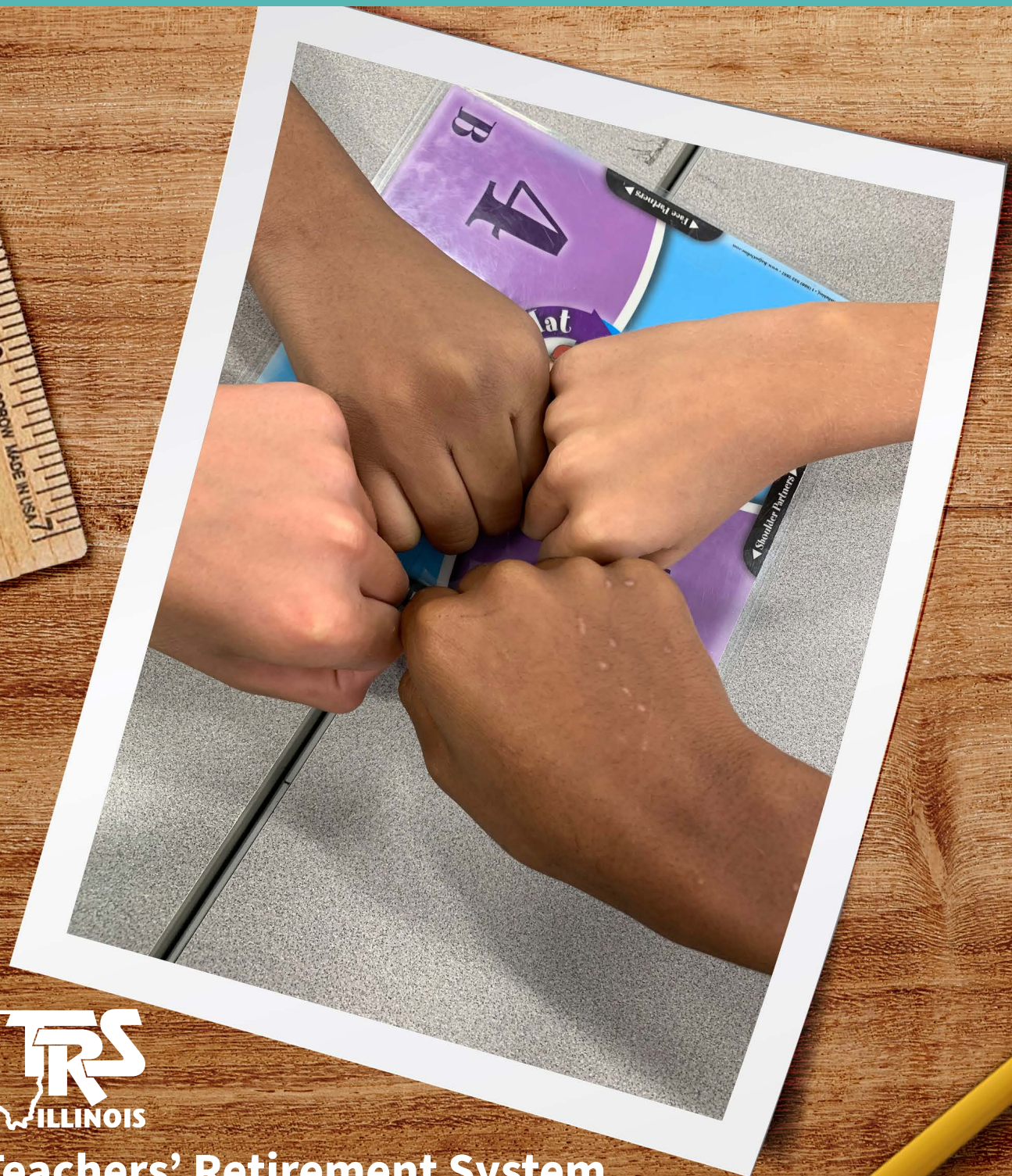


Annual Comprehensive Financial Report

For the Fiscal Year Ended June 30, 2021



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

a component unit of the State of Illinois

Fiscal Year 2021 Highlights

As of June 30, 2021	
Active contributing members	159,027
Inactive noncontributing members	145,769
Benefit recipients*	127,518
Total membership	432,314
Investment return	
Total fund investment return, net of fees	25.5%
Actuarial information	
Actuarial accrued liability (AAL)	\$138,914,274,917
Less actuarial value of assets (AVA)	58,979,922,966
Unfunded actuarial accrued liability, AVA basis (UAAL)	\$79,934,351,951
Funded ratio (AVA/AAL)	42.5%
Less fair value of assets (FVA)	\$64,212,505,020
Unfunded actuarial accrued liability, FVA basis (UAAL)	\$74,701,769,897
Funded ratio (FVA/AAL)	46.2%
GASB Statement No. 67 disclosures	
Total pension liability (TPL)	\$142,223,798,748
Less fiduciary net position (FNP)	64,212,505,020
Net pension liability (NPL)	\$78,011,293,728
FNP as a percentage of TPL	45.1%
Additions	
Member contributions	\$1,023,531,951
Employer contributions	97,594,081
State of Illinois contributions	5,140,648,356
Total investment income	13,046,153,685
Total additions	\$19,307,928,073
Deductions	
Benefits paid	\$7,323,948,701
Refunds paid	64,194,011
Administrative expenses	23,758,112
Total deductions	\$7,411,900,824

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

Cover photo: Due to the COVID-19 pandemic, the fist bump is slowly eclipsing the handshake as a preferred gesture that adds extra meaning to a variety of interpersonal moments — “hello,” “goodbye,” “we agree,” “I’m sorry,” “congratulations” and “thank you.” As the cover of this report illustrates, the nice thing about the fist bump is that more than one person can participate at the same time. People with diverse backgrounds, ages, beliefs and abilities can together create a common understanding that enhances inclusion and equality. Submitted by Analiese Gremillion, art teacher at Thomas Jefferson Jr. High School, Woodridge School District #68.

PREFACE

Annual Comprehensive Financial Report for the fiscal year ended June 30, 2021

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



English as a second language teacher Claudine O'Malley from Willow Bend School in Rolling Meadows feels "proud and blessed" to teach kindergarten and first grade students from 13 different countries.

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>



Seniors from the class of 2022 at Jacobs High School in Algonquin proudly wore their class colors during their Homecoming week celebration. Submitted by Barb Valle, principal at Jacobs High School.

CELEBRATING DIVERSITY IN ILLINOIS SCHOOLS

“Diversity” in Illinois is older than the state itself. Throughout history, a nonstop march of different cultures has prospered southwest of the Great Lakes, north of the Ohio River and east of the Mississippi River.

First came the Illinois, Iroquois, Chippewa, Ottawa, Potawatomi, Kickapoo, Kaskaskia, Miami, Shawnee, Sauk and Fox. The Mississippian culture established a city in what is now Collinsville that in 1250 AD was larger than London.

Western European explorers and soldiers first rode our rivers in the 1600s and erected forts and outposts in places now called Massac County, Utica, Peoria, East Dubuque and McLean County. They eventually wound their way north to a river called Shikaakwa by the Algonquin, who lived along a large lake. In the 1780s, a Haitian fur trader named Jean Baptiste Point du Sable became the first non-native resident of this area, which is now the city of Chicago.

Most early U.S. migration came from the South, as poor young farm families trekked overland to southern Illinois from Kentucky, Tennessee and the Carolinas. Migration from Indiana, Ohio and Pennsylvania filled the central portion of the state, while New Englanders and New Yorkers came to the north via the Erie Canal and the Great Lakes.

The first blacks came to Illinois in 1719 with the French, but their numbers remained few until after the Civil War. Immigration from Europe became significant in the 1840s and continued in a heavy stream for about 80 years from Germany, Ireland, Britain and Scandinavia, as well as southern and eastern Europe. At one time, the greatest concentration of Poles outside of Poland was in Chicago. Hispanic immigration blossomed in the 20th Century.

Diversity, of course, encompasses much more than the origin of your forebearers. Across the 55,000 square miles of modern Illinois, a multitude of languages, dress, beliefs, customs and abilities have continually clashed, merged, grown, sacrificed and evolved. But mostly, through it all our rich diversity has contributed greatly to who each of us are today. In Illinois we celebrate diversity.

And nowhere is the diversity of Illinois better reflected than in our schools – the living nexus of past, present and future.

This *Annual Comprehensive Financial Report* is dedicated by Teachers’ Retirement System to showcasing the many diversities that make up Illinois schools: students, teachers and staff, families, communities, heritages, traditions, facilities, classroom curricula, extra-curriculars and even nicknames and mascots.

No two schools in our state are the same and that’s great. That’s Illinois.

TABLE OF CONTENTS

PREFACE

INTRODUCTION

Certificate of Achievement	4
Recognition Award for Administration	5
Letter of Transmittal	6
TRS Board of Trustees	13
TRS Organization	14
Consulting and Professional Services	16

FINANCIAL

Independent Auditor's Report	18
Management's Discussion and Analysis	20
Financial Statements	26
Statement of Fiduciary Net Position June 30, 2021	26
Statement of Changes in Fiduciary Net Position for the Year Ended June 30, 2021	27
Notes to Financial Statements	28
Required Supplementary Information	54
Schedule of Changes in the Net Pension Liability for Fiscal Years	54
Schedule of the Net Pension Liability for Fiscal Years	54
Schedule of Investment Returns for Fiscal Years	56
Schedule of Contributions from Employers and Other Contributing Entities, Last 10 Fiscal Years	56
Notes to Required Supplementary Information	57
Other Supplementary Information	58
Schedule of Administrative Expenses for the Years Ended June 30	58
Schedule of Investment Expenses for the Years Ended June 30	59
Schedule of Professional Services for the Years Ended June 30	60

INVESTMENTS

Introduction	62
Asset Allocation	63
Portfolio Securities Summary	64
Securities Holdings (Historical)	65
Investment Results	65
Equity	67
Income	73
Real Assets	76
Diversifying Strategies	79

Securities Lending	80
Brokerage Activity	81
Investment Manager and Custodian Fees	82

ACTUARIAL

Actuary's Certification	88
Actuarial Assumptions and Methods	90
Actuarial Experience Analysis	93
Annual Actuarial Valuation	94
Analysis of Financial Experience: Reconciliation of Unfunded Liability	94
Actuarial Standards and Illinois State Pension Funding	95
Tests of Financial Condition	97
Other Information	99
Funding Analysis by Tier	101
Average Annual Salary for Active Members (Excluding Substitutes) by Years of Service and Number of Employers	102
Average Annual Salary and Age for Active Members by Years of Service as of June 30, 2021	104
Plan Summary	106
Summary of Tier 1 and Tier 2 Benefit Provisions	108

STATISTICAL

Statistical Section	113
Changes in Net Position Restricted for Pensions, Last 10 Fiscal Years	114
Benefit and Refund Deductions from Net Position by Type, Last 10 Fiscal Years	114
Employee and Employer Contribution Rates, Last 10 Fiscal Years	116
Active Members by Tier	116
Retired Members by Years of Service and Years in Retirement as of June 30, 2021	117
Demographics of Benefit Recipients and Active Members as of June 30, 2021	118
Benefit Recipients by Type as of June 30, 2021	120
Average Benefit Payments for New Retirees, Last 10 Fiscal Years	121
Principal Participating Employers	122



A junior from Shiloh High School in Hume restores a vintage tractor donated to the school.

A Shiloh High School student climbs a rock wall in physical education class. Both pictures submitted by science teacher Kendra Saddoris, Shiloh High School.





Students at South Elgin High School develop a presentation to help other students understand the "Chicano concept." Submitted by Spanish teacher Saúl Vázquez.

Rock Island High School students learn healthcare techniques in basic nurses training. Submitted by Joann Stribling, MSN, RN – Nurse educator at Rock Island High School.



INTRODUCTION





Public Pension Coordinating Council

Recognition Award for Administration 2021

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, reading 'Alan H. Winkle'.

Alan H. Winkle
Program Administrator



TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

2815 W. Washington St. | P.O. Box 19253 | Springfield, IL 62794-9253
877-927-5877 (877-9-ASK-TRS) | TTD: 800-526-0844 (or 711) | FAX: 217-753-0964
members@trsil.org | <https://www.trsil.org>
R. Stanley Rupnik, Executive Director & Chief Investment Officer

LETTER OF TRANSMITTAL

December 13, 2021

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, 2021. 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.

Concluding its 82nd year of operation in FY21, TRS successfully distributed \$7.3 billion in retirement and disability benefits to 127,518 members, despite ongoing challenges created by the world-wide COVID-19 pandemic.

Yet, despite the pervasive influence of the coronavirus on Illinois families and the economy, for the first time since 2018 the System's funded ratio ticked up during the year to 42.5 percent from the 40.5 percent recorded at the end of FY20.

This is good news for TRS members and the taxpayers of Illinois.

For the last four years, the TRS funded ratio remained steady, averaging 40.5 percent. This stability was the direct result of consistent annual contributions by **Gov. JB Pritzker** and the General Assembly, and decent investment returns from a lengthy bull market. These positive actions are now beginning to create modest improvements in the long-term fiscal condition of TRS and will continue if state officials continue to follow a prudent pension funding policy.

Nonetheless, TRS continues to carry one of the lowest funded ratios in the nation for a retirement system its size. The System had an actuarial value of \$59.0 billion in assets and a long-term benefit obligation of \$138.9 billion, which creates an unfunded liability of \$79.9 billion.

COVID-19 PANDEMIC

For almost two years, the negative effects of the coronavirus have leached through every aspect of daily life in Illinois – but none more so than in public education.

Since March of 2020, 479 TRS members have succumbed to the virus. The loss of their talents and dedication have not only shaken school districts but exasperated a lingering shortage of classroom teachers in all 102 Illinois counties.

TRS members, school officials, parents and students continue to work through an ever-changing teaching environment because of the virus. They struggle with a patchwork of COVID-19 policies designed to keep everyone healthy and provide students with the quality education they deserve.

And just as TRS members have risen to the enormous challenges placed before them, TRS as an agency accepted the challenges created by COVID-19 and met the goals set for it by members, taxpayers and elected officials. TRS transitioned swiftly to a remote work platform during FY21 because the System had the foresight to prepare emergency contingencies in case the System's offices needed to be closed.

The top TRS priority during this unprecedented situation was to continue paying all benefits as usual to beneficiaries. TRS was designated an "essential" state service by Gov. Pritzker in 2020 because of the monthly economic impact of TRS benefits in communities across Illinois.

During FY21, TRS staff fulfilled the System's priority functions. In a year when staff worked mostly from remote locations, TRS paid approximately \$7.3 billion in member benefits on time and in full. More than 4,300 retirement claims were processed. The System's Call Center handled more than 147,000 telephone requests for assistance and approximately 67,500 emails from members and their families.

INCREASE IN MEMBER RETIREMENTS

During FY21, TRS experienced an unusual jump in teacher retirements. Interestingly, this rise in calendar year 2020 did not occur during the System's normal "retirement season" between January and June. The increase began in July of FY21, before the beginning of the new school year, and continued through October. Traditionally during July to October, retirement numbers decline.

Between June and September of calendar year 2020, teacher retirements rose by 45 percent compared to 2019. In July, at the start of FY21, retirements increased by 38 percent over the two prior years and jumped by 67 percent in August 2020.

Anecdotally, members retiring in July through October mentioned to TRS counselors that their retirements were related to the drastic changes in teaching caused by COVID-19. The surge, however, turned out to be temporary. Between January and June of calendar year 2021, the number of retirement applications filed returned to levels that TRS would consider "normal."

ONLINE MEMBER MEETINGS

Due to the coronavirus pandemic, the TRS Member Services Department adapted to the changing conditions and developed successful methods of reaching active and retired members including virtual meetings.

Surveys indicate that quite a few TRS members enjoy the flexibility of online presentations.

The System's traditional Fall Member Meetings were held online and proved to be very popular. More than 2,900 members heard TRS counselors explain the retirement process and benefits. Normally, counselors fan out across the state to meet in person with members.

Between January and March of 2021, Member Services hosted 30 "It's Time to Retire" webinars that focused on helping about-to- retire members ease into the retirement process. More than 2,000 members attended this series. At the end of FY21, Members Services hosted 15 "What's Next" webinars. This series explained what happens to newly retired members.

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.

The annual budget for TRS administrative expenses is prepared by staff and approved by the TRS 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, an annual compliance attestation examination is performed to review compliance with applicable statutes and codes. The Independent Auditor's Report on TRS's financial statements is included on pages 18 and 19 in the Financial Section of this report. TRS received an unmodified auditor opinion on the fair presentation of its financial statements.

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 report of the independent auditors.

ADDITIONS AND DEDUCTIONS

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

Additions (\$ millions)

Source	2021	2020	Increase/(Decrease)	
			Amount	% Change
Member contributions	\$1,023	\$994	\$29	2.9%
Employer contributions	98	93	5	5.4
State of Illinois contributions	5,141	4,813	328	6.8
Total investment income	13,046	276	12,770	4,626.8
Total	\$19,308	\$6,176	\$13,132	212.6%

Deductions (\$ millions)

	2021	2020	Increase/(Decrease)	
			Amount	% Change
Benefits payments	\$7,324	\$7,035	\$289	4.1%
Refunds	64	64	-	-
Administrative/other	24	23	1	4.4
Total	\$7,412	\$7,122	\$290	4.1%

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 25.5 percent, net of fees, for the fiscal year ended June 30, 2021. Total investment assets increased approximately \$12.4 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 81 to 85 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, 2021, the funded ratio based on the actuarial value of assets of the Teachers' Retirement System increased to 42.5 percent from its June 30, 2020 level of 40.5 percent. The actuarial value of assets at year end was \$59.0 billion and the actuarial accrued liability was \$138.9 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

INVESTMENT RETURNS SOAR

Despite the economic upheaval caused by the COVID-19 pandemic, TRS investments closed out FY21 with a strong rate of return and record assets under management. The TRS investment return in FY21 was a positive 25.5 percent, net of fees.

Through FY21, the TRS Investment Department successfully navigated the perils of the pandemic's attack on the economy and was able to rebuild the value of the System's portfolio to prepandemic levels – and beyond. As of June 30, TRS managed assets totaling \$63.9 billion – a record for the System and a 24.1 percent increase in assets from the prior year. TRS closed FY20 with \$51.5 billion.

The low point during the early months of the pandemic saw TRS assets at \$48.5 billion. By the end of the second quarter of FY21, TRS had worked back to \$56.9 billion in investment assets, a 17.3 percent rebound in value. Prior to the pandemic, TRS began calendar year 2020 with \$54.6 billion in assets.

TRS maintains a focus on steady, long-term investment returns because a majority of its members maintain relationships with TRS for decades. The TRS long-term investment returns continue to exceed the System's long-term assumed investment return of 7 percent. The 40-year return for TRS at the end of FY21 was 9.5 percent.

COMMITMENT TO DIVERSITY

TRS continues to strengthen its existing commitment to diversity within the management of its \$63.9 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 \$8.2 billion to \$15.5 billion. In each of the last four 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 FY21, TRS commitments to MWBE firms totaled \$15.5 billion, or 24.3 percent of the System's total portfolio of \$63.9 billion.

In addition, TRS is developing a standardized metric scoring tool for diversity, equity and inclusion to help staff when analyzing potential investment opportunities and monitoring existing relationships. This is part of a broader “re-imagining” of the System's successful diversity efforts to understand our partners' commitment to diversity.

OPTIONAL DEFINED CONTRIBUTION BENEFIT PLAN

TRS made significant progress in the development of its Supplemental Savings Plan (SSP), a new optional 457(b) defined contribution retirement savings plan for active members of the System. TRS expects to implement the SSP in FY22.

Specifically, TRS made substantial alterations in its IT capabilities to prepare for the SSP, including significant changes to its data reporting system for employers.

The SSP does not replace the Defined Benefit (DB) Plan for participating members. Members participating in the SSP will still make payroll contributions to their DB pensions. All fees to private companies managing the investments of the plan, as well as the cost of administration, will be paid by participating members.

ACCELERATED BENEFIT PAYMENT PROGRAMS

Adhering to legislation approved in 2018, in FY21 TRS continued to administer two accelerated pension benefit programs for members. TRS has expended 66 percent of the original \$650 million allocation to members who have elected participation.

State government bond sales used to support these payments have reached approximately \$750 million. Of the original \$1 billion authorization, approximately \$250 million remains. The programs have been extended to run through FY24.

Through FY21, 1,900 newly retiring TRS members participating in the “Accelerated Automatic Increase” program shared \$217 million.

More than 1,700 inactive members in the “Accelerated Pension Benefit” program shared \$212 million.

CYBERSECURITY

The COVID-19 pandemic further reinforced efforts already underway to combat cyberattacks and illustrated new concerns to be addressed in the expanded use of the work-from-home environment.

Because pension systems provide tempting targets, the TRS Board of Trustees understands that it is imperative for the System to keep the private information of 432,314 men, women and their families, as well as 991 employers as safe and secure as possible. TRS implements practices and systems that guard against these changing threats.

Because TRS receives thousands of emails daily, tested “screening” technology is used to filter out as much of the unwanted spam and potential malware before it ever reaches TRS employees. Additionally, TRS trains all staff on how to identify potential cyberattacks, methods to report this information to IT and updates about current real-world threats.

ANNUAL “BENCHMARKING”

How does TRS stack up against other large public retirement systems in the way we administer our members' benefits and invest their money? TRS performed very well in a number of areas, however, there is always room for improvement.

With the help of an internationally recognized consultant, CEM Benchmarking, of Toronto, Canada, the System finds out exactly where it ranks. CEM measures 120 “performance metrics” and then compares them to 11 pension systems of a similar size and mission to TRS.

The TRS total service score was 80, equal to the peer systems median score. TRS’s service score increased 13 points between 2014 and 2020. Since 2014, the System’s service score has risen by eight points, with the biggest service improvements seen in the Call Center, counseling and member responses to our satisfaction surveys.

The cost to administer TRS benefits was \$79 for every active member and annuitant. The peer average was \$84. This speaks to the efficiency of TRS.

MANAGEMENT CHANGES AT TRS

TRS’s senior leadership team experienced multiple changes during FY21.

In June, Chief Investment Officer **R. Stanley Rupnik** was named by the Board of Trustees as the new TRS executive director. He will retain his other responsibilities as CIO.

Director Rupnik is an 18-year veteran of TRS. He had served as acting executive director since August of 2020. He was named CIO in November of 2004 and previously served TRS as acting executive director between 2009 and 2011.

Also during the fiscal year, the TRS executive staff saw the departures of the chief financial officer, chief legal counsel, chief technology officer and chief human resources officer. Following the end of FY21, Chief Benefits Officer **Carlton Lenoir** left the agency after accepting an appointment as executive director of the Chicago Teachers' Pension and Retirement Fund. All executive management positions have been filled on a temporary or permanent basis.

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, 2020. This was the 32nd 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 2021 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, 2021



Matthew Hunt
President
Appointed
Glen Ellyn



Andrew Hirshman
Vice President
Elected
Oak Park



Beth Anderson
Elected
Ashkum



Dr. Carmen I. Ayala
Ex Officio
Downers Grove



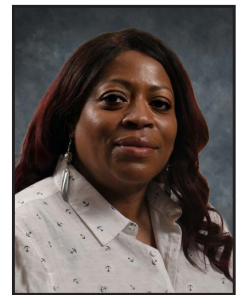
Norma Bellcoff
Appointed
Edwardsville



Kevin (Duffy) Blackburn
Appointed
Joliet



Joseph Blomquist
Elected
St. Charles



Marsha Byas
Elected
Marion



Maria "Mia" Jazo-Harris
Appointed
Bloomington



Maureen Mena
Appointed
Bolingbrook



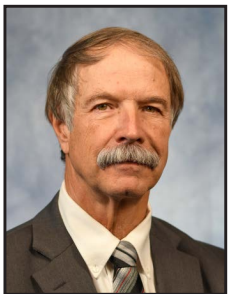
David Miller
Appointed
Lynwood



Fred Peronto
Elected
Elmhurst



Larry Pfeiffer
Elected
Carlinville



Doug Strand
Elected
East Moline

TRS ORGANIZATION
EXECUTIVE CABINET
AS OF DECEMBER 1, 2021



Stan Rupnik, CFA
Executive Director
& Chief Investment
Officer



Jeff Bennett
Director of
Operations



Deron Bertolo
Chief Financial
Officer



Lori Dour
Acting Chief
Benefits Officer



Emily Peterson
General Counsel



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



**Jamie Stults, MA,
SPHR, SHRM-SCP**
Director of Human
Resources



Dave Urbanek
Director of
Communications

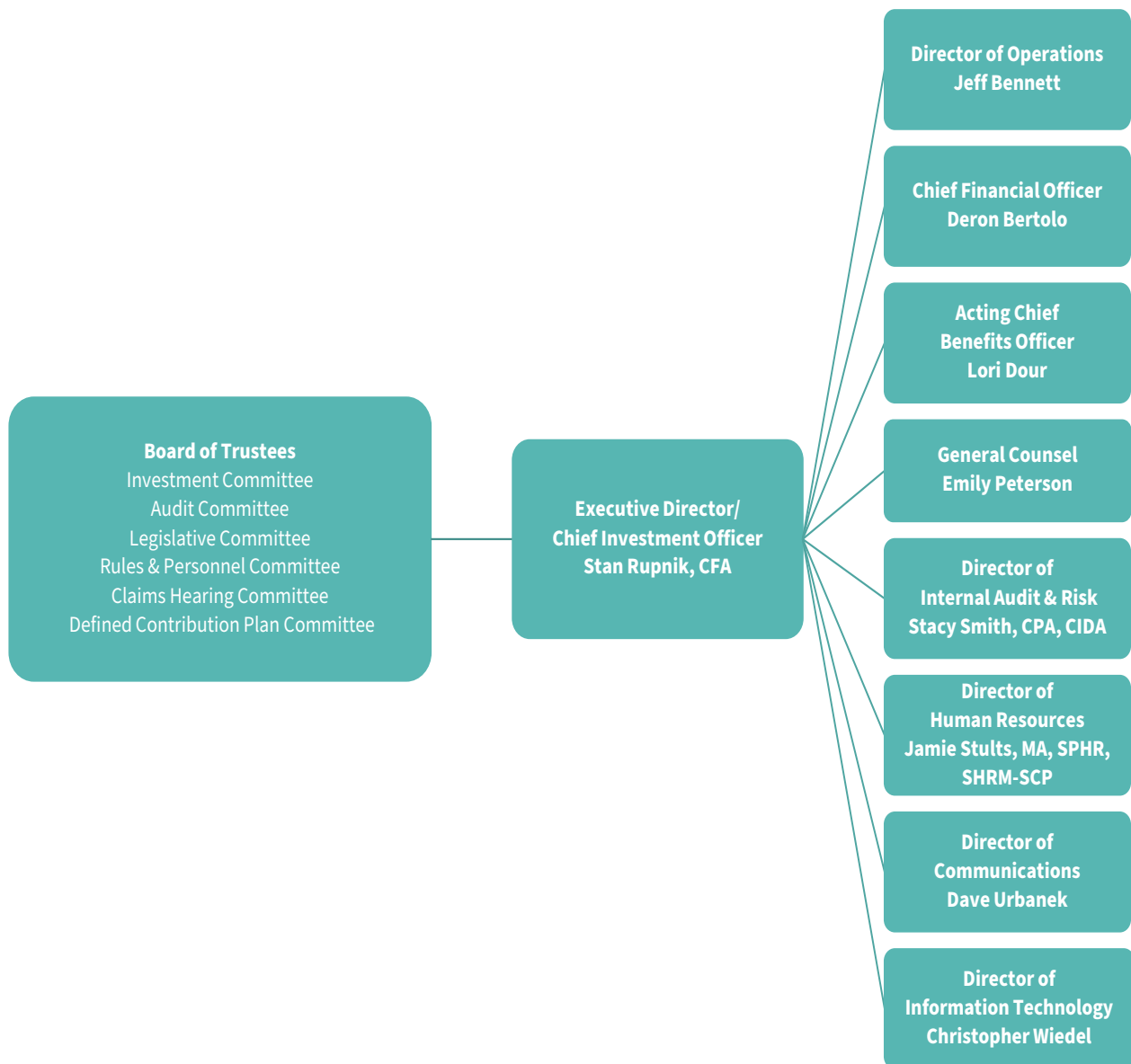


Christopher Wiedel
Director of Information
Technology

TRS MISSION STATEMENT

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

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



CONSULTING AND PROFESSIONAL SERVICES

ACTUARY

The Segal Company Midwest, Inc.

EXTERNAL AUDITORS

(Special assistants to the Office of the Auditor General)

BKD, 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.

King & Spalding L.L.P.

Kopec White & Spooner

Reinhart Boerner Van Deuren s.c.

Whitt Law, L.L.C.

LEGISLATIVE CONSULTING

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

INFORMATION TECHNOLOGY

Carahsoft Technology Corporation

FireEye, Inc.

HSO North America, L.L.C.

ProCircular, Inc.

Promet Solutions Corporation

Sentinel Technologies, Inc.

The Segal Company Midwest, Inc.

VPMA Global Services L.L.C.

INTERNAL AUDIT

Investment Training & Consulting Institute, Inc.

OPERATIONS

CAPFinancial Partners, L.L.C. (formerly known as Cammack Retirement Group, Inc.)

CEM Benchmarking, Inc.

Darlington Partners Ltd.

Higher Logic, L.L.C.

Jasculca Terman Strategic Communications

Levi Ray & Shoup, Inc.

Management Association

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)*

RVK, Inc. *(General investment)*

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

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

CO-INVESTMENT ADVISORS

Aksia TorreyCove Partners, L.L.C.

Meketa Investment Group, Inc.

FINANCIAL



Top left:

Sunset at River Valley School in Lemont, where Principal Debra Lynch says "Where all means all, 24/7. Every child, every family, every staff member... We are all in this together, taking care of each other."

Middle left:

This monarch mural was recently added to the garden shed at Lockport Township High School, inviting students to learn about monarch butterflies and native prairie plants. Submitted by horticulture teacher Colleen Martin.

Bottom left:

The Quincy High School Marching Blue Devil Band drumline practices for a show. Submitted by teacher Teresa Rose.

Top right:

Elmwood Elementary School is located west of Peoria in Elmwood, a small and thriving farm community. Students from pre-K through high school learn together in one building. Submitted by Jenni Davis, 6th grade ELA/SS teacher.

Bottom right:

A truly rural setting, Shiloh Community Unit School District 1 is surrounded by corn and bean fields. This aerial shot was taken by the school's business teacher Julia North and submitted by science teacher Kendra Saddoris.



Independent Auditor's Report

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

Report on the Financial Statements

As Special Assistant Auditors for the Auditor General, we have audited the accompanying 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, 2021, and the 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.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2021, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

The actuarially determined 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.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis, the schedule of changes in the net pension liability, the schedule of net pension liability, the schedule of investment returns, the schedule of contributions from employers and other contributing entities, and notes to required supplementary information as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a 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.

Other Information

Our audit for the year ended June 30, 2021 was conducted for the purpose of forming an opinion on the System's basic financial statements.

The other supplementary information in the financial section and the accompanying preface, introduction, investments, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the 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 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 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 for the year ended June 30, 2021.

We have also previously audited, in accordance with auditing standards generally accepted in the United States of America, the System's basic financial statements as of and for the year ended June 30, 2020 (not presented herein) and have issued our report thereon dated December 10, 2020 which contained an unmodified opinion on those financial statements. The other supplementary information in the financial section, as listed in the table of contents, for the year ended June 30, 2020 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 June 30, 2020 financial statements. The other supplementary 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 June 30, 2020 basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare those 2020 basic financial statements or to those 2020 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 2020 other supplementary 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 for the year ended June 30, 2020.

The preface, introduction, investments, actuarial, and statistical sections, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

BKD, LLP

Decatur, Illinois
December 13, 2021

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, 2021. Please read it in conjunction with the Letter of Transmittal in the Introduction Section on page 6 and the Financial Statements and related notes that follow this discussion.

FINANCIAL HIGHLIGHTS

- The net position of TRS at June 30, 2021 was \$64.2 billion.
- During FY21, the net position of TRS increased \$11.9 billion.
- Contributions from members, employers and the State of Illinois were \$6.3 billion, an increase of \$361.3 million or 6.1 percent for FY21.
- Total net investment income was \$13.0 billion, compared to \$275.7 million in FY20, an increase of \$12.8 billion.
- Benefits and refunds paid to members and annuitants were \$7.4 billion, an increase of \$288.6 million or 4.1 percent.
- The actuarial accrued liability was \$138.9 billion at June 30, 2021.
- The unfunded actuarial accrued liability was \$79.9 billion at June 30, 2021. The funded ratio was 42.5 percent at June 30, 2021. 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 \$142.2 billion at June 30, 2021.
- The net pension liability (NPL) was \$78.0 billion at June 30, 2021. The plan fiduciary net position, as a percentage of total pension liability, was 45.1 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 pension trust fund's 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 financial position of the Teachers' Retirement System as of June 30, 2021.

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

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

Required Supplementary Information and Other Supplementary Information. The required supplementary information and other 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.

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

CONDENSED COMPARATIVE STATEMENTS OF FIDUCIARY NET POSITION AS OF JUNE 30

	2021	Percentage Change	2020
Cash	\$16,263,026	(33.2%)	\$24,329,683
Receivables and prepaid expenses	4,468,795,311	(0.6)	4,496,792,625
Investments	63,851,832,280	24.1	51,454,158,912
Invested securities lending collateral	2,425,695,348	19.9	2,023,876,139
Capital assets	<u>8,453,925</u>	37.9	<u>6,130,809</u>
Total assets	70,771,039,890	22.0	58,005,288,168
Total liabilities	<u>6,558,534,870</u>	15.3	<u>5,688,810,397</u>
Net position restricted for pensions	<u>\$64,212,505,020</u>	22.7%	<u>\$52,316,477,771</u>

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

	2021	Percentage Change	2020
Contributions	\$6,261,774,388	6.1%	\$5,900,510,333
Net investment income	<u>13,046,153,685</u>	4,632.5	<u>275,669,398</u>
Total additions	<u>19,307,928,073</u>	212.6	<u>6,176,179,731</u>
Benefits and refunds	7,388,142,712	4.1	7,099,524,955
Administrative expenses	<u>23,758,112</u>	3.4	<u>22,966,372</u>
Total deductions	<u>7,411,900,824</u>	4.1	<u>7,122,491,327</u>
Net increase/decrease in net position	11,896,027,249	1,357.1	(946,311,596)
Net position restricted for pensions - beginning of year	<u>52,316,477,771</u>	(1.8)	<u>53,262,789,367</u>
Net position restricted for pensions - end of year	<u>\$64,212,505,020</u>	22.7%	<u>\$52,316,477,771</u>

FINANCIAL ANALYSIS

TRS was created to provide retirement, survivor and disability benefits to qualified members. Increases or decreases in the plan's net position serve as useful indicators of TRS's financial position. The net position available to pay benefits was \$64.2 billion at June 30, 2021.

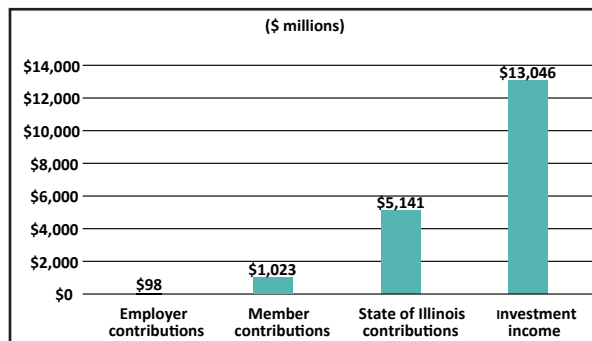
CONTRIBUTIONS

Contributions increased \$361.3 million during FY21. Contributions from the State of Illinois increased \$327.2 million, member contributions increased \$29.1 million and employer contributions from school districts increased \$5.0 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.

Revenues by Type for the Year Ended June 30, 2021



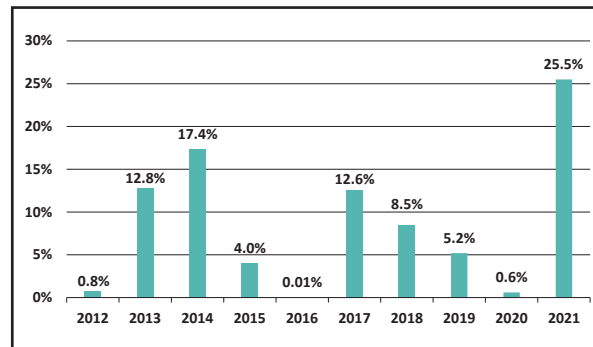
INVESTMENTS

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

The TRS investment portfolio returned 25.5 percent, net of fees, for the fiscal year ended June 30, 2021.

During the fiscal year, total TRS investment assets and net investment income increased approximately \$12.4 and \$12.8 billion, respectively. The significant improvement was due to the year over year increase in the annual rate of return.

Annual Rate of Return (net of investment expenses)

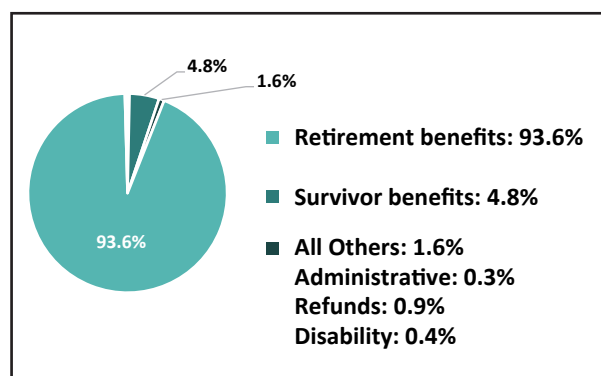


BENEFITS AND REFUNDS

Retirement, survivor and disability benefit payments increased \$288.6 million during FY21. Benefit payments increased to \$7.3 billion with 127,518 recipients in FY21. 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 112,977 as of June 30, 2020 to 114,252 as of June 30, 2021.

Refunds of contributions decreased \$23 thousand in FY21. The decrease during FY21 is the result of lower member and retirement refunds.

Deductions by Type for the Year Ended June 30, 2021



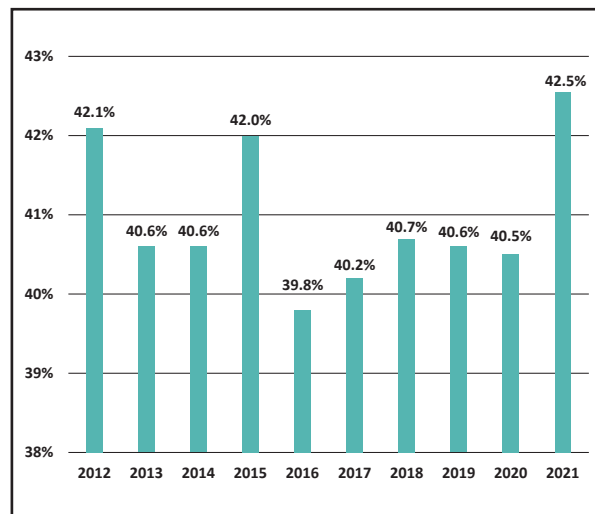
ACTUARIAL

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 \$3.3 billion in FY21 to \$138.9 billion at June 30, 2021. 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 decreased \$773 million during FY21 to \$79.9 billion at June 30, 2021. The funded ratio reflects the percentage of the actuarial accrued liability covered by the actuarial value of assets. The funded ratio increased from 40.5 percent on June 30, 2020 to 42.5 percent on June 30, 2021.

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 \$142.2 billion at June 30, 2021, while the NPL is \$78.0 billion at June 30, 2021.

LEGISLATIVE SOLVING RETIREMENT CONCERNS CREATED BY COVID-19

Public Act 102-0016 will help correct the unforeseen effects of the COVID-19 cancellation of in-person learning and extracurricular activities on TRS members who will be retiring in the next few years.

Many teachers and administrators did not earn stipends and other extra pay that they would have in a year without the coronavirus. As a result, most member creditable earnings reported to TRS for the 2020-21 school year are expected to be lower than in previous years and future years.

Under the previous law, if teachers who taught during 2020-21 were planning to retire within the next four years, they were required to use their four highest, consecutive salaries to calculate their initial pension. That calculation would have included the reduced salary for 2020-21 during the next four years because of the “consecutive” requirement. As a result, an initial pension would be lower than it would have been if COVID had never happened.

To correct this, the law removes the requirement that the final average salary calculation use the four “consecutive” highest salaries.

Additionally, the law also creates new exemptions to an existing statute that requires school districts to pay a higher contribution to TRS if they grant a raise to a TRS member on the verge of retirement that is greater than 6 percent from one year to the next. The new exemptions are for “overload, stipend work, increased instructional time and summer school” time.

It is probable that adding overload, stipend, summer school and increased instructional time to a teacher’s base salary in the year following COVID-19 cancellations would boost that member’s total compensation by more than 6 percent. Under normal circumstances that would trigger the 6 percent threshold and require added TRS contributions from the school district.

ADDRESSING THE CLASSROOM TEACHER SHORTAGE IN ILLINOIS

Two new laws enacted during FY21 make it easier for retired educators to help school districts overcome the chronic shortage of classroom teachers in Illinois.

Public Act 102-0537 extends the “sunset” date of the enhanced post-retirement work limits from 2021 to 2023. A retired TRS member will not lose her/his pension benefit if she/he teaches for up to 120 days or 600 hours during a single school year. The limits were first raised in 2011 from 100 days or 500 hours.

A second measure, Public Act 102-0440, extends the life of the state’s “subject shortage area” statute from 2021 to 2024. With the approval of a regional school superintendent, a school district can declare that it has a shortage of qualified teachers in a particular subject area and can hire retired teachers to fill those vacancies. Those retired teachers hired do not lose their pension benefits.

ALLOWING TRS MEMBERS TO CLAIM PRIVATE SCHOOL SERVICE CREDIT

Public Act 102-0525 provides TRS members with a limited opportunity to purchase optional service credit for up to two years of work in a private school recognized by the Illinois State Board of Education.

“AUTO ENROLLMENT” OF NEW TRS MEMBERS IN TRS SUPPLEMENTAL SAVINGS PLAN

TRS continues to develop a defined contribution benefit for active members. The new program is called the “TRS Supplemental Savings Program” (SSP).

Public Act 102-0540 enacted in FY21 requires that “as soon as practicable” TRS “shall automatically enroll” all newly hired TRS members into the SSP. All existing active members will not be automatically enrolled when the SSP is launched.

While new members are automatically enrolled, they can “opt out” of the SSP within 90 days from her/his first day of employment.



Students at Moline High School enjoy using a new physical education facility. Submitted by special education teacher Rhonda Rusk.

Students in sixth through eighth grades at Manteno Middle School enjoy six weeks of fitness class each semester. Submitted by fitness teacher Kevin Prendergast.

FINANCIAL STATEMENTS
TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS
STATEMENT OF FIDUCIARY NET POSITION
JUNE 30, 2021

	June 30, 2021
Assets	
Cash	\$16,263,026
Receivables and prepaid expenses:	
Member contributions	99,098,234
Employer contributions	9,821,474
State of Illinois	5,024,118
Investment income	121,604,718
Other receivables	285,804
Pending investment sales	4,229,353,118
Prepaid expenses	3,607,845
Total receivables and prepaid expenses	4,468,795,311
Investments, at fair value:	
Fixed income	10,220,741,948
Public equities	22,407,527,477
Alternative investments	29,359,397,945
Derivatives	(5,405,619)
Short-term investments	1,756,658,884
Foreign currency	112,911,645
Total investments	63,851,832,280
Invested securities lending collateral:	
Securities lending collateral	2,366,899,348
Securities lending collateral with the State Treasurer	58,796,000
Total invested securities lending collateral	2,425,695,348
Capital assets, net of accumulated depreciation	8,453,925
Total assets	70,771,039,890
Liabilities	
Benefits and refunds payable	6,021,934
Administrative expenses payable	2,789,817
Investment expenses payable	30,395,315
Pending investment purchases	4,093,633,008
Securities lending collateral	2,425,694,796
Total liabilities	6,558,534,870
Net position restricted for pensions	\$64,212,505,020

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, 2021

	June 30, 2021
Additions	
Contributions:	
Members	\$1,023,531,951
State of Illinois	5,140,648,356
Employers	
Federal funds	27,978,206
2.2 benefit formula	61,558,261
Excess employer costs	8,057,614
Total contributions	<u>6,261,774,388</u>
Investment income:	
Net increase in fair value of investments	12,183,214,170
Alternatives income	942,481,173
Interest and dividends	812,920,640
Other investment income	6,201,472
Securities lending income	8,937,961
Less investment expenses:	
Alternatives expense	(420,642,148)
Direct investment expense	(486,423,308)
Securities lending management fees	(536,275)
Net investment increase	<u>13,046,153,685</u>
Total additions	<u>19,307,928,073</u>
Deductions	
Retirement benefits	6,935,054,294
Survivor benefits	357,078,075
Disability benefits	31,816,332
Refunds	64,194,011
Administrative expenses	23,758,112
Total deductions	<u>7,411,900,824</u>
Net increase in net position	11,896,027,249
Net position restricted for pensions	
Beginning of year	<u>52,316,477,771</u>
End of year	<u><u>\$64,212,505,020</u></u>

See accompanying Notes to Financial Statements.

NOTES TO FINANCIAL STATEMENTS

A. PLAN DESCRIPTION

1. REPORTING ENTITY

The Teachers' Retirement System of the State of Illinois (TRS) is 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.

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

2. EMPLOYERS

Members of TRS are employed by school districts, special districts, certain state agencies and certain non-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)

	2021
Local school districts	851
Special districts	130
State agencies	10
Total	991

3. MEMBERS

TRS Membership (as of June 30)

	2021
Retirees and beneficiaries	127,518
Inactive members	145,769
Active members	159,027
Total	432,314

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

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 years of creditable earnings within the last 10 years of creditable

service and the percentage of average salary to which the member is entitled. Most members retire under a formula that provides 2.2 percent of final average salary up to a maximum of 75 percent with 34 years of service. The 2.2 percent formula became effective July 1, 1998 but service earned before that date can be upgraded to the 2.2 formula with a member contribution. The cost of the upgrade can be reduced if members upgrade and continue teaching after 1998. A graduated formula applies to service earned before 1998 and provides a maximum benefit of 75 percent of average salary with 38 years of service.

Tier 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 following the member's first anniversary in retirement, whichever is later.

Disability and death benefits are provided.

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

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 highest consecutive eight years of creditable service rather than the highest consecutive four years of salary. 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.

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, 2021 actuarial valuation were used to calculate the June 30, 2021 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, 2021, the assumption for future investment returns was 7.0 percent, a rate unchanged from June 30, 2020. The investment return assumption for the 2021 actuarial valuation is based on an asset allocation study conducted by the TRS investment consultant and additional analysis conducted by the actuary in 2021.

The TRS actuary used the following assumed rates of returns by asset class, excluding 2.25 percent for the assumed rate of inflation as well as investment expenses.

Expected Arithmetic Real Returns Over 20 Years

Asset Class	Return	Allocation
U.S. equities large cap	6.2%	16.7%
U.S. equities small/mid cap	7.4	2.2
International equities developed	6.9	10.6
Emerging market equities	9.2	4.5
U.S. bonds core	1.6	3.0
International debt developed	0.4	1.0
International debt emerging	4.4	4.0
Cash equivalents	0.1	2.0
TIPS	0.8	1.0
Real estate	5.8	16.0
Hedge funds (absolute return)	3.9	10.0
Infrastructure	6.3	4.0
Private equity	10.4	15.0
Private debt	6.5	10.0

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, 2021, 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 and 101-0010. 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 98 percent) are provided by the State of Illinois, are projected to be \$5.7 billion in FY22 and grow to \$9.2 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, 2021 measurement date based on census data as of June 30, 2020. Assets, included in plan fiduciary net position, are measured at fair value.

Net Pension Liability

	June 30, 2021
Total pension liability	\$142,223,798,748
Plan fiduciary net position	64,212,505,020
Net pension liability	<u>\$78,011,293,728</u>
Plan fiduciary net position as a percentage of the total pension liability	45.1%

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	\$96,615,373,673	\$78,011,293,728	\$62,558,129,092

Most of the actuarial assumptions used in the June 30, 2021 actuarial valuation are based on the actuarial experience analysis dated September 2021 that covered the period July 1, 2017 through June 30, 2020.

Actuarial Assumptions Used for Financial Reporting Disclosure

Actuarial Valuation Date	June 30, 2021
Census Date:	June 30, 2020 with total pension liability projected to June 30, 2021
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, 2021
Real rate of investment return	4.75%
Projected salary increases	8.50% with 1 year of service to 3.50% with 20 or more years of service. Includes inflation and real wage growth (productivity) assumptions.
Group size growth rate	0%
Assumed inflation rate	2.25%
Post-retirement increase	Tier 1: 3%, compounded; Tier 2: 1.125%, 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.

As a result of the spread of the SARS-CoV-2 virus and the incidence of COVID-19, economic uncertainties have arisen which may negatively affect the fiduciary net position of the System. The duration of these uncertainties and the ultimate financial effects cannot be reasonably estimated at this time.

4. NEW ACCOUNTING PRONOUNCEMENTS

GASB Statement No. 98, "The Annual Comprehensive Financial Report" establishes the term *annual comprehensive financial report* and its acronym *ACFR*. The new term and acronym replace instances of comprehensive annual financial report and its acronym in generally accepted accounting principles for state and local governments. The requirements of this Statement are effective for fiscal years ending after December 15, 2021, however TRS has early applied its provisions for the year ended June 30, 2021.

Effective for fiscal year 2022, GASB Statement No. 87, "Leases" establishes a single model for lease accounting based on the principle that leases are financings of the right to use an asset. There is no longer an operating vs. capital classification. Lessees will recognize a lease liability and an intangible right-to-use asset, and lessors will recognize a lease receivable and a deferred inflow of resources. TRS will be implementing the provisions of GASB 87 for the year ended June 30, 2022.

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

Equipment is stated on the basis of historical cost. Depreciation is computed using the straight-line method based upon the estimated useful lives of the assets. Capital assets activity for the year ended June 30, 2021 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	9,081,955	225,110	-	9,307,065
Site improvements	1,127,708	-	-	1,127,708
Equipment and furniture	3,044,079	220,476	26,912	3,237,643
Purchased Software	310,045	-	15,000	295,045
Internally Generated Software (IGS)	6,436,174	3,671,652	-	10,107,826
	<u>19,999,961</u>	<u>4,117,238</u>	<u>41,912</u>	<u>24,075,287</u>
Less accumulated depreciation:				
Office building	7,755,158	213,099	-	7,968,257
Site improvements	960,683	70,989	-	1,031,672
Equipment and furniture	2,717,035	222,341	26,912	2,912,464
Purchased Software	310,045	-	15,000	295,045
Internally Generated Software (IGS)	2,364,408	1,287,693	-	3,652,101
	<u>14,107,329</u>	<u>1,794,122</u>	<u>41,912</u>	<u>15,859,539</u>
Total Net Capital Assets	<u>\$6,130,809</u>	<u>\$2,323,116</u>	<u>\$ -</u>	<u>\$8,453,925</u>
Office building and site improvements (\$25,000 or greater capitalized)				
			10 - 40 years	
Equipment and furniture (\$5,000 or greater capitalized)				
			3 - 10 years	
Software (\$25,000 or greater capitalized)				
			3 - 5 years	

7. COMPENSATED ABSENCES

When employment is terminated, TRS employees are entitled to receive compensation for all accrued unused vacation time and one-half of all unused sick leave earned through 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, 2021, the System had a liability of \$2,272,713 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, 2021 was as follows:

	Beginning Balance	Additions	Reductions	Ending Balance
Compensated absences payable	\$2,202,238	\$902,736	\$832,261	\$2,272,713
The estimated amount due within one year is: \$105,007				

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 \$16,263,026 at June 30, 2021. Of the bank balance, \$16,262,901 was on deposit with the State Treasurer at June 30, 2021. 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 \$1,589,607,057 at June 30, 2021. The STIF fund has an average credit quality rating of A1P1 and a weighted average maturity of 48.0 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 \$112,911,645 at June 30, 2021.

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, 2021.

Long-term Asset Allocation Policy Mix	
Equity	49%
Real assets	20
Diversifying strategies	10
Income	21
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 rated B- or better. However, in circumstances where position downgrades occur, investment managers have been given permission to hold securities below this rating due to circumstances such as a higher peer group rating from another nationally-recognized statistical rating organization, the investment manager's internal ratings or other mitigating factors.

As of June 30, 2021, 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	\$171,220,232	\$27,449,434	\$51,730,848	\$110,914,168	\$681,894,069	\$ -	\$568,273,550	\$1,611,482,301
Aa1	-	3,928,449	-	-	-	-	429,218,555	433,147,004
Aa2	22,234,864	3,077,493	78,060,490	-	-	-	-	103,372,847
Aa3	11,116,072	8,248,078	52,549,449	-	-	2,655,158	11,081,702	85,650,459
A1	102,572,259	500,454	249,558,267	-	-	-	-	352,630,980
A2	316,193,661	13,247,907	56,133,201	-	-	-	1,200,995,152	1,586,569,921
A3	245,695,260	-	147,879,684	-	-	-	606,932,542	1,000,507,486
Baa1	145,560,423	2,920,566	267,515,553	-	-	-	-	415,996,542
Baa2	270,555,209	10,217,211	433,269,041	-	-	-	-	714,041,461
Baa3	531,456,522	986,451	373,401,004	-	-	-	26,484,998	932,328,975
Ba1	82,586,143	-	123,462,227	-	-	2,564,842	-	208,613,212
Ba2	163,426,054	-	419,400,849	-	-	-	-	582,826,903
Ba3	126,279,138	-	274,095,502	-	-	-	73,020,857	473,395,497
B1	55,583,738	16,007	98,552,502	-	-	-	4,610,856	158,763,103
B2	45,857,207	-	333,814,599	-	-	-	-	379,671,806
B3	18,165,768	-	187,152,735	-	-	-	-	205,318,503
Caa1	5,000,109	-	111,086,791	-	-	-	-	116,086,900
Caa2	-	121,568	28,140,667	-	-	-	-	28,262,235
Caa3	2,849,082	-	6,307,782	-	-	-	-	9,156,864
Ca	348,313	1,519,634	53,960,969	-	-	-	-	55,828,916
C	-	66,111	7,247,961	-	-	-	-	7,314,072
Not rated	17,077,610	8,690,762	73,646,938	-	-	-	-	99,415,310
Withdrawn	5,324,127	63,191	4,969,766	-	-	-	-	10,357,084
Total credit risk, bonds, corporate notes and government obligations	2,339,101,791	81,053,316	3,431,936,825	110,914,168	681,894,069	5,220,000	2,920,618,212	9,570,738,381
U.S. Treasuries								650,003,567
Total bonds, corporate notes & government obligations	\$2,339,101,791	\$81,053,316	\$3,431,936,825	\$110,914,168	\$681,894,069	\$5,220,000	\$2,920,618,212	\$10,220,741,948

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, 2021 is as follows:

Type	2021 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	\$760,917,735	\$145,922,371	\$341,116,443	\$223,621,874	\$28,185,455	\$22,071,592
U.S. government-backed mortgages	681,894,069	210	1,712,645	472,354	645,436,327	34,272,533
Municipals	5,220,000	157,907	-	977,258	1,429,677	2,655,158
Asset-backed securities	81,053,316	1,328,184	30,988,782	17,413,927	22,854,793	8,467,630
Commingled funds (U.S. & international)*	2,920,618,212	59,622,651	318,366,038	2,297,702,875	244,926,648	-
Corporate debt securities	2,339,101,791	138,351,886	1,108,967,545	714,795,147	107,476,767	269,510,446
Foreign debt/corporate obligations	3,431,936,825	266,556,404	1,021,958,952	1,195,472,106	544,364,568	403,584,795
Total bonds, corporate notes and government obligations	10,220,741,948	611,939,613	2,823,110,405	4,450,455,541	1,594,674,235	740,562,154
Derivatives	(5,405,619)	3,209,963	(6,058,041)	(2,064,482)	(493,059)	-
Total bonds, corporate notes, government obligations, securities lending collateral and derivatives	<u>\$10,215,336,329</u>	<u>\$615,149,576</u>	<u>\$2,817,052,364</u>	<u>\$4,448,391,059</u>	<u>\$1,594,181,176</u>	<u>\$740,562,154</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, 2021 is as follows:

Currency	Foreign Currency	Equities	Fixed Income	Derivatives	Total
Argentine Peso	\$14,846	\$ -	\$53,274,083	\$ -	\$53,288,929
Australian Dollar	2,182,941	422,032,611	-	300,869	424,516,421
Bangladeshi Taka	-	-	-	-	-
Brazilian Real	1,635,098	173,571,913	102,117,226	(13,395)	277,310,842
British Pound	11,231,025	840,080,573	2,319,547	-	853,631,145
Canadian Dollar	7,609,001	578,066,370	-	(77)	585,675,294
Chilean Peso	2,127,127	13,924,644	16,064,828	(57,325)	32,059,274
Chinese Yuan	24,811,234	-	-	-	24,811,234
Chinese Yuan Renminbi	(21,148,767)	217,429,262	39,836,532	(891,319)	235,225,708
Colombia Peso	405,879	893,233	78,605,496	(137,232)	79,767,376
Czech Koruna	194,036	6,496,027	9,810,523	(163,826)	16,336,760
Danish Krone	3,145,291	203,966,267	-	-	207,111,558
Dominican Peso	-	-	315,679	-	315,679
Egyptian Pound	4,099,608	13,441,430	47,209,527	-	64,750,565
Emirati Dirham	127,271	2,902,346	-	-	3,029,617
Euro	19,733,177	1,856,761,393	62,985,612	-	1,939,480,182
Ghana Cedi	575,292	-	24,416,688	-	24,991,980
Hong Kong Dollar	4,197,552	842,638,450	-	225,193	847,061,195
Hungarian Forint	199,708	28,979,856	16,029,763	(85,851)	45,123,476
Indian Rupee	3,845,209	353,197,247	66,742,445	-	423,784,901
Indonesian Rupiah	3,653,145	50,118,233	128,760,334	-	182,531,712
Israeli Shekel	226,415	20,659,910	-	651	20,886,976
Icelandic Krona	-	-	-	-	-
Japanese Yen	19,253,322	1,641,343,964	99,991,865	-	1,760,589,151
Kazakhstani Tenge	-	-	1,015,953	-	1,015,953
Malaysian Ringgit	874,538	30,122,445	45,313,284	(58,081)	76,252,186
Mexican Peso	6,078,740	79,675,342	136,818,843	(4,079,752)	218,493,173
Moroccan Dirham	-	-	-	-	-
New Taiwan Dollar	4,982,104	641,575,668	-	1,133,480	647,691,252
New Zealand Dollar	1,613,084	12,728,174	-	-	14,341,258
Nigerian Naira	1,508,866	-	-	-	1,508,866
Norwegian Krone	749,817	57,886,434	-	-	58,636,251
Pakistani Rupee	3,801	786,461	-	-	790,262
Peruvian Sol	1,056,910	254,918	28,815,927	-	30,127,755
Philippine Peso	275,982	9,163,123	-	-	9,439,105
Polish Zloty	479,908	64,103,410	32,318,868	216,220	97,118,406
Qatari Riyal	102,350	4,368,640	-	-	4,470,990
Romanian Leu	-	-	10,549,763	-	10,549,763
Russian Ruble	1,187,174	117,191,373	80,729,899	(317,248)	198,791,198
Serbian Dinar	-	-	1,852,436	-	1,852,436
Singapore Dollar	904,793	68,119,138	31,912,893	73,141	101,009,965
South African Rand	(390,317)	65,970,296	102,111,612	431,015	168,122,606
South Korean Won	1,383,207	648,826,773	100,486,759	(424,374)	750,272,365
Swedish Krona	1,974,489	313,570,634	-	-	315,545,123
Swiss Franc	1,099,961	550,399,437	-	-	551,499,398
Thailand Baht	405,548	102,324,294	37,328,360	-	140,058,202
Turkish Lira	244,948	18,102,168	6,418,382	(223,172)	24,542,326
Ukraine Hryvnia	257,332	-	2,860,211	-	3,117,543
Uruguayan Peso	-	-	1,427,522	-	1,427,522
Vietnam Dong	-	3,817,796	-	-	3,817,796
Total subject to foreign currency risk	112,911,645	10,055,490,253	1,368,440,860	(4,071,083)	11,532,771,675
Investments in international securities payable in U.S. dollars	-	1,150,952,123	2,063,495,965	(465,682)	3,213,982,406
Total international investment securities (including domestic securities payable in foreign currency)	112,911,645	11,206,442,376	3,431,936,825	(4,536,765)	14,746,754,081
Domestic investments (excluding securities payable in foreign currency)	-	11,201,085,101	6,788,805,123	(868,854)	17,989,021,370
Total fair value	\$112,911,645	\$22,407,527,477	\$10,220,741,948	(\$5,405,619)	\$32,735,775,451

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 \$219,879,161, \$3,233,732 and \$812,247,691 at June 30, 2021, 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, 2021, Citibank, N.A. served as the third-party securities lending agent for the fixed income, domestic equity and international equity lending programs. In this capacity, TRS reduces credit risk by allowing Citibank to lend securities to a diverse group of dealers on behalf of TRS. At fiscal-year end, TRS has no credit risk exposure to borrowers because the amount TRS owes the

borrowers exceeds the amount the borrowers owe TRS. The weighted average term of the loans is nine days 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. As of June 30, 2021, 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 57 days at June 30, 2021. 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, 2021, TRS had outstanding loaned investment securities with a fair value of \$2,407,754,585 against which it had received cash and non-cash collateral with a fair value of \$2,474,785,470. The securities on loan remain on TRS's Statement of Fiduciary Net Position in their respective investment categories. As of June 30, 2021, TRS cash collateral received and reported as securities lending obligation on the Statement of Fiduciary Net Position totaled \$2,366,898,796; whereas, the fair value of re-invested cash collateral reported as securities lending collateral was \$2,366,899,348. 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 FY21, the System earned net income of \$8,401,686 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, 2021, 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, 2021, the TRS investment portfolio held the following derivatives.

Investment Derivatives	Fair Value at June 30, 2021	Change in Fair Value	Shares/Par	Notional
Credit default swaps buying protection	\$562,305	(\$1,214,730)	55,555,000	\$55,100,685
Credit default swaps selling protection	156,799	169,004	10,220,000	10,379,922
Index and variance swaps	3,189,078	29,455,976	21,022,641	126,196,194
Pay fixed interest rate/inflation swaps	(514,734)	1,217,327	237,828,397	237,949,324
Receive fixed interest rate/inflation swaps	(8,819,952)	(14,150,868)	570,809,535	562,624,067
Equity futures long	-	32,651,181	97,832,323	119,449,574
Equity futures short	-	(12,025,823)	(241,100)	(43,067,640)
Fixed income futures long	-	(5,268,239)	154,800,000	200,594,726
Fixed income futures short	-	8,206,594	(153,369,053)	(227,534,570)
Currency forward options purchased	653,876	(3,280,837)	173,098,591	173,193,823
Currency forward options written	(669,836)	6,270,986	(156,706,459)	156,379,569
Options on futures purchased	-	(314,361)	-	-
Swaptions purchased	59,793	444,799	39,600,000	39,600,000
Swaptions written	(22,947)	771,149	(39,600,000)	39,600,000
FX forwards	13,052,105	(24,055,051)	-	-
Rights	150,384	504,651	109,550	109,550
Warrants	14,255,061	5,327,051	1,846,399	1,846,399
Grand total	<u>\$22,051,932</u>	<u>\$24,708,809</u>		<u>\$1,452,421,623</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, 2021, TRS had currency forward purchase or sale contracts for 33 different currencies with various settlement dates.

Fair Value: As of June 30, 2021, TRS's open currency forward contracts had a net fair value (unrealized gain) of \$13,052,105.

FINANCIAL FUTURES

Objective: Financial futures are agreements to purchase or sell a specific amount of an asset at a

specified delivery or maturity date for an agreed upon price. These derivative securities are used to improve yield, adjust the duration of the fixed income portfolio, protect against changes in interest rates or replicate an index.

Terms: Futures contracts are standardized and traded on organized exchanges, thereby minimizing TRS's credit risk. As the daily market value of the futures contract varies from the original contract price, a gain or loss is recognized and paid to, or received from, the clearinghouse. As of June 30, 2021, TRS had outstanding futures contracts with a notional value, or exposure, of \$49,442,090. Notional values do not represent the actual values in the Statement of Fiduciary Net Position. The contracts have various expiration dates through September 2021.

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 gain on futures contracts was \$23,323,603 during FY21.

Type	Number of Contracts	Notional Principal
Equity Futures		
International equity index futures - long	2,064	\$119,449,574
International equity index futures - short	(1,966)	(43,067,640)
Fixed Income/Cash Equivalent Futures		
Fixed income index futures - long	1,067	200,594,726
Fixed income index futures - short	(1,190)	(172,386,102)
International fixed income index futures - short	(288)	(55,148,468)

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, 2021, the TRS investment portfolio held currency forward options with notional value of \$329,573,392. Contractual principal/notional values do not represent the actual values in the Statement of Fiduciary Net Position. The contracts have various expiration dates through April 2022.

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, 2021, the fair value of all option contracts, gross of premiums received, was (\$15,960). 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, 2021. 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	4	\$32,209,488
Currency forward call options - written	4	32,013,586
Currency forward put options - purchased	8	140,984,335
Currency forward put options - written	6	124,365,983

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, 2021, TRS had outstanding written put swaption exposure of \$39,600,000 and purchased put swaption exposure of \$39,600,000. The contracts have various maturity dates through

September 2021. 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, 2021, the fair value of swaption contracts was \$36,846.

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, 2021, TRS had credit default/index swaps in its portfolio with various maturity dates through June 2026. The notional values as of June 30, 2021, included purchased credit default swaps (buying protection) of \$55,100,685, written credit default swaps (selling protection) of \$10,379,922 and index swaps of \$126,196,194.

Fair Value: The fair value of credit default swaps, including index swaps, held by TRS was \$3,908,182 as of June 30, 2021. 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, 2021, TRS held interest rate swaps in various currencies with various expiration/maturity dates ranging from 2023 to 2051. 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, 2021.

As of June 30, 2021	
Receive floating/pay fixed	(\$514,734)
Receive fixed/pay floating	(8,819,952)

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, 2021.

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/21
Pay Fixed Interest Rate/Inflation Swaps:						
Interest Rate Swap BRL	6,322,091	\$1,259,920	3 month Brazilian CDI	8.25%	1/2/2025	(\$20,447)
Interest Rate Swap BRL	20,170,845	4,019,818	3 month Brazilian CDI	8.14	1/2/2025	(52,333)
Interest Rate Swap ZAR	219,726,000	15,451,846	3 month JIBAR	4.98	8/21/2025	361,663
Interest Rate Swap COP	9,000,000,000	2,412,078	3 Month IBRCO	3.79	3/15/2026	124,664
Interest Rate Swap USD	92,820,000	92,822,844	3 month LIBOR	0.98	3/23/2026	(327,448)
Interest Rate Swap ZAR	277,162,000	19,424,547	3 month JIBAR	6.01	3/24/2026	(105,579)
Interest Rate Swap MYR	23,400,000	5,636,841	3 month KLIBOR	2.65	4/8/2026	(24,841)
Interest Rate Swap MYR	22,000,000	5,312,385	3 month KLIBOR	2.60	4/21/2026	(6,903)
Interest Rate Swap MYR	23,700,000	5,702,166	3 month KLIBOR	2.67	4/27/2026	(26,337)
Interest Rate Swap HUF	1,320,000,000	4,464,468	6 month BUBOR	2.15	5/14/2026	49,203
Interest Rate Swap MXN	8,430,000	424,151	28 day Mexican TIIE	5.80	6/10/2026	14,195
Interest Rate Swap CLP	2,602,000,000	3,573,912	6 month Chile Interbank Rate	3.17	6/23/2026	44,895
Interest Rate Swap ZAR	48,748,000	3,416,091	3 month JIBAR	5.91	6/25/2026	10,032
Interest Rate Swap BRL	7,224,767	1,439,813	3 month Brazilian CDI	7.11	1/4/2027	45,933
Interest Rate Swap BRL	74,236,357	14,794,455	3 month Brazilian CDI	7.06	1/4/2027	497,232
Interest Rate Swap BRL	9,850,703	1,963,132	3 month Brazilian CDI	8.57	1/4/2027	(32,858)
Interest Rate Swap BRL	14,695,999	2,928,744	3 month Brazilian CDI	8.38	1/4/2027	(7,827)
Interest Rate Swap BRL	8,383,132	1,670,662	3 month Brazilian CDI	7.75	1/4/2027	18,529
Interest Rate Swap ZAR	34,820,000	2,442,034	3 month JIBAR	6.83	3/17/2031	77,921
Interest Rate Swap USD	14,560,000	14,560,446	3 month LIBOR	1.73	3/23/2031	(444,390)
Interest Rate Swap ZAR	25,164,000	1,777,035	3 month JIBAR	7.54	4/9/2031	(43,994)
Interest Rate Swap CLP	609,800,000	837,945	6 month Chile Interbank Rate	3.68	5/3/2031	32,244
Interest Rate Swap USD	20,390,000	20,393,466	3 month LIBOR	1.65	5/21/2031	(450,000)
Interest Rate Swap PLN	7,610,000	1,999,064	6 month WIBOR	1.75	6/17/2031	514
Interest Rate Swap USD	9,220,000	9,221,461	3 month LIBOR	1.86	2/22/2051	(248,802)
Total Pay Fixed Interest Rate/Inflation Swaps:		\$237,949,324				(\$514,734)
Receive Fixed Interest Rate/Inflation Swaps:						
Interest Rate Swap BRL	36,318,541	\$7,027,264	4.25% 3 month Brazilian CDI		1/2/2023	(\$210,605)
Interest Rate Swap BRL	32,899,822	6,566,138	6.57 3 month Brazilian CDI		1/2/2023	9,580

(continued)

(continued)

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/21
Interest Rate Swap BRL	72,320,339	\$14,386,062	6.45%	3 month Brazilian CDI	1/2/2023	(\$26,553)
Interest Rate Swap MXN	2,629,166,000	129,941,112	4.80	28 day Mexican TIIE	2/27/2023	(2,108,106)
Interest Rate Swap MXN	1,019,094,000	50,740,518	5.64	28 day Mexican TIIE	3/23/2023	(443,229)
Interest Rate Swap BRL	23,620,152	4,496,188	4.59	3 month Brazilian CDI	1/2/2024	(211,038)
Interest Rate Swap USD	45,780,000	45,773,071	0.44	3 month LIBOR	3/23/2024	(61,638)
Interest Rate Swap PLN	15,800,000	4,369,870	1.80	6 month WIBOR	7/24/2024	149,721
Interest Rate Swap BRL	6,307,119	1,224,124	5.76	3 month Brazilian CDI	1/2/2025	(32,813)
Interest Rate Swap BRL	18,679,272	3,735,133	7.95	3 month Brazilian CDI	1/2/2025	12,568
Interest Rate Swap CLP	1,812,000,000	2,362,089	1.66	6 month Chile Interbank Rate	4/23/2025	(134,464)
Interest Rate Swap COP	13,845,650,000	3,568,927	3.67	3 Month IBRCO	5/7/2025	(139,067)
Interest Rate Swap CNY	46,700,000	7,054,838	2.03	3 Month CNRR	5/29/2025	(185,799)
Interest Rate Swap CNY	123,770,000	18,880,583	2.30	3 Month CNRR	6/8/2025	(302,126)
Interest Rate Swap CNY	21,300,000	3,231,446	2.18	3 Month CNRR	6/15/2025	(68,145)
Interest Rate Swap ZAR	41,800,000	2,869,598	5.01	3 month JIBAR	6/25/2025	(60,220)
Interest Rate Swap CNY	117,579,000	18,201,976	2.60	3 month LIBOR	7/16/2025	(93,742)
Interest Rate Swap CNY	117,461,000	18,156,281	2.57	3 month LIBOR	7/20/2025	(114,777)
Interest Rate Swap CNY	50,000,000	7,714,221	2.66	3 month SHIBOR	9/17/2025	(31,811)
Interest Rate Swap CNY	69,975,000	10,781,454	2.54	3 Month CNRR	10/30/2025	(94,919)
Interest Rate Swap KRW	33,700,000,000	29,651,916	1.41	91 day CD-KSDA	3/12/2026	(288,147)
Interest Rate Swap MXN	343,065,000	16,903,102	6.03	28 day Mexican TIIE	3/19/2026	(369,825)
Interest Rate Swap USD	85,780,000	84,207,369	2.47	U.S. CPI URNSA	3/23/2026	(1,572,630)
Interest Rate Swap ZAR	19,885,000	1,397,153	5.61	3 month JIBAR	4/15/2026	(11,988)
Interest Rate Swap COP	23,100,000,000	6,063,567	4.60	3 Month IBRCO	6/10/2026	(122,829)
Interest Rate Swap PLN	13,685,000	3,609,554	1.48	6 month WIBOR	6/11/2026	11,940
Interest Rate Swap RUB	447,700,000	5,955,162	6.65	3 month MOSPR	6/16/2026	(189,958)
Interest Rate Swap RUB	300,000,000	3,979,276	6.65	3 month MOSPR	6/16/2026	(127,289)
Interest Rate Swap BRL	9,106,785	1,756,234	6.53	3 month Brazilian CDI	1/4/2027	(58,644)
Interest Rate Swap BRL	6,617,719	1,264,487	6.33	3 month Brazilian CDI	1/4/2027	(54,349)
Interest Rate Swap BRL	11,776,624	2,224,138	6.13	3 month Brazilian CDI	1/4/2027	(122,808)
Interest Rate Swap BRL	12,575,926	2,391,994	6.60	3 month Brazilian CDI	1/4/2027	(114,244)
Interest Rate Swap BRL	9,389,520	1,893,897	8.57	3 month Brazilian CDI	1/4/2027	22,673
Interest Rate Swap BRL	14,769,295	2,920,146	8.02	3 month Brazilian CDI	1/4/2027	(23,205)
Interest Rate Swap MXN	89,242,200	4,149,284	5.19	28 day Mexican TIIE	7/27/2027	(347,746)
Interest Rate Swap BRL	5,966,502	1,130,267	6.78	3 month Brazilian CDI	1/2/2029	(58,789)
Interest Rate Swap CZK	72,475,000	3,337,106	1.61	6 month PRIBOR	1/27/2030	(55,680)
Interest Rate Swap MXN	47,050,000	2,322,696	6.64	28 day Mexican TIIE	1/28/2030	(41,687)
Interest Rate Swap CZK	71,960,000	3,285,699	1.52	6 month PRIBOR	1/29/2030	(81,560)

(continued)

(continued)

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/21
Interest Rate Swap HUF	938,520,000	\$3,035,589	1.96%	6 month BUBOR	5/5/2030	(\$135,054)
Interest Rate Swap MXN	112,524,000	5,052,015	5.49	28 day Mexican TIIE	1/23/2031	(605,502)
Interest Rate Swap ZAR	25,164,000	1,833,383	7.53	3 month JIBAR	4/13/2031	\$42,243
Interest Rate Swap MXN	38,690,000	1,907,992	6.66	28 day Mexican TIIE	4/28/2031	(43,831)
Interest Rate Swap MXN	29,100,000	1,456,601	6.92	28 day Mexican TIIE	5/14/2031	(7,186)
Interest Rate Swap MXN	37,990,000	1,869,962	6.65	28 day Mexican TIIE	5/28/2031	(45,831)
Interest Rate Swap CZK	50,408,000	2,318,842	1.73	6 month PRIBOR	6/15/2031	(26,586)
Interest Rate Swap USD	5,870,000	5,625,743	2.34	U.S. CPI URNSA	2/22/2051	(244,257)
Total Receive Fixed Interest Rate/Inflation Swaps:		\$562,624,067				(\$8,819,952)

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, CPI - Consumer Price Index, IBRCO - Columbia Interbank Rate, JIBAR - Johannesburg Interbank Agreed Rate, LIBOR - London Interbank Offered Rate, KLIBOR - Kuala Lumpur Interbank Offered Rate, MOSPR - MosPrime Rate, PRIBOR - Czech Interbank Offered Rate, SHIBOR - Shanghai Interbank Offered Rate, TIIE - Mexico Interbank Equilibrium Interest Rate, URNSA - Urban Consumers NSA Index 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, 2021, the aggregate fair value of non-exchange traded derivative instruments in asset positions was \$46,830,254. 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, 2021
Aa2	\$5,055,692
Aa3	23,064,420
A1	6,428,494
A2	5,097,032
A3	7,184,616
Total subject to credit risk	\$46,830,254

Although the derivative instruments held within the TRS investment portfolio are executed with various counterparties, approximately 95 percent of the net market value exposure to credit risk is for non-exchange traded derivative contracts held with 10 counterparties.

5. INVESTMENT COMMITMENTS

Investments in certain limited partnerships commit TRS to possible future capital contributions. As of June 30, 2021, TRS had remaining unfunded commitments of \$12,478,928,848 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, 2021, the annual money-weighted rate of return on pension plan investments, net of investment expense, was 25.4 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 market value. These investments are not categorized in the fair value hierarchy.

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

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

The following table summarizes the valuation of TRS investments by the fair value hierarchy levels as of June 30, 2021.

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

Investments by fair value level	June 30, 2021	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	\$81,053	\$ -	\$81,053	\$ -
Commercial/collateralized mortgages & loans	289,996	-	289,996	-
Domestic corporate obligations	2,049,106	-	2,049,106	-
Fixed income mutual funds	2,274,713	-	361,372	1,913,341
Foreign debt/corporate obligations	3,431,937	-	3,431,937	-
Municipals	5,220	-	5,220	-
U.S. agencies obligations	110,914	-	110,914	-
U.S. government-backed mortgages	681,894	-	681,894	-
U.S. treasuries	650,004	-	650,004	-
Total debt securities	9,574,837	-	7,661,496	1,913,341
Equity investments				
International common and preferred stock	11,206,327	11,170,918	35,409	-
U.S. common and preferred stock	11,201,201	11,201,092	109	-
Total equity investments	22,407,528	22,372,010	35,518	-
Real assets				
Real estate	5,113,968	-	-	5,113,968
Total real assets	5,113,968	-	-	5,113,968
Total investments by fair value level	\$37,096,333	\$22,372,010	\$7,697,014	\$7,027,309
Investments measured at the net asset value (NAV)				
Commingled fixed income funds	\$645,905			
Diversifying strategies	5,541,737			
Private debt partnerships	4,069,872			
Private equity partnerships	10,178,045			
Private real estate partnerships	3,739,822			
Real asset partnerships	715,954			
Total investments measured at the NAV	24,891,335			
Total investments measured at fair value	\$61,987,668			
Investment derivative instruments				
Credit default swaps	\$719	\$ -	\$719	\$ -
Index and variance swaps	3,189	-	3,189	-
Interest rate and inflation swaps	(9,335)	-	(9,335)	-
Options/swaptions	21	-	21	-
Total investment derivative instruments	(\$5,406)	\$ -	(\$5,406)	\$ -
Invested securities lending collateral				
Total invested securities lending collateral*	\$2,366,899	\$355,035	\$2,011,864	\$ -

* 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, 2021	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Commingled fixed income funds ¹	\$645,905	\$ -	Monthly, quarterly	30-45 days
Diversifying funds - liquid ²	5,232,163	-	Daily, weekly, monthly, quarterly	1-90 days
Diversifying funds - illiquid ³	309,574	215,051	Not eligible	N/A
Total diversifying strategies	5,541,737	215,051		
Custom private debt partnerships	1,710,443	306,370	Quarterly	60-90 days
Private debt partnerships	2,359,429	2,724,474	Not eligible	N/A
Total private debt partnerships⁴	4,069,872	3,030,844		
Private equity partnerships ⁵	10,178,045	4,896,663	Not eligible	N/A
Private real estate partnerships ⁵	3,739,822	3,101,902	Not eligible	N/A
Real assets partnerships ⁶	715,954	1,234,469	Not eligible	N/A
Total investments measured at the NAV	<u>\$24,891,335</u>	<u>\$12,478,929</u>		

- Commingled fixed income funds:** The investment strategies for the three fixed income funds include high yield, defensive bond arbitrage and global liquidity relative value. The fair value of the investments has been determined using the NAV per share (or its equivalent) of the investments. Liquidity ranges from monthly to quarterly upon notice of redemption.
- 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. Four factor portfolio direct investments include trend/momentum exposures and alternative risk premia. The systematic and discretionary macro strategies include direct investments in six funds diversifying through regional and product expertise, speed of algorithms and style of trading. Opportunistic funds, including five 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. The strategies maintain a liquidity profile of less than one year, ranging from daily to quarterly and require advance notice prior to redemption.
- Diversifying funds (illiquid strategies):** The diversifying strategies asset class includes four 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 a monthly 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, 2021.

- 4) **Private debt partnerships:** Private debt funds consist of 50 funds investing across strategies such as stressed debt/credit, direct and specialty lending, real estate credit and global multi-credit strategies. Five 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 spans three to 12 years and distributions are received throughout the life of the fund. The custom partnerships allow TRS to liquidate upon giving advanced notice. TRS has no plans to liquidate as of June 30, 2021, however; during the fiscal year, TRS did sell one fund on the secondary market.
- 5) **Private equity and real estate partnerships:** TRS has 197 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 58 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 that 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 did not sell any private equity funds on the secondary market. As of June 30, 2021, 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 12 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, 2021, 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

2021	
Balances at June 30	\$64,201,602,080

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 \$79.9 billion in FY21 based on the actuarial value of assets.

2. MINIMUM RETIREMENT ANNUITY

2021	
Balances at June 30	\$10,902,940

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. Or, the GASB actuarial valuations can be found at www.cgfa.ilga.gov under the topic Group Insurance.



Top:

Monochromatic self-portraits created by students in kindergarten through fifth grade line the halls at Melrose Park Elementary School. Submitted by teacher Lauren Guenther.

Middle:

Students at Washington Junior High School in Joliet celebrated Hispanic Heritage Month by creating the flag of Mexico to decorate their classroom door. Submitted by social studies teacher Elisabeth Patton.

Bottom:

A student at Caruso Middle School in Deerfield celebrates LGBTQ Pride Month. Submitted by communication media arts teacher Julie Witczak.

REQUIRED SUPPLEMENTARY INFORMATION

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

	2021	2020	2019	2018
Total pension liability				
Service cost	\$2,032,149,463	\$1,991,622,987	\$1,947,627,286	\$1,838,002,948
Interest	9,580,886,840	9,296,897,060	8,991,684,121	8,703,519,454
Changes of benefit terms	-	-	-	(374,603,419)
Difference between expected and actual experience	(370,469,646)	(28,215,833)	258,778,925	1,191,346,970
Change of assumptions	(162,359,084)	-	77,241,572	(666,054,719)
Benefit payments, including refund of member contributions	(7,388,142,712)	(7,099,524,955)	(6,818,760,572)	(6,551,634,376)
Net change in total pension liability	3,692,064,861	4,160,779,259	4,456,571,332	4,140,576,858
Total pension liability - beginning	138,531,733,887	134,370,954,628	129,914,383,296	125,773,806,438
Total pension liability - ending (a)	142,223,798,748	138,531,733,887	134,370,954,628	129,914,383,296
Plan fiduciary net position				
Contributions - employer	97,594,081	92,658,238	88,514,781	84,633,117
Contributions - nonemployer contributing entity	5,140,648,356	4,813,451,679	4,466,020,692	4,095,125,358
Contributions - member	1,023,531,951	994,400,416	963,972,120	938,037,245
Net investment income (loss)	13,046,153,685	275,669,398	2,617,831,332	4,049,271,728
Benefit payments, including refund of member contributions	(7,388,142,712)	(7,099,524,955)	(6,818,760,572)	(6,551,634,376)
Administrative expense	(23,758,112)	(22,966,372)	(24,335,680)	(21,550,896)
Net change in plan fiduciary net position	11,896,027,249	(946,311,596)	1,293,242,673	2,593,882,176
Plan fiduciary net position - beginning	52,316,477,771	53,262,789,367	51,969,546,694	49,375,664,518
Plan fiduciary net position - ending (b)	64,212,505,020	52,316,477,771	53,262,789,367	51,969,546,694
Employers' net pension liability - ending (a) - (b)	\$78,011,293,728	\$86,215,256,116	\$81,108,165,261	\$77,944,836,602

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

Schedule of the Net Pension Liability for Fiscal Years:

	2021	2020	2019	2018
Total pension liability	\$142,223,798,748	\$138,531,733,887	\$134,370,954,628	\$129,914,383,296
Plan fiduciary net position	64,212,505,020	52,316,477,771	53,262,789,367	51,969,546,694
Net pension liability	\$78,011,293,728	\$86,215,256,116	\$81,108,165,261	\$77,944,836,602
Plan fiduciary net position as a percentage of the total pension liability	45.1%	37.8%	39.6%	40.0%
Covered payroll	\$11,120,776,122	\$10,827,438,800	\$10,450,452,444	\$10,163,980,000
Net pension liability as a percentage of covered payroll	701.5%	796.3%	776.1%	766.9%

2017	2016	2015	2014
\$1,877,570,053	\$1,681,242,232	\$1,948,079,771	\$1,894,351,211
8,390,352,464	8,264,257,311	7,864,916,421	7,561,104,814
-	-	-	-
482,486,212	701,827,169	(90,079,446)	39,950,212
(2,725,599,755)	7,553,894,504	1,136,454,886	-
(6,438,005,920)	(5,931,207,177)	(5,625,037,173)	(5,320,662,979)
1,586,803,054	12,270,014,039	5,234,334,459	4,174,743,258
124,187,003,384	111,916,989,345	106,682,654,886	102,507,911,628
125,773,806,438	124,187,003,384	111,916,989,345	106,682,654,886
149,495,577	148,040,767	145,591,585	158,334,598
3,986,363,699	3,742,469,245	3,377,664,945	3,438,382,892
929,130,165	951,809,398	935,451,049	928,745,853
5,520,453,001	(44,103,178)	1,770,549,533	6,782,031,720
(6,438,005,920)	(5,931,207,177)	(5,625,037,173)	(5,320,662,979)
(22,728,735)	(22,967,917)	(21,686,860)	(21,218,069)
4,124,707,787	(1,155,958,862)	582,533,079	5,965,614,015
45,250,956,731	46,406,915,593	45,824,382,514	39,858,768,499
49,375,664,518	45,250,956,731	46,406,915,593	45,824,382,514
\$76,398,141,920	\$78,936,046,653	\$65,510,073,752	\$60,858,272,372

2017	2016	2015	2014
\$125,773,806,438	\$124,187,003,384	\$111,916,989,345	\$106,682,654,886
49,375,664,518	45,250,956,731	46,406,915,593	45,824,382,514
\$76,398,141,920	\$78,936,046,653	\$65,510,073,752	\$60,858,272,372
39.3%	36.4%	41.5%	43.0%
\$9,965,569,893	\$9,811,614,284	\$9,641,170,627	\$9,512,809,680
766.6%	804.5%	679.5%	639.8%

Schedule of Investment Returns for Fiscal Years:

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

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

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

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Actuarially-determined contribution (ADC)	\$8,441,258	\$7,988,612	\$7,429,037	\$7,080,756	\$6,248,879	\$4,582,530	\$4,119,526	\$4,091,978	\$3,582,033	\$3,429,945
Contributions in relation to the actuarially-determined contribution:*										
State	5,140,337	4,813,078	4,465,578	4,094,616	3,985,783	3,741,802	3,376,878	3,437,478	2,702,278	2,405,172
Federal & Employer Contributions	97,082	92,038	87,707	84,034	148,749	147,408	144,780	157,228	155,787	153,409
Total contributions	5,237,419	4,905,116	4,553,285	4,178,650	4,134,532	3,889,210	3,521,658	3,594,706	2,858,065	2,558,581
Contribution deficiency	\$3,203,839	\$3,083,496	\$2,875,752	\$2,902,106	\$2,114,347	\$693,320	\$597,868	\$497,272	\$723,968	\$871,364
Covered payroll	\$11,120,776	\$10,827,439	\$10,450,452	\$10,163,980	\$9,965,570	\$9,811,614	\$9,641,171	\$9,512,810	\$9,394,741	\$9,321,098
Contributions as a percentage of covered payroll	47.1%	45.3%	43.6%	41.1%	41.5%	39.6%	36.5%	37.8%	30.4%	27.4%

* 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.

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 FY21, they increased the total pension liability by \$3.7 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 FY21.

	For Funding per State Statute	For Determining the Actuarially-determined Contribution
Valuation Used to Determine Funding Amount:	June 30, 2019	June 30, 2019
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
Remaining Amortization:	24 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

	2021	2020
Personnel services		
Salaries	\$10,924,264	\$11,075,840
Retirement contributions	1,867,608	2,068,795
Insurance and payroll taxes	4,238,772	3,616,262
	<u>17,030,644</u>	<u>16,760,897</u>
Professional services		
Actuarial services	239,646	196,868
External auditors	225,356	270,919
Legal services	611,753	560,578
Legislative consulting	84,000	84,000
Information systems consulting	613,471	255,364
Operations consulting	231,158	437,805
Other	12,229	3,295
	<u>2,017,613</u>	<u>1,808,829</u>
Communications		
Postage	84,780	223,277
Printing and copying	44,671	65,959
Telephone	127,544	180,991
	<u>256,995</u>	<u>470,227</u>
Other services		
Administrative services	286,886	307,357
Building operations and maintenance	469,960	451,833
EDP supplies and equipment	160,767	132,104
Equipment repairs, rental and maintenance	221,639	235,091
Insurance	288,652	193,758
Memberships and subscriptions	82,577	112,977
Office equipment and furniture	56,891	130,409
Office supplies	17,505	14,294
Software licenses and maintenance	1,034,575	1,068,164
Travel, conferences, education	39,286	175,819
	<u>2,658,738</u>	<u>2,821,806</u>
Depreciation expense	<u>1,794,122</u>	<u>1,104,613</u>
Total administrative expenses	<u>\$23,758,112</u>	<u>\$22,966,372</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

	2021	2020
Investment manager fees	<u>\$445,990,695</u>	<u>\$375,519,105</u>
Master custodian fees		
State Street Bank and Trust Company	<u>3,847,375</u>	<u>3,534,575</u>
Consulting services		
Aksia, L.L.C.	702,700	705,770
Aksia TorreyCove Partners, L.L.C.	100,000	-
Meketa Investment Group, Inc.	60,000	-
RVK, Inc.	465,000	465,000
Stepstone Group, L.P.	964,250	423,924
Stepstone Group Real Estate, L.P.	319,725	303,816
Stout Risius Ross, Inc.	-	137,500
TorreyCove Capital Partners, L.L.C.	<u>-</u>	<u>1,024,750</u>
	<u>2,611,675</u>	<u>3,060,760</u>
Legal services		
DLA Piper, L.L.P.	<u>783,359</u>	<u>715,269</u>
Tax advisory services		
Ernst & Young Private, Ltd.	<u>110,892</u>	<u>93,918</u>
Other investment expense		
Auditing costs	368,886	178,800
Communication services	21,730	22,905
Education, meetings and travel	9,498	86,953
Foreign tax expense	22,876,576	14,642,338
Investment activity expenses	3,561,776	552,156
Investment analytical systems	1,053,172	903,027
Personnel costs	4,898,704	5,145,178
Research, subscriptions and memberships	68,401	99,796
Other costs	<u>220,569</u>	<u>110,651</u>
	<u>33,079,312</u>	<u>21,741,804</u>
Total investment expenses	<u>\$486,423,308</u>	<u>\$404,665,431</u>

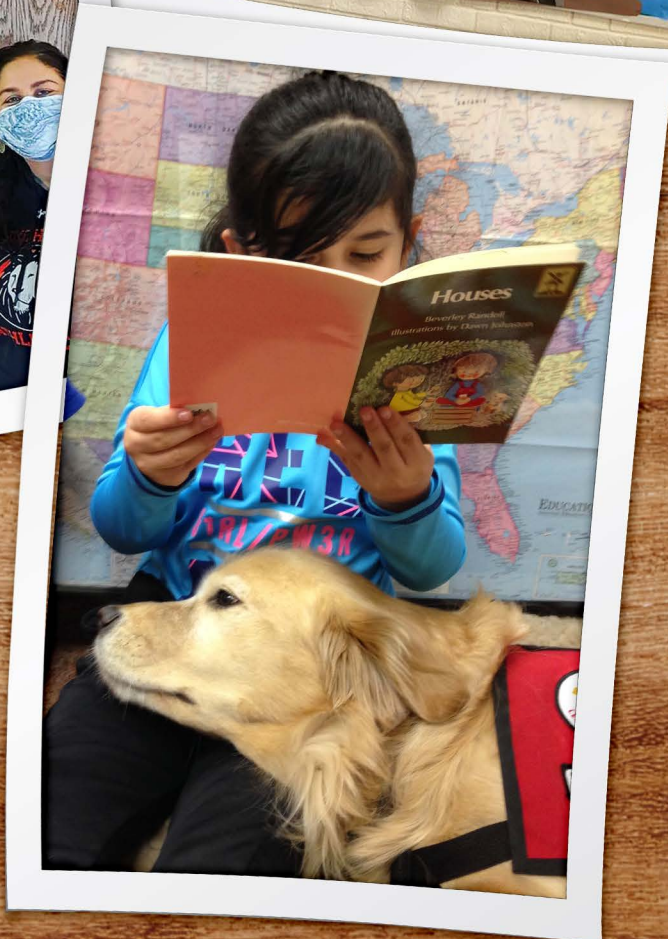
Note: Investment manager fee detail is shown on pages 84 to 87.

SCHEDULE OF PROFESSIONAL SERVICES FOR THE YEARS ENDED JUNE 30

	2021	2020
Actuarial services		
The Segal Company Midwest, Inc.	\$239,646	\$196,868
External auditors		
Office of the Auditor General (BKD, L.L.P.)	225,356	270,919
Legal services		
Elrod Friedman L.L.P.	136,302	106,519
Holland & Knight, L.L.P.	43,560	78,632
Howard & Howard Attorneys, P.L.L.C.	13,421	3,597
King & Spalding L.L.P.	361,862	285,887
Kopec White & Spooner	2,720	1,000
Reinhart Boerner Van Deuren s.c.	49,288	83,193
Whitt Law, L.L.C.	4,600	1,750
	611,753	560,578
Legislative consulting		
Leinenweber Baroni & Daffada Consulting, L.L.C.	84,000	84,000
Information systems consulting		
AT & T Corp.	590	-
Blu Age Corporation	-	12,938
Carahsoft Technology Corp.	14,193	-
CDW L.L.C.	42,800	-
Dayagdag, Chris	153,520	-
Digital Check Corp.	-	4,350
Excelon Development II L.L.C.	-	14,155
FireEye Inc.	18,538	-
HSO North America, L.L.C.	84,420	130,117
McDonald Hopkins L.L.C.	1,462	-
Mellor, William Thomas	10,400	-
ProCircular, Inc.	21,850	17,100
Promet Solutions Corporation	47,375	36,563
Provaliant Retirement, L.L.C.	-	378
The Segal Company Midwest Inc.	188,773	-
Sentinel Technologies, Inc.	7,800	39,763
VPMA Global Services L.L.C.	21,750	-
	613,471	255,364
Operations consulting		
CAPFinancial Partners, L.L.C. (formerly known as Cammack Retirement Group, Inc.)	-	220,000
CEM Benchmarking, Inc.	50,000	50,000
Darlington & Company, Inc.	23,300	36,653
Higher Logic, L.L.C.	10,396	10,396
Jasculca Terman Strategic Communications	30,000	96,000
Korn Ferry (US)	95,680	-
Levi Ray & Shoup, Inc.	-	17,500
Management Association	-	5,606
SABA Software	1,782	1,650
The Segal Co Western Stats Inc.	20,000	-
	231,158	437,805
Other	12,229	3,295
Total professional services	\$2,017,613	\$1,808,829

Students at Glenview Middle School in East Moline created a colorful display during Hispanic Heritage Month that honored the contributions of Hispanic women. Submitted by Belinda Rusch of the Parapro/Sped/Success Program.

At Nichols Middle School in Evanston, teachers Brian Sommer and Demetra Stratakos show off their creative reminder that students need to wear masks during the pandemic.



Martha, a certified member of Alliance of Therapy Dogs, works with students in the Literacy Program at Morris Grade School in Morris. Submitted by reading teacher Trudy DesLauriers.

INVESTMENTS

INTRODUCTION

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

The TRS investment portfolio added \$12.4 billion over the past 12 months, ending with a value of \$63.9 billion on June 30, 2021. The TRS portfolio remains fully diversified across different 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.

Investment performance rebounded significantly during the fiscal year in all asset classes as the economy recovered from the global pandemic. Markets were able to stabilize and subsequently rallied for impressive results, however volatility persists due to COVID-19 variants and resurges. Within the equity asset class, private equity outperformed public assets during the year, generating 57.2 percent, net of fee return, versus 41.0 percent in public equity. All asset classes had outperformance comparative to assigned benchmarks and the System’s diversification allowed a positive return of 25.5 percent, net of fees, for the fiscal year ended June 30, 2021.

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, 2021. State Street

Bank and Trust has also provided detailed financial reports of all investments, receipts, disbursements, purchases and sales of securities, and other transactions pertinent to the fund for FY21. 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. State Street Bank and Trust calculates returns using industry best practices. Additionally, State Street Bank and Trust 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, 2021

Total fund fair value	\$63.9 billion
1-year return (net of fees)	25.5%
3-year return (net of fees)	9.9%
5-year return (net of fees)	10.1%
10-year return (net of fees)	8.4%
20-year return (net of fees)	7.2%
30-year return (net of fees)	8.3%
Percent externally managed	100.0%
Number of external managers	168
Master Trustee and Custodian	State Street Bank and Trust Company
General consultant	RVK, Inc.

TRS is the 42nd largest pension system in the United States according to *Pensions & Investments*. Rankings are based on the fair value of total assets as of Sept. 30, 2020.

ASSET ALLOCATION

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

During FY21, TRS continued implementation of the asset allocation structure adopted by the Board in June 2017 (effective July 1, 2017). This continued approach solidified the previously adopted asset class structure and seeks to continue minor shifts, focused on balancing private and public capital, improving diversification, managing liquidity and enhancing the overall portfolio risk/return profile. The System, as approved by the Board in June 2019, modified long-term targets for the continued diversification of the fund by modestly reducing the long-term allocation to diversifying strategies, accompanied by increases to the income class in order to balance the portfolio and its defensive characteristics. Minor changes to interim targets were made to align with current market conditions and opportunities.

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 following Strategic Investment Listing table shows the asset allocation targets, as adopted by the Board of Trustees, compared to the total assets assigned to each particular asset class at June 30, 2021.

Strategic Investment Listing Allocation Targets vs. Total Assets

Asset Class	As of June 30, 2021				As of June 30, 2020	
	Total Fund \$ (Million)	Actual Percent	Interim Target	Long- term Target	Actual Percent	Long- term Target
Public equity	\$22,795.3	35.7%	34.0%	34.0%	32.9%	34.0%
Private equity	10,195.1	15.9	12.0	15.0	12.6	15.0
Total Equity	32,990.4	51.6	46.0	49.0	45.5	49.0
Real estate	8,857.4	13.9	14.0	16.0	15.0	16.0
Other real assets	716.0	1.1	4.0	4.0	0.7	4.0
Total Real Assets	9,573.4	15.0	18.0	20.0	15.7	20.0
Total Diversifying Strategies	5,541.7	8.7	10.0	10.0	10.8	10.0
Global income	14,368.6	22.5	24.0	21.0	25.2	21.0
Short-term	1,442.5	2.2	2.0	-	2.8	-
Total Income	15,811.2	24.7	26.0	21.0	28.0	21.0
Pending settlements/expenses*	(64.9)	NA	NA	NA	NA	NA
Total TRS Fund	\$63,851.8	100.0%	100.0%	100.0%	100.0%	100.0%

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.

PORTFOLIO SECURITIES SUMMARY

The Portfolio Securities Summary table contains a detailed list of security types. The amounts in this table differ from the allocation percentages shown in the previous Strategic Investment Listing table. The Strategic Investment Listing represents assets assigned to managers within each asset class, whereas the Portfolio Securities Summary represents specific types of financial instruments; 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

	2021		2020	
	Fair Value	% of Total	Fair Value	% of Total
U.S. treasuries & agencies	\$760,917,735	1.2%	\$515,366,878	1.0%
U.S. government-backed mortgages	681,894,069	1.1	148,463,903	0.3
Municipals	5,220,000	-	5,804,425	-
Asset-backed securities	81,053,316	0.1	175,495,345	0.3
Commercial/collateralized mortgages & loans	289,996,014	0.4	116,987,263	0.2
Commingled funds (U.S. & international)	2,920,618,212	4.6	3,274,885,797	6.4
Domestic corporate obligations	2,049,105,777	3.2	2,433,892,252	4.7
Foreign debt/corporate obligations	3,431,936,825	5.4	3,217,023,067	6.3
Total fixed income	10,220,741,948	16.0	9,887,918,930	19.2
U.S. equities	11,201,200,370	17.5	7,768,675,705	15.1
International equities	11,206,327,107	17.6	8,995,763,679	17.5
Total public equities	22,407,527,477	35.1	16,764,439,384	32.6
Diversifying strategies	5,541,737,095	8.7	5,542,576,267	10.8
Private debt	4,069,872,023	6.4	2,916,257,777	5.7
Private equity	10,178,044,705	15.9	6,519,058,596	12.6
Real estate	8,853,790,213	13.9	7,716,975,327	15.0
Other real assets	715,953,909	1.1	368,868,176	0.7
Total alternative investments	29,359,397,945	46.0	23,063,736,143	44.8
Derivatives	(5,405,619)	-	6,184,038	-
Short-term investments	1,756,658,884	2.7	1,652,527,489	3.2
Foreign currency	112,911,645	0.2	79,352,928	0.2
TRS total portfolio	<u>\$63,851,832,280</u>	<u>100.0%</u>	<u>\$51,454,158,912</u>	<u>100.0%</u>

Sources: State Street Bank and Trust and TRS

SECURITIES HOLDINGS (HISTORICAL)

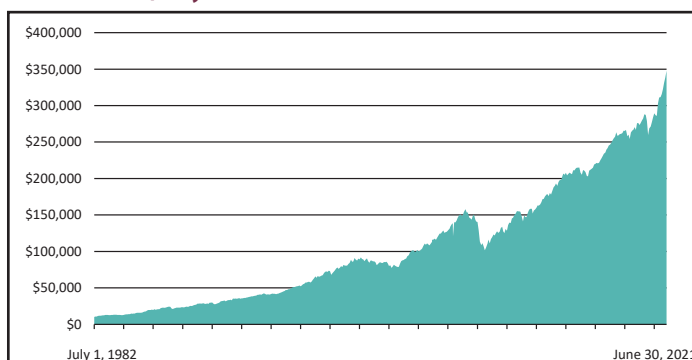
Historically, TRS has adopted various asset allocation strategies. The Securities Holdings table shows the actual asset allocation based on asset types for the last five-year period.

Securities Holdings for the Years Ended June 30

Asset Type	2021	2020	2019	2018	2017
Fixed income	16.0%	19.2%	21.6%	19.7%	18.9%
Public equities	35.1	32.6	33.8	35.0	35.5
Diversifying strategies	8.7	10.8	10.2	11.2	11.9
Private debt	6.4	5.7	4.3	3.6	2.6
Private equity	15.9	12.6	12.1	13.0	13.1
Real estate	13.9	15.0	13.9	13.9	14.4
Other real assets	1.1	0.7	1.0	0.9	0.9
Short-term/ currency/ derivatives	2.9	3.4	3.1	2.7	2.7
Total	100.0%	100.0%	100.0%	100.0%	100.0%

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

Growth of \$10,000



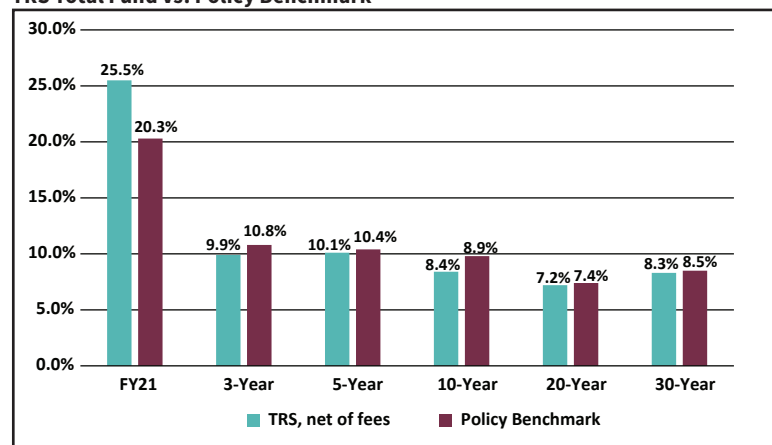
INVESTMENT RESULTS

As reported on the Statement of Fiduciary Net Position, the June 30, 2021 fair value of TRS's investments was \$63.9 billion, an increase of \$12.4 billion from the prior year. TRS had a total fund annualized return of 26.5 percent, gross of fees, and 25.5 percent, net of fees, for the one-year period ended June 30, 2021.

The Performance Summary chart and table summarize total fund and asset class performance versus comparative benchmarks. As illustrated, the TRS total fund outperformed the policy index by 520 basis points for the year ended June 30, 2021. 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 also outperformed the 7.0 percent actuarial return assumption and the real rate of return expectation, which is to exceed the rate of inflation, as measured by the Consumer Price Index, by 4.5 percentage points.

Total Fund Performance Summary (net of fees)

TRS Total Fund vs. Policy Benchmark



Sources: State Street Bank and Trust and TRS

Asset Class/Index	Years ended June 30					Annualized at 6/30/21		
	2021	2020	2019	2018	2017	3 Years	5 Years	10 Years
TRS total fund	25.5%	0.6%	5.2%	8.5%	12.6%	9.9%	10.1%	8.4%
TRS weighted policy index*	20.3	5.5	7.2	8.2	11.4	10.8	10.4	8.9
Equity	45.8	(0.1)	5.5	12.8	20.3	15.4	15.8	11.3
TRS equity composite benchmark ¹	42.8	3.4	6.5	13.0	20.2	16.3	16.4	12.1
Real assets	13.5	(0.2)	2.7	7.4	6.5	5.2	5.9	8.0
TRS real asset composite benchmark ²	8.1	3.4	6.6	7.4	6.9	6.0	6.5	8.4
Diversifying strategies	8.6	1.2	2.1	4.5	3.5	3.9	3.9	3.9
TRS diversifying composite benchmark ³	4.1	5.7	6.4	5.4	5.5	5.4	5.4	5.4
Income	6.6	1.7	7.0	2.0	5.8	5.1	4.6	4.8
TRS income composite benchmark ⁴	(0.3)	8.2	7.4	(0.3)	(0.3)	5.0	2.9	3.2

* 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

- 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%

- Real assets composite includes the following asset classes and corresponding benchmarks:

Sub Asset Class	Benchmark
Real estate	NCREIF Property Index
Other real assets	CPI (inflation) + 5.0%

- 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%

- 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

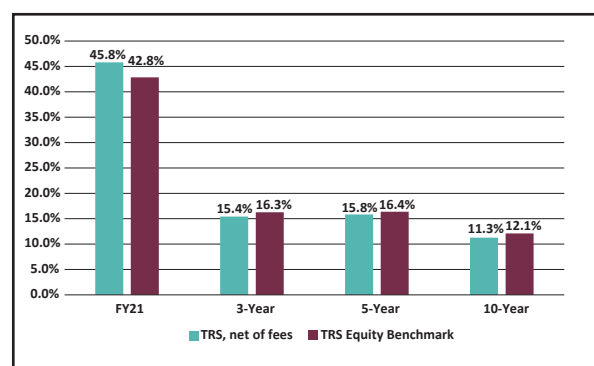
The following sections provide a brief and informative overview of the assets held by TRS for the period ended June 30, 2021.

EQUITY

TRS's equity asset class broadly includes investments in global public equity securities and private equity investments. As of June 30, 2021, the asset class represented 51.6 percent of total fund with a value of \$33.0 billion.

One-, three-, five- and 10-year comparisons to the composite benchmark are shown in the following chart.

Equity vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

GLOBAL PUBLIC EQUITY

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.

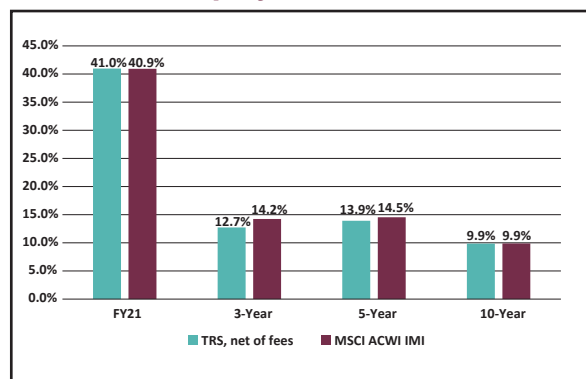
Following a tepid prior year return, the global public equity market rallied sharply for the year ended June 30, 2021. This contributes to strong market performance for all trailing periods. The U.S. equity market outperformed most international equity markets for the year ended June 30, 2021, extending a long period of U.S. equity market leadership.

As of June 30, 2021, the global public equity portfolio value represented \$22.8 billion, or 35.7 percent of the total fund. The long-term policy target for public

equities is 34.0 percent of total fund. For the year ended June 30, 2021, the global public equity portfolio generated 41.0 percent on a net of fee basis.

One-, three-, five- and 10-year comparisons to these benchmarks are shown in the following charts.

Global Public Equity vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

The top 10 holdings in global public equities, categorized by U.S. and international, as of June 30, 2021 follow. These 20 securities combine to represent 15.4 percent of total public equity holdings. These stocks illustrate the sector and geographic diversification present in the portfolio.

Top 10 U.S. Equity Holdings at June 30, 2021

Firm	Sector	Fair Value (USD)
Microsoft Corp.	Technology	\$542,608,095
Apple, Inc.	Technology	448,294,870
Amazon.com, Inc.	Consumer	416,087,352
Facebook, Inc.	Technology	243,521,480
Alphabet, Inc. - class C	Communication	207,127,297
Alphabet, Inc. - class A	Communication	178,677,983
Berkshire Hathaway, Inc.	Financials	171,311,833
Johnson & Johnson	Health Care	133,127,712
J.P. Morgan Chase & Co.	Financials	107,582,663
NVIDIA Corp.	Technology	105,368,369
Total		\$2,553,707,654

Sources: State Street Bank and Trust and TRS

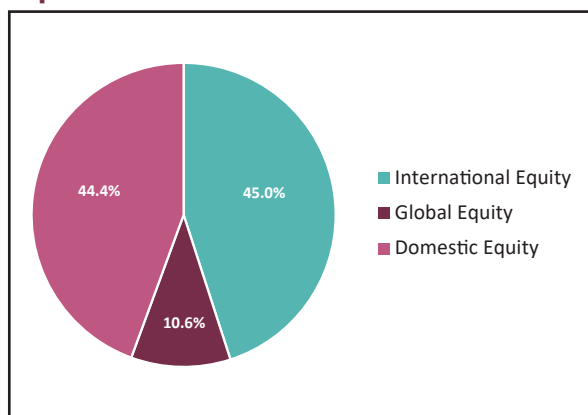
Top 10 International Equity Holdings at June 30, 2021

Firm	Country	Fair Value (USD)
Samsung Electronics LTD	Korea	\$130,773,556
Tencent Holdings LTD	China	130,402,214
Roche Holding AG	Switzerland	105,407,010
Taiwan Semiconductor Manufacturing Co Ltd	Taiwan	95,114,581
ASML Holding NV	Netherlands	91,696,311
Novartis AG	Switzerland	76,000,840
ADR Taiwan Semiconductor Manufacturing Co Ltd	Taiwan	71,342,236
ADR Alibaba Group Holdings Ltd	China	65,276,355
Silergy Corp	Taiwan	65,139,439
Nestle SA	Switzerland	57,084,227
Total		\$888,236,769

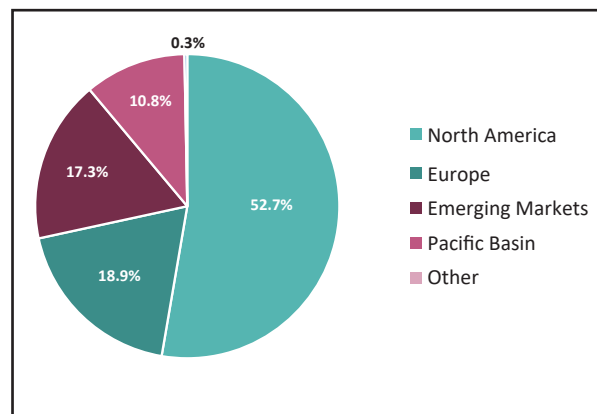
Sources: State Street Bank and Trust and TRS

Investment managers are chosen to diversify the portfolio based on capitalization, geography and style basis. This diversification is important for controlling the risk of the portfolio, as well as balancing the portfolio. As of June 30, 2021, the following charts convey the sector and regional exposure, asset allocation mix and fundamental characteristics for the global public equity portfolio.

Global Public Equity Characteristics and Exposures

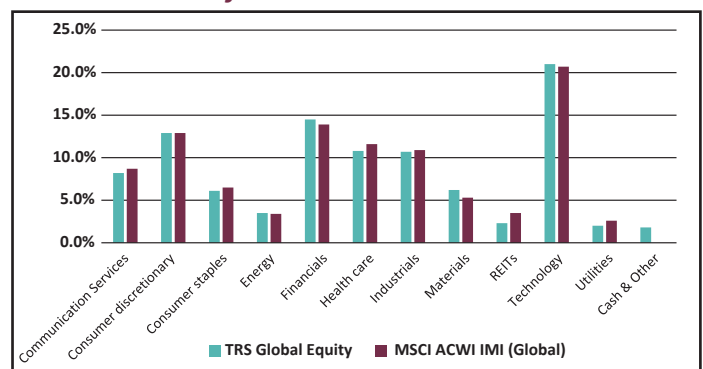


Source: State Street Bank and Trust and TRS



Sources: BlackRock Aladdin and TRS

Diversification by Sector



Sources: BlackRock Aladdin and TRS

Fundamental Characteristics	TRS Global Public Equity	MSCI ACWI IMI (Global)
Average market cap (\$ billions)	\$262.7	\$301.1
Price/earnings ratio	17.8x	19.4x
Dividend yield	1.88%	1.47%
Price/book ratio	3.3x	3.5x

Sources: BlackRock Aladdin and TRS

TRS employed the following public equity managers as of June 30, 2021.

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

	Assets
Large Cap	
Acadian Asset Management, L.L.C. (07/16)	\$1,219,377,661
Arrowstreet Capital, L.P. (11/17)	2,412,292,141
LSV Asset Management (10/12)	1,770,367,466
Northern Trust Investments, Inc. (8/10)	3,284,355,860
RhumbLine Advisors, L.P. (5/06)	7,607,210,527
Strategic Global Advisors (3/11)	563,677,472
T. Rowe Price Associates, Inc. (11/06)	769,601,500
Small /Mid Cap	
Emerald Advisors, Inc. (11/04)	282,209,311
Grandeur Peak Global Advisors, L.L.C. (12/18)	408,977,218
LSV Asset Management (12/18)	374,738,913
RhumbLine Advisors, L.P. (12/19)	832,115,370
Strategic Global Advisors (12/13)	323,626,879
Emerging Markets	
Acadian Asset Management, L.L.C. (01/21)	351,624,702
AQR Capital Management, L.L.C. (7/13)	770,628,820
Axiom International Investors (5/15)	606,604,374
J.P. Morgan Investment Management, Inc. (8/15)	780,496,716
Wasatch Advisors (11/14)	430,716,160

Note: The list does not include managers terminated prior to June 30, 2021 with residual assets in the account.

PRIVATE EQUITY

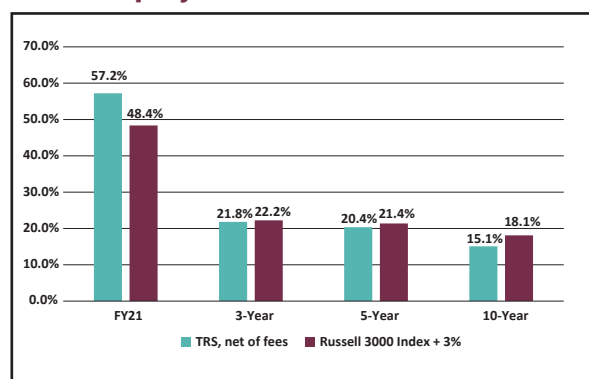
Private equity includes investments that are placed and traded outside of the stock exchanges and other public markets. Over the long term, they are an attractive investment for pension funds, endowments, insurance companies and other

sophisticated investors. The investment class benefits the economy by providing needed capital to start-up companies and for continued growth in privately held companies and firms that are restructuring to better compete. Investing in private equity carries additional risk, but with skillful selection of managers, returns can be significantly higher than public equity investments, as well as provide diversification. TRS is widely diversified across all subsectors within private equity, including buyout, growth equity, venture capital and distressed debt.

TRS measures private equity performance against the Russell 3000 Index plus 3.0 percent. This benchmark does not specifically compare performance to the private equity industry, but rather to the TRS long-term expectation that private equity produce returns superior to the public markets. For the one-year period ended June 30, 2021, private equity earned 57.2 percent on a net of fee basis, compared to the benchmark gain of 48.4 percent. The long-term performance strength of the private equity program and the asset class's diversification both benefit the overall portfolio.

One-, three-, five- and 10-year comparisons relative to the benchmark follow.

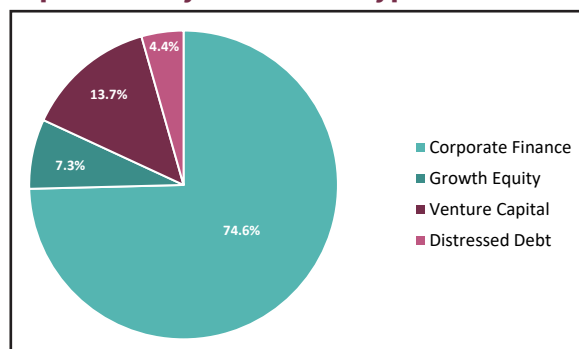
Private Equity vs. Benchmark Return



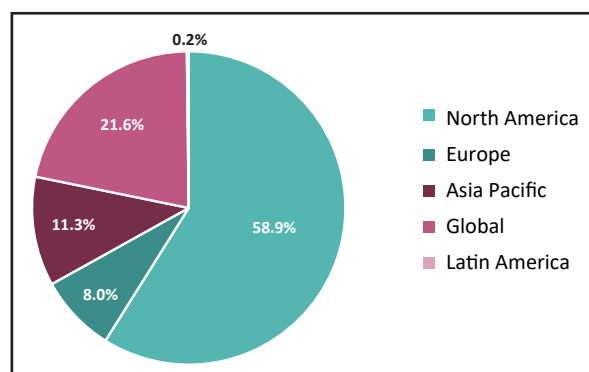
Sources: State Street Bank and Trust and TRS

The long-term policy target for private equity is 15.0 percent of the total fund. Successful implementation of this target is subject to many factors, including public market performance and sufficient availability of high-quality private equity opportunities in the market. As of June 30, 2021, the private equity value was \$10.2 billion or 15.9 percent of the total fund, a slight overweight to the long-term target, reflective of the strong fiscal year performance. The following charts provide exposure percentage by type and geography at June 30, 2021.

Exposure % by Investment Type

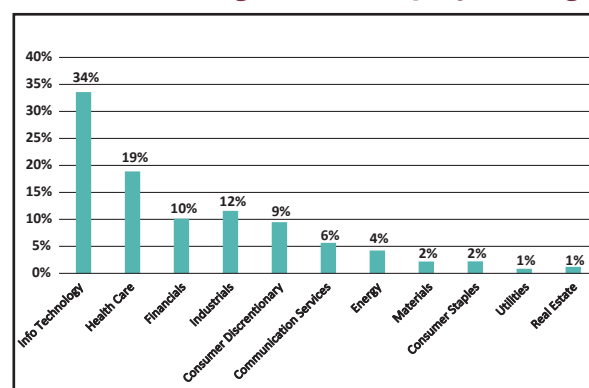


Source: StepStone Group Private Equity, L.P.



Source: StepStone Group Private Equity, L.P.

Sector Positioning of Private Equity Holdings



Source: StepStone Group Private Equity, L.P.

As of June 30, 2021, TRS employed the following managers and/or funds including their respective assets under management.

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

	Assets
Corporate Finance	
Advent International GPE VI Limited Partnership (07/08)	\$6,561,155
Advent International GPE VII-C Limited Partnership (12/12)	69,056,026
Advent International GPE VIII-B-2 Limited Partnership (09/16)	195,882,631
Altaris Constellation Partners IV, L.P. (06/18)	14,633,112
Altaris Health Partners IV, L.P. (06/18)	76,630,314
Altaris Health Partners V, L.P. (04/21)	2,974,360
Apollo Investment Fund IX, L.P. (03/19)	135,353,601
Apollo Investment Fund VI, L.P. (07/06)	2,828,304
Apollo Investment Fund VII, L.P. (01/08)	31,880,338
Apollo Investment Fund VIII Annex A (04/16)	42,173,469
(continued)	

(continued)	
	Assets
Apollo Investment Fund VIII, L.P. (12/13)	\$178,481,894
Arlington V, L.P. (08/19)	34,201,430
Astorg VI, SLP (07/16)	57,447,378
Astorg VII, SLP (06/19)	51,091,866
Aurora Equity Partners VI, L.P. (04/21)	3,445,716
Avance Investment Partners, L.P. (06/21)	5,477,585
Bain Relish Investor, L.P. (09/19)	33,754,425
Bertram Growth Capital IV, L.P. (12/20)	19,438,299
Blackstone Capital Partners VI Annex A (10/11)	21,084,438
Bregal Unternehmerskapital III-A SCSp (04/21)	630,547
Carlyle/Riverstone Global Energy and Power Fund III, L.P. (03/06)	2,554,636
(continued)	

<i>(continued)</i>	
	Assets
Clearlake Capital Partners IV, L.P. (09/15)	\$99,946,008
Clearlake Capital Partners V, L.P. (02/18)	108,395,562
Clearlake Capital Partners VI, L.P. (05/20)	54,080,991
Clearlake Flagship Plus Partners, L.P. (02/21)	19,958,824
Clearlake Opportunities Partners (P), L.P. (09/15)	49,443,584
Edgewater Growth Capital Partners II, L.P. (03/06)	1,458,827
Edgewater Growth Capital Partners III, L.P. (09/11)	26,007,654
Edgewater Growth Capital Partners, L.P. (01/03)	1,311,090
EIF United States Power Fund IV, L.P. (08/10)	52,756,431
Energy Capital Partners II Annex A (10/11)	803,705
EQT IX (No. 2) USD SCSp (02/21)	75,773,178
EQT Midmarket Europe, L.P. (08/17)	91,325,437
EQT VI, L.P. (09/11)	34,178,856
EQT VII, L.P. (01/16)	93,773,511
EQT VIII, L.P. (08/18)	125,566,453
Grain Communications Opportunity Fund II, L.P. (12/18)	47,698,404
Grain Communications Opportunity Fund III, L.P. (02/21)	4,025,335
Grain Communications Opportunity Fund, L.P. (07/16)	54,268,436
GTCR Fund VIII, L.P. (07/03)	643,522
ICV Partners II, L.P. (01/06)	295,695
ICV Partners III, L.P. (10/13)	24,827,266
ICV Partners IV, L.P. (05/18)	26,094,537
IL Asia Investors, L.P. (12/14)	269,797,775
Inflexion Buyout Partnership V, L.P. (06/18)	50,116,763
Inflexion Enterprise Fund V (No. 1), L.P. (06/19)	4,875,522
Inflexion Supplemental Fund V (No. 1), L.P. (05/19)	23,757,554
Insight Opportunities Fund I Annex A (12/20)	12,500,000
Insight Partners Opportunities Fund I, L.P. (04/21)	12,364,949
Madison Dearborn Capital Partners VII, L.P. (01/16)	93,268,736
MBK Partners Fund II, L.P. (05/09)	950,070
MBK Partners Fund III Annex B (10/15)	16,442,708
MBK Partners Fund III, L.P. (04/13)	191,068,347
MBK Partners Fund IV, L.P. (03/17)	207,652,881
MBK Partners Fund V, L.P. (03/21)	31,443,048
<i>(continued)</i>	

<i>(continued)</i>	
	Assets
Mill Point Capital Partners II, L.P. (06/21)	\$2,501,694
Morgan Creek Partners Asia, L.P. (01/11)	76,935,622
New Mountain Partners III, L.P. (08/07)	78,238,736
New Mountain Partners IV, L.P. (07/14)	89,535,493
New Mountain Partners V, L.P. (11/17)	151,850,238
New Mountain Partners VI, L.P. (03/21)	14,781,806
NGP Natural Resources IX Annex A (11/12)	112,924
NGP Natural Resources X, L.P. (05/12)	14,145,895
NGP Natural Resources XI, L.P. (11/14)	77,285,760
NGP Natural Resources XII, L.P. (11/17)	62,602,845
OceanSound Partners Fund, L.P. (02/20)	7,609,354
Palladium Equity Partners IV, L.P. (03/14)	14,008,650
Pamlico Capital V, L.P. (04/21)	3,100,646
Parthenon Investors IV Annex A (06/15)	127,625,320
Parthenon Investors IV, L.P. (04/12)	54,501,346
Parthenon Investors V, L.P. (01/17)	151,257,216
Parthenon Investors VI, L.P. (04/20)	16,935,217
Providence Equity Partners VI Annex A (08/12)	20,269,547
Providence Equity Partners VI International, L.P. (03/07)	9,965,897
Providence Equity Partners VII, L.P. (06/12)	272,077,159
RCP Multi-Fund Feeder SBO 1.0, L.P. (11/19)	7,153,789
RCP SBO Fund II, L.P. (10/20)	3,002,084
RCP SBO Fund, L.P. (10/16)	121,044,783
RCP SBO Opportunities Fund, L.P. (02/21)	7,480,541
Rhone Capital V Annex A (12/20)	41,121,169
Rhone Partners IV, L.P. (01/12)	23,897,453
Rhone Partners V, L.P. (07/15)	115,930,908
Ridgemont Annex A (02/21)	24,236,380
Ridgemont Equity Partners III, L.P. (10/19)	41,374,242
Riverstone Global Energy and Power Fund V Annex A (11/13)	7,025
Riverstone Global Energy and Power Fund V, L.P. (06/12)	100,568,987
Riverstone Global Energy and Power Fund VI, L.P. (09/16)	108,894,894
Riverstone/Carlyle Global Energy and Power Fund IV, L.P. (03/08)	1,787,105
Silver Lake Partners III, L.P. (10/07)	30,474,699
Silver Lake Partners IV, L.P. (10/13)	289,801,323
Silver Lake Partners V, L.P. (06/18)	254,756,461
<i>(continued)</i>	

(continued)	
	Assets
Silver Lake Partners VI, L.P. (01/21)	\$58,762,951
Siris Partners II, L.P. (10/11)	19,847,364
Siris Partners III, L.P. (05/15)	72,250,152
Siris Partners IV, L.P. (03/19)	28,687,845
SK Capital Catalyst Fund I, L.P. (01/20)	18,700,281
SK Capital Partners V-A, L.P. (10/18)	47,026,692
TA Select Opportunities Fund-A, L.P. (04/20)	33,381,190
TA XII-A, L.P. (02/16)	123,016,951
TA XIII, L.P. (12/19)	85,810,532
TDR Capital IV 'A', L.P. (11/18)	53,838,529
The Baring Asia Private Equity Fund V, L.P. (03/11)	82,877,678
The Baring Asia Private Equity Fund VI, L.P.1 (09/15)	149,304,656
Trident V, L.P. (11/10)	52,356,560
Trident VI, L.P. (09/14)	105,503,493
Trident VII, L.P. (12/17)	151,312,066
Trident VIII, L.P. (04/20)	70,209,794
TSG 8, L.P. (01/19)	31,343,208
Veritas Capital Fund IV, L.P. (08/10)	2,418,852
Veritas Capital Fund V, L.P. (06/15)	251,658,543
Veritas Capital Fund VI, L.P. (06/17)	327,823,600
Vista Equity Partners Fund V, L.P. (05/14)	283,637,213
Vista Equity Partners Fund VI, L.P. (06/16)	231,196,949
Vista Foundation Fund III, L.P. (07/16)	56,741,313
Vista Foundation Fund IV, L.P. (07/20)	13,027,981
ZMC III, L.P. (01/20)	7,370,362
Venture Capital	
Battery Ventures XI-A Side Fund, L.P. (06/16)	11,959,926
Battery Ventures XI-A, L.P. (06/16)	17,154,754
FinTech Collective Fund III, L.P. (05/21)	5,000,932
Granite Ventures II, L.P. (11/05)	64,295,240
Greenspring IL Master 2.0, L.P. (04/20)	32,052,908
Greenspring IL Master, L.P. (01/18)	278,014,160
Institutional Venture Partners XV, L.P. (06/15)	79,038,369
Institutional Venture Partners XVI, L.P. (02/18)	131,797,284
Lightspeed Venture Partners IX, L.P. (03/12)	99,143,930
Lightspeed Venture Partners Select II, L.P. (06/16)	34,245,868
Lightspeed Venture Partners Select, L.P. (03/14)	34,528,694
Lightspeed Venture Partners X, L.P. (07/14)	47,349,241
(continued)	

(continued)	
	Assets
Lightspeed Venture Partners XI, L.P. (03/16)	\$21,600,118
LiveOak Venture Partners I, L.P. (02/13)	64,952,703
Longitude Venture Partners II, L.P. (04/13)	20,204,973
Longitude Venture Partners III, L.P. (12/16)	41,601,650
New Enterprise Associates 15, L.P. (03/15)	84,540,408
New Enterprise Associates 16, L.P. (05/17)	70,662,315
Scale Venture Partners V, L.P. (01/16)	88,428,601
Scale Venture Partners VII, L.P. (02/21)	6,909,228
Shasta Ventures, L.P. (01/05)	1,514,439
Sofinnova Venture Partners IX, L.P. (12/14)	45,051,822
Sofinnova Venture Partners VIII, L.P. (08/11)	13,837,396
Sofinnova Venture Partners X, L.P. (11/17)	61,300,225
StarVest Partners II, L.P. (01/09)	6,813,289
Distressed Debt	
A & M Capital Partners II, L.P. (08/19)	57,255,236
Apollo Lincoln Private Credit Fund, L.P. (10/14)	5,800,555
Clearlake Capital Partners II, L.P. (07/09)	2,047,115
Clearlake Capital Partners III, L.P. (11/12)	25,964,471
Harvest Partners Structured Capital Fund II, L.P. (06/18)	57,010,281
Littlejohn Fund IV, L.P. (07/10)	6,434,845
Marlin Equity V, L.P. (02/18)	53,077,006
Oaktree European Principal Fund III, L.P. (11/11)	42,797,385
Oaktree Opportunities Fund IX, L.P. (03/13)	71,451,206
Oaktree Opportunities Fund VIII, L.P. (03/10)	2,050,240
Oaktree Opportunities Fund Xb, L.P. (06/18)	77,184,286
OCM European Principal Opportunities Fund II, L.P. (08/08)	914,477
OCM Opportunities Fund VIIb, L.P. (06/08)	89,574
Silver Lake Alpine, L.P. (09/18)	50,807,560
Stellex Capital Partners II, L.P. (04/21)	4,906,200
Growth Equity	
Bregal Sagemount III-B, L.P. (01/20)	10,336,818
Greenspring IL Special II, L.P. (10/20)	9,707,910
Greenspring IL Special, L.P. (06/18)	458,806,676
Inflexion Partnership Capital II, L.P. (06/18)	18,988,265
JMI Equity Fund VII, L.P. (02/11)	1,803,103
JMI Equity Fund VIII-A, L.P. (10/15)	32,065,439
RRJ Capital Master Fund III, L.P. (12/15)	24,453,995
Sunstone Partners I, L.P. (02/16)	24,402,151
Sunstone Partners II, L.P. (03/21)	1,606,997
Trustbridge Partners IV, L.P. (12/11)	108,653,294

Note: The list does not include managers terminated prior to June 30, 2021 with residual assets in the account.

INCOME

The income asset class 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.

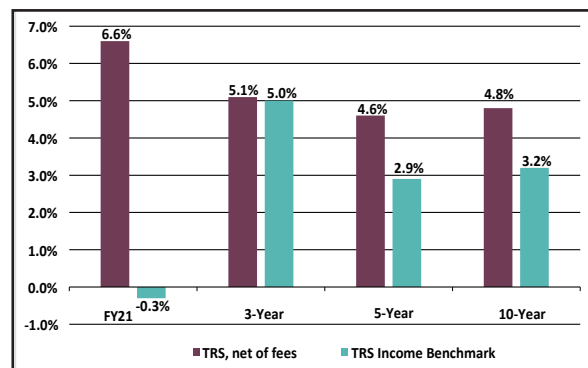
The G-20 worldwide \$2.8 trillion fiscal/monetary stimulus packages (\$1.9 trillion in the U.S.) accentuated policymakers' commitment for continued economic support after the large 2020 COVID-19 negative market impacts. Developed market yields rose sharply alongside stronger growth forecasts and higher inflation expectations, as well as anticipation of an earlier start to central bank policy normalization. Economic growth continues to accelerate as vaccination rates climb and economies re-open, and a powerful return in consumer spending activity has been seen as pent-up demand is unleashed. Private credit and TRS's flexible investment mandates provided the largest value add within the fiscal year. TRS's lower duration profile, investment selection in select non-U.S. countries in Asia and Europe, U.S. corporate credit and other major spread sectors, and post-COVID comebacks in energy, technology, restaurants/leisure and real estate related debt contributed significantly to portfolio performance.

The asset class blended benchmark consists of global income measured against the Bloomberg Aggregate Hedged Index, along with short-term investments evaluated against the ICE BofAML 3-month U.S. Treasury Bill Index.

For the fiscal year ending June 30, 2021, the \$15.8 billion income portfolio represented 24.7 percent of the total fund. Traditional income investments, customized separate accounts and private debt strategies comprise the majority of investments, representing 90.1 percent of the asset class, while TRS's cash and short-term investment portfolio completes the remainder of the asset class. The long-term policy target for income is 21.0 percent of total fund; however, current levels remain closer to the interim target of 26.0 percent.

TRS's income portfolio outperformed the blended index during the fiscal year and all trailing periods. For the year ended June 30, 2021, the income asset class earned 6.6 percent on a net of fee basis compared to asset class blended benchmark of (0.3) percent. One-, three-, five- and 10-year comparisons to this benchmark are shown in the following chart, showing strong outperformance over the long term.

Income vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

The following table lists the top 10 global income investments or funds held by TRS as of June 30, 2021, exclusive of the TRS cash portfolio.

Top 10 Global Income Holdings at June 30, 2021

Security/Position	Fair Value (USD)
Prudential Trust Company Collective Trust	\$1,106,552,023
PGIM Fixed Income Global Liquidity Relative Value Fund I (Cayman), Ltd.	568,273,550
PIMCO PAPS Investment Grade Corporate Portfolio	343,515,704
PIMCO Income Fund Institutional Class	223,922,909
PIMCO PAPS U.S. Government and Short-term Investments Portfolio	191,450,194
PIMCO PAPS Mortgage and Short-Term Investments Portfolio	124,669,256
PIMCO PAPS Asset-Backed Securities Portfolio	94,443,129
MacKay Shields Defensive Bond Arbitrage Fund, Ltd.	73,020,857
PIMCO PAPS Short-Term Floating NAV Portfolio II	59,622,651
PIMCO PAPS International Portfolio	48,702,196
Total	\$2,834,172,469

Sources: State Street Bank and Trust and TRS

The following table lists the top 10 largest debt securities holdings, excluding commingled funds, held within the TRS plan portfolio as of June 30, 2021. A complete listing of investment holdings is available as a separate report.

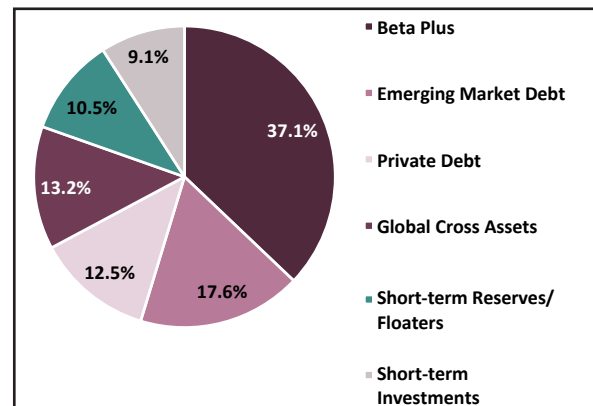
Top 10 Global Income Debt Holdings at June 30, 2021

Security/Position	Fair Value (USD)
United States Treasury Note/Bond	\$74,511,724
United States Treasury Note/Bond	67,944,060
United States Treasury Note/Bond	59,394,431
Korea Treasury Bond	55,241,894
United States Treasury Note/Bond	51,011,719
Fannie Mae Pool	50,998,397
Fannie Mae Pool	50,761,337
Fannie Mae Pool	50,644,229
Fannie Mae Pool	50,512,499
Fannie Mae Pool	50,351,400
Total	\$561,371,690

Sources: State Street Bank and Trust and TRS

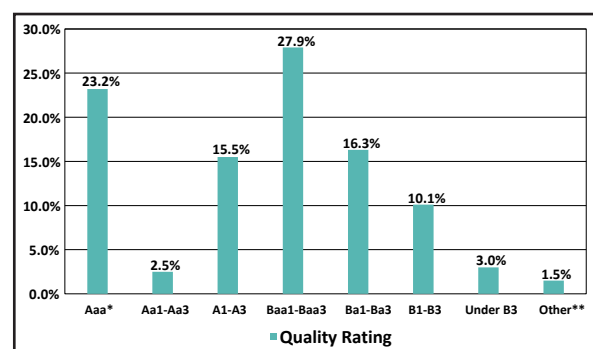
The following charts provide the asset allocation mix and statistical information on TRS's income portfolio as of June 30, 2021.

Income Allocation



Sources: State Street Bank and Trust and TRS

Diversification by Quality Rating for Individual Bonds



Sources: State Street Bank and Trust and TRS

Note: Public debt instruments only.

* U.S. treasury securities are included.

** Other includes unrated securities.

Income Fundamental Characteristics

	TRS Income Portfolio	Bloomberg Aggregate Hedged Index
Average maturity	6.8 years	8.5 years
Effective duration	4.2 years	6.4 years
Average quality rating	A3	Aa1/Aa2

Sources: State Street Bank and Trust and TRS

Note: Public debt instruments only.

TRS employed the following global fixed income managers as of June 30, 2021.

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

	Assets
AllianceBernstein, L.P. (08/18)	\$922,618,174
Apollo Lincoln Fixed Income Fund, L.P. (03/14)	311,679,497
Apollo Revolver Fund, L.P. (01/20)	-
BIG Real Estate Fund I, L.P. (11/17)	44,988,858
BIG Real Estate Fund II, L.P. (06/21)	2,980,349
Beach Point Sangamon, L.P. (09/18)	427,620,038
Blantyre Special Situations Fund II, L.P. (12/20)	3,233,732
CapitalSpring Investment Partners VI, L.P. (05/21)	4,936,162
Cerberus 2112 Loan Opportunities Fund, L.L.C. (08/20)	203,577,463
Cerberus Real Estate Debt Fund, L.P. (04/20)	44,899,152
DCP China Credit Fund II, L.P. (07/19)	26,246,660
Dolan McEniry Capital Management, L.L.C. (05/06)	817,536,765
DoubleLine Mortgage Opportunities L.P. (09/17)	84,435,541
EISAF II, L.P. (10/18)	59,822,402
Franklin Advisers, Inc. (02/08)	688,606,596
Garcia Hamilton & Associates, L.P. (06/10)	595,731,129
Global Transport Income Fund Master Partnership SCSp (11/17)	131,044,333
Hayfin Chief GP Limited (03/20)	272,763,375
ICG SantoSCSp (04/20)	376,773,249
LCM Partners CO IIIa, L.P. (09/16)	52,913,192
LCM Partners SOLO III, L.P. (09/18)	79,600,561
LCM Partners COPS 4 SLP (02/20)	28,008,223
Locust Point Seniors Housing Debt II, L.P. (06/20)	10,176,270
MacKay Shields L.L.C. (08/11)	916,426,081
Maranon Senior Credit Fund II-B, L.P. (06/13)	15,039,910
Monroe Capital Private Credit Fund II, L.P. (04/16)	32,928,589
Northern Shipping Fund III, L.P. (01/16)	32,521,638
Northern Shipping Fund IV, L.P. (07/19)	36,176,395
NXT Capital Senior Loan Fund II, L.P. (08/13)	5,393,665
NXT Capital Senior Loan Fund IV, L.P. (01/16)	112,831,454
NXT Capital Senior Loan Fund V, L.P. (10/17)	89,166,636
Oaktree Enhanced Income Fund II, L.P. (05/14)	1,083,157
(continued)	

(continued)	
	Assets
Oaktree Enhanced Income Fund III, L.P. (04/16)	88,743,880
Oaktree Real Estate Debt Fund, L.P. (10/13)	472,696
Oaktree Real Estate Debt Fund II, L.P. (03/17)	53,801,895
Oaktree Real Estate Debt Fund III, L.P. (08/20)	23,472,896
Pacific Investment Management Company, L.L.C. (07/82)	1,168,327,238
PIMCO BRAVO Fund III Onshore Feeder, L.P. (12/16)	108,568,531
PIMCO BRAVO Fund Onshore Feeder I, L.P. (11/10)	56,201
PIMCO BRAVO Fund Onshore Feeder II, L.P. (03/13)	39,442,654
PIMCO Corporate Opportunities Fund II, L.P. (01/16)	44,418,554
PIMCO Corporate Opportunities Fund III Onshore Feeder, L.P. (04/20)	38,834,936
PIMCO Commercial Real Estate Debt Fund, L.P. (02/19)	60,084,865
PIMCO Horseshoe Fund, L.P. (12/14)	594,370,427
Pemberton Debt Fund Delaware I, L.P. (11/16)	44,979,210
Pemberton Debt Fund Delaware II, L.P. (1/19)	84,778,862
PGIM Fixed Income Alternatives Fund II, L.P. (05/21)	77,549,040
PGIM, Inc. (12/08)	2,034,223,897
PGIM Fixed Income Global Liquidity Relative Value Fund I (Cayman), Ltd. (12/15)	568,273,550
Proterra Credit Fund, L.P. (06/19)	22,875,141
Riverstone Credit Partners, L.P. (12/15)	22,535,895
Riverstone Credit Partners II, L.P. (05/18)	46,554,291
SCP Private Corporate Lending Fund, L.P. (05/19)	58,806,391
Taplin, Canida & Habacht (04/13)	1,651,803,136
Taurus Mining Finance Annex Fund L.L.C. (01/17)	9,857,206
Taurus Mining Finance Fund L.L.C. (04/15)	20,421,365
Taurus Mining Finance Fund No. 2, L.P. (07/19)	13,813,141
TCW Asset Management Company (08/13)	935,068,363
TerraCotta Credit Fund, L.P. (08/20)	75,418,838
The Varde Private Debt Opportunities Fund (Onshore), L.P. (08/18)	49,174,608

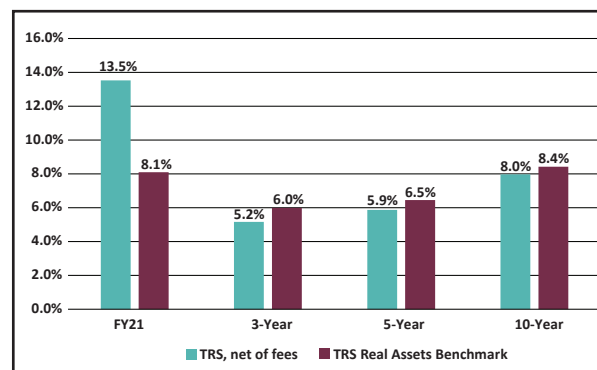
Note: The list does not include managers terminated prior to June 30, 2021 with residual assets in the account.

REAL ASSETS

For the fiscal year ended June 30, 2021, the \$9.6 billion real assets portfolio represented 15.0 percent of the total fund. Real estate core, opportunistic and value-add strategies comprise the majority of investments, representing 92.5 percent of the asset class, while other real assets including infrastructure, agriculture and energy complete the remainder of the asset class.

The asset class blended benchmark consists of real estate strategies measured against the NCREIF Property Index, while other real assets are benchmarked against the Consumer Price Index (CPI) + 5.0 percent. The long-term policy target for real assets is 20.0 percent of total fund, comprised of 16.0 percent allocated to core, opportunistic and value-add real estate and 4.0 percent allocated to other real assets. For the fiscal year, TRS's real assets portfolio outperformed, adding 13.5 percent, net of fees, compared to the 8.1 percent return of the benchmark. Real assets performance and benchmark comparisons are noted in the following chart.

Real Assets vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

The real asset class offers competitive returns, provides diversification benefits to portfolios of stocks and bonds and serves as a hedge against inflation. 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.

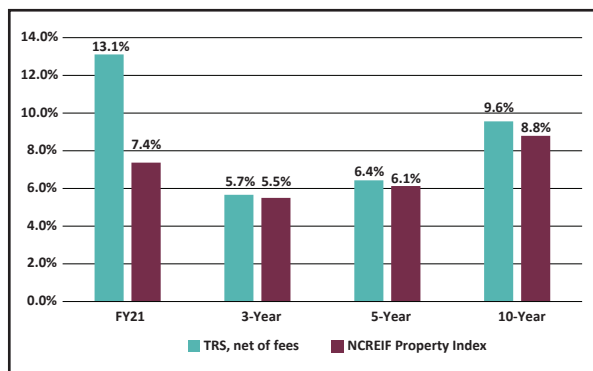
Real estate investments currently represent a significant portion of the asset class and are defined as direct investments or ownership in land and buildings including apartments, offices, warehouses, shopping centers and hotels. Further, TRS holds partnership interests in entities that purchase and manage property and pass rent and sale income back to TRS, including co-investments.

The COVID-19 pandemic caused disruption in nearly every aspect of the world economy with certain industries, such as hospitality, air travel, senior housing and discretionary retail, seeing the most severe impact to operations. However, due to current economic stimulus measures, progress of the vaccination rollout and pent-up demand, near-term growth is leading to significant recovery and stabilization in the real estate market.

TRS's real estate portfolio continues to weather the pandemic relatively well as demonstrated by the strong portfolio performance for the year ended June 30. Performance within the portfolio has benefited from high rent collections throughout most sectors, specifically triple net lease, industrial, multifamily, medical office, office and self-storage. The retail and hotel sectors, segments hit the hardest during the pandemic, have been slower to recover but are beginning to see near term improvement. The strategic sector shifts made within the real estate and real asset portfolio over the past several years continue to provide additional portfolio strength and downside protection during the global pandemic.

The TRS portfolio maintains a long-term target allocation of 16.0 percent to core, opportunistic and value-add real estate. As of June 30, 2021, TRS held \$8.9 billion in such assets or 13.9 percent of the total fund portfolio. For the fiscal year, TRS's real estate portfolio earned 13.1 percent, net of fees, compared to the benchmark of 7.4 percent. Real estate performance and benchmark comparisons are noted in the following chart.

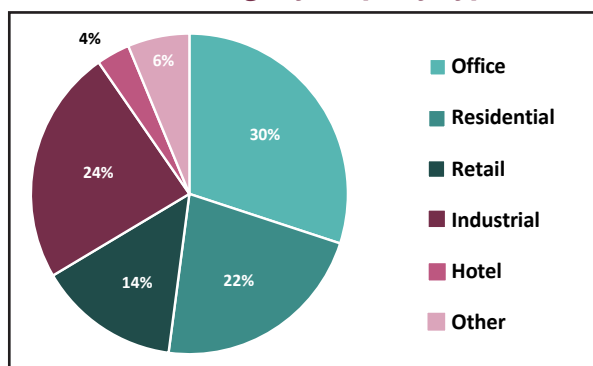
Total Real Estate vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

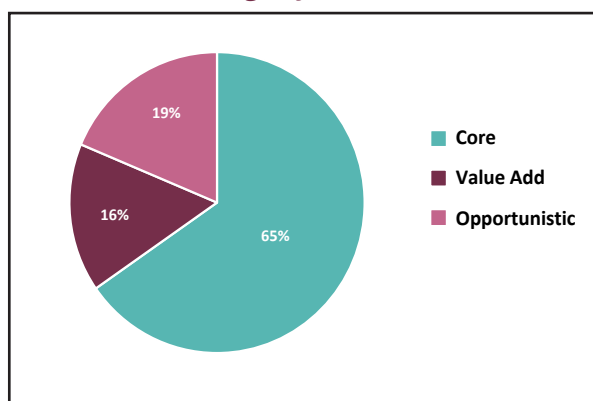
To enhance returns and reduce risk, TRS acquires high quality properties diversified geographically and by property type. The data sets below exhibit TRS's real estate holdings by type, geography and risk return profiles as of June 30, 2021.

Real Estate Holdings by Property Type



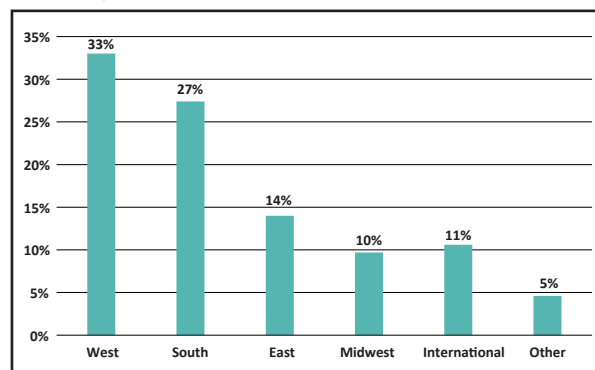
Source: StepStone Group Real Estate L.P.

Real Estate Holdings by Risk/Return



Source: StepStone Group Real Estate L.P.

Geographic Diversification of Real Estate Holdings



Source: StepStone Group Real Estate L.P.

Professional real estate advisors manage real estate owned by TRS. Separate account managers administer TRS's direct investments in real estate assets; commingled accounts represent partnership interests in funds.

As of June 30, 2021, TRS employed the following managers and/or funds investing in real estate and other real assets including their respective assets under management.

Real Asset Managers & Assets Under Management (inception date of account)

Assets	
Real Estate (Core, Opportunistic and Value-add)	
Separate Accounts	
Barings, L.L.C. (07/08)	\$740,212,573
Heitman Capital Management, L.L.C. (07/09)	1,698,830,295
Invesco Institutional (N.A.), Inc. (07/08)	1,375,487,479
LPC Realty Advisors I, Ltd. (07/92)	985,901,869
Principal Real Estate Investors, L.L.C. (10/13)	463,398,893
Commingled Accounts	
Blackstone Real Estate Partners Asia II, L.P. (06/18)	52,011,652
Blackstone Real Estate Partners Asia, L.P. (12/13)	71,523,334
Blackstone Real Estate Partners VI, L.P. (09/07)	1,938,568
Blackstone Real Estate Partners VII, L.P. (01/12)	82,183,240

(continued)

<i>(continued)</i>	
	Assets
Blackstone Real Estate Partners VIII, L.P. (08/15)	\$243,148,820
Blackstone Real Estate Partners IX, L.P. (09/19)	169,032,759
Carlyle Realty Partners Europe III, L.P. (03/08)	1,442,345
Carlyle Realty Partners IV, L.P. (06/05)	6,269,142
Carlyle Realty Partners VII, L.P. (07/14)	35,472,451
Carlyle Realty Partners VIII, L.P. (08/17)	83,116,511
CB Richard Ellis Strategic Partners Europe Fund III US TE, L.P. (05/07)	290,080
Dyal Zeus Co-Investment Partners VIII, L.P. (05/17)	71,447,072
Exeter Industrial Core Fund III, L.P. (02/20)	38,186,716
Exeter Industrial Value Fund IV, L.P. (09/17)	59,375,653
Exeter Industrial Value Fund V, L.P. (10/20)	42,535,461
Exeter Europe Industrial Core Fund S.C.Sp. (09/20)	46,760,324
Fortress Japan Opportunity Fund III, L.P. (08/15)	72,771,129
Fortress Japan Opportunity Fund IV, L.P. (07/18)	24,363,510
Gateway Real Estate Fund IV, L.P. (07/13)	8,158,053
LaSalle Asia Opportunity Fund III, L.P. (12/07)	917,859
LaSalle Asia Opportunity Fund IV, L.P. (07/13)	5,944,052
Lion Industrial Trust Fund, L.P. (04/05)	870,194,338
Lone Star Real Estate Fund III, L.P. (01/14)	2,067,458
Lone Star Real Estate Fund IV, L.P. (10/15)	69,154,959
Lone Star Real Estate Fund V, L.P. (09/17)	41,040,452
Lone Star Real Estate Fund VI, L.P. (12/19)	3,039,242
Madison International Real Estate Liquidity Fund VI (TE), L.P. (03/16)	105,794,930
Niam Nordic V, L.P. (04/12)	3,527,306
Oak Street Real Estate Capital Fund III, L.P. (05/16)	774,578
Oak Street Real Estate Capital Fund IV, L.P. (11/17)	66,273,112
Oak Street Real Estate Capital Fund V, L.P. (11/20)	39,416,841
Oak Street Real Estate Capital Net Lease Property Fund, L.P. (10/19)	268,706,717
Retail Co-Invest Holdings, L.P. (11/13)	66,327
Rockpoint Real Estate Fund V, L.P. (08/15)	81,436,147
Rockpoint Real Estate Fund VI, L.P. (05/20)	42,993,460
<i>(continued)</i>	

<i>(continued)</i>	
	Assets
SCG TMI Co-Invest, L.P. (01/15)	\$1,013,575
SCG Whale Co-Invest, L.P. (07/15)	1,287,186
Southwest Multifamily Partners, L.P. (08/12)	585,943
Starwood Distressed Opportunity Fund IX Global, L.P. (03/13)	52,651,520
Starwood Opportunity Fund X Global, L.P. (10/15)	94,501,847
Starwood Opportunity Fund XI Global, L.P. (07/18)	212,130,190
Starwood Opportunity Fund XII Global, L.P. (06/21)	200,611
Starwood Value-Add Fund, L.P. (06/17)	338,613,251
Tristan European Property Investors Special Opportunities V, L.P. (03/19)	49,189,547
Walton Street Real Estate Fund IV, L.P. (07/03)	662,563
Walton Street Real Estate Fund VII-Q, L.P. (06/13)	24,321,219
Walton Street Real Estate Fund VI-Q, L.P. (04/09)	33,354,326
Westbrook Real Estate Fund X, L.P. (07/16)	50,272,971
Westbrook Real Estate Fund XI, L.P. (12/20)	19,799,759
Other Real Assets	
Black River Agriculture Fund 2, L.P. (06/13)	81,015,655
Blackstone Infrastructure Partners, L.P. (03/19)	88,992,408
Blackstone Infrastructure Partners (Supplemental Account), L.P. (03/19)	24,044,303
BIF IV Renewable Sidecar-B, L.P. (12/20)	88,115,356
Brookfield Infrastructure Fund IV, L.P. (03/20)	48,766,191
Carlyle Infrastructure Opportunity Fund, L.P. (07/19)	39,476,496
Macquarie Infrastructure Fund VI, L.P. (09/19)	118,669,559
Macquarie Infrastructure Partners V, L.P. (12/20)	36,797,693
Sheridan Production Partners III-B, L.P. (11/14)	20,939,000
Stonepeak Infrastructure Fund IV, L.P. (12/20)	152,529
Strategic Partners Infrastructure III, L.P. (07/20)	4,775,476
West Street Global Infrastructure Partners III, L.P. (01/16)	164,209,242

Note: The list does not include managers terminated prior to June 30, 2021 with residual assets in the account.

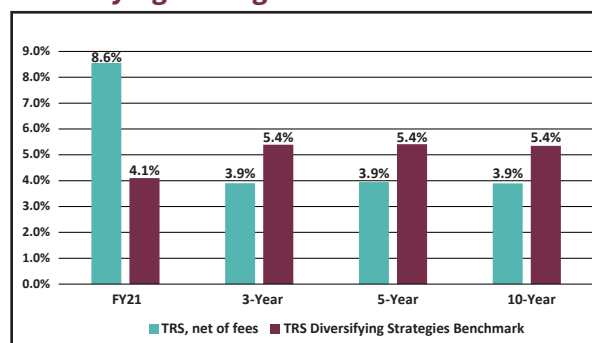
DIVERSIFYING STRATEGIES

Diversifying strategies includes mandates designed to provide attractive return and risk attributes while exhibiting low correlation to traditional public equity and fixed income investments. This segment of the portfolio continues to evolve and currently includes systematic macro, discretionary macro, opportunistic, risk parity and factor strategies. TRS has been investing in such profiles since FY07, though the composition of the program has gone through a number of evolutions as strategic adjustments are made in response to changes throughout the plan and global financial markets. Investments in diversifying strategies are administered via both direct investment manager relationships and diversified fund of funds.

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

The long-term policy target for diversifying strategies is 10.0 percent of total fund. As of June 30, 2021, the TRS diversifying strategies asset class value was \$5.5 billion or 8.7 percent of total fund. For the fiscal year, TRS's diversifying strategies portfolio generated 8.6 percent, net of fees, compared to the 4.1 percent return of the benchmark. Diversifying strategies performance and benchmark comparisons are noted in the following chart.

Diversifying Strategies vs. Benchmark Return



Sources: State Street Bank and Trust and TRS

As of June 30, 2021, TRS employed the following managers and/or funds including their respective assets under management.

Diversifying Strategies Managers and Assets Under Management (inception date of account)

	Assets
Diversified Fund of Funds	
Grosvenor Monarch Fund, L.L.C. (6/07)	\$325,414,483
Direct Investment Funds	
Alphadyne Global Rates Fund II, Ltd. (06/14)	542,656,095
AQR Multi-Strategy Fund XIV, L.P. (07/07)	247,638,559
Aspect Systematic Global Macro US Fund, LLC (02/20)	341,958,402
Brevan Howard Alpha Strategies, L.P. (05/20)	311,145,444
Brevan Howard Systematic Trading Fund, L.P. (06/15)	271,519,937
Capstone Vol (US), L.P. (03/20)	436,890,543
Crabel Fund, L.P. (12/15)	117,353,962
Graham Global Investment Fund I SPC, Ltd. (02/19)	440,675,454
Grosvenor Monarch Fund Series B (03/11)	210,924,251
Kirkoswald Global Macro Fund, L.P. (06/19)	502,826,285
Light Sky Macro Fund, L.P. (07/18)	272,428,014
Maniyar Macro Fund, L.P. (04/21)	198,947,617
PDT Mosaic Offshore Holdings, L.L.C. (06/15)	260,574,391
Taconic European Credit Dislocation Fund III, L.P. (06/21)	22,098,982
Tilden Park Investment Fund, L.P. (08/18)	286,539,692
Trend Macro Onshore, L.P. (12/18)	385,957,134
Varadero International, Ltd. (06/14)	289,962,685
Varadero Special Opportunities International, L.P. (06/18)	76,225,162

Note: The list does not include managers terminated prior to June 30, 2021 with residual assets in the account.

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, 2021.

Collateral Type	Collateral Received	Securities on Loan	Collateral %
Cash collateral	\$2,366,898,796	\$2,311,945,738	102.4%
Non-cash collateral	107,886,674	95,808,847	112.6
Total	\$2,474,785,470	\$2,407,754,585	102.8%
Reinvested cash collateral	\$2,366,899,348		

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, 2021, TRS earned net income of \$8.4 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 FY21	
Securities lending income	\$9,050,126
Borrower rebates	(112,165)
Lending agent fees	(536,275)
Securities lending net income	\$8,401,686
Loan Averages During FY21	
Available to loan	\$21,884,926,917
Securities on loan	2,071,649,154
Percentage on loan	9.5%

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

BROKERAGE ACTIVITY

The following table shows the top 50 listed brokers used by TRS external equity managers for the year ended June 30, 2021. TRS also manages a commission recapture program as part of its trading strategies. For the year ended June 30, 2021, TRS recaptured \$0.03 million in cash that was reinvested in the fund. In addition, TRS uses commission recapture refunds to pay for Investment Department expenses. During FY21, TRS used \$0.2 million of recaptured funds to offset expenses.

Top 50 Brokers Used by TRS Managers

Broker	Shares Traded	FY21 Commission
Citigroup, Inc. and all Subsidiaries (Worldwide)	124,348,227	\$636,194
Instinet, L.L.C. (Worldwide)	312,261,355	547,962
Merrill Lynch & Co., Inc. and all Subsidiaries (Worldwide)	645,392,365	519,135
Loop Capital Markets, L.L.C.	110,420,136	348,165
Goldman Sachs & Co. (Worldwide)	479,461,473	315,074
Credit Suisse (Worldwide)	149,974,495	311,825
J.P. Morgan Securities, Inc. (Worldwide)	480,775,438	310,111
Morgan Stanley & Co., Inc. and Subsidiaries (Worldwide)	60,539,651	271,422
Cowen, Inc.	96,885,145	250,405
HSBC Bank PLC	12,788,720	243,138
UBS AG	124,512,084	204,617
BNP Paribas Securities Services S.C.A.	1,252,815,998	195,589
Societe Generale S.A. and all Subsidiaries	38,445,802	187,981
Barclays (Worldwide)	75,815,009	152,894
Cabrera Capital Markets, Inc.	49,252,509	136,590
Jefferies & Company, Inc.	11,353,539	122,589
Macquarie Bank & Securities, Ltd. (Worldwide)	24,828,038	120,992
Williams Capital Group, L.P.	40,773,797	113,123
Brasil Plural S.A.	737,443,115	94,586
Sanford Bernstein (Worldwide)	705,819	91,488
Liquidnet, Inc.	21,975,806	69,361
Credit Lyonnais Securities	44,364,670	59,352
CLSA Securities	44,987,236	58,935
Mischler Financial Group	14,590,659	54,581
Investment Technology Group, Inc. (Worldwide)	19,096,779	45,358

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Broker	Shares Traded	FY21 Commission
Exane, Inc.	44,004,263	\$44,654
Pershing, L.L.C.	9,921,223	42,329
RBC Dain Rauscher (Worldwide)	2,160,975	28,271
KB Financial Group	12,159,135	28,238
Sturdivant & Co., Inc.	43,062,639	25,001
Penserra Securities, L.L.C.	10,377,426	23,078
Piper Jaffray Companies	434,339	22,618
Samsung Group	14,648	21,346
Kim Eng Securities, Ltd.	3,218,417	19,628
Banco Bradesco, S.A.	8,216,377	15,578
KCG Americas L.L.C	8,889,419	15,443
Joh. Berenberg, Gossler & Co.	729,325	15,286
Ambit Holdings Pvt., Ltd.	824	14,753
Stifel Nicolaus & Company, Inc.	7,039,028	14,671
Canadian Imperial Bank of Commerce	1,245,144	14,295
Ho Chi Minh City Securities Corporation	1,616,692	13,312
UOB Kay Hian Pte, Ltd.	634,961	10,252
Daiwa Securities Group, Inc.	5,121,443	9,643
EFG Hermes Holding S.A.E	3,663,525	9,589
Guzman & Company	189,704	8,926
Ichiyoshi Securities Co., Ltd.	121,882	8,856
Korea Investment Holdings	6,093,018	8,695
Banco BTG Pactual S.A	2,672	8,537
ICICI Brokerage Services, Ltd.	1,911,282	8,106
Motilal Oswal Financial Services, Ltd	858,919	8,060
(All Others - 96 Brokers)	85,065,085	179,396
Total	5,230,560,230	\$6,080,028

Sources: State Street Bank and Trust and TRS

INVESTMENT MANAGER AND CUSTODIAN FEES

For the year ended June 30, 2021, fee payments to external investment managers and the master custodian totaled \$449.8 million.

Schedule of Fees

Investment Manager/Account	FY21
A & M Capital Partners II, L.P.	\$582,268
Acadian Asset Management, L.L.C.	4,582,432
Advent International GPE VI Limited Partnership	97,863
Advent International GPE VII-C Limited Partnership	600,805
Advent International GPE VIII-B-2 Limited Partnership	1,412,641
AllianceBernstein, L.P.	2,703,818
Alphadyne Global Rates Fund II, Ltd.	44,873,740
Altaris Health Partners IV, L.P.	270,994
Altaris Health Partners V, L.P.	298,757
Apollo Investment Fund IX, L.P.	3,047,887
Apollo Investment Fund VII, L.P.	21,136
Apollo Investment Fund VIII, L.P.	708,602
Apollo Lincoln Fixed Income Fund, L.P.	1,930,392
Apollo Lincoln Private Credit Fund, L.P.	68,495
AQR Capital Management, L.L.C.	3,867,011
AQR U.S. Relaxed Constraint Equity Fund II, L.P.	10,508
Arlington V, L.P.	1,500,000
Arrowstreet Capital, L.P.	5,642,840
Aspect Systematic Global Macro US Fund L.L.C.	4,536,879
Astorg VI, SLP	777,653
Astorg VII, SLP	1,064,521
Aurora Equity Partners VI, L.P.	1,251,370
Avance Investment Partners, L.P.	158,333
Axiom International Investors, L.L.C.	4,334,052
Barings, L.L.C.	2,291,623
Battery Ventures XI-A Side Fund, L.P.	96,614
Battery Ventures XI-A, L.P.	199,832
Beach Point Sangamon, L.P.	7,955,396
Bertram Growth Capital IV, L.P.	809,725
BIF IV Renewable Sidecar-B, L.P.	1,811,839
BIG Real Estate Fund I, L.P.	421,829
BIG Real Estate Fund II, L.P.	69,350
Black River Agriculture Fund 2, L.P.	965,489
Blackstone Infrastructure Partners, L.P.	1,200,953
Blackstone Real Estate Partners Asia II, L.P.	1,500,000
Blackstone Real Estate Partners Asia, L.P.	680,391
(continued)	

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Investment Manager/Account	FY21
Blackstone Real Estate Partners IX, L.P.	\$3,750,000
Blackstone Real Estate Partners VII, L.P.	999,016
Blackstone Real Estate Partners VIII.TE.2, L.P.	2,646,502
Blantyre Special Situations Fund II, L.P.	269,253
Bregal Sagemount III-B, L.P.	1,497,934
Bregal Unternehmerkapital III-A SCSp	599,160
Brevan Howard Alpha Strategies Fund, L.P.	6,389,298
Brevan Howard Systematic Trading Fund, L.P.	2,310,076
Brookfield Infrastructure Fund IV, L.P.	1,523,636
CapitalSpring Investment Partners VI, L.P.	408,854
Capstone Vol (US), L.P.	14,799,057
Carlson Capital, L.P.	258,578
Carlyle Europe Real Estate Partners III, L.P.	51,362
Carlyle Realty Partners VII, L.P.	375,337
Carlyle Realty Partners VIII, L.P.	1,728,765
Cerberus 2112 Loan Opportunities Fund, L.L.C.	2,532,275
Cerberus Real Estate Debt Fund, L.P.	92,260
Clearlake Capital Partners III, L.P.	143,424
Clearlake Capital Partners IV, L.P.	413,171
Clearlake Capital Partners V, L.P.	531,617
Clearlake Capital Partners VI, L.P.	798,953
Clearlake Flagship Plus Partners, L.P.	17,739
Clearlake Opportunities Partners (P), L.P.	557,488
Crabel Fund, L.P.	548,608
DCP China Credit Fund II, L.P.	1,095,345
Dimensional Fund Advisors, L.P.	1,064,686
Dolan McEniry Capital Management, L.L.C.	1,162,311
DoubleLine Mortgage Opportunities, L.P.	888,942
Edgewater Growth Capital Partners II, L.P.	55,238
EIF United States Power Fund IV, L.P.	868,022
EISAF II, L.P.	354,781
Emerald Advisers, Inc.	896,331
EQT IX (No. 2) USD SCSp	2,715,847
EQT Midmarket Europe, L.P.	1,502,008
EQT VI, L.P.	284,999
EQT VII, L.P.	1,059,251
(continued)	

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Investment Manager/Account	FY21
EQT VIII, L.P.	\$532,117
European Property Investors Special Opportunities 5 SCSp-SIF	1,416,829
Exeter Europe Industrial Core Fund S.C.Sp.	607,123
Exeter Industrial Core Fund III, L.P.	142,937
Exeter Industrial Value Fund V, L.P.	1,200,000
Exeter Value Fund IV, L.P.	423,453
Fortress Japan Opportunity Fund III (Dollar A), L.P.	(256,144)
Fortress Japan Opportunity Fund IV (Dollar A), L.P.	171,547
Franklin Advisers, Inc.	2,314,002
Franklin Templeton Emerging Market Debt Opportunities (Cayman) Fund, Ltd.	80,929
Garcia Hamilton & Associates, L.P.	1,066,498
Gateway Real Estate Fund IV, L.P.	179,189
Global Transport Income Fund Master Partnership SCSp	628,394
Graham Global Investment Fund I SPC Ltd.	4,170,055
Grain Communications Opportunity Fund II, L.P.	1,000,000
Grain Communications Opportunity Fund III, L.P.	507,172
Grain Communications Opportunity Fund, L.P.	665,095
Grandeur Peak Global Advisors	2,307,384
Granite Ventures II, L.P.	74,160
Greenspring IL Master 2.0, L.P.	343,278
Greenspring IL Master, L.P.	2,046,889
Grosvenor Monarch Fund, L.L.C.	2,203,216
Harvest Partners Structured Capital Fund II, L.P.	415,020
Hayfin Chief, L.P.	2,167,574
Heitman Capital Management, L.L.C.	4,400,387
IC Hospitality Fund II, L.P.	100,383
ICG Santo SCSp	3,627,262
ICV Partners III, L.P.	101,133
ICV Partners IV, L.P.	799,088
IL Asia Investors, L.P.	891,220
Inflexion Buyout Partnership V, L.P.	739,007
Inflexion Enterprise Fund V (No. 1), L.P.	193,566
Inflexion Partnership Capital II, L.P.	724,747
Inflexion Supplemental Fund V (No. 1), L.P.	51,122
Insight Partners Opportunities Fund I, L.P.	254,076
Institutional Venture Partners XV, L.P.	974,773
Institutional Venture Partners XVI, L.P.	1,273,695
Invesco Institutional (N.A.), Inc.	4,379,361
IPM Systematic Macro Fund, L.P.	821,569
JMI Equity Fund VII, L.P.	171,927
<i>(continued)</i>	

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Investment Manager/Account	FY21
JMI Equity Fund VIII-A, L.P.	\$461,700
JP Morgan Investment Management, Inc.	4,206,349
Kirkoswald Global Macro Fund, L.P.	22,341,918
LaSalle Asia Opportunity Fund IV, L.P.	38,670
LCM Partners CO IIIa, L.P.	716,310
LCM Partners COPS 4, L.P.	144,542
LCM Partners SOLO III, L.P.	600,361
Light Sky Macro Fund, L.P.	6,294,570
Lightspeed Venture Partners IX, L.P.	541,860
Lightspeed Venture Partners Select II, L.P.	376,000
Lightspeed Venture Partners Select, L.P.	384,038
Lightspeed Venture Partners X, L.P.	317,088
Lightspeed Venture Partners XI, L.P.	272,196
Lion Industrial Trust	6,195,843
Littlejohn Fund IV, L.P.	30,723
LiveOak Venture Partners I, L.P.	292,500
Locust Point Senior Housing Debt II, L.P.	928,125
Lone Star Real Estate Fund III (U.S.), L.P.	405
Lone Star Real Estate Fund IV (U.S.), L.P.	248,289
Lone Star Real Estate Fund V (U.S.), L.P.	173,492
Lone Star Real Estate Fund VI, L.P.	657,166
Longitude Venture Partners II, L.P.	59,822
Longitude Venture Partners III, L.P.	795,766
LPC Realty Advisors I, Ltd.	3,021,473
LSV Asset Management	7,458,957
MacKay Shields, L.L.C.	2,104,110
Macquarie European Infrastructure Fund 6 SCSp	(348,494)
Macquarie Infrastructure Partners V, L.P.	(704,108)
Madison Dearborn Capital Partners VII, L.P.	535,832
Madison International Real Estate Liquidity Fund VI (TE), L.P.	1,104,006
Magnetar Constellation Fund IV, L.L.C.	441,070
Magnetar Constellation Fund V, L.L.C.	1,851,698
Man Alternative Risk Premia SP	552,090
Maniyar Macro Fund, L.P.	431,926
Maranon Senior Credit Fund II-B, L.P.	103,132
Marlin Equity V, L.P.	1,001,745
Matarin Capital Management, L.L.C.	52,265
MBK Partners Fund III, L.P.	1,125,822
MBK Partners Fund IV, L.P.	640,983
MBK Partners Fund V, L.P.	1,131,507
MBK Special Situations II, L.P.	441,095
<i>(continued)</i>	

(continued)

Investment Manager/Account	FY21
Mill Point Capital Partners II, L.P.	\$349,053
Monroe Capital Private Credit Fund II, L.P.	579,290
Morgan Creek Partners Asia, L.P.	610,326
New Enterprise Associates 15, L.P.	408,662
New Enterprise Associates 16, L.P.	553,639
New Mountain Partners IV, L.P.	515,858
New Mountain Partners V, L.P.	584,466
New Mountain Partners VI, L.P.	1,933,288
NGP Natural Resources X, L.P.	561,439
NGP Natural Resources XI, L.P.	946,306
NGP Natural Resources XII, L.P.	1,497,752
Niam Nordic V, L.P.	1,562,935
Northern Shipping Fund III, L.P.	233,698
Northern Shipping Fund IV, L.P.	1,110,973
Northern Trust Investments, Inc.	1,271,600
NXT Capital Senior Loan Fund II, L.P.	51,309
NXT Capital Senior Loan Fund IV, L.P.	1,467,682
NXT Capital Senior Loan Fund V, L.P.	1,505,211
Oak Street Real Estate Capital Fund III, L.P.	91,237
Oak Street Real Estate Capital Fund IV, L.P.	1,122,108
Oak Street Real Estate Capital Fund V, L.P.	282,711
Oak Street Real Estate Capital Net Lease Property Fund, L.P.	1,476,102
Oaktree Enhanced Income Fund III, L.P.	1,651,344
Oaktree European Principal Fund III, L.P.	888,781
Oaktree Opportunities Fund IX, L.P.	1,099,290
Oaktree Opportunities Fund VIII, L.P.	7,858
Oaktree Opportunities Fund Xb, L.P.	1,581,932
Oaktree Real Estate Debt Fund II, L.P.	514,561
Oaktree Real Estate Debt Fund III, L.P.	240,365
Oaktree Real Estate Debt Fund, L.P.	18,490
OceanSound Partners Fund, L.P.	164,709
Pacific Investment Management Company, L.L.C.	25,030,660
Palladium Equity Partners IV, L.P.	91,695
Pamlico Capital V, L.P.	314,684
Parthenon Investors IV, L.P.	(4,437)
Parthenon Investors V, L.P.	(3)
Parthenon Investors VI, L.P.	1,519,056
PDT Partners, L.L.C.	9,632,566
Pemberton Debt Fund Delaware I, L.P.	612,234
Pemberton Debt Fund Delaware II, L.P.	1,092,126
PGIM Fixed Income Alternatives Fund II, L.P.	103,278

*(continued)**(continued)*

Investment Manager/Account	FY21
PGIM Fixed Income Global Liquidity Relative Value Fund I (Cayman), Ltd.	\$7,317,584
PGIM, Inc.	4,307,665
PIMCO BRAVO Fund III Onshore Feeder, L.P.	1,258,155
PIMCO BRAVO Fund Onshore Feeder II, L.P.	758,272
PIMCO Commercial Real Estate Debt Fund, L.P.	519,319
PIMCO Corporate Opportunities Fund III, L.P.	247,104
Principal Real Estate Investors, L.L.C.	1,136,175
Proterra Credit Fund, L.P.	500,331
Providence Equity Partners VII, L.P.	365,213
RCP SBO Fund, L.P.	965,625
Rhone Partners IV, L.P.	195,413
Rhone Partners V, L.P.	1,077,541
RhumbLine Advisers, L.P.	653,130
Ridgemont Equity Partners III, L.P.	462,594
Riverstone Credit Partners II, L.P.	921,129
Riverstone Credit Partners, L.P.	249,316
Riverstone Global Energy and Power Fund V, L.P.	1,485,368
Riverstone Global Energy and Power Fund VI, L.P.	1,773,190
Riverstone/Carlyle Global Energy and Power Fund IV, L.P.	58,871
Rockpoint Real Estate Fund V, L.P.	943,502
Rockpoint Real Estate Fund VI, L.P.	2,438,315
RRJ Capital Master Fund III, L.P.	262,931
Scale Venture Partners V, L.P.	721,456
Scale Venture Partners VII, L.P.	332,400
SCP Private Corporate Lending Fund, L.P.	702,817
Sheridan Production Partners III-B, L.P.	231,497
Silver Lake Alpine, L.P.	470,029
Silver Lake Partners III, L.P.	58,284
Silver Lake Partners IV, L.P.	1,013,364
Silver Lake Partners V, L.P.	1,105,788
Silver Lake Partners VI, L.P.	2,259,714
Siris Partners II, L.P.	460,661
Siris Partners III, L.P.	1,150,911
Siris Partners IV, L.P.	819,601
SK Capital Catalyst Fund I, L.P.	538,168
SK Capital Partners V-A, L.P.	212,374
Sofinnova Venture Partners IX, L.P.	995,154
Sofinnova Venture Partners VIII, L.P.	587,135
Sofinnova Venture Partners X, L.P.	1,368,036
Southwest Multifamily Partners, L.P.	174,641

(continued)

<i>(continued)</i>	
Investment Manager/Account	FY21
StarVest Partners II, L.P.	\$72,843
Starwood Distressed Opportunity Fund IX Global, L.P.	818,113
Starwood Opportunity Fund X Global, L.P.	2,276,083
Starwood Opportunity Fund XI Global, L.P.	3,504,797
Starwood Value Add Fund, L.P.	1,190,455
Starwood X Annex A	1,056
Starwood X Annex B	6,205
State Street Bank and Trust Company (Custody)	3,847,375
State Street Global Advisors Trust Company	1,372
Stellex Capital Partners II, L.P.	432,783
Stonepeak Infrastructure Fund IV, L.P.	1,848,611
Strategic Global Advisors, L.L.C.	3,329,993
Strategic Partners Infrastructure III, L.P.	1,915,000
Sunstone Partners I, L.P.	366,401
Sunstone Partners II, L.P.	622,831
T. Rowe Price Associates, Inc.	1,978,802
TA XII-A, L.P.	1,044,356
TA XIII, L.P.	1,243,168
Taconic European Credit Dislocation Fund III, L.P.	13,260
Taplin, Canida & Habacht, L.L.C.	1,009,077
Taurus Mining Finance Annex Fund L.L.C.	187,225
Taurus Mining Finance Fund II L.L.C.	1,938,530
Taurus Mining Finance Fund L.L.C.	324,889
TCW Asset Management Company	3,349,904
TDR Capital IV 'A', L.P.	1,157,523
TerraCotta Credit Fund, L.P.	599,975
The Baring Asia Private Equity Fund V, L.P.	1,230,280
<i>(continued)</i>	

<i>(continued)</i>	
Investment Manager/Account	FY21
The Baring Asia Private Equity Fund VI, L.P.1	\$1,118,093
The Varde Private Debt Opportunities Fund (Onshore), L.P.	429,906
Tilden Park Investment Fund, L.P.	3,885,658
Transition - Private Equity	8,601
Trend Macro Onshore, L.P.	11,501,396
Trident V, L.P.	429,617
Trident VI, L.P.	734,369
Trident VII, L.P.	1,223,832
Trident VIII, L.P.	1,488,173
Trustbridge Partners IV, L.P.	394,470
TSG8, L.P.	1,806,847
Varadero International, Ltd.	4,022,561
Varadero Special Opportunities International, L.P.	1,861,885
Vista Credit Opportunities Fund I-B, L.P.	45,701
Vista Equity Partners Fund V, L.P.	1,838,793
Vista Equity Partners Fund VI, L.P.	2,242,381
Vista Foundation Fund III, L.P.	939,956
Vista Foundation Fund IV, L.P.	987,966
Walton Street Real Estate Fund VI, L.P.	309,274
Walton Street Real Estate Fund VII, L.P.	635,030
Wasatch Advisors, Inc.	2,425,277
West Street Global Infrastructure Partners III, L.P.	1,113,838
Westbrook Real Estate Fund X, L.P.	728,313
Westbrook Real Estate Fund XI, L.P.	1,963,150
ZMC III, L.P.	549,432
Total fees paid by TRS	<u>\$449,838,070</u>



Top left:

Early childhood teacher Khawla Mashni wore a Palestinian thobe on Cultural Day at Ridge Lawn School in Chicago Ridge.

Top right:

Teachers Elaine Bernal and Veronica Delgado celebrate Hispanic Heritage Month at Covington Elementary School in Oak Lawn.

Bottom left:

Kindergarten teacher Penny Pierce of Elgin School District U-46 reminds students and families that distance learning teachers are more than just a face on a screen.

Bottom right:

Marla Isaacs, a biology teacher at Evanston Township High School.



Bryan McMahan, a business and technology teacher at Somonauk High School in Somonauk.



ACTUARIAL

Top left:

Margarita Sanchez, an English language teacher at Foster Elementary School in Oak Forest.

Bottom left:

U.S. Army veteran and physical education teacher Carol Golemo uses yoga figurines to demonstrate poses during yoga fitness classes over Zoom from Thomas Middle School in Arlington Heights.

Right:

Colleen Martin, horticulture teacher at Lockport Township High School says students and staff are very proud of their greenhouse.

November 19, 2021

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

ACTUARIAL CERTIFICATION

Ladies and Gentlemen:

This report presents the results of the annual valuation of the assets and liabilities of the Teachers' Retirement System of the State of Illinois (TRS or System) as of June 30, 2021, 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 2021 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. 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

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. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data. 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, 2021, the actuarial experience of TRS was favorable, generating a net actuarial gain of \$1.67 billion. This gain is the net result of a \$1.44 billion gain due to favorable investment return experience and a \$0.23 billion (0.2% of the actuarial accrued liability) net gain due to demographic experience on behalf of fiscal 2021.

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 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, State Funding Amounts, Unfunded Liability as a Percentage of Payroll Test, and Schedule of Contributions from Employers and Other Contributing Entities. The Actuarial Section also contains the following schedules, which were prepared by Segal: Funded Ratio Test, Solvency Test, Employer Normal Cost by Tier, and Funded Ratio by Tier. Segal neither reviewed nor prepared any items beyond those specifically listed in this paragraph and the preceding paragraph.

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 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.

Respectfully submitted,

Segal

By:



Kim M. Nicholl, FSA, FCA, MAAA, EA
Senior Vice President and Actuary



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 that federal funds contributions be treated in the same manner as other school district contributions resulting in the calculation of state contributions to be the level percent of payroll required to attain 90 percent by fiscal year 2045. The change was implemented for the June 30, 2019 actuarial valuation, effective for contributions in fiscal years 2021 and thereafter.

Cheiron recommended additional disclosure on stress testing, but it has not been included in the 2021 preliminary actuarial valuation. TRS and Segal believe this type of analysis is better suited for discussion with input from the TRS Board of Trustees, staff, the actuary and the TRS general investment consultant, RVK, Inc. However, additional disclosure on the types of risk faced by the plan has been added to the actuarial report.

The preliminary June 30, 2021 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 were adopted in the FY21 valuation and are based on the 2021 experience study analysis unless otherwise noted.

INVESTMENT RETURN

The investment return rate is 7.0 percent per annum, compounded annually and net of investment expenses, including inflation at 2.25 percent and real return at 4.75 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 rates were adopted in the FY21 valuation.

SALARY INCREASES

Components of the salary increase assumption include:

- inflation of: 2.25 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	8.50%
2 years	6.75
3 years	6.25
4 years	6.25
5 years	6.00
10 years	5.00
15 years	4.50
20 years and above	3.50

For a member who works 34 years, the assumed average salary increase over the member's career is 4.48 percent per year. The actual average salary increase for teachers who were in full-time or regular part-time status at both June 30, 2019 and June 30, 2020 is 4.36 percent.

INFLATION

Inflation is assumed to be 2.25 percent per annum and is implicit in investment and earnings progression assumptions. This rate was adopted in the FY21 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	0%	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
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
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: 1.125%, not compounded (adopted in 2021 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, 2024 by Public Act 101-0010:

- 5 percent of eligible Tier 1 and Tier 2 inactive members are assumed to participate in the Accelerated Pension Benefit Program.

- 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 experience of TRS in 2020-2021.

Of the original \$1 billion bond authorization, TRS was allotted \$650 million. From the inception of the buyout programs through FY21, TRS expended nearly \$425 million from the bond proceeds. Buyouts will continue until June 30, 2024 or until the bond authorization is exhausted.

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 adopted by the TRS Board of Trustees in the June 30, 2021 actuarial valuation.

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

- The inflation assumption was lowered from 2.50 percent to 2.25 percent in light of all sources of inflation expectations.
- 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 are assumed to be paid was extended from FY22 to FY24.

The net effect of all the changes in assumptions was a decrease in the June 30, 2021 unfunded liability of \$517 million.

The rate of return was maintained at 7.0 percent, although the rate of inflation was lowered to 2.25 percent and the real rate of return was increased to 4.75 percent.

In addition to the review of all the assumptions that is conducted every three years, the major economic assumptions are reviewed every year. This more frequent review was recommended by the state actuary.

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, 2021
Based on actuarial value of assets	
Total actuarial accrued liability	\$138,914,275
Less actuarial value of assets*	58,979,923
Unfunded liability	<u>\$79,934,352</u>
Funded ratio*	42.5%
Based on fair value of assets	
Total actuarial accrued liability	\$138,914,275
Less assets at fair value	64,212,505
Unfunded liability	<u>\$74,701,770</u>
Funded ratio	46.2%

* Five-year prospective smoothing began in FY09.

ANALYSIS OF FINANCIAL EXPERIENCE: RECONCILIATION OF UNFUNDED LIABILITY

The \$0.8 billion net decrease in the 2021 unfunded liability was caused by a combination of factors.

The first factor shown in the table is the difference between actual employer/state contributions and the amount that would cover the employer/state's cost of benefits earned during the year and prevent the prior year's unfunded liability from growing. That shortfall was \$1.4 billion.

Actuarial gains and losses occurred under the other assumptions. The most significant gain was on investments. Other actuarial gains occurred under the assumptions for buyouts, salary increases, disabilities, mortality and new members, meaning that experience was more favorable (less costly) than assumed. The gain of \$88 million in the "other" category is a balancing item.

Actuarial losses occurred under the assumptions for retirement, terminations and rehires (members coming back into teaching service), meaning that experience was less favorable (more costly) than assumed.

The net effect of the actuarial gains and losses was a decrease in the unfunded liability of \$1.7 billion.

Reductions in the unfunded liability occurred because of changes in actuarial assumptions adopted in the June 30, 2021 actuarial valuation. Based on the 2021 experience analysis, the net effect of the assumption adopted by the TRS Board of Trustees was a reduction in the unfunded liability of \$517 million.

In summary, the \$0.8 billion decrease in the unfunded liability is the net effect of the \$1.4 billion employer cost in excess of contributions, the \$1.7 billion reduction due to experience and the \$0.5 billion reduction due to assumption changes.

Reconciliation of Unfunded Liability

Reconciliation of Unfunded Actuarial Accrued Liability	Year Ended June 30, 2021
Unfunded liability at beginning of year	\$80,707,571,185
Additions	
Employer cost in excess of contributions	1,414,463,477
Experience (gain)/loss from:	
Investment (gain)/loss on actuarial value of assets*	(1,436,959,691)
Salary increases for continuing active members	(56,331,439)
Retirements other than expected	107,023,064
Disabilities other than expected	(18,941,923)
Terminations other than expected	49,242,128
Mortality other than expected	(68,231,169)
Rehires	41,159,834
New entrants	(4,382,406)
Buyout experience	(195,467,590)
Other	(88,083,634)
Net experience (gain)	(1,670,972,826)
Changes in actuarial assumptions	(516,709,885)
Net decrease in unfunded liability	(773,219,234)
Unfunded liability at end of year	<u>\$79,934,351,951</u>

* Assets were expected to earn 7.0 percent during the year ended June 30, 2021. 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 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 FY22 certified state contributions are based on the June 30, 2020 actuarial valuation and the FY23 certifications are based on the June 30, 2021 actuarial valuation. The state actuary will review the proposed certifications for FY23 as well as the preliminary June 30, 2021 valuation. Final certifications for FY23 are due Jan. 15, 2022 pursuant to Public Act 97-0674.

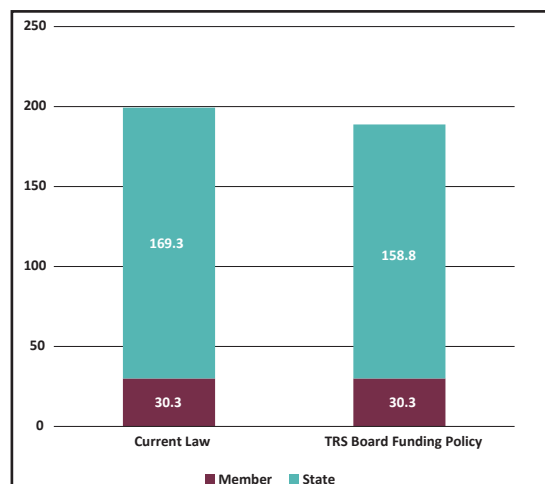
The following table shows funding requirements under the statutory funding plan and the TRS Board of Trustee's funding plan that was adopted in 2015.

FY22 & FY23 State Contribution Requirements

	FY22 Requirements	FY23 Requirements
Based on Statutory Funding Plan		
Benefit Trust Reserve	\$5,693,706,973	\$5,893,732,209
Minimum Annuity Reserve	400,000	300,000
Total State Contribution	\$5,694,106,973	\$5,894,032,209
Based on TRS Board Funding Policy		
Benefit Trust Reserve	\$8,850,055,308	\$9,101,333,224
Minimum Annuity Reserve	400,000	300,000
Total State Contribution	\$8,850,455,308	\$9,101,633,224
Employer Normal Cost Rate		
Tier 1	13.99%	14.58%
Tier 2	(1.29%)	(1.34%)
Combined	10.31%	10.49%

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 through FY45 would be \$10.5 billion lower than under current law.

State and Member Required Contributions FY23-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
2012	\$90,024,945	\$37,945,397	\$36,516,825	\$52,079,548	\$53,508,120	42.1%	40.6%
2013	93,886,988	38,155,191	39,858,768	55,731,797	54,028,220	40.6	42.5
2014	103,740,377	42,150,765	45,824,383	61,589,612	57,915,994	40.6	44.2
2015	108,121,825	45,435,193	46,406,916	62,686,632	61,714,909	42.0	42.9
2016	118,629,890	47,222,098	45,250,957	71,407,792	73,378,933	39.8	38.1
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

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
2012	\$9,321,098	\$52,079,548	558.7%
2013	9,394,741	55,731,797	593.2
2014	9,512,810	61,589,612	647.4
2015	9,641,171	62,686,632	650.2
2016	9,811,614	71,407,792	727.8
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

* 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				Percentage of Benefits Covered by Net Assets		
	Active Member Contributions	Participants Currently Receiving Benefits)	Active Members Employer Portion	Actuarial Value of Assets			
	(1)	(2)	(3)		(1)	(2)	(3)
2012	\$8,270,073	\$58,734,636	\$23,020,236	\$37,945,397	100%	51%	-
2013	8,569,939	61,254,334	24,062,715	38,155,191	100	48	-
2014	8,890,558	65,614,627	29,235,192	42,150,765	100	51	-
2015	9,281,893	70,545,782	28,294,150	45,435,193	100	51	-
2016	9,629,934	77,688,075	31,311,881	47,222,098	100	48	-
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	-

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
2012	\$2,405,172	\$153,409	\$2,558,581	\$3,429,945	74.6%	\$2,547,803	100.4%
2013	2,702,278	155,787	2,858,065	3,582,033	79.8	2,843,463	100.5
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	4,183,040	99.9
2019	4,465,578	87,707	4,553,285	7,429,037	61.3	4,554,862	100.0
2020	4,813,078	92,038	4,905,116	7,988,612	61.4	4,905,192	100.0
2021	5,140,337	97,082	5,237,419	8,441,258	62.0	5,140,337	100.0

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.
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.

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
2012	101,288	6,943	2,784	105,447	\$4,781,692,373	8.2%	\$45,347	4.0%
2013	105,447	6,404	3,068	108,783	5,100,219,925	6.7	46,884	3.4
2014	108,783	6,433	2,883	112,333	5,430,104,782	6.5	48,339	3.1
2015	112,333	5,789	3,200	114,922	5,718,110,055	5.3	49,756	2.9
2016	114,922	5,723	2,995	117,650	6,024,825,507	5.4	51,210	2.9
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

Source: TRS

Year Ended June 30	Amount Added to Rolls			Amount Removed from Rolls
	Annual Benefit Increases	New Benefit Recipients		
2012	\$135,604,876	\$311,161,467		\$83,574,491
2013	145,282,975	268,124,075		94,879,498
2014	153,329,242	273,690,582		97,134,967
2015	162,158,193	237,388,307		111,541,227
2016	168,459,973	250,009,083		111,753,604
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

Source: TRS

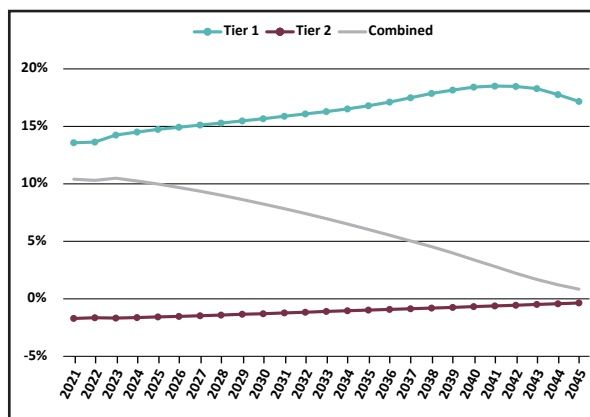
FUNDING ANALYSIS BY TIER

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 2021 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



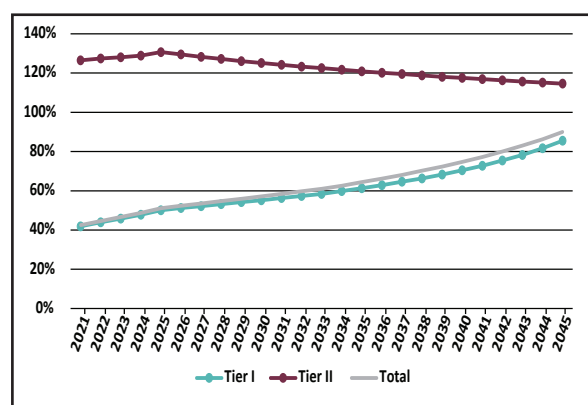
Note: Combined rate includes administrative expenses.

Source: 2019 valuation for 2021 data, 2020 valuation for 2022 data, 2021 valuation for subsequent years.

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 2026.

By 2045, Tier 1 would be 86 percent funded and Tier 2 would be 115 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: 2019 valuation for 2021 data, 2020 valuation for 2022 data, 2021 valuation for subsequent years.

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

Years of Service		2021	2020	2019	2018
Under 5	Members	27,043	26,499	26,111	25,959
	Salary	\$53,591	\$51,260	\$51,835	\$50,568
5-9	Members	27,577	27,309	26,264	25,831
	Salary	\$63,366	\$61,110	\$60,626	\$59,615
10-14	Members	24,514	25,861	28,322	29,465
	Salary	\$74,888	\$73,590	\$73,266	\$72,008
15-19	Members	25,545	25,186	24,459	24,304
	Salary	\$87,256	\$85,800	\$85,131	\$84,065
20-24	Members	19,018	17,618	16,209	15,590
	Salary	\$97,906	\$95,974	\$94,599	\$93,379
25-29	Members	10,930	10,520	10,038	8,786
	Salary	\$105,660	\$103,541	\$101,340	\$99,102
30-34	Members	4,354	4,193	3,950	3,976
	Salary	\$112,524	\$109,478	\$106,097	\$105,266
35 +	Members	326	356	353	379
	Salary	\$119,173	\$116,714	\$112,963	\$111,104
Total Members		139,307	137,542	135,706	134,290
Salary		\$77,577	\$76,027	\$74,518	\$73,028
% Change salary		2.0%	2.0%	2.0%	1.7%
Total payroll full & part-time		\$10,807,084,561	\$10,456,942,174	\$10,112,568,797	\$9,806,930,120
Number of Employers		991	990	990	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.

2017	2016	2015	2014	2013	2012
26,486	26,767	26,698	25,191	24,812	25,733
\$49,935	\$49,464	\$47,796	\$46,845	\$46,058	\$46,222
26,436	27,845	29,798	33,028	34,682	35,071
\$59,150	\$59,276	\$58,935	\$58,540	\$58,027	\$57,741
29,617	29,395	29,214	28,747	28,503	28,105
\$71,412	\$71,140	\$70,589	\$70,233	\$69,686	\$68,751
23,936	22,894	21,421	19,917	19,406	18,610
\$82,745	\$81,868	\$80,737	\$79,921	\$79,295	\$78,328
14,728	14,120	13,877	13,562	12,280	11,834
\$92,035	\$90,942	\$89,591	\$88,037	\$86,235	\$84,904
8,254	8,087	7,908	7,827	7,913	7,940
\$97,624	\$96,157	\$94,510	\$93,016	\$91,735	\$89,986
3,979	3,936	3,970	3,941	4,247	4,826
\$104,652	\$102,896	\$100,785	\$98,807	\$96,966	\$94,665
453	592	731	809	889	994
\$110,576	\$107,826	\$105,372	\$103,533	\$101,293	\$98,140
133,889	133,636	133,617	133,022	132,732	133,113
\$71,773	\$70,868	\$69,538	\$68,556	\$67,558	\$66,696
1.3%	1.9%	1.4%	1.5%	1.3%	1.0%
\$9,609,615,197	\$9,470,516,048	\$9,291,458,946	\$9,119,456,232	\$8,967,108,456	\$8,878,104,648
989	992	1,006	1,013	1,019	1,024

Average Annual Salary and Age for Active Members by Years of Service as of June 30, 2021

		Years of Service				
		Subs	Under 5	5-9	10-14	15-19
20-24	Members	2,160	3,751	-	-	-
	Salary	\$6,182	\$44,705	-	-	-
25-29	Members	1,957	9,373	3,918	-	-
	Salary	\$8,235	\$50,306	\$57,547	-	-
30-34	Members	1,420	4,482	10,536	3,285	-
	Salary	\$7,965	\$53,217	\$61,401	\$70,109	-
35-39	Members	1,849	2,982	5,119	10,513	4,496
	Salary	\$6,943	\$55,115	\$64,666	\$74,667	\$84,175
40-44	Members	2,398	2,490	3,016	4,383	10,646
	Salary	\$7,140	\$55,412	\$64,874	\$75,763	\$88,052
45-49	Members	2,432	1,685	2,155	2,567	4,359
	Salary	\$7,031	\$55,763	\$65,437	\$74,955	\$88,343
50-54	Members	2,330	1,186	1,557	1,934	2,984
	Salary	\$6,587	\$57,514	\$65,894	\$74,262	\$86,515
55-59	Members	1,993	656	807	1,250	1,949
	Salary	\$6,246	\$59,795	\$63,724	\$73,632	\$83,825
60-64	Members	1,560	323	359	470	908
	Salary	\$5,934	\$63,046	\$63,988	\$74,672	\$84,577
65-69	Members	968	94	92	91	179
	Salary	\$5,700	\$61,055	\$67,524	\$75,144	\$90,883
70-74	Members	492	17	16	19	23
	Salary	\$5,381	\$47,511	\$63,252	\$71,466	\$108,867
Over 74	Members	161	5	1	2	1
	Salary	\$5,976	\$60,941	\$57,262	\$68,198	\$122,573
Total Members		19,720	27,044	27,576	24,514	25,545
Salary		\$6,797	\$52,088	\$62,532	\$74,196	\$86,834

Source: TRS

	Average Age	Average Years of Service	Members
Full and part-time members	42	13	139,307
Substitutes	45	4	19,720
All	43	12	159,027

Years of Service							Full & Part-time Member Totals
20-24	25-29	30-34	35-39	40-44	45-49	50+	
-	-	-	-	-	-	-	3,751
-	-	-	-	-	-	-	\$44,705
-	-	-	-	-	-	-	13,291
-	-	-	-	-	-	-	\$52,441
-	-	-	-	-	-	-	18,304
-	-	-	-	-	-	-	\$60,965
-	-	-	-	-	-	-	23,110
-	-	-	-	-	-	-	\$71,779
3,823	-	-	-	-	-	-	24,357
\$96,420	-	-	-	-	-	-	\$80,947
8,318	2,255	-	-	-	-	-	21,339
\$98,890	\$105,101	-	-	-	-	-	\$87,729
3,910	5,981	1,754	-	-	-	-	19,306
\$98,073	\$105,414	\$110,311	-	-	-	-	\$92,201
1,996	2,096	2,282	131	-	-	-	11,167
\$95,111	\$106,639	\$114,151	\$120,563	-	-	-	\$92,747
781	478	255	99	25	-	-	3,698
\$94,444	\$103,322	\$112,222	\$120,139	\$126,150	-	-	\$87,085
156	99	48	18	21	8	-	806
\$98,713	\$102,930	\$101,896	\$98,076	\$119,892	\$132,620	-	\$88,547
32	18	12	8	1	8	3	157
\$104,905	\$98,552	\$108,387	\$103,568	\$193,397	\$105,174	\$120,128	\$91,317
2	3	3	-	1	-	3	21
\$96,805	\$81,534	\$104,235	-	\$70,915	-	\$102,590	\$83,359
19,018	10,930	4,354	256	48	16	6	139,307
\$97,657	\$105,452	\$112,333	\$118,286	\$123,660	\$118,897	\$111,359	\$76,865

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 108-109 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 92-93. 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.

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Top:

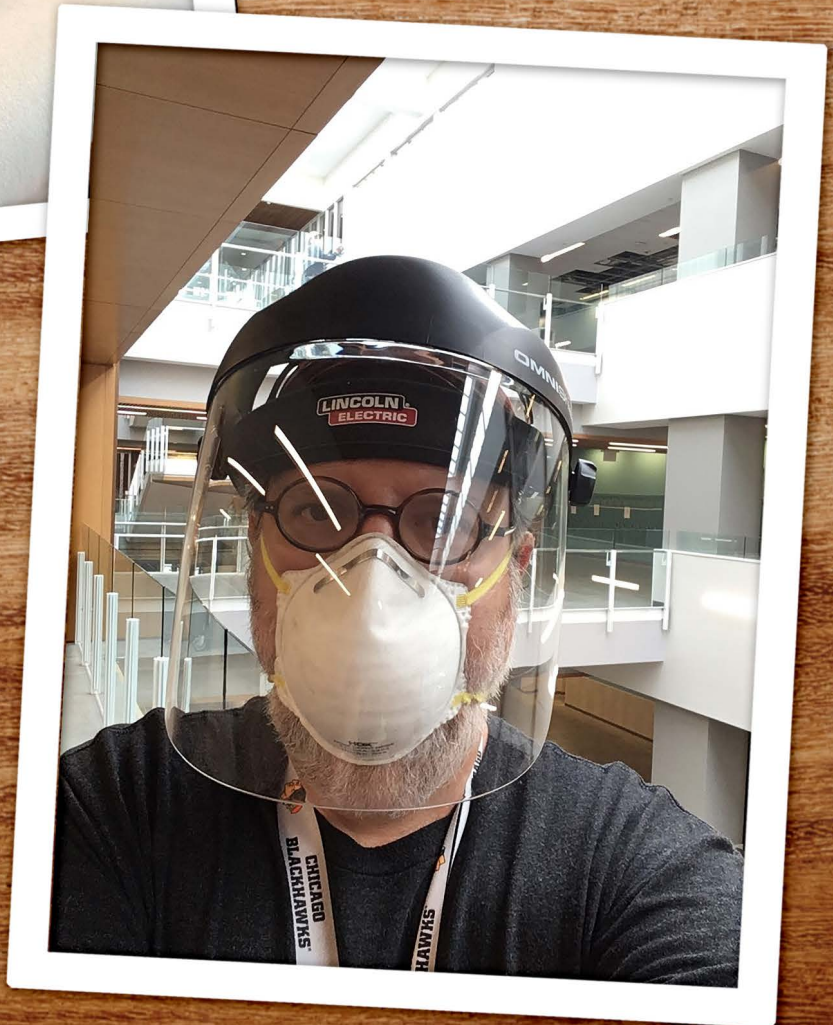
TPI (transitional program of instruction) teacher Stephanie Noble and bilingual teacher Margarita Mojica kicked off Hispanic Month at Glenview Middle School in East Moline by wearing their Latin Education Collaborative shirts.

Middle:

First grade teacher Cheryl Rainwater starts the first day of remote learning from home for her first grade students at Arland Williams Elementary School in Mattoon.

Bottom:

Teacher Paul Easton, preparing for the first day of classes in August 2020 at New Trier Township High School, Winnetka Campus.

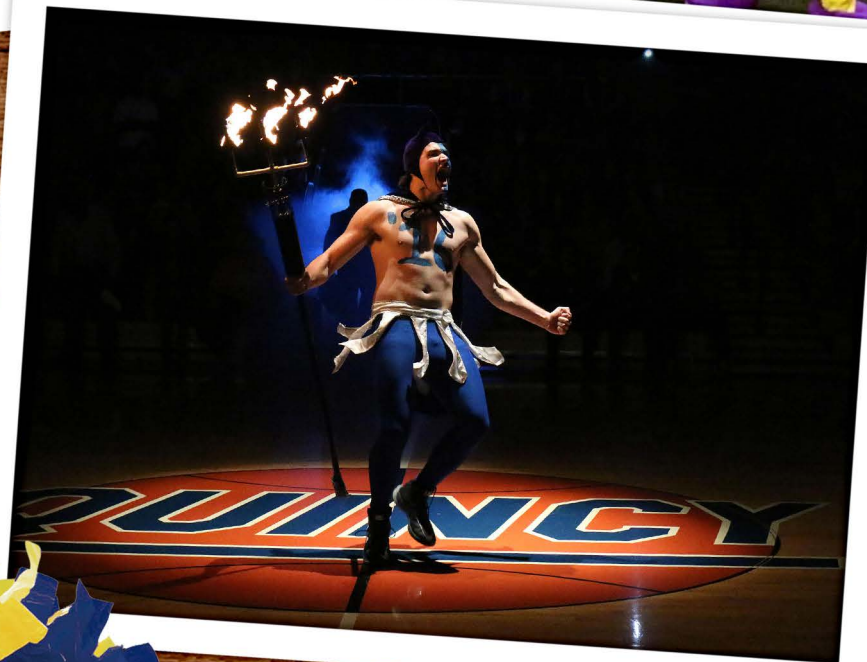


5 6 WOODROW MADE IN USA 7

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 based on the member's highest four consecutive years of service out of the last 10.</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, 2023, Tier 1 retirees can teach up to 120 days or 600 hours per year without having their retirement benefits suspended. After that date, the limits return to 100 days or 500 hours.
Contributions to TRS	<p>During FY21, 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 FY21, 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.
Accelerated Benefit Programs (temporary)	<p>Until June 30, 2024, 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, 2024, 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>

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 FY21 Tier 2 limit was \$116,740.42.</p> <p>The final average salary is based on the member's highest eight consecutive years of service out of the last 10.</p> <p>Tier 2 does not provide a money-purchase style "actuarial" benefit.</p>
Post-Retirement Increases	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.
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 FY21, 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, 2024, 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.



Left:

Students at Barack Obama Learning Academy in Hazel Crest found “Eagle spirit” after teacher Ruth Barrett purchased an eagle head and created a mascot for the school.

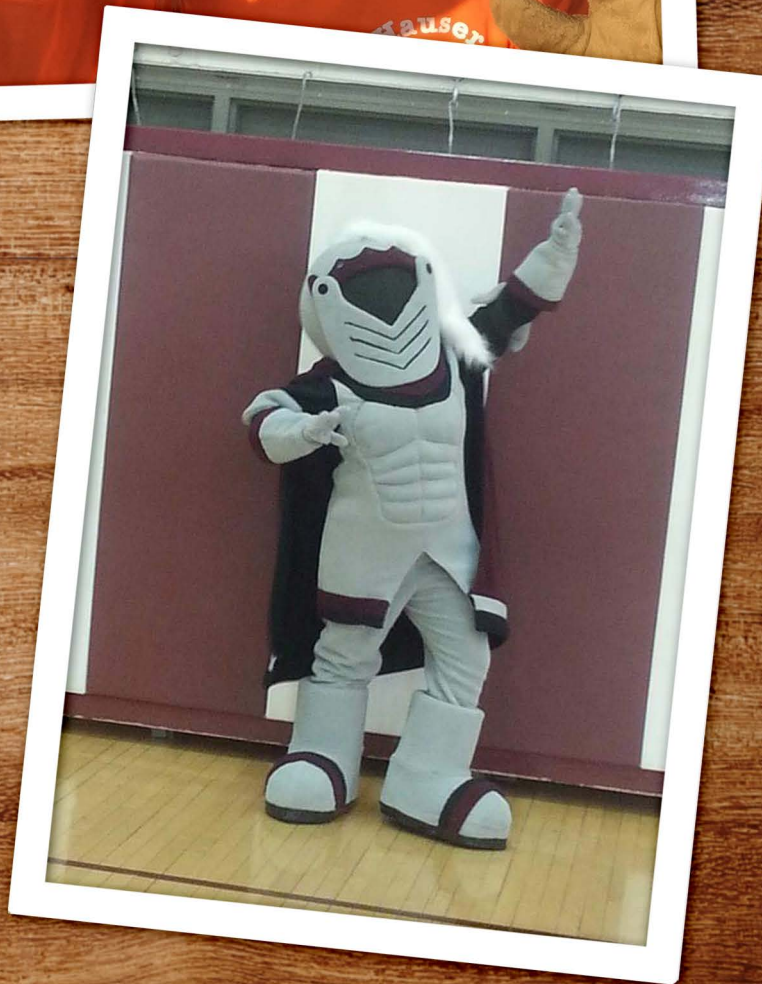
Right:

“Captain Bullet,” is the mascot for the Williamsville High School Bullets. Submitted by teacher Lynsey Bonner.

Bottom:

The “Blue Devil” mascot fires up fans before a basketball game at Quincy High School. Submitted by teacher Teresa Rose.

STATISTICAL



Teacher Elizabeth Olympio with the Cougar mascot at L.J. Hauser Junior High School in Riverside.

Princeville Jr./Sr. High School's mascot, "The Prince," submitted by business teacher and co-op coordinator Susan Mercer.

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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 114-115

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 116

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 116

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 117

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 – PAGE 118-119

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 120

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

AVERAGE BENEFIT PAYMENTS TO NEW RETIREES – PAGE 121

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 121

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

PARTICIPATING EMPLOYERS – PAGE 122

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)

	2021	2020	2019	2018
Additions				
Member contributions*	\$1,023,532	\$994,400	\$963,972	\$938,037
State of Illinois	5,140,648	4,813,452	4,466,021	4,095,125
Employer contributions**	97,594	92,658	88,514	84,633
Investment income (loss) net of expenses	13,046,154	275,669	2,617,831	4,049,272
Total additions to/reductions from plan net position	19,307,928	6,176,179	8,136,338	9,167,067
Deductions				
Benefit payments	7,323,949	7,035,307	6,745,544	6,458,710
Refunds	64,194	64,217	73,216	92,925
Administrative expenses	23,758	22,966	24,336	21,550
Total deductions from plan net position	7,411,901	7,122,490	6,843,096	6,573,185
Changes in net position restricted for pensions				
Beginning of year	52,316,478	53,262,789	51,969,547	49,375,665
Net increase (decrease)	11,896,027	(946,311)	1,293,242	2,593,882
End of year	\$64,212,505	\$52,316,478	\$53,262,789	\$51,969,547

* 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)

	2021	2020	2019	2018
Type of benefit				
Retirement	\$6,935,054	\$6,672,267	\$6,405,908	\$6,140,877
Survivor	357,078	329,872	306,503	285,068
Disability	31,817	33,168	33,133	32,765
Total benefits	\$7,323,949	\$7,035,307	\$6,745,544	\$6,458,710
Type of refund				
Withdrawals	16,927	19,150	23,358	27,356
Death benefits and excess contribution refunds paid to survivors	21,769	18,372	21,172	20,263
2.2 and optional service	10,587	11,082	11,132	13,247
Survivor contributions refunded to retirees	9,498	8,791	8,225	8,839
Early Retirement Option and other	5,413	6,822	9,329	23,220
Total refunds	\$64,194	\$64,217	\$73,216	\$92,925

2017	2016	2015	2014	2013	2012
\$929,130	\$951,809	\$935,451	\$928,746	\$921,423	\$917,661
3,986,364	3,742,469	3,377,665	3,438,383	2,703,312	2,406,364
149,495	148,041	145,591	158,335	157,179	154,895
5,520,453	(44,103)	1,770,550	6,782,031	4,561,768	224,107
10,585,442	4,798,216	6,229,257	11,307,495	8,343,682	3,703,027
6,152,868	5,848,180	5,536,399	5,225,207	4,893,084	4,553,822
285,138	83,027	88,638	95,456	88,398	84,635
22,729	22,968	21,687	21,218	20,257	19,012
6,460,735	5,954,175	5,646,724	5,341,881	5,001,739	4,657,469
45,250,957	46,406,916	45,824,382	39,858,768	36,516,825	37,471,267
4,124,708	(1,155,959)	582,534	5,965,614	3,341,943	(954,442)
\$49,375,665	\$45,250,957	\$46,406,916	\$45,824,382	\$39,858,768	\$36,516,825

2017	2016	2015	2014	2013	2012
\$5,857,968	\$5,575,130	\$5,281,221	\$4,986,156	\$4,670,385	\$4,347,173
263,430	242,578	224,779	208,424	192,390	177,422
31,470	30,472	30,399	30,627	30,309	29,227
\$6,152,868	\$5,848,180	\$5,536,399	\$5,225,207	\$4,893,084	\$4,553,822
30,487	26,797	29,789	33,128	30,194	25,563
19,135	17,094	17,881	20,633	16,764	18,415
14,185	15,074	17,855	19,331	20,053	20,988
9,410	10,458	10,197	10,990	10,780	10,358
211,921	13,604	12,916	11,374	10,607	9,311
\$285,138	\$83,027	\$88,638	\$95,456	\$88,398	\$84,635

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	
2012	9.40%	24.06%	0.58%	0.85%	25.49%
2013	9.40	27.21	0.58	0.84	28.63
2014	9.40	34.44	0.58	0.97	35.99
2015	9.40	32.42	0.58	0.58	33.58
2016	9.40	35.30	0.58	0.76	36.64
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

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
2012	150,996	93.1%	11,221	6.9%	162,217	100.0%
2013	144,297	89.8	16,395	10.2	160,692	100.0
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

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

Retired Members by Years of Service and Years in Retirement as of June 30, 2021*

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	141	182	249	370	513	490	623	779	32	11	2	3,392	60
	Avg. current benefit	\$215	\$883	\$1,576	\$2,519	\$3,508	\$4,694	\$6,195	\$7,032	\$8,083	\$11,497	\$9,958	\$4,528	
	Avg. orig. benefit	\$215	\$883	\$1,572	\$2,510	\$3,503	\$4,684	\$6,186	\$7,032	\$8,083	\$11,497	\$9,958	\$4,522	
1 - 4	Retirees	790	1,422	1,453	1,757	2,462	2,296	2,569	3,236	246	46	9	16,286	64
	Avg. current benefit	\$281	\$808	\$1,556	\$2,635	\$3,611	\$4,853	\$6,170	\$6,990	\$8,132	\$9,955	\$11,620	\$4,257	
	Avg. orig. benefit	\$263	\$758	\$1,455	\$2,476	\$3,427	\$4,600	\$5,876	\$6,794	\$7,586	\$9,339	\$11,048	\$4,066	
5 - 9	Retirees	1,155	2,104	2,106	2,252	3,475	3,279	3,947	5,386	539	82	10	24,335	68
	Avg. current benefit	\$342	\$911	\$1,765	\$2,802	\$3,951	\$5,305	\$6,826	\$7,580	\$8,627	\$10,077	\$15,902	\$4,802	
	Avg. orig. benefit	\$278	\$739	\$1,438	\$2,300	\$3,257	\$4,362	\$5,607	\$6,222	\$7,021	\$8,251	\$12,977	\$3,942	
10 -14	Retirees	916	1,835	1,679	1,620	2,554	2,522	5,236	5,918	384	62	9	22,735	71
	Avg. current benefit	\$375	\$895	\$1,677	\$2,864	\$4,029	\$5,481	\$7,270	\$7,748	\$8,465	\$9,214	\$12,575	\$5,340	
	Avg. orig. benefit	\$265	\$634	\$1,187	\$2,031	\$2,865	\$3,888	\$5,108	\$5,536	\$6,006	\$6,624	\$9,050	\$3,788	
15 - 19	Retirees	781	1,023	1,016	947	2,132	2,498	10,404	3,972	257	39	2	23,071	75
	Avg. current benefit	\$346	\$853	\$1,688	\$2,764	\$3,879	\$5,433	\$7,493	\$8,208	\$8,219	\$9,031	\$10,960	\$6,084	
	Avg. orig. benefit	\$210	\$521	\$1,033	\$1,699	\$2,391	\$3,339	\$4,614	\$5,059	\$5,034	\$5,569	\$6,562	\$3,746	
20 - 24	Retirees	529	513	454	426	1,131	1,267	3,661	2,153	138	10	-	10,282	80
	Avg. current benefit	\$385	\$883	\$1,483	\$2,532	\$3,594	\$5,206	\$7,295	\$7,974	\$7,529	\$8,647	-	\$5,648	
	Avg. orig. benefit	\$204	\$465	\$789	\$1,358	\$1,939	\$2,806	\$4,006	\$4,307	\$4,030	\$4,667	-	\$3,071	
25 -29	Retirees	205	256	272	239	460	838	1,354	2,627	3,854	3	-	10,108	84
	Avg. current benefit	\$335	\$878	\$1,376	\$1,751	\$2,574	\$3,308	\$4,359	\$5,902	\$6,750	\$7,269	-	\$5,192	
	Avg. orig. benefit	\$152	\$398	\$613	\$787	\$1,161	\$1,494	\$1,967	\$2,677	\$3,067	\$3,330	-	\$2,355	
30 - 34	Retirees	57	107	187	185	642	568	719	480	22	1	2	2,970	90
	Avg. current benefit	\$287	\$696	\$1,228	\$1,966	\$2,717	\$3,700	\$5,324	\$6,581	\$7,509	\$7,685	\$4,969	\$3,939	
	Avg. orig. benefit	\$111	\$265	\$479	\$771	\$1,085	\$1,479	\$2,123	\$2,647	\$3,022	\$3,025	\$2,074	\$1,574	
35 - 39	Retirees	19	18	51	59	224	186	208	136	3	-	-	904	94
	Avg. current benefit	\$270	\$469	\$1,079	\$1,683	\$2,244	\$3,191	\$4,322	\$5,939	\$4,973	-	-	\$3,303	
	Avg. orig. benefit	\$91	\$139	\$358	\$574	\$773	\$1,109	\$1,506	\$2,075	\$1,688	-	-	\$1,146	
40 - 44	Retirees	4	2	3	10	49	33	29	23	3	-	-	156	99
	Avg. current benefit	\$235	\$344	\$909	\$1,275	\$1,665	\$2,549	\$3,259	\$3,741	\$3,919	-	-	\$2,405	
	Avg. orig. benefit	\$72	\$12	\$272	\$371	\$503	\$777	\$1,011	\$1,152	\$1,189	-	-	\$734	
45 - 49	Retirees	1	-	1	2	3	2	2	2	-	-	-	13	103
	Avg. current benefit	\$237	-	\$871	\$1,556	\$1,246	\$1,742	\$2,282	\$2,698	-	-	-	\$1,646	
	Avg. orig. benefit	\$64	-	\$229	\$327	\$292	\$440	\$585	\$715	-	-	-	\$408	
Total retirees		4,598	7,462	7,471	7,867	13,645	13,979	28,752	24,712	5,478	254	34	114,252	
Avg. current benefit		\$339	\$871	\$1,638	\$2,683	\$3,705	\$5,035	\$6,960	\$7,450	\$7,214	\$9,646	\$12,605	\$5,155	
Avg. orig. benefit		\$242	\$651	\$1,233	\$2,073	\$2,755	\$3,662	\$4,696	\$5,330	\$4,009	\$7,560	\$10,230	\$3,599	

* Represents monthly benefit

Demographics of Benefit Recipients and Active Members as of June 30, 2021
(excludes inactive members)

Age	Retirees			Disability Benefit Recipients			Survivors		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Under 20	-	-	-	-	-	-	42	11	53
20-24	-	-	-	-	-	-	-	11	11
25-30	-	-	-	-	-	-	-	-	-
30-34	-	-	-	1	5	6	2	5	7
35-39	-	-	-	1	15	16	14	6	20
40-44	-	-	-	3	40	43	6	32	38
45-49	-	-	-	12	61	73	30	47	77
50-54	4	13	17	19	124	143	41	66	107
55-59	1,010	2,986	3,996	31	145	176	76	130	206
60-64	2,871	11,064	13,935	29	93	122	185	296	481
65-69	5,110	19,528	24,638	18	102	120	306	619	925
70-74	8,424	23,178	31,602	21	91	112	677	1,355	2,032
75-79	6,587	13,237	19,824	13	52	65	711	1,659	2,370
80-84	3,691	7,083	10,774	4	20	24	564	1,742	2,306
85-89	2,091	3,766	5,857	5	20	25	496	1,501	1,997
90+	994	2,615	3,609	2	9	11	383	1,317	1,700
Total:	30,782	83,470	114,252	159	777	936	3,533	8,797	12,330

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
2	5	7	44	16	60	73%	27%	100%
1,116	4,788	5,904	1,116	4,799	5,915	19	81	100
3,083	12,165	15,248	3,083	12,165	15,248	20	80	100
4,464	15,260	19,724	4,467	15,270	19,737	23	77	100
5,904	19,055	24,959	5,919	19,076	24,995	24	76	100
6,325	20,569	26,894	6,334	20,641	26,975	23	77	100
5,616	18,016	23,632	5,658	18,124	23,782	24	76	100
5,087	16,549	21,636	5,151	16,752	21,903	24	76	100
2,992	10,168	13,160	4,109	13,429	17,538	23	77	100
1,089	4,169	5,258	4,174	15,622	19,796	21	79	100
556	1,218	1,774	5,990	21,467	27,457	22	78	100
277	372	649	9,399	24,996	34,395	27	73	100
86	64	150	7,397	15,012	22,409	33	67	100
14	11	25	4,273	8,856	13,129	33	67	100
3	2	5	2,595	5,289	7,884	33	67	100
-	2	2	1,379	3,943	5,322	26	74	100
36,614	122,413	159,027	71,088	215,457	286,545	25	75	100

Benefit Recipients by Type as of June 30, 2021

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)	Retirement	
												Other	Total
Under \$500	6,468	5,592	3	-	-	873	1,259	1,447	2,885	-	-	1	5,592
\$500 - \$999	6,885	5,360	26	1	-	1,498	912	1,098	3,311	7	22	10	5,360
\$1,000 - \$1,499	6,280	4,859	61	1	-	1,359	924	1,227	2,590	42	60	16	4,859
\$1,500 - \$1,999	6,371	4,753	229	24	-	1,365	1,126	1,201	2,118	130	159	19	4,753
\$2,000 - \$2,499	6,808	5,051	184	29	1	1,543	1,561	1,130	1,719	388	237	16	5,051
\$2,500 - \$2,999	7,095	5,411	99	30	1	1,554	2,007	948	1,330	744	365	17	5,411
\$3,000 - \$3,499	7,053	5,614	65	22	1	1,351	2,377	717	1,077	924	496	23	5,614
\$3,500 - \$3,999	6,967	5,973	35	16	1	942	2,793	532	837	1,180	603	28	5,973
\$4,000 - \$4,499	7,175	6,485	18	9	-	663	3,202	450	740	1,383	681	29	6,485
\$4,500 - \$4,999	7,713	7,200	16	5	-	492	3,701	452	587	1,673	716	71	7,200
\$5,000 - \$5,499	7,644	7,347	17	3	-	277	3,804	500	481	1,833	664	65	7,347
\$5,500 - \$5,999	7,565	7,387	7	-	-	171	3,770	537	428	1,910	646	96	7,387
\$6,000 - \$6,499	7,228	7,120	9	-	-	99	3,613	532	362	1,935	588	90	7,120
\$6,500 - \$6,999	6,569	6,506	7	-	1	55	3,288	525	262	1,929	410	92	6,506
\$7,000 - \$7,499	5,414	5,374	5	-	-	35	2,761	507	219	1,471	339	77	5,374
\$7,500 - \$7,999	4,415	4,394	2	-	-	19	2,196	478	150	1,194	295	81	4,394
\$8,000- \$8,499	3,956	3,941	2	-	-	13	1,994	422	130	1,058	273	64	3,941
\$8,500 - \$8,999	3,312	3,305	2	-	-	5	1,666	359	101	873	254	52	3,305
\$9,000 - \$9,499	2,851	2,845	2	-	-	4	1,352	317	74	892	162	48	2,845
\$9,500 - \$9,999	2,343	2,336	1	-	-	6	1,104	280	49	739	129	35	2,336
\$10,000 or more	7,406	7,399	1	-	-	6	3,372	1,029	223	2,281	318	176	7,399
Total benefit recipients:	127,518	114,252	791	140	5	12,330	48,782	14,688	19,673	22,586	7,417	1,106	114,252

Summary Statistics, all Benefit Recipients, as of June 30, 2021

	Age Retirement	Disability Benefits (3 types)	Survivor Benefits
Average Monthly Benefit	\$5,155	\$2,630	\$2,465
Average Age	72	61	78
Average Service Credit	27	16	-
Average Years Receiving Benefits	13	11	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
43%	13%	17%	20%	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, 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		
Period July 1, 2012 through June 30, 2013	Average monthly benefit	\$279	\$771	\$1,424	\$2,237	\$3,179	\$4,232	\$5,396	\$6,066	\$7,369	\$4,070	age 61	26 years
	Average final average salary	\$59,313	\$42,291	\$49,881	\$66,108	\$76,095	\$83,918	\$90,517	\$96,245	\$101,109	\$79,689		
	Number of retired members	149	298	353	391	673	664	750	1,115	142	4,535		
Period July 1, 2011 through June 30, 2012	Average monthly benefit	\$271	\$787	\$1,426	\$2,354	\$3,159	\$4,310	\$5,568	\$6,214	\$7,273	\$4,292	age 60	27 years
	Average final average salary	\$63,513	\$49,970	\$53,199	\$68,176	\$76,104	\$85,929	\$92,839	\$98,975	\$103,131	\$83,346		
	Number of retired members	215	358	375	380	620	702	923	1,516	177	5,266		

Medians for Retirees as of June 30, 2021

	Median Age	Median Monthly Benefit	Median Service Credit	Retiree Count
All retirees	72	\$5,058	31	114,252
New retirees	61	\$4,276	27	3,396

Principal Participating Employers

Participating Employer	City	Year ended June 30, 2021			Year ended June 30, 2012		
		Rank	Covered Employees (including subs)	Percentage of Total TRS Membership	Rank	Covered Employees	Percentage of Total TRS Membership
School District U46	Elgin	1	3,104	2.0%	1	2,774	1.7%
Indian Prairie CUSD 204	Naperville	2	2,386	1.5	2	2,612	1.6
Plainfield SD 202	Plainfield	3	2,288	1.4	3	2,389	1.5
Rockford School District 205	Rockford	4	2,211	1.4	4	2,213	1.4
Community USD 300	Algonquin	5	1,831	1.2	6	1,607	1.0
Naperville CUSD 203	Naperville	6	1,766	1.1	5	1,712	1.1
Schaumburg CCSD 54	Schaumburg	7	1,764	1.1	9	1,474	0.9
Oswego CUSD 308	Oswego	8	1,734	1.1	-	-	-
Valley View CUSD 365	Romeoville	9	1,702	1.1	8	1,578	1.0
Springfield SD 186	Springfield	10	1,348	0.8	7	1,594	1.0
Waukegan CUSD 60	Waukegan	-	-	-	10	1,440	0.8
Total, largest 10 employers			20,134	12.7%		19,393	12.0%
All Other (981 employers in 2021*; 1,014 employers in 2012)			138,885	87.3%		142,824	88.0%
Grand total			159,019	100.0%		162,217	100.0%

*Other Employers by Type as of June 30, 2021	Number of Other Employers	Other Covered Employees
Local school districts	841	132,264
Special districts	130	5,865
State agencies	10	756
Total, all employers other than largest 10	981	138,885

Total Employers by Type as of June 30, 2021	Total Number of Employers	Total Covered Employees
Local school districts	851	152,406
Special districts	130	5,865
State agencies	10	756
Total, all employers	991	159,027