Teachers' Retirement System
of the State of Illinois
(A Component Unit of the State of Illinois)

Independent Auditor's Reports and Financial Audit

For the Year Ended June 30, 2022

Performed as Special Assistant Auditors for
the Auditor General, State of Illinois

Teachers' Retirement System
of the State of Illinois
(A Component Unit of the State of Illinois)
Financial Audit
For the Year Ended June 30, 2022

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Financial Audit
For the Year Ended June 30, 2022

System Officials

Executive Director	Stan Rupnik, CFA
Chief Investment Officer	Stan Rupnik, CFA
Chief Financial Officer	Deron Bertolo
General Counsel (11/22/21 – Present)	Emily Peterson
Director of Internal Audit and Risk	Stacy Smith, CPA, CIDA

Governing Board Members

President	Mr. Matthew Hunt
Vice President	Mr. Andrew Hirshman
Board of Trustee	Dr. Carmen I. Ayala
Board of Trustee	Ms. Marsha Byas
Board of Trustee	Ms. Maureen Mena
Board of Trustee	Mr. David Miller
Board of Trustee	Mr. Fred Peronto
Board of Trustee	Mr. Larry Pfeiffer
Board of Trustee	Mr. Doug Strand
Board of Trustee	Ms. Beth Anderson
Board of Trustee	Ms. Maria Jazo-Harris
Board of Trustee	Mr. Joseph Blomquist
Board of Trustee	Mr. Kevin Blackburn
Board of Trustee (06/22 – Present)	Mr. Michael Goetz

Office Locations

<u>Springfield Office</u>
2815 West Washington Street
Springfield, Illinois 62794

<u>Lisle Office</u>
4200 Commerce Court, Suite 100
Lisle, Illinois 60532-3611

Teachers' Retirement System
of the State of Illinois
(A Component Unit of the State of Illinois)
Financial Statement Report Summary
For the Year Ended June 30, 2022

Summary

The audit of the accompanying financial statements of the Teachers' Retirement System of the State of Illinois ("System") was performed by **FORVIS, LLP.**

Based on their audit, the auditors expressed an unmodified opinion on the System's basic financial statements.

Exit Conference

The System waived an exit conference in a correspondence from Deron Bertolo, Chief Financial Officer, on December 8, 2022.

FORV/S

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Independent Auditor's Report

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

Report on the Audit of the Financial Statements

Opinion

As Special Assistant Auditors for the Auditor General, we have audited the Statement of Fiduciary Net Position of the Teachers' Retirement System of the State of Illinois (System), a component unit of the State of Illinois, as of June 30, 2022, and the related Statement of Changes in Fiduciary Net Position for the year then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2022, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

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

Emphasis of Matter

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

Responsibilities of Management for the Financial Statements

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

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

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

Auditor's Responsibilities for the Audit of the Financial Statements

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

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- exercise professional judgement and maintain professional skepticism throughout the audit.
- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, no such opinion is expressed.
- evaluate the appropriateness of accounting polices used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- conclude whether, in our judgement, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

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

Required Supplementary Information

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

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The other supplementary information, as listed in the table of contents, is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The other supplementary information, 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, as listed in the table of contents, is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Information

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

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

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 13, 2022 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

SIGNED ORIGINAL ON FILE

Decatur, Illinois
December 13, 2022

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, 2022. Please read it in conjunction with the Financial Statements and related notes that follow this discussion.

FINANCIAL HIGHLIGHTS

- The fiduciary net position of TRS at June 30, 2022 was $62.8 billion.
- During FY22, the fiduciary net position of TRS decreased $1.4 billion.
- Defined benefit contributions from members, employers and the State of Illinois were $7.1 billion, an increase of $798.5 million or 12.8 percent for FY22.
- Deferred compensation contributions of $722.8 thousand from employers and members started in March 2022.
- Total net investment loss was ($743.0) million, compared to $13.0 billion gain in FY21, a decrease of $13.8 billion.
- Defined benefits and refunds paid to members and annuitants were $7.7 billion, an increase of $281.4 million or 3.8 percent.
- The actuarial accrued liability was $143.5 billion at June 30, 2022.
- The unfunded actuarial accrued liability was $80.6 billion at June 30, 2022. The funded ratio was 43.8 percent at June 30, 2022. 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 $146.7 billion at June 30, 2022.
- The net pension liability (NPL) was $83.8 billion at June 30, 2022. The plan fiduciary net position, as a percentage of total pension liability, was 42.8 percent.

The Financial Statements consist of:

Statement of Fiduciary Net Position. This statement reports the fiduciary net position which represents the difference between the financial statement elements comprised of assets and liabilities. It is the balance sheet for the pension system and reflects the June 30, 2022 net position (assets less liabilities) available for the payment of benefits and other fiduciary activities of the System.

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

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

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

Plan Changes. The financial statements and notes presented in the TRS FY22 ACFR will include two separately reported plans, as opposed to one in prior years. The plans to be included are the TRS Defined Benefit Pension Plan as a fiduciary component unit of TRS and the Deferred Compensation Plan, not a component unit of TRS but a custodial fund reporting fiduciary activities.

The following are condensed comparative financial statements.

CONDENSED COMPARATIVE STATEMENTS OF FIDUCIARY NET POSITION AS OF JUNE 30

	2022	Percentage Change	2021
Cash	$19,555,871	20.2%	$16,263,026
Receivables and prepaid expenses	5,290,933,248	18.4	4,468,795,311
Investments	62,528,309,625	(2.1)	63,851,832,280
Invested securities lending collateral	2,183,903,100	(10.0)	2,425,695,348
Capital assets	8,238,075	(2.6)	8,453,925
Total assets	**70,030,939,919**	**(1.0)**	**70,771,039,890**
Total liabilities	**7,199,105,736**	**9.8**	**6,558,534,870**
Total fiduciary net position	**$62,831,834,183**	**(2.2%)**	**$64,212,505,020**

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

	2022	Percentage Change	2021
Contributions	$7,061,038,548	12.8%	$6,261,774,388
Net investment income (loss)	(743,042,373)	(105.7)	13,046,153,685
Participant fee income	3,029	100.0	-
Total additions	6,317,999,204	(67.3)	19,307,928,073
Benefits and refunds	7,669,576,246	3.8	7,388,142,712
Administrative expenses	28,372,371	19.4	23,758,112
Contributions sent to third-party administrator	721,424	100.0	-
Total deductions	7,698,670,041	3.9	7,411,900,824
Net increase/decrease in fiduciary net position	**(1,380,670,837)**	**(111.6)**	**11,896,027,249**
Total fiduciary net position - beginning of year	**64,212,505,020**	**22.7**	**52,316,477,771**
Total fiduciary net position - end of year	**$62,831,834,183**	**(2.2%)**	**$64,212,505,020**

FINANCIAL ANALYSIS

TRS was created to provide retirement, survivor and disability benefits to qualified members. Increases or decreases in the plan's fiduciary net position serve as useful indicators of TRS's financial position. The fiduciary net position was $62.8 billion at June 30, 2022.

CONTRIBUTIONS

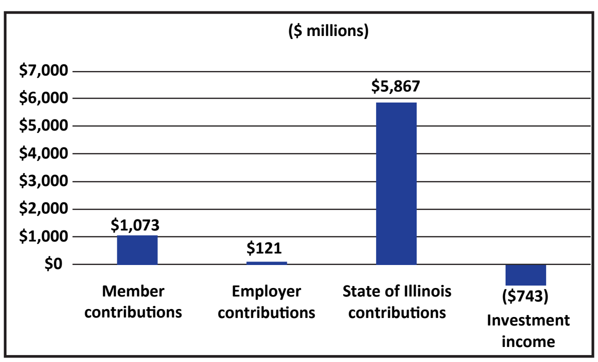
Defined benefit contributions increased $798.5 million during FY22. Contributions from the State of Illinois increased $726.1 million, member contributions increased $49.1 million and employer contributions from school districts increased $23.3 million.

The new TRS Deferred Compensation Plan, a 457(b) plan, started accepting contributions in March 2022. Deferred compensation contributions totaled $0.7 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, 2022



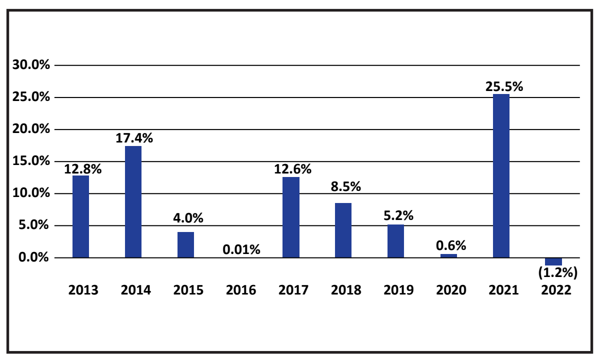
INVESTMENTS

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 declined (1.2) percent, net of fees, for the fiscal year ended June 30, 2022. Increased market volatility, lowered economic growth forecasts, rising interest rates and geopolitics influenced markets with few options for capital preservation. In a volatile year for worldwide financial markets, the investment strategy employed by TRS protected assets and limited the System's portfolio loss. While a negative investment return broke a string of 12 consecutive years of positive investment returns, the FY22 rate of return did no lasting harm to the System's financial position.

During the fiscal year, total TRS investment assets decreased approximately $1.3 billion, incurring a net investment loss of $743 million. The significant decline in investment income was due to the year over year decrease in the annual rate of return.

Annual Rate of Return (net of investment expenses)

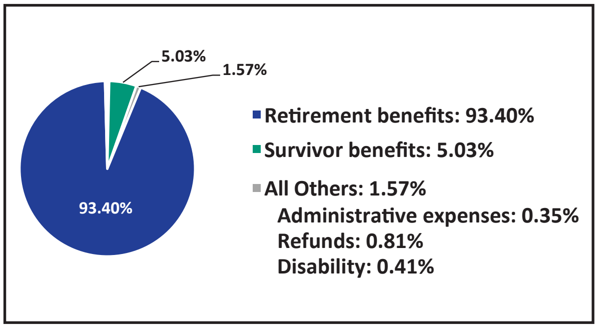


DEFINED BENEFITS AND REFUNDS

Retirement, survivor and disability benefit payments increased $283.0 million during FY22. Benefit payments increased to $7.6 billion with 129,466 recipients in FY22. 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 114,252 as of June 30, 2021 to 115,778 as of June 30, 2022.

Refunds of contributions decreased $1.6 million in FY22. The decrease during FY22 is the result of fewer member and retirement refunds.

Defined Benefit Deductions by Type for the Year Ended June 30, 2022



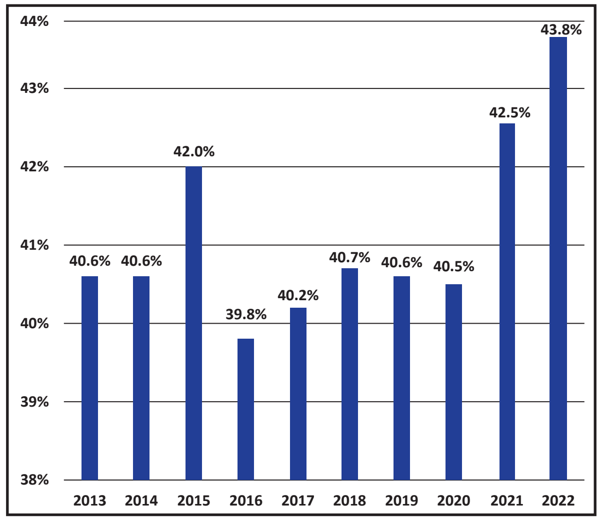
ACTUARIAL

For statutory funding and financial reporting, an actuarial valuation is performed annually and measures the total liability for all benefits earned to date. The actuarial accrued liability is a present value estimate of all benefits earned to date but not yet paid. The actuarial accrued liability based on statutory funding requirements increased $4.6 billion in FY22 to $143.5 billion at June 30, 2022. The actuarial unfunded liability is the present value of accrued benefits payable that are not covered by the actuarial value of assets as of the valuation date. The actuarial unfunded liability based on the actuarial value of assets increased $679 million during FY22 to $80.6 billion at June 30, 2022. The funded ratio reflects the percentage of the actuarial accrued liability covered by the actuarial value of assets. The funded ratio increased from 42.5 percent on June 30, 2021 to 43.8 percent on June 30, 2022.

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 $146.7 billion at June 30, 2022, while the NPL is $83.8 billion at June 30, 2022.

LEGISLATIVE

In addition to new programs and initiatives, TRS was affected by the enactment of several new laws during FY22:

Deferred Compensation Plan Auto-Enrollment — Public Act 102-0540

All new TRS members must be enrolled in the Supplemental Savings Plan (SSP). The act was signed on August 20, 2021 and TRS set a target date of January 1, 2023 to begin auto enrollment. New TRS members who begin their service in 2023 will have 3 percent of their compensation deferred into a personalized SSP account. All auto-enrolled members have the option of declining their participation in the SSP before the first payroll deferral is made. The TRS Board has the authority to increase the minimum compensation deferral.

COVID-19 Paid Administrative Leave — Public Act 102-697

For TRS members who used sick time during the 2020-21 school year to deal with the coronavirus, the new law requires school districts to replace any "sick time" used for that purpose with "COVID-19 administrative leave time." The sick time would be added back to a member's accumulated sick leave "bank."

Accelerated Benefit Program Extension — Public Act 102-718

Authorizes state government to issue bonds up to $1 billion to fund payouts for the two public pension "accelerated benefit" programs. This bond authorization is in addition to the initial $1 billion signed into law at the inception of the buyout programs. The public act authorizing the additional $1 billion also extends the "buyout" program sunset from 2024 to 2026.

Post Retirement Work Limits — Public Act 102-709

Expands the number of days during the 2021-2022 school year that retired TRS members could have taught full-time without that service negatively affecting their pensions. The former limits of 120 days or 600 hours were increased to 140 days or 700 hours.

The following new laws are designed to help ease the current classroom teacher shortage in Illinois by simplifying the path to a teacher's license or a position in the classroom. These laws affect TRS because changes to licensure requirements may boost the number of active TRS members.

Teaching License Reinstatement — Public Act 102-0710

Reduces the fee inactive educators must pay to reinstate a lapsed teaching license from the State Board of Education to $50. The old fee was $500.

Substitute Teaching Licenses — Public Act 102-0711

Will allow currently-enrolled college education majors to obtain a substitute teaching license. To be eligible, students must have completed 90 or more credit hours. Under current law, candidates for substitute teaching licenses must hold a bachelor's degree or higher. The new law is effective on January 1, 2023.

FINANCIAL STATEMENTS
TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS
STATEMENT OF FIDUCIARY NET POSITION
JUNE 30, 2022

	Defined Benefit Pension Plan	Deferred Compensation Custodial Fund	Total
Assets			
Cash	$19,555,845	$26	$19,555,871
Receivables and prepaid expenses:			
Member contributions	111,156,404	23,415	111,179,819
Participant DC fees	-	3,029	3,029
Employer contributions	14,122,831	91	14,122,922
State of Illinois	379,510	-	379,510
Investment income	208,865,252	-	208,865,252
Other receivables	1,796,573	-	1,796,573
Pending investment sales	4,954,586,143	-	4,954,586,143
Prepaid expenses	-	-	-
Total receivables and prepaid expenses	5,290,906,713	26,535	5,290,933,248
Investments, at fair value:			
Fixed income	8,729,837,455	-	8,729,837,455
Public equities	20,060,816,480	-	20,060,816,480
Alternative investments	32,685,826,413	-	32,685,826,413
Derivatives	(4,884,136)	-	(4,884,136)
Short-term investments	959,097,903	-	959,097,903
Foreign currency	97,615,510	-	97,615,510
Total investments	62,528,309,625	-	62,528,309,625
Invested securities lending collateral:			
Securities lending collateral	2,162,401,100	-	2,162,401,100
Securities lending collateral with the State Treasurer	21,502,000	-	21,502,000
Total invested securities lending collateral	2,183,903,100	-	2,183,903,100
Capital assets, net of accumulated depreciation	8,238,075	-	8,238,075
Total assets	70,030,913,358	26,561	70,030,939,919
Liabilities			
Administrative expenses payable	3,532,274	1,796,573	5,328,847
Benefits and refunds payable	7,896,219	-	7,896,219
Investment expenses payable	95,534,960	-	95,534,960
Pending investment purchases	4,906,430,051	-	4,906,430,051
Securities lending collateral	2,183,893,515	-	2,183,893,515
Third-party administrator payable	-	22,144	22,144
Total liabilities	7,197,287,019	1,818,717	7,199,105,736
Total fiduciary net position (deficit) restricted for pensions and other benefits	$62,833,626,339	($1,792,156)	$62,831,834,183

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, 2022

	Defined Benefit Pension Plan	Deferred Compensation Custodial Fund	Total
Additions			
Contributions:			
Members	$1,072,639,330	$722,477	$1,073,361,807
State of Illinois	5,866,799,836	-	5,866,799,836
Employers			
Federal funds	44,470,352	-	44,470,352
2.2 benefit formula	67,679,341	-	67,679,341
Excess employer costs	8,726,877	-	8,726,877
Employer SSP	-	335	335
Total contributions	7,060,315,736	722,812	7,061,038,548
Investment income:			
Net decrease in fair value of investments	(1,822,405,587)	-	(1,822,405,587)
Alternatives income	1,100,265,053	-	1,100,265,053
Interest and dividends	913,528,907	-	913,528,907
Other investment income	4,644,932	-	4,644,932
Securities lending income	8,460,584	-	8,460,584
Less investment expenses:			
Alternatives expense	476,452,397	-	476,452,397
Direct investment expense	470,576,250	-	470,576,250
Securities lending management fees	507,615	-	507,615
Net investment decrease	(743,042,373)	-	(743,042,373)
Other income			
Participant fees	-	3,029	3,029
Total other income	-	3,029	3,029
Total additions	6,317,273,363	725,841	6,317,999,204
Deductions			
Retirement benefits	7,188,187,839	-	7,188,187,839
Survivor benefits	386,984,571	-	386,984,571
Disability benefits	31,847,092	-	31,847,092
Refunds	62,556,744	-	62,556,744
Contributions sent to third-party administrator	-	721,424	721,424
Administrative expenses	26,575,798	1,796,573	28,372,371
Total deductions	7,696,152,044	2,517,997	7,698,670,041
Net decrease in net position	(1,378,878,681)	(1,792,156)	(1,380,670,837)
Total fiduciary net position			
Beginning of year	64,212,505,020	-	64,212,505,020
End of year (deficit)	$62,833,626,339	($1,792,156)	$62,831,834,183

See accompanying Notes to Financial Statements.

NOTES TO FINANCIAL STATEMENTS

A. PLAN DESCRIPTIONS

1. Reporting Entity

a. Defined Benefit Plan

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

b. Deferred Compensation Plan

TRS also administers a deferred compensation plan. Pursuant to Section 16-204 of the Illinois Pension Code, the Board of Trustees of TRS established the TRS Supplemental Savings Plan (SSP). The SSP is an eligible deferred compensation plan (DCP) under Section 457(b) of the Internal Revenue Code. Membership is voluntary for eligible TRS members. TRS uses a third-party administrator and acts as a pass-through entity for contributions received, thus assets are not controlled by TRS. The assets of the SSP are maintained under a trust for the exclusive benefit of participants and beneficiaries. Participating members, not TRS, direct the third-party administrator regarding use, exchange or employment of assets within their own accounts. The SSP is not a component unit of TRS but a custodial fund reporting fiduciary activities.

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

TRS uses criteria established by the Governmental Accounting Standards Board (GASB) to determine whether other entities should be included within its financial reporting entity.

2. Employers

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

Employers are responsible for employer contributions for:

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

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

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

Number of Employers (as of June 30)

	2022
Local school districts	851
Special districts	132
State agencies	9
Total	**992**

3. Members

TRS Membership (as of June 30)

	2022
Retirees and beneficiaries	129,466
Inactive members	144,801
Active members	165,566
Total	**439,833**

4. Board of Trustees

TRS is governed by a 15-member Board of Trustees. Trustees include the state superintendent of education, seven trustees appointed by the governor, five trustees elected by contributing TRS members, and two trustees elected by TRS annuitants. The president of the Board of Trustees, by law, is appointed by the governor from among the sitting trustees. The Board of Trustees elects its vice president from among its members. The Board of Trustees appoints an executive director who also serves as the secretary of the Board of Trustees. The executive director is responsible for daily operations at TRS.

5. Benefit Provisions

a. Defined Benefit Plan

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

Public Act 96-0889 (Act), which was signed into law in the spring of 2010, added a new section to the Pension Code that applies different benefits to anyone who first contributes to TRS on or after Jan. 1, 2011 and does not have any previous service credit with one of the reciprocal retirement systems in Illinois. Members who first participate on or after that date are members of Tier 2.

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

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

Tier 1 Benefits

A member qualifies for an age retirement annuity after meeting one of the following requirements: age 62 with five years of service credit; age 60 with 10 years; or age 55 with 20 years. If a member retires between the ages of 55 and 60 with fewer than 35 years of service, the annuity will be reduced at the rate of 0.50 percent for each month the member is under age 60. A member with fewer than five years of creditable service and service on or after July 1, 1947, is entitled to a single-sum benefit payable at age 65.

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

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

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

All Tier 1 retirees receive an annual 3 percent increase in the current retirement benefit beginning Jan. 1

following the attainment of age 61 or on Jan. 1 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 member's highest average salary earned during eight consecutive years out of the last 10 years of service with one exception. Public Act 102-0016 removes the consecutive years requirement for members who are retiring on or after June 1, 2021 and the 2020-21 school year is used in the member's final average salary. The final average salary will be based on the eight highest years within the last 10 years of creditable service.

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

Disability and refund provisions for Tier 2 are identical to those that apply to Tier 1. Death benefits are payable under a formula that is different from Tier 1.

Effective July 1, 2017, Tier 2 members contribute 9.0 percent of their creditable earnings to TRS and an additional contribution to a retiree health insurance program that is not administered by TRS.

Tier 3 Benefits

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

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

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

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

b. Deferred Compensation Plan

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

6. Actuarial Measurements

The Schedule of Changes in the Net Pension Liability, Schedule of the Net Pension Liability and the Schedule of Contributions from Employers and Other Contributing Entities may be found in the Required Supplementary

Information. Other schedules pertaining to the System's funded status are in the Actuarial section.

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

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

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

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

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

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

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

Pension Liability

The actuarial assumptions included in the June 30, 2022 actuarial valuation were used to calculate the June 30, 2022 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, 2022, the assumption for future investment returns was 7.0 percent, a rate unchanged from June 30, 2021. However, the components which make up the investment return assumption, real rate of return and inflation, were changed from 4.75 percent and 2.25 percent to 4.50 percent and 2.50 percent, respectively. The investment return assumption for the 2022 actuarial valuation is based on an asset allocation study conducted by the TRS investment consultant and additional analysis conducted by the actuary in 2022.

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

Expected Arithmetic Real Returns Over 20 Years

Asset Class	Return	Allocation
U.S. equities large cap	5.7%	16.3%
U.S. equities small/mid cap	6.8	1.9
International equities developed	6.6	14.1
Emerging market equities	8.6	4.7
U.S. bonds core	1.2	6.9
International debt developed	0.3	1.2
International debt emerging	3.8	3.7
Cash equivalents	(0.3)	1.2
TIPS	0.3	0.5
Real estate	5.4	16.0
Hedge funds (absolute return)	3.5	4.0
Infrastructure	5.9	2.0
Private equity	10.0	15.0
Private debt	5.3	12.5

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, 2022, as it did for the prior year.

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

Estimated contributions from employers and the State of Illinois, of which the majority of the contributions (approximately 98 percent) are provided by the State of Illinois, are projected to be $5.9 billion in FY23 and grow to $10.3 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, 2022 measurement date based on census data as of June 30, 2021. Assets, included in plan fiduciary net position, are measured at fair value.

Net Pension Liability

	June 30, 2022
Total pension liability	$146,673,960,220
Plan fiduciary net position	62,833,626,339
Net pension liability	$83,840,333,881
Plan fiduciary net position as a percentage of the total pension liability	42.8%

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	$102,537,471,806	$83,840,333,881	$68,336,030,930

Most of the actuarial assumptions used in the June 30, 2022 actuarial valuation are based on the actuarial experience analysis dated September 2021 that covered the period July 1, 2017 through June 30, 2020 and the economic experience review presented at the Aug. 11, 2022 Board meeting.

Actuarial Assumptions Used for Financial Reporting Disclosure

Actuarial Valuation Date	June 30, 2022
Census Date:	June 30, 2021 with total pension liability projected to June 30, 2022
Actuarial Cost Method:	
For financial reporting purposes	Entry age normal
Asset Valuation Method:	
For financial reporting purposes	Fair value as of valuation date
Actuarial Assumptions:	
Investment rate of return	7.0% adopted effective June 30, 2022
Real rate of investment return	4.50%
Projected salary increases	8.75% with 1 year of service to 3.75% with 20 or more years of service. Includes inflation and real wage growth (productivity) assumptions.
Group size growth rate	0%
Assumed inflation rate	2.50%
Post-retirement increase	Tier 1: 3%, compounded; Tier 2: 1.25%, not compounded
Mortality table:	PubT - 2010 adjusted for TRS experience with future mortality improvements on a fully generational basis using projection table MP-2020.

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1. Basis of Accounting

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

2. Use of Estimates

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

3. Risks and Uncertainties

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

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

The newly established Deferred Compensation Plan started accepting contributions in March 2022. Under GASB Statement No. 84, "Fiduciary Activities," the Deferred Compensation Plan will be reported not as a component unit of TRS but as a custodial fund reporting fiduciary activities. Aspects of the plan that have been assigned to a third-party administrator are not included in TRS financial reporting per governmental accounting standards.

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 implemented the provisions of GASB 87 for the year ended June 30, 2022. This had an immaterial impact.

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, 2022 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
	238,177	-	-	238,177
Capital Assets, depreciated:				
Office building	9,307,065	340,988	-	9,648,053
Site improvements	1,127,708	-	-	1,127,708
Equipment and furniture	3,237,643	118,005	38,921	3,316,727
Purchased Software	295,045	-	-	295,045
Internally Generated Software (IGS)	10,107,826	1,569,967	-	11,677,793
	24,075,287	2,028,960	38,921	26,065,326
Less accumulated depreciation:				
Office building	7,968,257	215,004	-	8,183,261
Site improvements	1,031,672	69,261	-	1,100,933
Equipment and furniture	2,912,464	143,093	38,815	3,016,742
Purchased Software	295,045	-	-	295,045
Internally Generated Software (IGS)	3,652,101	1,817,346	-	5,469,447
	15,859,539	2,244,704	38,815	18,065,428
Total Net Capital Assets	**$8,453,925**	**($215,744)**	**$106**	**$8,238,075**

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, 2022, the System had a liability of $2,167,568 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, 2022 was as follows:

	Beginning Balance	Additions	Reductions	Ending Balance
Compensated absences payable	$2,272,713	$1,249,531	$1,354,676	$2,167,568

The estimated amount due within one year is: $29,491

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 $19,555,845 at June 30, 2022. Of the bank balance, $19,556,897 was on deposit with the State Treasurer at June 30, 2022. 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 $886,920,530 at June 30, 2022. The STIF fund has an average credit quality rating of A1P1 and a weighted average maturity of 11.0 days.

For purposes of this disclosure, foreign currency held by investment managers is considered a deposit. However, for financial statement presentation and investment purposes, TRS considers foreign currency an investment asset. Uncollateralized foreign currency subject to custodial credit risk was $97,615,510 at June 30, 2022.

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, 2022.

Long-term Asset Allocation Policy Mix	
Equity	52%
Real assets	18
Diversifying strategies	4
Income	26
Total	**100%**

2. Investment Risk

Custodial Credit Risk

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

Concentration of Credit Risk

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

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to TRS. Credit risk exposure is dictated by each investment manager's agreement. Each portfolio is managed in accordance with investment guidelines that are specific as to permissible credit quality ranges, exposure levels within individual security quality rating tiers and/or the average credit quality of the overall portfolio. Most guidelines allow managers to hold bonds with a minimal quality S&P rating of B- or Moody's equivalent rating of B3. However, in circumstances where position downgrades occur, investment managers have been given permission to hold securities below this rating due to circumstances such as a higher peer group rating from another nationally-recognized statistical rating organization, the investment manager's internal ratings or other mitigating factors.

As of June 30, 2022, 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	$143,285,832	$7,947,467	$502,592	$1,705,298	$93,593,103	$ -	$145,273,581	$392,307,873
Aa1	1,987,384	-	1,027,059	-	-	-	827,283,024	830,297,467
Aa2	1,628,912	7,451,623	41,567,242	-	-	-	-	50,647,777
Aa3	8,235,823	10,907,765	80,331,086	-	-	1,946,445	8,612,931	110,034,050
A1	183,842,581	1,012,689	188,287,157	-	-	-	-	373,142,427
A2	412,516,841	1,175,761	65,163,397	-	-	-	1,424,659,035	1,903,515,034
A3	242,055,591	3,302,644	78,035,804	-	-	-	305,842,890	629,236,929
Baa1	102,157,328	4,266,300	222,251,261	-	-	-	67,286,079	395,960,968
Baa2	251,521,654	8,162,302	488,352,936	-	-	-	-	748,036,892
Baa3	465,997,935	3,142,244	235,083,665	-	-	-	-	704,223,844
Ba1	107,082,566	-	95,989,813	-	-	1,683,304	-	204,755,683
Ba2	107,001,387	4,856,284	340,755,421	-	-	-	-	452,613,092
Ba3	123,736,491	958,180	239,320,627	-	-	-	1,241,923	365,257,221
B1	78,921,653	-	113,336,287	-	-	-	-	192,257,940
B2	27,205,333	-	143,392,228	-	-	-	-	170,597,561
B3	47,476,996	-	77,035,692	-	-	-	-	124,512,688
Caa1	18,110,164	-	69,101,177	-	-	-	-	87,211,341
Caa2	-	-	23,741,682	-	-	-	-	23,741,682
Caa3	1,803,644	-	8,896,607	-	-	-	-	10,700,251
Ca	243,124	1,370,615	5,923,655	-	-	-	-	7,537,394
C	-	51,144	13,710,687	-	-	-	-	13,761,831
Not rated	27,569,359	11,013,107	36,401,076	-	-	25,345	-	75,008,887
Withdrawn	2,964,452	44,084	8,835,737	-	-	-	-	11,844,273
Total credit risk, bonds, corporate notes and government obligations	**2,355,345,050**	**65,662,209**	**2,577,042,888**	**1,705,298**	**93,593,103**	**3,655,094**	**2,780,199,463**	**7,877,203,105**
U.S. Treasuries								852,634,350
Total bonds, corporate notes & government obligations	**$2,355,345,050**	**$65,662,209**	**$2,577,042,888**	**$1,705,298**	**$93,593,103**	**$3,655,094**	**$2,780,199,463**	**$8,729,837,455**

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, 2022 is as follows:

		Maturity in Years				
Type	**2022 Fair Value**	**Less Than 1 year**	**1 to 5 years**	**5 to 10 years**	**10 to 20 years**	**More Than 20 years**
U.S. treasuries/agencies	$854,339,648	$160,515,110	$624,548,331	$30,128,344	$24,791,281	$14,356,582
U.S. government-backed mortgages	93,593,103	69,793	474,838	-	53,011,371	40,037,101
Municipals	3,655,094	-	-	573,935	1,134,714	1,946,445
Asset-backed securities	65,662,209	-	21,143,070	20,023,690	7,898,960	16,596,489
Commingled funds (U.S. & international)*	2,780,199,463	786,208,756	353,513,925	1,286,363,305	103,662,298	250,451,179
Corporate debt securities	2,355,345,050	169,869,746	1,347,333,189	524,778,817	128,861,009	184,502,289
Foreign debt/corporate obligations	2,577,042,888	60,868,753	856,888,722	961,537,746	406,463,847	291,283,820
Total bonds, corporate notes and government obligations	**8,729,837,455**	**1,177,532,158**	**3,203,902,075**	**2,823,405,837**	**725,823,480**	**799,173,905**
Derivatives	(4,884,136)	(2,680,400)	2,918,564	(5,122,300)	-	-
Total bonds, corporate notes, government obligations, securities lending collateral and derivatives	**$8,724,953,319**	**$1,174,851,758**	**$3,206,820,639**	**$2,818,283,537**	**$725,823,480**	**$799,173,905**

** 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, 2022 is as follows:

Currency	Foreign Currency	Equities	Fixed Income	Derivatives	Total
Argentine Peso	$3	$ -	$ -	$ -	$3
Australian Dollar	3,456,366	373,779,582	-	-	377,235,948
Brazilian Real	5,879,613	142,373,150	109,175,091	(1,910,990)	255,516,864
British Pound	8,727,229	895,786,623	77,118	-	904,590,970
Canadian Dollar	6,689,080	569,480,652	-	-	576,169,732
Chilean Peso	603,153	8,638,912	14,297,173	(230,637)	23,308,601
Chinese Yuan	18,407,004	-	-	-	18,407,004
Chinese Yuan Renminbi	(17,750,624)	250,044,265	37,475,835	-	269,769,476
Colombia Peso	276,184	589,481	37,470,338	(492,079)	37,843,924
Czech Koruna	758,053	6,861,277	22,760,487	(2,833,731)	27,546,086
Danish Krone	1,685,067	172,379,472	-	-	174,064,539
Dominican Peso	-	-	284,867	-	284,867
Egyptian Pound	(211,773)	5,538,535	3,043,903	-	8,370,665
Emirati Dirham	51,443	30,016,163	-	-	30,067,606
Euro	26,383,550	1,742,829,243	35,074,415	-	1,804,287,208
Hong Kong Dollar	4,501,317	562,878,920	-	-	567,380,237
Hungarian Forint	618,574	11,839,923	24,594,121	450,164	37,502,782
Indian Rupee	298,513	281,992,149	239	-	282,290,901
Indonesian Rupiah	1,847,299	93,522,083	74,880,144	-	170,249,526
Israeli Shekel	322,784	44,296,842	-	30,857	44,650,483
Japanese Yen	15,546,379	1,198,961,789	-	-	1,214,508,168
Kuwati Dinar	2,441	1,427,479	-	-	1,429,920
Malaysian Ringgit	829,529	37,680,499	45,241,763	(270,042)	83,481,749
Mexican Peso	3,352,107	66,080,307	93,224,670	(749,762)	161,907,322
New Taiwan Dollar	805,584	325,066,176	-	(1,213,519)	324,658,241
New Zealand Dollar	90,480	4,960,967	-	-	5,051,447
Nigerian Naira	985,704	-	-	-	985,704
Norwegian Krone	985,785	60,862,912	-	-	61,848,697
Pakistani Rupee	46,490	461,452	-	-	507,942
Peruvian Sol	13,458	382,037	29,892,857	-	30,288,352
Philippine Peso	190,409	10,396,137	-	-	10,586,546
Polish Zloty	2,328,148	45,152,886	36,060,789	3,972,681	87,514,504
Qatari Riyal	586,573	21,290,497	-	-	21,877,070
Romanian Leu	206,176	-	10,399,298	-	10,605,474
Russian Ruble	2,086,056	-	1,427,455	-	3,513,511
Singapore Dollar	872,331	78,040,361	-	277,002	79,189,694
South African Rand	146,233	75,352,961	90,911,669	(700,573)	165,710,290
South Korean Won	20,484	355,742,706	-	(1,487,157)	354,276,033
Swedish Krona	2,657,354	193,559,314	-	-	196,216,668
Swiss Franc	2,153,787	525,557,333	-	-	527,711,120
Thailand Baht	612,129	105,681,612	47,720,826	(238,897)	153,775,670
Turkish Lira	161,910	15,095,840	502,592	-	15,760,342
Ukraine Hryvnia	197,222	-	-	-	197,222
Uruguayan Peso	195,906	-	5,206,038	-	5,401,944
Vietnam Dong	-	2,547,819	-	-	2,547,819
Uzbekistani Som	-	-	626,567	-	626,567
Zambian Kwacha	-	-	5,132,065	-	5,132,065
Total subject to foreign currency risk	**97,615,510**	**8,317,148,356**	**725,480,320**	**(5,396,683)**	**9,134,847,503**
Investments in international securities payable in U.S. dollars	-	800,266,892	1,851,562,568	336,511	2,652,165,971
Total international investment securities (including domestic securities payable in foreign currency)	**97,615,510**	**9,117,415,248**	**2,577,042,888**	**(5,060,172)**	**11,787,013,474**
Domestic investments (excluding securities payable in foreign currency)	-	10,943,401,232	6,152,794,567	176,036	17,096,371,835
Total fair value	**$97,615,510**	**$20,060,816,480**	**$8,729,837,455**	**($4,884,136)**	**$28,883,385,309**

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 $444,700,980, $26,579,564 and $655,114,550 at June 30, 2022, 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, 2022, Citibank, N.A. served as the third-party securities lending agent for the fixed income, domestic equity, international equity and global equity lending programs. In this capacity, TRS reduces credit risk by allowing Citibank to lend securities to a diverse group of dealers on behalf of TRS. At fiscal-year end, TRS has no credit risk exposure to borrowers because the amount TRS owes the borrowers exceeds the amount the borrowers owe TRS. The weighted average term of the loans is seven 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, but as of June 30, 2022, 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 53 days at June 30, 2022. 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, 2022, TRS had outstanding loaned investment securities with a fair value of $2,160,536,130 against which it had received cash and non-cash collateral with a fair value of $2,218,363,489. The securities on loan remain on TRS's Statement of Fiduciary Net Position in their respective investment categories. As of June 30, 2022, TRS cash collateral received and reported as securities lending obligation on the Statement of Fiduciary Net Position totaled $2,162,391,515; whereas, the fair value of reinvested cash collateral reported as securities lending collateral was $2,162,401,100. 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 reinvested 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 FY22, the System earned net income of $7,952,969 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, 2022, 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, 2022, the TRS investment portfolio held the following derivatives.

Investment Derivatives	Fair Value at June 30, 2022	Change in Fair Value	Shares/Par	Notional
Credit default swaps buying protection	$2,382,527	$10,238,601	256,212,146	$253,690,048
Credit default swaps selling protection	(1,271,446)	(457,089)	15,310,000	14,042,836
Index and variance swaps	(3,051,947)	(9,959,653)	(31,798,199)	23,900,824
Pay fixed interest rate/inflation swaps	10,972,399	30,231,918	272,472,758	273,910,053
Receive fixed interest rate/inflation swaps	(14,287,216)	(28,519,549)	439,651,639	426,294,082
Equity futures long	-	(13,156,390)	714,314	75,417,466
Equity futures short	-	3,249,463	(45,160)	(16,978,995)
Fixed income futures long	-	(21,416,630)	182,904,545	221,315,965
Fixed income futures short	-	15,596,150	(39,083,823)	(51,392,352)
Currency forward options purchased	1,508,791	3,129,478	215,047,263	145,946,469
Currency forward options written	(1,206,724)	(2,532,539)	(204,076,889)	50,907,121
Options on futures purchased	-	(633,571)	-	-
Swaptions purchased	91,188	(1,351,594)	86,500,000	4,411,500
Swaptions written	(21,708)	753,834	(86,500,000)	821,750
FX forwards	1,328,389	14,224,620	-	-
Rights	196	378,996	2,242	2,242
Warrants	14,030,851	1,128,924	1,822,943	1,822,943
Grand total	**$10,475,300**	**$904,969**		**$1,424,111,952**

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, 2022, TRS had currency forward purchase or sale contracts for 33 different currencies with various settlement dates.

Fair Value: As of June 30, 2022, TRS's open currency forward contracts had a net fair value (unrealized gain) of $1,328,389.

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, 2022, TRS had outstanding futures contracts with a notional value, or exposure, of $228,362,084. Notional values do not represent the actual values in the Statement of Fiduciary Net Position. The contracts have various expiration dates through September 2022.

Fair Value: Gains and losses on futures contracts are settled daily based on the change of the index or commodity price for the underlying notional value. Because of daily settlement, the futures contracts have no fair value. TRS's realized loss on futures contracts was $15,241,464 during FY22.

Type	Number of Contracts	Notional Principal
Equity Futures		
International equity index futures - long	1,401	$75,417,466
International equity index futures - short	(700)	(16,978,995)
Fixed Income/Cash Equivalent Futures		
Fixed income index futures – long	1,547	221,201,860
Fixed income index futures – short	(175)	(21,305,594)
International fixed income index futures - long	1	114,105
International fixed income index futures – short	(205)	(30,086,758)

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, 2022, the TRS investment portfolio held currency forward options with notional value of $196,853,590. Contractual principal/notional values do not represent the actual values in the Statement of Fiduciary Net Position. The contracts have various expiration dates through October 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, 2022, the fair value of all option contracts, gross of premiums received, was $302,067. 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, 2022. 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	7	$38,851,186
Currency forward call options - written	4	11,888,837
Currency forward put options - purchased	11	107,095,283
Currency forward put options - written	13	39,018,284

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, 2022, TRS had outstanding written call swaption exposure of $821,750 and purchased call swaption exposure of $4,411,500.

The contracts have various maturity dates through September 2022. 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, 2022, the fair value of swaption contracts was $69,480.

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, 2022, TRS had credit default/index swaps in its portfolio with various maturity dates through June 2027. The notional values as of June 30, 2022, included purchased credit default swaps (buying protection) of $253,690,048, written credit default swaps (selling protection) of $14,042,836 and index swaps of $23,900,824.

Fair Value: The fair value of credit default swaps, including index swaps, held by TRS was ($1,940,866) as of June 30, 2022. 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, 2022, TRS held interest rate swaps in various currencies with various expiration/maturity dates ranging from 2023 to 2032. 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, 2022.

	As of June 30, 2022
Receive floating/pay fixed	$10,972,399
Receive fixed/pay floating	(14,287,216)

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, 2022.

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/22
Pay Fixed Interest Rate/Inflation Swaps:						
Interest Rate Swap PLN	22,450,000	$5,053,005	6 month WIBOR	1.35%	10/5/2023	$368,117
Interest Rate Swap PLN	22,450,000	5,053,005	6 month WIBOR	1.38	10/5/2023	365,761
Interest Rate Swap PLN	22,865,000	5,101,296	6 month WIBOR	2.40	12/15/2023	321,670
Interest Rate Swap CLP	12,318,740,000	13,155,559	6 month Chile Interbank Rate	8.25	6/29/2024	40,613
Interest Rate Swap BRL	6,322,091	1,208,940	3 month Brazilian CDI	8.25	1/2/2025	89,330
Interest Rate Swap BRL	20,170,845	3,857,164	3 month Brazilian CDI	8.14	1/2/2025	298,572
Interest Rate Swap BRL	25,241,859	4,826,867	3 month Brazilian CDI	9.07	1/2/2025	313,988
Interest Rate Swap PLN	31,340,000	7,065,410	6 month WIBOR	4.30	2/1/2025	478,536
Interest Rate Swap CLP	2,602,000,000	2,782,982	6 month Chile Interbank Rate	3.17	6/23/2026	381,423
Interest Rate Swap HUF	1,021,120,000	2,735,333	6 month BUBOR	2.66	9/3/2026	536,385
Interest Rate Swap PLN	18,190,000	4,097,697	6 month WIBOR	1.57	9/3/2026	755,113
Interest Rate Swap ZAR	52,314,000	3,200,180	3 month JIBAR	6.86	12/15/2026	139,635
Interest Rate Swap BRL	7,224,767	1,381,554	3 month Brazilian CDI	7.11	1/4/2027	211,754
Interest Rate Swap BRL	8,383,132	1,603,062	3 month Brazilian CDI	7.75	1/4/2027	208,489
Interest Rate Swap BRL	8,767,456	1,978,436	3 month Brazilian CDI	8.39	1/4/2027	301,882
Interest Rate Swap BRL	8,923,788	1,706,449	3 month Brazilian CDI	9.30	1/4/2027	146,093
Interest Rate Swap BRL	84,653,591	16,187,857	3 month Brazilian CDI	11.09	1/4/2027	605,674
Interest Rate Swap BRL	38,348,830	7,333,243	3 month Brazilian CDI	12.00	1/4/2027	92,681
Interest Rate Swap BRL	38,470,113	7,356,436	3 month Brazilian CDI	12.22	1/4/2027	50,122
Interest Rate Swap BRL	37,412,105	7,154,119	3 month Brazilian CDI	12.27	1/4/2027	43,322
Interest Rate Swap BRL	28,639,433	5,476,567	3 month Brazilian CDI	12.36	1/4/2027	19,717
Interest Rate Swap BRL	43,858,699	8,386,866	3 month Brazilian CDI	12.04	1/4/2027	91,280
Interest Rate Swap BRL	29,349,868	5,612,420	3 month Brazilian CDI	12.81	1/4/2027	(42,452)
Interest Rate Swap CLP	1,968,940,000	2,168,043	6 month Chile Interbank Rate	5.63	1/10/2027	117,035
Interest Rate Swap COP	4,845,670,000	1,164,517	3 Month IBRCO	6.85	1/12/2027	97,112
Interest Rate Swap COP	14,271,000,000	3,429,622	3 Month IBRCO	7.65	2/14/2027	188,936
Interest Rate Swap ZAR	385,687,000	23,843,685	3 month JIBAR	6.96	3/16/2027	1,043,864
Interest Rate Swap HUF	1,970,000,000	5,288,459	6 month BUBOR	6.25	3/17/2027	447,104
Interest Rate Swap PLN	72,750,000	16,371,889	6 month WIBOR	5.41	4/7/2027	879,419

(continued)

(continued)

Asset Description		Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/22
Interest Rate Swap	MXN	2,608,000	$129,683	28 day Mexican TIIE	8.54%	6/9/2027	$2,257
Interest Rate Swap	KRW	7,700,000,000	5,935,497	91 day CD-KSDA	2.41	6/15/2027	294,307
Interest Rate Swap	PLN	56,922,913	12,699,786	6 month WIBOR	4.97	6/15/2027	993,424
Interest Rate Swap	MXN	89,341,000	4,428,137	28 day Mexican TIIE	8.46	9/15/2027	98,458
Interest Rate Swap	MXN	208,760,000	10,347,074	28 day Mexican TIIE	8.99	9/15/2027	14,315
Interest Rate Swap	COP	15,597,200,000	3,748,336	3 Month IBRCO	9.20	9/21/2027	1,146
Interest Rate Swap	PLN	78,314,188	17,419,217	6 month WIBOR	6.63	9/21/2027	146,328
Interest Rate Swap	THB	446,210,000	12,620,846	12 month THOR	3.09	9/21/2027	(238,897)
Interest Rate Swap	ZAR	329,020,000	20,083,626	3 month JIBAR	8.28	9/21/2027	107,074
Interest Rate Swap	ZAR	25,164,000	1,550,970	3 month JIBAR	7.54	4/9/2031	119,772
Interest Rate Swap	ZAR	60,660,000	3,737,858	3 month JIBAR	7.42	7/13/2031	332,061
Interest Rate Swap	ZAR	45,070,000	2,752,606	3 month JIBAR	7.49	9/27/2031	259,256
Interest Rate Swap	ZAR	46,795,000	2,886,476	3 month JIBAR	7.60	1/4/2032	239,326
Interest Rate Swap	PLN	4,407,154	989,279	6 month WIBOR	6.41	5/10/2032	12,397
Total Pay Fixed Interest Rate/Inflation Swaps:			**$273,910,053**				**$10,972,399**
Receive Fixed Interest Rate/Inflation Swaps:							
Interest Rate Swap	BRL	23,620,152	$3,947,886	4.59%	3 month Brazilian CDI	1/2/2024	($568,870)
Interest Rate Swap	BRL	91,048,013	16,949,055	11.25	3 month Brazilian CDI	1/2/2024	(461,574)
Interest Rate Swap	BRL	85,633,589	16,294,873	12.99	3 month Brazilian CDI	1/2/2024	(80,384)
Interest Rate Swap	BRL	137,178,766	26,105,345	13.00	3 month Brazilian CDI	1/2/2024	(126,623)
Interest Rate Swap	HUF	22,150,000,000	58,231,376	9.40	3 month BUBOR	6/27/2024	(128,752)
Interest Rate Swap	PLN	15,800,000	3,202,186	1.80	6 month WIBOR	7/24/2024	(371,356)
Interest Rate Swap	BRL	6,307,119	1,061,033	5.76	3 month Brazilian CDI	1/2/2025	(145,044)
Interest Rate Swap	BRL	18,679,272	3,257,719	7.95	3 month Brazilian CDI	1/2/2025	(314,219)
Interest Rate Swap	BRL	17,568,466	3,272,381	11.19	3 month Brazilian CDI	1/2/2025	(87,144)
Interest Rate Swap	BRL	28,341,632	5,263,210	11.08	3 month Brazilian CDI	1/2/2025	(156,410)
Interest Rate Swap	BRL	36,532,751	6,782,370	11.09	3 month Brazilian CDI	1/2/2025	(203,594)
Interest Rate Swap	BRL	45,345,607	8,577,400	12.05	3 month Brazilian CDI	1/2/2025	(93,800)
Interest Rate Swap	BRL	256,700,000	48,930,245	12.48	3 month Brazilian CDI	1/2/2025	(157,135)
Interest Rate Swap	CLP	1,812,000,000	1,645,996	1.66	6 month Chile Interbank Rate	4/23/2025	(294,267)
Interest Rate Swap	COP	13,845,650,000	2,837,702	3.67	3 Month IBRCO	5/7/2025	(489,700)
Interest Rate Swap	ZAR	41,800,000	2,373,468	5.01	3 month JIBAR	6/25/2025	(180,119)
Interest Rate Swap	CLP	2,334,600,000	2,182,517	3.51	6 month Chile Interbank Rate	7/12/2026	(350,656)
Interest Rate Swap	CZK	69,720,000	2,661,248	2.36	6 month PRIBOR	9/22/2026	(339,954)
Interest Rate Swap	BRL	9,106,785	1,473,729	6.53	3 month Brazilian CDI	1/4/2027	(267,713)
Interest Rate Swap	BRL	6,617,719	1,058,371	6.33	3 month Brazilian CDI	1/4/2027	(207,100)

(continued)

(continued)

Asset Description	Par	Gross Notional	TRS Receives	TRS Pays	Maturity Date	Fair Value 6/30/22
Interest Rate Swap BRL	11,776,624	$1,855,506	6.13%	3 month Brazilian CDI	1/4/2027	($396,476)
Interest Rate Swap BRL	12,575,927	1,999,531	6.60	3 month Brazilian CDI	1/4/2027	(405,297)
Interest Rate Swap BRL	9,389,520	1,608,473	8.57	3 month Brazilian CDI	1/4/2027	(187,035)
Interest Rate Swap BRL	7,091,864	1,184,616	8.02	3 month Brazilian CDI	1/4/2027	(171,524)
Interest Rate Swap BRL	29,426,547	5,550,800	11.76	3 month Brazilian CDI	1/4/2027	(76,283)
Interest Rate Swap BRL	12,032,572	2,298,523	12.20	3 month Brazilian CDI	1/4/2027	(2,402)
Interest Rate Swap BRL	31,115,411	5,821,485	11.68	3 month Brazilian CDI	1/4/2027	(128,550)
Interest Rate Swap KRW	5,886,499,999	4,307,091	2.18	91 day CD-KSDA	1/7/2027	(249,619)
Interest Rate Swap ZAR	433,258,000	25,809,082	6.96	3 month JIBAR	3/16/2027	(1,172,615)
Interest Rate Swap MXN	185,690,000	9,175,936	8.80	28 day Mexican TIIE	6/9/2027	(63,691)
Interest Rate Swap COP	23,047,850,000	5,362,930	8.23	3 Month IBRCO	6/15/2027	(195,773)
Interest Rate Swap MXN	89,242,200	3,742,269	5.19	28 day Mexican TIIE	7/27/2027	(696,276)
Interest Rate Swap MXN	35,470,000	1,748,164	8.88	28 day Mexican TIIE	9/15/2027	(9,887)
Interest Rate Swap KRW	32,700,000,000	25,305,467	3.64	91 day CD-KSDA	9/21/2027	120,624
Interest Rate Swap MYR	76,900,000	17,354,631	3.82	3 month KLIBOR	9/21/2027	(92,902)
Interest Rate Swap MYR	35,120,000	7,903,796	3.76	3 month KLIBOR	9/21/2027	(64,440)
Interest Rate Swap MYR	52,000,000	11,695,597	3.74	3 month KLIBOR	9/21/2027	(102,474)
Interest Rate Swap MYR	35,110,000	7,900,262	3.75	3 month KLIBOR	9/21/2027	(65,705)
Interest Rate Swap MYR	54,000,000	12,307,322	4.03	3 month KLIBOR	9/21/2027	55,479
Interest Rate Swap ZAR	646,022,000	37,965,855	7.49	3 month JIBAR	9/21/2027	(1,467,809)
Interest Rate Swap BRL	5,966,502	925,524	6.78	3 month Brazilian CDI	1/2/2029	(215,418)
Interest Rate Swap CZK	72,475,000	2,353,635	1.61	6 month PRIBOR	1/27/2030	(730,619)
Interest Rate Swap CZK	71,960,000	2,318,020	1.52	6 month PRIBOR	1/29/2030	(743,028)
Interest Rate Swap HUF	938,520,000	2,068,211	1.96	6 month BUBOR	5/5/2030	(404,572)
Interest Rate Swap ZAR	25,164,000	1,440,386	7.53	3 month JIBAR	4/13/2031	(120,746)
Interest Rate Swap MXN	29,100,000	1,268,868	6.92	28 day Mexican TIIE	5/14/2031	(175,951)
Interest Rate Swap CZK	50,408,000	1,608,039	1.73	6 month PRIBOR	6/15/2031	(524,102)
Interest Rate Swap MXN	39,760,000	1,717,751	6.78	28 day Mexican TIIE	7/24/2031	(261,097)
Interest Rate Swap COP	2,683,430,000	551,084	6.65	3 Month IBRCO	11/9/2031	(93,801)
Interest Rate Swap CLP	1,567,600,000	1,549,456	5.38	6 month Chile Interbank Rate	12/27/2031	(124,784)
Interest Rate Swap CZK	92,885,000	3,487,662	3.45	6 month PRIBOR	1/27/2032	(496,029)
Total Receive Fixed Interest Rate/Inflation Swaps:		**$426,294,082**				**($14,287,216)**

BUBOR - *Budapest Interbank Offered Rate,* **CDI** - *Cetip Interbank Deposit (interbank lending rate),* **CD-KSDA** - *Certificates of Deposit, Korean Securities Dealer Assoc.,* **IBRCO** - *Colombia Interbank Rate,* **JIBAR** - *Johannesburg Interbank Average Rate,* **KLIBOR** - *Kuala Lumpur Interbank Offered Rate,* **PRIBOR** - *Prague Interbank Offered Rate,* **TIIE** - *Mexico Interbank Equilibrium Interest Rate,* **THOR** - *Thai Overnight Repurchase 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, 2022, the aggregate fair value of non-exchange traded derivative instruments in asset positions was $69,217,125. 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, 2022
Aa2	$4,513,451
Aa3	26,488,949
A1	20,446,972
A2	16,421,352
A3	1,274,008
Baa1	72,393
Total subject to credit risk	**$69,217,125**

Although the derivative instruments held within the TRS investment portfolio are executed with various counterparties, approximately 93 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, 2022, TRS had remaining unfunded commitments of $13,175,007,449 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, 2022, the annual money-weighted rate of return on pension plan investments, net of investment expense, was (1.2) percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the timing of cash flows and the changing amounts invested.

7. Fair Value Measurement

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

Level 1 Inputs using unadjusted quoted prices in active markets or exchanges for identical assets and liabilities.

Level 2 Significant other observable inputs, which may include quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in non-active markets; and inputs other than quoted prices that are observable for the assets or liabilities, either directly or indirectly.

Level 3 Valuations for which one or more significant inputs are unobservable and may include situations where there is minimal, if any, market activity for the investment.

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

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

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

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

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

The following table summarizes the valuation of TRS investments by the fair value hierarchy levels as of June 30, 2022.

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

Investments by fair value level	June 30, 2022	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	$65,662	$ -	$65,662	$ -
Commercial/collateralized mortgages & loans	243,143	-	243,143	-
Domestic corporate obligations	2,112,202	-	2,112,202	-
Fixed income mutual funds	2,157,461	-	550,275	1,607,186
Foreign debt/corporate obligations	2,577,043	-	2,577,043	-
Municipals	3,655	-	3,655	-
U.S. agencies obligations	1,705	-	1,705	-
U.S. government-backed mortgages	93,593	-	93,593	-
U.S. treasuries	852,635	-	852,635	-
Total debt securities	**8,107,099**	**-**	**6,499,913**	**1,607,186**
Equity investments				
International common and preferred stock	9,106,048	9,086,555	19,493	-
U.S. common and preferred stock	10,954,768	10,954,661	107	-
Total equity investments	**20,060,816**	**20,041,216**	**19,600**	**-**
Real assets				
Real estate	5,721,952	-	-	5,721,952
Total real assets	**5,721,952**	**-**	**-**	**5,721,952**
Total investments by fair value level	**$33,889,867**	**$20,041,216**	**$6,519,513**	**$7,329,138**
Investments measured at the net asset value (NAV)				
Commingled fixed income funds	$622,738			
Diversifying strategies	4,447,346			
International equity commingled fund	-			
Private debt partnerships	5,685,030			
Private equity partnerships	10,195,515			
Private real estate partnerships	5,477,979			
Real asset partnerships	1,158,005			
Total investments measured at the NAV	**27,586,612**			
Total investments measured at fair value	**$61,476,480**			
Investment derivative instruments				
Credit default swaps	$1,111	$ -	$1,111	$ -
Index and variance swaps	(3,052)	-	(3,052)	-
Interest rate and inflation swaps	(3,315)	-	(3,315)	-
Options/swaptions	372	-	372	-
Total investment derivative instruments	**($4,884)**	**$ -**	**($4,884)**	**$ -**
Invested securities lending collateral				
Total invested securities lending collateral*	**$2,162,401**	**$324,359**	**$1,838,042**	**$ -**

** 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, 2022	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Commingled fixed income funds[1]	$622,738	$ -	Monthly, quarterly	30-45 days
Diversifying funds - liquid[2]	4,144,518	$83,813	Daily, weekly, monthly, quarterly	1-90 days
Diversifying funds - illiquid[3]	302,828	174,932	Not eligible	N/A
Total diversifying strategies	**4,447,346**	**258,745**		
Custom private debt partnerships	2,770,448	1,019,553	Quarterly	60-90 days
Private debt partnerships	2,914,581	2,831,052	Not eligible	N/A
Total private debt partnerships[4]	**5,685,029**	**3,850,605**		
Private equity partnerships[5]	10,195,515	5,217,231	Not eligible	N/A
Private real estate partnerships[5]	5,477,979	3,220,626	Not eligible	N/A
Real assets partnerships[6]	1,158,005	627,800	Not eligible	N/A
Total investments measured at the NAV	**$27,586,612**	**$13,175,007**		

1) **Commingled fixed income funds:** The investment strategies for the four fixed income funds include ESG, 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 is available monthly upon notice of redemption.

2) **Diversifying funds (liquid strategies):** The diversifying strategies asset class applies various strategies that provide diversification to the total investment portfolio. Investments focus on reducing equity-like risk characteristics encompassed in the overall TRS portfolio by enhancing exposures to strategies that show little to no correlation to growth factors while adding positive skew and active risk management characteristics. Three factor portfolio direct investments include trend/momentum exposures and alternative risk premia. One risk parity investment focuses on optimizing Chinese beta. The systematic and discretionary macro strategies include direct investments in five funds diversifying through regional and product expertise, speed of algorithms and style of trading. Opportunistic funds, including six direct investments and one diversified fund of funds, use idiosyncratic alpha capture through liquidity and security selection. The fair value of these investments has been determined using the NAV per share of the investments. Most strategies maintain a liquidity profile of less than one year, ranging from daily to quarterly and require advance notice prior to redemption.

3) **Diversifying funds (illiquid strategies):** The diversifying strategies asset class includes five 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, 2022.

4) **Private debt partnerships:** Private debt funds consist of 66 funds investing across strategies such as stressed debt/credit, direct and specialty lending, real estate credit and global multi-credit strategies. Six of these funds are custom partnerships investing in opportunistic investments. The private debt funds provide additional exposure to niche and/or specific non-traditional point-in-time opportunities that are not normally targeted by traditional fixed income managers. Funds are valued using the NAV per share (or its equivalent) and are audited annually. Redemption restrictions are in place over the life of the partnership. The average life of these funds span three to 12 years and distributions are received throughout the life of the fund. The custom partnerships allow TRS to liquidate upon giving advanced notice. TRS has no plans to liquidate as of June 30, 2022, and TRS did not sell any funds on the secondary market during the fiscal year. As of June 30, 2022, it is probable that all investments in this type will be sold at an amount different from the current NAV of the Plan's ownership interest.
5) **Private equity and real estate partnerships:** TRS has 218 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 66 real estate limited partnerships invest in various property types across multiple geographic regions. Investments in limited partnerships are normally long-term with an approximate life of 10 to 15 years and considered illiquid. Investors are subject to redemption restrictions which limit and restrict the ability of limited partners to exit prior to dissolution. Partnership interests are valued using their respective NAV calculated by the general partner's fair valuation policy and are generally audited annually. The most significant element of NAV is the fair value of the investment holdings which are typically valued on a quarterly basis by the general partners. Distributions are received as the funds sell underlying portfolio company investments. TRS has no plans on liquidating the portfolio; however, will opportunistically sell funds in the secondary market to reposition the portfolio and optimize returns. During the fiscal year, TRS sold full or partial interest in nine private equity funds on the secondary market. As of June 30, 2022, 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 11 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, though two infrastructure funds were sold on the secondary market during the fiscal year. As of June 30, 2022, 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

	2022
Balances at June 30	$62,822,069,184

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 $80.6 billion in FY22 based on the actuarial value of assets.

2. Minimum Retirement Annuity

	2022
Balances at June 30	$11,557,155

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.

REQUIRED SUPPLEMENTARY INFORMATION

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

	2022	2021	2020	2019
Total pension liability				
Service cost	$2,097,274,410	$2,032,149,463	$1,991,622,987	$1,947,627,286
Interest	9,834,039,952	9,580,886,840	9,296,897,060	8,991,684,121
Changes of benefit terms	-	-	-	-
Difference between expected and actual experience	(260,304,587)	(370,469,646)	(28,215,833)	258,778,925
Change of assumptions	448,727,943	(162,359,084)	-	77,241,572
Benefit payments, including refund of member contributions	(7,669,576,246)	(7,388,142,712)	(7,099,524,955)	(6,818,760,572)
Net change in total pension liability	4,450,161,472	3,692,064,861	4,160,779,259	4,456,571,332
Total pension liability - beginning	142,223,798,748	138,531,733,887	134,370,954,628	129,914,383,296
Total pension liability - ending (a)	146,673,960,220	142,223,798,748	138,531,733,887	134,370,954,628
Plan fiduciary net position				
Contributions - employer	120,876,570	97,594,081	92,658,238	88,514,781
Contributions - nonemployer contributing entity	5,866,799,836	5,140,648,356	4,813,451,679	4,466,020,692
Contributions - member	1,072,639,330	1,023,531,951	994,400,416	963,972,120
Net investment income (loss)	(743,042,373)	13,046,153,685	275,669,398	2,617,831,332
Benefit payments, including refund of member contributions	(7,669,576,246)	(7,388,142,712)	(7,099,524,955)	(6,818,760,572)
Administrative expense	(26,575,798)	(23,758,112)	(22,966,372)	(24,335,680)
Net change in plan fiduciary net position	(1,378,878,681)	11,896,027,249	(946,311,596)	1,293,242,673
Plan fiduciary net position - beginning	64,212,505,020	52,316,477,771	53,262,789,367	51,969,546,694
Plan fiduciary net position - ending (b)	62,833,626,339	64,212,505,020	52,316,477,771	53,262,789,367
Employers' net pension liability - ending (a) - (b)	**$83,840,333,881**	**$78,011,293,728**	**$86,215,256,116**	**$81,108,165,261**

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:

	2022	2021	2020	2019
Total pension liability	$146,673,960,220	$142,223,798,748	$138,531,733,887	$134,370,954,628
Plan fiduciary net position	62,833,626,339	64,212,505,020	52,316,477,771	53,262,789,367
Net pension liability	**$83,840,333,881**	**$78,011,293,728**	**$86,215,256,116**	**$81,108,165,261**
Plan fiduciary net position as a percentage of the total pension liability	42.8%	45.1%	37.8%	39.6%
Covered payroll	$11,647,247,711	$11,120,776,122	$10,827,438,800	$10,450,452,444
Net pension liability as a percentage of covered payroll	719.8%	701.5%	796.3%	776.1%

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

2018	2017	2016	2015	2014
$129,914,383,296	$125,773,806,438	$124,187,003,384	$111,916,989,345	$106,682,654,886
51,969,546,694	49,375,664,518	45,250,956,731	46,406,915,593	45,824,382,514
$77,944,836,602	**$76,398,141,920**	**$78,936,046,653**	**$65,510,073,752**	**$60,858,272,372**
40.0%	39.3%	36.4%	41.5%	43.0%
$10,163,980,000	$9,965,569,893	$9,811,614,284	$9,641,170,627	$9,512,809,680
766.9%	766.6%	804.5%	679.5%	639.8%

Schedule of Investment Returns for Fiscal Years:

	2022	2021	2020	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	(1.2%)	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)

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Actuarially-determined contribution (ADC)	$8,947,919	$8,441,258	$7,988,612	$7,429,037	$7,080,756	$6,248,879	$4,582,530	$4,119,526	$4,091,978	$3,582,033
Contributions in relation to the actuarially-determined contribution:*										
State	5,866,530	5,140,337	4,813,078	4,465,578	4,094,616	3,985,783	3,741,802	3,376,878	3,437,478	2,702,278
Federal & Employer Contributions	120,441	97,082	92,038	87,707	84,034	148,749	147,408	144,780	157,228	155,787
Total contributions	5,986,971	5,237,419	4,905,116	4,553,285	4,178,650	4,134,532	3,889,210	3,521,658	3,594,706	2,858,065
Contribution deficiency	**$2,960,948**	**$3,203,839**	**$3,083,496**	**$2,875,752**	**$2,902,106**	**$2,114,347**	**$693,320**	**$597,868**	**$497,272**	**$723,968**
Covered payroll	$11,647,248	$11,120,776	$10,827,439	$10,450,452	$10,163,980	$9,965,570	$9,811,614	$9,641,171	$9,512,810	$9,394,741
Contributions as a percentage of covered payroll	51.4%	47.1%	45.3%	43.6%	41.1%	41.5%	39.6%	36.5%	37.8%	30.4%

** 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. For FY22, the state contribution amount includes an additional one-time contribution of $173 million appropriated for TRS per Public Act 102-0696.*

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 FY22, the total pension liability increased by $4.5 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 FY22.

	For Funding per State Statute	**For Determining the Actuarially-determined Contribution**
Valuation Used to Determine Funding Amount:	June 30, 2020	June 30, 2020
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:	23 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

	2022	2021
Personnel services		
Salaries	$12,615,302	$10,924,264
Retirement contributions	1,734,781	1,867,608
Insurance and payroll taxes	4,560,695	4,238,772
	18,910,778	17,030,644
Professional services		
Actuarial services	162,225	239,646
External auditors	229,699	225,356
Legal services	283,682	611,753
Legislative consulting	84,000	84,000
Information systems consulting	2,519,746	613,471
Operations consulting	338,032	231,158
Other	23,139	12,229
	3,640,523	2,017,613
Communications		
Postage	215,229	84,780
Printing and copying	35,701	44,671
Telephone	132,339	127,544
	383,269	256,995
Other services		
Administrative services	353,549	286,886
Building operations and maintenance	422,932	469,960
EDP supplies and equipment	134,226	160,767
Equipment repairs, rental and maintenance	239,161	221,639
Insurance	447,821	288,652
Memberships and subscriptions	138,872	82,577
Office equipment and furniture	52,481	56,891
Office supplies	15,043	17,505
Software licenses and maintenance	1,299,437	1,034,575
Travel, conferences, education	89,575	39,286
	3,193,097	2,658,738
Depreciation expense	2,244,704	1,794,122
Total administrative expenses	**$28,372,371**	**$23,758,112**

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

	2022	2021
Investment manager fees	$449,288,368	$445,990,695
Master custodian fees		
State Street Bank and Trust Company	3,952,800	3,847,375
Investment consultants		
Aksia, L.L.C.	700,000	702,700
RVK, Inc.	465,000	465,000
Stepstone Group, L.P.	993,177	964,250
Stepstone Group Real Estate, L.P.	329,317	319,725
	2,487,494	2,451,675
Co-investment advisors		
Aksia TorreyCove Partners, L.L.C.	-	100,000
Meketa Investment Group, Inc.	240,000	60,000
Stout Risius Ross, Inc.	175,000	-
	415,000	160,000
Secondary market advisors		
Evercore Group L.L.C.	4,849,348	-
Legal services		
DLA Piper, L.L.P.	1,102,148	783,359
Tax advisory services		
Ernst & Young Private, Ltd.	255,654	110,892
Other investment expense		
Auditing costs	228,530	368,886
Communication services	22,602	21,730
Education, meetings and travel	38,617	9,498
Investment activity expenses	1,946,218	3,631,485
Investment analytical systems	956,396	1,053,172
Personnel costs	4,767,793	4,898,704
Research, subscriptions and memberships	62,230	68,401
Other costs	203,052	220,569
	8,225,438	10,272,445
Total investment expenses	**$470,576,250**	**$463,616,441**

Note: Foreign tax expense for FY22 included in investments realized gain/loss. Adjusted FY21 for comparable.

SCHEDULE OF PROFESSIONAL SERVICES FOR THE YEARS ENDED JUNE 30

	2022	2021
Actuarial services		
The Segal Company Midwest, Inc.	$162,225	$239,646
External auditors		
Office of the Auditor General (FORVIS, L.L.P.)	229,699	225,356
Legal services		
Elrod Friedman L.L.P.	32,730	136,302
Holland & Knight, L.L.P.	101,397	43,560
Howard & Howard Attorneys, P.L.L.C.	65,308	13,421
Ice Miller L.L.P.	13,072	-
King & Spalding L.L.P.	-	361,862
Kopec White & Spooner	-	2,720
Nixon Peabody L.L.P.	2,056	-
Reinhart Boerner Van Deuren s.c.	67,081	49,288
Whitt Law, L.L.C.	2,038	4,600
	283,682	611,753
Legislative consulting		
Leinenweber Baroni & Daffada Consulting, L.L.C.	84,000	84,000
Information systems consulting		
AT & T Corp.	-	590
Apex Systems	680,076	-
Capitol Strategies Consultants Inc.	684,981	-
Carahsoft Technology Corp.	-	14,193
CDW L.L.C.	-	42,800
Compulink Management Center Inc.	38,250	-
Dayagdag, Chris	185,844	153,520
Decker Innovations Inc.	395,895	-
Ellerman, Greg	137,183	-
FireEye Inc.	-	18,538
HSO North America, L.L.C.	78,600	84,420
McDonald Hopkins L.L.C.	1,567	1,462
Mellor, William Thomas	19,800	10,400
Mythics Emergent Group Inc.	4,844	-
ProCircular, Inc.	-	21,850
Promet Solutions Corporation	68,375	47,375
Sentinel Technologies, Inc.	132,911	7,800
Telos Corporation	76,800	-
The Segal Company Midwest Inc.	14,620	188,773
VPMA Global Services L.L.C.	-	21,750
	2,519,746	613,471
Operations consulting		
CAPFinancial Partners L.L.C.	115,000	-
CEM Benchmarking, Inc.	50,000	50,000
Darlington & Company, Inc.	-	23,300
Higher Logic, L.L.C.	10,812	10,396
Hudepohl & Associates Inc.	86,458	-
Jasculca Terman Strategic Communications	46,000	30,000
Korn Ferry (US)	-	95,680
Management Association	4,100	-
SABA Software	4,662	1,782
The Segal Co. Western Stats Inc.	21,000	20,000
	338,032	231,158
Other	23,139	12,229
Total professional services	**$3,640,523**	**$2,017,613**

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Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

Independent Auditor's Report

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

As Special Assistant Auditors for the Auditor General, we have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Teachers' Retirement System of the State of Illinois (System), a component unit of the State of Illinois, as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise the System's basic financial statements, and have issued our report thereon dated December 13, 2022, which contained an emphasis of matter paragraph regarding actuarial assumptions used in the actuary's calculation of the net pension liability.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatement on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the System's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that have not been identified.

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

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

SIGNED ORIGINAL ON FILE

Decatur, Illinois
December 13, 2022