State Teachers Retirement System of Ohio

COMPREHENSIVE
Annual Financial Report 2018

Fiscal Years Ending June 30, 2018 and 2017

State Teachers Retirement System of Ohio

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Annual Financial Report 2018

Fiscal Years Ending June 30, 2018 and 2017

Prepared through the joint efforts of the STRS Ohio staff
275 E. Broad St., Columbus, OH 43215-3771 • 614.227.4090 • www.strsoh.org

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

The State Teachers Retirement System of Ohio

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2017

Executive Director/CEO

TABLE OF CONTENTS

Professional Consultants: Independent Public Accountants, CliftonLarsonAllen LLP, Toledo, Ohio; Investment Consultants, Callan Associates Inc., Chicago, and Cliffwater LLC, Marina del Ray, Calif.; Actuarial Consultants, Cheiron; and Performance Verification Consultants, ACA Performance Services LLP, New York. See Page 59 for a list of external managers.

2017–2018 STATE TEACHERS RETIREMENT BOARD

Guiding the members of the Retirement Board is their collective belief that Ohio's public educators deserve comprehensive benefits and quality service from their retirement system during their careers and in retirement. The Retirement Board provides the direction, fiduciary oversight and policies that enable STRS Ohio to fulfill its mission of partnering with STRS Ohio members in helping to build retirement security.

The Retirement Board is composed of 11 members as follows: five elected contributing members; two elected retired members; an investment expert appointed by the governor; an investment expert appointed jointly by the speaker of the Ohio House of Representatives and the Ohio Senate president; an investment expert appointed by the treasurer of state; and the superintendent of public instruction or his designated investment expert. These individuals devote hundreds of volunteer hours in service to STRS Ohio and are compensated only for necessary expenses.

In April 2018, the speaker of the Ohio House of Representatives and the president of the Ohio Senate jointly appointed David Gruber to an investment expert seat on the Retirement Board. The term for this seat runs through Nov. 4, 2020. The seat was formerly held by Craig Brooks.

Robert A. McFee and Jeffrey Rhodes were elected to contributing member seats on the Retirement Board in the May 2018 election, filling seats vacated by Mark Hill and Dale Price. The term for these seats runs from Sept. 1, 2018, through Aug. 31, 2022.

In June 2018, Carol Correthers was elected as vice chair and Robert Stein assumed the responsibility of board chair, effective Sept. 1, 2018.

At the August 2018 board meeting, the board elected Dale Price to fill the contributing member seat previously held by Tim Myers, who retired in June 2018. The term for this seat expires in 2020.

Mark Hill, Chair
Contributing member since 2010.
Worthington City Schools, Franklin County

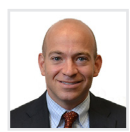
Robert Stein, Vice Chair
Retired teacher member since 2009.

Carol Correthers
Contributing member since 2009.
Lorain City Schools, Lorain County

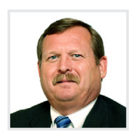
Paolo DeMaria
Superintendent of Public Instruction. Ex officio member of the board since 2016.

David Gruber
Appointed jointly by the speaker of the House and the Senate president in 2018.

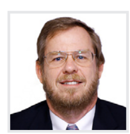
Taiyia L. Hayden
Contributing member since 2006.
Columbus City Schools, Franklin County



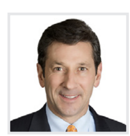
Yoel Mayerfeld
Appointed by the Treasurer of State in 2012.



Tim Myers
Contributing member since 2008.
Elida Local Schools, Allen County



Dale Price
Contributing member since 2010.
Toledo Public Schools, Lucas County



Wade Steen
Appointed by the governor of the state in 2016.

Rita J. Walters
Retired teacher member since 2017.

Michael J. Nehf, Executive Director
State Teachers Retirement System of Ohio

STRS Ohio Mission and Vision

The mission of STRS Ohio is to partner with our members in helping to build retirement security.

The vision of STRS Ohio is to be a leading retirement system by providing comprehensive retirement benefits and quality service to our members through exceptional financial performance, ethical business practices and responsible resource management.

STRS Ohio Guiding Principles

1. Make decisions that produce the greatest sustainable benefits for our members.
2. Attract, develop and retain highly competent and motivated associates who have authority commensurate with their responsibilities.
3. Continually improve through research, development, evaluation and risk management.
4. Build an organizational culture that inspires a high level of professionalism and performance.

STRS Ohio Senior Staff Members

Michael J. Nehf, Executive Director

John D. Morrow, Deputy Executive Director — Investments and Chief Investments Officer

Gary M. Russell, Deputy Executive Director — Member Benefits and Chief Benefits Officer

Paul M. Snyder, Deputy Executive Director — Finance and Chief Financial Officer

Marla E. Bump, Director, Governmental Relations

Rhonda L. Hare, Retirement Board Liaison

Andrew J. Marfurt, Director, Human Resource Services

William J. Neville, Chief Legal Officer

David Tackett, Chief Audit Executive, Internal Audit

Gregory A. Taylor, Chief Information Officer

Nicholas J. Treneff, Director, Communication Services

STATE TEACHERS RETIREMENT SYSTEM OF OHIO

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Columbus, OH 43215-3771
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RETIREMENT BOARD CHAIR
ROBERT STEIN

RETIREMENT BOARD VICE CHAIR
CAROL CORRETHERS

EXECUTIVE DIRECTOR
MICHAEL J. NEHF

Dec. 7, 2018

Members of the State Teachers Retirement Board:

We are pleased to present the *Comprehensive Annual Financial Report* of the State Teachers Retirement System of Ohio for the fiscal year ended June 30, 2018. This report is intended to provide financial, investment, actuarial and statistical information in a single publication. STRS Ohio management is responsible for the accuracy of the data, as well as the completeness and fairness of the presentation.

STRS Ohio was created by legislative act on May 8, 1919, as an alternative to separate, often unstable local school district retirement plans. STRS Ohio is a cost-sharing, multiple-employer plan providing service retirement, disability and survivor benefits to teachers and faculty members of public boards of education, state-supported colleges and universities, and the state of Ohio and its political subdivisions. Optional health care coverage is available to eligible benefit recipients and their eligible dependents.

More analysis and information of the financial activities of STRS Ohio can be found in the Management's Discussion and Analysis section that begins on Page 10 of this report.

Major Initiatives

Pension reform legislation passed in 2012 to improve the financial condition of Ohio's pension systems continues to be implemented at STRS Ohio. Changes implemented during fiscal year 2018 include increases to age and service requirements for unreduced benefits to any age and 32 years of service; or age 65 and five years of service, for retirement dates on or after Aug. 1, 2017. The age and service requirements will continue to increase to 35 years of service by Aug. 1, 2023, and a minimum age 60 beginning Aug. 1, 2026. The law also provides the Retirement Board with authority to make future changes depending on funding improvements.

Beginning July 1, 2017, the cost-of-living was reduced to 0% for all benefit recipients. The change will remain in place until the Retirement Board approves an adjustment in the future. Not later than the next five-year experience review (expected to be in 2022), the board will evaluate whether an upward adjustment of the cost-of-living increase is payable without materially impairing the fiscal integrity of the retirement system. STRS Ohio's annual actuarial valuation report shows funding improvements during the fiscal year ended June 30, 2018. The report provides a detailed look into the financial health of the pension fund and includes the updated actuarial assumptions the board adopted in 2017. These assumptions included reducing the expected investment return to 7.45%, updating to generational mortality tables to recognize that STRS Ohio retirees are living longer, reducing the inflation assumption and reducing overall expected payroll growth. The valuation report shows the funded ratio — the value of assets compared to actuarial accrued liabilities (expected benefits to be paid to the membership) — improved slightly to 75.5% from 75.1% the previous year. The funding period — the time needed ro reach a 100% funded ratio under current assumptions and benefit levels — also improved, decreasing to 17.8 years from 18.4 years in the previous year's report. Despite the improvement in the funding status, because of the volatility around investment returns, staff estimates STRS Ohio faces about a 29% chance that the pension fund could drop below a 50% funded ratio in the next 10 years.

In the past several years, STRS Ohio has developed online applications for various processes and forms. There are now about 108,000 active members and 82,000 benefit recipients who have established an online account. In addition to saving printing and mailing costs, the system benefits by receiving more accurate information — requiring fewer instances of one-on-one follow up. During this past fiscal year, STRS Ohio members made nearly 9,800 online changes to tax withholdings and direct deposits. Additionally, nearly 85% of retirement applications are completed online and about 7,800 members opted out of paper tax forms. Members also continue to embrace paperless communications. The number of members who have opted out of receiving a paper annual statement has increased to 55,000 from 48,000 last year. There are now more than 77,000 members who have opted out of receiving paper newsletters and more than 13,000 benefit recipients who now receive electronic health care open-enrollment materials.

After a 33-month project, STRS Ohio successfully upgraded its STaRS pension fund management system in May 2018. The project required a sustained commitment from staff, as well as contractors. While the upgrade was implemented six months later than originally planned, it was completed within budget. The STaRS system enables all necessary pension fund management functions, such as maintaining member information, accepting contributions from employers, paying monthly benefits and providing health care benefits. The Member Self Service (MSS) and Employer Self Service (ESS) secure web portals are also part of the STaRS system and were upgraded. Staff anticipates operating for about five years before another upgrade project will be necessary.

A new supplemental savings initiative kicked off this fiscal year and is designed to raise awareness and provide high level information to members regarding the need for additional savings for retirement and methods they may use to save. A print piece is included in the Member Education meeting packets and available during counseling sessions, and an online video is currently being developed.

For the tenth time in the past 20 years, and for the third year in a row, STRS Ohio was ranked number one in member service, according to the CEM Pension Administration Benchmarking report for fiscal year 2017. The survey benchmarked 45 participating pension systems, primarily from the United States, Canada and Scandinavia. STRS Ohio earned the highest service level score for Pension Payments, Call Center, One-on-one Counseling, Pension Estimates, Disaster Recovery and Website. While the service level was at the top, the administrative cost per active member and annuitant decreased to $105 from $107. STRS Ohio's administrative costs measured in the survey continue to trend lower, while costs for the peer group have increased. The reduction in administrative costs have been primarily driven by staff reduction that reflects the increased usage of online applications and a reduction in retirements, counseling sessions and purchasable service activity.

Another report by CEM showed STRS Ohio has top decile investment returns and low investment costs compared to peer retirement systems. The report compared investment data for the five-year period ending Dec. 31, 2017, from 17 large U.S. public fund sponsors. Results of the study showed STRS Ohio was low cost compared to its peer group for investment costs. STRS Ohio's strategy of using internal investment managers for about 70% of the system's assets was the primary reason for its low overall costs. The report stated that STRS Ohio saved about $95 million in 2017 by using the internal management approach. The savings is based on the peer group's median external management costs. The report also provided performance data and showed that STRS Ohio's five-year total net return of 10.1% was above the peer median of 9.0%.

Management Responsibility

This report consists of management's representations regarding STRS Ohio's finances. Management assumes full responsibility for the completeness and reliability of all information presented in this report. To provide a reasonable basis for making these representations, management has established a comprehensive internal control framework that is designed both to protect the assets from loss, theft or misuse and to compile sufficient, reliable information for the preparation of STRS Ohio's financial statements in conformity with generally accepted accounting principles. The internal control framework has been designed to provide reasonable rather than absolute assurance that the financial statements will be free from material misstatement. The concept of reasonable assurance recognizes that first, the cost of a control should not exceed the benefits likely to be derived, and second, the valuation of the cost and benefits requires estimates and judgments by management. We as management believe that the internal controls currently in place support this purpose, and assert that, to the best of our knowledge and belief, this financial report is complete and reliable in all material respects.

Investments

Total investments (including short-term investments) increased to $79.9 billion as of June 30, 2018. The Investment Review starting on Page 41 discusses the investment environment during fiscal 2018. The allocation of investment assets is designed to provide high long-term returns at optimal risk consistent with the expected long-term objectives of the board. Investment risks are diversified over a very broad range of market sectors, securities and other investments. This strategy reduces portfolio risk to adverse developments in sectors and issuers experiencing unusual difficulties and offers opportunity to benefit from future markets. A summary of the asset allocation can be found on Page 56 and a schedule of the system's largest investment holdings can be found on Page 58.

STRS Ohio claims compliance with the Global Investment Performance Standards (GIPS®) and the verification report is on Page 54 and full performance disclosures are on Page 55. For the fiscal year ended June 30, 2018, net investment income was $7.1 billion and the total fund returned 9.57%. STRS Ohio's annualized rate of return was 8.12% over the last three years and 9.26% for the last five years. Similar benchmark returns over the same one-, three- and five-year periods were 8.94%, 7.58% and 8.98%, respectively. Investment performance is calculated using a time-weighted rate of return. Performance is net of fees for external managed real estate and alternative investments and gross of fees on all other investments.

Plan Contributions

Member and employer contributions, as well as income from investments, provide funds for pension benefits and health care coverage. Member and employer contributions were each $1.6 billion in 2018. Employer contributions include amounts paid by employers of participants in alternative retirement plans (ARPs). ARP participants are not members of STRS Ohio; however, their employers contribute 4.47% of salaries to STRS Ohio to help pay for unfunded liabilities. In fiscal year 2018, STRS Ohio received $29.2 million in joint retirement revenue. Premiums received from health care recipients totaled $329.3 million in fiscal year 2018. STRS Ohio received $107.2 million in Medicare Part D government reimbursements for participant prescription costs. This federal subsidy helps offset the overall cost of the post-employment health care program.

Plan Deductions

The principal purpose for STRS Ohio is to provide retirement, survivor and disability benefits to qualified members and their beneficiaries. Plan deductions, including refunds to terminated members, optional health care coverage and administrative expenses, totaled $7.9 billion. Service retirement payouts increased 0.9% in fiscal 2018 as a result of new retiree benefits being higher than benefits removed due to death. Refunds increased by $29.3 million from fiscal year 2017, due in part to more members reaching the Internal Revenue Code minimum distribution age.

Funding

Contribution rates are intended to provide a level basis of funding using the entry age normal cost method, and an actuarial valuation is performed annually by an external actuarial firm. The July 1, 2018, valuation shows that the amortization period for the unfunded accrued liability decreased to 17.8 years from 18.4 the prior year, and the ratio of actuarial assets to total accrued liabilities increased to 75.5% from 75.1%. A detailed discussion of funding is provided in the Actuarial Section of this report beginning on Page 60.

Retiree Health Care Program

Health Care Plan assets increased 7.1% to $3.7 billion in fiscal 2018 from $3.5 billion in fiscal 2017 as a result of increases in governmental reimbursements, decreases in health care benefit payments and higher than expected investment returns. Program changes, designed to build a long-term financial foundation for the health care program, continue to appear in fiscal 2018 results. The changes result in utilization of lower-cost plans, decreases in Medicare Part B premium reimbursements and higher generic drug usage.

Benefit recipient health care premiums decreased by 2.9% during fiscal 2018 as a result of continued decreases in non-Medicare retiree health care enrollment in 2018. Government reimbursements increased by 35.1% in fiscal 2018 due to higher federal reimbursement for prescription drugs. Payments for claims and administrative expenses totaled $519.9 million in fiscal 2018, a decrease of 8.5% from the previous fiscal year.

The annual health care actuarial valuation showed that benefit payments for the 12-month period ending June 30, 2018, totaled $517.5 million, an average of about $1.4 million per day. The funded ratio of the plan is 176%, meaning if the fund earns 7.45% in all future years and all other plan experience matches assumptions, the fund is projected to remain solvent for all current members. The health care program is susceptible to volatility from investment returns, government reimbursement changes, enrollment fluctuations and health care inflation.

Certificate of Achievement and Other Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to STRS Ohio for its *Comprehensive Annual Financial Report* for the fiscal year ended June 30, 2017. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports.

To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report that conforms to program standards. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for one year. STRS Ohio has received a Certificate of Achievement for the last 28 years. We believe our current report continues to meet the Certificate of Achievement program requirements and will be submitted to the GFOA.

In addition, the Public Pension Coordinating Council (PPCC) presented STRS Ohio with the 2018 Public Pension Standards Award for Administration in recognition of meeting professional standards set forth in the Public Pension Standards. PPCC is a coalition made up of the National Association of State Retirement Administrators (NASRA), the National Council on Teacher Retirement (NCTR) and the National Conference on Public Employee Retirement Systems (NCPERS).

Acknowledgments

The preparation of this report is possible only through the combined efforts of the STRS Ohio staff. It is intended to provide complete and reliable information as a basis for making management decisions, complying with legal provisions and determining responsible stewardship of the assets contributed by members and their employers.

Respectfully submitted,

Michael J. Nehf
Executive Director

Paul M. Snyder, CPA
Deputy Executive Director
Chief Financial Officer

CliftonLarsonAllen

CliftonLarsonAllen LLP
CLAconnect.com

INDEPENDENT AUDITORS' REPORT

The Retirement Board
State Teachers Retirement System of Ohio and
The Honorable Dave Yost, Auditor of State

Report on the Financial Statements

We have audited the accompanying financial statements of State Teachers Retirement System of Ohio (STRS Ohio), which comprise the statements of fiduciary net position as of June 30, 2018 and 2017, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

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 and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits 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 financial position of STRS Ohio as of June 30, 2018 and 2017, and the changes in its financial position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

The Retirement Board
State Teachers Retirement System of Ohio and
The Honorable Dave Yost, Auditor of State
Page 2

Other Matters

Required Supplementary Information

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

Other Information

Our audits were conducted for the purpose of forming an opinion on STRS Ohio's financial statements. The additional information, consisting of the schedules of administrative expenses, investment expenses, and external asset managers' fees, as listed in the table of contents, is presented for purposes of additional analysis and is not a required part of the financial statements.

The additional information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audits of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the additional information, consisting of the schedules of administrative expenses, internal investment expenses, and external asset managers' fees, as listed in the table of contents, is fairly stated, in all material respects, in relation to the financial statements as a whole.

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

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated December 6, 2018 on our consideration of STRS Ohio's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on STRS Ohio's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering STRS Ohio's internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

CliftonLarsonAllen LLP

Toledo, Ohio
December 6, 2018

Management is pleased to provide this overview and analysis of the financial activities of the State Teachers Retirement System of Ohio (STRS Ohio) for the years ended June 30, 2018 and 2017. This information is intended to supplement the financial statements, which begin on Page 17 of this report. We encourage readers to consider all the information and data in this 2018 *Comprehensive Annual Financial Report*.

As of June 30, 2018, STRS Ohio held $78.6 billion in trust on behalf of about 494,000 active, inactive and retired educators. This represents a $2.8 billion increase in net position from the previous fiscal year-end. In fiscal 2017, STRS Ohio experienced a $5.4 billion increase in net position from the previous fiscal year-end.

A multifaceted pension reform plan to strengthen the financial condition of the pension fund became effective in 2013 and will be fully phased-in by 2026. Key changes made to the pension plan include:

- ***Increased the eligibility requirements for full retirement — with an unreduced benefit — to age 60 with 35 years of service or age 65 with five years of service (phased-in by Aug. 1, 2026).***
- ***Increased the eligibility requirements for early retirement — with an actuarially reduced benefit — to a minimum 30 years of service or age 60 with five years of service (phased-in by Aug. 1, 2023).***
- ***Increased member contributions to 14% of compensation.***
- ***Changed benefit formula to 2.2% for all years of service and eliminated the 35-year enhanced benefit formula.***
- ***Changed final average salary calculation to the five highest years of earnings.***
- ***Reduced the cost-of-living adjustment (COLA).***
- ***Modified eligibility conditions for disability and survivor benefits, requiring longer service.***
- ***Granted the Retirement Board authority to make future adjustments depending on the retirement system's funding progress.***

In 2017, the Retirement Board made the difficult decision to further reduce the (COLA) increases to 0% to preserve the fiscal integrity of the retirement system. The board will evaluate — not later than the next five-year actuarial experience review expected in 2022 — whether an upward adjustment of the COLA is payable without materially impairing the fiscal integrity of the retirement system.

Financial Highlights

Highlights of the fiscal year include:

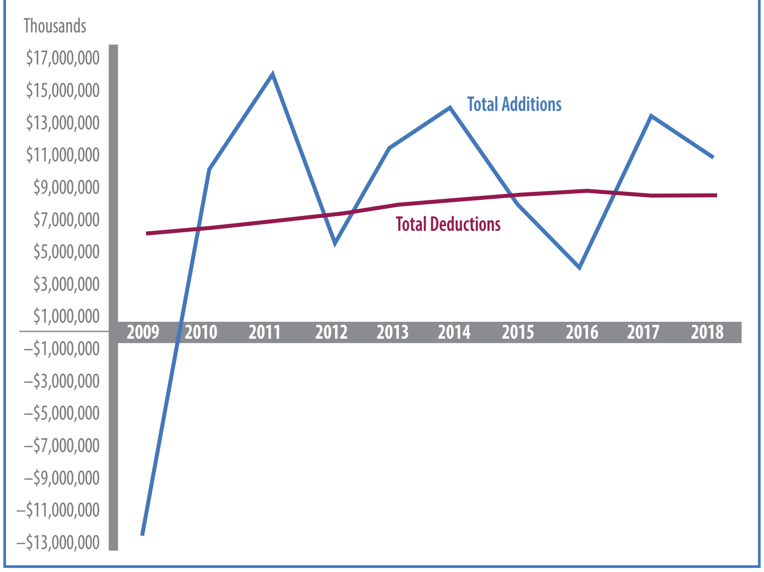
- The total fund time-weighted rate of return was 9.57% in fiscal 2018. The total fund rate of return for fiscal 2017 was 14.29%. Five- and 10-year total fund annualized returns are 9.26% and 7.04%, respectively. Investment performance is calculated using a time-weighted rate of return. Performance is net of fees for external managed real estate and alternative investments and gross of fees on all other investments.
- Total net position increased 3.7% from the prior fiscal year, ending at $78.6 billion as of June 30, 2018. Net position increased 7.6% during fiscal 2017, ending at $75.8 billion as of June 30, 2017.
- The post-employment health care net position was $3.7 billion as of June 30, 2018, an increase of 7.1% from the prior fiscal year. The post-employment health care balance increased 9.1% during fiscal 2017, ending at $3.5 billion as of June 30, 2017. Program changes designed to build a long-term financial foundation for the health care program continue to improve the net position. Changes include utilization of lower-cost plans, decreases in Medicare Part B premium reimbursements and higher generic drug use.
- Defined contribution accounts finished the year with $1.5 billion in net position, an increase of 16.5% from the end of fiscal 2017 due to investment performance and continued participant growth in the Defined Contribution Plan. The defined contribution accounts ended fiscal 2017, with $1.3 billion in net position, an increase of 21.2% from the end of fiscal 2016.
- Total additions to fiduciary net position were $10.7 billion during fiscal 2018 compared to $13.2 billion during fiscal 2017.
- Member and employer contributions totaled $3.2 billion in fiscal year 2018 and increased over the prior year by $42.8 million and $53.5 million, respectively as a result of increases in plan payroll. Total member and employer contributions were $3.1 billion in fiscal 2017 and increased 7.5% from fiscal 2016.
- Contributions from other retirement systems decreased to $29.2 million in fiscal 2018 from $39.6 million in fiscal 2017 and include Ohio retirement systems' joint service credit retirement activity.

- Net investment income was $7.1 billion in fiscal year 2018 compared to $9.7 billion in fiscal year 2017. Investment performance for fiscal years 2018 and 2017 was above the long-term investment return assumption. Interest income increased $84 million or 23.0% and is due to increases in interest rates and additional allocations made to fixed income investments during the fiscal year as part of the adopted asset allocation. Net securities lending income increased 11.6% in fiscal 2018 due to increased loans outstanding in fiscal 2018 and lower volumes in fiscal 2017 due to the global custodian change.
- Total deductions to fiduciary net position were $7.9 billion during fiscal year 2018 compared to $7.8 billion during fiscal year 2017.
- Total benefit payments were $7.6 billion during fiscal 2018 and 2017. STRS Ohio paid benefit recipients $7.1 billion in service retirement, disability, survivor and other benefits plus $0.5 billion for health care coverage during fiscal 2018.
- Refunds to members who have withdrawn were $251.2 million in fiscal 2018 compared to $221.8 million in fiscal 2017. The $29.3 million increase from the prior year is due in part to more members reaching the IRS minimum distribution age.
- Administrative expenses were $65.7 million in fiscal 2018 compared to $66.1 million in fiscal year 2017. Investment expenses for internal investment management were $42.1 million in fiscal 2018 compared to $41.9 million in fiscal 2017. External asset management fees increased to $218.3 million in fiscal 2018 from $212.2 million in fiscal 2017 due primarily to increased commitments to alternative investments.

Annual Financial Review

The total fund delivered a 9.57% rate of return in fiscal 2018 and all asset classes except fixed income had a positive absolute return during the year. Domestic equities led all investment categories by generating a 16.21% return while alternative investments returned 13.59%, real estate had a 9.08% return, international equities returned 7.15% and fixed income had a –0.06% return. The total fund annualized investment return for the past 10 fiscal years was 7.04%. Investment performance is calculated using a time-weighted rate of return and is net of fees for external managed real estate and alternative investments and gross of fees on all other investments.

Historical Plan Asset Additions and Deductions
(years ended June 30)



Contributions
Years Ended June 30, 2018 and 2017 (dollar amounts in thousands)

	2018	2017	Percentage Change
Member contributions	$ 1,580,430	$ 1,537,677	2.8%
Employer contributions	1,604,782	1,551,254	3.5%
Health care premiums and government reimbursements	436,502	418,413	4.3%
Other	29,245	39,615	–26.2%
Total contributions	**$ 3,650,959**	**$ 3,546,959**	**2.9%**

Deductions
Years Ended June 30, 2018 and 2017 (dollar amounts in thousands)

	2018	2017	Percentage Change
Benefits (includes optional health care)	$ 7,570,112	$ 7,555,127	0.2%
Refunds	251,159	221,841	13.2%
Administrative expenses	65,734	66,149	–0.6%
Total deductions	**$ 7,887,005**	**$ 7,843,117**	**0.6%**

Historical deductions from fiduciary net position indicate a pattern of steadily increasing deductions through 2016, with a slight decrease in 2017 and a slight increase in 2018. Historical additions to fiduciary net position in contrast fluctuate more due to investment volatility, as shown in the chart at the top of this page. Changes in contributions and deductions for fiscal years ended June 30, 2018 and 2017, are shown in the tables above. Total benefit payments including health care costs exceed total contributions, therefore, STRS Ohio is dependent upon investment income to compensate for the negative cash flow.

Net position for post-employment health care increased to $3.7 billion at June 30, 2018, from $3.5 billion at June 30, 2017. Premiums received from health care recipients in fiscal 2018 decreased to $329 million from $339 million in fiscal 2017. Government reimbursements of $107 million were received in fiscal 2018 to help offset prescription drug costs compared to $79 million in fiscal 2017. Health care coverage payments decreased 8.6% to $517 million from $566 million in fiscal 2017.

Overview of the Financial Statements of STRS Ohio

The basic financial statements are the *Statements of Fiduciary Net Position* and the *Statements of Changes in Fiduciary Net Position*. Amounts are shown for the most recent and previous fiscal years for comparison and analysis of changes in individual line items. The statements are prepared in conformity with generally accepted accounting principles.

The *Statements of Fiduciary Net Position* are a measure of STRS Ohio's assets and liabilities at the close of the fiscal year. Total assets less current liabilities equals net position held in trust for future benefits.

The *Statements of Changes in Fiduciary Net Position* show additions and deductions for the fiscal year. The net increase (or decrease) is the change in net position available for benefits since the end of the previous fiscal year.

For financial reporting purposes, STRS Ohio assets are divided into three primary funds: the Defined Benefit (DB) Plan, the Defined Contribution (DC) Plan and Post-employment Health Care.

- The Defined Benefit Plan is the largest fund and includes member contributions, employer contributions and investment earnings for DB participants. The DB Plan pays service retirement benefits using a fixed formula based on age, years of service and salary. In addition to service retirement, DB participants are eligible for disability and survivor benefits.
- The Defined Contribution Plan began on July 1, 2001. It is an optional plan available to new members. DC participants allocate both member and employer contributions in investment choices provided by STRS Ohio. Benefits are based on the member's account value.

  As an alternative to the Defined Benefit or Defined Contribution Plan, new members may elect the Combined Plan. Combined Plan participants allocate their member contributions among the same investment choices as DC members, and employer contributions are used to provide a reduced formula service retirement benefit along with disability and survivor protection. Assets to provide benefits to Combined Plan members are divided between the Defined Benefit Plan and the Defined Contribution Plan.
- Net position for post-employment health care consists of funds set aside to subsidize optional health care coverage for members enrolled in the Defined Benefit and Combined Plans.

The *Notes to Financial Statements* are a fundamental part of the financial statements and provide important information to augment the figures in the financial statements. The notes describe accounting policies along with plan membership and benefits. Additional disclosures of selected financial data are included in the notes.

In addition to the basic financial statements and notes, a *Schedule of Changes in Employers' Net Pension Liability*, *Schedule of Employers' Net Pension Liability, Schedule of Employers' Contributions — Pension* and *Schedule of Investment Returns — Pension* are included as "required supplementary information." These schedules emphasize the long-term nature of pension plans and the status of STRS Ohio in accumulating sufficient assets to pay benefits when due. They also provide a history of contributions from employers and actuarial assumptions and methods that assist in understanding the net pension liability of STRS Ohio.

The *Notes to Required Supplementary Information — Pension* provide the actuarial assumptions and methods used to determine the data in the *Schedule of Changes in Employers' Net Pension Liability,* the *Schedule of Employers' Net Pension Liability* and the *Schedule of Employers' Contributions — Pension*.

Likewise, to provide actuarial assumptions and methods that assist in understanding the net post-employment benefits other than pensions (OPEB) liability of STRS Ohio, a *Schedule of Changes in Employers' Net OPEB Liability*, *Schedule of Employers' Net OPEB Liability, Schedule of Employers' Contributions — OPEB* and *Schedule of Investment Returns — OPEB* are also included as "required supplementary information."

The *Notes to Required Supplementary Information — OPEB* provide the actuarial method and assumptions used to determine the data in the *Schedule of Changes in Employers' Net OPEB Liability,* the *Schedule of Employers' Net OPEB Liability* and the *Schedule of Employers' Contributions — OPEB*.

Investment Performance

(total returns, annualized on a fiscal-year basis, July 1–June 30)

1-Year Returns (2018)[1]

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Equities	16.21%	Russell 3000® Index[3]	14.78%
International Equities	7.15%	International Blended Benchmark[4]	7.87%
Fixed Income	–0.06%	Fixed-Income Blended Benchmark[5]	–0.30%
Real Estate	9.08%	Real Estate Blended Benchmark[6]	6.74%
Alternative Investments	13.59%	Alternative Investments Blended Relative Return Objective[7]	–
Total Fund	**9.57%**	**Total Fund Blended Benchmark[8]**	**8.94%**

5-Year Returns (2014–2018)[1]

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Equities	13.25%	Russell 3000® Index[3]	13.29%
International Equities	8.43%	International Blended Benchmark[4]	7.39%
Fixed Income	2.78%	Fixed-Income Blended Benchmark[5]	2.62%
Real Estate	10.95%	Real Estate Blended Benchmark[6]	9.65%
Alternative Investments	10.16%	Alternative Investments Blended Relative Return Objective[7]	13.30%
Total Fund	**9.26%**	**Total Fund Blended Benchmark[8]**	**8.98%**

STRS Ohio Long-Term Policy Objective (10 Years)[2]

Total Fund: 6.84%

Investment performance is calculated using a time-weighted rate of return. Performance is net of fees for external managed real estate and alternative investments and gross of fees on all other investments.

[1]The one-year returns for the fiscal years ended June 30, 2008, through 2018, have been examined by ACA Performance Services LLC. A copy of the examination report is available upon request.

[2]The long-term policy objective is a projected annualized policy return based on return forecasts by asset class before any value added. The State Teachers Retirement Board expects the net value added to be 0.40% per year.

[3]The Russell® Indices are a trademark of FTSE International Limited (FTSE), Frank Russell Company (Russell®) and their respective subsidiary undertakings, which are members of the London Stock Exchange Group PLC.

[4]The International Blended Benchmark is calculated monthly using 80% of the MSCI World ex-U.S. 50% Hedged Index-Net and 20% of the MSCI Emerging Markets Index-Net effective Jan. 1, 2014. Prior to Jan. 1, 2014, the MSCI Emerging Markets Index was the Gross return.

[5]The Fixed-Income Blended Benchmark is calculated daily and is a blend of two benchmarks using the actual core fixed-income weighting and the Bloomberg Barclays U.S. Universal index and the actual weighting of the liquid treasury portfolio weighting and the Bloomberg Barclays U.S. Intermediate Treasury Index. Source: Bloomberg Index Services Limited. BLOOMBERG® is a trademark and service mark of Bloomberg Finance L.P. and its affiliates (collectively "Bloomberg"). BARCLAYS® is a trademark and service mark of Barclays Bank PLC (collectively with its affiliates, "Barclays"), used under license. Bloomberg or Bloomberg's licensors, including Barclays, own all proprietary rights in the Bloomberg Barclays Indices. Neither Bloomberg nor Barclays approves or endorses this material, or guarantees the accuracy or completeness of any information herein, or makes any warranty, express or implied, as to the results to be obtained therefrom and, to the maximum extent allowed by law, neither shall have any liability or responsibility for injury or damages arising in connection therewith.

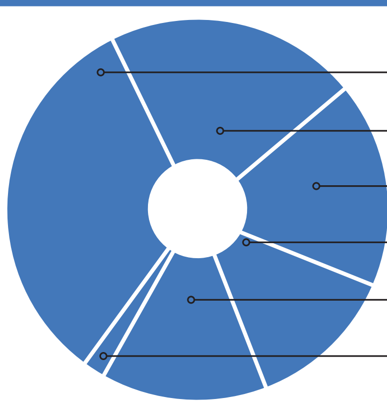
[6]The Real Estate Blended Benchmark is calculated quarterly using 85% NCREIF Property Index (NPI) and 15% FTSE NAREIT Equity REITs Index effective July 1, 2012.

[7]Given the long-term nature of the asset class, no relative return objective for Alternative Investments is displayed for the one-year period. For the longer five-year period, the Alternative Investments Blended Relative Return Objective is a blend of two relative return objectives for Private Equity (PE) and Opportunistic/Diversified (OD) and is calculated using: 46.7% of the Russell 3000® Index plus 1% for PE and 53.3% of the Russell 3000® Index minus 1% for OD effective April. 1, 2018; 50.0% of the Russell 3000® Index plus 1% for PE and 50.0% of the Russell 3000® Index minus 1% for OD effective July 1, 2017; 50.0% of the Russell 3000® Index plus 1% for PE and 50.0% of the Russell 3000® Index minus 1% for OD effective Jan. 1, 2014; 53.8% of the Russell 3000® Index plus 1% for PE and 46.2% of the Russell 3000® Index minus 1% for OD effective July 1, 2013.

[8]The Total Fund Blended Benchmark is calculated and rebalanced monthly using a blend of the asset class benchmarks based on the Total Fund's policy weights in effect during the respective period. For alternative investments, however, the actual Alternative Investments return is used in the calculation of the Total Fund Blended Benchmark. Information concerning asset class benchmarks and policy weights is available upon request.

Investment Distribution by Fair Value — as of June 30, 2018

(dollar amounts in thousands)



Domestic Equities:	$ 22,688,592	28.4%
International Equities:	$ 17,804,674	22.3%
Fixed Income:	$ 15,706,091	19.7%
Real Estate:	$ 9,839,959	12.3%
Alternative Investments:	$ 12,393,204	15.5%
Cash and Short-Term Investments:	$ 1,457,728	1.8%
Total Investments:	**$ 79,890,248**	

Schedules of Administrative Expenses, *Internal Investment Expenses* and *External Asset Management Fees* are included to detail the administrative and investment costs to operate STRS Ohio.

Investment Allocation and Fiscal Year Performance

For fiscal 2018, the total fund rate of return was 9.57%. The relative benchmark for STRS Ohio returned 8.94%. Investment performance is calculated using a time-weighted rate of return and performance is net of fees for external managed real estate and alternative investments and gross of fees on all other investments. The target allocations at the end of fiscal 2018, were 1% liquidity reserves, 21% fixed income, 29% domestic equities, 24% international equities, 10% real estate and 15% alternative investments. Amounts actually invested in these categories at the end of June 2018 represent an investment over/underweight if different from the target allocation. Over/underweighting occurs as fair values change and as investment managers determine allocation entry and exit timing strategies. See Page 13 for detailed investment performance.

External asset management fees are shown separately in the *Statements of Changes in Fiduciary Net Position* as a reduction of investment income. Coupled with internal investment expenses, the cost to manage investments was $260 million in 2018 and $254 million in 2017.

Financial Statement Analysis

The tables on Page 15 show condensed information from the *Statements of Fiduciary Net Position* and the *Statements of Changes in Fiduciary Net Position*.

Total net position increased 3.7% in fiscal 2018 and 7.6% in fiscal 2017. In 2018 and 2017, better than expected investment income and contributions more than offset benefit payments.

The net book value of capital assets decreased from fiscal 2017 because depreciation expense in fiscal 2018 exceeded capital asset additions.

Net investment income was $7.1 billion in fiscal year 2018 compared to $9.7 billion in fiscal year 2017. Investment performance for fiscal years 2018 and 2017 was above the long-term investment return assumption. Interest income increased by $84 million or 23.0% and is due to increases in interest rates and additional allocations made to fixed income investments during the fiscal year as part of the adopted asset allocation. Net securities lending income increased 11.6% in fiscal 2018 due to increased loans outstanding in fiscal 2018 and lower volumes in fiscal 2017 due to the global custodian change.

Member contributions increased 2.8%, which is consistent with the increase in payroll in fiscal 2018 and 12.1% in fiscal 2017. Member rates increased from 13% to 14% of earned compensation from fiscal 2016 to 2017 and remained at 14% in fiscal 2018. Employer contributions increased 3.5% in fiscal 2018 and 3.3% in fiscal 2017, which is consistent with the increase in employer payroll. Employer rates remained at 14% in fiscal 2016, fiscal 2017 and fiscal 2018.

Health care premiums helped offset some of the increases in health care costs. Of the $517 million paid to health care providers in fiscal 2018, health care enrollees paid $329 million through premium deductions. Health care enrollees were also responsible for additional health care costs paid through deductibles, coinsurance, copayments and other out-of-pocket expenditures. Government reimbursements of $107 million also helped offset health care costs. No employer contributions were allocated to the health care fund in fiscal 2018 and 2017. For fiscal 2017, $566 million was paid to health care providers, benefit recipients contributed $339 million and government reimbursements were $79 million.

STRS Ohio was created to provide retirement, disability and survivor benefits to members and eligible beneficiaries. Expenditures include monthly payments to eligible recipients, refunds of contributions to members who terminate employment and administrative costs of operating STRS Ohio.

These deductions from net position were $7.9 billion in fiscal 2018, a 0.6% increase compared to fiscal 2017. Total deductions from net position were $7.8 billion in fiscal 2017, a 2.7% decrease over fiscal 2016. The largest deductions component is monthly benefit payments for service retirement, disability and survivor benefits. These benefit payments increased 0.8% in fiscal 2018 and decreased 1.5% in fiscal 2017.

Health care costs decreased 8.6% in 2018 due to lower non-Medicare retiree health care enrollment and more cost being shifted to the member. Health care costs decreased 16.4% in fiscal 2017.

Funding Analysis

In fiscal 2017, the board reviewed two studies — an actuarial experience review and an asset-

Net Position (dollar amounts in thousands)

	2018	2017	2016	Amount Increase (Decrease) From 2017 to 2018	Amount Increase (Decrease) From 2016 to 2017
Cash and investments	$ 79,890,248	$ 76,851,134	$ 71,407,567	$ 3,039,114	$ 5,443,567
Receivables	914,546	921,150	847,871	(6,604)	73,279
Securities lending collateral	1,804,947	1,347,863	1,356,392	457,084	(8,529)
Net capital assets	83,557	87,161	92,118	(3,604)	(4,957)
Total assets	82,693,298	79,207,308	73,703,948	3,485,990	5,503,360
Total liabilities	4,055,647	3,360,303	3,234,912	695,344	125,391
Net position	**$ 78,637,651**	**$ 75,847,005**	**$ 70,469,036**	**$ 2,790,646**	**$ 5,377,969**

Additions to Net Position (dollar amounts in thousands)

	2018	2017	2016	Amount Increase (Decrease) From 2017 to 2018	Amount Increase (Decrease) From 2016 to 2017
Contributions:					
Member contributions	$ 1,580,430	$ 1,537,677	$ 1,372,033	$ 42,753	$ 165,644
Employer contributions	1,604,782	1,551,254	1,501,102	53,528	50,152
Health care premiums and government reimbursements	436,502	418,413	398,739	18,089	19,674
Other	29,245	39,615	44,001	(10,370)	(4,386)
Total contributions	3,650,959	3,546,959	3,315,875	104,000	231,084
Net investment income	7,066,422	9,674,127	389,872	(2,607,705)	9,284,255
Total additions to net position	**$ 10,717,381**	**$ 13,221,086**	**$ 3,705,747**	**$ (2,503,705)**	**$ 9,515,339**

Deductions From Net Position (dollar amounts in thousands)

	2018	2017	2016	Amount Increase (Decrease) From 2017 to 2018	Amount Increase (Decrease) From 2016 to 2017
Deductions:					
Benefit payments	$ 7,004,774	$ 6,947,246	$ 7,051,436	$ 57,528	$ (104,190)
Health care coverage	517,470	565,962	676,993	(48,492)	(111,031)
Refunds to members	251,159	221,841	232,070	29,318	(10,229)
Administrative expenses	65,734	66,149	64,726	(415)	1,423
Other	47,868	41,919	38,601	5,949	3,318
Total deductions from net position	**$ 7,887,005**	**$ 7,843,117**	**$ 8,063,826**	**$ 43,888**	**$ (220,709)**

Net Increase (Decrease) in Net Position (dollar amounts in thousands)

	2018	2017	2016	Amount Increase (Decrease) From 2017 to 2018	Amount Increase (Decrease) From 2016 to 2017
Net increase (decrease) in net position	**$ 2,830,376**	**$ 5,377,969**	**$ (4,358,079)**	**$ (2,547,593)**	**$ 9,736,048**

liability study — that are conducted every five years. These studies establish plan assumptions, measure the system's actuarial accrued liabilities and help determine how to invest system assets and how fast these assets are expected to grow. The results of these studies indicated that several factors, including lower than expected investment returns, longer lifespans among active and retired members, and lower than expected payroll growth continue to have a negative effect on the pension fund.

Accordingly, the board approved changes to the actuarial assumptions that are used to calculate pension liabilities and funded status. The new assumptions increased STRS Ohio's accrued liabilities and funding period, indicating that STRS Ohio would need to reduce benefits in order to meet the 30-year funding target required by Ohio statute.

In spring 2017, the board made the decision to reduce COLA increases granted on or after July 1, 2017, to 0% to preserve the fiscal integrity of the retirement system. The COLA change and the impact of the new actuarial assumptions are reflected in the July 1, 2017, valuation.

The unfunded actuarial accrued liability (UAAL) for STRS Ohio pension benefits was $23.8 billion as of July 1, 2018, down from $23.9 billion as of July 1, 2017, and $30.6 billion at July 1, 2016. Market changes in investment assets are smoothed over a four-year period for valuation purposes, except that the actuarial value of assets shall not be less than 91% nor more than 109% of market value. Valuation assets ended fiscal 2018 at $73.1 billion, up from $72.2 billion at fiscal year end 2017 and $70.1 billion at fiscal year end 2016. The present value of expected benefits to be paid to current and future benefit recipients (the actuarial accrued liability) at fiscal 2018, 2017 and 2016 was $96.9 billion, $96.1 billion and $100.8 billion, respectively. The funded ratio, which is valuation assets divided by actuarial accrued liability, was 75.5% at July 1, 2018. At July 1, 2017, the funded ratio was 75.1% and at July 1, 2016, the funded ratio was 69.6%. At July 1, 2018, the funding period was 17.8 years, down from 18.4 years at July 1, 2017, and 26.6 years at July 1, 2016.

Financial Reporting Valuation

The actuarial valuation for financial reporting emphasizes the obligation an employer incurs to employees through the employment-exchange process. The primary purpose of the valuation for financial reporting is to provide a consistent, standardized methodology that allows comparability of data and increased transparency of the pension liability across plans. To do so, GASB 67 requires a different approach for determining the reported net pension liability (NPL), as compared to the previously disclosed UAAL. Under GASB 67, the funded status is not presented in the notes or required supplementary information.

The UAAL mirrored the unfunded actuarial obligation calculated by STRS Ohio's external actuary for funding purposes and represented the excess of the actuarial accrued liability (AAL) over the actuarial value of assets (AVA). Under GASB 67, the UAAL has been replaced by the NPL, which represents the excess of the total pension liability over fiduciary net position.

A side-by-side comparison of the two calculations is as follows:

GASB 67 Accounting Method	Funding Method
Total Pension Liability	Actuarial Accrued Liability (AAL)
– Fiduciary Net Position	– Actuarial Value of Assets (AVA)
= Net Pension Liability (NPL)	= Unfunded Actuarial Accrued Liability (UAAL)

There are considerable differences between the two numbers. The UAAL is the method selected by the plan and used for funding purposes. The UAAL is determined using asset smoothing. The NPL is determined using fair value and is the method prescribed by GASB for accounting purposes.

Additionally, beginning with fiscal year 2017, STRS Ohio implemented GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* (OPEB). The new OPEB standards are designed to bring greater clarity to post-employment benefit liabilities, the most significant of which is retiree health insurance. GASB 74 parallels the GASB 67 pension standards issued in 2012.

Requests for Information

Questions about any information provided in this report should be addressed to:

State Teachers Retirement System of Ohio
ATTN: Chief Financial Officer
275 E. Broad St.
Columbus, OH 43215-3771

Statements of Fiduciary Net Position (in thousands)

	June 30, 2018				June 30, 2017			
	Defined Benefit	Defined Contribution	Post-employment Health Care	Totals	Defined Benefit	Defined Contribution	Post-employment Health Care	Totals
Assets:								
Cash and short-term investments	$ 1,261,956	$ 131,072	$ 64,700	$ 1,457,728	$ 1,054,301	$ 123,190	$ 52,041	$ 1,229,532
Receivables:								
Accrued interest and dividends	208,868		10,709	219,577	194,399		9,596	203,995
Member contributions	219,842	122		219,964	207,747	320		208,067
Employer contributions	313,197	39		313,236	316,625	126		316,751
Securities sold	130,414		6,687	137,101	150,235		7,416	157,651
Miscellaneous receivables	24,668			24,668	34,686			34,686
Total receivables	**896,989**	**161**	**17,396**	**914,546**	**903,692**	**446**	**17,012**	**921,150**
Investments, at fair value:								
Fixed income	14,644,663	310,604	750,824	15,706,091	13,750,396	257,897	678,726	14,687,019
Domestic equities	20,846,728	773,063	1,068,801	22,688,592	20,649,460	648,349	1,019,268	22,317,077
International equities	16,802,421	140,802	861,451	17,804,674	18,068,705	120,930	891,881	19,081,516
Real estate	9,262,065	103,033	474,861	9,839,959	8,501,820	101,707	419,654	9,023,181
Alternative investments	11,788,799		604,405	12,393,204	10,018,300		494,509	10,512,809
Total investments	**73,344,676**	**1,327,502**	**3,760,342**	**78,432,520**	**70,988,681**	**1,128,883**	**3,504,038**	**75,621,602**
Invested securities lending collateral	1,716,921		88,026	1,804,947	1,284,461		63,402	1,347,863
Capital assets	249,428			249,428	246,873			246,873
Accumulated depreciation	(165,871)			(165,871)	(159,712)			(159,712)
Net capital assets	83,557			83,557	87,161			87,161
Total assets	**77,304,099**	**1,458,735**	**3,930,464**	**82,693,298**	**74,318,296**	**1,252,519**	**3,636,493**	**79,207,308**
Liabilities:								
Securities purchased and other investment liabilities	200,871		10,299	211,170	239,499		11,822	251,321
Debt on real estate investments	1,767,714		90,630	1,858,344	1,559,709		76,988	1,636,697
Accrued expenses and other liabilities	34,299		1,758	36,057	31,060		1,533	32,593
Medical benefits payable			18,414	18,414			6,994	6,994
Obligations under securities lending program	1,716,688		88,014	1,804,702	1,283,959		63,377	1,347,336
Net pension liability	126,960			126,960	85,362			85,362
Total liabilities	**3,846,532**		**209,115**	**4,055,647**	**3,199,589**		**160,714**	**3,360,303**
Fiduciary net position restricted for defined benefit, defined contribution and post-employment health care coverage:	**$ 73,457,567**	**$ 1,458,735**	**$ 3,721,349**	**$ 78,637,651**	**$ 71,118,707**	**$ 1,252,519**	**$ 3,475,779**	**$ 75,847,005**

See accompanying Notes to Financial Statements.

Statements of Changes in Fiduciary Net Position (in thousands)

	Year Ended June 30, 2018				Year Ended June 30, 2017			
	Defined Benefit	Defined Contribution	Post-employment Health Care	Totals	Defined Benefit	Defined Contribution	Post-employment Health Care	Totals
Additions:								
Contributions:								
Member	$ 1,479,151	$ 101,279		$ 1,580,430	$ 1,443,374	$ 94,303		$ 1,537,677
Employer	1,565,679	39,103		1,604,782	1,514,285	36,969		1,551,254
Transfers between retirement plans	14,003	(14,003)			15,034	(15,034)		
Government reimbursements			$ 107,197	107,197			$ 79,357	79,357
Benefit recipient health care premiums			329,305	329,305			339,056	339,056
Other retirement systems	29,245			29,245	39,615			39,615
Total contributions	**3,088,078**	**126,379**	**436,502**	**3,650,959**	**3,012,308**	**116,238**	**418,413**	**3,546,959**
Income from investing activities:								
Net appreciation in fair value of investments	5,379,876	111,210	267,123	5,758,209	7,918,787	135,356	383,117	8,437,260
Interest	426,754	1,617	21,189	449,560	347,920	681	16,833	365,434
Dividends	841,876		41,801	883,677	852,274		41,234	893,508
Real estate income	213,801		10,616	224,417	211,963		10,255	222,218
Investment income	6,862,307	112,827	340,729	7,315,863	9,330,944	136,037	451,439	9,918,420
Less internal investment expenses	(39,379)	(752)	(1,955)	(42,086)	(39,363)	(677)	(1,904)	(41,944)
Less external asset management fees	(207,981)		(10,327)	(218,308)	(202,369)		(9,791)	(212,160)
Net income from investing activities	6,614,947	112,075	328,447	7,055,469	9,089,212	135,360	439,744	9,664,316
Securities lending income	11,593		576	12,169	10,398		503	10,901
Securities lending expenses	(1,158)		(58)	(1,216)	(1,040)		(50)	(1,090)
Net income from securities lending activities	10,435		518	10,953	9,358		453	9,811
Net investment income	6,625,382	112,075	328,965	7,066,422	9,098,570	135,360	440,197	9,674,127
Total additions	**9,713,460**	**238,454**	**765,467**	**10,717,381**	**12,110,878**	**251,598**	**858,610**	**13,221,086**
Deductions:								
Benefits:								
Service retirement	6,673,049			6,673,049	6,612,638			6,612,638
Disability benefits	206,969			206,969	210,649			210,649
Survivor benefits	124,756			124,756	123,959			123,959
Health care			517,470	517,470			565,962	565,962
Other	47,868			47,868	41,919			41,919
Total benefit payments	7,052,642		517,470	7,570,112	6,989,165		565,962	7,555,127
Refunds to members who have withdrawn	219,453	31,706		251,159	190,517	31,324		221,841
Administrative expenses	62,775	532	2,427	65,734	62,592	1,060	2,497	66,149
Total deductions	**7,334,870**	**32,238**	**519,897**	**7,887,005**	**7,242,274**	**32,384**	**568,459**	**7,843,117**
Net increase in net position	**2,378,590**	**206,216**	**245,570**	**2,830,376**	**4,868,604**	**219,214**	**290,151**	**5,377,969**
Fiduciary net position restricted for defined benefit, defined contribution and post-employment health care coverage:								
Beginning of year	71,118,707	1,252,519	3,475,779	75,847,005	66,250,103	1,033,305	3,185,628	70,469,036
Prior period adjustment, GASB 75	(39,730)			(39,730)				
Beginning of year, restated	71,078,977			75,807,275				
End of year	**$73,457,567**	**$ 1,458,735**	**$ 3,721,349**	**$78,637,651**	**$71,118,707**	**$ 1,252,519**	**$ 3,475,779**	**$ 75,847,005**

See accompanying Notes to Financial Statements.

1. Summary of Significant Accounting Policies

The financial statements of the State Teachers Retirement System of Ohio (STRS Ohio) presented herein have been prepared on the accrual basis of accounting following the accounting policies set forth below.

Organization — STRS Ohio is a cost-sharing, multiple-employer plan that operates under Chapter 3307 of the Ohio Revised Code (Revised Code) and is administered by a board comprised of 11 members as follows: five elected contributing members; two elected retired teacher members; an investment expert appointed by the governor; an investment expert appointed jointly by the speaker of the Ohio House of Representatives and the Ohio Senate President; an investment expert designated by the treasurer of state; and the superintendent of public instruction or his or her designated investment expert.

The accompanying financial statements comply with the provisions of the Governmental Accounting Standards Board (GASB) Statement No. 39, an amendment of GASB Statement No. 14, *The Financial Reporting Entity*. This statement requires that financial statements of the reporting entity include all of the organizations, activities, functions and component units for which the reporting entity is financially accountable. Financial accountability is defined as the appointment of a voting majority of the component unit's board and either (1) the reporting entity's ability to impose its will over the component unit, or (2) the possibility that the component unit will provide a financial benefit to or impose a financial burden on the reporting entity. STRS Ohio does not have financial accountability over any entities.

Investment Accounting — Purchases and sales of investments are recorded as of their trade date. Dividend income is recognized on the ex-dividend date. Interest and rental income is recognized as the income is earned. Investment expenses associated with external asset management are reported if they are separable from investment income and the administrative expenses of the plan.

STRS Ohio has no individual investment that exceeds 5% of net position available for benefits.

Contributions and Benefits — Employer and member contributions are recognized when due based on statutory or contractual requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

Capital Assets — Capital assets are recorded at historical cost. Depreciation is provided on a straight-line basis over estimated useful lives of five to 10 years for equipment and 40 years for building and building improvements. Capital assets include purchases of $5,000 or more with a useful life of at least five years. Intangible assets, such as internally developed software, are capitalized in accordance with GASB Statement No. 51 and STRS Ohio's capital asset policy.

Method Used to Value Investments — Investments are reported at fair value. Short-term investments, with maturities less than one year, are reported at amortized cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at the then current exchange rates. Fixed-income investments are valued as determined by a qualified independent service. The fair value of real estate investments and other internally managed alternative investments is based on independent appraisals and internal valuations. The fair value of externally managed alternative investments and real estate is determined by the valuation methodology outlined in the partnership agreement.

Federal Income Tax Status — STRS Ohio is exempt from federal income taxes under Section 401(a) of the Internal Revenue Code.

Use of Estimates — In preparing financial statements in conformity with accounting principles generally accepted in the United States of America, management makes estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates and assumptions.

New Accounting Pronouncements —GASB Statement No. 75, *Postemployment Benefit Plans Other Than Pensions* was implemented for the year ended June 30, 2018. One of the primary requirements is for participating employers in STRS Ohio to record a net OPEB liability based on their proportionate share of STRS Ohio's total net OPEB liability. Likewise, STRS Ohio is required to record a proportionate share of the total net OPEB liability of Ohio Public Employees Retirement System (OPERS). STRS Ohio adopted GASB Statement No. 75 effective July 1, 2017, resulting in a restatement of the beginning net position restricted for defined benefits of –$39.7 million.

GASB Statement No. 82, *Pension Issues — An Amendment of GASB Statements No. 67, No. 68 and No. 73*, was issued in March 2016. GASB No. 82 addresses certain issues with the presentation of payroll-related measures in required supplementary information, the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and the classification of payments made by employers to satisfy employee (member) contribution requirements. Upon review, it was determined that STRS Ohio is currently presenting information in accordance with the requirements of GASB Statement No. 82.

Reclassifications — Certain reclassifications of 2017 amounts were made to conform with the 2018 presentation. The reclassifications have no effect on the fiduciary net position or changes in fiduciary net position.

2. Description of the STRS Ohio Plan

Plan Membership — STRS Ohio is a statewide retirement plan for licensed teachers and other faculty members employed in the public schools of Ohio (the state) or any school, college, university, institution or other agency controlled, managed and supported, in whole or part, by the state or any political subdivision thereof.

Member and retiree data and participating employers are shown in the following tables.

Member and Retiree Data at July 1, 2018 and 2017

	2018	2017
Current active members	170,327	168,132
Inactive members eligible for refunds only	138,075	139,533
Terminated members entitled to receive a benefit in the future	18,416	18,403
Retirees and beneficiaries currently receiving a benefit	157,422	158,039
Defined Contribution Plan members	9,682	9,330
Reemployed retirees	22,038	25,009
Total Plan Membership	515,960	518,446

Participating Employers at June 30, 2018 and 2017

	2018	2017
City school districts	194	194
Local school districts	369	369
County educational service centers	52	52
Exempted village school districts	49	49
Joint vocational schools	49	49
Colleges and universities	36	36
County boards of developmental disabilities	61	61
Community schools	318	323
State of Ohio	1	1
Other	11	11
Total	1,140	1,145

Active members are defined as participants who earned 0.25 years of service credit or more in the valuation year and those employed on or after Jan. 1, with less than 0.25 years of service credit.

Plan Options — New members have a choice of three retirement plan options. In addition to the Defined Benefit (DB) Plan, new members are offered a Defined Contribution (DC) Plan or a Combined Plan. The DC Plan allows members to allocate all their member contributions and employer contributions equal to 9.5% of earned compensation among various investment choices. Effective July 1, 2017, employer contributions equal to 9.53% of earned compensation are deposited to members accounts. The Combined Plan offers features of the DC Plan and the DB Plan. In the Combined Plan, member contributions less 2% of earned compensation are allocated among investment choices by the member. Employer contributions and a portion of member contributions in the Combined Plan are used to fund a defined benefit payment at a reduced level from the regular DB Plan. Contributions into the DC Plan and the Combined Plan are credited to member accounts as employers submit their payroll information to STRS Ohio, generally on a biweekly basis.

DB Plan Benefits — Plan benefits are established under Chapter 3307 of the Revised Code. From Aug. 1, 2015–July 1, 2017, any member could retire with reduced benefits who had (1) five years of service credit and age 60; (2) 26 years of service credit and age 55; or (3) 30 years of service credit regardless of age. Effective Aug. 1, 2017–July 1, 2019, any member may retire with reduced benefits who has (1) five years of service credit and age 60; (2) 27 years of service credit and age 55; or (3) 30 years of service credit regardless of age. Eligibility changes will continue to be phased in through Aug. 1, 2026, when retirement eligibility for unreduced benefits will be five years of service credit and age 65, or 35 years of service credit and at least age 60. Retirement eligibility for reduced benefits will be five years of service credit and age 60, or 30 years of service credit regardless of age.

The annual retirement allowance, payable for life, is based on the average of the member's five highest years of earnings multiplied by 2.2% for each year of credited service. For July 1, 2015, and earlier, the annual allowance is determined by multiplying final average salary (average of three highest years of earnings) by 2.2% for the first 30 years of credited service. Each year over 30 years is incrementally increased by 0.1%, starting at 2.5% for the 31st year of contributing service up to a maximum allowance of 100% of final average salary. Upon reaching 35 years of Ohio service, the first 31 years of Ohio contributing service are multiplied by 2.5%, and each year over 31 years is incrementally increased by 0.1% starting at 2.6% for the 32nd year. Members retiring before age 65 with less than 30 years of service credit receive a percentage reduction in benefit amounts.

For members who were eligible to retire on July 1, 2015, the annual benefit is the greater of the benefit amount calculated upon retirement under the new benefit formula or the frozen benefit amount as of July 1, 2015.

Since the plan is tax-qualified, benefits are subject to limits established by Section 415 of the Internal Revenue Code.

A retiree of STRS Ohio or another Ohio public retirement system is eligible for reemployment as a teacher following the elapse of two months from the date of retirement. Contributions are made by the reemployed member and employer during the reemployment. Upon termination of reemployment or age 65, whichever comes later, the retiree is eligible for an annuity benefit or equivalent lump-sum payment in addition to the original retirement allowance. A reemployed retiree may alternatively receive a refund of member contributions with interest before age 65, once employment is terminated.

In September 2012, the Ohio General Assembly passed and the Governor signed into law Substitute Senate Bill 342. The legislation improves pension funding of the STRS Ohio defined benefit plan.

The legislative changes that improve funding to STRS Ohio's defined benefit plan are: increasing age and service requirements for retirement; pensions calculated on a lower, fixed formula; increasing the period for determining final average salary, increasing member contributions to the retirement system; reducing the cost-of-living adjustment (COLA); eliminating the COLA for fiscal year 2014; and deferring the COLA for future retirees. The law also provides the Retirement Board with authority to make future adjustments to the member contribution rate, retirement age and service requirements, and the COLA as the need or opportunity arises, depending on the retirement system's funding progress. In April 2017, the Retirement Board made the decision to reduce COLA granted on or after July 1, 2017, to 0% to preserve the fiscal integrity of the retirement system. Benefit recipients' base benefit and past cost-of-living increases are not affected by this change.

DC Plan Benefits — Benefits are established under Chapter 3307.80 to 3307.89 of the Revised Code.

For members who select the DC Plan, all member contributions and employer contributions at a rate of 9.5% are placed in an investment account. The member determines how to allocate the member and employer money among various investment choices offered by STRS Ohio. The member receives a quarterly statement of his or her account activity and balance. The remaining 4.5% of the 14.0% employer rate is allocated to the defined benefit unfunded liability. Effective July 1, 2017, employer contributions of 9.53% are placed in the investment accounts and the remaining 4.47% of the 14% employer rate is allocated to the defined benefit unfunded liability.

A member is eligible to receive a retirement benefit at age 50 and termination of employment. The member may elect to receive a lifetime monthly annuity or a lump-sum withdrawal. Employer contributions into member accounts are vested after the first anniversary of the first day of paid service. Members vest 20% per year in employer contributions and all gains and losses on those contributions.

Members in the DC Plan who become disabled are entitled only to their account balance. If a member dies before retirement benefits begin, the member's designated beneficiary is entitled to receive the member's account balance.

Combined Plan — For members who select the Combined Plan, 12% of the 14% member contribution rate is deposited into the member's defined contribution account and the remaining amount applied to the DB Plan. In the Combined Plan, member contributions are allocated among investment choices by the member, and employer contributions are used to fund a defined benefit payment.

A member's defined benefit is determined by multiplying 1% of the member's final average salary by the member's years of service credit. The defined benefit portion of the Combined Plan payment is payable to a member on or after age 60 with five years of service. The DC portion of the account may be taken as a lump sum or converted to a lifetime monthly annuity at age 50 and termination of employment.

DC and Combined Plan members must actively select the Defined Benefit Plan during their fifth year of membership or their original selection is maintained. During fiscal 2018, $14.0 million was transferred from the DC and Combined Plan accounts to the Defined Benefit Plan. During fiscal 2017, $15.0 million was transferred from the DC and Combined Plan accounts to the Defined Benefit Plan.

Death, Survivor and Disability Benefits — A Defined Benefit Plan or Combined Plan member with five or more years of credited service who is determined to be disabled (illness or injury preventing individual's ability to perform regular job duties for at least 12 months) may receive a disability benefit. Additionally, eligible survivors of members who die before service retirement may qualify for monthly benefits. New members on or after July 1, 2013, must have at least 10 years of qualifying service credit to apply for disability benefits.

A death benefit of $1,000 is payable to the beneficiary of each deceased retired member who participated in the Defined Benefit Plan. Death benefit coverage up to $2,000 can be purchased by participants in the DB, DC or Combined Plans. Various other benefits are available to members' beneficiaries.

Health Care Coverage After Retirement — Ohio law allows the State Teachers Retirement Board to offer a cost-sharing, multiple-employer health care plan. STRS Ohio provides access to health care coverage to eligible retirees who participated in the Defined Benefit or Combined Plans and their eligible dependents.

Coverage under the current program includes hospitalization, physicians' fees and prescription drugs and reimbursement of monthly Medicare Part B premiums. Medicare Part B premium reimbursements will be discontinued effective Jan. 1, 2020. Pursuant to the Revised Code, the Retirement Board has discretionary authority over how much, if any, of the associated health care costs will be absorbed by the plan. All benefit recipients pay a portion of the health care costs in the form of a monthly premium. Benefit recipients contributed $329.3 million or 64% of the total health care costs in fiscal 2018 (excluding deductibles, coinsurance and copayments). For the year ended June 30, 2017, benefit recipients contributed $339.1 million or 60% of the total health care costs.

Under Ohio law, funds to pay health care costs may be deducted from employer contributions, currently 14% of compensation. For fiscal years 2018 and 2017, no employer allocation was made to health care.

Medicare Part D is a federal program to help cover the costs of prescription drugs for Medicare beneficiaries. This program allows STRS Ohio to recover part of the cost for providing prescription coverage since all eligible STRS Ohio health care plans include creditable prescription drug coverage. For the years ended June 30, 2018 and 2017, STRS Ohio received $107.2 million and $79.4 million in Medicare Part D government reimbursements, respectively.

Refunds — Withdrawal cancels a member's rights and benefits in STRS Ohio.

Upon termination of employment, a Defined Benefit Plan member may withdraw accumulated contributions made to STRS Ohio. Refunds of member contributions may include interest and 50% matching payments.

A Combined Plan member is eligible for the present value of future benefits from the defined benefit portion of the account if he or she terminates employment after at least five years of service. For the defined contribution portion of the account, the refund consists of member contributions plus any investment gains or losses on those contributions.

Defined Contribution Plan members receive their contributions plus any investment gains or losses until they have completed one year of membership. After one year of membership, members also receive 20% per year in employer contributions and all gains or losses on those contributions.

Alternative Retirement Plan — Eligible faculty of Ohio's public colleges and universities may choose to enroll in either STRS Ohio or an alternative retirement plan (ARP) offered by their employer.

Employees have 120 days from their date of hire to select a retirement plan.

For employees who elect an ARP, employers are required to remit employer contributions to STRS Ohio at a rate of 4.47% of payroll for fiscal year 2018 and 4.5% for fiscal year 2017. For the years ended June 30, 2018 and 2017, the ARP participant payroll totaled $735.5 million and $704.8 million, respectively.

Administrative Expenses — The costs of administering the Defined Benefit and post-employment health care plans are financed by investment income. The administrative costs of the Defined Contribution Plan are financed by participant fees.

3. Net Pension Liability of Participating Employers

The components of the net pension liability of the participating employers as of June 30, 2018 and 2017, was as follows:

Net Pension Liability at June 30, 2018 and 2017
(dollar amounts in thousands)

	2018	2017
Total Pension Liability for STRS Ohio	$ 96,904,057	$ 96,126,440
Fiduciary Net Position	(74,916,302)	(72,371,226)
Net Pension Liability	$ 21,987,755	$ 23,755,214
Ratio of Fiduciary Net Position to the Total Pension Liability	77.3%	75.3%

The total pension liability for 2018 and 2017 was determined by an actuarial valuation as of July 1, 2018 and 2017, using actuarial assumptions related to inflation (2.50%), investment rate of return (7.45%), and 0% COLA. Projected salary increases range from 2.50% at age 65 to 12.50% at age 20.

Pension and post-employment health care assets are commingled for investment purposes. Consequently, amounts reported for individual asset classes are allocated between pension and post-employment health care based upon ending net position.

STRS Ohio's investment consultant develops an estimate range for the investment return assumption based on the target allocation adopted by the Retirement Board. The target allocation and long-term expected rate of return for each major asset class are summarized as follows:

Asset Class	Target Allocation*	Long-term Expected Rate of Return**
Domestic Equity	28%	7.35%
International Equity	23%	7.55%
Alternatives	17%	7.09%
Fixed Income	21%	3.00%
Real Estate	10%	6.00%
Liquidity Reserves	1%	2.25%
Total Fund	100%	

*Target weights will be phased in over a 24-month period concluding on July 1, 2019.

**10-year annualized geometric nominal returns, which include the real rate of return and inflation of 2.25% and does not include investment expenses. Over a 30-year period, STRS Ohio's investment consultant indicates that the above target allocations should generate a return above the actuarial rate of return, without net value added by management.

Pension Plan Discount Rate — The projection of cash flows used to determine the discount rate assumes that employer and member contributions will be made at statutory contribution rates of 14% each. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Based on those assumptions, STRS Ohio's fiduciary net position was projected to be available to make all projected future benefit payments to current plan members as of June 30, 2018 and 2017. Therefore, the long-term expected rate of return on pension plan investments of 7.45% was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2018, and 2017.

Sensitivity of the Net Pension Liability to the Discount Rate Assumption — The following represents the net pension liability as of June 30, 2018 and 2017, calculated using the current period discount rate assumption, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current assumption.

Net Pension Liability (in thousands)

	1% Decrease (6.45%)	Current Assumption (7.45%)	1% Increase (8.45%)
June 30, 2017	$34,052,291	$23,755,214	$15,081,470
June 30, 2018	$32,110,221	$21,987,755	$13,420,460

Mortality Rates for Pension — For the actuarial valuations as of July 1, 2018 and 2017, post-retirement mortality rates are based on RP-2014 Annuitant Mortality Table with 50% of rates through age 69, 70% of rates between ages 70 and 79, 90% of rates between ages 80 and 84, and 100% of rates thereafter, projected forward generationally using mortality improvement scale MP-2016; pre-retirement mortality rates are based on RP-2014 Employee Mortality Table, projected forward generationally using mortality improvement scale MP-2016.

Disabled: Post-retirement disabled mortality rates are based on RP-2014 Disabled Mortality Table with 90% of rates for males and 100% of rates for females, projected forward generationally using mortality improvement scale MP-2016.

Experience Study — The actuarial assumptions used in the July 1, 2018 and 2017 valuations, were adopted by the board from the results of an actuarial experience study for July 1, 2011, through June 30, 2016.

4. Post Employment Health Care Net OPEB Liability of Participating Employers

The components of the net OPEB liability of the participating employers as of June 30, 2018 and 2017, was as follows:

Net OPEB Liability (Asset) at June 30, 2018 and 2017
(dollar amounts in thousands)

	2018	2017
Total OPEB Liability	$ 2,114,451	$ 7,377,410
Fiduciary Net OPEB Position	3,721,349	3,475,779
Net OPEB Liability (Asset)	$ (1,606,898)	$ 3,901,631
Ratio of Fiduciary Net Position to the Total OPEB Liability	176.0%	47.1%

The total OPEB liability for 2018 was determined by an actuarial valuation as of June 30, 2018, using actuarial assumptions including the discount rate of return (7.45%), projected salary increases ranging from 2.5% to 12.5% and health care cost trend rates ranging from -5.2% to 9.6% initially and a 4% ultimate rate. The total OPEB liability for 2017 was determined by an actuarial valuation as of June 30, 2017, using actuarial assumptions including the blended discount rate of return (4.13%), projected salary increases ranging from 2.5% to 12.5% and health care cost trend rates ranging from 6% to 11% initially and a 4.5% ultimate rate.

STRS Ohio's investment consultant develops an estimate range for the investment return assumption based on the target allocation adopted by the Retirement Board. The target allocation and long-term expected rate of return for each major asset class are summarized as follows:

Asset Class	Target Allocation*	Long-term Expected Rate of Return**
Domestic Equity	28%	7.35%
International Equity	23%	7.55%
Alternatives	17%	7.09%
Fixed Income	21%	3.00%
Real Estate	10%	6.00%
Liquidity Reserves	1%	2.25%
Total Fund	100%	

*Target weights will be phased in over a 24-month period concluding on July 1, 2019.

**10-year annualized geometric nominal returns, which include the real rate of return and inflation of 2.25% and does not include investment expenses. Over a 30-year period, STRS Ohio's investment consultant indicates that the above target allocations should generate a return above the actuarial rate of return, without net value added by management.

OPEB Discount Rate — The projection of cash flows used to determine the discount rate assumed STRS Ohio continues to allocate no employer contributions to the health care fund. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments to current plan members as of June 30, 2018. Therefore, the long-term expected rate of return on health care plan investments of 7.45% was applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2018. For June 30, 2017, the OPEB plan's fiduciary net position was not projected to be sufficient to make all projected future benefit payments of current plan members. Therefore, a blended discount rate of 4.13% which represents the long-term expected rate of return of 7.45% for the funded benefit payments and the Bond Buyer 20-year municipal bond rate of 3.58% for the unfunded benefit payments was used to measure the total OPEB liability at June 30, 2017.

Sensitivity of the Net OPEB Liability to the Discount Rate and Health Care Cost Trend Rate Assumptions — The following represents the net OPEB liability as of June 30, 2018, calculated using the current period discount rate assumption of 7.45%, as well as what the net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current assumption. Also shown is the net OPEB liability as of June 30, 2018, calculated using health care cost trend rates that are one percentage point lower or one percentage point higher than the current health care cost trend rates.

Net OPEB Liability (Asset) at June 30, 2018 (in thousands)		
1% Decrease in Discount Rate (6.45%)	Current Discount Rate (7.45%)	1% Increase in Discount Rate (8.45%)
$(1,377,262)	$(1,606,898)	$(1,799,896)
1% Decrease in Trend Rates	Current Trend Rates	1% Increase in Trend Rates
$(1,789,001)	$(1,606,898)	$(1,421,958)

Mortality Rates for Health Care — *Healthy:* Rates are based on the RP-2014 Annuitant Mortality Table with 50% of rates through age 69, 70% of rates between ages 70 and 79, 90% of rates between ages 80 and 84, and 100% of rates thereafter, projected forward generationally using mortality improvement scale MP-2016.

Disabled: Rates are based on the RP-2014 Disabled Mortality Table with 90% of rates for males and 100% of rates for females, projected forward generationally using mortality improvement scale MP-2016.

Experience Study — The actuarial assumptions used in the June 30, 2018 and 2017, valuation were adopted by the board from the results of an actuarial experience study for July 1, 2011, through June 30, 2016.

5. Contribution Requirements and Reserves

Member and employer contribution rates are established by the Retirement Board and limited by Chapter 3307 of the Revised Code. The member and employer contribution rates are 14% of covered payroll.

Various funds are established under the Revised Code to account for contributions, reserves, income and administrative expenses.

The Teachers' Savings Fund (TSF) is used to accumulate member contributions in trust.

The Employers' Trust Fund (ETF) is used to accumulate employer contributions in trust. The ETF includes assets allocated to post-employment health care from which payments for health care coverage are made. Investment fair value changes for the Defined Benefit Plan and the health care program from year-to-year are recorded in the ETF.

The Annuity and Pension Reserve Fund (APRF) is the fund from which all annuities and pension payments to retired members are made. Reserves are transferred to this fund from the TSF and ETF funds at the time of retirement.

The Survivors' Benefit Fund is the fund from which all survivor benefit payments are made for which reserves have been transferred from the TSF and the ETF.

The Defined Contribution Fund accumulates DC member and employer contributions, Combined Plan member contributions, investment earnings and DC plan expenses.

The Guarantee Fund is used to accumulate income derived from gifts, bequests and investments for the year.

The Expense Fund is the fund from which all expenses for the administration and management of STRS Ohio are paid each year.

After interest is allocated to the various funds, the Guarantee Fund and the Expense Fund are closed into the ETF at year-end.

At June 30, 2018 and 2017, STRS Ohio's net position was included in the various funds as shown below.

Fund Balances (in thousands)

	June 30, 2018	June 30, 2017
Teachers' Savings Fund	$ 13,981,601	$ 12,416,315
Employers' Trust Fund	(5,438,596)	(7,545,223)
Annuity and Pension Reserve Fund	67,494,750	68,610,248
Survivors' Benefit Fund	1,141,161	1,113,146
Defined Contribution Fund	1,458,735	1,252,519
Total	$ 78,637,651	$ 75,847,005

6. Commitments and Contingencies

STRS Ohio has made commitments to fund various real estate investments totaling $1,137,323,000 as of June 30, 2018. The commitments as of June 30, 2018, have expected funding dates from December 2018 to December 2027.

STRS Ohio has made commitments to fund various alternative investments totaling $6,566,662,000 as of June 30, 2018. The expected funding dates for the commitments as of June 30, 2018, range from July 2018 to June 2024 .

STRS Ohio is a party in various legal actions. While the final outcome cannot be determined at this time, management is of the opinion that the liability, if any, for these legal actions will not have a material adverse effect on fiduciary net position.

7. Fair Value Measurement

STRS Ohio's investments measured and reported at fair value are shown on Page 26 and are classified according to the following hierarchy:

Level 1: Level 1 inputs are quoted prices in active markets such as exchange markets.

Level 2: Level 2 inputs are prices that are observable either directly or indirectly. Level 2 inputs may include quoted prices in markets that are not considered active or inputs other than quoted prices that are observable such as interest rates, yield curves, implied volatilities, credit spreads or market-corroborated inputs.

Level 3: Level 3 inputs are prices based on unobservable sources. Level 3 inputs include the best information available under the circumstances, which can include the government's own data and takes into account all information about market participant assumptions.

The assignment of Levels, within the hierarchy, is based on the type or class of investment and the pricing transparency of the investment. Assets classified as Level 1 are valued directly from a primary external pricing vendor. Assets classified as Level 2 are priced using an alternative independent pricing source or a pricing model that uses observable inputs in conjunction with trade information. Assets classified in Level 3 are cases where there is limited activity or a lack of an independent pricing source.

8. Deposit and Investment Risk Disclosure

Investment Authority — The investment authority of the Retirement Board is governed by Section 3307.15 of the Revised Code that also requires the Retirement Board to publish its investment policies annually and make copies available to interested parties. This section requires that investments be made with care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

Rates of Return — Rates of return on total fund are calculated in two ways — as time weighted rates and as money-weighted rates. The time-weighted rate of return expresses investment performance without consideration of the timing and amounts invested. For the year ended

Investments Measured at Fair Value at June 30, 2018 and 2017 (in thousands)

		Fair Value Measurements Using:				Fair Value Measurements Using:		
	June 30, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	June 30, 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level:								
Short-term								
U.S. Treasury bills	$ 1,259,765		$ 1,259,765		$ 1,207,007		$ 1,207,007	
Asset-backed security held in short term	5,501		5,501					
Commercial paper	95,892		95,892					
Corporate notes held in short term	30,503		30,503					
Short-term investment funds	50,000		50,000		15,000		15,000	
Fixed income								
U.S. government agency obligations	499,848		499,848		319,438		319,438	
Corporate bonds	4,017,749		4,017,749		4,092,293		4,092,293	
High yield and emerging markets	1,660,217	56,344	1,603,873		1,627,525		1,627,525	
Mortgages and asset-backed	2,911,068		2,911,068		2,830,428		2,830,428	
U.S. government obligations	6,617,209		6,617,209		5,817,191		5,817,191	
Domestic								
Common and preferred stock	22,689,443	22,689,443			22,317,421	22,317,421		
International								
Foreign stock	16,342,518	16,342,518			17,542,167	17,151,650	390,517	
Foreign equity index funds	1,410,347		1,410,347		1,592,863		1,592,863	
Real estate								
Direct real estate assets	7,677,592			7,677,592	6,897,362			6,897,362
REITs	1,229,655	1,229,655			1,095,194	1,095,194		
Alternative investments								
Foreign stock held in alternative investments	183,444	183,444			176,401	176,401		
Domestic stock held in alternative investments	84,678	84,678			26,551	26,551		
Opportunistic diversified	1,459,155	929,706	251,054	278,395	1,272,336	545,273		727,063
Total investments by fair value level	**68,224,584**	**41,515,788**	**18,752,809**	**7,955,987**	**66,829,177**	**41,312,490**	**17,892,262**	**7,624,425**
Investments measured at net asset value (NAV):								
Real estate								
Commingled real estate fund					95,760			
Real estate funds	932,712				934,865			
Alternative investments								
Hedge funds	1,668,003				1,773,382			
Private equity	5,793,527				4,987,826			
Opportunistic diversified	3,201,782				2,275,854			
Total investments measured at NAV	**11,596,024**				**10,067,687**			
Investment derivatives:								
Options	2,823	(1,670)	4,493		(807)	(1,266)	459	
Rights and warrants	2,077			2,077	1,178			1,178
Foreign currency forwards	55,643		55,643		(52,455)		(52,455)	
Equity swaps	(6,970)		(6,970)		(1,171)		(1,171)	
Total investment derivatives	**53,573**	**(1,670)**	**53,166**	**2,077**	**(53,255)**	**(1,266)**	**(53,167)**	**1,178**
Cash	16,067				7,525			
Total investments and cash	**$ 79,890,248**				**$ 76,851,134**			

Investments Measured at Net Asset Value (NAV) at June 30, 2018 and 2017 (in thousands)

	June 30, 2018	Unfunded Commitment	Redemption Frequency (if Currently Eligible)	Redemption Notice Period	June 30, 2017	Unfunded Commitment	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Commingled real estate fund total[1]					$ 95,760		Quarterly	60 days
Real estate funds total[2]	$ 932,712	$ 751,440	N/A	N/A	934,865	$ 542,439	N/A	N/A
Hedge funds								
Credit/Distressed[3]	683,508		Quarterly	65 days	662,046		Quarterly	60–90 days
Equity long/short[4]	18,558		Quarterly	Fully redeemed	17,432		Quarterly	60 days
Event driven[5]	149,510		Quarterly	65 days	143,096		Quarterly	65 days
Macro[6]	317,517		Quarterly	60 days	296,618		Quarterly	60 days
Market neutral[7]			Quarterly	Fully redeemed	110,112		Quarterly	60 days
Multi-strategy[8]	498,910		Quarterly	60–95 days	544,078		Quarterly	60–90 days
Hedge funds total	1,668,003				1,773,382			
Private equity total[9]	5,793,527	4,193,379	N/A	N/A	4,987,826	3,406,670	N/A	N/A
Opportunistic diversified total[10]	3,201,782	2,373,283	N/A	N/A	2,275,854	2,043,500	N/A	N/A
Total investments measured at NAV	$ 11,596,024				$ 10,067,687			

[1]**Commingled real estate fund total** — Consisting of one domestic real estate investment fund considered to be commingled in nature. The fund is valued at the net asset value, at the end of the period, based upon the fair value of the underlying assets.

[2]**Real estate funds total** — Consisting of 38 opportunistic and international funds which invest in markets throughout the globe. The primary strategy of these funds is to invest in mispriced, mismanaged and distressed assets with the goal of repositioning the asset as a core investment for sale to institutional investors within a 3–5 year holding period. These funds are not eligible for redemption. The fair value of these funds is determined using net assets valued one quarter in arrears plus current cash flows.

[3]**Credit/Distressed** — Consisting of four funds, this strategy invests both long and short in securities of companies that have been, or are expected to be, in potential restructuring situations, as well as U.S. and global credit securities with the goal of generating excess yield relative to traditional credit instruments. These investments are valued at NAV per share. Due to contractual gating restrictions, 63% of the value of these investments is eligible for redemption within the next six months. The remaining 36% of the value of these investments remain restricted up to 14 months. Due to contractual gating restrictions, 63% of the value of the investments is eligible for redemption within the next six months and the remaining 37% remained restricted up to 12 months.

[4]**Equity long/short** — Consisting of one fund, this strategy invests both long and short in U.S. and global equity securities, with the goal of adding growth and minimizing market exposure. This investment is valued at NAV per share. 100% of this investment is eligible for redemption within the next six months.

[5]**Event driven** — Consisting of one fund, this strategy seeks to gain an advantage from pricing inefficiencies that may occur in the onset or aftermath of a corporate action or related event. This investment is valued at NAV per share. 100% of this investment is eligible for redemption within the next six months.

[6]**Macro** — Consisting of one fund, this strategy invests in interest rate, currency, commodity, and equity securities in anticipation of price movements in the global capital markets with the goal of generating returns uncorrelated with the broader markets. This investment is valued at NAV per share. Due to contractual gating restrictions, 50% of the value of this investment is eligible for redemption within the next six months. The remaining 50% of the value of this investment remains restricted up to 14 months.

[7]**Market neutral** — Consisting of one fund that was fully redeemed in fiscal year 2018.

[8]**Multi-strategy** — Consisting of three funds, this strategy aims to pursue varying strategies in order to diversify risks and reduce volatility. These investments are valued at NAV per share. 100% of the value of these investments is eligible for redemption within the next six months.

[9]**Private equity total** — Consisting of 174 commingled funds, fund-of-funds and separately managed accounts involving domestic and global buyout and venture capital funds. These are long-term lock up vehicles, typically with 10-year terms plus available extensions. These investments are valued at NAV as reported by the fund/account manager. The unfunded commitments can be called by the managers to make new investments during the investment period, which is roughly the first half of the fund term. Thereafter, the manager can call capital to fund follow-on expenses in support of the existing portfolio investments or to pay fund expenses.

[10]**Opportunistic diversified** — Consisting of 72 commingled funds, co-investments, and direct investments involving domestic and global energy, infrastructure, and specialty finance funds. These are generally long-term lock up vehicles, typically with 10-year terms plus available extensions. These investments are generally valued at NAV as reported by the fund/account manager, with some exceptions for publicly traded securities. The unfunded commitments can be called by the managers to make new investments during the investment period, which is roughly the first half of the fund term. Thereafter, the manager can call capital to fund follow-on expenses in support of the existing portfolio investments or to pay fund expenses.

June 30, 2018, the annual time-weighted rate of return, net of investment expenses was 9.43%. The money-weighted rate of return expresses investment performance after consideration of the impact of the changing amounts actually invested. For the year ended June 30, 2018, the annual money-weighted rate of return, net of investment expenses, was 9.55%.

Investments held at fair value by STRS Ohio at June 30, 2018 and 2017, are summarized below.

Investments and Invested Securities Lending Collateral Held at Fair Value by STRS Ohio at June 30, 2018 and 2017 (summarized and in thousands)

Category	June 30, 2018	June 30, 2017
Cash and short-term investments		
Cash	$ 16,067	$ 7,525
Commercial paper	95,892	
Short-term investment funds	50,000	15,000
Asset-backed security held in short term	5,501	
Corporate notes held in short term	30,503	
U.S. Treasury bills	1,259,765	1,207,007
Total cash and short-term	**1,457,728**	**1,229,532**
Fixed income		
U.S. government agency obligations	499,848	319,438
Corporate bonds	4,017,749	4,092,293
High yield and emerging market	1,660,217	1,627,669
Mortgages and asset-backed	2,911,068	2,830,428
U.S. government obligations	6,617,209	5,817,191
Total fixed income	**15,706,091**	**14,687,019**
Domestic equities	**22,688,592**	**22,317,077**
International equities (See Note 9)	**17,804,674**	**19,081,516**
Real estate (See Note 10)		
East region	3,097,011	2,778,577
Midwest region	1,285,763	1,351,368
South region	756,929	658,175
West region	2,537,899	2,109,242
REITs	1,229,655	1,095,194
Non-core	932,712	1,030,625
Total real estate	**9,839,959**	**9,023,181**
Alternative investments (See Note 11)	**12,393,204**	**10,512,809**
Invested securities lending collateral	**1,804,947**	**1,347,863**
Total investments and invested securities lending collateral	**$ 81,695,195**	**$ 78,198,997**

Cash and Short-Term Investments — Cash and short-term investments are combined for reporting purposes and include cash balances of $16,067,000 at June 30, 2018, and $7,525,000 at June 30, 2017, in the *Statements of Fiduciary Net Position*.

GASB Statement No. 40 — GASB Statement No. 40, *Deposit and Investment Risk Disclosures*, addresses common deposit and investment risks related to credit risk, concentration of credit risk, interest rate risk and foreign currency risk.

Credit Risk — Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This risk is measured by ratings assigned by a nationally recognized statistical rating organization. The quality ratings of investments in fixed income as of June 2018 and 2017, are shown in the table on the next page. U.S. government fixed-income securities or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk.

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

All investments are held in the name of STRS Ohio or its nominee by the Treasurer of the State of Ohio as custodian. At June 30, 2018 and 2017, the bank statement cash balances were approximately $23,400,000 and $15,514,000, respectively. Bank balances are insured up to $250,000 by the Federal Deposit Insurance Corporation. The remaining bank deposits are covered by collateral held in the name of STRS Ohio's pledging financial institution, as required by state statute.

Interest Rate Risk — Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates. It uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price. The longer the maturity, the more the value of the fixed-income investment will fluctuate with interest rate changes. The table on the next page shows the maturities by weighted-average duration at June 30, 2018 and 2017.

Concentration of Credit Risk — STRS Ohio is guided by statute and policy in the selection of security investments. No investment in any one organization represents 5% or more of STRS Ohio's net position as of June 30, 2018 and 2017.

Quality Ratings of Fixed-Income Investments Held at June 30, 2018 and 2017 (in thousands)

Investment Type	Quality Rating	June 30, 2018 Fair Value	June 30, 2017 Fair Value
U.S. government agency obligations	Aaa	$ 263,242	$ 84,417
	Aa	220,654	235,021
	NR	15,952	
Total U.S. government agency obligations		**499,848**	**319,438**
Corporate bonds	Aaa	124,208	130,261
	Aa	588,043	535,331
	A	1,926,376	1,959,171
	Baa	1,299,413	1,436,722
	Ba	9,923	10,554
	NR	69,786	20,254
Total corporate bonds		**4,017,749**	**4,092,293**
High yield and emerging markets fixed income	Aaa	17,651	7,022
	Aa	8,389	5,709
	A	45,576	47,810
	Baa	96,958	121,092
	Ba	444,604	407,144
	B	683,301	614,605
	Caa and below	237,518	247,816
	NR	126,220	176,471
Total high yield and emerging markets fixed income		**1,660,217**	**1,627,669**
Mortgages and asset-backed	Aaa	2,608,655	2,564,477
	Aa		
	A		2,620
	Baa		
	B		
	Caa and below	1,399	1,557
	NR	301,014	261,774
Total mortgages and asset-backed		**2,911,068**	**2,830,428**
Credit risk debt securities		**9,088,882**	**8,869,828**
U.S. government obligations		**6,617,209**	**5,817,191**
Total fixed-income investments		**$15,706,091**	**$ 14,687,019**

Duration of Fixed-Income Investments Held at June 30, 2018 and 2017 (in thousands)

Investment Type	June 30, 2018 Fair Value	June 30, 2018 Weighted-Average Duration	June 30, 2017 Fair Value	June 30, 2017 Weighted-Average Duration
U.S. government agency obligations	$ 499,848	2.814	$ 319,438	1.177
Corporate bonds	4,017,749	5.822	4,092,293	5.077
High yield and emerging markets fixed income	1,660,217	4.479	1,627,669	4.183
Mortgages and asset-backed	2,911,068	3.940	2,830,428	3.144
U.S. government obligations	6,617,209	5.273	5,817,191	6.185
Total fixed income	**$ 15,706,091**		**$ 14,687,019**	

Significant investment guidelines that relate to investment concentration, interest rate risk and foreign currency risk by major asset class are as follows:

Overall Investment Portfolio — The Retirement Board has approved a target risk budget range of 0.60% to 1.20%, with a working range of 0.20% to 1.60%, annualized active management for the total fund. A risk budget is the amount the Retirement Board has approved for returns to vary from an unmanaged passive investment profile. The board's objective is for active management to add net 0.40% of annualized excess return over moving five-year periods to judge its effectiveness.

Fixed Income — The portfolio will seek diversification by market sector, quality and issuer. The core fixed income portfolio risk budget range is 0.10% to 1.50% using the Bloomberg Barclays U.S. Universal Index as the benchmark. The Liquid Treasury portfolio risk budget range is 0.0% to 0.25% during normal market conditions, but will have a board-approved risk budget range of 0.0% to 1.0% using the Bloomberg Barclays U.S. Intermediate Treasury Index as the benchmark. Derivatives may be used to adjust the exposure to interest rates, individual securities or to various market sectors in the portfolio. Underlying exposure of derivatives for fixed-income investments will not exceed 5% of total fund assets. Short sales may be used, but may not exceed 10% of the value of the asset class.

Global Equities — Domestic — The risk budget range for domestic equities is 0.20% to 1.50% using the Russell 3000® Index as the benchmark. Derivatives may be used in management of the equity portfolio. Underlying exposure of equity derivatives will not exceed 10% of total fund assets. Short sales may be used, but may not exceed 10% of the value of the asset class.

Global Equities — International — International assets will be a diversified portfolio including both developed and emerging countries. The risk budget range for international equity is between 0.60% to 2.50% using a blended benchmark of 80% MSCI World ex US Index-Net (50% hedged) and 20% MSCI Emerging Markets Index-Net. Derivatives may be used in management of the portfolio and underlying exposure of derivatives for international investments will not exceed 10% of total fund assets. Short sales may be used, but may not exceed 10% of the value of the asset class.

Real Estate — The real estate portfolio shall be diversified between property type, geographic location and investment structure. The risk budget range for real estate investments is 2.00% to 7.00% using a benchmark of 85% NCREIF Property Index and 15% FTSE NAREIT Equity REITs Index. Investments in non-core real estate, which includes domestic and international opportunity funds and real estate development projects, shall not exceed 20% of total real estate assets. Derivatives may be used and will not exceed 1% of total fund assets. STRS Ohio may borrow funds on a secured or unsecured basis and leverage is limited to 50% in aggregate of internally managed real estate assets excluding publicly traded real estate investment trusts (REITs). Short sales may be used, but may not exceed 10% of the value of the asset class.

Alternative Investments — Alternative investments involve separate allocations to private equity and opportunistic/diversified investments. Private equity investments are being managed with the objective of earning at least 1% net of fees above domestic public equity markets (Russell 3000® Index) over moving 10-year periods. Private equity investments are traded infrequently and, therefore, risk budget concepts are not applicable. Opportunistic/diversified investments are being managed with the objective of earning domestic public equity-like returns defined as 1% net of fees below domestic public equity markets (Russell 3000® Index) over moving 10-year periods, but with the added objective of downside protection during equity bear markets. Investments in this category can be liquid or illiquid and, therefore, risk budget concepts are not applicable. Derivatives may be used but will not exceed 10% of total fund assets.

Foreign Currency Risk — Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. Forward currency contracts may be used to manage the exposure to foreign currencies. The system's investments exposed to foreign currency risk at June 30, 2018 and 2017, are shown in the table to the right. The investment figures are

Exposure to Foreign Currency Risk
Held at June 30, 2018 and 2017 (in thousands)

	June 30, 2018		June 30, 2017	
Foreign Currency Denomination	International	High Yield & Emerging Markets Fixed Income	International	High Yield & Emerging Markets Fixed Income
Argentine Peso	$ 2,679	$ 214	$ 1	$ 899
Australian Dollar	309,921		283,825	
Brazilian Real	216,982	1,983	260,681	2,436
British Pound Sterling	924,635		836,878	
Canadian Dollar	355,644		354,174	
Chilean Peso	47,503		64,276	1,457
Chinese Yuan Renminbi	15,891			
Colombian Peso	1,866		110	
Czech Republic Koruna	4,330		4,320	
Danish Krone	94,535		143,792	
Egyptian Pound	5,747		5,108	
European Union Euro	1,425,660	24,220	1,534,152	22,023
Hong Kong Dollar	1,104,027		931,627	
Hungarian Forint	21,844		32,671	
Indian Rupee	262,485	1,773	271,375	1,411
Indonesian Rupiah	36,023	665	49,515	2,372
Israeli Shekel	(1,643)		8,553	
Japanese Yen	1,216,358		1,351,547	
Kenyan Shilling	1,698		1,555	
Malaysian Ringgit	26,443		26,664	
Mexican Peso	36,852	2,565	53,060	3,559
Moroccan Dirham	1,603		1,439	
New Taiwan Dollar	436,292		573,158	
New Zealand Dollar	11,299		28,000	
Nigerian Naira	22,307		14,546	
Norwegian Krone	83,729		32,740	
Peruvian Nuevo Sol		620		4,727
Philippines Peso	18,604		19,917	
Polish Zloty	41,965		61,722	
Romanian Leu	1,596		983	
Russian Ruble	56,269		29,293	2,953
Singapore Dollar	107,048		96,031	
South African Rand	204,201	4,937	150,935	
South Korean Won	573,419		695,787	
Swedish Krona	123,029		169,290	
Swiss Franc	385,164		458,926	
Thailand Baht	88,623		95,462	
Tunisian Dinar			689	
Turkish Lira	98,175		105,067	1,183
Uruguayan Peso Uruguayo				555
United Arab Emirates Dirham	808			
Vietnamese Dong	9,372		4,611	
Held In Foreign Currency	8,372,983	36,977	8,752,480	43,575
Held In U.S. Dollars	**9,431,691**	**1,623,240**	**10,329,036**	**1,584,094**
Total	**$17,804,674**	**$1,660,217**	**$19,081,516**	**$1,627,669**

comprised of numerous portfolios within international equity, debt securities and real estate investments.

Securities Lending — STRS Ohio participates in a domestic and international securities lending program whereby securities are loaned to investment brokers/ dealers (borrower). Securities loaned are collateralized by the borrower at 102% of the domestic equity and U.S. dollar-denominated fixed-income loaned securities' fair value and 105% of the international loaned securities' fair value.

STRS Ohio lends domestic equities, international equities, U.S. Treasuries, agencies and corporate bonds. The collateral received is cash, U.S. Treasuries or related agency securities. STRS Ohio cannot sell or pledge collateral received. If a borrower defaults, then the collateral can be liquidated.

A custodial agent bank administers the program and STRS Ohio receives a fee from the borrower for the use of loaned securities. Cash collateral from securities lending is invested in repurchase agreements, commercial paper and U.S. corporate obligations.

The credit quality of the invested cash collateral is the same as the credit quality on STRS Ohio direct holdings. There are slight mismatches between the duration of the cash invested and the length of time the securities are on loan. As of June 30, 2018, the weighted average maturity of the invested cash collateral is 83 days. Because much of the cash collateral is invested in floating rate securities, the weighted average number of days interest rates reset is 15 days as of June 30, 2018. STRS Ohio has minimized its exposure to credit risk due to borrower default by having the custodial agent bank determine daily that the required collateral meets the specified collateral requirements. There are no restrictions on the amount of securities that can be loaned. The fair value of loaned securities was $1,753,453,000 and $1,315,766,000 as of June 30, 2018 and 2017, respectively. The fair value of the associated invested cash collateral as of June 30, 2018 and 2017, was $1,804,947,000 and $1,347,863,000, respectively.

9. International Investments

Externally Managed — STRS Ohio has investments in international equity securities through the use of external money managers. It is the intent of STRS Ohio and the money managers to be fully invested; however, cash and short-term fixed-income investments may be held temporarily. The portfolios are managed in accordance with various mandates based on Morgan Stanley Capital International's (MSCI) indexes. Investments are held in both developed and emerging international markets.

Internally Managed:

Developed Markets, Emerging Markets — STRS Ohio actively invests in developed and emerging markets. The portfolio's active management adds value primarily through security selection and country allocation decisions using a variety of portfolio management approaches including quantitative and fundamental techniques. Aggregate exposures to countries, currencies, equity styles, and market capitalization are monitored and managed relative to their benchmark exposures.

Europe, Australia and Far East (EAFE) Index Fund — To increase diversification in international developed markets, STRS Ohio invests in an EAFE Index Fund. The EAFE Index Fund purchases foreign equities, futures and other traded investments to replicate the makeup of the EAFE benchmark.

Equity Swaps — Three EAFE swap agreements were contracted during fiscal 2018 with maturity dates in fiscal 2019. There were no Emerging Market Free (EMF) international equity swap agreements contracted during fiscal 2018. In exchange for LIBOR (London Interbank Offered Rate) minus a negotiated spread, STRS Ohio will receive or pay the difference of the change in the total return of the various market indices included in the swap agreements. Fixed-income securities with a notional amount of $737.4 million have been set aside at the global subcustodial account as security.

Forward Contracts — Managers have the ability to add value through currency management. Forward currency contracts are used to minimize the impact of foreign currency fluctuations on the asset positions of foreign investments.

The fair values of international investments held at June 30, 2018 and 2017, are shown below.

Fair Values of International Investments Held at June 30, 2018 and 2017 (in thousands)

	June 30, 2018	June 30, 2017
Externally managed		
International stocks	$ 7,488,096	$ 8,160,879
International currency and liquidity reserves	176,751	137,420
Forward contracts	25,189	(14,705)
Total externally managed	**7,690,036**	**8,283,594**
Internally managed		
Developed markets	6,603,449	6,970,170
Emerging markets	2,072,747	2,194,843
EAFE Index Fund	1,410,347	1,592,863
EAFE equity swaps	(2,359)	8,420
EMF equity swaps		69,376
Forward contracts	30,454	(37,750)
Total internally managed	**10,114,638**	**10,797,922**
Total international	**$17,804,674**	**$ 19,081,516**

10. Real Estate Investments

Direct — STRS Ohio properties are diversified between property type, geographic location and investment structure. Eighty-five percent of real estate is actively managed. The portfolio is primarily managed internally with direct property investments representing most of the portfolio. Direct real estate investments include office, apartment, industrial and retail space.

Public Real Estate — Public real estate includes publicly traded real estate securities and real estate investment trusts (REITs). REITS are passively managed and targeted at 15% of the real estate portfolio to enhance liquidity and diversification.

Non-Core Real Estate — Non-core real estate investments include opportunistic and international funds that invest in markets throughout the globe. Non-core real estate investments typically carry more risk with higher expected return.

Debt on Real Estate Investments — STRS Ohio uses debt to lower the cash outlay in acquiring real estate assets and to positively impact the performance of the real estate portfolio. Of the debt on real estate investments, $250 million and $290 million was recourse debt as of June 30, 2018 and 2017, respectively. This debt is recourse to STRS Ohio with a covenant not to mortgage a specific pool of real estate assets. The remainder of the debt on real estate investments at June 30, 2018 and 2017, is non-recourse debt, which means that in the event of default, the specific real estate holding is used as collateral for the loan and general assets of STRS Ohio are not pledged as collateral.

At June 30, 2018, the recourse loans of $250 million had maturity dates in May 2019. The interest rate on the recourse loans are based on a fixed rate of 2.99%.

Of the non-recourse debt at June 30, 2018, loan maturities range from September 2018 to May 2030. Non-recourse debt at June 30, 2017, had loan maturities ranging from July 2017 to June 2028.

The repayment schedule for real estate debt as of June 30, 2018, is shown in the table below.

Real Estate Debt Repayment Schedule
As of June 30, 2018 (in thousands)

By Fiscal Year	Principal	Interest
2019	$ 560,715	$ 63,912
2020	21,992	49,951
2021	12,286	48,938
2022	124,468	44,575
2023	92,899	43,108
2024–2028	1,019,148	108,470
2029–2033	26,836	2,295
Total	$ 1,858,344	$ 361,249

11. Alternative Investments

Alternative investments involve separate allocations to private equity and opportunistic/diversified investments. Private equity is 100% actively managed and includes, but is not limited to, venture capital and leverage buyouts, mezzanine debt or distressed debt. Private equity investments may be made directly, through funds, fund of funds or as co-investments. Opportunistic/diversified investments are typically actively managed and are tactical in nature with a goal of downside protection during equity bear markets. The category can be liquid or illiquid and investments may be made directly, through funds, fund of funds or as co-investments.

12. Derivatives

Equity and Over-the-Counter Swap Agreements — As discussed in Note 9, STRS Ohio has entered into international equity swap agreements. In addition, STRS Ohio has entered into over-the-counter (OTC) swap agreements for its alternative investments . No funds are exchanged at the inception of the swap agreements; however, STRS Ohio has purchased fixed-income securities equivalent to the initial notional amount of the agreements, which are located in the global subcustodial account as of June 30, 2018. In addition, collateral is pledged between the parties during the term of the agreements to account for market movements. The notional amount of the equity contracts was $737.4 million at June 30, 2018, and $1.13 billion at June 30, 2017. The fair value of the equity swap contracts of –$5.9 million at June 30, 2018, and –$1.2 million at June 30, 2017, is included in the *Statements of Fiduciary Net Position*. The notional amount of the OTC swap agreements was $201.1 million at June 30, 2018 and no OTC swaps were held as of June 30, 2017. The fair value of the OTC swap contracts of –$1.0 million as of June 30, 2018, is included in the *Statements of Fiduciary Net Position*. The market risk of the swap is the same as if STRS Ohio owned the underlying stocks that comprise the indexes. The revenues and expenses resulting from these agreements have been recorded in the basic financial statements.

Forward Contracts — Forward contracts in various currencies are used to transact and hedge direct foreign equity and real estate investments that STRS Ohio maintains through the use of outside managers. Additionally, forward contracts are used to hedge currency exposure as a result of the EAFE equity swap agreements. STRS Ohio is obligated to deliver the foreign currency at a certain dollar price sometime in the future. To fulfill this obligation at maturity, STRS Ohio must obtain the currency in the open market. Before the contract matures, STRS Ohio can enter into an offsetting forward contract that nets out the original contract. These events expose STRS Ohio to currency market risk, which can fluctuate. The fair value of the foreign currency forwards of $55.6 million at June 30, 2018, and –$52.5 million at June 30, 2017, is included in the *Statements of Fiduciary Net Position*. STRS Ohio is also subject to the risk that the counterparty will fail to fulfill the contract.

Futures — Index futures are designed to offer lower cost and more efficient alternatives to buying individual stocks that comprise the index. The market and credit risk of the futures were the same as if STRS Ohio had owned the underlying stocks that comprise the index. The realized gain or loss on index futures is included in net appreciation (depreciation) in fair value of investments in the *Statements of Changes in Fiduciary Net Position*.

Additionally, futures were used in the EAFE Index Fund and by external money managers. The system's exposure to future and forward contracts at June 30, 2018 and 2017, is shown in the following table.

Exposure to Future and Forward Contracts Held at June 30, 2018 and 2017 (in thousands)

	June 30, 2018	June 30, 2017
Forward contracts		
Externally managed	$ 4,307,295	$ 4,811,186
Internally managed	4,328,208	5,221,254
Total forward contracts	$ 8,635,503	$ 10,032,440
Future contracts		
EAFE Index Fund	$ 20,853	$ 32,470
S&P Index Futures		
Externally Managed	34,913	
Total future contracts	$ 55,766	$ 32,470

Options — STRS Ohio writes option contracts on existing stock positions to enhance the return on the stock portfolio. In exchange for a premium, STRS Ohio gives the option buyer the right to buy or sell the underlying stock. Options are also purchased to "cover" existing written open option positions. The notional value of the options contracts was $34.2 million at June 30, 2018, and $80.8 million at June 30, 2017. The fair value of the options contracts of –$0.85 million at June 30, 2018, and –$1.3 million at June 30, 2017, is included in the *Statements of Fiduciary Net Position*. Additionally, options were utilized by external managers with a notional value of $6.6 billion at June 30, 2018, and $3.2 billion at June 30, 2017. The fair value of $3.7 million at June 30, 2018, and $0.46 million at June 30, 2017, is included in the *Statements of Fiduciary Net Position*.

Warrants — Warrants allow the right to purchase underlying stock shares at a specified price. Warrants are usually added on as an incentive to an issuer's fixed-income securities. STRS Ohio held warrants with a value of $2.1 million as of June 30, 2018, and $1.2 million at June 30, 2017, and is included in the *Statements of Fiduciary Net Position*.

Fixed-Income Credit Default Swaps — STRS Ohio may manage credit exposure through the use of credit default swaps. A credit default swap is a contract whereby the credit risk associated with an investment is transferred by entering into an agreement with another party who, in exchange for periodic fees, agrees to make payments in the event of a default or other predetermined credit event. One of the main advantages of a credit default swap is it allows for exposure to credit risk while limiting exposure to other risks, such as interest rate and currency risk. STRS Ohio held no credit default swaps as of June 30, 2018, and June 30, 2017.

13. Pension Plan for Employees of STRS Ohio

Substantially all STRS Ohio employees are required to participate in a contributory retirement plan administered by OPERS. OPERS is a cost-sharing, multiple-employer public employee retirement system that administers three pension plans that include a defined benefit plan, a defined contribution plan and a combined plan. Participation in these plans is a choice members make at the time their employment commences. Members may elect to change plans once during their career.

In 2012, the Ohio Legislature passed Senate Bill 343 to improve the financial condition of OPERS. In the legislation, members were categorized into three groups with varying provisions of the law applicable to each group. Retirement benefits are specific to each group and members must meet the eligibility requirements based on their age and years of service within the group. The key components to OPERS' pension plan changes are:

- Age and service requirements for retirement increased.
- Final average salary calculation increased to five years from three years.
- Calculation used to determine the benefit amount for service retirement was modified.
- COLA is based on the annual percentage change in the Consumer Price Index with a 3% cap.
- Calculation used to determine early retirement benefit is determined by OPERS' actuary.

Details about OPERS' plan changes and when they become effective can be found on its website at www.OPERS.org.

The member and employer contribution rates are 10.0% and 14.0% of covered payroll, respectively. The required employer contributions for the current year and the two preceding years are shown in the table below.

STRS Ohio Required Employer Contributions to OPERS

Year Ended June 30	Annual Required Contribution	Percent Contributed
2016	$7,418,000	100%
2017	$7,787,000	100%
2018	$7,848,000	100%

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, requires STRS Ohio to record a net pension liability based on its proportionate share of OPERS' total net pension liability. Likewise, STRS Ohio's proportionate share of OPERS' deferred outflows and deferred inflows of resources related to pensions and pension expense are recorded in the *Statements of Fiduciary Net Position* and *Statements of Changes in Fiduciary Net Position* for fiscal years ending June 30, 2018, and June 30, 2017.

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 OPERS and additions to/deductions from OPERS' fiduciary net position have been determined on the same basis as they are reported by OPERS. For this purpose, benefits and refunds are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

OPERS also provides post-employment health care coverage which is considered an OPEB as described in GASB Statement No. 75. In addition to the legislation that made changes to the pension plan, the OPERS Board approved changes to the retiree health care plan with phased-in implementation dates over the next several years. Depending on pension funding, OPERS has the discretion to direct a portion of employer contributions to fund retiree health care. The Revised Code provides statutory authority for employer contributions. The employer rate set aside for post-employment health care was 1% for calendar year 2017 and 2% for calendar year 2016.

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the OPEB fiduciary net position of OPERS and additions to/deductions from the OPEB fiduciary net position of OPERS have been determined on the same basis as they are reported by OPERS. For this purpose, health care benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Historical trend information showing the progress of OPERS in accumulating sufficient assets to pay pension and OPEB benefits when due is presented in the OPERS Comprehensive Annual Financial Report. OPERS issues a publicly available financial report for the plans. The report may be obtained by writing to OPERS, 277 E. Town St., Columbus, OH 43215-4642.

Schedule of Changes in Employers' Net Pension Liability
Fiscal Years Ending June 30, 2014–2018* (in thousands)

	2018	2017	2016	2015	2014
Total pension liability					
Service cost	$ 1,075,334	$ 1,067,687	$ 1,058,987	$ 1,111,078	$ 1,094,986
Interest	6,974,353	7,611,942	7,472,169	7,272,034	7,137,686
Benefit changes, due to COLA reduction	0	(12,353,691)	0	0	0
Difference between expected and actual experience	31,732	(239,322)	527,725	1,355,347	292,708
Changes in assumptions	0	6,494,408	0	0	0
Benefit payments, including refunds of employee contributions	(7,303,802)	(7,211,006)	(7,317,113)	(6,890,862)	(6,725,017)
Net change in total pension liability	777,617	(4,629,982)	1,741,768	2,847,597	1,800,363
Total pension liability, beginning of year	96,126,440	100,756,422	99,014,654	96,167,057	94,366,694
Total pension liability, end of year	**96,904,057**	**96,126,440**	**100,756,422**	**99,014,654**	**96,167,057**
Fiduciary net pension position					
Member contributions	$ 1,580,430	$ 1,537,677	$ 1,372,033	$ 1,259,135	$ 1,193,808
Employer contributions, including other retirement systems	1,634,027	1,590,869	1,545,103	1,594,794	1,508,442
Net investment income	6,737,457	9,233,930	372,871	3,671,845	10,534,608
Benefit payments	(7,303,801)	(7,211,006)	(7,322,107)	(6,890,863)	(6,725,017)
Administrative expenses	(63,307)	(63,652)	(62,071)	(61,183)	(60,991)
Net change in fiduciary net pension position	2,584,806	5,087,818	(4,094,171)	(426,272)	6,450,850
Fiduciary net pension position, beginning of year	72,371,226	67,283,408	71,377,579	71,843,596	65,392,746
Restatement of fiduciary net pension position**	(39,730)	N/A	N/A	(39,745)	N/A
Restatement of fiduciary net pension position, beginning of year	72,331,496	N/A	N/A	71,803,851	N/A
Fiduciary net pension position, end of year	**74,916,302**	**72,371,226**	**67,283,408**	**71,377,579**	**71,843,596**
Net pension liability, end of year	**$ 21,987,755**	**$ 23,755,214**	**$ 33,473,014**	**$ 27,637,075**	**$ 24,323,461**

*This is a 10-year schedule — however, the information is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until 10 years of information is available.

**For purposes of determining net pension liability and related disclosures, fiduciary net position was not restated for earlier periods to reflect the adoption of GASB 75 in 2018 and GASB 68 in 2015.

Schedule of Employers' Net Pension Liability
Fiscal Years Ending June 30, 2013–2018* (dollar amounts in thousands)

Fiscal Year Ending	Total Pension Liability	Fiduciary Net Position	Net Pension Liability	Ratio of Fiduciary Net Position to Total Pension Liability	Covered Payroll	Net Pension Liability as a Percentage of Covered Payroll
June 30, 2013	$94,366,694	$65,392,746	$28,973,948	69.3%	$10,765,635	269.1%
June 30, 2014	$96,167,057	$71,843,596	$24,323,461	74.7%	$10,725,329	226.8%
June 30, 2015	$99,014,654	$71,377,579	$27,637,075	72.1%	$10,948,586	252.4%
June 30, 2016	$100,756,422	$67,283,408	$33,473,014	66.8%	$11,099,607	301.6%
June 30, 2017	$96,126,440	$72,371,226	$23,755,214	75.3%	$11,557,147	205.5%
June 30, 2018	**$96,904,057**	**$74,916,302**	**$21,987,755**	**77.3%**	**$11,923,688**	**184.4%**

*This is a 10-year schedule — however, the information is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until 10 years of information is available.

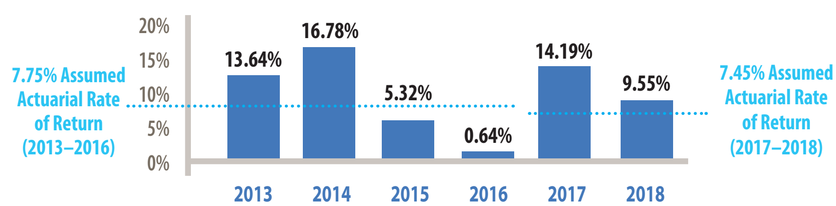
Schedule of Employers' Contributions — Pension
Fiscal Years Ending June 30, 2009–2018* (dollar amounts in thousands)

Fiscal Year	Actuarial Determined Contribution	Employer Contributions*	Contribution Deficiency (Excess)	Covered Payroll**	Contributions as a Percentage of Covered Payroll
2009	$1,502,240	$1,347,741	$154,499	$10,122,141	13.31%
2010	$2,623,624	$1,374,327	$1,249,297	$10,341,512	13.29%
2011	$2,715,523	$1,379,104	$1,336,419	$10,369,367	13.30%
2012	$3,248,651	$1,349,561	$1,899,090	$10,102,509	13.36%
2013	$2,910,537	$1,327,862	$1,582,675	$9,917,911	13.39%
2014	$1,489,734	$1,325,141	$164,593	$9,833,028	13.48%
2015	$1,368,602	$1,449,165	$(80,563)	$9,985,181	14.51%
2016	$1,178,129	$1,466,938	$(288,809)	$10,069,269	14.57%
2017	$1,054,862	$1,514,285	$(459,423)	$10,459,706	14.48%
2018	**$1,056,430**	**$1,565,679**	**$(509,249)**	**$10,775,526**	**14.53%**

*Employer contributions are the same as contractually required contributions.
**Excludes payroll from the Defined Contribution and Alternative Retirement Plans.

Schedule of Investment Returns — Pension
Fiscal Years Ending June 30, 2013–2018*

Money-Weighted Rate of Return, Net of Fees



	2013	2014	2015	2016	2017	2018
Time-Weighted Rate of Return, Net of Fees	13.54%	16.71%	5.33%	0.78%	14.15%	9.43%

*This is a 10-year schedule — however, the information is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until 10 years of information is available.

Notes to Required Supplementary Information — Pension
Fiscal Years Ending June 30, 2018 and 2017

Valuation date	July 1, 2018	July 1, 2017
Actuarial cost method	Entry age normal	Entry age normal
Actuarial assumptions:		
Investment rate of return, net of investment expense, including inflation	7.45%	7.45%
Projected salary increases	12.50% at age 20 to 2.50% at age 65	12.50% at age 20 to 2.50% at age 65
Projected payroll growth	3.00%	3.00%
Inflation assumption	2.50%	2.50%
Cost-of-living adjustments	None	None

The information presented in the required supplemental schedules was determined as part of the actuarial valuations for the dates indicated. See accompanying independent auditors' report.

Schedule of Changes in Employers' Net OPEB Liability (Asset)
Fiscal Years Ending June 30, 2018 and 2017* (in thousands)

	2018	2017
Total OPEB liability		
Service cost	$ 633,316	$ 225,094
Interest	320,157	277,562
Benefit changes	(3,340,847)	(1,065,891)
Difference between expected and actual experience	(109,227)	262,764
Changes in assumptions	(2,248,888)	(366,671)
Benefit payments	(517,470)	(489,102)
Net change in total OPEB liability	(5,262,959)	(1,156,244)
Total OPEB liability, beginning of year	7,377,410	8,533,654
Total OPEB liability, end of year	**2,114,451**	**7,377,410**
Fiduciary net OPEB position		
Retired member contributions	329,305	339,056
Employer contributions	0	0
Net investment income	328,965	440,197
Benefit payments, net of reimbursements	(410,273)	(486,605)
Administrative expenses	(2,427)	(2,497)
Net change in fiduciary net OPEB position	245,570	290,151
Fiduciary net OPEB position, beginning of year	3,475,779	3,185,628
Fiduciary net OPEB position, end of year	**3,721,349**	**3,475,779**
Net OPEB liability (asset), end of year	**$ (1,606,898)**	**$ 3,901,631**

*This is a 10-year schedule — however, the information is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until 10 years of information is available.

Schedule of Employers' Net OPEB Liability
Fiscal Years Ending June 30, 2016–2018* (dollar amounts in thousands)

Fiscal Year Ending	Total OPEB Liability	Fiduciary Net OPEB Position	Net OPEB Liability (Asset)	Ratio of Fiduciary Net OPEB Position to Total OPEB Liability	Covered Payroll	Net OPEB Liability (Asset) as a Percentage of Covered Payroll
June 30, 2016	$8,533,654	$3,185,628	$5,348,026	37.3%	$10,628,269**	50.3%
June 30, 2017	$7,377,410	$3,475,779	$3,901,631	47.1%	$10,767,964**	36.2%
June 30, 2018	**$2,114,451**	**$3,721,349**	**$(1,606,898)**	**176.0%**	**$10,775,526**	**(14.9)%**

*This is a 10-year schedule — however, the information is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until 10 years of information is available.

**Covered payroll was based on the prior calendar year projected forward to the fiscal year end period.

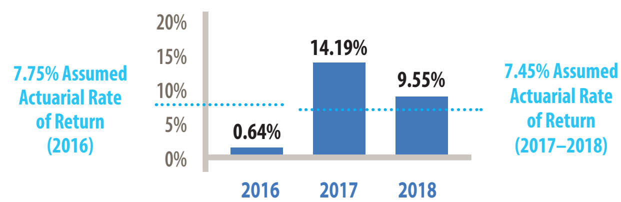
Schedule of Employers' Contributions — OPEB
Fiscal Years Ending June 30, 2017 and 2018* (dollar amounts in thousands)

Fiscal Year	Actuarial Determined Contribution	Employer Contributions*	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2017	$239,430	$0	$239,430	$10,767,964	0.00%
2018	**$0**	**$0**	**$0**	**$10,775,526**	**0.00%**

*This is a 10-year schedule — however, the information is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until 10 years of information is available.

Schedule of Investment Returns — OPEB
Fiscal Years Ending June 30, 2016–2018*

Money-Weighted Rate of Return, Net of Fees



Time-Weighted Rate of Return, Net of Fees	0.78%	14.15%	9.43%

*This is a 10-year schedule — however, the information is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until 10 years of information is available.

Notes to Required Supplementary Information — OPEB
Fiscal Years Ending June 30, 2018 and 2017

Valuation date	Jan. 1, 2018	Jan. 1, 2017
Measurement date	June 30, 2018	June 30, 2017
Amortization method	Level percentage of payroll	Level percentage of payroll
Actuarial cost method	Entry age normal	Entry age normal
Actuarial assumptions:		
Discount rate	7.45%	4.13%*
Projected salary increases	12.50% at age 20 to 2.50% at age 65	12.50% at age 20 to 2.50% at age 65
Payroll increases	3.00%	3.00%
Trend rates	–5.23%–9.62% initial; 4.00% ultimate	6%–11% initial; 4.50% ultimate

The information presented in the required supplemental schedules was determined as part of the actuarial valuations for the dates indicated. See accompanying independent auditors' report.

Schedules of Administrative Expenses
For the Years Ending June 30, 2018 and 2017

	2018	2017
Personnel		
Salaries and wages	$ 33,405,768	$ 33,474,905
Retirement contributions	4,630,475	4,552,595
Benefits	6,461,741	5,891,960
Total personnel	**44,497,984**	**43,919,460**
Professional and technical services		
Computer support services	901,914	738,328
Health care services	710,190	664,716
Actuary	219,311	513,257
Auditing	318,757	212,718
Defined contribution administrative fees	1,137,175	1,088,287
Legal	391,022	428,745
Temporary employment services	10,692	21,679
Total professional and technical services	**3,689,061**	**3,667,730**
Communications		
Postage and courier services	1,150,637	1,163,425
Printing and supplies	1,211,546	1,339,382
Telephone	297,709	277,632
Total communications	**2,659,892**	**2,780,439**
Other expenses		
Equipment repairs and maintenance	5,249,570	5,456,654
Building utilities and maintenance	1,434,252	1,534,216
Transportation and travel	190,227	192,087
Recruitment fees	40,014	35,106
Depreciation	6,572,639	7,049,399
Member and staff education	174,538	220,848
Insurance	594,314	616,383
Memberships and subscriptions	141,217	153,538
Ohio Retirement Study Council	247,561	227,678
Miscellaneous	242,920	295,216
Total other expenses	**14,887,252**	**15,781,125**
Total administrative expenses	**$ 65,734,189**	**$ 66,148,754**

Note: Above amounts do not include internal investment expenses, which are deducted from investment income and shown in a separate schedule on Page 40.

See accompanying independent auditors' report.

Schedules of Internal Investment Expenses
For the Years Ending June 30, 2018 and 2017

	2018	2017
Personnel		
Salaries and wages	$ 27,755,310	$ 27,711,802
Retirement contributions	3,217,164	3,234,660
Benefits	2,675,119	2,702,891
Total personnel	**33,647,593**	**33,649,353**
Professional and technical services		
Investment research	2,561,510	2,362,169
Financial asset advisors	733,647	792,187
Custody banking fees	2,292,854	2,412,245
Investment quotation systems	1,952,051	1,768,808
Temporary employment services	27,537	11,758
Total professional and technical services	**7,567,599**	**7,347,167**
Other expenses		
Printing and supplies	3,429	3,746
Building utilities and maintenance	206,947	333,522
Travel	444,653	446,894
Staff education	15,837	9,103
Memberships and subscriptions	106,883	69,171
Miscellaneous	92,936	84,829
Total other expenses	**870,685**	**947,265**
Total internal investment expenses	**$ 42,085,877**	**$ 41,943,785**

See accompanying independent auditors' report.

Schedules of External Asset Management Fees
For the Years Ending June 30, 2018 and 2017

	2018	2017
Asset class		
Fixed income	$ 6,716,217	$ 6,578,481
Domestic equities	12,262,706	11,996,315
International equities	31,782,239	31,003,372
Real estate	15,278,726	18,060,629
Alternative investments	152,268,290	144,521,277
Total external asset management fees	**$ 218,308,178**	**$ 212,160,074**

Note: Investment-related costs associated with external asset management are reported as external asset management fees in the *Statement of Changes in Fiduciary Net Position*, if the investment-related costs are reasonably separable from investment income and expenses of the plan.

See accompanying independent auditors' report.

Investment Review

For Fiscal Year July 1, 2017, through June 30, 2018
Prepared by STRS Ohio's Investment Department Associates

Basis of Presentation

STRS Ohio provides the investment returns for the fund and performance calculations are prepared using time-weighted rates of return. Performance is net of fees for external managed real estate and alternative investments and gross of fees on all other investments. Returns for periods longer than one year are annualized.

Economic Environment

In less than a year, the current U.S. economic expansion will likely move into uncharted territory. It will be on the cusp of entering its 11th year of economic growth because the risk of recession is low in fiscal year 2019. It will, then, wear the crown for being the longest U.S. expansion since reliable records began in the mid-1800s — outshining the 10-year growth cycle from 1991–2001.

Though the expansion's duration is impressive, its performance had been disappointing-to-mediocre because of the long recovery from the financial crisis that led to the Great Recession of 2007–2009. That assessment of its performance changed beginning in early 2016 when real (inflation-adjusted) core economic activity accelerated into the 3% range and overall economic growth returned to its long-term trend. Today, while certainly aged because of the expansion's length, the U.S. economy is generally behaving like it is in a mid-cycle phase that is pushing gradually closer toward late-cycle characteristics in future years. It will likely leave a duration record that future expansions will find hard to match.

Upside and downside risks remain to the sturdy U.S. economic forecast for fiscal year 2019, but real economic growth in the 2–3.5% range appears to be highly likely. The personal and business tax cuts and reforms that were passed in mid-fiscal year 2018 should help to support a third straight year of consumer and business activity in or above the economy's low-to-mid 2% long-term potential range. If business fixed investment exceeds expectations due to a larger impact from corporate tax reform, full capital expenditures expensing, repatriation of foreign profits that increasingly are used for expansion and further significant federal government deregulations, then U.S. economic growth could surpass the upper bound on the baseline forecast range for real gross domestic product (GDP) growth. A greater acceleration in capital expenditures would also lead in future years to productivity gains that could push potential economic growth above the current long-term range.

Meanwhile, the Trump administration's inability to deliver a unified message on trade policy could damage business and consumer confidence enough that it changes expected behavior and slows economic growth to below the lower bound of the baseline forecast range. Furthermore, geopolitical crises in the Middle East and elsewhere remain a threat to U.S. economic growth. Nevertheless, we place a higher probability on solid economic growth in fiscal year 2019 than in recent years because the U.S. economy is producing broad-based strength across most economic sectors with new expansionary fiscal policy that should offset the gradual movement toward more restrictive monetary policy.

Real GDP growth through fiscal year 2018 has averaged an annualized 2.25% over the entire expansion. That rate of growth remains roughly half of the average growth rates recorded from all post-World War II economic expansions. Much of the softer economic growth can be attributed to a significant slowing in productivity growth. It has advanced by just an annualized 1.1% during the past nine years compared to a postwar expansion average of 2.4% and an entire post-war business cycle (including recessions) average of 2.1%. Unfortunately, the disappointing productivity growth of the current expansion matches the average productivity gains that have occurred in all post-war recessions when economic activity generally contracts. At the same time, the demographic challenges for the United States from retiring Baby Boomers and slower labor force growth will continue for decades to come. Taken together, the two primary components — worker productivity and labor inputs — to potential economic growth abruptly slowed during the current economic expansion.

Following soft 1% overall and 1.9% core annualized economic growth in the middle quarters of fiscal year 2016, the U.S. economy accelerated. Total economic activity has advanced by 2.5% while core economic activity (real private domestic final sales that equals real GDP less volatile foreign trade, inventory change and government spending) has grown an annualized 3.1% over the subsequent nine quarters ending fiscal year 2018. For fiscal year 2018 alone, the total U.S. economy grew 2.9% while real private domestic final sales increased by a strong 3.2%.

In the upcoming fiscal year, consumer spending is expected to accelerate further from still-strong, though marginally slower, employment gains and added after-tax income from the recent federal tax changes. In fiscal year 2018, monthly employment gains averaged 199,000 in an economy whose long-term average monthly increases should fall into the 75,000–100,000 range. As a result, the unemployment rate closed the fiscal year at 4% from 4.3% at the end of fiscal year 2017, but it had dipped to a nearly 50-year low of 3.8% in May. Most estimates for the natural rate of unemployment (where inflation pressures are considered to be evenly balanced) rest around 4.5%, so today's unemployment rate suggests inflation pressures are growing. Furthermore, the underemployment rate (that measures people who would like to work more hours in addition to those who would like a job) fell significantly to 7.6% in May from 8.5% at the start of the fiscal year 2018. That tells us that, not only are the unemployed finding jobs, but that workers are more satisfied with the amount of work they are receiving. And, for the first time since 2000 when the data collection started, the number of job openings around the country exceed the number of total unemployed workers. While it is impossible to completely match up job openings with the remaining unemployed, that shows businesses face an extremely tight labor market.

Business investment in structures and equipment collapsed from late 2014 through 2016 largely due to a pullback in the energy sector, as commodity prices descended. Non-residential investment was virtually flat during that period because of the plunge from reduced investment in oil and gas wells. Energy prices began to move higher in mid-2016, providing an incentive for domestic oil and gas producers to return and, again, invest in structures and equipment. In the year-and-a-half since 2016, business fixed investment has grown a robust 7.5% annualized and orders activity for future investment has remained strong.

A key part of the Republican administration and Congress' tax policy changes focused on the business sector by significantly lowering the corporate tax rate, providing incentives through a much lower tax rate to bring foreign profits home, allowing immediate expensing of capital equipment purchases and reducing regulations on how businesses operate. Provided that murky trade policy positions from the Trump administration do not cause a collapse in business confidence or a significant wave of counter-protectionist measures from other countries, this friendlier tax policy climate to expand investment and a strong domestic economy should keep non-residential investment growing at a solid rate through fiscal year 2019.

Following the collapse of the housing sector before and during the Great Recession, residential investment has been a consistent contributor to overall economic growth, even though its influence on the economy is smaller. At its peak in 2005, real residential investment was 6% of real GDP. It fell to as low as 2.4% of real GDP but has now reached about 3.3% of real GDP. That is still well short of its 5.4% average share of real GDP since World War II, but the sector has increasingly become a more important component of economic activity. During the current expansion, residential investment has grown an annualized 5.4% and remains the only economic sector outpacing its average annualized growth rate of all post-war economic expansions. So, while its contribution is smaller because of its smaller size within the economy, residential investment has made important contributions to the economy since the trough of the Great Recession.

Housing starts, which had fallen to an annual rate below 500,000 units at the end of the recession, grew to about 1.25 million units in fiscal year 2018 after 1.2 million units in fiscal year 2017. Further economic gains from the housing sector should continue through fiscal year 2019, as housing affordability for the potential buyer remains relatively high and homebuilders expect solid demand in coming quarters, particularly since the supply of new and existing homes is tight.

Leading economic indicators suggest that future economic growth in the United States will remain strong after having slowed from fiscal year 2014 through part of fiscal year 2016. The Economic Cycle Research Institute's leading index (a measure that is heavily influenced by weekly financial market series) soared before fiscal year 2017 after the stock market began to rebound in mid-February 2016. Its surge continued into January 2017, reaching highs not seen since immediately after the Great Recession, though it slid to virtually no gain in early fiscal year 2018. Meanwhile, the Conference Board's leading index (a measure that is heavily influenced by monthly real economic series) bottomed out just before fiscal year 2017 and has been relatively strong since. Other private sector surveys that provide leading economic data remain in moderate-to-strong growth territory, pointing towards further gains for the U.S. economy. Together, these leading indicators support the forecast of a continued strong economy for, at least, fiscal year 2019.

Commodity prices bottomed in early-2016, helping to subsequently drive headline inflation measures like the personal consumption expenditures (PCE) price index upward from flat growth in early fiscal year 2016. Rising energy costs, particularly in fiscal year 2018, have added pressure to headline inflation measures. The PCE price index at fiscal-year's end was already growing above the 2% rate that the Federal Reserve considers to be its long-term average target. Meanwhile, the core PCE price index that excludes volatile food and energy costs was advancing slightly below the 2% target at 1.9% year-over-year through fiscal year 2018.

Inflation pressures are clearly quickening, both broadly and after stripping away volatile segments. Consumer prices in fiscal year 2018 grew 2.8% while core consumer prices advanced by 2.2%. Perhaps more alarming, however, is that the Federal Reserve Bank of Cleveland's median consumer price index (constructed to get an idea of how true inflation is behaving) grew 2.8% — an expansion high — over the past fiscal year. With increasingly little slack remaining in the labor market, wage pressures should add to the inflation outlook and keep actual inflation at the high end of the Federal Reserve's targeted range.

The Federal Reserve has maintained a stimulative monetary policy since the beginning of the Great Recession.

Policymakers at the Federal Reserve understood that they had to do everything in their power to prevent a deflationary spiral developing out of the recession — an issue stagnant Japan dealt with for more than two decades. Initially, the Federal Reserve drove short-term interest rates significantly lower to roughly 0% by using its main policy tool — the federal funds targeted rate — but it did not stop there. Quantitative easing led to an expansion of assets on the Federal Reserve's balance sheet from roughly $900 billion prior to the recession to as high as $4.5 trillion. The Federal Reserve made sure the banking system was flooded with cash for future loans that could eventually spark a credit cycle leading to ever stronger economic growth.

At its December 2013 monetary policy meeting, the Federal Reserve began to taper the purchases of securities from quantitative easing (QE) because the labor market was showing signs of better growth and the overall economy was finally gaining traction. At each subsequent meeting, it reduced the size of further quantitative easing purchases until monetary policymakers finished QE in the fall of 2014. In December 2015, the Federal Reserve's main policy tool of controlling short-term interest rates was eased back too, when the Federal Reserve raised the federal funds rate 0.25%, making it the first increase in short-term interest rates since mid-2006. Since then, the Federal Reserve has gradually raised interest rates to the end of fiscal year 2018's targeted range of 1.75–2% for the federal funds rate.

Federal Reserve policymakers would like to raise short-term interest rates further in fiscal year 2019, but they will continue to closely watch how the U.S. and foreign economies and financial markets react to less stimulative monetary policy within the United States. An intermittent course of gradually raising short-term interest rates is the most likely one from the Federal Reserve. Furthermore, the Federal Reserve will continue to reduce the assets on its balance sheet in fiscal year 2019.

Like the interest rate policy it has pursued since the Great Recession, the Federal Reserve will be cautious with a gradualist policy change for its balance sheet so as to not disrupt the financial markets or economy from its healthy course. Federal Reserve Chair Jerome Powell has testified in the past to an acceptable range for assets on the central bank's balance sheet that would, given the reduction course already laid out by policymakers, lead to a partial reversal of QE through 2020 or even into 2021.

Fixed Income

Fiscal 2018 was a mixed year for fixed-income market returns, as measured by the Bloomberg Barclays U.S. Universal Index*, as favorable economic conditions continued. The first six months of the fiscal year, the return was +1.42%, while the second half of the fiscal year returned –1.67%. Fixed-income returns were driven by the increase in interest rates and wider spreads, partially offset by coupon income. The highest returning sector was high yield (+2.62%), followed by asset-backed securities (+0.44%), agency mortgage-backed securities (+0.15%) and government related (+0.12%). Emerging market debt (–1.04%), investment-grade corporate bonds (–0.83%), U.S. Treasuries (–0.65%) and commercial mortgage-backed securities (–0.25%) sectors had negative returns. The Bloomberg Barclays U.S. Intermediate Treasury Index* had a negative return of –0.76% for fiscal year 2018.

The STRS Ohio fixed-income asset class returned –0.06% versus the benchmark's return of –0.30%. Over the three prior fiscal years, the STRS Ohio fixed-income asset class returned an annual average of 2.44% versus the benchmark's return of 2.11%. The STRS Ohio performance over the prior five fiscal years was 2.78% versus the benchmark's 2.62%. A more complete report of STRS Ohio performance appears on Page 55.

Domestic Equities

The U.S. equity market rose for the ninth consecutive year in fiscal 2018 and reached an all-time high as the U.S. and global economies grew for a second straight year. The S&P 500 gained a very strong 14.4% on a total return basis, closing the year at 2718.37. Returns for the year were primarily driven by stronger corporate earnings growth which was mostly due to reduced tax burden at both the corporate and individual level. The information technology, energy, and consumer discretionary sectors were the best performers during the period. S&P 500 earnings grew approximately 18% during the fiscal year. The increase was led by a continued rebound in energy sector profits and improved information technology sector earnings.

The STRS Ohio domestic equities asset class returned a robust 16.21% versus the Russell 3000® Index benchmark's return of 14.78%. Over the three prior fiscal years, the STRS Ohio domestic equities asset class returned an annualized 11.75% versus the benchmark's return of 11.58%. The STRS Ohio performance over the prior five fiscal years was 13.25% versus the benchmark return of 13.30%. A more complete report of STRS Ohio performance appears on Page 55.

International Equities

The international markets rose for the second consecutive year in fiscal 2018 with the emerging markets performing slightly better than the developed markets. The MSCI World ex-US Index (50% hedged) for developed markets increased

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7.7% and the MSCI EM Index for emerging markets increased 8.2%. The overall international returns were positively impacted by a sustained global economic expansion that supported corporate earnings growth.

Most of the developed markets were able to record positive returns in U.S. dollar terms. The best performing countries were Norway (+28.5%), Portugal (+17.1%) and Finland (+11.7%). The three weakest markets were Israel (–4.2%), Sweden (–3.5%) and Spain (–3.0%). The developed market returns were slightly impacted in a negative manner by currency movements as the U.S. dollar was modestly stronger overall against developed market currencies during the fiscal year.

The three best markets in emerging markets were Peru (+30.7%), Russia (+27.1%) and Czech Republic (+22.1%). The weakest markets were Pakistan (–29.7%), Turkey (–25.9%) and Philippines (–13.5%). The overall emerging markets performance began to deteriorate in the second half of the fiscal year when investors focused more intently on risk factors such as global trade policies and higher U.S. interest rates.

The STRS Ohio international asset class returned 7.15% versus the benchmark's return of 7.87%. Over the past three fiscal years, the STRS Ohio international asset class returned an annualized 6.75% versus the benchmark's return of 5.75%. The STRS Ohio performance over the prior five years was 8.43% versus the benchmark's return of 7.39%. A more complete report of STRS Ohio performance appears on Page 55.

Real Estate

The real estate market total return of 6.74% in fiscal 2018 compares favorably to 5.64% in fiscal 2017. The private real estate market component provided a total return of 7.2% with the public real estate market (REITs) turning in a return of 3.5%. While the private real estate market was close to flat versus fiscal 2017, the public market was substantially improved over the negative 1.7% return in fiscal 2017.

The income component of the private market represented 65% of the total return in fiscal 2018 — substantially below the 90% over the trailing 10 years. This period covers the recovery from the financial crisis during which there was significant cap rate compression. This resulted in substantially higher appreciation, although not sustainable as the cycle matures. Fiscal 2018 is moving in the right direction of the much longer term relative relationship between income and appreciation. Real estate's role in the portfolio is to provide diversification with reduced volatility in a multi-asset class portfolio. The strong income component of real estate provides stability, thereby reducing overall volatility. The fundamentals of real estate — supply and demand — drive real estate returns. The environment continues to be conducive to the fundamentals remaining positive and in relative balance overall. Private market returns are expected to remain stable over the next year.

The STRS Ohio total real estate asset class returned 9.08% versus the benchmark's return of 6.74% in fiscal 2018. Over the three prior fiscal years, the STRS Ohio real estate total asset class returned an annual average return of 9.02% versus the benchmark's return of 8.28%. The STRS Ohio performance over the prior five fiscal years was 10.95% versus the benchmark's 9.65%. A more complete report of STRS Ohio performance appears on Page 55.

Alternative Investments

There are two portfolios within alternative investments: private equity and opportunistic/diversified. The target allocation for private equity is 7%. The target allocation for opportunistic/diversified is currently 8%, resulting in a combined target neutral weight for the alternative investments asset class of 15% of total fund.

Private equity managers continued to take advantage of the capital markets in order to exit their investments through strategic sales and IPOs and to return capital by recapitalizing some of the companies they held. During the fiscal year, this activity generated distributions that exceeded the capital that was called. The opportunistic/diversified portfolio grew primarily as the result of significant liquid alternative investment activity during the fiscal year that more than offset realizations and redemptions.

The performance of the alternative investments asset class is measured against a relative return objective or an absolute return objective, which are expected to converge over the very long term. Currently, the relative return objective is the Russell 3000® Index and the absolute return objective is 7.09%. Over the 10 prior fiscal years, the STRS Ohio total alternative investment asset class returned an annual average return of 7.95%. That return was influenced by the global financial crisis compared to the blended benchmark return of 11.08% that included fiscal years prior to 2012 when the private equity objective was the Russell 3000® Index plus 3%. A more complete report of STRS Ohio performance appears on Page 55.

Total Fund

During fiscal year 2018, the STRS Ohio fund returned 9.57% versus the benchmark's return of 8.94%. Over the three prior fiscal years, the STRS Ohio fund returned an annual average of 8.12% versus the benchmark's return of 7.58%, while the fund performance over the prior five fiscal years was 9.26% versus the benchmark's 8.98%. During the 10 past fiscal years, the STRS Ohio fund returned an annual average of 7.04% versus the benchmark's return of 7.05%. A more complete report of STRS Ohio fund performance appears on Page 55.

Statement of Investment Objectives and Policy

Effective Dec. 14, 2017

1.0 Purpose

1.1 The State Teachers Retirement System of Ohio ("STRS Ohio") was established for the benefit of the teachers of the public schools of the State of Ohio. STRS Ohio is dedicated to partnering with STRS Ohio members to provide financial performance and member service to help build financial security for current and future retirees.

1.2 The State Teachers Retirement Board of Ohio (the "Board") is vested with the operation and management of the State Teachers Retirement System of Ohio ("STRS Ohio") (ORC Section 3307.04). The Board has the full power to invest the assets (the "Fund") of STRS Ohio (ORC Section 3307.15). The Board is required to ". . . adopt in a regular meeting, policies, objectives or criteria for the operation of the investment program . . ." (ORC Section 3307.15).

1.3 To fulfill the statutory requirement of ORC Section 3307.15, the Board has adopted this Statement of Investment Objectives and Policies (the "Statement") to govern the investment of the Fund. This Statement summarizes the objectives and policies for the investment of the Fund.

1.4 The Board has approved these objectives and policies after careful consideration of STRS Ohio benefit provisions, and the implications of alternative objectives and policies.

1.5 The Statement has been prepared with five audiences in mind: incumbent, new and prospective Board members; STRS Ohio investment staff; STRS Ohio active and retired members; the Ohio General Assembly and Governor; and agents engaged by the Board to manage and administer the Fund.

1.6 The Board regularly, but in no event less than annually, will assess the continued suitability of this Statement, initiate change as necessary and update this Statement accordingly.

1.7 The Board may authorize its administrative officers and committees to act for it in accord with its policies (ORC Sections 3307.04 and 3307.15). The Board, no less frequently than annually, adopts a resolution delegating to the Executive Director and the Deputy Executive Director — Investments the authority to acquire, dispose, operate and manage the assets of the Fund, subject to the Board's policies and to subsequent approval by the Board. Consequently, the Executive Director, the Deputy Executive Director — Investments and the investment staff are responsible for preparing and maintaining numerous supporting management documents that govern the implementation of Board policies, including, but not limited to, individual investment manager mandates and guidelines, agent agreements and limited partnership documents.

1.8 In carrying out the operation and management of STRS Ohio, the Board, the Executive Director, his/her investment staff and others that are considered fiduciaries as defined in ORC Section 3307.01(K) are subject to various fiduciary responsibilities in ORC Chapter 3307, including those found in ORC Sections 3307.15, 3307.151, 3307.181 and 3307.18. This Statement incorporates, and is subject to, all of the provisions of ORC Chapter 3307.

1.9 The Board acknowledges its responsibilities under ORC Chapter 3307 and to the extent that this Statement is inconsistent with ORC Chapter 3307, Chapter 3307 shall control.

1.95 The Board approved this Statement on Dec. 14, 2017.

2.0 Investment Objective

2.1 Subject to the Ohio Revised Code, the investment objectives for the total fund are:

(a) to earn, over moving 30-year periods, an annualized return that equals or exceeds the actuarial rate of return (ARR) approved by the Board to value STRS Ohio liabilities. The current actuarial rate of return is 7.45%;

(b) to earn a rate of return that equals or exceeds the System's long-term policy index with an acceptable level of risk; and

(c) maintain sufficient liquidity to satisfy cash flow needs.

2.2 The Board believes, based on the assumptions in this Statement, that the investment policies summarized in this Statement will achieve this long-term actuarial objective at an acceptable level of risk. The Board evaluates risk in terms of the probability of not achieving the ARR over a 30-year time horizon.

3.0 Key Document Policy

To assist the Board and the investment staff, the following key documents will be produced or reviewed according to the schedule in Exhibit 1.

Exhibit 1: Key Document Schedule

Key Document	Document Source	Review Schedule
Quarterly Performance Review	Board Consultant	Quarterly
Statement of Investment Objectives and Policy/ Fund Governance	STRS Ohio Investment Staff/ Reviewed by Board Consultant	Annually
Annual Plan (Includes Risk Budget)	STRS Ohio Investment Staff/ Reviewed by Board Consultant	Annually
Actuarial Study	Actuary/STRS Ohio Finance Department	Annually
Asset/Liability Study and Experience Review	STRS Ohio Investment Staff/ STRS Ohio Senior Staff/Board Consultant/Actuary/Board	At least once in every quinquennial period

4.0 Asset Mix Policy, Risk Diversification and Return Expectations

4.1 After careful consideration of the investment objectives, liability structure, funded status and liquidity needs of STRS Ohio, and the return, risk and risk-diversifying characteristics of different asset classes, the Board approved the asset mix policy presented in Exhibit 2 (below). The exhibit also summarizes the Board's return expectations for the asset mix policy and active management.

4.2 Fifty-eight percent of the Fund is targeted for investment in equities, inclusive of domestic, international and private equity investments. Equity investments have provided the highest returns over long time periods, but can produce low and even negative returns over shorter periods.

4.3 The risk of low or negative returns over shorter time periods makes 100% equity policies unsuitable for most pension funds, including STRS Ohio. By investing across multiple equity asset classes, and in lower return but less risky fixed-income and real estate, the Board is managing and diversifying total fund risk.

4.4 Forecasts of capital market and active management returns undertaken by the Board's investment consultant indicate that the Board's asset allocation summarized in Exhibit 2 has an expected 10-year annualized return of 6.84% (without net value added). Over a 30-year period, the Board's investment consultant indicates that this asset mix should generate a return above the actuarial rate of return, without net value added by management.

Exhibit 2: Asset Mix Policy and Return Expectations for STRS Ohio Total Fund

Asset Class	Target Allocation[1]	Rebalancing Range	Expected 10-Year Policy Returns[2]	Expected Management Net Returns[3]	Expected Total Return
Equity					
Domestic	**28%**	**23–33%**	**7.35%**	**0.25%**	**7.60%**
International	**23%**	**18–29%**	**7.55%**	**1.00%**	**8.55%**
Alternatives	**17%[5]**	**7–21%[5]**	**7.09%**		**7.09%**
Private Equity	7%[5]	4–9%[5]	8.15%		8.15%
Opportunistic/Diversified	10%[5]	3–12%[5]	6.35%		6.35%
Fixed Income	**21%**	**13–28%**	**3.00%**	**0.35%**	**3.35%**
Core	16%	13–21%			
Liquid Treasury	5%	0–7%			
Real Estate	**10%**	**6–13%**	**6.00%**	**1.00%**	**7.00%**
Liquidity Reserve	**1%**	**0–5%**	**2.25%**		**2.25%**
Total Fund[5]	**100%**		**6.84%**	**0.40%**	**7.24%[4]**

[1]The target allocation percentage became effective as of July 1, 2017. The eventual new target weights will be phased-in over a 24 month period, based on the "Phase-In Target Weights" table in the next section.

[2]The expected 10-year policy returns are based on the investment consultant's capital market assumptions in the 2017 asset-liability study for each asset class and total fund using the eventual new target weights.

[3]Individual asset class returns (except real estate and alternative investments) are gross value added. The total fund is net of all investment management costs, and real estate and alternative investments is net of external management fees.

[4]The 10-year total fund return forecast is 7.24% per year, which includes the expected net value added by management and is based on the eventual new target weights.

[5]The Private Equity and Opportunistic Diversified target weights and rebalancing ranges are only meant to be general guidelines; the official target weight and rebalancing range is at the total alternative investment asset class level.

Phase-In Target Weights

Asset Class	Pre-Phase-In	July 1, 2017	Oct. 1, 2017	April 1, 2018	Oct. 1, 2018	July 1, 2019
Liquidity Reserve	1%	1%	1%	1%	1%	1%
Fixed Income — Core	18%	18%	17%	17%	16%	16%
Fixed Income — Liquid Treasury	N/A	1%	3%	4%	5%	5%
Domestic Equity	31%	30%	30%	29%	28%	28%
International Equity	26%	26%	25%	24%	24%	23%
Real Estate	10%	10%	10%	10%	10%	10%
Private Equity	7%	7%	7%	7%	7%	7%
Opportunistic/Diversified	7%	7%	7%	8*	9%	10%

4.5 From the 2017 Asset-Liability Study, the 6.84% expected asset mix 10-year policy return was developed with reference to the observed long-term relationships among major asset classes. The Board believes this return expectation is reasonable, but recognizes that the actual 10-year asset mix policy return can deviate significantly from this expectation — both positively and negatively. The volatility level associated with this asset mix is approximately 14.46%.

4.6 Fund assets are invested using a combination of passive and active management strategies. Passive management reduces both the risk for underperformance and the opportunities of outperformance. Active management is expected to earn net 0.40% per annum of additional returns over moving five-year periods. The Board recognizes that unsuccessful active management can reduce total fund returns.

4.7 Investment objectives and guidelines for individual asset classes have been approved by the Board and are summarized in the following sections.

4.8 Liquidity reserves are kept at a minimum level, but sufficient to cover the short-term cash flow needs. STRS Ohio investment staff may utilize a derivative overlay to maintain the level at 1%.

4.9 The Board reviews at least annually its expectations for asset class and active management performance, and assesses how the updated expectations affect the probability that the Fund will achieve the established investment objectives.

5.0 Rebalancing

5.1 Exposures to selected asset classes are actively managed within the rebalancing ranges specified in Exhibit 2. Rebalancing ensures that the Fund's actual asset allocation remains close to the target asset mix policy.

5.2 The Fund's actual asset allocation is monitored at least monthly relative to established asset allocation policy targets and ranges. The timing and magnitude of rebalancing are decided with due consideration to the liquidity of the investments and the associated transaction costs.

5.3 In its Annual Investment Plan prepared for the Board, staff explains how it is managing asset class exposures based on short- and intermediate-term capital market forecasts.

5.4 The impact of rebalancing decisions on total fund returns is included in investment performance reports to the Board.

6.0 Passive and Active Management Within Risk Budgets

6.1 STRS Ohio investment staff has been delegated the responsibility for managing the Fund's exposure to passive and active investment strategies, subject to the constraint that active risk does not exceed Board-approved target risk budgets for the total fund and individual asset classes. Active risk will be evaluated compared to risk budgets on an ex-ante basis.

6.2 The Board has approved a target risk budget of .60% to 1.20%, with a working range of .20% to 1.60%, annualized active management for the total fund. In exchange for assuming this level of active risk, the Board expects active management to add net 0.40% of annualized excess return over moving five-year periods to judge its effectiveness.

6.3 The Board realizes that actual active management returns will likely be above or below the net 0.40% target over any five-year moving period, and therefore will evaluate the success of STRS Ohio active management program within this context. The Board recognizes that any amount of management return in excess of the associated investment costs improves the security of STRS Ohio plan members.

6.4 Passive management uses low cost index funds to access the return streams available from the world's capital markets. Indexed funds control costs, are useful tools for evaluating active management strategies, capture exposure to the more efficient markets and facilitate rebalancing to the policy asset mix.

6.5 Active management is expected to earn higher returns than those available from index funds by making value-added security selection and asset mix timing decisions. Unsuccessful active management results in below index fund returns.

6.6 Because there are no index fund products for private real estate and alternative investments, these assets must be actively managed. Active versus passive decisions in all asset classes are based upon using the best available information.

7.0 Global Equities — Domestic

7.1 Domestic equity is being managed relative to a Board-approved risk budget range of .20% to 1.50%, and is expected to earn at least 0.25% of annualized excess return above the Russell 3000® Index over moving five-year periods.

7.2 Key elements of the strategy:

(a) The portfolio's active management adds value primarily through security selection. Sector tilts by style, economic sectors or market capitalization are managed in accordance with the risk budget for domestic equities.

(b) The portfolio utilizes a variety of portfolio management approaches including quantitative and fundamental techniques to diversify the source of excess return.

(c) The portfolio utilizes a combination of internal and external management, utilizing multiple internal portfolio managers and multiple external manager firms to improve the likelihood of achieving excess returns, to diversify risk and to control costs.

7.3 Short sales may be used in the management of STRS Ohio domestic equity portfolios, but may not exceed 10% of the value of the asset class.

8.0 Global Equities — International

8.1 International equity is being managed relative to a Board-approved risk budget range of 0.60% to 2.50%, and is expected to earn at least 1.0% of annualized excess return above a blended benchmark of 80% MSCI World ex US Index-Net (50% hedged currency) and 20% MSCI Emerging Markets Index-Net over moving five-year periods.

8.2 Key elements of the strategy:

(a) The portfolio's active management adds value primarily through security selection and country allocation decisions. These decisions have been shown to be the principal sources of the excess return in international equity portfolios. Managers also have the ability to add value through currency management.

(b) The portfolio uses a variety of portfolio management approaches including quantitative and fundamental techniques to diversify the source of excess return.

(c) Aggregate exposures to countries, currencies, equity styles and market capitalization are monitored and managed relative to their benchmark exposures.

(d) The portfolio utilizes a combination of internal and external management, with multiple internal portfolio managers and multiple external manager firms to improve the likelihood of achieving excess returns, to diversify risk and to control costs.

(e) STRS Ohio utilizes a 50% hedged benchmark on the developed markets portfolios in order to reduce the overall exposure to currency risk. With a 50% hedged benchmark, all developed market portfolios are generally hedged around the 50% benchmark level. Active currency positions are taken from time to time in some portfolios at the managers' discretion. This is generally limited to 10 percentage points under or over hedged around the benchmark for the total internal developed portfolios. Three-month currency forwards are the investment instrument generally used for hedges.

8.3 Short sales may be used in the management of STRS Ohio international equity portfolios, but may not exceed 10% of the value of the asset class.

9.0 Fixed Income

9.1 Core Fixed Income Portfolio is being managed relative to a Board-approved risk budget range of 0.10% to 1.50%, and is expected to earn at least 0.35% of annualized excess returns above the Bloomberg Barclays U.S. Universal Index over moving five-year periods.

9.2 Core Fixed Income Portfolio is actively managed because active management is generally low cost and market opportunities exist for skilled managers to generate excess returns.

9.3 Key elements of the Core Fixed Income Portfolio strategy:

(a) The portfolio will primarily be managed internally, with multiple external managers utilized in specialized segments of the market such as high yield and emerging market debt.

(b) The portfolio will emphasize issue selection, credit analysis, sector allocations and duration management.

(c) Aggregate exposures to duration, credit and sectors are monitored and managed relative to corresponding exposures in the asset class benchmark.

9.4 Liquid Treasury Portfolio is expected to be managed within a risk budget range of 0.0% to .25% during normal market conditions, but will have a Board-approved risk budget range of 0.0% to 1.0%. At times, it may be prudent to manage the portfolio to the upper end of the Board-approved risk budget range to accommodate the liquidity needs of the total fund. Returns are expected to track or slightly exceed the annualized returns of the Bloomberg Barclays U.S. Intermediate Treasury Index over moving five-year periods.

9.5 The marketability of this portfolio will remain high to maintain substantial flexibility in meeting the liquidity needs of the total fund including benefit payments, asset allocation rebalancing and diversification.

9.6 Key elements of the Liquid Treasury Portfolio strategy:

(a) The portfolio is internally managed because internal management is generally low cost and provides greater control over the timing of investment decisions in order to meet the rebalancing and cash flow needs of the total fund.

(b) The portfolio will emphasize liquidity, issue selection and minimize transaction costs through achievement of efficient trade execution.

(c) Exposures to duration, credit and sectors are monitored and managed relative to the portfolio benchmark and characteristics.

9.7 Short sales may be used in the management of STRS Ohio fixed-income portfolios, but may not exceed 10% of the value of the asset class.

10.0 Real Estate

10.1 Real estate investments are being managed relative to a Board-approved risk budget range of 2.00% to 7.00%, and are expected to earn at least 1.00% of annualized excess returns above a blended benchmark over moving five-year periods. The Real Estate Blended Benchmark is 85% NCREIF Property Index and 15% FTSE NAREIT Equity REITs Index.

10.2 Key elements of the strategy:

(a) Eighty-five percent of Real Estate is actively managed. The portfolio is primarily managed internally, with direct property investments representing most of the portfolio. External Managers are used primarily for specialized segments of the market. Risk is diversified by investing across major property types and geographic areas.

(b) Leverage of up to and including 50%, in aggregate, is permitted for internally managed assets (excluding REITs).

(c) Publicly traded REITs are passively managed and targeted at 15% of the real estate portfolio to enhance liquidity and diversification.

(d) Non-core real estate investments are limited to 20% of the real estate portfolio. Investment strategies will be characterized as "opportunistic" based on the market conditions prevailing at the time of investment.

10.3 Short sales may be used in the management of REITs, but may not exceed 10% of the value of the asset class.

11.0 Alternative Investments (Private Equity and Opportunistic/Diversified)

11.1 Alternative investments involve separate allocations to private equity and opportunistic/diversified investments.

11.2 Private equity investments are being managed with the objective of earning at least 1% net of fees above domestic public equity markets (Russell 3000® Index) over moving 10-year periods. Private equity investments are traded infrequently and, therefore, risk budget concepts are not applicable.

11.3 Key elements of the private equity strategy:

(a) Private equity investments are 100% actively managed.

(b) Private equity risk is diversified by investing across different types of investments including, but not limited to, venture capital, leverage buyouts, mezzanine debt or distressed debt. Private equity investments may be made directly, through funds, fund-of-funds or as co-investments.

(c) Private equity risk is also diversified by investing across vintage years, industry sectors, investment size, development stage and geography.

(d) Private equity investments are managed by general partners with good deal flow, specialized areas of expertise, established or promising net of fees track records and fully disclosed and verifiable management procedures.

11.4 Opportunistic/diversified investments are being managed with the objective of earning domestic public equity-like returns defined as 1% net of fees below domestic public equity markets (Russell 3000® Index) over moving 10-year periods, but with the added objective of downside protection during equity bear markets. Investments in this category can be liquid or illiquid and, therefore, risk budget concepts are not applicable.

11.5 Key elements of the opportunistic/diversified strategy:

(a) Opportunistic/diversified investments are tactical in nature and typically are actively managed.

(b) Downside protection during equity bear markets can be achieved and asset class risk is diversified by investing across different types of opportunistic/diversified investments.

(c) Opportunistic/diversified investments may be made directly, through funds, fund-of-funds or as co-investments.

12.0 Derivatives

12.1 Derivatives may be used in the management of STRS Ohio total fund, including all asset classes. Derivatives are typically, but not exclusively, futures contracts, equity swaps, credit default swaps, option contracts and option contracts on futures for market indexes. Options on individual securities, baskets of securities and equity-linked notes, and shorting for positioning purposes are further examples. Derivatives are both exchange traded and traded over the counter.

12.2 Derivative exposures must be of a hedging or positioning nature. As a percentage of total fund assets, the underlying exposure of all positioning derivatives will not exceed:

(a) 5% for fixed-income investments;

(b) 10% for domestic equity investments;

(c) 10% for international equity investments; and

(d) 1% for real estate investments.

(e) 10% for alternative investments

Hedging derivatives will not be included in the limits above, but must be disclosed in the semi-annual derivative exposure report.

12.3 Any use of leverage will adhere to asset allocation restrictions and asset class active management risk range constraints.

13.0 Proxy Voting

13.1 Common stock proxies are valuable and should be voted in the best interest of STRS Ohio active and retired members.

13.2 The Board shall maintain stock proxy voting policies and has directed STRS Ohio investment staff and the proxy voting agents to use these policies as guidelines for voting common stock proxies held by the Fund.

14.0 Ohio Investments

14.1 The Board will give due consideration to investments that enhance the general welfare of the State of Ohio and its citizens provided that assets are invested in the best interest of STRS Ohio active and retired members. Preference will be given to Ohio investments offering competitive returns at risk levels comparable to similar investments currently available to the Board.

14.2 STRS Ohio investment staff shall maintain and implement an Ohio Investment Plan. The plan shall set forth procedures to assure that a special effort will be made by the investment staff to examine and evaluate all legal investment opportunities in the state and, where policy criteria are satisfied, to acquire such investments.

15.0 Broker-Dealers

15.1 Purchases and sales of publicly traded securities shall be executed with broker-dealers from a list reviewed by the Board. In those rare situations where best execution cannot be achieved through a broker-dealer on the list, the Deputy Executive Director — Investments may approve the use of a broker-dealer not on the list.

15.2 Selection shall be based on an evaluation by the STRS Ohio investment staff as to financial soundness, underwriting capabilities, research services, execution capabilities and other factors required by the staff to fulfill its assigned investment responsibilities.

15.3 Specific transactions will be directed to the broker on that list most capable of providing brokerage services necessary to obtain both the best available price and the most favorable execution.

15.4 The Board shall give equal consideration to smaller Ohio-headquartered broker-dealers or smaller broker-dealers with at least one Ohio office and broker-dealers owned and controlled by minorities and/or women, provided the assets are transacted in the best interest of STRS Ohio members.

15.5 The Board has a goal to increase the use of Ohio-qualified broker-dealers for the execution of domestic equity and fixed-income securities transactions, when the services that Ohio-qualified broker-dealers provide are equal in quality, cost, scope and execution capabilities to all broker-dealers approved to transact securities transactions on behalf of the Board.

15.6 Each firm listed shall file with the Board on an annual basis such evidence of financial responsibility as required by the Board. This information shall include, but not be limited to, an audited financial statement.

15.7 When stocks are purchased during underwriting, allocations may be made to dealers not on the approved list provided the managing underwriter is so listed.

15.8 When entering into real estate transactions, the Board shall give equal consideration to Ohio firms providing associated professional services, minority-owned and controlled firms, and firms owned and controlled by women.

16.0 Securities Lending

The Board may operate a securities lending program to enhance the income of the Fund. The program must be operated by a bank trustee who follows the custodial requirements of the Treasurer of the State of Ohio and each security lent must be fully collateralized. Results of the program must be reported to the Board annually.

17.0 Securities Litigation

Involvement in securities litigation is an important responsibility for institutional investors with major public market exposure. The Board shall maintain a policy to determine the appropriate action to be taken when class action litigation is initiated against a company that generates a significant loss for the Board during the class period.

18.0 Security Valuation

Valuation of investments shall be the total of:

(a) The primary closing price on the principal registered stock exchange for all common and preferred stocks so listed.

(b) The official closing price as reflected by either the OTCBB (Over the Counter Bulletin Board) or the Pink Sheets for common and preferred stocks not listed on a registered stock exchange.

(c) The current value as determined by a qualified independent service for all bonds, notes and certificates of indebtedness, including accrued income.

(d) Amortized cost for commercial paper, certificates of deposit, repurchase agreements and other short-term investments with a maturity of 270 or fewer days.

(e) Each internally managed real estate property initially valued at acquisitional price. Subsequent valuations completed internally or externally as outlined in the Real Estate Valuation Policy Manual. Full, self-contained appraisals completed by an independent external appraiser no less than every third year.

(f) The most recent external manager valuations for alternative investments and externally managed real estate updated to include current capital activity.

(g) International equity and external fixed income investments are valued by the subcustodian using relevant closing market prices and exchange rates and including accrued income for fixed income investments.

(h) Each internally managed alternative investment initially valued at acquisition price. Subsequent valuations completed internally as outlined in the Alternative Investments Valuation Policy Manual.

19.0 Performance Monitoring and Evaluation

19.1 The Board and its agents use a variety of compliance, verification and performance measurement tools to monitor, measure and evaluate how well STRS Ohio assets are being managed. Monitoring, reporting and evaluation frequencies range from live real time performance, to daily, weekly, monthly, quarterly and annualized performance for periods up to 20 years.

19.2 The Board has developed a performance monitoring and evaluation system that answers two fundamental fiduciary questions:

(a) Are the assets being prudently managed? More specifically, are assets being managed in accordance with established laws, policies and procedures, and are individual investment managers in compliance with their mandates?

(b) Are the assets being profitably managed? More specifically, has performance affected benefit security, has capital market risk been rewarded and has active management risk been rewarded?

19.3 If there is a deviation from Board policies, STRS Ohio investment staff is required to provide the Board with a report explaining how the deviation was discovered, the reasons for the deviation, the impact on Fund performance, if any, and steps taken to mitigate future occurrences.

19.4 Exhibit 3 is an example of one of many reports used by the Board to monitor and evaluate performance of the total fund. Panel one indicates whether the total fund return exceeded the actuarial rate of return. Panel two indicates whether the Fund was rewarded for investing in higher return but more risky equity investments. Panel three indicates whether active management added or detracted from returns.

19.5 Additional reports provide the Board with a multi-level view of investment activities at different levels and over different time horizons. These include:

(a) Performance of the total fund;

(b) Performance of individual asset class strategies;

(c) Performance of internally and externally managed portfolios; and

(d) Performance of individual external managers.

Exhibit 3: EXAMPLE Total Fund Trustee Summary Report, as of June 30, 2017

Experienced Returns	Annualized Rates of Return				
	1 Year	3 Years	5 Years	10 Years	20 Years
Have returns affected funded ratio?					
1. Total fund return	14.29%	6.74%	10.06%	5.48%	7.02%
2. Actuarial discount rate	7.75%	7.75%	7.75%	7.88%	7.83%
3. Relative performance (1–2)	6.54%	–1.01%	2.31%	–2.40%	–0.80%
Has plan been rewarded for capital market risk?					
4. Total fund blended benchmark return*	13.52%	6.29%	10.01%	5.50%	6.83%
5. Minimum risk/high opportunity cost policy of 91-day T-Bills	0.49%	0.23%	0.17%	0.46%	2.03%
6. Impact of asset mix policy (4–5)	13.03%	6.06%	9.84%	5.04%	4.80%
Has plan been rewarded for active management risk?					
7. Active management return (1–4)**	0.77%	0.45%	0.05%	–0.02%	0.19%
8. Net active management return estimated***	0.63%	0.32%	–0.08%	–0.14%	0.08%

* The total fund blended benchmark is a blend of the asset class benchmarks based on the total fund's target allocation for the respective asset classes. Effective Jan. 1, 2014, the total fund blended benchmark is 18% Bloomberg Barclays U.S. Universal Index 31% Russell 3000® Index, 26% International blended benchmark, 10% Real Estate blended benchmark, 14% Alternative Investment actual return and 1% BofA Merrill Lynch three-month U.S. Treasure Bill Index.

** Mix of net and gross as per industry conventions (external managers fees for alternative and real estate investment have been deducted, but no fees deducted for internal assets, external equity or external fixed income).

*** After all investment management costs deducted.

Statement of Fund Governance

Effective Dec. 14, 2017

1.0 Purpose

1.1 This Statement of Fund Governance (the "Statement") summarizes the governance structure established by the Board of the State Teachers Retirement Board of Ohio (the "Board") to ensure the prudent, effective and efficient management of the assets of the State Teachers Retirement System of Ohio ("STRS Ohio").

1.2 The fund governance structure was approved by the Board after careful consideration of alternative approaches to governing a very large and growing pension fund within an increasingly complex financial and investment environment.

1.3 The Statement has been prepared with five audiences in mind: incumbent, new and prospective Board members; STRS Ohio investment staff; STRS Ohio active and retired members; the Ohio General Assembly and Governor; and agents engaged by the Board to manage, administer or advise on STRS Ohio's assets ("Fund").

1.4 The Statement summarizes more detailed policy and procedure documents prepared and maintained by STRS Ohio investment staff, and numerous other documents that govern the day-to-day management of STRS Ohio assets.

1.5 The Board regularly assesses the continued suitability of the STRS Ohio fund governance structure, initiates change as necessary and updates this Statement accordingly.

1.6 The Board may authorize its administrative officers and committees to act for it in accord with its policies (Ohio Revised Code [ORC] Sections 3307.04 and 3307.15). The Board, no less frequently than annually, adopts a resolution delegating to the Executive Director and the Deputy Executive Director — Investments the authority to acquire, dispose, operate and manage the assets of the Fund, subject to the Board's policies and to subsequent approval by the Board.

1.7 In carrying out the operation and management of STRS Ohio, the Board, the Executive Director, the investment staff and others that are considered fiduciaries as defined in ORC Section 3307.01(K) are subject to various fiduciary responsibilities in ORC Chapter 3307, including those found in ORC Sections 3307.15, 3307.151, 3307.18 and 3307.181. This Statement incorporates, and is subject to, all of the provisions of ORC Chapter 3307.

1.8 The Board acknowledges its responsibilities under ORC Chapter 3307 and to the extent that this Statement is inconsistent with ORC Chapter 3307, Chapter 3307 shall control.

1.9 The Board approved this Statement on Dec. 14, 2017.

2.0 Governance Principles

2.1 Three principles guided the Board's development of the STRS Ohio fund governance structure:

(a) As STRS Ohio governing fiduciary, the Board is ultimately accountable for all investment decisions. Section 3307.15 of the Ohio Revised Code (the "Code") vests the investment function in the Board and requires the Board to ". . . adopt, in regular meetings, policies, objectives, or criteria for the operation of the investment program . . ." Section 3307.15 of the Code sets forth the fiduciary responsibility of the Board in discharging its duties with respect to the fund.

(b) To ensure STRS Ohio assets are prudently, profitably and efficiently managed on a day-to-day basis, the Board needs to delegate the management and implementation of Board investment policies to qualified managing and operating fiduciaries. Sections 3307.04 and 3307.15 of the Code empower the Board to authorize its committees and administrative officers to act for it in accord with Board policies. The fiduciary responsibility of Board delegates in discharging their duties with respect to the fund is specified in Section 3307.15.

(c) To ensure effective oversight of delegates, the Board requires informative and timely performance reports that reveal if managing and operating fiduciaries have complied with established policies, and indicate how assets under their care have performed relative to Board-approved investment objectives.

3.0 Investment Decisions Retained by the Board

3.1 The Board approves the following investment policies:

(a) Statement of Investment Objectives and Policy, which includes the following:

(i) Total fund risk and return objectives;

(ii) Total fund target asset mix policy;

(iii) Total fund asset mix policy rebalancing ranges;

(iv) Active management risk and return objectives at the total fund and asset class levels; and

(v) Performance measurement criteria and evaluation standards.

(b) Proxy voting;

(c) Ohio investments;

(d) Securities lending;

(e) Broker-dealer selection criteria and procedures;

(f) Ohio-qualified investment managers and brokers; and

(g) Securities litigation.

3.2 Before approving or amending policy decisions, the Board seeks advice, guidance and recommendations from STRS Ohio investment staff, Board-retained investment consultants, and other experts or sources as considered prudent by the Board.

4.0 Investment Decisions Delegated to Investment Staff

4.1 The Board, through the Executive Director, has delegated to qualified STRS Ohio investment staff the following investment management and implementation decisions:

(a) Buying, selling, managing and monitoring individual securities, real assets and/or other investment transactions to achieve the total fund and asset class investment objectives approved by the Board;

(b) Retaining, managing and terminating external investment managers within each asset class as required to achieve the total fund and asset class investment objectives approved by the Board;

(c) Ensuring total fund, asset class and individual manager portfolios comply with established parameters and risk levels; and

(d) Preparing, negotiating and executing external investment manager mandates, guidelines and fee agreements.

4.2 In making these decisions, STRS Ohio investment staff seeks the advice, guidance and recommendations of Board-retained investment consultants, external investment managers, and other experts and sources as considered prudent by STRS Ohio staff.

5.0 Board Oversight

5.1 The Board requires investment staff to prepare and deliver an Annual Investment Plan that explains how STRS Ohio assets will be managed in order to achieve the Board-established investment objectives. This provides the Board a focused opportunity to:

(a) Question and comment on staff's investment management plans;

(b) Request additional information and support about staff's investment intentions; and

(c) Express its confidence in the Annual Investment Plan.

5.2 The Board meets at least quarterly to assess how assets are being managed relative to the Annual Investment Plan, to monitor and evaluate investment performance relative to objectives and to address other investments issues as are warranted.

5.3 The Board approves the criteria and standards for monitoring and evaluating the impact different investment decisions have on total fund, asset class and manager-level performance. Performance is monitored and evaluated with respect to risk and return objectives established by the Board.

(a) Investment risks are monitored and evaluated quarterly by comparing total fund and asset class risk characteristics relative to suitable benchmarks.

(b) Investment returns are monitored monthly and evaluated quarterly by comparing total fund and asset class returns relative to suitable benchmarks.

5.4 Before approving or amending the criteria for monitoring and evaluating investment decisions, the Board seeks advice, guidance and recommendations from STRS Ohio investment staff, Board-retained investment consultants, and other experts and sources as considered prudent by the Board.

ACA COMPLIANCE GROUP
PERFORMANCE SERVICES

Verification Report

State Teachers Retirement System of Ohio
275 E. Broad Street
Columbus, OH 43215-3771

We have verified whether State Teachers Retirement System of Ohio ("the *Firm*") (1) complied with all the composite construction requirements of the Global Investment Performance Standards (GIPS®) on a firm-wide basis for the periods from July 1, 2006 through June 30, 2018, and (2) designed its policies and procedures to calculate and present performance in compliance with the GIPS standards as of June 30, 2018. The Firm's management is responsible for compliance with the GIPS standards and the design of its policies and procedures. Our responsibility is to express an opinion based on our verification. We conducted this verification in accordance with the required verification procedures of the GIPS standards. We also conducted such other procedures as we considered necessary in the circumstances.

In our opinion, the Firm has, in all material respects:

- Complied with all the composite construction requirements of the GIPS standards on a firm-wide basis for the periods from July 1, 2006 through June 30, 2018, and
- Designed its policies and procedures to calculate and present performance in compliance with the GIPS standards as of June 30, 2018.

Since our verification was designed to form an opinion on a firm-wide basis this report does not relate to any composite compliant presentation of the Firm and does not ensure the accuracy of any specific composite compliant presentation, including what is reflected in this Comprehensive Annual Financial Report.

ACA Performance Services, LLC

ACA Performance Services, LLC
August 16, 2018

Investment Performance

(total returns, annualized on a fiscal-year basis, July 1–June 30)

1-Year Returns (2018)[1]

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Equities[9]	16.21%	Russell 3000® Index[3]	14.78%
International Equities[9]	7.15%	International Blended Benchmark[4]	7.87%
Fixed Income[9]	–0.06%	Fixed-Income Blended Benchmark[5]	–0.30%
Real Estate[9]	9.08%	Real Estate Blended Benchmark[6]	6.74%
Alternative Investments[9]	13.59%	Alternative Investments Blended Relative Return Objective[7]	–
Total Fund	**9.57%**	**Total Fund Blended Benchmark[8]**	**8.94%**

3-Year Returns (2016–2018)[1]

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Equities[9]	11.75%	Russell 3000® Index[3]	11.58%
International Equities[9]	6.75%	International Blended Benchmark[4]	5.75%
Fixed Income[9]	2.44%	Fixed-Income Blended Benchmark[5]	2.11%
Real Estate[9]	9.02%	Real Estate Blended Benchmark[6]	8.28%
Alternative Investments[9]	8.79%	Alternative Investments Blended Relative Return Objective[7]	–
Total Fund	**8.12%**	**Total Fund Blended Benchmark[8]**	**7.58%**

5-Year Returns (2014–2018)[1]

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Equities[9]	13.25%	Russell 3000® Index[3]	13.29%
International Equities[9]	8.43%	International Blended Benchmark[4]	7.39%
Fixed Income[9]	2.78%	Fixed-Income Blended Benchmark[5]	2.62%
Real Estate[9]	10.95%	Real Estate Blended Benchmark[6]	9.65%
Alternative Investments[9]	10.16%	Alternative Investments Blended Relative Return Objective[7]	13.30%
Total Fund	**9.26%**	**Total Fund Blended Benchmark[8]**	**8.98%**

STRS Ohio Long-Term Policy Objective (10 Years)[2]

Total Fund: 6.84%

State Teachers Retirement System of Ohio claims compliance with the Global Investment Performance Standards (GIPS®). To receive a compliant presentation and/or a description of the firm's composite, please contact the STRS Ohio Communication Services Department at 614-227-2825.

State Teachers Retirement System of Ohio is defined and created by the Ohio Revised Code, Chapter 3307.15. The STRS Ohio Total Fund performance returns consist of all assets of the fund, including both internally and externally managed accounts. All returns are calculated in U.S. dollars using a time-weighted rate of return. All returns are net of brokerage commissions, expenses related to trading, and applicable foreign withholding taxes on dividends, interest and capital gains. Performance is net of fees for external managed real estate and alternative investments and gross of fees on all other investments. Net of fees returns are available upon request and investment management fees vary among asset classes. All measurements and comparisons have been made using standard performance evaluation methods, and results are presented in a manner consistent with the investment industry in general and public pension funds in particular.

The Total Fund reflects an actual asset allocation to the following asset classes as of June 30, 2018: Liquidity Reserves 1.8%, Fixed Income 19.4%, Domestic Equities 29.2%, International Equities 23.9%, Real Estate 10.3% and Alternative Investments 15.4%. The investment objective for the Total Fund is to earn, over moving 30-year periods, an annualized return that equals or exceeds the actuarial rate of return, approved by the State Teachers Retirement Board ("Board") to value STRS Ohio liabilities. As of June 30, 2018, the actuarial rate of return was 7.45%.

As part of the Total Fund strategy, certain asset classes may use derivatives and/or leverage. The following asset classes may use derivatives and/or leverage to gain exposure to certain sectors of the market:

- Fixed Income: Exposure to derivatives may not exceed 5% of Total Fund assets. A variety of derivatives may be used to adjust the exposure to interest rates, individual securities or to market sectors in the fixed income asset class.
- Domestic Equities: Exposure to derivatives, including, but not limited to, futures, stock options and index options may not exceed 10% of Total Fund assets.
- International Equities: Exposure to derivatives, including swap agreements, may not exceed 10% of Total Fund assets.
- Real Estate: Activities may include borrowing funds on a secured or unsecured basis with leverage limited to 50% of the internally managed direct real estate assets. At June 30, 2018 and 2017, debt as a percentage of these assets was 33.0% and 29.1%, respectively. Derivatives may also be used and cannot exceed 1% of Total Fund assets.
- Alternative Investments: Exposure to derivatives may not exceed 10% of Total Fund assets. Alternative investment managers may use derivatives as components of the funds' investment strategy and to achieve the investment objectives of the fund.

[1]The one-year returns for the fiscal years ended June 30, 2008, through 2018, have been examined by ACA Performance Services LLC. A copy of the examination report is available upon request.

[2]The long-term policy objective is a projected annualized policy return based on return forecasts by asset class before any value added. The State Teachers Retirement Board expects the net value added to be 0.40% per year.

[3]The Russell® Indices are a trademark of FTSE International Limited (FTSE), Frank Russell Company (Russell®) and their respective subsidiary undertakings, which are members of the London Stock Exchange Group PLC.

[4]The International Blended Benchmark is calculated monthly using 80% of the MSCI World ex-U.S. 50% Hedged Index-Net and 20% of the MSCI Emerging Markets Index-Net effective Jan. 1, 2014. Prior to Jan. 1, 2014, the MSCI Emerging Markets Index was the Gross return.

[5]The Fixed-Income Blended Benchmark is calculated daily and is a blend of two benchmarks using the actual core fixed-income weighting and the Bloomberg Barclays U.S. Universal index and the actual weighting of the liquid treasury portfolio weighting and the Bloomberg Barclays U.S. Intermediate Treasury Index. Source: Bloomberg Index Services Limited. BLOOMBERG® is a trademark and service mark of Bloomberg Finance L.P. and its affiliates (collectively "Bloomberg"). BARCLAYS® is a trademark and service mark of Barclays Bank PLC (collectively with its affiliates, "Barclays"), used under license. Bloomberg or Bloomberg's licensors, including Barclays, own all proprietary rights in the Bloomberg Barclays Indices. Neither Bloomberg nor Barclays approves or endorses this material, or guarantees the accuracy or completeness of any information herein, or makes any warranty, express or implied, as to the results to be obtained therefrom and, to the maximum extent allowed by law, neither shall have any liability or responsibility for injury or damages arising in connection therewith.

[6]The Real Estate Blended Benchmark is calculated quarterly using 85% NCREIF Property Index (NPI) and 15% FTSE NAREIT Equity REITs Index effective July 1, 2012.

[7]Given the long-term nature of the asset class, no relative return objective for Alternative Investments is displayed for the one-year period and the three-year period. For the longer five-year period, the Alternative Investments Blended Relative Return Objective is a blend of two relative return objectives for Private Equity (PE) and Opportunistic/Diversified (OD) and is calculated using: 46.7% of the Russell 3000® Index plus 1% for PE and 53.3% of the Russell 3000® Index minus 1% for OD effective April. 1, 2018; 50.0% of the Russell 3000® Index plus 1% for PE and 50.0% of the Russell 3000® Index minus 1% for OD effective July 1, 2017; 50.0% of the Russell 3000® Index plus 1% for PE and 50.0% of the Russell 3000® Index minus 1% for OD effective Jan. 1, 2014; 53.8% of the Russell 3000® Index plus 1% for PE and 46.2% of the Russell 3000® Index minus 1% for OD effective July 1, 2013.

[8]The Total Fund Blended Benchmark is calculated and rebalanced monthly using a blend of the asset class benchmarks based on the Total Fund's policy weights in effect during the respective period. For alternative investments, however, the actual Alternative Investments return is used in the calculation of the Total Fund Blended Benchmark. Information concerning asset class benchmarks and policy weights is available upon request.

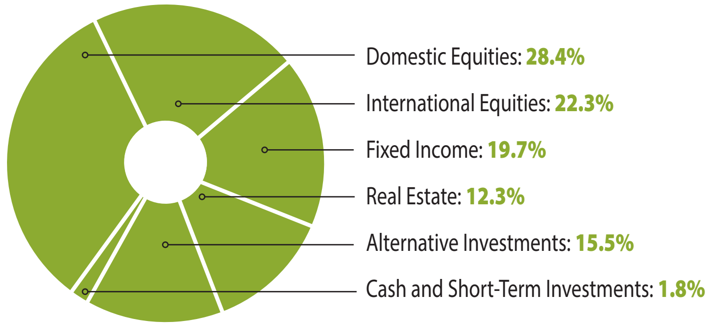
[9]Returns are supplemental to the Total Fund composite returns.

Summary of Investments and Cash
As of June 30, 2018 and 2017 (dollar amounts in thousands)

	June 30, 2018	Percentage of Assets	June 30, 2017	Percentage of Assets
Cash and short-term investments				
Cash	$ 16,067	0.0%	$ 7,525	0.0%
Commercial Paper	95,892	0.1%		
Short-term investment funds	50,000	0.1%	15,000	0.0%
Asset-backed security held in short-term	5,501	0.0%		
Corporate notes held in short-term	30,503	0.0%		
U.S. Treasury bills	1,259,765	1.6%	1,207,007	1.6%
Total cash and short-term investments	**1,457,728**	**1.8%**	**1,229,532**	**1.6%**
Fixed income				
U.S. government agency obligations and U.S. government obligations	7,117,057	8.9%	6,136,629	8.0%
Corporate bonds	4,017,749	5.1%	4,092,293	5.3%
High yield and emerging market	1,660,217	2.1%	1,627,669	2.1%
Mortgages and asset-backed	2,911,068	3.6%	2,830,428	3.7%
Total fixed income	**15,706,091**	**19.7%**	**14,687,019**	**19.1%**
Domestic equities	**22,688,592**	**28.4%**	**22,317,077**	**29.1%**
International equities	**17,804,674**	**22.3%**	**19,081,516**	**24.8%**
Real estate				
East region	3,097,001	3.9%	2,778,577	3.6%
Midwest region	1,285,763	1.6%	1,351,368	1.8%
South region	756,929	0.9%	658,175	0.9%
West region	2,537,899	3.2%	2,109,242	2.7%
REITs	1,229,655	1.5%	1,095,194	1.4%
Non-core	932,712	1.2%	1,030,625	1.3%
Total real estate	**9,839,959**	**12.3%**	**9,023,181**	**11.7%**
Alternative investments	**12,393,204**	**15.5%**	**10,512,809**	**13.7%**
Total investments and cash	**$79,890,248**	**100.0%**	**$76,851,134**	**100.0%**

Investment schedule excludes invested securities lending collateral.

Investment Distribution by Fair Value — as of June 30, 2018



Ohio Investment Profile — as of June 30, 2018

(in thousands)

STRS Ohio continues to engage in quality Ohio investments. As of June 30, 2018, STRS Ohio investments in companies with headquarters in Ohio are valued at more than $1.2 billion.

Fixed income	$ 207,815
Domestic equities	653,574
Real estate	113,296
Alternative investments	272,346
Total Ohio-headquartered investments	**$ 1,247,031**

Schedule of U.S. Stock Brokerage Commissions Paid

(for the year ended June 30, 2018)

Brokerage Firm	Shares Traded*	Commissions Paid	Average Cents Per Share
ITG, Inc.	49,387,668	$ 1,975,507	4.0
Nomura (Instinet LLC)	33,807,452	1,333,500	3.9
Susquehanna Financial Group LLP	27,503,000	706,286	2.6
JP Morgan Securities LLC	13,613,424	318,259	2.3
Baird (Robert W.) & Company Inc.	7,693,713	307,749	4.0
Weeden And Co	5,668,092	226,724	4.0
Weeden And Co	7,002,874	224,134	3.2
Barclays Capital Inc.	6,098,612	219,148	3.6
RBC Capital Markets LLC	6,948,175	203,876	2.9
Merrill Lynch, Pierce, Fenner & Smith Inc.	7,879,774	192,996	2.4
KeyBanc Capital Markets	4,979,103	190,918	3.8
Evercore ISI Institutional Equities	4,527,389	181,096	4.0
Deutsche Bank Securities Inc.	5,129,054	170,590	3.3
Cantor Fitzgerald & Company	4,569,352	168,271	3.7
Citi Capital Markets Inc.	3,877,486	155,099	4.0
Morgan Stanley & Company LLC	3,686,288	143,702	3.9
Macquarie Capital (USA) Inc.	4,060,383	143,610	3.5
Cowen & Company LLC	3,548,717	141,949	4.0
Credit Suisse Securities (USA) LLC	3,361,086	129,796	3.9
Goldman, Sachs & Company	4,056,875	128,488	3.2
Others (includes 37 brokerage firms and external managers)	113,869,684	2,779,106	2.4
Totals	**321,268,201**	**$ 10,040,804**	**3.1**

*Includes option equivalent shares.
Excludes commissions on futures trading.

Schedule of Largest Investment Holdings* (as of June 30, 2018)

Domestic Equities — Top 20 Holdings

	Shares	Fair Value
Apple Computer Inc.	3,823,229	$707,717,920
Microsoft Corp.	6,529,376	$643,861,767
Amazon Com Inc.	320,487	$544,763,803
Facebook Inc.-A	2,159,895	$419,710,796
JPMorgan Chase & Co.	2,899,142	$302,090,596
Alphabet Inc. Cl A	263,615	$297,671,422
Alphabet Inc. Cl C	255,959	$285,560,658
Unitedhealth Group Inc.	996,811	$244,557,611
Visa Inc. Cl A	1,826,745	$241,952,375
Exxon Mobil Corp.	2,904,871	$240,319,978
Wells Fargo Company	3,950,552	$219,018,603
ChevronTexaco Corp.	1,721,055	$217,592,984
Berkshire Hathaway Inc. Class B	1,156,909	$215,937,065
Bank Of America Corp.	7,252,733	$204,454,543
Boeing Co.	587,572	$197,136,282
Johnson & Johnson	1,600,035	$194,148,247
Home Depot Inc.	977,290	$190,669,279
Cisco Systems	4,377,235	$188,352,422
Citigroup Inc.	2,764,859	$185,024,364
Adobe Systems Inc.	727,466	$177,363,485

International Equities — Top 20 Holdings

	Shares	Fair Value
Samsung Electronics Co. LTD (South Korea)	4,567,038	$191,164,040
Roche Holding Ag (Switzerland)	786,152	$174,616,873
SAP SE (Germany)	1,377,393	$159,128,949
Taiwan Semiconductor Manufacturing Co. LTD (Taiwan)	21,592,357	$153,328,150
Nestle SA (Switzerland)	1,953,560	$151,295,397
Novartis AG (Switzerland)	1,825,798	$138,421,948
AIA Group LTD (Hong Kong)	11,672,238	$102,061,134
Equinor ASA (Norway)	3,711,563	$98,545,131
Diageo PLC Ord (United Kingdom)	2,703,862	$97,169,244
Royal Dutch Shell plc (United Kingdom)	2,695,777	$93,699,726
Rio Tinto PLC Ord (United Kingdom)	1,521,136	$84,367,835
BHP Billiton plc (United Kingdom)	3,619,773	$81,529,831
Danone (France)	1,057,757	$77,643,462
Tencent Holdings LTD (China)	1,515,436	$76,066,854
Mitsubishi Ufj Financial Group Inc. (Japan)	13,277,517	$75,650,620
Canadian National Railway Co. (Canada)	922,352	$75,396,640
L'Oreal (France)	295,126	$72,877,483
ING Groep NV (Netherlands)	5,054,534	$72,752,726
Anglo American plc (United Kingdom)	3,199,530	$71,591,394
DBS Group Holdings Ltd. (Singapore)	3,663,216	$71,491,146

Fixed Income — Top 20 Holdings

	Par Value	Fair Value
U.S. Treasury N/B, 10/31/2023, Aaa	263,677,000	$248,965,658
U.S. Treasury N/B, 2/15/2026, Aaa	232,507,000	$213,367,200
U.S. Treasury N/B, 5/15/2026, Aaa	210,517,000	$192,608,796
U.S. Treasury, FRN, 4/30/2020, Aaa	167,050,000	$167,058,999
U.S. Treasury N/B, 12/15/2019, Aaa	169,226,000	$166,584,033
U.S. Treasury N/B, 8/15/2026, Aaa	174,020,000	$157,186,608
U.S. Treasury N/B, 12/31/2019, Aaa	155,199,000	$152,132,694
U.S. Treasury N/B, 11/15/2026, Aaa	149,084,000	$139,746,818
U.S. Treasury N/B, 5/15/2023, Aaa	144,573,000	$138,136,824
U.S. Treasury N/B, 11/15/2019, Aaa	122,810,000	$120,775,710
U.S. Treasury N/B, 1/15/2020, Aaa	118,504,000	$116,514,144
U.S. Treasury N/B, 8/31/2020, Aaa	115,231,000	$114,185,699
U.S. Treasury N/B, 2/15/2025, Aaa	106,640,000	$101,445,243
U.S. Treasury N/B, 8/31/2021, Aaa	99,232,000	$94,682,092
U.S. Treasury N/B, 6/15/2019, Aaa	93,974,000	$92,671,200
U.S. Treasury N/B, 7/31/2021, Aaa	91,625,000	$87,562,061
U.S. Treasury N/B, 9/30/2021, Aaa	91,042,000	$86,748,885
U.S. Treasury N/B, 2/15/2020, Aaa	87,118,000	$85,569,754
U.S. Treasury N/B,11/15/2019, Aaa	86,808,000	$85,109,917
U.S. Treasury N/B, 9/30/2023, Aaa	83,579,000	$77,972,872

*A complete list of investment holdings is available from STRS Ohio.

Schedule of External Managers (as of June 30, 2017)

Domestic Equities

Intech
Chartwell Investment Partners
Fuller & Thaler Asset Management
M.A. Weatherbie & Company
Neuberger Berman

International Equities

Alliance Bernstein
Arrowstreet Capital
Genesis Asset Managers
Lazard Asset Management
MFS Investment Management
Stewart Investors
Wellington Management

Fixed Income

Fidelity Institutional Asset Management
Oaktree Capital Management
Pacific Investment Management Company
Stone Harbor Investment Partners

Real Estate

BCMR-GP LLC
Benson Elliot Capital Management LLP
BlackRock Realty Advisors, Inc.
Blackstone Real Estate Advisors Europe, LP
Blackstone Real Estate Advisors LP
Carlyle Investment Management LLC
CBRE Global Investment Partners Asia, Pte. Ltd.
CIM Global LLC
CLSA Capital Partners Singapore PTE Ltd.
DDR Corporation
Fortress Japan Opportunity Management LLC
Fortress Real Estate Opportunities Advisors LLC
Invesco Avisers Inc.
JP Morgan Funds Limited
KSL Advisors, LLC
LaSalle Investment Management (Asia) Pte. Ltd.
LNR CPI Fund GP, LLC
Normandy Real Estate Partners
Patria Brazil Real Estate Fund General Partner II, Ltd.
Patria Brazil Retail Property Fund General Partner, Ltd.
Pramerica Investment Management Limited
SCREP V Management , LLC
Strategic Partners Fund Solutions Advisors LP
Westbrook Realty Management IX, LP
Westbrook Realty Management V, LP
Westbrook Realty Management VI, LP
Westbrook Realty Management VII, LP
Westbrook Realty Management VIII, LP
Westbrook Realty Management X, LP

Alternative Investments

Adams Capital Management, Inc.
Advanced Technology Ventures
Advent International Corporation
Angelo, Gordon & Co.
Apax Partners Worldwide
Apollo Aviation Group, LLC
Apollo Management
AQR Capital Management, LLC
ArcLight Capital Partners, LLC
Ares Management, LLC
Asia Alternatives Management LLC
Atalaya Capital Managment LP
Athenian Venture Partners
Avenue Capital Group
Avenue Capital Management II, LP
Axiom Asia Private Capital
Bain Capital, LLC
Baker Capital Corp.
Beacon Capital Partners, LLC
Benefit Street Partners LLC
Berkshire Partners, LLC
BlackRock Institutional Trust Company, N.A.
Blue Chip Venture Company, Ltd.
Bridgepoint Capital, Ltd.
Brookside Capital, LLC
C B Health Ventures, LLC
Capital Fund Management LLP
Cantor Fitzgerald
Cardinal Partners
CID Capital, Inc.
Claren Road Asset Management, LLC
Clayton, Dubilier & Rice, LLC
Commonfund Capital, Inc
Commonwealth Capital Ventures
Community Bancorp LLC
CQS
CVC Capital Partners Limited
Davidson Kempner Advisors, Inc.
Duff Ackerman & Goodrich
Dyal Capital Partners
EnCap Investments LP
Essex Woodlands Health Ventures
Fairview Management Group, LLC
Fortress Investment Group, LLC
Foundation Medical Partners
Fox Paine & Company, LLC
Francisco Partners
Freeman Spogli & Co.
Friedman, Fleischer & Lowe, LLC
General Catalyst Partners
Gilbert Global Equity Capital, LLC
Globespan Capital Management, LLC
Golub Capital
Grosvenor Capital Management, LLC
GTCR LLC
H.I.G. Capital Management
Hamilton Bancorp Incorporated
HarbourVest Partners, LLC
Heartland Industrial Partners
Hellman & Friedman LLC
Hermes GPE LLP
HSBC Group
Ionic Capital Advisors, LLC
King Street Advisors, LLC
Leonard Green & Partners, LP
Lighthouse Capital Partners
Lime Rock Partners, LLC
Linsalata Capital Partners
Meritage Holdings, LLC
MHR Fund Management LLC
MKP Capital Management
Monitor Clipper Partners, Inc.
Moonrise Capital LP
Moore Capital Advisors, LLC
Morgenthaler Ventures
MV Management XIV, LLC
New Enterprise Associates (NEA)
Oak Hill Capital Management, Inc.
Oaktree Capital Management Limited
Oaktree Capital Management, LLC
Och-Ziff Capital Management Group
Ohio Innovation Fund
Owl Rock Capital Advisors
Paine Schwartz Paine, LLC
Pamplona Capital Management
Panda Energy International, Inc.
Park Street Capital, LLC
PineBridge Investments
Primus Venture Partners, Inc.
Providence Equity Partners, Inc.
Quad Partners LLC
Redpoint Omega III, LLC
Redshift Ventures
Resolution Life
Reverence Capital Partners LLC
Ross, Jeffrey & Antle LLC
SciBeta
Semaphore
Silver Lake Partners
Summit Partners
TA Associates, Inc.
TCW Group
Texas Pacific Group
The Blackstone Group
The Carlyle Group
Thoma Bravo, LLC
Tiger Iron Capital
TowerBrook Capital Partners, LP
TPG Sixth Street Partners (TSSP)
Triton Partners
Vitruvian Partners LLP
Truebridge Capital Partners, LLC
Veritas Capital Fund Management, LLC
Vista Equity Partners Management, LLC
Warburg Pincus LLC
WL Ross & Co, LLC (Invesco)

CHEIRON

Classic Values, Innovative Advice

October 10, 2018

Board of Trustees
State Teachers Retirement System of Ohio
275 East Broad Street
Columbus, Ohio 43215

Dear Members of the Board:

This report presents the July 1, 2018 Actuarial Valuation of the State Teachers Retirement System of Ohio ("STRS"). In preparing our report, we relied on information, some oral and some written, supplied by the STRS. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The actuarial assumptions and methods used in this valuation are the same as those recommended by the prior actuary. The actuarial assumptions were adopted by the Board based on recommendations from the prior actuary from an experience study covering plan experience for the period July 1, 2011 through June 30, 2016. Cheiron has reviewed this experience study dated March 3, 2017. While we consider these assumptions to be generally reasonable, we have not yet performed our own actuarial experience study.

Included in the report are the follow supporting schedules prepared by Cheiron to be included in the Financial, Actuarial and Statistical sections of the STRS Ohio *Comprehensive Annual Financial Report*:

- Financial/Required Supplementary Information
  - Schedule of Changes in Employers' Net Pension Liability
  - Schedule of Employers' Net Pension Liability
  - Schedule of Employers' Contributions – Pension
  - Notes to Required Supplementary Information - Pension
  - Sensitivity of the Net Pension Liability to the Discount Rate Assumption
- Actuarial
  - Schedule of Valuation Data – Active Members
  - Schedule of Valuation Data – Retirees/Beneficiaries
  - Benefit Recipients Added to and Removed from the Rolls
  - Solvency Test
  - Analysis of Financial Experience
- Statistical
  - Actuarial Funded Ratio & Funding Period
  - Selected Funding Information – Defined Benefit Plan
  - Number of Benefit Recipients by Type
  - Summary of Active Membership Data
  - Benefit Payments by Type

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and, changes in plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This report was prepared for STRS for the purposes described herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Gene Kalwarski, FSA, FCA, MAAA, EA
Principal Consulting Actuary

Janet Cranna, FSA, FCA, MAAA, EA
Principal Consulting Actuary

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This section presents the results of the annual valuation of the assets and liabilities of the State Teachers Retirement System of Ohio (STRS Ohio) as of July 1, 2018, prepared by its actuary, Cheiron, in accordance with Section 3307.51 of Chapter 3307 of the Ohio Revised Code.

Summary of Actuarial Assumptions and Methods

The assumptions below have been adopted by the State Teachers Retirement Board after consulting with the actuary. The board has adopted a funding policy that establishes the framework and specific objectives to monitor the system's funding status.

Mortality Rates — Post-Retirement: RP-2014 Annuitant Mortality Table with 50% of rates through age 69, 70% of rates between ages 70 and 79, 90% of rates between ages 80 and 84, and 100% of rates thereafter, projected forward generationally using mortality improvement scale MP-2016. (Adopted effective July 1, 2017). Sample 2014 mortality rates are as follows.

Mortality Rates — Post-Retirement		
Age	Male	Female
50	0.20%	0.14%
55	0.29%	0.18%
60	0.39%	0.26%
65	0.55%	0.40%
70	1.17%	0.90%
75	1.88%	1.47%
80	4.02%	3.14%
85	7.75%	6.05%
90	13.59%	10.71%
95	21.86%	17.90%
100	31.40%	27.09%

Mortality Rates — Pre-Retirement: RP-2014 Employee Mortality Table, projected forward generationally using mortality improvement scale MP-2016. (Adopted effective July 1, 2017).

Mortality Rates — Post-Retirement Disabled: RP-2014 Disabled Mortality Table with 90% of rates for males and 100% of rates for females, projected forward generationally using mortality improvement scale MP-2016. (Adopted effective July 1, 2017). Sample 2014 mortality rates as follows.

Mortality Rates — Post-Retirement Disabled		
Age	Male	Female
45	1.53%	0.90%
50	1.84%	1.19%
55	2.10%	1.45%
60	2.39%	1.70%
65	2.85%	2.09%
70	3.63%	2.82%
75	4.89%	4.10%

Active Retirement Rates: The following rates of retirement are assumed for members eligible to retire — shown below for selected ages. (Adopted effective July 1, 2017).

Active Retirement Rates

Defined Benefit Plan – Grandfathered Male Rates				
Age	Under 25 Years of Service	25-29 Years of Service	30-34 Years of Service	35 or More Years of Service
<53	0%	0%	20%	30%
55	0%	6%	20%	40%
60	10%	7%	20%	40%
65	20%	20%	25%	25%
70	15%	20%	25%	20%
75	100%	100%	100%	100%

Defined Benefit Plan – Grandfathered Female Rates				
Age	Under 25 Years of Service	25-29 Years of Service	30-34 Years of Service	35 or More Years of Service
<53	0%	0%	20%	35%
55	0%	9%	20%	40%
60	10%	10%	30%	45%
65	25%	30%	35%	45%
70	20%	20%	35%	40%
75	100%	100%	100%	100%

Defined Benefit Plan – Non-Grandfathered Male Rates				
Age	Under 25 Years of Service	25-29 Years of Service	30-34 Years of Service	35 or More Years of Service
<53	0%	3%	20%	20%
55	0%	3%	20%	20%
60	5%	5%	20%	25%
65	20%	20%	25%	25%
70	20%	20%	25%	20%
75	100%	100%	100%	100%

Defined Benefit Plan – Non-Grandfathered Female Rates				
Age	Under 25 Years of Service	25-29 Years of Service	30-34 Years of Service	35 or More Years of Service
<53	0%	5%	20%	20%
55	0%	5%	20%	20%
60	10%	10%	30%	30%
65	30%	30%	35%	35%
70	20%	20%	35%	30%
75	100%	100%	100%	100%

Combined Plan		
Age	Male	Female
60	13%	22%
65	17%	20%
70	12%	12%
75	100%	100%

Inactive Vested Retirement Rates: 5% at each early retirement age through age 64 and 100% at age 65, or the first age at which unreduced benefits are available.

Disability Rates: Shown below for selected ages. (Adopted effective July 1, 2017).

Disability Rates	
Age	Unisex Rate
Under 30	0.01%
30	0.01%
35	0.03%
40	0.05%
45	0.10%
50	0.18%
55	0.22%
60	0.25%
65 and Over	0.25%

Termination Rates: Termination rates based on service, for causes other than death, disability, or retirement. (Adopted effective July 1, 2017).

Vested Terminations*		
Age	Male	Female
20	11.25%	13.25%
25	11.25%	12.50%
30	2.75%	3.75%
35	2.00%	2.00%
40	1.75%	1.50%
45	1.75%	1.25%
50	2.00%	1.75%
55	3.25%	3.00%
60	0.00%	0.00%

* Termination rates cut out at first retirement eligibility

Non-Vested Terminations		
Service	Male	Female
Under 1 Year	30.00%	25.00%
1 to 2 Years	20.00%	20.00%
2 to 3 Years	15.00%	10.00%
3 to 5 Years	10.00%	10.00%

Percent Electing a Deferred Termination Benefit: 50% of terminating members of the Defined Benefit Plan are assumed to elect deferred termination benefit. Termination benefits are assumed to commence at age 60 or the first age at which unreduced benefits are available, if earlier.

Percent Married: For valuation purposes, 80% of male members and 60% of female members are assumed to be married. Male members are assumed to be three years older than their spouses, and female members are assumed to be one year younger than their spouses. (The assumed age difference adopted effective July 1, 2012, and reaffirmed effective July 1, 2017.)

Dependents for Survivor's Benefit: The spouse is the only assumed beneficiary for the survivor's benefit.

Investment Return Rate: 7.45% per annum, compounded annually and net of all expenses. (Adopted effective July 1, 2017)

Salary Increase Rates: Inflation rate of 2.50% plus merit and seniority increase, as shown below for selected ages. (Adopted effective July 1, 2017).

Salary Increase Rates	
Age	Rate
20	12.50%
25	11.50%
30	7.75%
35	6.50%
40	5.25%
45	4.75%
50	4.00%
55	3.50%
60	2.75%
65	2.50%

Payroll Growth Rate: 3.00% per annum. (Adopted effective July 1, 2017).

Defined Contribution Plan: The defined benefit account balance is added to the actuarial liability and the actuarial value of assets. If a member retires and elects to have the defined contribution account balance paid as an annuity, then the account balance is transferred to the Defined Benefit Plan and the annuity is valued as part of the Defined Benefit Plan.

Rationale for Assumptions: The demographic actuarial assumptions were adopted by the Board based on recommendations from the prior actuary from an experience study covering plan experience for the period July 1, 2011, through June 30, 2016. Cheiron has reviewed this experience study dated March 3, 2017. Cheiron considers these assumptions to be generally reasonable, but has not yet performed its own actuarial experience study. An experience study will be performed once a sufficient amount of recent data has been accumulated.

Asset Value of Assets: The actuarial value of assets is based on the market value of assets with a four-year phase-in of actual investment return in excess of (or less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the actuarial value of assets (adjusted for receipts and disbursements during the year). The actual investment return for this purpose is determined net of all investment and administrative expenses. The actuarial value is further adjusted, if necessary, to be within 9% of the market value.

Actuarial Funding Method: The funding method for the valuation of liabilities used for this valuation is the Entry Age Normal (EAN) method. Under this funding method, a normal cost rate is determined as a level percentage of pay for each active participant. The normal cost rate multiplied by payroll equals the total normal cost for each participant. The normal cost contributions (employer and participant) will pay for projected benefits at retirement for each active participant.

The actuarial liability is the difference between the present value of future benefits and the present value of future normal costs. The difference between this actuarial liability and the actuarial value of assets is the unfunded actuarial liability (UAL).

The portion of the actuarial liability in excess of plan assets, the UAL, is amortized to develop an additional cost that is added to each year's employer normal cost. Under this funding method, actuarial gains and losses are directly reflected in the size of he unfunded actuarial liability. The amortization method is described below.

Amortization Method: The actuarially determined contribution (ADC) is determined as the sum of (a) the employer normal cost rate, and (b) a level percentage of payroll required to amortize the unfunded actuarial accrued liability over the 30-year closed period that began July 1, 2015.

Benefit Recipients Added to and Removed From the Rolls, 2009–2018

Fiscal Year Ended	Beginning Number of Benefit Recipients	Beginning Annual Allowances (in thousands)	Benefit Recipients Added	Payments Added (in thousands)	Benefit Recipients Removed	Payments Removed (in thousands)	Ending Number of Benefit Recipients	Ending Annual Allowance (in thousands)
2009	126,506	$4,418,799	6,675	$366,645	3,522	$78,480	129,659	$4,706,964
2010	129,659	$4,706,964	7,089	$334,654	3,645	$83,658	133,103	$4,957,960
2011	133,103	$4,957,960	7,744	$501,900	2,759	$66,488	138,088	$5,393,372
2012	138,088	$5,393,372	8,761	$512,952	3,593	$90,917	143,256	$5,815,407
2013	143,256	$5,815,407	8,493	$441,942	2,528	$67,167	149,221	$6,190,182
2014	149,221	$6,190,182	5,550	$283,768	2,563	$76,415	152,208	$6,397,535
2015	152,208	$6,397,535	9,027	$490,598	3,119	$86,952	158,116	$6,801,181
2016	158,116	$6,801,181	2,675	$177,665	2,853	$82,684	157,938	$6,896,162
2017	157,938	$6,896,162	3,254	$155,702	3,153	$96,555	158,039	$6,955,309
2018	**158,039**	**$6,955,309**	**3,847**	**$128,494**	**4,464**	**$134,381**	**157,422**	**$6,949,422**

Schedule of Valuation Data — Active Members, 2009–2018

Valuation Date*	Number of Active Members	Annualized Salaries (in thousands)	Annual Average Pay	% Increase in Average Pay
2009	174,807	$9,502,701	$54,361	2.6%
2010	175,842	$9,633,354	$54,784	0.8%
2011	177,897	$9,609,723	$54,018	–1.4%
2012	173,044	$9,330,845	$53,922	–0.2%
2013	169,945	$9,118,036	$53,653	–0.5%
2014	169,295	$9,148,438	$54,038	0.7%
2015	164,925	$9,057,095	$54,916	1.6%
2016	169,212	$9,562,236	$56,510	2.9%
2017	168,132	$9,842,388	$58,540	3.6%
2018	**170,327**	**$10,581,345**	**$62,124**	**6.1%**

*For valuations prior to July 1, 2010, active members are defined as participants who earned 0.25 years of service credit or more, in the valuation year. Starting with the July 1, 2010, figures, active members are defined as participants who earned 0.25 years of service credit or more in the valuation year and those employed on or after Jan. 1, with less than 0.25 years of service.

Schedule of Valuation Data — Retirees/Beneficiaries, 2009–2018

Valuation Date	Number of Retirees/Beneficiaries	Annual Allowances (in thousands)	% Increase in Annual Allowances	Average Annual Allowances
2009	129,659	$4,706,964	6.5%	$36,303
2010	133,103	$4,957,960	5.3%	$37,249
2011	138,088	$5,393,372	8.8%	$39,057
2012	143,256	$5,815,407	7.8%	$40,594
2013	149,221	$6,190,182	6.4%	$41,483
2014	152,208	$6,397,535	3.3%	$42,032
2015	158,116	$6,801,181	6.3%	$43,014
2016	157,938	$6,896,162	1.4%	$43,664
2017	158,039	$6,955,309	0.9%	$44,010
2018	**157,422**	**$6,949,422**	**–0.1%**	**$44,145**

Solvency Test, 2009–2018 (dollar amounts in thousands)

Valuation Date	Accrued Liability For: (1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer-Financed Portion)	Actuarial Value of Assets*	Portion of Accrued Liabilities Covered by Valuation Assets: (1)	(2)	(3)
2009	$10,295,816	$54,909,046	$26,236,093	$54,902,859	100%	81%	0%
2010	$10,641,167	$57,754,654	$26,324,848	$55,946,259	100%	78%	0%
2011	$10,907,611	$62,441,601	$25,416,993	$58,110,495	100%	76%	0%
2012	$10,985,246	$68,111,175	$27,205,420	$59,489,508	100%	71%	0%
2013	$10,962,886	$68,075,440	$15,328,367	$62,590,786	100%	76%	0%
2014	$11,477,457	$69,776,259	$14,913,341	$66,657,175	100%	79%	0%
2015	$11,473,309	$74,340,699	$13,200,646	$68,655,999	100%	77%	0%
2016	$12,498,469	$74,282,592	$13,975,362	$70,114,637	100%	78%	0%
2017	$13,668,834	$69,723,394	$12,734,213	$72,216,212	100%	84%	0%
2018	**$15,440,336**	**$68,911,073**	**$14,324,150**	**$73,115,358**	**100%**	**84%**	**0%**

*Excludes health care assets.

Analysis of Financial Experience

Gains and Losses in Unfunded Actuarial Liability Resulting From Differences Between Assumed Experience and Actual Experience (in thousands)

Type of Activity	Gain (loss) for year ended June 30: 2018	2017	2016	2015	2014	2013
Investment income. If there is greater investment income than assumed, there is a gain. If less, there is a loss.	$ (253,993)	$ 857,418	$ 774,260	$ 1,068,184	$ 3,333,931	$ 2,483,140
Payroll growth. If more contributions from payroll growth are received than expected, there is a gain. If less, there is a loss.	0	7,091	(40,874)	(26,173)	(51,750)	(36,193)
Salary increases. If there are smaller salary increases than assumed, there is a gain. If greater increases, there is a loss.	180,810	279,058	236,054	21,385	413,619	816,457
Retirement and other separation experience. If members retire from service at an older age or with a lower final average salary than assumed, there is a gain. If separation claims are less than expected, there is a gain. If new members don't enter the system as expected, there is a loss.	(285,353)	(316,922)	(333,342)	(1,064,240)	(327,782)	(1,199,362)
Death after retirement. If retirees live shorter than expected, there is a gain. If retirees live longer than assumed, there is a loss.	(9,495)	27,307	(336,967)	(223,251)	(185,841)	39,580
Final plan reselection. If the account value from defined contribution accounts is greater than the reestablished defined benefit account balance, there is a gain.	0	(1,403)	(9,569)	(8,240)	(3,807)	(11,124)
Gain (or loss) during year from financial experience	(368,031)	852,549	289,562	(232,335)	3,178,370	2,092,498
Actuarial gain (or loss) due to assumption changes/plan amendments	236,418	415,862	0	0	0	15,662,266
Composite gain (or loss) during the year	**$ (131,613)**	**$ 1,268,411**	**$ 289,562**	**$ (232,335)**	**$ 3,178,370**	**$ 17,754,764**

Summary of Benefit and Contribution Provisions — Defined Benefit Plan

Eligibility for Membership

Immediate upon commencement of employment.

Service Retirement

Eligibility : Effective Aug. 1, 2015, the service credit requirements for an unreduced benefit are as follows:

Unreduced Benefit for Retirement	Minimum Age and Years of Service
Through 7/1/2015	Any age and 30 years; or age 65 and 5 years
8/1/2015–7/1/2017	Any age and 31 years; or age 65 and 5 years
8/1/2017–7/1/2019	Any age and 32 years; or age 65 and 5 years
8/1/2019–7/1/2021	Any age and 33 years; or age 65 and 5 years
8/1/2021–7/1/2023	Any age and 34 years; or age 65 and 5 years
8/1/2023–7/1/2026	Any age and 35 years; or age 65 and 5 years
8/1/2026	Age 60 and 35 years; or age 65 and 5 years

Amounts effective Aug. 1, 2015: Annual amount equal to 2.2% of final average salary for the five highest years of earnings, multiplied by all years of service.

Amounts on or before July 1, 2015: Annual amount equal to the greater of (a) 2.2% of final average salary for the three highest years of earnings, multiplied by years of total Ohio service credit, or 2.5% of final average salary for the three highest paid years if the member has 35 or more years of contributing service credit multiplied by years of total contributing service credit, except that for years of contributing service credit in excess of 30, the following percentages apply:

Year	Percentage
31	2.5%
32	2.6%
33	2.7%
34	2.8%
35	2.9%
36	3.0%
37	3.1%
38	3.2%
39	3.3%

or (b) $86 multiplied by years of service credit.

Transition Benefit: For members who were eligible to retire on July 1, 2015, the annual amount will be greater of (a) the benefit amount calculated upon retirement under the current benefit formula, or (b) the benefit amount the member would have received if he/she retired on July 1, 2015.

Annual salary is subject to the limit under Section 401(a) (17) of the Internal Revenue Code.

Reduction factors for early retirement: Prior to July 1, 2015, if the member has less than 30 years of service at retirement and is younger than age 65, the following reduction factors apply:

Attained Age	Years of Ohio Service Credit	% of Base Amount
58	25	75%
59	26	80%
60	27	85%
61		88%
	28	90%
62		91%
63		94%
	29	95%
64		97%
65	30 or more	100%

Effective Aug. 1, 2015, the service credit requirements for an actuarially reduced benefit are as follows:

Actuarially Reduced Benefit for Retirement	Minimum Age and Years of Service
Through 7/1/2015	Age 55 and 25 years; or age 60 and 5 years
8/1/2015–7/1/2017	Any age and 30 years; or age 55 and 26 years; or age 60 and 5 years
8/1/2017–7/1/2019	Any age and 30 years; or age 55 and 27 years; or age 60 and 5 years
8/1/2019–7/1/2021	Any age and 30 years; or age 55 and 28 years; or age 60 and 5 years
8/1/2021–7/1/2023	Any age and 30 years; or age 55 and 29 years; or age 60 and 5 years
8/1/2023	Any age and 30 years; or age 60 and 5 years

The actuarially reduced benefit reflects a reduction for each year that the member retires before meeting eligibility for an unreduced benefit.

Disability Retirement

Eligibility : Membership before July 30, 1992, and election of this benefit, completion of five or more years of qualifying service credit, under age 60 and permanently incapacitated for the performance of duty.

Amount

(1) Annuity with a reserve equal to the member's accumulated contributions, plus

(2) The difference between (1) and 2% of the average salary during the three highest paid years times total service plus years and months from date of disability to age 60. Maximum allowance is 75% of final average salary. Minimum allowance is 30% of final average salary. Disability benefits commencing before Aug. 1, 2015, were based on a three-year final average salary.

Disability Allowance

Eligibility : Membership on or after July 1, 2013, completion of 10 years of qualifying service credit and permanently incapacitated for the performance of duty. For membership after July 29, 1992, or membership before July 30, 1992, and election of this benefit, completion of five or more years of qualifying service credit and permanently incapacitated for the performance of duty.

Amount : 2.2% of the average salary during the five highest paid years times total service. Maximum allowance is 60% of final average salary. Minimum allowance is 45% of final average salary. The disability allowance payment terminates at age 65 (or later if payment begins after age 60). After termination of the disability allowance, the member may apply for service retirement. Disability benefits commencing before Aug. 1, 2015, were based on a three-year final average salary.

Death After Retirement

Lump-sum payment of $1,000 upon death after service or disability retirement.

Survivor Benefits

Eligibility : Upon death after at least 1-1/2 years of credit with at least 1/4 year of such service in the 2-1/2 years preceding death or upon death of a disability benefit recipient. For membership on or after July 1, 2013, upon death after at least five years of qualifying service credit and died not later than one year after the date service terminated or upon the death of a disability benefit recipient.

Qualified survivors will receive the highest benefit from among the following for which they are eligible: dependent-based benefit, service-based benefit, and retirement-based benefit.

Qualified survivors are the spouse, dependent children, and/or dependent parents over age 65.

Dependent-based benefit: Monthly survivor benefits are determined according to the number of qualified survivors. These benefits are payable as a percentage of final average salary. The percentages are as follows:

Number of Qualified Dependents	% of Final Average Salary
1	25%
2	40%
3	50%
4	55%
5 or more	60%

Service-based benefit: If a member has 20 or more years of service before death, monthly survivor benefits are determined according to the number of years of service credit. These benefits are payable as a percentage of final average salary. The percentages are as follows:

Years of Service	% of Final Average Salary
20	29%
21	33%
22	37%
23	41%
24	45%
25	48%
26	51%
27	54%
28	57%
29 or more	60%

Retirement-based benefit: If a member dies after meeting service retirement eligibility, the monthly survivor benefit is determined as if the member had actually retired and provided the maximum joint and survivor benefit to the qualified survivor (Option 1). Early retirement reduction applies if the member is not eligible for unreduced benefit.
The primary beneficiary may withdraw the deceased member's account in lieu of receiving monthly benefits if there are no children who are qualified survivors.

Lump-Sum Withdrawal Option

In lieu of any other pension or survivor benefits, a member who leaves the system can receive his or her member contributions with interest in a lump sum payment according to the following schedule:

Credited Service	Lump-Sum Amount
Less than three years	Member contributions with 2% interest
Three or more years but less than five years	Member contributions with 3% interest
Five or more years	150% of member contributions with 3% interest

The board has the authority to modify the interest credited to member contributions.

Plans of Payment

There are four basic plans of payment:

Plan I — Single Life Annuity: if a member chooses this plan at retirement and later marries, he/she may change the plan to a Joint and Survivor Annuity with his/her spouse as beneficiary within the first year of the marriage.

Plan II — Joint and Survivor Annuity: there are four options under this plan of payment:

- Options 1, 2 and 3 apply to a single primary beneficiary
- Option 4 applies to multiple primary beneficiaries

Plan III — Annuity Certain: if a death occurs before the guaranteed period ends, a beneficiary receives the same monthly benefit until the guaranteed period expires. If a member names more than one beneficiary, a lump-sum payment, representing the present value of the remaining payments, is divided equally and paid to the beneficiaries. If all beneficiaries die before the expiration of the certain period, the present value of all remaining payments is paid to the estate of the beneficiary last receiving payments.

Plan IV — Partial Lump-Sum Option Plan: allows a member to take an amount from six to 36 times the monthly Single Life Annuity benefit in a lump sum at retirement. The remainder of a member's lifetime benefits will be paid based on member's selected plan of payment: Single Life Annuity, Joint and Survivor Annuity or Annuity Certain.

Optional Forms of Benefit

Option 1 — 100% joint and survivorship. Reduced retirement allowance payable to the member, continuing after the member's death, for life to the member's sole beneficiary named at retirement.

Option 2 — A joint and survivorship annuity payable during the lifetime of the member, with the member's sole beneficiary named at retirement to receive some other portion of the member's annuity after the member's death.

Option 3 — The sole member's reduced retirement allowance provided under Option 1 or Option 2 is to be paid after the member's death for life to the member's sole beneficiary named at retirement, except that in the event of the death of the sole beneficiary or termination of marriage between the retiree and the sole beneficiary, the retiree may elect to return to his single lifetime benefit equivalent. In the case of termination of marriage, the election may be made with the written consent of the beneficiary or by court order.

Option 4 — Members may elect a reduced benefit to provide continuing lifetime benefits for up to four primary beneficiaries under a Joint and Survivor Annuity. A member may specify percentages of his/her benefit or a flat dollar amount for each beneficiary; however, the total benefit amount payable to all beneficiaries cannot exceed the amount payable to the member.

Cost-of-Living Adjustment (COLA)

Effective July 1, 2017, the COLA was reduced to zero.

Health Care

Retirees, their spouses and dependents are eligible for a comprehensive medical expense health care plan as may be offered by the Retirement Board, subject to changes in terms and conditions from time to time.

Contribution

By Members: 14% of salary.

By Employers: 14% of salaries of their employees who are members.

Summary of Benefit and Contribution Provisions — Combined Plan

Eligibility for Membership

New members hired on or after July 1, 2001, may elect in writing to participate in the Combined Plan.

Service Retirement

Eligibility: Age 60 with five years of service.

Amount: The balance in the member's defined contribution account plus an annual amount equal to 1% of final average salary for the five highest paid years multiplied by years of total Ohio service credit.

Before Aug. 1, 2015, the final average salary was the average of the member's three highest salary years.

Annual salary is subject to the limit under Section 401(a)(17) of the Internal Revenue Code.

Vesting

Eligibility: Completion of five years of service for the defined benefit portion. Member contributions and earnings are 100% vested at all times.

Amount: A member who terminates with five or more years of service credit can receive the actuarial equivalent present value of the defined benefit formula. Before age 50, a withdrawal must include both the defined benefit and defined contribution portions of the account.

Early Retirement

Eligibility: Before age 60 with five years of service.

Amount: The normal retirement benefit commencing at age 60. At age 50 or after, a member may elect to withdraw the full value of his or her defined contribution account and receive the withdrawal value of the defined benefit in a single sum, or leave the defined benefit on account for a benefit payable at age 60. The member may withdraw the defined benefit portion of the account only if he or she is also withdrawing the defined contribution account.

Disability Benefits

Eligibility: Completion of five or more years of qualifying service credit and permanently incapacitated from the performance of duty. For membership on or after July 1, 2013, completion of 10 years of qualifying service credit with STRS Ohio.

Amount: 2.2% of the average salary during the five highest paid years times total service. Maximum allowance is 60% of final average salary and the minimum is 45%. All contributions and investment gains in the member's defined contribution account are used to fund the benefit. At age 65, the disability allowance converts to a service retirement benefit with a 2.2% formula. Alternatively, the member's defined contribution account is available.

Survivor Benefits

Eligibility: Upon death after at least 1-1/2 years of qualifying service credit with at least 1/4 year of such service in the 2-1/2 years preceding death or upon death of a disability benefit recipient. For membership on or after July 1, 2013, upon death at least five years of qualifying service credit and died no later than one year after service terminated or upon death of a disability benefit recipient.

Amount: Qualified survivors have the option of receiving dependent-based, service-based or retirement-based benefits described under the Defined Benefit Plan. Both employer contributions and the member's contributions and any investment gains in the member's defined contribution account are used to fund the benefit. Survivors also have the option to withdraw the defined contribution and defined benefit portions of the Combined Plan account.

Optional Forms of Payment of Defined Benefit Portion

The greater of a lump sum of the actuarial equivalent of the defined benefit formula benefit or member contributions to the defined benefit portion. If a member withdraws the defined contribution account before age 50, the defined benefit portion is paid in a lump sum.

Joint and Survivorship Options — Options 1 through 4 described in the Defined Benefit Plan provisions are available, as well as the PLOP. All alternative forms of payment are the actuarial equivalent of the Single Life Annuity benefit payable at age 60.

Optional Forms of Payment of Member's Defined Contribution Account

The actuarial equivalent of the member's defined contribution account can be paid on or after age 50 as a lifetime annuity. Options 1 through 4, described in the Defined Benefit Plan provisions, are also available. The monthly annuity must be $100 or more to receive the member's defined contribution account in the form of an annuity.

The vested amount of the member's defined contribution account upon termination of employment can be paid as a single lump sum. If a member takes a lump sum of the defined benefit formula benefit, the member must simultaneously withdraw the lump-sum value of the member's defined contribution account in a single lump sum.

Health Care

Retirees, their spouses and dependents are eligible for a comprehensive medical expense health care plan as may be offered by the Retirement Board, subject to changes in terms and conditions from time to time.

Contribution

By Members: 14% of salary.

12% of salary is deposited into the member's defined contribution account and 2% is applied to the defined benefit portion of the Combined Plan.

By Employers: 14% of salaries of their employees who are Combined Plan members.

Summary of Benefit and Contribution Provisions — Defined Contribution Plan

Eligibility for Membership

New members hired on or after July 1, 2001, may elect in writing to participate in the Defined Contribution Plan.

Service Retirement

Eligibility: Termination after age 50.

Amount: The balance in the member's defined contribution account.

Vesting

Eligibility: Employer contributions and earnings on the member's account are vested after the first anniversary of membership. Effective July 1, 2013, members vest 20% per year in employer contributions and all gains and losses on those contributions. Member contributions and earnings are 100% vested immediately.

Amount: The balance in the member's defined contribution account.

Early Retirement

Eligibility: Termination before age 50.

Amount: The balance in the member's defined contribution account.

Disability Benefits

Eligibility: Permanently incapacitated for the performance of duty and termination of employment.

Amount: The balance in the member's defined contribution account. At age 50, other payment options are available, but employment must first be terminated.

Survivor Benefits

Eligibility: Upon death.

Amount: The balance in the member's defined contribution account. A spouse may either continue to manage the member's defined contribution account or withdraw the account.

Optional Forms of Payment

The actuarial equivalent of the member's defined contribution account can be paid on or after age 50 as a lifetime annuity. Options 1 through 4, described in the Defined Benefit Plan provisions, are also available. The monthly annuity must be $100 or more to receive the member's defined contribution account in the form of an annuity.

Cost-of-Living Adjustment (COLA)

Not available.

Health Care

Not available.

Contribution

By Members: 14% of salary is deposited into the member's defined contribution account.

By Employers: 14% of salaries of their employees who are Defined Contribution Plan members. Effective July 1, 2017, 9.53% of salary is deposited into the member's defined contribution account. 4.47% of the salaries is used to amortize the unfunded actuarial accrued liability of the plan.

CHEIRON *Classic Values, Innovative Advice*

October 10, 2018

Board of Trustees
State Teachers Retirement System of Ohio
275 East Broad Street
Columbus, Ohio 43215

Dear Members of the Board:

The purpose of this report is to provide accounting and financial disclosure information under Governmental Accounting Standards Board (GASB) Statement Nos. 74 and 75 for the Other Postemployment Benefits (OPEB) Plan provided by the State Teachers Retirement System of Ohio (the System). This report is for the use of the System and their auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report is not appropriate for other purposes, including the measurement of funding requirements for the Plan.

The actuary prepared the following supporting schedules including the Financial and Actuarial Sections of the Comprehensive Annual Financial Report:

- Financial/Required Supplementary Information
  - Schedule of Changes in Employers' Net OPEB Liability
  - Schedule of Employers' Net OPEB Liability
  - Schedule of Employers' Contributions – OPEB
  - Notes to Required Supplementary Information - OPEB
  - Sensitivity of the Net OPEB Liability to the Discount Rate and Trend Rate Assumptions
- Actuarial
  - Health Care Solvency Test
  - Key methods and assumptions used in Health Care Actuarial Valuation
  - Summary of Membership Data

In preparing our report, we relied on information (some oral and some written) supplied by the System. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, changes in healthcare assumptions, and changes in plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board including the use of assumptions and methods for funding purposes that comply with the Actuarial Standards of Practice. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This report was prepared for the System for the purposes described herein and for the use by the auditors in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Margaret A. Tempkin, FSA, MAAA, EA
Principal Consulting Actuary

Gaelle Gravot, FSA, MAAA
Principal Consulting Actuary

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A separate annual valuation of the retiree health care coverage provided by STRS Ohio was performed as of June 30, 2018, by Cheiron.

Summary of Actuarial Assumptions and Methods — Health Care Plan

The assumptions for this valuation were selected based on recent experience and expectations for the future. Many of the demographic assumptions were selected by the prior actuary based on its prior experience study. Cheiron has not performed its own experience study but reviewed the reports and letters of the prior actuary and believe the assumptions to be reasonable.

Economic Assumption Changes Since Last Valuation: The trend assumptions were updated to reflect the current market place. The GASB 74/75 discount rate was changed from 4.13% to 7.45%.

Retirement Rates: The same retirement rates were used as in the July 1, 2018, pension valuation.

Rates of Termination/Withdrawal: The same rates of termination/withdrawal were used as in the July 1, 2018, pension valuation.

Rates of Mortality: The same rates of mortality were used as in the July 1, 2018, pension valuation.

Percent of Retirees Electing Health Care Coverage: 75% of future eligible service retirees and 65% of future eligible disabled retirees are assumed to elect health care coverage. 100% of Combined Plan and 50% of Defined Benefit Plan future inactive vested participants are assumed to cash out. 30% of inactive vested participants who do not cash out are assumed to elect health care coverage. Current and future participants for whom the value of the benefits received is less than their contribution are assumed to drop health care coverage.

Benefit Elections: Below is a summary of medical plan election rates for future retirees by Medicare status

Pre-Medicare Medical Plans	Benefit Election Rate
Medical Mutual/Aetna Basic PPO	93.0%
AultCare PPO	3.5%
Paramount Health Care HMO	3.5%

Medical Plans	Benefit Election Rate
Aetna Medicare Advantage	92.6%
Medical Mutual/Aetna Basic PPO	5.4%
AultCare PPO	1.1%
Paramount Health Care HMO	0.9%

Spousal Coverage: Of those future retirees who elect to continue health coverage, 20% were assumed to have an eligible spouse who also opts for health care coverage at that time.

Administrative Expenses: Health plan administrative expenses are included in the per capita claims costs.

Changes Since the Last Valuation: Benefit percentage elections were updated to reflect current elections.

Claim and Expense Assumptions: The claims costs were developed based on actual medical and prescription drug claims paid from July 1, 2015 to June 30, 2017. An adjustment was made to the claims to account for the children of retirees. Additionally, 2018 contractual administrative expenses and an estimated CMS prescription drug plan subsidy were included. The resulting per person per month (PPPM) cost was then adjusted using age curves.

Average Annual Claims and Expense Assumptions: The following July 1, 2018–June 30, 2019, claims costs are shown for selected ages.

Average Claim and Expense Assumptions								
	Medical Pre-65		Prescription Drug Pre-65		Medical 65+		Prescription Drug 65+	
Age	Male	Female	Male	Female	Male	Female	Male	Female
40	$2,867	$5,202	$939	$1,164	$642	$578	$1,703	$1,632
50	$4,961	$6,200	$1,548	$1,643	$1,174	$1,057	$3,112	$2,982
60	$8,080	$8,936	$2,360	$2,233	$1,213	$1,092	$3,216	$3,081
65	$9,502	$8,989	$2,798	$2,529	$618	$566	$1,639	$1,598
70	$10,419	$9,967	$3,322	$2,887	$745	$642	$1,845	$1,673
80	$12,525	$12,253	$4,521	$3,684	$1,078	$900	$1,629	$1,551

Retiree Contributions: In 2018, non-Medicare retirees receive a subsidy of 1.9% per year of service to a maximum of 30 years and Medicare retirees receive a subsidy of 2.1% per year of service to a maximum of 30 years. Beginning in 2019, the STRS Ohio subsidy dollar amount for non-Medicare plans will be frozen at the current 2018 levels. Annual increases in the subsidy dollar amount for Medicare plans will be based on the percentage increase in the Aetna Medicare Advantage plan, limited at 6%.

For those who retire on or after August 2023, the first five years of service do not count towards the subsidy, so subsidy percentages are shifted five years and those with less than 20 years of service receive no subsidy.

A weighted average total cost across the medical plans is used as the STRS Ohio subsidy and is shown below. The amount is assumed to increase with health trend.

Weighted Average Premiums	
Pre-65 retirees	$11,247.51
Retirees age 65+	$4,093.92

Medicare Part B Premium Subsidy: Service retirees and disabled retirees who are enrolled in an STRS Ohio medical plan and who participate in Medicare Part B receive $29.90 monthly reimbursement towards the Part B premiums. This benefit will be eliminated Jan. 1, 2020.

Health Care Solvency Test, 2016–2018 (dollar amounts in thousands)

Actuarial Valuation Date	Accrued Liability For: (1) Active Members	(2) Inactive Members	(3) Retirees, Survivors & Dependents	Fair Market Value of Assets	Portion of Accrued Liability Covered by Fair Value of Assets: (1)	(2)	(3)
Jan. 1, 2016	$1,830,799	$19,435	$3,303,997	$3,258,197	100%	100%	43%
Jan. 1, 2017	$2,596,979	$18,783	$3,271,404	$3,222,093	100%	100%	19%
Jan. 1, 2018	$777,500	$2,424	$1,636,026	$3,691,399	100%	100%	178%
June 30, 2018	**$784,921**	**$1,965**	**$1,327,565**	**$3,721,349**	**100%**	**100%**	**221%**

Key Methods and Assumptions Used in Health Care Actuarial Valuation

Valuation date	June 30, 2018
Actuarial cost method	Entry age normal, level percent of pay
Amortization method	30 years, open, level percent of pay
Asset valuation method	Fair market value
Actuarial Assumptions:	
Investment rate of return	7.45%
Salary increase rate	Varies by age from 2.5%–12.5%
Payroll increase rate	3.00% per year

Health Care Cost Trend Rates

Year	Medical Pre-65	Medical 65+	Prescription Drug Pre-65	Prescription Drug 65+	Year	Medical Pre-65	Medical 65+	Prescription Drug Pre-65	Prescription Drug 65+
2019	6.00%	5.00%	8.00%	–5.23%	2027	4.93%	4.47%	5.87%	6.19%
2020	5.87%	4.93%	7.73%	9.62%	2028	4.80%	4.40%	5.60%	5.88%
2021	5.73%	4.87%	7.47%	8.06%	2029	4.67%	4.33%	5.33%	5.56%
2022	5.60%	4.80%	7.20%	7.75%	2030	4.53%	4.27%	5.07%	5.25%
2023	5.47%	4.73%	6.93%	7.44%	2031	4.40%	4.20%	4.80%	4.94%
2024	5.33%	4.67%	6.67%	7.13%	2032	4.27%	4.13%	4.53%	4.63%
2025	5.20%	4.60%	6.40%	6.81%	2033	4.13%	4.07%	4.27%	4.31%
2026	5.07%	4.53%	6.13%	6.50%	2034+	4.00%	4.00%	4.00%	4.00%

Summary of Membership Data

Valuation date	Jan. 1, 2016	Jan. 1, 2017	Jan. 1, 2018	June 30, 2018
Active members	164,925	169,205	168,132	**170,327**
Inactive members	17,275	17,011	17,694	**18,415**

STRS Ohio Health Care Program Enrollees

	Jan. 1, 2016	Jan. 1, 2017	Jan. 1, 2018	Added	Terminated	June 30, 2018
Retirees	101,539	99,835	98,231	1,459	1,860	**97,830**
Disabled retirees	4,300	4,131	3,939	45	161	**3,823**
Survivors	4,880	4,744	4,826	323	383	**4,766**
Spouses and dependents (excluding children)	17,722	16,376	15,458	230	775	**14,913**
Total	**128,441**	**125,086**	**122,454**	**2,057**	**3,179**	**121,332**
Annual allowance (in thousands)	$426,730	$427,693	$351,457	$5,967	$8,681	**$348,743**

Valuation date	Jan. 1, 2016	Jan. 1, 2017	Jan. 1, 2018	June 30, 2018
Average per health care participant annual benefit	$2,115	$2,205	$273	**$667**

The objective of the statistical section is to provide financial statement users with historical perspective, context and detail to assist in using the information in the financial statements and the notes to the financial statements to better understand and assess STRS Ohio's economic condition.

The schedules on Pages 73–74 show financial trend information that assists users in understanding and assessing how STRS Ohio's financial position has changed over time. The financial trend schedules presented are:

- Changes in Fiduciary Net Position
- Net Position by Plan
- Benefit Expenses by Type

Demographic and economic information begins on Page 75. This information is intended to assist users in understanding the environment in which STRS Ohio operates and to provide information that facilitates comparisons of financial statement information over time and among governments. The demographic and economic information presented are:

- Actuarial Funded Ratio and Funding Period
- Selected Funding Information — Defined Benefit Plan
- Number of Benefit Recipients by Type
- Summary of Active Membership Data

Operating information, which begins on Page 77, is intended to provide contextual information about STRS Ohio's operation to assist in using financial statement information. The operating information presented is:

- Benefit Payments by Type
- Average Benefit Payments for Service Retirees
- Average Benefit Subsidy Payments for Retirees Enrolled in Health Care Plan
- Number of Reporting Employers by Type
- Principal Participating Employers

Changes in Fiduciary Net Position
Years Ending June 30, 2009–2018 (in thousands)

Defined Benefit Plan

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Additions:										
Member contributions	$ 1,041,248	$ 1,066,483	$ 1,081,958	$ 1,049,709	$ 1,042,959	$ 1,134,899	$ 1,188,062	$ 1,289,809	$ 1,443,374	$1,479,151
Employer contributions	1,347,741	1,374,327	1,379,104	1,349,561	1,327,862	1,325,141	1,449,165	1,466,938	1,514,285	1,565,679
Net investment income (loss)	(14,371,713)	6,641,516	11,924,753	1,094,829	7,984,266	10,418,170	3,644,151	361,567	9,098,570	6,625,382
Other	35,324	39,857	45,910	50,804	54,681	168,250	123,557	55,441	54,649	43,248
Total additions	(11,947,400)	9,122,183	14,431,725	3,544,903	10,409,768	13,046,460	6,404,935	3,173,755	12,110,878	9,713,460
Deductions:										
Benefit payments	4,613,751	4,900,418	5,244,407	5,741,042	6,152,335	6,504,676	6,662,232	7,090,037	6,989,165	7,052,642
Refunds	121,863	117,751	153,243	169,071	186,459	198,972	198,700	205,223	190,517	219,453
Administrative expenses	58,679	59,320	57,778	57,879	58,613	60,136	60,270	61,038	62,592	62,775
Total deductions	4,794,293	5,077,489	5,455,428	5,967,992	6,397,407	6,763,784	6,921,202	7,356,298	7,242,274	7,334,870
Net increase (decrease)	(16,741,693)	4,044,694	8,976,297	(2,423,089)	4,012,361	6,282,676	(516,267)	(4,182,543)	4,868,604	2,378,590
Net position held in trust, beginning of year	66,837,412	50,095,719	54,140,413	63,116,710	60,693,621	64,705,982	70,988,658	70,432,646	66,250,103	71,118,707
Prior period adjustment GASB 68 2015; GASB 75 2018	N/A	N/A	N/A	N/A	N/A	N/A	(39,745)	N/A	N/A	(39,730)
Beginning of year restated	N/A	N/A	N/A	N/A	N/A	N/A	70,948,913	N/A	N/A	71,078,977
Net position held in trust, end of year	**$50,095,719**	**$54,140,413**	**$63,116,710**	**$60,693,621**	**$64,705,982**	**$70,988,658**	**$70,432,646**	**$66,250,103**	**$71,118,707**	**$73,457,567**

Defined Contribution Plan

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Additions:										
Member contributions	$ 44,490	$ 46,059	$ 47,935	$ 49,764	$ 52,331	$ 58,909	$ 71,073	$ 82,224	$ 94,303	$ 101,279
Employer contributions	26,873	27,359	28,205	28,890	30,027	29,083	32,002	34,164	36,969	39,103
Net investment income (loss)	(59,251)	39,157	89,213	2,670	74,076	116,674	27,694	11,304	135,360	112,075
Transfers between retirement plans	(14,644)	(16,580)	(16,264)	(17,246)	(16,738)	(14,033)	(9,931)	(11,440)	(15,034)	(14,003)
Total additions	(2,532)	95,995	149,089	64,078	139,696	190,633	120,838	116,252	251,598	238,454
Deductions:										
Refunds	7,427	9,230	12,777	14,697	20,033	21,369	29,930	26,847	31,324	31,706
Administrative expenses	256	(35)	922	881	837	854	913	1,033	1,060	532
Total deductions	7,683	9,195	13,699	15,578	20,870	22,223	30,843	27,880	32,384	32,238
Net increase (decrease)	(10,215)	86,800	135,390	48,500	118,826	168,410	89,995	88,372	219,214	206,216
Net position held in trust, beginning of year	307,227	297,012	383,812	519,202	567,702	686,528	854,938	944,933	1,033,305	1,252,519
Net position held in trust, end of year	**$ 297,012**	**$ 383,812**	**$ 519,202**	**$ 567,702**	**$ 686,528**	**$ 854,938**	**$ 944,933**	**$ 1,033,305**	**$ 1,252,519**	**$ 1,458,735**

Post-Employment Health Care Plan

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Additions:										
Employer contributions	$ 101,221	$ 103,415	$ 103,694	$ 101,025	$ 99,179	$ 98,330	$ 0	$ 0	$ 0	$ 0
Health care premiums	225,627	222,316	222,130	246,264	261,903	277,477	306,569	339,927	339,056	329,305
Net investment income (loss)	(778,556)	348,311	608,969	54,990	402,110	524,484	180,566	17,001	440,197	328,965
Government reimbursements	37,956	38,156	70,556	92,213	41,200	46,132	61,127	58,812	79,357	107,197
Total additions	(413,752)	712,198	1,005,349	494,492	804,392	946,423	548,262	415,740	858,610	765,467
Deductions:										
Health care provider payments	558,344	592,416	604,456	627,890	599,818	629,465	672,615	676,993	565,962	517,470
Administrative expenses	3,349	2,523	2,502	2,568	2,555	2,495	2,569	2,655	2,497	2,427
Total deductions	561,693	594,939	606,958	630,458	602,373	631,960	675,184	679,648	568,459	519,897
Net increase (decrease)	(975,445)	117,259	398,391	(135,966)	202,019	314,463	(126,922)	(263,908)	290,151	245,570
Net position held in trust, beginning of year	3,655,737	2,680,292	2,797,551	3,195,942	3,059,976	3,261,995	3,576,458	3,449,536	3,185,628	3,475,779
Net position held in trust, end of year	**$ 2,680,292**	**$ 2,797,551**	**$ 3,195,942**	**$ 3,059,976**	**$ 3,261,995**	**$ 3,576,458**	**$ 3,449,536**	**$ 3,185,628**	**$ 3,475,779**	**$3,721,349**

Net Position by Plan
Years Ending June 30, 2009–2018 (in thousands)

Fiscal Year	Defined Benefit Plan	Defined Contribution Plan	Post-Employment Health Care Plan	Total Net Position
2009	$50,095,719	$297,012	$2,680,292	$53,073,023
2010	$54,140,413	$383,812	$2,797,551	$57,321,776
2011	$63,116,710	$519,202	$3,195,942	$66,831,854
2012	$60,693,621	$567,702	$3,059,976	$64,321,299
2013	$64,705,982	$686,528	$3,261,995	$68,654,505
2014	$70,988,658	$854,938	$3,576,458	$75,420,054
2015	$70,432,646	$944,933	$3,449,536	$74,827,115
2016	$66,250,103	$1,033,305	$3,185,628	$70,469,036
2017	$71,118,707	$1,252,519	$3,475,779	$75,847,005
2018	**$73,457,567**	**$1,458,735**	**$3,721,349**	**$78,637,651**

Benefit Expenses by Type
Years Ending June 30, 2009–2018 (in thousands)

Fiscal Year	Service Retirement	Disability	Survivor	Other	Total
2009	$4,299,310	$204,939	$99,139	$10,363	$4,613,751
2010	$4,579,805	$205,989	$103,114	$11,510	$4,900,418
2011	$4,908,718	$207,245	$113,531	$14,913	$5,244,407
2012	$5,401,457	$208,929	$115,473	$15,183	$5,741,042
2013	$5,792,657	$211,755	$124,656	$23,267	$6,152,335
2014	$6,135,563	$211,945	$121,089	$36,079	$6,504,676
2015	$6,280,983	$211,425	$121,533	$47,055	$6,660,996
2016	$6,714,014	$212,614	$124,808	$38,601	$7,090,037
2017	$6,612,638	$210,649	$123,959	$41,919	$6,989,165
2018	**$6,673,049**	**$206,969**	**$124,756**	**$47,868**	**$7,052,642**

Actuarial Funded Ratio and Funding Period, 2009–2018 (dollar amounts in thousands)

As of July 1	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Funding Period
2009	$54,902,859	$91,440,955	$36,538,096	60.0%	Infinite years
2010	$55,946,259	$94,720,669	$38,774,410	59.1%	Infinite years
2011	$58,110,495	$98,766,204	$40,655,709	58.8%	Infinite years
2012	$59,489,508	$106,301,841	$46,812,333	56.0%	Infinite years
2013	$62,590,786	$94,366,694	$31,775,908	66.3%	40.2 years
2014	$66,657,175	$96,167,057	$29,509,882	69.3%	29.5 years
2015	$68,655,999	$99,014,654	$30,358,655	69.3%	28.4 years
2016	$70,114,637	$100,756,422	$30,641,785	69.6%	26.6 years
2017	$72,216,212	$96,126,440	$23,910,228	75.1%	18.4 years
2018	**$73,115,358**	**$96,904,057**	**$23,788,698**	**75.5%**	**17.8 years**

Selected Funding Information — Defined Benefit Plan, 2009–2018

		Employer Contribution Rate					
As of July 1	Member Contribution Rate	Employer Normal Cost	Health Care	Unfunded Actuarial Accrued Liability	Total Employer Rate	Interest Rate Assumption	Payroll Growth Assumption
2009	10.00%	4.34%	1.00%	8.66%	14.00%	8.00%	3.50%
2010	10.00%	4.30%	1.00%	8.70%	14.00%	8.00%	3.50%
2011	10.00%	3.98%	1.00%	9.02%	14.00%	8.00%	3.50%
2012	10.00%	5.94%	1.00%	7.06%	14.00%	7.75%	3.50%
2013	11.00%	1.03%	1.00%	11.97%	14.00%	7.75%	3.50%
2014	12.00%	–0.17%	0.00%	14.17%	14.00%	7.75%	3.50%
2015	13.00%	–1.54%	0.00%	15.54%	14.00%	7.75%	3.50%
2016	14.00%	–3.05%	0.00%	17.05%	14.00%	7.75%	3.50%
2017	14.00%	–3.16%	0.00%	17.16%	14.00%	7.45%	3.00%
2018	**14.00%**	**–3.09%**	**0.00%**	**17.09%**	**14.00%**	**7.45%**	**3.00%**

Number of Benefit Recipients by Type, 2009–2018

As of July 1	Service Retirement	Disability	Beneficiaries Receiving Optional Allowances	Survivor	Total
2009	109,031	6,340	8,387	5,901	129,659
2010	112,483	6,104	8,619	5,897	133,103
2011	117,138	6,028	9,012	5,910	138,088
2012	122,136	5,951	9,300	5,869	143,256
2013	127,797	5,890	9,621	5,913	149,221
2014	130,521	5,825	9,945	5,917	152,208
2015	136,019	5,736	10,437	5,924	158,116
2016	135,638	5,640	10,767	5,893	157,938
2017	135,446	5,498	11,135	5,960	158,039
2018	**134,718**	**5,314**	**11,486**	**5,904**	**157,422**

Summary of Active Membership Data, 2009–2018 (dollars in thousands)

Defined Benefit Plan

As of July 1	Females Active Members	Females Annual Salaries	Females Average Age	Females Average Service	Males Active Members	Males Annual Salaries	Males Average Age	Males Average Service	Total Active Members	Total Annual Salaries	Total Average Age	Total Average Service
2009	121,544	$6,402,337	43.98	13.09	48,763	$2,909,210	44.90	13.18	170,307	$9,311,547	44.24	13.12
2010	122,730	$6,509,962	43.97	12.89	48,609	$2,921,391	44.81	13.01	171,339	$9,431,353	44.21	12.92
2011	123,721	$6,481,816	43.67	12.38	49,562	$2,914,809	44.59	12.42	173,283	$9,396,625	43.94	12.39
2012	119,931	$6,269,684	43.61	12.42	48,442	$2,839,622	44.58	12.39	168,373	$9,109,306	43.89	12.41
2013	117,359	$6,116,458	43.27	12.17	47,698	$2,765,389	44.24	11.97	165,057	$8,881,847	43.55	12.11
2014	116,748	$6,128,826	43.18	12.19	47,280	$2,762,322	44.23	12.07	164,028	$8,891,148	43.49	12.15
2015	113,852	$6,059,671	42.75	11.81	45,474	$2,715,670	43.91	11.84	159,326	$8,775,341	43.08	11.82
2016	116,728	$6,404,312	42.96	12.01	46,532	$2,849,489	44.11	12.02	163,260	$9,253,801	43.29	12.02
2017	115,925	$6,600,162	43.25	12.42	46,131	$2,913,921	44.41	12.39	162,056	$9,514,083	43.58	12.41
2018	**117,692**	**$6,881,822**	**43.54**	**12.68**	**46,246**	**$2,999,599**	**44.72**	**12.69**	**163,938**	**$9,881,421**	**43.87**	**12.68**

Combined Plan

As of July 1	Females Active Members	Females Annual Salaries	Females Average Age	Females Average Service	Males Active Members	Males Annual Salaries	Males Average Age	Males Average Service	Total Active Members	Total Annual Salaries	Total Average Age	Total Average Service
2009	3,528	$145,617	38.46	5.39	972	$45,537	41.24	5.22	4,500	$191,154	39.06	5.35
2010	3,518	$154,180	38.98	6.08	985	$47,821	42.11	5.80	4,503	$202,001	39.67	6.02
2011	3,611	$163,273	39.51	6.59	1,003	$49,825	42.30	6.29	4,614	$213,098	40.11	6.53
2012	3,642	$168,991	39.94	7.15	1,029	$52,548	42.55	6.67	4,671	$221,539	40.52	7.04
2013	3,819	$180,102	40.30	7.51	1,069	$56,086	42.72	6.97	4,888	$236,188	40.83	7.39
2014	4,126	$196,090	40.22	7.61	1,141	$61,201	42.56	7.13	5,267	$257,291	40.73	7.51
2015	4,367	$213,263	40.41	7.78	1,232	$68,491	42.85	7.25	5,599	$281,754	40.95	7.66
2016	4,657	$234,432	40.48	7.95	1,295	$74,004	42.82	7.55	5,952	$308,436	40.99	7.86
2017	4,754	$250,040	40.88	8.35	1,322	$78,265	43.20	7.93	6,076	$328,305	41.38	8.26
2018	**5,005**	**$271,250**	**41.02**	**8.64**	**1,384**	**$84,633**	**43.28**	**8.18**	**6,389**	**$355,883**	**41.51**	**8.54**

Total Active Membership

As of July 1	Females Active Members	Females Annual Salaries	Females Average Age	Females Average Service	Males Active Members	Males Annual Salaries	Males Average Age	Males Average Service	Total Active Members	Total Annual Salaries	Total Average Age	Total Average Service
2009	125,072	$6,547,954	43.82	12.87	49,735	$2,954,747	44.83	13.02	174,807	$9,502,701	44.11	12.92
2010	126,248	$6,664,142	43.83	12.70	49,594	$2,969,212	44.75	12.86	175,842	$9,633,354	44.09	12.74
2011	127,332	$6,645,089	43.55	12.22	50,565	$2,964,634	44.54	12.29	177,897	$9,609,723	43.84	12.24
2012	123,573	$6,438,675	43.50	12.26	49,471	$2,892,170	44.54	12.27	173,044	$9,330,845	43.80	12.26
2013	121,178	$6,296,561	43.17	12.02	48,767	$2,821,475	44.20	11.86	169,945	$9,118,036	43.47	11.98
2014	120,874	$6,324,915	43.08	12.03	48,421	$2,823,523	44.19	11.95	169,295	$9,148,438	43.40	12.01
2015	118,219	$6,272,934	42.66	11.66	46,706	$2,784,161	43.89	11.72	164,925	$9,057,095	43.01	11.68
2016	121,385	$6,638,743	42.86	11.86	47,827	$2,923,493	44.08	11.90	169,212	$9,562,236	43.21	11.87
2017	120,679	$6,850,202	43.15	12.26	47,453	$2,992,186	44.38	12.26	168,132	$9,842,388	43.50	12.26
2018	**122,697**	**$7,153,072**	**43.43**	**12.52**	**47,630**	**$3,084,232**	**44.68**	**12.56**	**170,327**	**$10,237,304**	**43.78**	**12.53**

Note: Members enrolled in STRS Ohio's Defined Contribution Plan and reemployed retirees are not reflected in the above figures.

Benefit Payments by Type
As of July 1, 2018

Age Last Birthday	Number	Annual Allowance (in thousands)	Average Annual Allowance
Service Retirees			
Under 60	6,219	$ 309,448	$ 49,758
60–64	17,210	861,108	50,035
65–69	35,045	1,740,848	49,675
70–74	30,767	1,511,102	49,114
75–79	20,227	914,370	45,205
Over 79	25,250	925,150	36,640
Total	**134,718**	**$ 6,262,026**	**$ 46,482**
Beneficiaries Receiving Optional Allowances			
Under 60	36	$ 1,450	$ 40,278
60–64	166	6,805	40,994
65–69	707	30,709	43,436
70–74	1,283	52,453	40,883
75–79	1,670	61,701	36,947
Over 79	7,624	208,601	27,361
Total	**11,486**	**$ 361,719**	**$ 31,492**
Survivor Benefit Recipients			
Under 60	1,333	$ 15,944	$ 11,961
60–64	462	10,458	22,636
65–69	880	22,370	25,420
70–74	886	22,298	25,167
75–79	743	17,946	24,153
Over 79	1,600	34,696	21,685
Total	**5,904**	**$ 123,712**	**$ 20,954**
Disability Benefit Recipients			
Under 60	1,200	$ 44,127	$ 36,773
60–64	761	29,226	38,405
65–69	1,049	43,941	41,888
70–74	983	40,289	40,986
75–79	618	23,079	37,345
Over 79	703	21,303	30,303
Total	**5,314**	**$ 201,965**	**$ 38,006**
Grand Total	**157,422**	**$ 6,949,422**	**$ 44,145**

Average Benefit Payments for Service Retirees
July 1–June 30, 2009–2018

		Years of Service Credit						
		5–9	10–14	15–19	20–24	25–29	30+	Average/Total
2009	Average monthly benefit	$431	$822	$1,382	$2,193	$2,697	$4,497	$3,754
	Average final average salary	$28,623	$38,507	$51,590	$64,199	$67,168	$73,260	$68,136
	Number of recipients	199	158	288	310	429	3,698	5,082
2010	Average monthly benefit	$455	$934	$1,349	$2,030	$2,780	$4,680	$3,887
	Average final average salary	$30,030	$46,509	$50,407	$59,781	$67,794	$74,810	$69,522
	Number of recipients	174	155	282	359	543	3,833	5,346
2011	Average monthly benefit	$480	$992	$1,540	$2,377	$2,890	$4,689	$3,937
	Average final average salary	$33,330	$46,727	$55,904	$68,932	$70,775	$75,724	$71,591
	Number of recipients	171	201	365	438	685	4,595	6,455
2012	Average monthly benefit	$496	$946	$1,625	$2,385	$2,965	$4,727	$3,921
	Average final average salary	$31,235	$45,473	$58,519	$68,884	$72,224	$77,181	$72,706
	Number of recipients	204	241	450	674	960	5,463	7,992
2013	Average monthly benefit	$482	$945	$1,714	$2,407	$3,144	$4,796	$3,886
	Average final average salary	$33,742	$47,370	$62,954	$68,669	$75,864	$79,557	$74,643
	Number of recipients	203	280	541	724	1,198	5,113	8,059
2014	Average monthly benefit	$488	$951	$1,681	$2,419	$3,268	$4,808	$3,885
	Average final average salary	$36,506	$48,294	$61,904	$70,372	$78,726	$81,516	$76,213
	Number of recipients	157	225	417	549	817	3,703	5,868
2015	Average monthly benefit	$524	$960	$1,729	$2,410	$3,132	$4,722	$3,795
	Average final average salary	$42,757	$49,494	$64,257	$69,568	$75,754	$80,543	$75,610
	Number of recipients	149	269	514	683	1,246	4,400	7,261
2016	Average monthly benefit	$540	$989	$1,562	$2,440	$3,359	$5,052	$3,805
	Average final average salary	$45,268	$52,092	$59,616	$71,777	$81,463	$87,829	$79,495
	Number of recipients	92	147	347	500	686	1,990	3,762
2017	Average monthly benefit	$505	$1,150	$1,619	$2,453	$3,253	$4,534	$3,460
	Average final average salary	$44,471	$60,384	$62,461	$74,083	$80,735	$83,139	$77,032
	Number of recipients	75	119	237	282	366	1,204	2,283
2018	**Average monthly benefit**	**$483**	**$1,067**	**$1,690**	**$2,416**	**$3,325**	**$4,861**	**$3,454**
	Average final average salary	**$37,558**	**$54,811**	**$63,271**	**$71,915**	**$81,491**	**$88,886**	**$78,110**
	Number of recipients	**80**	**111**	**304**	**344**	**406**	**1,030**	**2,275**

Average Benefit Subsidy Payments for Retirees Enrolled in Health Care Plan, 2010–2018

		Years of Service Credit						
		5–9*	10–14*	15–19	20–24	25–29	30+	Average/Total
Jan. 1, 2010	Average monthly subsidy	$34	$38	$141	$189	$254	$353	$309
	Number of recipients	1,755	1,887	4,292	6,100	10,891	68,945	93,870
Jan. 1, 2011	Average monthly subsidy	$34	$39	$154	$208	$274	$379	$334
	Number of recipients	1,640	1,778	4,315	6,139	11,024	71,203	96,099
Jan. 1, 2012	Average monthly subsidy	$34	$39	$155	$208	$271	$365	$325
	Number of recipients	1,536	1,665	4,347	6,256	11,253	74,274	99,331
Jan. 1, 2013	Average monthly subsidy	$33	$39	$148	$197	$253	$329	$296
	Number of recipients	1,427	1,553	4,359	6,386	11,554	76,616	101,895
Jan. 1, 2014	Average monthly subsidy	$34	$40	$157	$209	$266	$341	$308
	Number of recipients	1,325	1,447	4,497	6,532	11,948	79,367	105,116
Jan. 1, 2015	Average monthly subsidy	$33	$38	$163	$211	$264	$333	$303
	Number of recipients	1,198	1,288	4,409	6,564	12,141	80,871	106,471
Jan. 1, 2016	Average monthly subsidy	$39	$55	$167	$216	$273	$324	$300
	Number of recipients	1,167	1,301	4,172	6,746	12,700	84,633	110,719
Jan. 1, 2017	Average monthly subsidy	$34	$48	$157	$197	$246	$289	$268
	Number of recipients	1,074	1,170	4,017	6,610	12,494	83,345	108,710
Jan. 1, 2018	**Average monthly subsidy**	**$33**	**$47**	**$158**	**$199**	**$248**	**$288**	**$268**
	Number of recipients	**950**	**1,019**	**4,019**	**6,489**	**12,262**	**82,257**	**106,996**

*Members who retired before Jan. 1, 2004, with less than 15 years of service credit have access to the STRS Ohio Health Care Program, but pay the full cost of their premium. Members who retire on or after Jan. 1, 2004, and before Aug. 1, 2023, must have at least 15 years of qualifying service credit to access coverage. Members who retire on or after Aug. 1, 2023, must have at least 20 years of qualifying service credit to access coverage. The subsidy amounts listed for years of service credit less than fifteen years are reflective of the Medicare Part B Premium reimbursements, which currently require a minimum of five years of service credit, and some other subsidy situations.

Number of Reporting Employers by Type, 2009–2018

Fiscal Year Ended	City School Districts	Local School Districts	County Educational Service Centers	Exempted Village School Districts	Joint Vocational Schools	Colleges and Universities	County Boards of Developmental Disabilities	Community Schools	Other	Total
2009	194	370	58	49	49	36	71	280	10	1,117
2010	194	370	57	49	49	36	69	273	10	1,107
2011	194	370	56	49	49	36	69	291	10	1,124
2012	194	370	56	49	49	36	69	312	10	1,145
2013	194	369	55	49	49	36	67	322	12	1,153
2014	194	371	55	49	49	36	65	352	12	1,183
2015	194	370	53	49	49	36	64	337	12	1,164
2016	194	369	52	49	49	36	62	329	12	1,152
2017	194	369	52	49	49	36	61	323	12	1,145
2018	**194**	**369**	**52**	**49**	**49**	**36**	**61**	**318**	**12**	**1,140**

Principal Participating Employers For the Year Ended June 30, 2018

Employer	Covered Members	Prior Year Rank	Percentage of Membership
The Ohio State University	5,464	1	2.23%
Columbus City Schools	5,294	2	2.16%
Cleveland Metropolitan Schools	4,381	3	1.79%
University of Cincinnati	3,425	4	1.40%
Cincinnati Public Schools	3,392	5	1.38%
Kent State University	3,109	6	1.27%
ESC Council of Governments	3,066	7	1.25%
Toledo Public Schools	2,739	9	1.12%
Akron Public Schools	2,635	8	1.07%
ESC of Northeast Ohio	2,535	11	1.03%
All Others	209,302		85.56%
Total Covered Members	**245,342***		**100.00%**

*Covered members include any participant in STRS Ohio who made contributions through a reporting employer during the fiscal year. Part-time teachers working in multiple school districts are included within each school's payroll data and, consequently, are reported more than once. Participating employers include every publicly funded school in Ohio employing a licensed teacher. A complete listing of participating employers is available upon request. Years prior to the current year are not reflected since the participating employers do not change substantially from year to year.

STRS Ohio Plays a Critical Role in Supporting and Sustaining the State of Ohio

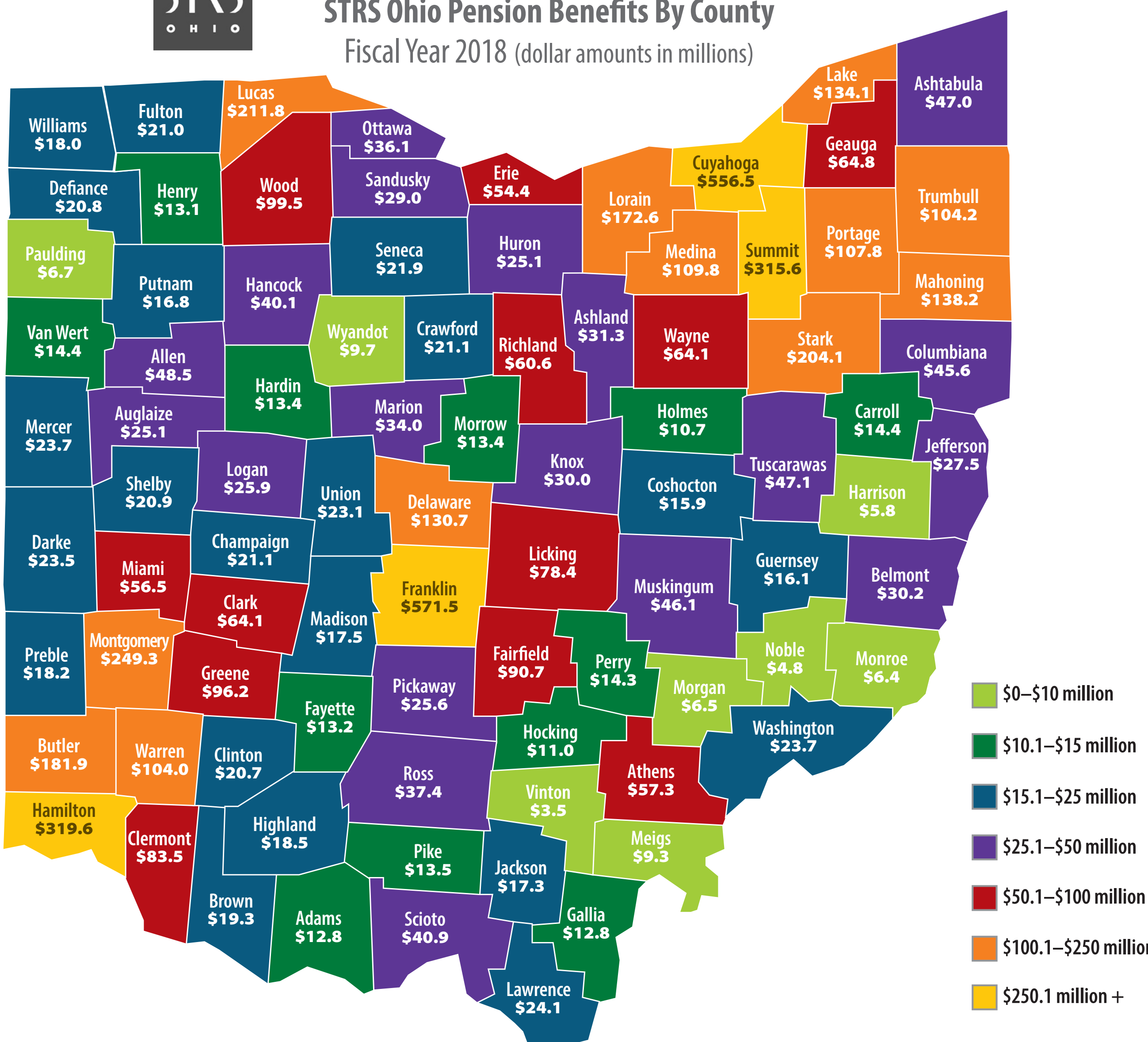
STRS Ohio is one of Ohio's five public pension systems and plays a critical role in supporting and sustaining the State of Ohio. Together, Ohio's statewide public retirement systems serve over a million of the state's citizens, both working and retired. The five systems provide a stable source of revenue for local economies, paying more than $15 billion annually in pension and health care benefits and invest in Ohio, too — holding more than $3 billion in investments in companies with a major presence in the state.

Ohio's pension systems share one common goal: ***to provide retirement security for the thousands of public servants who have made a career out of serving others****. These pension systems are major economic drivers for the state; are administratively efficient and economical; and provide a stable retirement income for public workers in Ohio, thereby reducing the burden on taxpayers and Social Security. In fact, these earned pensions represent good public policy for helping to maintain financial security for Ohio's older citizens.*

Economic Impact on the State of Ohio

STRS Ohio Pension Benefits By County

Fiscal Year 2018 (dollar amounts in millions)



$5.8 BILLION STRS Ohio benefits distributed among Ohio's **88** counties

82% STRS Ohio benefit recipients **live in Ohio**

$1.2 BILLION STRS Ohio **investments** with companies headquartered in **Ohio**

State Teachers Retirement System of Ohio
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