	731	809
\$112,963	\$111,104	\$110,576	\$107,826	\$105,372	\$103,533
135,706	134,290	133,889	133,636	133,617	133,022
\$74,518	\$73,028	\$71,773	\$70,868	\$69,538	\$68,556
2.0%	1.7%	1.3%	1.9%	1.4%	1.5%
\$10,112,568,797	\$9,806,930,120	\$9,609,615,197	\$9,470,516,048	\$9,291,458,946	\$9,119,456,232
990	990	989	992	1,006	1,013

Average Annual Salary and Age for Active Members by Years of Service as of June 30, 2023

Age		Subs	Years of Service			
			Under 5	5-9	10-14	15-19
20-24	Members	3,147	4,254	-	-	-
	Salary	\$6,151	\$47,861	-	-	-
25-29	Members	2,562	10,010	3,851	-	-
	Salary	\$8,020	\$53,156	\$60,419	-	-
30-34	Members	1,881	4,410	9,129	3,254	-
	Salary	\$6,879	\$55,504	\$65,239	\$73,450	-
35-39	Members	2,643	3,191	4,935	9,127	4,166
	Salary	\$6,583	\$57,587	\$68,440	\$77,796	\$88,014
40-44	Members	3,480	2,831	3,263	4,231	11,169
	Salary	\$7,297	\$58,383	\$69,521	\$79,519	\$91,490
45-49	Members	3,069	2,053	2,269	2,460	4,425
	Salary	\$7,717	\$58,213	\$68,437	\$78,031	\$93,030
50-54	Members	2,921	1,458	1,666	1,829	3,048
	Salary	\$7,743	\$60,412	\$70,456	\$78,611	\$90,019
55-59	Members	2,559	897	839	1,076	1,951
	Salary	\$7,501	\$68,532	\$68,685	\$77,820	\$87,965
60-64	Members	2,259	414	428	468	821
	Salary	\$7,394	\$65,968	\$68,808	\$78,176	\$88,732
65-69	Members	1,599	142	127	96	183
	Salary	\$7,092	\$61,753	\$66,208	\$77,070	\$89,678
70-74	Members	870	31	25	18	16
	Salary	\$7,433	\$49,116	\$71,681	\$73,014	\$81,838
Over 74	Members	346	9	2	3	5
	Salary	\$8,113	\$47,145	\$33,902	\$46,719	\$93,655
Total Members		27,336	29,700	26,534	22,562	25,784
Salary		\$7,260	\$55,105	\$66,437	\$77,582	\$90,616

Source: TRS

	Average Age	Average Years of Service	Members
Full and part-time members	43	14	142,553
Substitutes	45	3	27,336
All	43	11	169,889

Years of Service							Full & Part-time Member Totals
20-24	25-29	30-34	35-39	40-44	45-49	50+	
-	-	-	-	-	-	-	4,254
-	-	-	-	-	-	-	\$47,861
-	-	-	-	-	-	-	13,861
-	-	-	-	-	-	-	\$55,176
-	-	-	-	-	-	-	16,793
-	-	-	-	-	-	-	\$64,275
-	-	-	-	-	-	-	21,419
-	-	-	-	-	-	-	\$74,617
3,982	-	-	-	-	-	-	25,476
\$101,309	-	-	-	-	-	-	\$84,544
9,333	2,636	-	-	-	-	-	23,176
\$104,614	\$110,739	-	-	-	-	-	\$92,625
4,087	6,854	1,969	-	-	-	-	20,911
\$103,777	\$111,963	\$116,105	-	-	-	-	\$97,736
2,039	2,339	2,585	107	-	-	-	11,833
\$102,200	\$112,190	\$118,962	\$122,890	-	-	-	\$98,535
742	492	240	116	14	-	-	3,735
\$98,590	\$106,230	\$116,537	\$117,725	\$133,429	-	-	\$89,721
179	90	46	14	18	7	-	902
\$100,439	\$105,552	\$111,988	\$114,503	\$130,742	\$116,426	-	\$86,905
25	19	9	5	4	6	2	160
\$108,405	\$110,546	\$118,935	\$111,630	\$77,764	\$119,950	\$84,591	\$84,858
2	5	3	2	-	-	2	33
\$99,508	\$99,570	\$73,662	\$110,022	-	-	\$104,229	\$74,148
20,389	12,435	4,852	244	36	13	4	142,553
\$103,308	\$111,466	\$117,589	\$119,617	\$125,901	\$118,052	\$94,410	\$81,274

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 15-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 contributed to TRS or one of the Illinois reciprocal retirement systems on or after Jan. 1, 2011. Tier 1 benefits were not affected by PA 96-0889. See the table on pages 106-107 for a summary of Tier 1 and Tier 2 benefits.

See the Financial Section for a discussion of benefit programs recently enacted by the legislature. The accelerated benefit programs are discussed on pages 90-91. Tier 3 is discussed in the Notes to the Financial Section under "A. Plan Description, 5. Benefits Provisions."

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.

IMAGING AND USER SUPPORT DEPARTMENT



The front desk **Office Associate** always greets visitors with a friendly welcome.



A **Document Imaging Technician** analyses forms and correspondence from TRS members for content and purpose.

SUMMARY OF TIER 1 AND TIER 2 BENEFIT PROVISIONS

Tier 1	
Tier 1 Defined	Members who first contributed to TRS or one of the other Illinois reciprocal retirement systems before Jan. 1, 2011 are covered by Tier 1. Tier 1 membership is retained even if a member takes a refund and does not repay it.
Retirement Eligibility (Vesting)	<p>Tier 1 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) • 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>
Retirement Formula	<p>Retirement benefits for most Tier 1 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 1 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 the average of the four highest consecutive annual salary rates within the last 10 years of creditable service with one exception. Public Act 102-0016 removes the consecutive years requirement for members who are retiring on or after June 1, 2021 and the 2020-21 school year is used in the member's final average salary. The final average salary will be based on the four highest years within the last 10 years of creditable service.</p> <p>Tier 1 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	Annual increases are 3% of the current retiree benefit. The first increase is the later of the Jan. 1 following attainment of age 61 or the first anniversary of retirement.
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 annually or a higher amount based on service credit and age.</p> <p>On the Jan. 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 1 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	Until June 30, 2026, Tier 1 retirees can teach up to 120 days or 600 hours per year without having their retirement benefits suspended.
Contributions to TRS	<p>During FY23, Tier 1 members contributed 9.0% of pay. Of this rate, 7.5% is for retirement benefits, 1.0% is for survivor benefits and 0.5% is for the annual increase.</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 FY23, members contributed 0.90% 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 except for the 1% survivor benefit contribution. Credit can be re-established if the member returns to a 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.

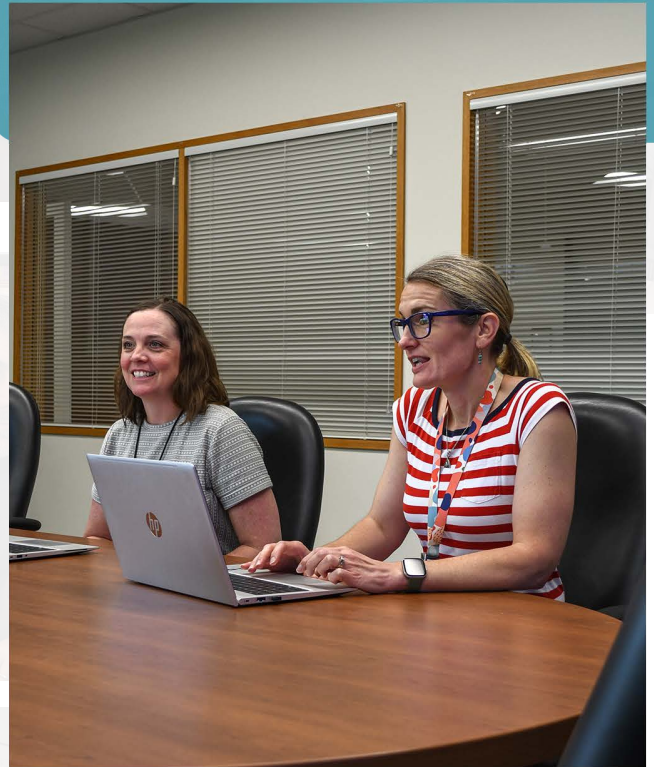
(continued)

Accelerated Benefit Programs (temporary)	<p>Until June 30, 2026, inactive members with five years of TRS service can take a lump-sum payment of 60% of the present value of their future benefit payments. Buyout payments are contingent upon sufficient bond proceeds being available.</p> <p>Until June 30, 2026, retiring members can elect to receive 70% of the present value of the difference between the current 3% compounded annual increase that starts no earlier than age 61 and a 1.5% noncompounded annual increase that starts no earlier than age 67. Buyout payments are contingent upon sufficient bond proceeds being available.</p>
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Tier 2	
Tier 2 Defined	Members who first contributed to TRS on or after Jan. 1, 2011 and do not have any previous service with one of the other Illinois reciprocal retirement systems are covered by Tier 2.
Retirement Eligibility (vesting)	<p>Tier 2 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>
Retirement Formula	<p>Retirement benefits for Tier 2 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 2 creditable earnings for pension purposes are limited by an amount that is tied to the 2010 Social Security Wage Base (SSWB). The Tier 2 limit increases by 3% or half the increase in the Consumer Price Index, whichever is less. The FY23 Tier 2 limit was \$123,489.18.</p> <p>The final average salary is based on the member's highest average salary earned during eight consecutive years out of the last 10 years of service with one exception. Public Act 102-0016 removes the consecutive years requirement for members who are retiring on or after June 1, 2022 and the 2021-22 school year is used in the member's final average salary. The final average salary will be based on the eight highest years within the last 10 years of creditable service.</p> <p>Tier 2 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. The first increase is the later of the Jan. 1 following attainment of age 67 or the first anniversary of retirement.</p>
Disability Benefits	Same as Tier 1, including increases.
Survivor Benefits	<p>In most cases, survivor benefits for Tier 2 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 2 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 FY23, Tier 2 members also contributed 9.0% of pay, with components designated for the same to TRS purposes.</p> <p>Tier 2 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 1.
Refunds	Same as Tier 1.
Service Credit	Same as Tier 1. The purchase of optional service earned before Jan. 1, 2011 does not change a Tier 2 member's status to Tier 1.
Accelerated Benefit Program (temporary)	Until June 30, 2026, inactive members with 10 years of TRS service can take a lump-sum payment of 60% of the present value of their future benefit payments. Buyout payments are contingent upon sufficient bond proceeds being available.



The **Communications team** selects photos for this publication.



The **Executive Officer** and **Executive Administrator** discuss implementing the Strategic Plan.



The **Internal Audit & Risk Department** holds their weekly staff meeting.

EXECUTIVE DEPARTMENT



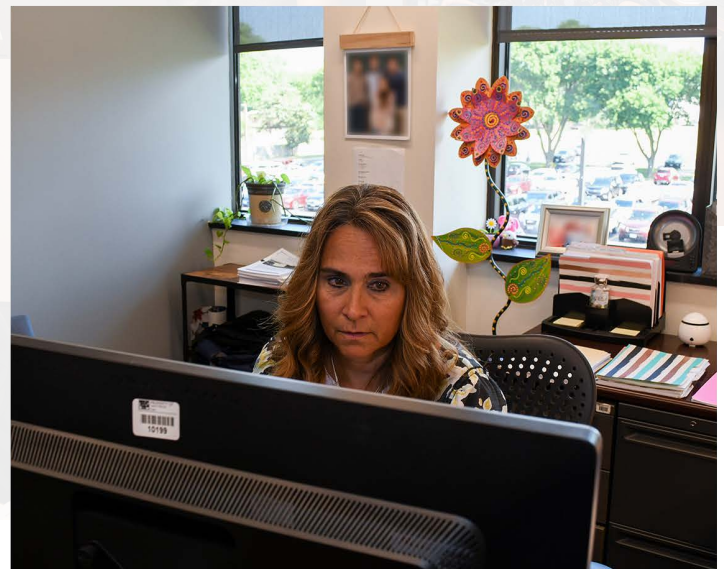
An **Employer Services Analyst** makes copies for employers.



An **Auditor** prints off a report.



An **Auditor** works with an employer to solve a reporting error.

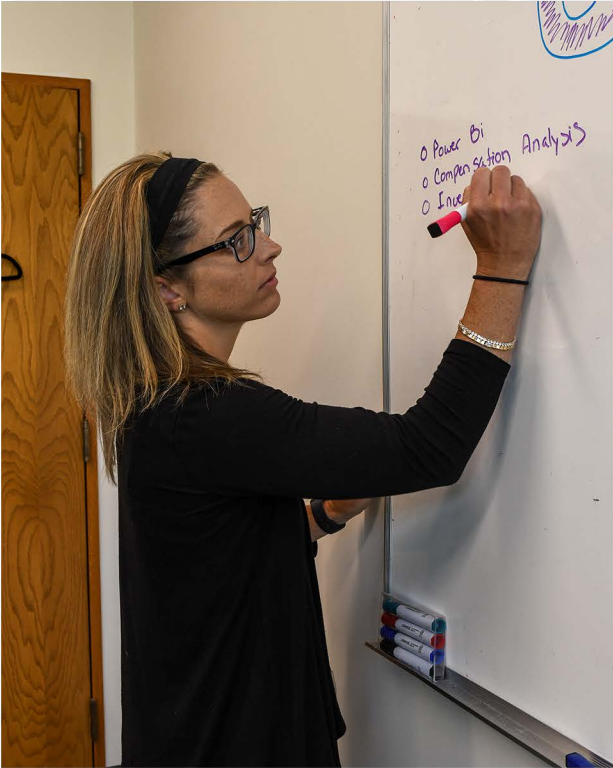


An **Employer Services Supervisor** reviews an employer's annual report.

EMPLOYER SERVICES DEPARTMENT

STATISTICAL

HUMAN RESOURCES DEPARTMENT



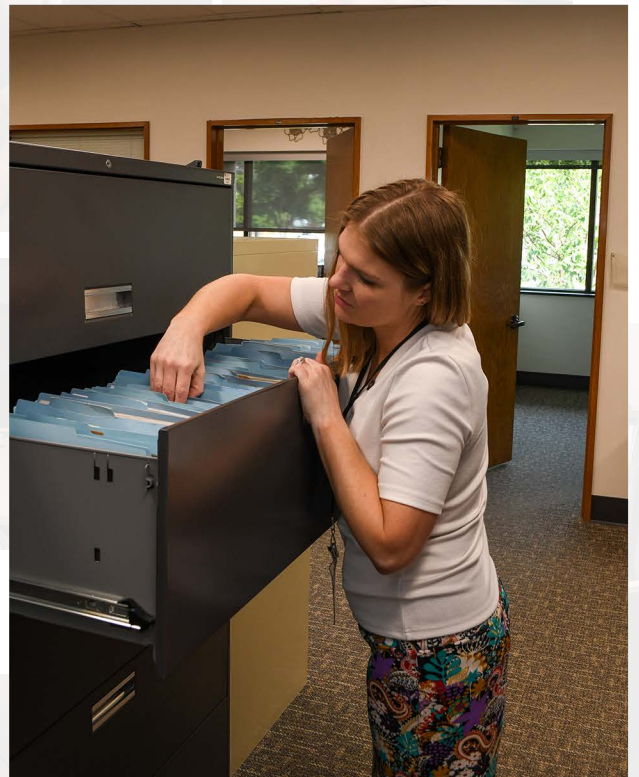
The **HR Business Partner** develops HR strategies that support the agency's goals and objectives.



The **HR Director** and **HR Generalist** engage in a collaborative discussion to explore and exchange innovative recruitment strategies during a video conference call.



The **Organizational Effectiveness Specialist** designs strategies to enhance the overall effectiveness, efficiency, and performance of the agency and our employees.



The **HR Administrative Coordinator** ensures that staff's employment records are up-to-date and creates a well-organized and compliant personnel record-keeping system.

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

10-Year Financial Trends – Pages 112-113

These two 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 114

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

Active Members by Tier – Page 114

This schedule shows the number of members by tier since Tier 2 began in FY11.

Retired Members by Years of Service and Years in Retirement – Page 115

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.

Demographics of Benefit Recipients and Active Members – Pages 116-117

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

Benefit Recipients by Type and Summary Statistics, All Benefit Recipients – Page 118

This schedule shows counts by benefit type and range. Additional tables show averages by benefit type and retirements by subtype.

Average Benefit Payments For New Retirees – Page 119

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.

Medians for Retirees – Page 119

This schedule shows the median age, median monthly amount, median service credit and retiree count for all and new retirees.

Participating Employers – Page 120

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

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

	2023	2022	2021	2020
Additions				
Member contributions*	\$1,109,498	\$1,072,639	\$1,023,532	\$994,400
State of Illinois	6,009,158	5,866,800	5,140,648	4,813,452
Employer contributions**	124,748	120,876	97,594	92,658
Investment income (loss) net of expenses	4,427,043	(743,042)	13,046,154	275,669
Total additions to/reductions from plan net position	11,670,447	6,317,273	19,307,928	6,176,179
Deductions				
Benefit payments	7,899,143	7,607,019	7,323,949	7,035,307
Refunds	68,187	62,557	64,194	64,217
Administrative expenses	32,026	26,576	23,758	22,966
Total deductions from plan net position	7,999,356	7,696,152	7,411,901	7,122,490
Changes in net position restricted for pensions				
Beginning of year	62,833,626	64,212,505	52,316,478	53,262,789
Net increase (decrease)	3,671,091	(1,378,879)	11,896,027	(946,311)
End of year	\$66,504,717	\$62,833,626	\$64,212,505	\$52,316,478

* 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. Beginning in 2018, contributions on earnings exceeding the governor's statutory salary are also included.

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

	2023	2022	2021	2020
Type of benefit				
Retirement	\$7,450,998	\$7,188,188	\$6,935,054	\$6,672,267
Survivor	416,260	386,985	357,078	329,872
Disability	31,885	31,847	31,817	33,168
Total benefits	\$7,899,143	\$7,607,020	\$7,323,949	\$7,035,307
Type of refund				
Withdrawals	21,537	18,367	16,927	19,150
Death benefits and excess contribution refunds paid to survivors	23,849	21,568	21,769	18,372
2.2 and optional service	8,954	9,264	10,587	11,082
Survivor contributions refunded to retirees	9,538	9,190	9,498	8,791
Early Retirement Option and other	4,309	4,168	5,413	6,822
Total refunds	\$68,187	\$62,557	\$64,194	\$64,217

2019	2018	2017	2016	2015	2014
\$963,972	\$938,037	\$929,130	\$951,809	\$935,451	\$928,746
4,466,021	4,095,125	3,986,364	3,742,469	3,377,665	3,438,383
88,514	84,633	149,495	148,041	145,591	158,335
<u>2,617,831</u>	<u>4,049,272</u>	<u>5,520,453</u>	<u>(44,103)</u>	<u>1,770,550</u>	<u>6,782,031</u>
8,136,338	9,167,067	10,585,442	4,798,216	6,229,257	11,307,495
6,745,544	6,458,710	6,152,868	5,848,180	5,536,399	5,225,207
73,216	92,925	285,138	83,027	88,638	95,456
<u>24,336</u>	<u>21,550</u>	<u>22,729</u>	<u>22,968</u>	<u>21,687</u>	<u>21,218</u>
6,843,096	6,573,185	6,460,735	5,954,175	5,646,724	5,341,881
51,969,547	49,375,665	45,250,957	46,406,916	45,824,382	39,858,768
<u>1,293,242</u>	<u>2,593,882</u>	<u>4,124,708</u>	<u>(1,155,959)</u>	<u>582,534</u>	<u>5,965,614</u>
<u>\$53,262,789</u>	<u>\$51,969,547</u>	<u>\$49,375,665</u>	<u>\$45,250,957</u>	<u>\$46,406,916</u>	<u>\$45,824,382</u>

2019	2018	2017	2016	2015	2014
\$6,405,908	\$6,140,877	\$5,857,968	\$5,575,130	\$5,281,221	\$4,986,156
306,503	285,068	263,430	242,578	224,779	208,424
<u>33,133</u>	<u>32,765</u>	<u>31,470</u>	<u>30,472</u>	<u>30,399</u>	<u>30,627</u>
\$6,745,544	\$6,458,710	\$6,152,868	\$5,848,180	\$5,536,399	\$5,225,207
23,358	27,356	30,487	26,797	29,789	33,128
21,172	20,263	19,135	17,094	17,881	20,633
11,132	13,247	14,185	15,074	17,855	19,331
8,225	8,839	9,410	10,458	10,197	10,990
<u>9,329</u>	<u>23,220</u>	<u>211,921</u>	<u>13,604</u>	<u>12,916</u>	<u>11,374</u>
\$73,216	\$92,925	\$285,138	\$83,027	\$88,638	\$95,456

Employee and Employer Contribution Rates, Last 10 Fiscal Years

Fiscal Year	Employee Rate (%) ¹	Employer Rate (%)			Total ⁴
		State ²	School Districts for 2.2 Formula	School Districts from Federal Sources ³	
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
2017	9.00	37.81	0.58	0.73	39.12
2018	9.00	39.22	0.58	0.20	40.02
2019	9.00	41.93	0.58	0.27	42.77
2020	9.00	43.94	0.58	0.28	44.80
2021	9.00	45.84	0.58	0.29	46.71
2022	9.00	49.63	0.58	0.28	50.49
2023	9.00	50.45	0.58	0.28	60.31

1. Employee rate decreased to 9.00 percent in FY17 because the ERO program was discontinued.
2. State contributions rates reflect recertifications and may not agree with original certifications in actuarial reports.
3. Beginning in FY18, the federal contribution rate for salaries paid from federal funds is the same as the total employer normal cost rate. Previously, it was the same as the state contribution rate.
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.

Active Members by Tier

Fiscal Year	Tier 1		Tier 2		Total - Both Tiers	
	Number	% of Total	Number	% of Total	Number	% of Total
2014	138,260	86.5%	21,578	13.5%	159,838	100.0%
2015	133,147	83.4	26,560	16.6	159,707	100.0
2016	128,107	80.2	31,628	19.8	159,735	100.0
2017	123,630	77.0	36,858	23.0	160,488	100.0
2018	119,333	74.2	41,526	25.8	160,859	100.0
2019	115,839	71.1	47,188	28.9	163,027	100.0
2020	112,004	68.7	51,111	31.3	163,115	100.0
2021	105,062	66.1	53,965	33.9	159,027	100.0
2022	103,163	62.3	62,403	37.7	165,566	100.0
2023	101,097	59.5	68,792	40.5	169,889	100.0

Note: Tier 2 membership began Jan. 1, 2011.

Retired Members by Years of Service and Years in Retirement as of June 30, 2023*

Years Retired		Years of Service											Weighted Average	Avg. Age
		Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+		
Under 1	Retirees	144	219	252	316	505	507	662	839	18	4	3	3,469	60
	Avg. current benefit	\$266	\$873	\$1,642	\$2,571	\$3,749	\$5,048	\$6,602	\$7,543	\$9,213	\$12,065	\$17,936	\$4,865	
	Avg. orig. benefit	\$266	\$872	\$1,635	\$2,560	\$3,741	\$5,047	\$6,589	\$7,540	\$9,213	\$12,065	\$17,936	\$4,859	
1 - 4	Retirees	866	1,368	1,312	1,710	2,393	2,198	2,612	3,182	154	37	12	15,844	63
	Avg. current benefit	\$271	\$837	\$1,565	\$2,623	\$3,650	\$4,880	\$6,258	\$7,087	\$8,487	\$10,848	\$12,912	\$4,301	
	Avg. orig. benefit	\$257	\$789	\$1,479	\$2,483	\$3,486	\$4,678	\$6,017	\$6,939	\$7,951	\$10,271	\$12,484	\$4,144	
5 - 9	Retirees	1,064	1,913	1,961	2,254	3,289	3,002	3,446	4,391	415	68	10	21,813	68
	Avg. current benefit	\$336	\$901	\$1,787	\$2,909	\$4,027	\$5,363	\$6,848	\$7,620	\$8,627	\$10,305	\$14,942	\$4,754	
	Avg. orig. benefit	\$274	\$732	\$1,458	\$2,386	\$3,315	\$4,416	\$5,631	\$6,289	\$7,065	\$8,421	\$12,160	\$3,912	
10 - 14	Retirees	1,033	2,123	1,915	1,855	2,947	2,919	4,225	6,450	488	74	10	24,039	72
	Avg. current benefit	\$392	\$983	\$1,856	\$3,054	\$4,265	\$5,773	\$7,434	\$8,181	\$9,248	\$10,332	\$15,703	\$5,439	
	Avg. orig. benefit	\$277	\$694	\$1,317	\$2,170	\$3,045	\$4,125	\$5,288	\$5,824	\$6,633	\$7,442	\$11,199	\$3,874	
15 - 19	Retirees	772	1,187	1,231	1,161	2,280	2,505	8,835	4,441	296	45	2	22,755	76
	Avg. current benefit	\$383	\$930	\$1,801	\$3,022	\$4,222	\$5,832	\$7,985	\$8,689	\$9,058	\$9,616	\$11,825	\$6,312	
	Avg. orig. benefit	\$235	\$570	\$1,102	\$1,855	\$2,589	\$3,563	\$4,859	\$5,337	\$5,537	\$5,886	\$7,582	\$3,856	
20 - 24	Retirees	668	668	633	593	1,515	1,769	6,945	2,932	162	19	-	15,904	80
	Avg. current benefit	\$396	\$941	\$1,695	\$2,824	\$3,998	\$5,734	\$7,897	\$8,556	\$8,279	\$9,252	-	\$6,369	
	Avg. orig. benefit	\$208	\$497	\$901	\$1,504	\$2,134	\$3,061	\$4,268	\$4,562	\$4,400	\$4,963	-	\$3,421	
25 - 29	Retirees	220	271	237	207	468	689	1,044	1,917	2,509	-	-	7,562	84
	Avg. current benefit	\$395	\$942	\$1,351	\$2,048	\$3,004	\$3,958	\$5,157	\$6,524	\$7,382	-	-	\$5,505	
	Avg. orig. benefit	\$182	\$426	\$611	\$932	\$1,391	\$1,808	\$2,340	\$2,904	\$3,192	-	-	\$2,434	
30 - 34	Retirees	93	126	192	177	523	603	806	963	936	1	-	4,420	88
	Avg. current benefit	\$313	\$791	\$1,399	\$2,009	\$2,882	\$3,812	\$5,267	\$6,450	\$6,658	\$6,520	-	\$4,809	
	Avg. orig. benefit	\$126	\$309	\$547	\$787	\$1,128	\$1,512	\$2,089	\$2,616	\$2,777	\$2,723	-	\$1,948	
35 - 39	Retirees	20	25	54	70	233	209	258	135	2	-	-	1,006	94
	Avg. current benefit	\$308	\$623	\$1,283	\$1,924	\$2,537	\$3,560	\$5,231	\$6,228	\$5,908	-	-	\$3,741	
	Avg. orig. benefit	\$105	\$202	\$438	\$665	\$873	\$1,232	\$1,830	\$2,147	\$2,065	-	-	\$1,297	
40 - 44	Retirees	5	-	8	10	47	39	35	23	2	-	-	169	99
	Avg. current benefit	\$159	-	\$1,157	\$1,446	\$2,011	\$2,828	\$3,758	\$5,099	\$5,733	-	-	\$2,897	
	Avg. orig. benefit	\$45	-	\$354	\$411	\$608	\$865	\$1,158	\$1,562	\$1,729	-	-	\$884	
45 - 49	Retirees	-	-	-	-	3	5	1	1	-	-	-	10	101
	Avg. current benefit	-	-	-	-	\$1,283	\$1,858	\$2,202	\$4,581	-	-	-	\$1,992	
	Avg. orig. benefit	-	-	-	-	\$299	\$480	\$626	\$1,255	-	-	-	\$518	
Total retirees		4,885	7,900	7,795	8,353	14,203	14,445	28,869	25,274	4,982	248	37	116,991	
Avg. current benefit		\$352	\$918	\$1,730	\$2,829	\$2,937	\$5,341	\$7,367	\$7,884	\$7,713	\$10,332	\$14,209	\$5,407	
Avg. orig. benefit		\$248	\$672	\$1,275	\$2,141	\$2,877	\$3,819	\$4,829	\$5,535	\$4,129	\$7,817	\$11,936	\$3,698	

*Represents monthly benefit

**Demographics of Benefit Recipients and Active Members as of June 30, 2023
(excludes inactive members)**

Age	Retirees			Disability Benefit Recipients			Survivors		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Under 20	-	-	-	-	-	-	49	-	49
20-24	-	-	-	-	-	-	-	13	13
25-30	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	2	2	-	2	2
35-39	-	-	-	3	9	12	10	10	20
40-44	-	-	-	3	38	41	12	31	43
45-49	-	-	-	6	64	70	28	57	85
50-54	7	14	21	24	130	154	44	73	117
55-59	1,093	3,220	4,313	20	149	169	69	126	195
60-64	2,842	10,436	13,278	27	83	110	185	271	456
65-69	4,203	16,743	20,946	19	92	111	288	524	812
70-74	6,893	23,221	30,114	15	87	102	636	1,270	1,906
75-79	7,623	16,904	24,527	18	61	79	797	1,873	2,670
80-84	4,412	9,003	13,415	5	26	31	712	1,996	2,708
85-89	2,272	4,294	6,566	4	18	22	552	1,657	2,209
90+	1,042	2,769	3,811	-	13	13	392	1,433	1,825
Total:	30,387	86,604	116,991	144	772	916	3,774	9,336	13,110

Actives			Total Retirees, Disabled, Survivors and Active Members			Percent Distribution of Retirees, Disabled, Survivors and Active Members		
Male	Female	Total	Male	Female	Total	Male	Female	Total
1	18	19	50	18	68	74%	26%	100%
1,467	5,912	7,379	1,467	5,925	7,392	20	80	100
3,452	12,971	16,423	3,452	12,971	16,423	21	79	100
4,110	14,564	18,674	4,110	14,568	18,678	22	78	100
5,515	18,547	24,062	5,528	18,566	24,094	23	77	100
6,533	22,423	28,956	6,548	22,492	29,040	23	77	100
6,140	20,105	26,245	6,174	20,226	26,400	23	77	100
5,601	18,231	23,832	5,676	18,448	24,124	24	76	100
3,348	11,044	14,392	4,530	14,539	19,069	24	76	100
1,311	4,683	5,994	4,365	15,473	19,838	22	78	100
753	1,748	2,501	5,263	19,107	24,370	22	78	100
416	614	1,030	7,960	25,192	33,152	24	76	100
156	160	316	8,594	18,998	27,592	31	69	100
35	25	60	5,164	11,050	16,214	32	68	100
4	1	5	2,832	5,970	8,802	32	68	100
1	-	1	1,435	4,215	5,650	25	75	100
38,843	131,046	169,889	73,148	227,758	300,906	24	76	100

Benefit Recipients by Type as of June 30, 2023

Monthly Benefit Range	Number of Recipients (all)	Type of Monthly Benefit					Subtypes of Age Retirement Benefit							
		Retirement	Disability Retirement	Non-occupational Disability	Occupational Disability	Survivor Monthly Benefits	Regular 2.2 Flat Formula	Graduated Formula	Actuarial Benefit Style	ERO (2.2 & Grad. Form.)	ERI (State or TRS)	Other	Retirement Total	
Under \$500	6,527	5,676	3	1	-	847	1,250	1,552	2,873	-	-	1	5,676	
\$500 - \$999	6,731	5,336	21	-	-	1,374	915	1,104	3,292	5	13	7	5,336	
\$1,000 - \$1,499	6,184	4,769	43	1	-	1,371	829	1,188	2,659	27	49	17	4,769	
\$1,500 - \$1,999	6,207	4,746	186	17	-	1,258	1,026	1,301	2,202	76	121	20	4,746	
\$2,000 - \$2,499	6,554	4,841	189	41	-	1,483	1,438	1,187	1,774	257	167	18	4,841	
\$2,500 - \$2,999	6,844	5,171	100	37	2	1,534	1,777	1,134	1,443	521	277	19	5,171	
\$3,000 - \$3,499	7,124	5,515	65	31	1	1,512	2,302	851	1,242	736	363	21	5,515	
\$3,500 - \$3,999	6,792	5,595	43	16	-	1,138	2,555	626	999	926	464	25	5,595	
\$4,000 - \$4,499	6,933	6,065	22	16	1	829	3,089	476	858	1,090	529	23	6,065	
\$4,500 - \$4,999	7,376	6,700	14	4	-	658	3,567	456	701	1,356	569	51	6,700	
\$5,000 - \$5,499	7,470	7,043	13	-	-	414	3,799	434	589	1,587	563	71	7,043	
\$5,500 - \$5,999	7,344	7,052	9	1	-	282	3,819	465	494	1,675	541	58	7,052	
\$6,000 - \$6,499	7,196	7,017	9	-	-	170	3,787	467	410	1,701	556	96	7,017	
\$6,500 - \$6,999	6,713	6,616	9	-	-	88	3,513	475	341	1,732	474	81	6,616	
\$7,000 - \$7,499	6,151	6,090	6	-	1	54	3,247	471	253	1,717	305	97	6,090	
\$7,500 - \$7,999	5,008	4,966	5	-	-	37	2,672	441	226	1,281	281	65	4,966	
\$8,000 - \$8,499	4,163	4,141	3	-	-	19	2,166	427	147	1,087	235	79	4,141	
\$8,500 - \$8,999	3,745	3,728	2	-	-	15	1,983	366	119	976	224	60	3,728	
\$9,000 - \$9,499	3,176	3,169	1	-	-	6	1,652	332	112	814	211	48	3,169	
\$9,500 - \$9,999	2,711	2,706	1	-	-	4	1,375	281	72	788	144	46	2,706	
\$10,000 or more	10,068	10,049	2	-	-	17	4,769	1,296	293	3,051	421	219	10,049	
Total benefit recipients:	131,017	116,991	746	165	5	13,110	51,530	15,330	21,099	21,403	6,507	1,122	116,991	

Summary Statistics, all Benefit Recipients, as of June 30, 2023

	Age Retirement	Disability Benefits (3 types)	Survivor Benefits
Average Monthly Benefit	\$5,407	\$2,765	\$2,688
Average Age	73	61	79
Average Service Credit	26	16	-
Average Years Receiving Benefits	14	12	10

Percentage of Retirement Benefits by Subtype						
Regular 2.2 Flat Form.	Graduated Formula	Actuarial Benefit Style	ERO (2.2 & Grad. Form.)	ERI (State or TRS)	Other	Retirement Total
44%	13%	18%	18%	6%	1%	100%

Average Benefit Payments for New Retirees, Last 10 Fiscal Years

Retirement Effective Dates		Years of Service									All FY Retirees	Avg. Age all FY Retirees	Avg. Service all FY Retirees
		Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+			
Period July 1, 2022 through June 30, 2023	Average monthly benefit	\$266	\$872	\$1,635	\$2,563	\$3,739	\$5,056	\$6,589	\$7,538	\$10,716	\$4,859	age 60	25 years
	Average final average salary	\$57,445	\$42,016	\$55,785	\$74,545	\$92,873	\$103,914	\$113,931	\$119,913	\$136,022	\$96,313		
	Number of retired members	144	219	252	317	506	508	662	840	25	3,473		
Period July 1, 2021 through June 30, 2022	Average monthly benefit	\$267	\$886	\$1,587	\$2,622	\$3,606	\$4,799	\$6,158	\$7,149	\$9,967	\$4,433	age 61	25 years
	Average final average salary	\$56,321	\$44,191	\$57,073	\$77,623	\$89,926	\$98,485	\$106,793	\$113,712	\$128,801	\$91,094		
	Number of retired members	228	236	252	377	551	541	665	782	31	3,663		
Period July 1, 2020 through June 30, 2021	Average monthly benefit	\$215	\$883	\$1,572	\$2,509	\$3,503	\$4,684	\$6,186	\$7,032	\$9,001	\$4,520	age 60	25 years
	Average final average salary	\$47,792	\$42,699	\$57,856	\$75,814	\$87,364	\$96,406	\$106,899	\$111,860	\$112,396	\$90,729		
	Number of retired members	142	182	249	371	515	490	623	779	45	3,396		
Period July 1, 2019 through June 30, 2020	Average monthly benefit	\$299	\$798	\$1,438	\$2,422	\$3,423	\$4,510	\$5,775	\$6,645	\$7,722	\$4,107	age 61	25 years
	Average final average salary	\$60,000	\$37,357	\$53,528	\$72,714	\$85,210	\$92,968	\$99,237	\$105,866	\$103,561	\$84,533		
	Number of retired members	132	290	254	332	564	504	576	690	47	3,389		
Period July 1, 2018 through June 30, 2019	Average monthly benefit	\$222	\$806	\$1,480	\$2,528	\$3,484	\$4,708	\$5,976	\$6,941	\$8,106	\$4,366	age 61	25 years
	Average final average salary	\$50,646	\$40,502	\$54,277	\$76,259	\$86,859	\$95,751	\$103,192	\$110,647	\$114,482	\$88,551		
	Number of retired members	131	210	289	417	524	493	599	768	65	3,496		
Period July 1, 2017 through June 30, 2018	Average monthly benefit	\$257	\$735	\$1,529	\$2,558	\$3,405	\$4,633	\$6,048	\$6,954	\$8,000	\$4,316	age 61	25 years
	Average final average salary	\$52,883	\$41,137	\$58,671	\$77,377	\$84,015	\$95,035	\$104,219	\$111,051	\$118,480	\$88,392		
	Number of retired members	154	269	337	423	585	576	633	855	73	3,905		
Period July 1, 2016 through June 30, 2017	Average monthly benefit	\$272	\$787	\$1,482	\$2,497	\$3,457	\$4,589	\$5,770	\$6,581	\$7,733	\$4,162	age 61	25 years
	Average final average salary	\$59,017	\$44,909	\$56,887	\$74,590	\$85,524	\$93,583	\$99,597	\$104,930	\$111,419	\$86,183		
	Number of retired members	184	255	351	426	615	587	666	816	102	4,002		
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		

Medians for Retirees as of June 30, 2023

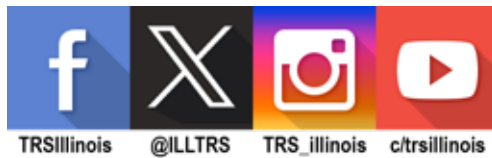
	Median Age	Median Monthly Benefit	Median Service Credit	Retiree Count
All retirees	73	\$5,289.95	30	116,991
New retirees	60	\$4,657.87	28	3,473

Principal Participating Employers

Participating Employer	City	Year ended June 30, 2023			Year ended June 30, 2014		
		Rank	Covered Employees (including subs)	Percentage of Total TRS Membership	Rank	Covered Employees	Percentage of Total TRS Membership
School District U46	Elgin	1	3,357	2.0%	1	2,939	1.8%
Indian Prairie CUSD 204	Naperville	2	2,534	1.5	2	2,482	1.6
Plainfield SD 202	Plainfield	3	2,464	1.5	4	2,306	1.4
Rockford School District 205	Rockford	4	2,234	1.3	3	2,398	1.5
Community USD 300	Algonquin	5	1,946	1.1	6	1,697	1.1
Naperville CUSD 203	Naperville	6	1,895	1.1	5	1,748	1.1
Schaumburg CCSD 54	Schaumburg	7	1,842	1.1	8	1,511	1.0
Oswego CUSD 308	Oswego	8	1,821	1.1	-	-	-
Valley View CUSD 365	Romeoville	9	1,797	1.1	7	1,655	1.0
St. Charles CUSD 303	St. Charles	10	1,422	0.8	-	-	-
Waukegan CUSD 60	Waukegan	-	-	-	9	1,496	0.9
Springfield SD 186	Springfield	-	-	-	10	1,485	0.9
Total, largest 10 employers			21,312	12.5%		19,717	12.3%
All Other (985 employers in 2023*; 996 employers in 2014)			148,577	87.5%		140,121	87.7%
Grand total			169,889	100.0%		159,838	100.0%

*Other Employers by Type as of June 30, 2023	Number of Other Employers	Other Covered Employees
Local school districts	841	141,570
Special districts	135	6,185
State agencies	9	822
Total, all employers other than largest 10	985	148,577

Total Employers by Type as of June 30, 2023	Total Number of Employers	Total Covered Employees
Local school districts	851	162,882
Special districts	135	6,185
State agencies	9	822
Total, all employers	995	169,889



TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

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