NEW YORK STATE TEACHERS' RETIREMENT SYSTEM

Basic Financial Statements and Supplemental Schedules

June 30, 2021 and 2020

(With Independent Auditors' Report Thereon)

Financial

Page

KPMG LLP
515 Broadway
Albany, NY 12207-2974

Independent Auditors' Report

The Retirement Board
New York State Teachers' Retirement System:

We have audited the accompanying financial statements of the New York State Teachers' Retirement System (the System), as of and for the years ended June 30, 2021 and 2020, and the related notes to the financial statements, which collectively comprise the System's basic financial statements for the years then ended as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; 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.

Auditors' Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the New York State Teachers' Retirement System as of June 30, 2021 and 2020, and the changes in its fiduciary net position for the years then ended in accordance with U.S. generally accepted accounting principles.

KPMG

Other Matters

Required Supplementary Information

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

Supplementary and Other Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The schedules of administrative expenses, schedules of investment expenses, and schedule of consulting fees as listed in the accompanying table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The schedules of administrative expenses, schedules of investment expenses, and schedules of consulting fees are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information 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 schedules of administrative expenses, schedules of investment expenses, and schedule of consulting fees are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

KPMG LLP

Albany, New York
October 28, 2021

FINANCIAL

MANAGEMENT'S DISCUSSION AND ANALYSIS

June 30, 2021 and 2020

(Unaudited)

The following discussion and analysis of the financial performance of the New York State Teachers' Retirement System (NYSTRS or the System) provides an overview of its activities for the years ended June 30, 2021, 2020, and 2019. Its purpose is to provide explanations and insights into the information presented in the financial statements, notes to the financial statements, and required supplementary information.

Financial Highlights

- The net position of the System represents funds available to pay current and future benefits. Net position was $148.1 billion as of the fiscal year ended 2021, and $120.5 billion and $122.5 billion as of the fiscal years ended 2020 and 2019, respectively. The change for the fiscal year ended 2021 was $27.6 billion or 23.0%, and the change for the fiscal year ended 2020 was negative $2.0 billion, or negative 1.6%.

- The System's investments experienced appreciation of $31.5 billion in 2021 and $1.6 billion and $5.6 billion in 2020 and 2019, respectively.

- Contributions from employers were $1.6 billion in 2021, $1.5 billion in 2020, and $1.8 billion in 2019, consistent with the change in the employer contribution rate.

- The size of the System's active membership has declined over the past three years. However, the number of retired members and beneficiaries receiving benefits has increased, leading to an increase in the retirement benefits paid. Retirement benefits paid in 2021, 2020, and 2019 were $7.7 billion, $7.5 billion, and $7.3 billion, respectively.

- The System's funded ratio, a comparison of the actuarial value of assets to the accrued pension benefit liability, was 98.9% as of the 2020 valuation. Valuations in 2019 and 2018 resulted in the System's funded ratio of 99.6% and 99.2%, respectively.

Overview of Financial Statements

The following discussion and analysis are intended to assist the reader in better understanding the purpose and meaning of each of the key components of NYSTRS' financial statements, which comprise the following:

1. The Statements of Fiduciary Net Position present NYSTRS' assets and deferred outflows of resources and liabilities and deferred inflows of resources by major categories and may serve over time as a useful indicator of the System's financial position. The difference between assets and deferred outflows of resources and liabilities and deferred inflows of resources represents the net position restricted for pensions. The statements also compare assets and deferred outflows of resources and liabilities and deferred inflows of resources by class to the previous year, which offers the reader the opportunity to note changes in each class from year to year.

2. The Statements of Changes in Fiduciary Net Position provide information on the change in the System's net position during the current year. The majority of additions are normally derived from net investment income, primarily in the form of changes in the fair value of assets from the prior year. Deductions include retirement benefit payments, beneficiary payments, return of contributions, and administrative expenses. For comparison purposes, information pertaining to the previous year's Statement of Changes in Fiduciary Net Position is also provided.

3. The Notes to the Basic Financial Statements are an essential part of the basic financial statements. They provide important background and detailed information about NYSTRS, the plan and the basic financial statements themselves.

4. The Required Supplementary Information (RSI) consists of information pertaining to NYSTRS' actuarial methods and assumptions and provides data on changes in the school districts' net pension liability, the composition of the school districts' net pension liability, the school districts' contributions, and NYSTRS' investment returns. Other supplemental information is also presented and includes the schedules of administrative expenses, investment expenses, and consulting fees.

MANAGEMENT'S DISCUSSION AND ANALYSIS *(continued)*
June 30, 2021 and 2020
(Unaudited)

Financial Analysis

Tables 1 and 2 summarize and compare the System's financial results for the years 2021, 2020 and 2019. Investments comprise the overwhelming majority of assets of the System. Investment performance, contributions and benefit payments are the primary drivers of changes in net fiduciary position.

TABLE 1 - SUMMARY OF FIDUCIARY NET POSITION

(dollars in thousands)

	June 30 2021	June 30 2020	June 30 2019	Amount increase (decrease) 2020 to 2021	Percentage change of total 2020 to 2021
Investments at fair value	$146,200,797	$118,603,921	$120,214,916	$ 27,596,876	22.9 %
Receivables	2,302,028	2,070,049	2,545,784	231,979	0.2
Securities lending collateral — invested	481,018	486,845	881,304	(5,827)	0.0
Member Loans	236,944	256,935	264,721	(19,991)	0.0
Other Assets	59,639	60,140	45,991	(501)	0.0
Total Assets	149,280,426	121,477,890	123,952,716	27,802,536	23.1
Total Deferred Outflows of Resources	32,671	25,261	9,217	7,410	0.0
Securities lending collateral — due to borrowers	479,186	484,150	877,766	(4,964)	0.0
Investment Purchases Payable	450,377	314,679	406,053	135,698	0.1
Other Liabilities	198,526	217,360	189,333	(18,834)	0.0
Total Liabilities	1,128,089	1,016,189	1,473,152	111,900	0.1
Total Deferred Inflows of Resources	36,551	7,457	11,300	29,094	0.0
Net position restricted for pensions	**$148,148,457**	**$120,479,505**	**$122,477,481**	**$ 27,668,952**	**23.0 %**

The increase in the investment value as of June 30, 2021 is attributable to appreciation of the investment portfolio due to particularly strong market performance, net of benefit payments. The portfolio earned a rate of return of 28.98%, compared to an assumed rate of return of 7.1%. The increase in receivables through June 30, 2021 is due to two factors: 1) amounts due from employers increased $109 million due to the increase in the employer contribution rate from 8.86% to 9.53%, and 2) timing of investment sales caused an increase in the amount receivable from $226 million to $320 million.

The decrease in the investment value as of June 30, 2020 resulted from appreciation on investments that was outpaced by retirement benefit payouts. The global pandemic and the subsequent effect on the markets resulted in a rate of return of 3.5%, compared to an assumed rate of return of 7.1 %. The decline in receivables through June 30, 2020 is primarily due to two factors: 1) amounts due from employers declined $ 258 million due to the decrease in the employer contribution rate from 10.62% to 8.86%, and 2) timing of investment sales caused a decline in the amount receivable from $413 million to $226 million.

MANAGEMENT'S DISCUSSION AND ANALYSIS *(continued)*
June 30, 2021 and 2020
(Unaudited)

TABLE 2 - SUMMARY OF CHANGES IN FIDUCIARY NET POSITION
(dollars in thousands)

	Years ended June 30			Amount increase (decrease)	Percentage change of total
	2021	2020	2019	2020 to 2021	2020 to 2021
Net appreciation in fair value of investments	$ 31,499,853	$ 1,643,319	$ 5,631,436	$ 29,856,534	24.8 %
Other investment income	2,168,155	2,280,314	2,391,744	(112,159)	(0.1)
Contributions- Employer and Member	1,788,336	1,653,677	1,920,343	134,659	0.1
Total Additions	35,456,344	5,577,310	9,943,523	29,879,034	24.8
Retirement benefits	(7,717,521)	(7,484,462)	(7,285,362)	(233,059)	(0.2)
Other deductions	(69,871)	(90,824)	(96,198)	20,953	0.0
Total Deductions	(7,787,392)	(7,575,286)	(7,381,560)	(212,106)	(0.2)
Net increase(decrease) in net position	27,668,952	(1,997,976)	2,561,963	29,666,928	24.6
Net position, beginning of year	120,479,505	122,477,481	119,915,518	(1,997,976)	(1.7)
Net position, end of year	**$148,148,457**	**$120,479,505**	**$122,477,481**	**$ 27,668,952**	**23.0 %**

Net Investment Income

For the year ended June 30, 2021, NYSTRS reported net investment income of $33.7 billion compared to $3.9 billion in 2020 and $8.0 billion in 2019. The strong appreciation in 2021 was due to robust market returns, primarily in the equity segments. The net appreciation (depreciation) by asset class and year is shown in the table below:

TABLE 3 - NET APPRECIATION (DEPRECIATION) ON INVESTMENTS *
(dollars in thousands)

	Years ended June 30			Amount increase (decrease)
	2021	2020	2019	2020 to 2021
Domestic equity	$ 15,646,731	$ 1,751,965	$ 2,759,314	$ 13,894,766
International equity	6,762,617	(1,016,484)	(138,261)	7,779,101
Global equity	1,527,191	46,357	41,498	1,480,834
Real estate equity	1,947,403	(21,446)	184,487	1,968,849
Private equity	5,679,894	534,144	1,133,447	5,145,750
Domestic fixed income	(452,552)	870,989	780,859	(1,323,541)
High-yield bonds	55,978	(8,969)	6,216	64,947
Global bonds	(22,191)	135,675	153,543	(157,866)
Real estate debt	130,075	(698,772)	596,515	828,847
Private debt	221,004	(6,908)	59,819	227,912
Cash equivalents	2,492	56,538	53,595	(54,046)
Other	1,211	230	404	981
Totals	**$ 31,499,853**	**$ 1,643,319**	**$ 5,631,436**	**$ 29,856,534**

*net of purchases, sales and maturities

MANAGEMENT'S DISCUSSION AND ANALYSIS *(continued)*
June 30, 2021 and 2020
(Unaudited)

Economic Factors

The economic factor that is of primary significance to NYSTRS is the investment rate of return earned in the capital markets. Legislative, demographic, and actuarial assumption changes can also have a significant impact on the net pension liability and funded status of the plan. All of these factors are incorporated into the annual actuarial valuation, which determines the rate at which participating employers must contribute in order to appropriately fund member benefits. In terms of demographics, the System will likely continue to experience a shift toward a greater proportion of retirees relative to active members. This year the System experienced strong appreciation on investments. Investment returns are smoothed (averaged) by NYSTRS over a five-year period for purposes of computing the actuarial value of assets used to determine the employer contribution rate. Lower than projected investment returns in the fiscal year ending June 30, 2020 contributed to an increase in the employer contribution rate, from 8.86% on 2019-20 member salaries to 9.53% on 2020-21 member salaries.

Requests for Information

This financial report is designed to provide active members, retirees, employers, and anyone else who is interested, with a general overview of the financial activities of NYSTRS. Questions about this report or requests for additional financial information should be addressed to the Public Information Office, New York State Teachers' Retirement System, 10 Corporate Woods Drive, Albany, NY 12211, or by email at communit@nystrs.org.

STATEMENTS OF FIDUCIARY NET POSITION

June 30, 2021 and 2020

(dollars in thousands)

Assets:	2021	2020
Investments — at fair value (notes 4, 5 and 6):		
Domestic equity	$ 50,050,654	$ 41,432,220
International equity	24,795,559	19,367,874
Global equity	5,097,105	3,595,252
Real estate equity	14,844,615	11,851,640
Private equity	14,783,219	9,461,825
Domestic fixed income	18,815,502	18,775,420
High-yield bonds	941,987	653,947
Global bonds	3,305,959	2,861,293
Real estate debt	7,460,772	7,168,585
Private debt	1,163,794	702,239
Cash equivalents	4,941,631	2,733,626
Total investments	146,200,797	118,603,921
Receivables:		
Employer	1,581,828	1,473,169
Member contributions	135,357	118,437
Investment income	264,854	252,414
Investment sales	319,989	226,029
Total receivables	2,302,028	2,070,049
Other assets:		
Securities lending collateral — invested (note 5)	481,018	486,845
Member loans	236,944	256,935
Capital assets, net of depreciation	22,962	26,300
Miscellaneous assets	36,677	33,840
Total other assets	777,601	803,920
Total assets	149,280,426	121,477,890
Deferred outflows of resources:		
Changes in net OPEB liability (note 10)	10,904	7,518
Changes in net pension liability (note 9)	21,767	17,743
Total deferred outflows of resources	32,671	25,261
Liabilities:		
Securities lending collateral — due to borrowers (note 5)	479,186	484,150
Investment purchases payable	450,377	314,679
Mortgage escrows and deposits — net of investments	6,755	2,558
Net OPEB liability (note 10)	47,187	51,933
Other liabilities (notes 5 and 9)	144,584	162,869
Total liabilities	1,128,089	1,016,189
Deferred inflows of resources:		
Changes in net OPEB liability (note 10)	4,276	6,811
Changes in net pension liability (note 9)	32,275	646
Total deferred inflows of resources	36,551	7,457
Net position restricted for pensions (note 3)	$ 148,148,457	$ 120,479,505

See accompanying notes to financial statements.

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

Fiscal Years Ended June 30, 2021 and 2020

(dollars in thousands)

Additions:	2021	2020
Investment income:		
Net appreciation in fair value of investments	$ 31,499,853	$ 1,643,319
Interest income	762,391	819,183
Dividend income	1,306,813	1,320,921
Real estate — net operating income	416,860	447,481
Securities lending — gross earnings	3,456	15,082
Other — net	17,060	15,788
	34,006,433	4,261,774
Less:		
Investment expenses	339,540	330,012
Securities lending:		
Broker rebates	(2,849)	6,083
Management fees	871	1,203
Depreciation of collateral	863	843
Net investment income	33,668,008	3,923,633
Contributions:		
Employer (note 1)	1,618,437	1,504,688
Member contributions	159,874	145,034
Transfers	10,025	3,955
Total contributions	1,788,336	1,653,677
Net additions	35,456,344	5,577,310
Deductions:		
Retirement benefit payments — periodic	7,659,950	7,420,488
Beneficiary payments	57,571	63,974
Return of contributions	14,379	19,439
Administrative expenses	55,492	71,385
Total deductions	7,787,392	7,575,286
Net increase (decrease) in net position	27,668,952	(1,997,976)
Net position restricted for pensions, beginning of year	120,479,505	122,477,481
Net position restricted for pensions, end of year	$ 148,148,457	$ 120,479,505

See accompanying notes to financial statements.

NOTES TO FINANCIAL STATEMENTS
June 30, 2021 and 2020
(dollars in thousands)

(1) Plan Description

The New York State Teachers' Retirement System (NYSTRS or the System) was created and exists, pursuant to Article 11 of the New York State Education Law. The System is the administrator of a cost-sharing, multiple-employer, defined benefit public employee retirement system (PERS), administered by a 10-member Board to provide pension benefits for teachers employed by participating employers in the State of New York, excluding New York City. The System's Board is composed of:

- Three teacher members elected from the active membership.
- One retired member elected by a mail vote of all retired members.
- Two school administrators appointed by the Commissioner of Education.
- Two present or former school board members, experienced in the fields of finance and investment, elected by the Board of Regents. At least one of these individuals must have experience as an executive of an insurance company.
- One present or former bank executive elected by the Board of Regents.
- The State Comptroller or his/her designee.

Funding of the System is accomplished through member and employer contributions and investment earnings, according to New York State Education Law.

As of June 30, the number of participating employers was:

	2021	2020
Public school districts	679	679
Board of Cooperative Education Services (BOCES)	37	37
SUNY	31	31
Community colleges	30	30
Charter schools	26	26
Special act districts	9	10
Other	9	9
Total	821	822

As of June 30, the System's membership consisted of:

	2021	2020
Retired members and beneficiaries currently receiving benefits	175,790	172,569
Members:		
Active members	249,355	252,091
Terminated members entitled to but not yet receiving benefits	9,803	9,141
Subtotal	259,158	261,232
Total	434,948	433,801

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

(a) Benefits

The benefits provided to members of the System are established by New York State law and may be amended only by the Legislature with the Governor's approval. Benefit provisions vary depending on date of membership and are subdivided into the following six classes:

Tier 1
Members who last joined prior to July 1, 1973 are covered by the provisions of Article 11 of the Education Law.

Tier 2
Members who last joined on or after July 1, 1973 and prior to July 27, 1976 are covered by the provisions of Article 11 of the Education Law and Article 11 of the Retirement and Social Security Law (RSSL).

Tier 3
Members who last joined on or after July 27, 1976 and prior to September 1, 1983 are covered by the provisions of Article 14 and Article 15 of the RSSL.

Tier 4
Members who last joined on or after September 1, 1983 and prior to January 1, 2010 are covered by the provisions of Article 15 of the RSSL.

Tier 5
Members who joined on or after January 1, 2010 and prior to April 1, 2012 are covered by the provisions of Article 15 of the RSSL.

Tier 6
Members who joined on or after April 1, 2012 are covered by the provisions of Article 15 of the RSSL.

(b) Service Retirements

Tier 1 and 2 members are generally eligible for a service retirement benefit of 2.0% per year of credited service times final average salary (FAS). A 5% reduction generally applies for each full year of state service under 20 years (prorated for partial years with a maximum reduction of 50%). Tier 1 and 2 members may retire as early as age 55 with five or more years of state service credit. Retirement may also occur for Tier 1 members at age 55 with less than five years of service if two years are credited since July 1, 1967, after the current membership date, and since the member turned age 53.

Generally, the maximum pension payable to Tier 1 and 2 members (with two years of credit under the Article 19 Benefit Enhancement law) is 79% of FAS. An age factor applies to Tier 2 members who retire before age 62 with less than 30 years of service. There is no age factor for Tier 1 members.

Tier 3 and 4 members are generally eligible for a service retirement benefit of 1.67% per year of credited service times FAS for less than 20 years of service, 2.0% per year for 20 to 30 years of service, and 60% of FAS plus 1.5% per year for service beyond 30 years. Tier 3 and 4 members may retire as early as age 55 with five years of state service credit. An age factor applies for Tier 3 and 4 members who retire before age 62 with less than 30 years of service.

Tier 5 members are generally eligible for a service retirement benefit of 1.67% per year of credited service times FAS for less than 25 years of service, 2.0% per year for 25 to 30 years of service, and 60% of FAS plus 1.5% per year for service beyond 30 years. Tier 5 members may retire as early as age 55 with 10 years of state service credit. An age factor applies to Tier 5 members who retire before age 57 or retire between age 57 and 62 with less than 30 years of service.

Tier 6 members are generally eligible for a service retirement benefit of 1.67% per year of credited service times FAS for less than 20 years of service, 1.75% per year for 20 years of service, and 35% of FAS plus 2% per year for service

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

beyond 20 years. Tier 6 members may retire as early as age 55 with 10 years of state service credit. An age factor applies for Tier 6 members who retire before age 63.

(c) Vested Benefits

Retirement benefits for Tiers 1-4 are vested after five years of credited service while benefits for Tiers 5-6 are vested after 10 years of credited service. Benefits are payable at age 55 or greater with the limitations noted for service retirements above.

(d) Disability Retirement

Members are eligible for disability retirement benefits after 10 years of credited New York State service, except for Tier 3 where disability retirement is permissible after five years of credited New York State service pursuant to the provisions of Article 14 of the RSSL. The Tier 3 benefit is integrated with Social Security.

(e) Death Benefits

Death benefits are paid to the beneficiary of active members who die in service and certain retirees. For active members, the benefit is based on final salary, age and the number of years of credited service. For retired members, it is also based on the number of years in retirement.

(f) Prior and Military Service

After two years of membership, members of all tiers may claim and receive credit for prior New York State public or teaching service. Only Tier 1 and 2 members may, under certain conditions, claim out-of-state service. Certain members may also claim military service credit prior to or interrupting membership.

(g) Tier Reinstatement

In accordance with Chapter 640 of the Laws of 1998, any active member who had a prior membership may elect to be reinstated to their original date and tier of membership.

(h) Employer Contributions

Pursuant to Article 11 of the New York State Education Law, employers are required to contribute at an actuarially determined rate adopted annually by the Retirement Board. The actuarially determined employer contribution rate applied to 2020-21 and 2019-20 member salaries is 9.53% and 8.86%, respectively. A reconciliation of total required employer contributions presented in the Schedule of the School Districts' Contributions and additions from employer contributions per the System's Statements of Changes in Fiduciary Net Position for fiscal years 2021 and 2020 is as follows:

	June 30	
	2021	2020
Total required employer contributions	$ 1,617,547	$ 1,503,823
Miscellaneous billing adjustments	890	865
Additions from employer contributions	$ 1,618,437	$ 1,504,688

In April 2013, the System's Retirement Board adopted a Stable Contribution Option (SCO) provided for under Chapter 57 of the Laws of 2013. Under the law, BOCES and public school districts participating in NYSTRS were offered the choice of either paying the actuarially determined contribution (ADC) or electing to participate in the SCO program, thereby paying a stable contribution rate for up to seven years beginning with the rate applied to the 2013-14 salaries and concluding with the rate applied to the 2020-21 salaries; deferring payment of the difference between the ADC and the contribution determined applying the SCO rate. Interest on deferred contribution amounts were based on the monthly average yield on 10-year U.S. Treasury securities for the 12-month period that precedes August 1 of the applicable deferred year, plus 1.0%. As of June 30, 2017, all districts that participated in the SCO have opted out and have either paid their outstanding deferral in full or have opted to repay the System over five years. The SCO receivable balances at June 30, 2021 and 2020 were $2,722 and $8,365, respectively.

(i) Member Contributions

Tier 3 and Tier 4 members were required by law to contribute 3% of salary to the System. Effective October 2000, contributions were eliminated for Tier 3 and 4 members with 10 or more years of service or membership. Effective January 1, 2010, Tier 5 members are required by law to contribute 3.5% of salary throughout their active membership. Effective April 1, 2012, Tier 6 members are required by law to contribute between 3.0% and 6.0% of salary throughout their active membership in accordance with a schedule based upon salary earned. Pursuant to Article 14 and Article 15 of the RSSL, those member contributions are used to help fund the benefits provided by the System. However, if a member dies or leaves covered employment with less than five years of credited service for Tiers 3 and 4, or 10 years of credited service for Tiers 5 and 6, the member contributions with interest calculated at 5.0% per annum are refunded to the employee or designated beneficiary. Eligible Tier 1 and Tier 2 members may make member contributions under certain conditions pursuant to the provisions of Article 11 of the Education Law and Article 11 of the RSSL. Upon termination of membership, such accumulated member contributions are refunded. At retirement, such accumulated member contributions can be withdrawn or are paid as a life annuity.

(j) Permanent Cost-of-Living Adjustment (COLA)

Section 532-a of the Education Law provides a permanent cost-of-living benefit to both current and future retired members. This benefit will be paid commencing September of each year to retired members who have attained age 62 and have been retired for five years or attained age 55 and have been retired for 10 years. Disability retirees must have been retired for five years, regardless of age, to be eligible. The annual COLA percentage is equal to 50.0% of the increase in the Consumer Price Index (CPI), not to exceed 3.0% nor be lower than 1.0%. It is applied to the first $18,000 dollars of the maximum annual benefit. The applicable percentage payable beginning September 2021 and 2020 is 1.4% and 1.0%, respectively.

Members who retired prior to July 1, 1970 are eligible for a minimum benefit of $17,500 dollars for 35 years of credited full-time New York State service. Certain members who retire pursuant to the provisions of Article 14 of the RSSL are eligible for automatic cost-of-living supplementation based on the increase in the CPI with a maximum per annum increase of 3.0%.

(2) Summary of Significant Accounting Policies

(a) Basis of Accounting

The System's financial statements are prepared using the accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and the employer has a legal requirement to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Investment purchases and sales are recorded on a trade-date basis.

(b) Investments

Plan investments are reported 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. Where plan investments do not have a readily determinable fair market value, fair value of the plan investments has been established using the net asset value per share (or its equivalent) of the investment to establish fair value. Refer to note 6 for more detail regarding the methods used to measure the fair value of investments.

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

(c) System Employees' Pension Plan and Other Postemployment Benefits

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions and pension expense, information about the fiduciary net position of the Employees Retirement System (ERS) and additions to/deductions from ERS's fiduciary net position have been determined on the same basis as they are reported for ERS by the New York State and Local Retirement System (NYSLRS).

For purposes of measuring the net other postemployment benefits (OPEB) liability, deferred outflows of resources and deferred inflows of resources related to OPEB and OPEB expense, information about the fiduciary net position of the New York State Teachers' Retirement System Retired Employee Health Benefits Trust (the Trust) and additions to/deductions from the Trust's fiduciary net position have been determined on the same basis as they are reported for by the Trust.

For these purposes, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms, and investments are reported at fair value for both plans.

(d) Capital Assets

Capital assets of one hundred thousand dollars or more are recorded at historical cost and capitalized over their useful life. Depreciation has been provided over the estimated useful lives using the straight-line method. The estimated useful lives are as follows:

	Years
Building	39
Building improvements	15
Roads and shrubbery	10
Office furniture and equipment	7
Computer equipment and software	3 - 5
Automobiles	5

(e) Federal Tax Status

The System is exempt from federal income taxes under Section 501(a) of the IRC.

(f) Use of Estimates

Management of the System has made a number of estimates and assumptions relating to the reporting of assets and liabilities and in the disclosure of contingencies to prepare these financial statements in conformity with U.S. generally accepted accounting principles. The System's most significant estimates relate to assumptions made about future events as part of the annual actuarial valuation process and the valuation of investments. Due to the inherent nature of these estimates, actual results could differ from those estimates.

(g) Accounting Pronouncements Applicable to the System

Governmental Accounting Standards Board (GASB) Statement No. 84, *Fiduciary Activities* (GASB 84): GASB 84 provides guidance on the identification of fiduciary activities for accounting and financial reporting purposes, including clarification of fiduciary activities and how these activities should be reported. In light of the COVID-19 pandemic, GASB Statement No. 95, *Postponement of the Effective Date of Certain Authoritative Guidance*, which in addition to other pronouncements, amended GASB 84 to change the effective date of the standard to be effective for fiscal years beginning after December 15, 2020. In reviewing the criteria for fiduciary activity outlined in GASB 84, the System determined that this standard does not have a material effect on the System's financial statements.

NOTES TO FINANCIAL STATEMENTS *(continued)*
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(h) Reclassification

Certain amounts in the 2020 basic financial statements have been reclassified to conform to 2021 presentation.

(3) Funds

The following funds were established pursuant to the laws of the State of New York. All of the funds, with the exception of the Administrative Fund, are available for the payment of benefits to members or beneficiaries.

(a) Annuity Savings Fund

The fund in which contributions of Tier 1 and 2 members covered by the provisions of Article 11 of the Education Law and Article 11 of the RSSL are accumulated. For reporting purposes below, this fund is combined with the Annuity Reserve Fund.

(b) Annuity Reserve Fund

The fund from which the accumulated contributions of members covered by the provisions of Article 11 of the Education Law and Article 11 of the RSSL are paid as a life annuity. For reporting purposes below, this fund is combined with the Annuity Savings Fund.

(c) Pension Accumulation Fund

The fund in which all reserves for the payment of all benefits are accumulated with the exception of the annuity provided by the accumulated contributions of Tier 1 and 2 members, supplemental retirement allowances, and group term life insurance.

(d) Pension Reserve Fund

The fund that pays pensions with the reserves from the Pension Accumulation Fund.

(e) Group Life Insurance Fund

Pursuant to Article 4-B of the RSSL, the Retirement Board established a Group Life Insurance Fund. The Group Life Insurance Fund provides a group term death benefit not to exceed fifty thousand dollars, payable upon the death of eligible members. Group term death benefits paid for the years ended June 30, 2021 and 2020 were $19,836 and $20,280, respectively. For reporting purposes below, this fund is combined with the Pension Accumulation Fund.

(f) CO-ESC Member Contributions Fund

Members covered by the provisions of Article 14 and Article 15 of the RSSL contributed a range of 3% to 6% of salary depending on their tier to the System's CO-ESC Member Contribution Fund. Contributions to this fund were $126,946 and $118,495 for the years ended June 30, 2021 and 2020, respectively. For reporting purposes below, this fund is combined with the Pension Accumulation Fund.

(g) Administrative Fund

All operating expenses of the System are paid through this fund. The fund receives an allocation from employer contributions, which are designated by law to cover all non-investment-related operating expenses.

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
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(h) *Summary of Fund Balances*

Net position restricted for pensions at June 30, 2021 and 2020 consist of the following:

	2021	2020
Administrative fund	$ 62,807	$ 62,360
Annuity savings and reserve funds	72,002	79,456
Pension accumulation, group life insurance and CO-ESC funds	76,692,887	50,188,993
Pension reserve fund	71,320,761	70,148,696
Total	$148,148,457	$120,479,505

(4) Pension Plan Investments

(a) *Investment Policy*

The System has been authorized by the New York State Legislature pursuant to the Banking Law, Section 235; the Education Law, Article 11, Section 508; and the RSSL, Article 4-A, Sections 176 and 177, to invest in stocks, bonds, mortgages, real estate, and other investments. A specific investment within these broad asset classes may be subject to particular restrictions or limitations contained in the applicable statutory provision. The Leeway Clause of Section 177 provides that, subject to guidelines adopted by the Retirement Board, up to 25.0% of assets may be invested in types of assets not otherwise specifically authorized, provided the Retirement Board is satisfied such investments were made with the care, skill, prudence and diligence of a prudent person acting in a like capacity and familiar with such matters. Pursuant to regulations promulgated by the New York State Department of Financial Services, investments must be made in a manner consistent with those of a reasonably prudent person exercising care, skill and caution. In addition to applicable legal constraints, the Retirement Board has adopted policies governing the investments made by the System.

NOTES TO FINANCIAL STATEMENTS *(continued)*
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(b) Asset Allocation

The System's asset allocation policy as of June 30, 2021 and 2020, as adopted by the Retirement Board is as follows:

Asset Class	Target	Range
Domestic equity	33%	29-37%
International equity	16	12-20
Global equity	4	0-8
Real estate	11	6-16
Private equity	8	3-13
Total equity	72	
Domestic fixed income	16	12-20
Global bonds	2	0-3
High-yield bonds	1	0-3
Private debt	1	0-5
Real estate debt	7	3-11
Cash equivalents	1	0-4
Total fixed income	28	
Total	100%	

(c) Rate of Return

For the years ended June 30, 2021 and 2020, the annual money-weighted rate of return on System investments, net of pension plan investment expense, was 28.97% and 3.32%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

(5) Deposit and Investment Risk Disclosure

(a) Credit Risk

The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at June 30, 2021 and 2020 are as follows:

	2021		2020	
Quality rating	Fair value	Percentage of portfolio	Fair value	Percentage of portfolio
Short-term:				
P-1	$ 3,659,642	12.4 %	$ 1,534,561	5.8 %
Long-term:				
Aaa	5,831,554	19.7	5,858,083	22.3
Aa	1,769,281	6.0	1,671,541	6.4
A	4,301,876	14.5	4,029,648	15.4
Baa	3,214,781	10.9	3,173,438	12.1
Ba	705,347	2.4	565,192	2.2
B	516,285	1.7	369,937	1.4
Other	33,722	0.1	36,723	0.1
Total credit risk debt securities	20,032,488	67.7	17,239,123	65.7
U.S. government fixed income securities*	9,550,305	32.3	9,003,883	34.3
Total fixed income securities**	$ 29,582,793	100.0 %	$ 26,243,006	100.0 %

** Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk and do not have purchase limitations.*

*** Cash equivalents, real estate debt, high-yield and global bond on the Statements of Fiduciary Net Position at June 30, 2021 and 2020 include $272,588 and $168,723, respectively, in cash and commingled commercial mortgage backed securities.*

Additionally, as of June 30, 2021 and 2020, the System held mortgages, secured by a lien of the properties, valued at $3.7 billion and $4.1 billion, respectively, that are not publicly traded assets and are not rated by the rating agencies.

(b) Custodial Credit Risk

Custodial credit risk is the risk that, in the event of a failure of the counterparty, the System will not be able to recover the value of its deposit or investment, or collateral securities that are in the possession of an outside party. Deposits are exposed to custodial credit risk if they are uninsured and uncollateralized. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the System, and are held by either the counterparty or the counterparty's trust department or agent but not in the System's name.

The head of the Division of the Treasury in the New York State Department of Taxation and Finance (the Treasurer) is the statutory custodian of the funds of the System and, in this capacity, has arranged to have bank accounts collateralized. Collateral is held in the name of the Treasurer, as custodian for the System, by a bank that does not act as an agent for the System. The System's bank accounts were fully collateralized during the year. At June 30, 2021 and 2020, the System's bank balance was a negative $3,128 and a negative $2,434, respectively, representing a managed overdraft. Consistent with the System's investment policy, all of the System's securities are held by the System's custodial bank in the System's name.

NOTES TO FINANCIAL STATEMENTS *(continued)*
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(dollars in thousands)

(c) Concentration of Investment and Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer.

As of June 30, 2021 and 2020, the System did not hold investments in any one issuer that would represent 5.0% or more of fiduciary net position. Obligations issued or explicitly guaranteed by the U.S. government and pooled investments are not considered subject to concentration of credit risk.

Issuer limits for investments held by the System are established for each investment area by the RSSL Article 4-A, Sections 176-179.

Short-term fixed income investments are generally limited to the following investment types maturing in one year or less:

- Obligations issued by any Federal Home Loan Bank or obligations fully guaranteed as to principal and interest by Fannie Mae or Freddie Mac.
- Commercial paper that has the highest rating by two nationally recognized rating services.

Fixed income securities are generally limited to the following investment types with maturities longer than one year:

- Obligations payable in U.S. dollars issued by any department, agency or political subdivision of the U.S. government or issued by any corporation, company or other issuer of any kind or description created or existing under the laws of the U.S.; any state of the U.S., District of Columbia or Commonwealth of Puerto Rico; and obligations of Canada or any province or city of Canada, provided each obligation shall be rated investment grade by two nationally recognized rating services. The aggregate investment by the System in the obligations of any one issuer shall not exceed 2.0% of the assets of the System or 5.0% of the direct liabilities of the issuer.
- Notwithstanding the 2.0% limitation stated above, the System may invest not more than 2.5% of its assets in the obligations of any one railroad or industrial corporation; or any one corporation engaged directly and primarily in the production, transportation, distribution or sale of electricity or gas; or the operations of telephone and telegraph systems or waterworks or in some combination thereof.
- In no event may more than 30.0% of the System's assets be invested in bonds of electric and gas corporations. Equipment trust certificates, subject to the provisions of the law, are not to exceed 5.0% of the assets of the System.
- Obligations issued or guaranteed by the Inter-American Development Bank, Asian Development Bank, the African Development Bank or the Youth Facilities Project Guarantee Fund and participations therein.
- Obligations of the Dominion of Canada, of any province of the Dominion of Canada, and of any city of the Dominion of Canada, payable in U.S. funds, provided that the aggregate unpaid principal amount of all such obligations at any time held by the System shall not exceed 5.0% of the System's assets.
- Bonds of the Savings and Loan Bank of the State of New York, Federal Land Bank, Federal Intermediate Credit Banks, and Banks for Cooperatives.
- Bonds of Freddie Mac, Federal Home Loan Banks, Tennessee Valley Authority, Fannie Mae, and the United States Postal Service.
- Obligations issued or guaranteed by the International Bank for Reconstruction and Development, provided the aggregate unpaid principal amount of such obligations at any time held by the System shall not exceed 5.0% of the System's assets.
- Bonds and notes of any bank, trust company, savings bank, or savings and loan association organized under the laws of New York State having a net worth of at least $10 million, which meet all applicable statutes, provided the

aggregate unpaid principal amount of bonds and notes secured by conventional mortgages shall not exceed 5.0% of the assets of the System.

- Mortgage pass-through certificates, provided the certificates evidence ownership of undivided interests in pools or mortgage loans secured by first mortgages on real property located in New York state improved by one-to-four family residential dwellings, which meet all applicable statutes. The aggregate unpaid principal on conventional mortgages securing mortgage pass-through certificates cannot exceed 10.0% of the assets of the System nor can the total unpaid principal on any single pool of conventional mortgages securing mortgage pass-through certificates exceed 1.0% of the assets of the System.
- Collateralized Mortgage Obligations, which meet the requirements of applicable statutes.
- Private placements, where the purchase of unrated obligations is authorized by the Banking Law or the RSSL governing fixed income obligations; if not so provided, private placements as well as other domestic fixed income not otherwise provided for may be purchased under the Leeway Clause.

The System may invest in domestic equity securities and interest-bearing obligations payable in U.S. funds, which are convertible into equity securities of any corporation created or existing under the laws of the U.S., any state of the U.S., District of Columbia, and the Commonwealth of Puerto Rico, or any investment company, as defined by, and which is registered under, an act of Congress of the United States, entitled to the Investment Company Act of 1940, as amended, subject to certain limitations.

The System's international equity investments may not exceed 10.0% of the System's assets including emerging market equity securities. To the extent the 10.0% limitation is exceeded, the System's international equity securities may be invested in Leeway investments (which amount shall not exceed 25.0% of System assets).

The maximum amount invested within the System's equities, including domestic and international, may not exceed, in any one year, 15.0% of System assets or 70.0% of the total System assets in aggregate. The System may not own more than 5.0% of the total issued and outstanding equity securities of any one corporation.

The System's real estate investments will be diversified across geographic regions to allow for competitive portfolio performance in the event of a temporary weakness in any one region and to allow for differing urban and suburban market trends within any region. The System may invest in certain conventional mortgages constituting a first lien upon real property located in the U.S. pursuant to statute subject to certain provisions. The value of all real property held by the System shall not exceed ten percent (10.0%) of System assets and the cost of each parcel of real property shall not exceed two percent (2.0%) of the System's assets.

Alternative investments are made pursuant to the Leeway Clause of the RSSL.

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Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. The System is exposed to interest rate risk at June 30, 2021 and 2020 as follows:

	2021		2020	
Investment type	**Fair value**	**Duration (in years)**	**Fair value**	**Duration (in years)**
Mortgages	$ 3,707,599	3.017	$ 4,072,590	3.617
Cash equivalents*	4,941,631	0.118	2,733,626	0.101
Domestic fixed income	18,815,502	3.979	18,775,420	3.563
CMBS	1,850,302	0.428	1,387,443	0.309
High-yield bonds	941,987	0.177	653,947	0.139
Global bonds	3,305,959	7.540	2,861,293	7.570
Total fair value	$ 29,855,381		$ 26,411,729	
Cash equivalents and fixed income portfolio modified duration		4.170		3.990

*Commercial paper, certificates of deposit and U.S. Treasury, agency, supranational and floating debt issues.

Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates. The greater the duration, the greater its price volatility will be in response to a change in interest rates and vice versa.

NOTES TO FINANCIAL STATEMENTS *(continued)*
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(d) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The System has exposure through global and international holdings in commingled investment trust funds and separate accounts, global real estate investment trusts (REITs), global bonds, and alternatives. The "alternatives" represent private equity and real estate investments denominated in foreign currency. With respect to global bond investments, the majority of currency risk inherent in non-U.S. dollar denominated bonds owned by the System in a separate account is hedged away by the managers through currency forwards. The System has an exposure to foreign currency fluctuation at June 30, 2021 and 2020 as follows:

	2021		2020	
	Equity Securities and REITs	Alternatives, Cash, and Global Bonds	Equity Securities and REITs	Alternatives, Cash, and Global Bonds
Currency:				
Euro	$ 5,693,619	$ 2,794,323	$ 4,395,677	$ 1,917,287
Japanese Yen	4,108,954	273,212	3,557,065	261,367
British Pound Sterling	2,432,008	801,998	1,966,318	477,975
Canadian Dollar	1,697,618	110,929	1,143,918	81,575
Hong Kong Dollar	1,803,830	—	1,234,100	—
Swiss Franc	1,484,802	9,311	1,339,577	7,679
China Renminbi	1,266,084	—	1,006,986	—
Australian Dollar	1,082,800	146,540	868,160	70,125
South Korean Won	1,137,216	45,698	713,429	26,274
New Taiwan Dollar	1,106,896	(21)	665,921	15
Swedish Krona	744,941	17,840	439,225	9,380
Indian Rupees	652,103	(1)	370,836	(33)
Danish Krone	475,474	13,990	381,168	13,121
Brazilian Real	451,539	4,771	317,747	4,719
South African Rand	274,992	12,442	219,042	15,100
Other	1,732,752	95,781	1,332,538	82,321
Totals	$ 26,145,628	$ 4,326,813	$ 19,951,707	$ 2,966,905

(e) Securities Lending Transactions

The Retirement and Social Security Law authorizes the System to enter into agreements to loan securities. Agreements to lend a security must be with a broker dealer or with New York State or nationally chartered banks and must not exceed a period of one year. The market value of securities loaned may not exceed 20% of the market value of the System's invested assets. Domestic and international bonds, and domestic and international equities are loaned. Initial collateral of at least 102% of the market value of loaned securities is received from the borrower for domestic securities and 105% for international securities. Securities on loan are marked to market daily and collateral for the loan is required not to fall below 100%. The fair value of invested cash collateral is reported as an asset, and cash collateral due to borrowers is reported as a liability on the Statement of Fiduciary Net Position. The fair value of the cash collateral invested exceeded the amount the System owed borrowers by approximately $1.8 million as of June 30, 2021 and $2.7 million as of June 30, 2020. For each year-end, the System had limited credit risk exposure to borrowers because the amounts the System owes the borrowers (the collateral) exceeds the amounts the borrowers owe the System (the loaned securities).

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As of June 30, 2021 and 2020, JP Morgan Securities Lending (JP Morgan) acted as agent for the domestic equity and fixed income securities lending program while State Street Bank and Trust Co. (State Street) & Bank of New York (BNY Mellon) acted as agents for the international equity, global bonds, and global equity securities lending program. Under the terms of the contracts with the lending agents, the System is fully indemnified against failure of the borrowers to return the loaned securities (to the extent the collateral is inadequate to replace the loaned securities) or failure to pay the System for income distributions by the securities' issuers while the securities are on loan. There were no significant violations of legal or contractual provisions, no borrower or lending agent defaults, and no material recoveries of prior period losses during the year. The majority of securities on loan can be recalled by the System on demand or returned by the borrower at any time. Cash collateral is invested by the System's lending agents in short-term investment funds managed by the agent lenders pursuant to System approved investment guidelines. There is no direct match of the maturities of the collateral investments with the maturities of the securities loans. Investments are restricted to issuers with a short-term credit rating issued by Standard & Poor's and Moody's Investors Service, not lower than A-1/P -1 or long-term ratings not lower than A/A2, respectively, or the equivalent thereof. Non-cash collateral received is limited to high quality U.S. Treasuries, agency securities and agency mortgage backed securities. At June 30, 2021 and 2020, the average effective duration of the funds managed by JP Morgan was 21 and 19 days respectively and of those managed by BNY Mellon and State Street was three days compared to one day, respectively. Securities loans and related collateral investments are monitored on a daily basis to ensure compliance with collateral requirements, limitations and cash collateral investment guidelines.

Securities Lending Program	2021	2020
Fair value of securities on loan — cash collateral	$ 459,107	$ 472,652
Fair value of securities on loan — non-cash collateral	941,509	640,457
Total fair value of securities on loan	$ 1,400,616	$ 1,113,109
Fair value of liabilities to borrowers — cash collateral	$ 479,186	$ 484,150
Fair value of liabilities to borrowers — non-cash collateral	962,850	661,675
Total collateral due to borrowers	$ 1,442,036	$ 1,145,825
Fair value of cash collateral invested by System	$ 481,018	$ 486,845
Fair value of non-cash collateral held by System	962,850	661,675
Total collateral invested and held by the System	$ 1,443,868	$ 1,148,520

(6) Fair Value Measurement

NYSTRS' investments measured and reported at fair value are classified according to the following hierarchy in which the levels are based on the nature of inputs used to measure the fair value of the investment:

Level 1 – Investments' fair values based on prices quoted in active markets for identical assets.

Level 2 – Investments' fair values based on observable inputs for the assets either directly or indirectly, other than those considered Level 1 inputs, which may include quoted prices for identical assets in markets that are not considered to be active, and quoted prices of similar assets in active or inactive markets.

Level 3 – Investments' fair values based upon unobservable inputs.

NOTES TO FINANCIAL STATEMENTS *(continued)*
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The categorization of investments within the hierarchy above is based solely upon the objectivity of the inputs used in the measurement of fair value of the investments and does not reflect the level of risk associated with the investments.

Investments classified in Level 1 of the fair value hierarchy are valued from predetermined external pricing vendors or primary dealers who source quoted prices in active markets which are readily attainable exit values of these securities. Investments classified in Level 2 are subject to alternative pricing sources, including a combination of price sources, descriptive data and pricing models based on attributes such as spread data, sector, quality, duration, and prepayment characteristics. Investments classified as Level 3 are valued using best available sources such as property appraisals, discounted cash flow models and public market comparables of similar assets where applicable. The values are supplied by advisers or general partners who hold those or similar assets in investments vehicles they oversee. These pricing sources may or may not be indicative of realizable exit value attainable for the assets.

NYSTRS' investments and securities lending collateral reinvested have the following fair value measurements or net asset values (NAV) as of June 30, 2021 and 2020, respectively:

		Fair Value Measurements Using		
Investments by Fair Value Level	**June 30, 2021**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Domestic equity	50,052,876	50,030,865	21,903	108
International equity	23,505,592	23,355,851	147,888	1,853
Global equity	5,081,316	4,968,274	113,042	—
Real estate equity:				
Direct equity real estate and joint venture investments	3,273,467	—	—	3,273,467
Real estate alternative investments	300,716	—	—	300,716
Domestic REIT	3,082,892	2,931,615	151,277	—
International REIT	—	—	—	—
Global REIT	1,532,577	1,521,169	11,402	6
Total real estate equity	$ 8,189,652	$ 4,452,784	$ 162,679	$ 3,574,189
Domestic fixed income	18,815,503	356,055	18,459,418	30
High-yield bonds	941,593	1,740	939,604	249
Global bonds	3,284,833	40,913	3,243,920	—
Real estate debt:				
Domestic commercial mortgage backed securities	1,860,302	—	1,860,302	—
Real estate alternative investments	549,603	—	—	549,603
Mortgages	3,707,599	—	—	3,707,599
Total real estate debt	$ 6,117,504	$ 0	$ 1,860,302	$ 4,257,202
Cash Equivalents	4,941,136	—	4,941,136	—
Securities Lending Collateral, Invested	481,018	—	479,412	1,606
Total investments by fair value level	$121,411,023	$ 83,206,482	$ 30,369,304	$ 7,835,237

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Investments Measured at the NAV	June 30, 2021	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled international equity funds (1)	$ 1,185,388	—	Daily or Monthly	5-30 days
Privately held real estate investment trusts (2)	1,785,335	135,000	NA	NA
Real estate equity funds (3)				
Closed-end funds	3,818,185	3,208,548	NA	NA
Open-end funds	1,050,544	74,981	Quarterly	30-120 days
Private equity closed end funds (4)	14,780,950	7,139,617	NA	NA
Real estate debt funds (5)				
Closed-end funds	1,242,091	1,741,723	NA	NA
Open-end funds	111,177	—	Quarterly	90 days
Private debt closed end funds (6)	1,163,794	1,333,484	NA	NA
Total investments measured at the NAV	$ 25,137,464	$ 13,633,353		

Investment related cash, receivables and payables not included in above	133,328
Total investments and securities lending collateral reinvested	$ 146,681,815

NOTES TO FINANCIAL STATEMENTS *(continued)*
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Investments by Fair Value Level	June 30, 2020	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)
Domestic equity	41,432,247	41,408,143	23,999	105
International equity	18,301,498	18,200,998	100,367	133
Global equity	3,585,730	3,541,834	43,896	—
Real estate equity:				
Direct equity real estate and joint venture investments	2,922,218	—	—	2,922,218
Real estate alternative investments	321,099	—	—	321,099
Domestic REIT	1,991,571	1,852,831	138,740	—
International REIT	—	—	—	—
Global REIT	824,032	814,531	9,501	—
Total real estate equity	$ 6,058,920	$ 2,667,362	$ 148,241	$ 3,243,317
Domestic fixed income	18,775,420	—	18,775,355	65
High-yield bonds	654,431	14	654,417	—
Global bonds	2,833,173	10,576	2,822,597	—
Real estate debt:				
Domestic commercial mortgage backed securities	1,387,443	10,820	1,345,159	31,464
Real estate alternative investments	480,357	—	—	480,357
Mortgages	4,072,590	—	—	4,072,590
Total real estate debt	$ 5,940,390	$ 10,820	$ 1,345,159	$ 4,584,411
Cash Equivalents	2,732,929	—	2,732,929	—
Securities Lending Collateral, Invested	486,844	—	484,810	2,034
Total investments by fair value level	$ 100,801,582	$ 65,839,747	$ 27,131,770	$ 7,830,065

NOTES TO FINANCIAL STATEMENTS *(continued)*
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Investments Measured at the NAV	June 30, 2020	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled international equity funds (1)	984,917	—	Daily or Monthly	5-30 days
Privately held real estate investment trusts (2)	1,738,973	135,000	NA	NA
Real estate equity funds (3)				
Closed-end funds	3,266,981	2,689,827	NA	NA
Open-end funds	785,625	—	Quarterly	30-120 days
Private equity closed -end funds (4)	9,461,826	7,152,107	NA	NA
Real estate debt funds (5)				
Closed-end funds	1,122,461	1,239,866	NA	NA
Open-end funds	105,734	—	Quarterly	90 days
Private debt closed- end funds (6)	702,239	948,566	NA	NA
Total investments measured at the NAV	$ 18,168,756	$ 12,165,366		
Investment related cash, receivables and payables not included in above	120,428			
Total investments and securities lending collateral reinvested	$ 119,090,766			

(1) Commingled international equity funds consist of three commingled investment vehicles which invest primarily in publicly traded global equity securities. The funds are valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments.

(2) Privately held real estate investment trusts consist of two trusts which primarily invest in U.S. commercial real estate. The fair values of the investments in this group have been determined using the net asset value of units held at the end of the period based upon the property appraisals of the underlying assets. The trusts are perpetual in nature, making periodic operating distributions to shareholders. Capital calls and redemptions are determined by a unanimous vote of the trust board members.

(3) Real estate equity funds invest primarily in US commercial real estate with some investing in global commercial real estate. The investment structures are either open end funds or closed end funds. In these structures, NYSTRS commits funds along with other investors to create a pool of capital that the fund manager then invests according to an agreed upon strategy such as core, value add or opportunistic. The fair values of the investments in this group have been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital. Open End funds may be redeemed on a quarterly basis with notice. Closed End Funds are not redeemable, however distributions will be received as the underlying investments of the funds are liquidated, which on average can occur over the span of eight to ten years after final closing.

(4) Private equity funds include buyout, growth equity, venture capital, co-investment, and turnaround/restructuring strategies. These investments are accessed through primary commitments to commingled funds, secondary funds, fund of funds and separately managed accounts. The fair values have been determined using the NAV per share (or its equivalent) of the Plan's ownership, interest in partners' capital.

(5) Real estate debt funds invest primarily in transitional first mortgage, mezzanine, and subordinate debt positions. The fair values of the investments in this group have been determined using the NAV per share (or its equivalent) of the Plan's ownership, interest in partners' capital. Open End funds may be redeemed on a quarterly basis with notice.

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

Closed End Funds are not redeemable; however, distributions will be received as the underlying investments of the funds are liquidated, which on average can occur over the span of eight to ten years after final closing.

(6) Private debt funds consist of direct lending, mezzanine, distressed and special situations. These investments are accessed through primary commitments to closed end comingled funds and evergreen funds. The fair values have been determined using the NAV per share (or its equivalent) of the Plan's ownership, interest in partners' capital.

(7) Net Pension Liability (Asset) of NYSTRS Participating School Districts

The components of the net pension liability (asset) of the NYSTRS participating school districts at June 30, 2021 and 2020 were as follows:

	2021	2020
Total pension liability	$ 130,819,415	$ 123,242,776
Plan fiduciary net position	148,148,457	120,479,505
School districts' net pension liability (asset)	$ (17,329,042)	$ 2,763,271
Plan fiduciary net position as a percentage of total pension liability	113.2%	97.8%

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

(a) Actuarial Methods and Assumptions

The total pension liability at June 30, 2021 was determined using an actuarial valuation as of June 30, 2020, with update procedures used to roll forward the total pension liability to June 30, 2021. The total pension liability at June 30, 2020 was determined using an actuarial valuation as of June 30, 2019, with update procedures used to roll forward the total pension liability to June 30, 2020. These actuarial valuations applied the following actuarial methods and assumptions:

Actuarial cost method	Entry age normal
Inflation	2.40% for June 30, 2021 and 2.20% for June 30, 2020
Projected salary increases	Rates of increase differ based on service
	They have been calculated based upon recent NYSTRS member experience and were updated as of June 30, 2021.

Service	June 30, 2021 Rate	June 30, 2020 Rate
5	5.18%	4.72%
15	3.64	3.46
25	2.50	2.37
35	1.95	1.90

Projected COLAs	1.3% for June 30, 2021 and June 30, 2020
Investment rate of return	6.95% for June 30, 2021 and 7.10% for June 30, 2020 measurement of total pension liability. The rates are compounded annually, net of pension plan investment expense, including inflation.
Mortality	Annuitant mortality rates are based on plan member experience, with adjustments for mortality improvements based on Society of Actuaries Scale MP2020 for June 30, 2021 and Scale MP2019 for June 30, 2020, applied on a generational basis. Active member mortality rates are based on plan member experience, with adjustments for mortality improvements based on Scale MP2020 starting as of June 30, 2021. No improvement scale was applied for June 30, 2020.
Experience Period	The June 30, 2021 demographic actuarial assumptions and the salary scale are based on the results of an actuarial experience study for the period July 1, 2015 to June 30, 2020. The June 30, 2020 demographic actuarial assumptions and the salary scale are based on the results of an actuarial experience study for the period July 1, 2009 to June 30, 2014. NYSTRS runs one-year and five-year experience studies annually in order to gauge the appropriateness of the assumptions. Refer to the Actuarial Assumptions Report for full details.

The long-term expected rate of return on pension plan investments was determined in accordance with Actuarial Standard of Practice (ASOP) No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*. ASOP No. 27 provides guidance on the selection of an appropriate assumed investment rate of return. Consideration was given to expected future real rates of return (expected returns, net of pension plan investment expense and inflation) for each major asset class as well as historical investment data and plan performance.

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

The Long-Term Expected Real Rates of Return are presented by asset allocation classification. Best estimates of arithmetic real rates of return for each major asset class included in the System's target asset allocation as of the measurement date of June 30, 2021 and June 30, 2020 (see the discussion of the pension plan's investment policy) are summarized in the following table:

Long-Term Expected Real Rate of Return*		
Asset Class	2021	2020
Domestic equity	6.8%	7.1%
International equity	7.6	7.7
Global equity	7.1	7.4
Real estate equity	6.5	6.8
Private equity	10.0	10.4
Domestic fixed income	1.3	1.8
Global bonds	0.8	1.0
Private debt	5.9	5.2
Real estate debt	3.3	3.6
High-yield bonds	3.8	3.9
Cash equivalents	(0.2)	0.7

**Real rates of return are net of the long-term inflation assumption of 2.4% for 2021 and 2.2% for 2020.*

(b) Discount Rate

The discount rate used to measure the total pension liability was 6.95% as of June 30, 2021 and 7.10% as of June 30, 2020. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current member contribution rates and that contributions from school districts will be made at statutorily required rates, actuarially determined. Based on those assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

(c) Sensitivity of the Net Pension Liability (Asset) to Changes in the Discount Rate

The following presents the net pension liability (asset) of the NYSTRS participating school districts calculated using the discount rate of 6.95% for June 30, 2021 and 7.10% for June 30, 2020, as well as what the school districts' net pension liability (asset) would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

System's Net Pension Liability (Asset)			
	1% Decrease	Current Discount Rate	1% Increase
June 30, 2021	(5.95)%	(6.95)%	(7.95)%
	$(1,818,430)	$(17,329,042)	$(30,364,586)
	1% Decrease	Current Discount Rate	1% Increase
June 30, 2020	(6.10%)	(7.10%)	(8.10%)
	$17,454,630	$2,763,271	$(9,566,502)

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

(8) Commitments and Contingencies

The System, in the normal course of business, enters into commitments with off-balance-sheet risk. The System adheres to the same credit policies, financial and administrative controls, and risk limiting and monitoring procedures for commitments as for on-balance-sheet investments.

The commitments for loans on real estate or purchases of real estate are subject to satisfactory appraisals prior to closing. Once investments are made, the System's exposure to potential loss is determined by the value of the underlying collateral.

The future financial commitments outstanding at June 30, 2021 and 2020, respectively, were: real estate and real estate alternative investments of $3.6 billion and $3.0 billion; mortgages and real estate debt funds of $1.8 billion and $1.3 billion; private equity $7.1 billion and $7.2 billion; and private debt investments of $1.3 billion and $948.6 million.

(9) System Employees' Pension Plan

(a) Plan Description

As an employer, the System participates in ERS, a cost-sharing, multiple-employer defined benefit pension plan which falls under NYSLRS and is administered by the Comptroller of the State of New York. ERS provides retirement, disability, withdrawal, and death benefits to plan members and beneficiaries as authorized by the RSSL of the State of New York. Benefits are guaranteed by the State Constitution and cannot be diminished or impaired. Benefits can be reduced for future members only by an act of the State Legislature. The NYSLRS issues a publicly available financial report that contains financial statements and required supplementary information for ERS. The report may be obtained on the Comptroller's website at www.osc.state.ny.us/pension.

(b) Benefits

The classes of employees covered under ERS range from Tiers 1 – 6. In order to be eligible for retirement, all members must be at least age 55 and have a minimum between five and 10 years of service. There is no minimum service requirement for Tier 1 members. Generally, all members are eligible for early retirement at age 55 with a benefit calculation of 1.67% of final average salary. Benefit calculations for Tier 1 – 5 members with greater than 20 years of service credit are 2.0% of final average salary. Tier 3 – 5 members are eligible for an additional 1.5% of final average salary applied to each year of service over 30 years. Generally, Tier 6 member retirement benefits are 1.8% of final average salary with 20 years of service, with an additional 2.0% of final average salary for each year of service over 20 years.

For Tiers 1 – 5, final average salary is the average of the wages earned in the three highest consecutive years of employment. Tier 6 final average salary is the average of the wages earned in the five highest consecutive years of employment.

Other benefits provided under ERS include ordinary disability, accidental disability and post-retirement benefit increases.

(c) Funding Policy

Funding of ERS is accomplished through member and employer contributions and investment earnings, according to the New York State RSSL.

Plan members are required to contribute between 0% and 6% throughout active service. Employers are required to contribute at an actuarially determined rate. An average employer contribution rate for the tiers of 14.5% and 14.4% was applicable to the annual covered payroll for the years ended March 31, 2021 and March 31, 2020, respectively.

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

The contributions paid to ERS during the System's years ended June 30, 2021 and 2020 were $4.5 million and $4.4 million, respectively, and were 100% of the contributions required.

(d) Pension Liabilities, Pension Expense, Deferred Outflows of Resources, and Deferred Inflows of Resources Related to Pensions

At June 30, 2021 and 2020, the System reported a liability of $0.1 million and $29.7 million, respectively, for its proportionate share of the ERS net pension liability measured as of March 31, 2021 and 2020, respectively.

NYSTRS' proportion of the ERS net pension liability was based on the projection of the long-term share of contributions to ERS relative to the projected contributions of all participating employers, actuarially determined. At March 31, 2021, the System's proportion was 0.1108277% and was 0.1120455% at March 31, 2020.

For the years ended June 30, 2021 and 2020, the System recognized pension expense of $2.5 million and $10.2 million, respectively.

Deferred outflows of resources were $21.8 million and $17.7 million at June 30, 2021 and 2020, respectively. Deferred inflows of resources were $32.3 million and $0.6 million at June 30, 2021 and 2020, respectively.

(10) System Employees' Other Post-Employment Benefits

(a) Plan Description

The System's Board established the Trust in 2008 to provide post-employment health insurance benefits. Contributions from the System to the Trust are irrevocable.

The Trust is a defined-benefit, single-employer other post-employment benefit (OPEB) plan that accumulates resources to pay current and future health insurance premiums for retired System employees and beneficiaries. The Trust is administered by a 10-member Board whose members are the same as the System Board. The Trust is a legally separate entity with standalone financial statements and required supplementary information, which can be found on the System's website at www.nystrs.org. The fiduciary net position of the OPEB and changes in fiduciary net position of the OPEB have been determined on the same basis as they are reported in the financial statements of the Trust.

(b) Benefits

Pursuant to contractual agreement and policy, the System provides post-employment healthcare benefits to eligible System employees who retire from the System and reimburses Medicare eligible retirees for their Medicare Part B premiums. The System is a voluntary participating employer in the New York State Health Insurance Program (NYSHIP), administered by the State of New York. Article XI of the New York State Civil Service Law assigns the authority to NYSHIP to establish and amend the benefit provisions of the plan and to establish maximum obligations of the plan members to contribute to the plan. The System's Board is authorized to establish the contribution rates of System employees and retirees up to those set by Civil Service Law, and they are set as part of the collective bargaining process.

In order to be eligible, employees must have worked for at least 10 years for the System, retire directly from System employment, and commence receipt of their pension from ERS. Dependents may also be covered.

System retirees are required to contribute toward the cost of their coverage. Employees who retire on or after July 1, 1985 contribute an amount equal to 14.0% of the premium up to the premium of the Empire Plan option. If more expensive coverage is elected, the retiree pays 14.0% of the Empire Plan option and 100% of the difference between the two.

Employees who retire on or after April 1, 1991, are eligible to have accumulated unused sick leave converted into a credit to offset their contribution requirement.

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2021 and 2020
(dollars in thousands)

As of June 30, 2021, 673 participants including 374 current employees and 299 retired and/or spouses of retired employees participated in the healthcare plan. As of June 30, 2020, 650 participants including 351 current employees and 299 retired and/or spouses of retired employees participated in the healthcare plan.

(c) Employer Contribution

The employer contribution, or funding, of the System's OPEB obligation is at the discretion of the System's management and Board. The System's current policy is to prefund benefits by contributing an amount that is, at a minimum, equal to the ADC. At June 30, 2021 and 2020, the Trust recognized contributions of $6.3 million and $6.0 million, respectively, which were approximately 107.5% and 100.8% of the ADC or 19.5% and 19.3% of covered payroll, respectively.

(d) OPEB Liabilities, OPEB Expense, Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

At June 30, 2021 and 2020, the System reported a net OPEB liability of $47.2 million and $51.9 million, respectively. The June 30, 2021 OPEB liability was determined using an actuarial valuation as of July 1, 2019, with update procedures used to roll forward the total OPEB liability to the measurement date of June 30, 2020. The total OPEB liability at June 30, 2020 was determined using an actuarial valuation as of July 1, 2018, with update procedures used to roll forward the total OPEB liability to June 30, 2019.

For the years ended June 30, 2021 and 2020, the System recognized OPEB expense of negative $4.4 million and $4.4 million, respectively.

Deferred outflows of resources were $10.9 million for June 30, 2021 and $7.5 million for June 30, 2020. Deferred inflows of resources were $4.3 million at June 30, 2021 and $6.8 million at June 30, 2020.

(11) Risk Management

The System is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; job-related illnesses or injuries to employees; and certain natural disasters for which the System carries commercial insurance. There were no settlements in the past three years that exceeded coverage. Management of the System believes there would be no material adverse effect on the financial statements as a result of the outcome of these matters if they occur.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CHANGES IN THE SCHOOL DISTRICTS' NET PENSION LIABILITY (ASSET) (UNAUDITED)

(Last Nine Fiscal Years)

(dollars in thousands)

	2021	2020	2019	2018
Total pension liability				
Service cost	$ 1,755,405	$ 1,563,222	$ 1,528,402	$ 1,319,513
Interest	8,752,345	8,418,885	8,189,405	8,224,221
Changes of benefit terms	—	678	815	—
Differences between expected and actual experience	558,905	1,169,842	753,802	964,258
Changes of assumptions	4,241,884	(285,424)	(1,392,886)	—
Benefit payments, including refunds of member contributions	(7,731,900)	(7,503,901)	(7,307,318)	(7,108,999)
Net change in total pension liability	7,576,639	3,363,302	1,772,220	3,398,993
Total pension liability — beginning	123,242,776	119,879,474	118,107,254	114,708,261
Total pension liability — ending (a)	$ 130,819,415	$ 123,242,776	$ 119,879,474	$ 118,107,254
Plan fiduciary net position				
Contributions — employer	$ 1,618,437	$ 1,504,688	$ 1,774,646	$ 1,597,139
Contributions — member	159,874	145,034	136,610	131,595
Net investment income	33,668,008	3,923,633	8,023,180	9,928,011
Benefit payments, including refunds of member contributions	(7,731,900)	(7,503,901)	(7,307,318)	(7,108,999)
Administrative expenses	(55,492)	(71,385)	(74,242)	(60,610)
Other	10,025	3,955	9,087	9,278
Net change in plan fiduciary net position	27,668,952	(1,997,976)	2,561,963	4,496,414
Plan fiduciary net position — beginning	120,479,505	122,477,481	119,915,518	115,468,360
Cumulative effect of change in accounting principle	—	—	—	(49,256)
Beginning balance as restated	120,479,505	122,477,481	119,915,518	115,419,104
Plan fiduciary net position — ending (b)	$ 148,148,457	$ 120,479,505	$ 122,477,481	$ 119,915,518
School districts' net pension liability (asset) — ending (a) — (b)	$ (17,329,042)	$ 2,763,271	$ (2,598,007)	$ (1,808,264)

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

SCHEDULE OF CHANGES IN THE SCHOOL DISTRICTS' NET PENSION LIABILITY (ASSET) (UNAUDITED) *(continued)*

(Last Nine Fiscal Years)

(dollars in thousands)

2017	2016	2015	2014	2013
$ 1,292,143	$ 1,181,609	$ 1,396,824	$ 1,397,547	$ 1,406,084
7,988,167	7,809,566	7,611,757	7,434,764	7,252,357
—	—	—	—	—
727,895	(111,652)	(161,043)	(181,834)	(128,194)
3,045,909	7,085,423	—	—	—
(6,923,037)	(6,719,866)	(6,531,140)	(6,343,538)	(6,139,718)
6,131,077	9,245,080	2,316,398	2,306,939	2,390,529
108,577,184	99,332,104	97,015,706	94,708,767	92,318,238
$ 114,708,261	$ 108,577,184	$ 99,332,104	$ 97,015,706	$ 94,708,767
$ 1,857,359	$ 2,046,562	$ 2,633,682	$ 2,400,386	$ 1,734,908
129,770	124,587	119,411	120,762	128,903
12,951,892	2,392,354	5,400,265	16,664,703	11,636,480
(6,923,037)	(6,719,866)	(6,531,140)	(6,343,538)	(6,139,718)
(61,611)	(60,426)	(56,948)	(55,616)	(54,338)
7,845	4,014	3,213	1,365	4,522
7,962,218	(2,212,775)	1,568,483	12,788,062	7,310,757
107,506,142	109,718,917	108,155,083	95,367,021	88,056,264
—	—	(4,649)	—	—
107,506,142	109,718,917	108,150,434	95,367,021	88,056,264
$ 115,468,360	$ 107,506,142	$ 109,718,917	$ 108,155,083	$ 95,367,021
$ (760,099)	$ 1,071,042	$ (10,386,813)	$ (11,139,377)	$ (658,254)

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

SCHEDULE OF THE SCHOOL DISTRICTS' NET PENSION LIABILITY (ASSET) (UNAUDITED)

(Last Nine Fiscal Years)

(dollars in thousands)

	2021	2020	2019	2018	2017
Total pension liability	$ 130,819,415	$ 123,242,776	$ 119,879,474	$ 118,107,254	$ 114,708,261
Plan fiduciary net position	148,148,457	120,479,505	122,477,481	119,915,518	115,468,360
School districts’ net pension liability (asset)	$ (17,329,042)	$ 2,763,271	$ (2,598,007)	$ (1,808,264)	$ (760,099)
Plan fiduciary net position as a percentage of the total pension liability	113.2%	97.8%	102.2%	101.5%	100.7%
Covered payroll	$16,973,207	$16,973,171	$16,691,626	$16,288,884	$15,846,705
School districts’ net pension liability (asset) as a percentage of covered payroll	(102.1)%	16.3%	(15.6)%	(11.1)%	(4.8)%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

SCHEDULE OF THE SCHOOL DISTRICTS' CONTRIBUTIONS (UNAUDITED)

(Last Ten Fiscal Years)

(dollars in thousands)

	2021	2020	2019	2018
Actuarially determined contribution	$ 1,617,547	$ 1,503,823	$ 1,772,651	$ 1,596,311
Contributions in relation to the actuarially determined contribution	1,617,547	1,503,823	1,772,651	1,596,311
Contribution deficiency	$ —	$ —	$ —	$ —
Covered payroll	$ 16,973,207	$ 16,973,171	$ 16,691,626	$ 16,288,884
Contributions as a percentage of covered payroll	9.53%	8.86%	10.62%	9.80%

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

SCHEDULE OF THE SCHOOL DISTRICTS' NET PENSION LIABILITY (ASSET) (UNAUDITED) *(continued)*

(Last Nine Fiscal Years)

(dollars in thousands)

2016	2015	2014	2013
$ 108,577,184	$ 99,332,104	$ 97,015,706	$ 94,708,767
107,506,142	109,718,917	108,155,083	95,367,021
$ 1,071,042	$ (10,386,813)	$ (11,139,377)	$ (658,254)
99.0%	110.5%	111.5%	100.7%
$ 15,431,009	$ 15,021,357	$ 14,771,301	$ 14,647,830
6.9%	(69.1)%	(75.4)%	(4.5)%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

SCHEDULE OF THE SCHOOL DISTRICTS' CONTRIBUTIONS (UNAUDITED) *(continued)*

(Last Ten Fiscal Years)

(dollars in thousands)

2017	2016	2015	2014	2013	2012
$ 1,857,234	$ 2,046,152	$ 2,633,244	$ 2,400,378	$ 1,734,303	$ 1,626,589
1,857,234	2,046,152	2,608,266	2,383,145	1,734,303	1,626,589
$ —	$ —	$ 24,978	$ 17,233	$ —	$ —
$15,846,705	$ 15,431,009	$ 15,021,357	$ 14,771,301	$ 14,647,830	$ 14,640,764
11.72%	13.26%	17.36%	16.13%	11.84%	11.11%

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

SCHEDULE OF INVESTMENT RETURNS (UNAUDITED)
(Last Nine Fiscal Years)

	2021	2020	2019	2018	2017	2016	2015	2014	2013
Annual money-weighted rate of return, net of investment expense	28.97%	3.32%	6.93%	8.95%	13.05%	2.28%	5.18%	18.16%	13.73%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
(Last Nine Fiscal Years)

Method and assumptions used in calculations of school districts' Total Pension Liability (TPL)

Changes of benefit terms. None

Changes of assumptions. Actuarial assumptions are revised periodically to more closely reflect actual, as well as anticipated future experience. The actuarial assumptions were revised and adopted by the Retirement Board on October 29, 2015 and first used in the 2016 determination of the Total Pension Liability. Current proposed assumptions are used in the 2021 determination of the Total Pension Liability.

The System's long-term rate of return assumption for purposes of the NPL is 6.95%, effective with the 2021 actuarial valuation. For the 2020 and 2019 actuarial valuations, the System's long-term rate of return assumption was 7.10%. For the 2018 and 2017 actuarial valuations, the System's long-term rate of return assumption was 7.25%. For the 2016 actuarial valuation, the System's long-term rate of return assumption was 7.50%. Prior to the 2016 actuarial valuation, the System's long-term rate of return was 8.00%.

The System's assumed annual inflation rate is 2.40% for 2021 and 2.20% for 2019 and 2020. For the 2018 and 2017 actuarial valuations, the System's annual inflation assumption was 2.25%. For the 2016 actuarial valuation, the System's annual inflation assumption was 2.5%. Prior to the 2016 actuarial valuation, the System's annual inflation assumption was 3.00%.

Effective with the 2019 actuarial valuation, COLAs are projected to increase at a rate of 1.30% annually. Effective with the 2015 actuarial valuation, COLAs were projected to increase at a rate of 1.50% annually. Prior to the 2015 actuarial valuation, COLAs were projected to increase at a rate of 1.625% annually.

Effective with the 2021 actuarial valuation, the assumed scale for mortality improvement was changed from MP2019 to MP2020. Effective with the 2020 actuarial valuation, the assumed scale for mortality improvement was changed from MP2018 to MP2019. Effective with the 2019 actuarial valuation, the assumed scale for mortality improvement was changed from MP2014 to MP2018.

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED) *(continued)*
(Last Nine Fiscal Years)

Method and assumptions used in calculations of school districts' Actuarially Determined Contributions. The actuarially determined contribution rates in the schedule of school districts' contributions are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine school districts' contributions in 2021. For assumptions and plan provisions used in contributions reported for years prior to 2021, refer to the Annual Actuarial Report for two years prior to the end of the fiscal year in which contributions are reported.

Valuation Date	June 30, 2019
Actuarial cost method	Aggregate (level percent of payroll)*
Amortization method	n/a*
Remaining amortization period	n/a*
Asset valuation method	Five-year phased-in deferred recognition of each year's net investment income/loss in excess of (or less than) the assumed valuation rate of interest at a rate of 20.0% per year, until fully recognized after 5 years.
Inflation	2.20%
Projected salary increases	Rates of increase differ based on service. They have been calculated based upon recent NYSTRS member experience.

Service	Rate
5	4.72%
15	3.46
25	2.37
35	1.90

Projected COLAs	1.3% compounded annually
Valuation rate of interest	7.10% compounded annually, net of pension plan investment expense.

** The System is funded in accordance with the Aggregate Cost Method, which does not identify or separately amortize unfunded actuarial liabilities. Costs are determined by amortizing the unfunded present value of benefits over the average future working lifetime of active plan members, which currently for NYSTRS is approximately 13 years.*

See accompanying independent auditors' report.

OTHER SUPPLEMENTAL SCHEDULES

SCHEDULES OF ADMINISTRATIVE EXPENSES

Years ended June 30, 2021 and 2020

(dollars in thousands)

	2021	2020
Salaries and benefits:		
Salaries	$ 35,141	$ 34,144
Civil service	50	48
Employees retirement	4,383	4,517
Health and dental insurance	12,679	11,888
Overtime salaries	12	37
Social Security	2,461	2,385
Total salaries and benefits	54,726	53,019
Building occupancy expenses:		
Building, grounds and equipment	$ 1,680	$ 2,434
Depreciation - building and improvements	1,996	1,896
Depreciation - Equipment	189	288
Office supplies and expenses	114	186
Utilities and municipal assessments	911	920
Total building occupancy expenses	4,890	5,724
Computer expenses:		
Amortization/depreciation - computer equipment	$ 1,379	$ 633
Computer hardware and software	4,350	3,938
Computer maintenance and supplies	65	68
Total computer expenses	5,794	4,639
Personnel and meeting expenses:		
Board - meetings, travel and education	$ 28	$ 93
Delegates meeting	3	46
Pre-retirement seminars	—	134
Professional development	561	773
Travel and automobile expense	3	132
Other personnel expenses	65	84
Total personnel and meeting expenses	660	1,262
Professional and governmental services:		
Auditors - financial*	$ 61	$ 416
Auditors - Department of Financial Services	139	151
Disability medical examinations	94	68
Postage and cartage	780	770
Professional fees and services	688	816
Publications	152	114
Statutory custodian charges	130	131
Total professional and governmental services	2,044	2,466
Total administrative fund expenses	68,114	67,110
Reconciliation of contribution expense to pension and OPEB expense	(12,622)	4,275
Total Administrative Expenses	$ 55,492	$ 71,385

** presented on an accrual basis for 2021. Expenses incurred in fiscal year 2022 when services performed.*

See accompanying independent auditors' report.

OTHER SUPPLEMENTAL SCHEDULES *(continued)*

SCHEDULES OF INVESTMENT EXPENSES

Years ended June 30, 2021 and 2020

(dollars in thousands)

	2021		2020	
Investment Category	Fair Value of Assets Serviced or Under Management	Expenses	Fair Value of Assets Serviced or Under Management	Expenses
Externally managed/serviced assets:				
International equity	$ 24,720,161	$ 29,958	$ 19,316,770	$ 26,311
Real estate equity	14,839,765	94,632	11,846,790	98,942
Private equity	14,780,950	137,707	9,461,825	137,539
Real estate debt	5,083,135	15,713	4,550,445	13,942
Global equity	5,097,105	17,702	3,595,252	11,574
Global bonds	3,305,959	5,834	2,861,293	5,655
Domestic equity	2,162,554	5,729	1,602,775	9,926
Private debt	1,163,794	17,491	702,239	13,711
High-yield bonds	941,987	2,806	653,947	1,474
Sub-total	72,095,410	327,572	54,591,336	319,074
General expenses	—	11,968	—	10,938
Totals	**$ 72,095,410**	**$ 339,540**	**$ 54,591,336**	**$ 330,012**

See accompanying independent auditors' report.

OTHER SUPPLEMENTAL SCHEDULES *(continued)*

SCHEDULE OF CONSULTING FEES
Year ended June 30, 2021

Fees in excess of $50,000 for outside professionals other than investment advisers.

Name	Amount	Nature
Stepstone Group LP	$ 1,669,800	Investment Consulting
Callan LLC	741,321	Investment Consulting
Aon Investments USA Inc	535,850	Investment Consulting
Sheppard Mullin Richter & Hampton LLP	382,197	Legal Services
Seward & Kissel LLP	371,051	Legal Services
Novacoast Inc	234,832	IT Professional Services
DLA Piper LLP (US)	142,321	Legal Services
Nixon Peabody LLP	134,238	Legal Services
Nossaman LLP	130,185	Legal Services
Turner Construction	127,628	Construction Management
Cherry Road Technologies Inc	124,350	IT Professional Services
Katten Muchin Rosenman LLP	122,496	Legal Services
Mercer Investments LLC	120,833	IT Professional Services
Sidley Austin LLP	113,547	Legal Services
KPMG LLP	96,112	Accounting Services
Janus Software Inc	70,370	IT Professional Services
Lenox Park Solutions	65,000	MWBE Consulting
Glass Lewis & Co	59,000	Investment Consulting
K&L Gates LLP	57,806	Legal Services
Morgan Lewis & Bockius LLP	57,563	Legal Services
Cheiron Inc	52,695	Actuarial Consulting

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