2018 CAFR

For the year ended June 30, 2018

Comprehensive Annual Financial Report

School Employees Retirement System of Ohio

Serving the People Who Serve Our Schools®

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO
COMPREHENSIVE ANNUAL FINANCIAL REPORT
For the year ended June 30, 2018

Prepared by SERS Staff
Richard Stensrud, Executive Director
300 E. Broad St., Suite 100, Columbus, Ohio 43215-3746
www.ohsers.org
Serving the People Who Serve Our Schools®

Mission

To provide our membership with valuable lifetime pension benefit programs and services

Vision

Through the continuous pursuit of excellence and innovative solutions, we will partner with our stakeholders so that our membership will understand and achieve security in retirement

Values

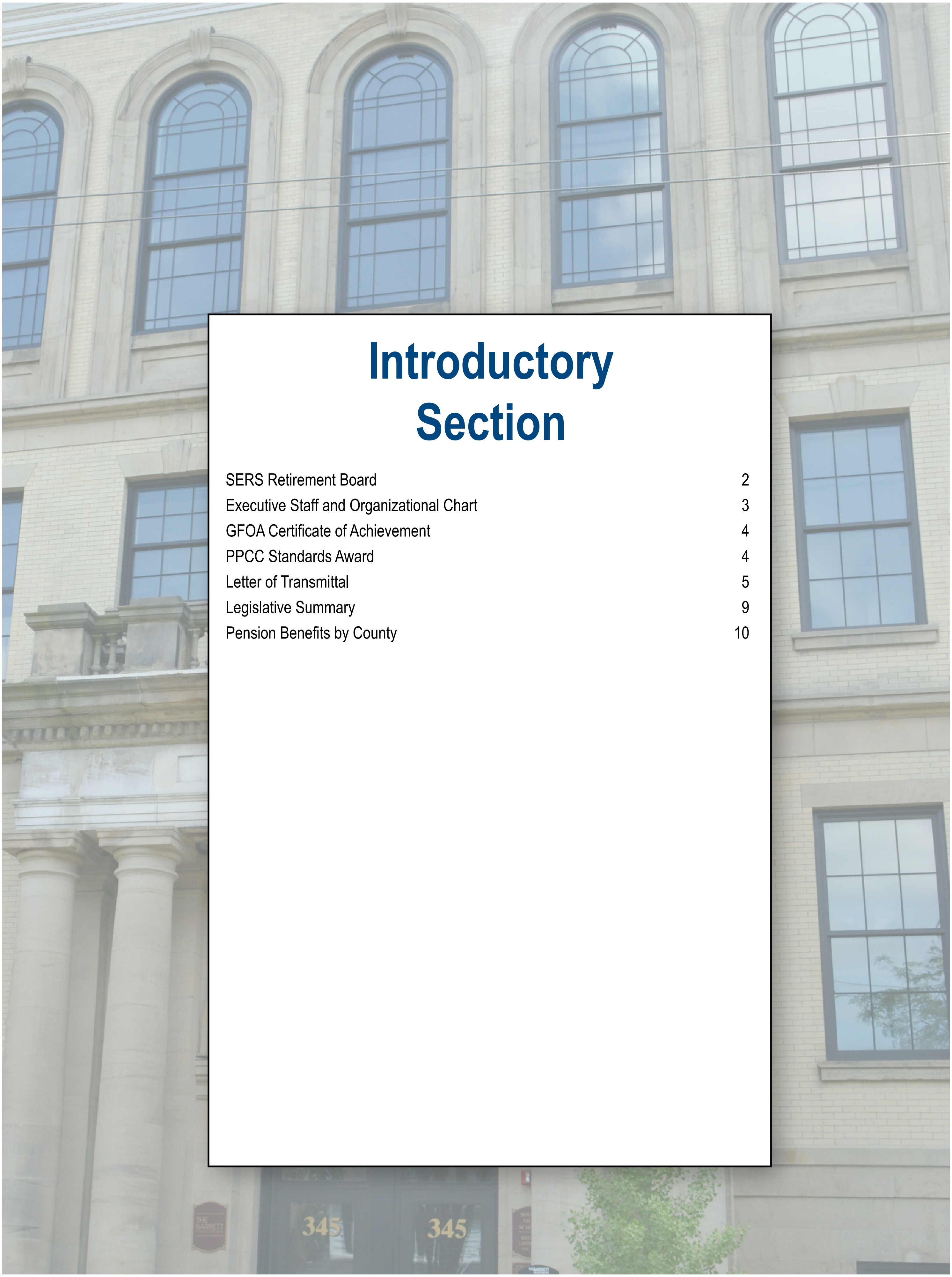
• Focus • Accountability • Communication
• Collaboration • Innovation

Investment Section (unaudited) continued

Actuarial Section (unaudited)

Statistical Section (unaudited)

Plan Summary



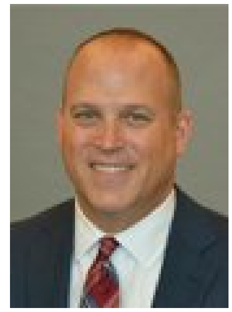
Introductory Section

SERS Retirement Board


Daniel Wilson


James Rossler, Jr.


Jeffrey DeLeone


Hugh Garside, Jr.


James Haller


Christine Holland


Catherine Moss


Barbra Phillips


Beverly Woolridge

Chair, Appointed Member
Daniel L. Wilson
Term Expires 9/27/2020

Vice-Chair, Appointed Member
James A. Rossler, Jr.
Term Expires 11/4/2020

Appointed Member
Jeffrey T. DeLeone
Term Expires 12/5/2020

Employee-Member
Hugh W. Garside, Jr.
Term Expires 6/30/2019

Employee-Member
James Haller
Term Expires 6/30/2021

Employee-Member
Christine D. Holland
Term Expires 6/30/2019

Retiree-Member
Catherine P. Moss
Term Expires 6/30/2020

Employee-Member
Barbra M. Phillips
Term Expires 6/30/2021

Retiree-Member
Beverly A. Woolridge
Term Expires 6/30/2019

Advisors

Independent Auditor
RSM US LLP - Cleveland, Ohio

Actuary
Cavanaugh Macdonald Consulting, LLC - Kennesaw, Georgia

Investment Consultant
Wilshire Associates, Inc. - Santa Monica, California

Hedge Fund Consultant
Aksia LLC - New York, New York

Medical Advisor
Dr. Glen Borchers - Columbus, Ohio

Investment Consultants and Investment Managers and Brokers' Fees - see pages 69 - 71


Richard Stensrud


Helen Ninos


Joseph Marotta


Joseph Bell


Farouki Majeed


Matthew Sanders

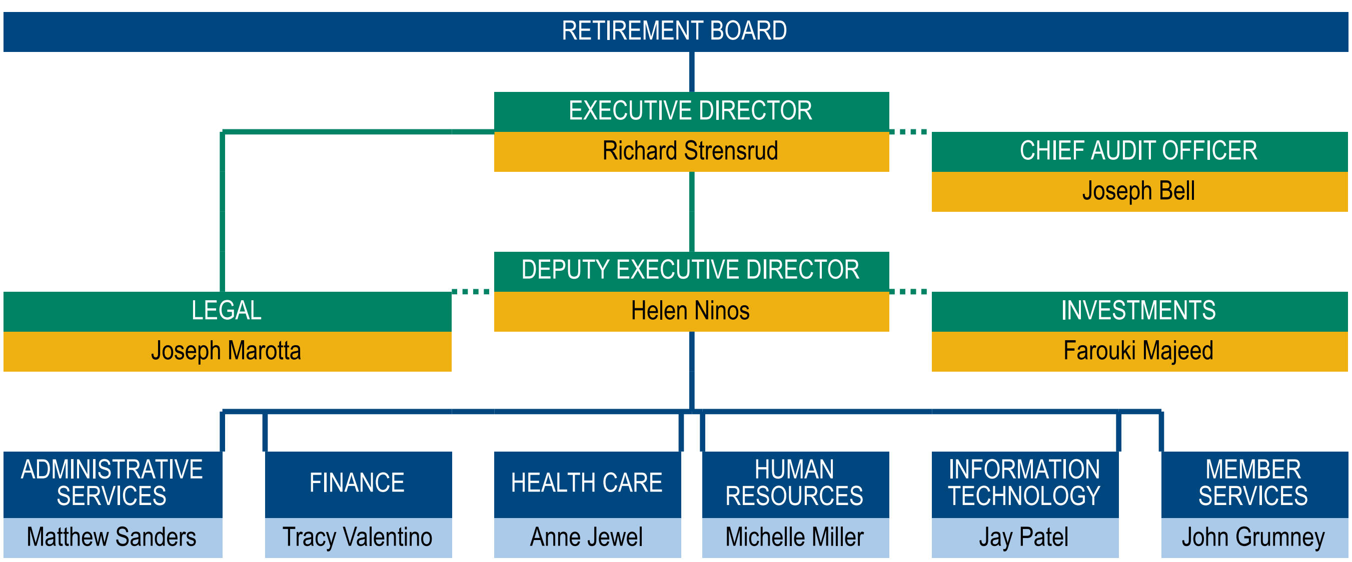

Tracy Valentino


Anne Jewel


Michelle Miller


Jay Patel


John Grumney



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

School Employees Retirement System of Ohio

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2017

Christopher P. Morrill

Executive Director/CEO

Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2018

Presented to

School Employees Retirement System of Ohio

In recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle

Alan H. Winkle
Program Administrator

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO
300 E. BROAD ST., SUITE 100 • COLUMBUS, OHIO 43215-3746
614-222-5853 • Toll-Free 800-878-5853 • www.ohsers.org

RICHARD STENSRUD
Executive Director

JOSEPH MAROTTA
Interim Deputy Executive Director

December 21, 2018

Dear Chair and Members of the Retirement Board:

On behalf of all management and staff, we are pleased to submit the *Comprehensive Annual Financial Report* of the School Employees Retirement System of Ohio (SERS) for the fiscal year ended June 30, 2018. We are responsible for the accuracy of the contents, and the completeness and fairness of the presentation, including disclosures. A narrative overview and analysis to accompany the basic financial statements is presented as Management's Discussion and Analysis (MD&A); it can be found immediately following the report of the independent auditor in the Financial Section. This letter of transmittal is designed to complement the MD&A.

Established in 1937 by an act of the Ohio General Assembly, SERS provides pensions and benefits to public and charter school employees who are not required to possess a certificate issued pursuant to sections 3319.22 to 3319.31 of the Ohio Revised Code in order to perform their duties. By statute, benefit plans include retirement for age and service, disability benefits, and survivor benefits that are paid upon the death of a member before retirement. A post-retirement health care program also is provided, although it is not required by law.

A system of internal accounting controls ensures the security of member and employer contributions and provides reasonable, but not absolute, assurance that assets are properly safeguarded, transactions are properly executed, and financial statements are reliable. Our independent external auditors have conducted an audit of the basic financial statements in accordance with auditing standards generally accepted in the United States of America. They have full and unrestricted access to you to discuss their audit and related findings concerning the integrity of financial reporting and adequacy of internal controls.

MAJOR INITIATIVES AND HIGHLIGHTS

Board Finalizes COLA Changes On October 9, 2017, the Board held a special Board meeting to finalize cost-of-living adjustment (COLA) changes. At that meeting, the Board suspended COLA increases for 2018, 2019, and 2020 for current retirees, and confirmed their intent to implement a four-year waiting period for the start of a COLA for future retirees. Passage of SB 8 on November 29 gave SERS' Board the authority to implement that waiting period for future retirees.

The COLA changes enacted by the Board have been the primary reason that SERS has been able to reduce unfunded liabilities by nearly $1 billion, which increased the funded status from 66.6% in FY2016 to 70.1% at the end of FY2018.

SERS Strengthens Online Security Following Portal Intrusion Attempt On January 23, 2018, SERS became aware of fraudulent activity on the online member portal. SERS immediately shut down the online portal and began investigating.

The investigation determined that this was not a breach situation on the part of SERS. Rather, the intruders established new online accounts for 21 retirees using personal information that was stolen during the data breaches of other companies. The intent was to redirect pension payments to an online bank account that only the intruders could access. The impact was immaterial as only one account was successfully accessed. The improper access was quickly identified and stopped.

To mitigate the risk of this from occurring in the future, SERS' staff developed and implemented a process that is initiated any time a new online account is created. A unique code is sent to the member, which they must enter into the online portal to confirm registration. This provides an additional layer of security to the online self-service enrollment process.

Redesigned Website Places Emphasis on Retirement Savings In May, SERS unveiled its redesigned website. The new website is easy to navigate, more intuitive, equipped with dropdown menus, responsive to different user preferences, and compatible with both mobile and desktop platforms. In addition, members and retirees can follow predetermined paths on popular topics such as "health care in retirement," "changes and life events," "new to SERS," "working members," and "ready to retire."

Staff also used the redesign to address the critical topic of retirement security in a section titled "invest in yourself." With the continued increase of health care costs, more people living longer in retirement than they contributed to retirement plans, and an increase in people who must piece together retirement income with savings earned from multiple employers, relying on a single pension payment for retirement security is becoming increasingly difficult to do. The Retirement Savings Team will use the "invest in yourself" page to address these topics and share ways to supplement retirement income at all stages of a working career.

Enrollment in Federal Marketplace Wraparound Plan Grows 61% In 2017, SERS became the first organization in the nation to establish a health care Marketplace Wraparound Plan for retirees under age 65. Under a pilot program established in the Patient Protection and Affordable Care Act (ACA), SERS retirees choose coverage from the federal Health Insurance Marketplace and SERS "wraps" additional benefits around the federal coverage that enhances the essential health benefits provided by the Marketplace plan. An added benefit is that retirees can maintain their eligibility for a Marketplace subsidy, which can further reduce their costs.

At the end of June, 531 SERS retirees were enrolled in the Wraparound Plan, up from 329 in 2017. When the pilot program ends in 2019, SERS expects to have saved $11.5 million.

Because of the success of this program, SERS has been actively engaging with the Centers for Medicare and Medicaid Services to extend the wraparound pilot program for 10 years or make it permanent. SERS has received support from numerous other retirement systems around the country and from Ohio legislators.

Early Medicare Initiative Aids Retirees with Disabilities Established in FY2017, this outreach program focuses on benefit recipients who are eligible for Medicare earlier than age 65 due to certain medical conditions. SERS works with vendor Human Arc to assist retirees with the application process. At the end of FY2018, 179 SERS retirees have been approved with 141 applications still pending with Social Security. The health care coverage through Medicare is more affordable for people with disabilities than SERS' under 65 group care.

SERS Expands Employer Education with Training Opportunities With the implementation of the new eSERS computer system in March 2017, SERS' Employer Services Outreach Team expanded its training outreach. Before the new eSERS computer system launched, the team held eight fall summer training sessions around the state to simulate how the new processes would work and 11 follow-up courses the following summer for those unable to attend the initial training courses. More than 75% of employers participated in this process. The remaining employers opted for one-on-one visits where SERS' outreach representatives visited school districts to provide a hands-on experience.

In addition, the Outreach Team attended organizational meetings organized by the Ohio Association of School Business Officials, Information Technology Centers, and other regional school groups, and continued to increase online educational options through webinars and training videos available through SERS' website at www.ohsers.org/employers/employer-education/video-center.

Corporate Governance Addressing Opioid Crisis and Board Diversity According to the National Institute on Drug Abuse, Ohio is among the top five states with the highest rates opioid-related overdose deaths. As a way to encourage corporate governance reforms that include increased oversight and transparency at companies that manufacture and/or distribute opioids, SERS joined the Investors for Opioid Accountability (IOA) Group. This group is made up of institutional investors who are engaging with public companies associated with the opioid crisis. In addition to conference calls with some of the companies, SERS' staff has participated in meetings with Cardinal Health to discuss their Board oversight of the company's response to the opioid crisis.

SERS also participates in the Midwest Investors Diversity Initiative, which is comprised of a group of institutional investors located in the Midwest who are working to encourage gender and ethnic diversity on corporate boards. The coalition's mission is to advance board diversity in companies located in Midwestern states and advocate at those companies for the adoption of board diversity policies that detail how women and minorities are considered as diverse candidates during their director nomination processes.

INVESTMENTS

SERS' investment portfolio is diversified by asset class, investment approach, and individual investments within each asset class to reduce overall portfolio risk and volatility. At year end, SERS' investment portfolio at fair value was $14.5 billion. Investment return was 9.2% (net) for the fiscal year versus the benchmark return of 8.3% and the actuarial assumed return of 7.5%. Net investment income was $1.27 billion compared to $1.65 billion in FY2017. The SERS Investment Committee structure is fully operational and represents a leading practice in investment operations. For more information on SERS' portfolio performance and investment strategy and policy, please turn to the Investment Section of this report.

On July 1, 2016, Wilshire Associates (Wilshire) became SERS' investment consultant and, in partnership with SERS' investment staff, completed an asset liability review. SERS' staff and Wilshire explored numerous change options, most involving the reduction of the multi-asset strategies portfolio and increases in dedicated mandates such as high-yield bonds, emerging market debt, and master limited partnerships. Ultimately, staff recommended and Wilshire supported a proposal to keep the current asset allocation. The allocation is 22.5% for US equity, 22.5% for non-US equity, 10% for private equity, 20% for fixed income and cash, 15% for real assets, and 10% for multi-asset strategies.

FUNDING

SERS' primary objective is to assure that at the time benefits commence, sufficient funds will be available to provide retirement, disability, and survivor benefits for its members. In addition, SERS is committed to sustaining contribution rates that remain level from generation to generation.

SERS' benefits are separated to comply with various sections of the Internal Revenue Code (IRC), and then reported and valued for funding purposes in accordance with relevant GASB statements. For FY2018, the funded ratios for the three benefits mandated by statutes increased, which was primarily due to the strong performance of SERS' investments. The funding level for pension benefits increased from 70.01% over a 27-year period to 70.07% over a 26-year period. The funding level for discretionary health care benefits increased from 15.94% to 17.25% over a 30-year period. Historical information related to progress on meeting the funding objective can be found in the Required Supplementary Information in the Financial Section of this report.

AWARDS AND ACKNOWLEDGEMENTS

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to SERS for its *Comprehensive Annual Financial Report* (CAFR) for the fiscal year ended June 30, 2017. This was the 33rd consecutive year that SERS has received this prestigious award. A Certificate of Achievement is valid for a period of one year only. We believe that our current CAFR continues to meet the Certificate of Achievement Program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

The GFOA gave SERS an Award for Outstanding Achievement in Popular Annual Financial Reporting for its *Summary Annual Financial Report* for the fiscal year ended June 30, 2017. This Award for Outstanding Achievement in Popular Annual Financial Reporting is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government popular reports. In order to receive an Award for Outstanding Achievement in Popular Annual Financial Reporting, a government unit must publish a *Popular Annual Financial Report*, whose contents conform to program standards of creativity, presentation, understandability, and reader appeal. An Award for Outstanding Achievement in Popular Annual Financial Reporting is valid for one year only.

The Public Pension Coordinating Council (PPCC) awarded to SERS the Public Pension Standards Award for 2017. Developed by the PPCC to promote excellence in meeting professional standards for plan funding and administration among state and local public retirement systems, the Public Pension Standards are the benchmark for measuring current practices of defined benefit plans. The PPCC is a coalition of three national associations that represent public retirement systems and administrators: the National Association of State Retirement Administrators, the National Council on Teacher Retirement, and the National Conference on Public Employee Retirement Systems.

This report represents the collaboration of SERS' staff and advisors. Our sincere appreciation is extended to all those who contributed to the completion of this report. This report is intended to provide complete and reliable information as a basis for management decisions, and for compliance with legal requirements, and as measurement of the responsible stewardship of SERS' assets.

In closing, we recognize that our strength is a reflection of the quality of our staff. We value their efforts that enable us to maintain effective internal controls while at the same time deliver high quality service to our members, retirees, and employers.

Respectfully submitted,

Richard Stensrud	Tracy L. Valentino, CPA
Executive Director	Chief Financial Officer

Legislative Summary

SERS and its members can be significantly affected by legislation enacted by the Ohio General Assembly and Congress. SERS closely monitors legislative and regulatory activities, and when appropriate, provides testimony or otherwise educates Ohio legislators, congressional representatives, and regulatory agencies on the impact of those proposals.

State Legislation

FROM THE 132ND GENERAL ASSEMBLY:

HB 49 Operating Budget (SERS' provisions effective 09/29/2017) - This bill contained SERS' Cost-of-Living-Adjustment (COLA) changes. Effective January 1, 2018, SERS COLAs changed from a fixed 3% annual increase to one based on the Consumer Price Index (CPI-W), with a cap of 2.5% and a floor of 0%. HB 49 also provided the SERS Retirement Board with the authority to award or suspend the COLA, or to adjust the COLA above or below CPI-W; however, any adjustment above or below CPI-W can only be enacted if the system's actuary determines it would not materially impair the fiscal integrity of the system, or is necessary to preserve the fiscal integrity of the system.

SB 8 School Infrastructure and Technology (SERS' provisions effective 03/23/2018) - This bill contained SERS' COLA delay amendment. For benefits beginning after the effective date, the SERS Retirement Board determines the number of benefit anniversaries that members must obtain prior to receiving their first COLA.

Federal Legislation

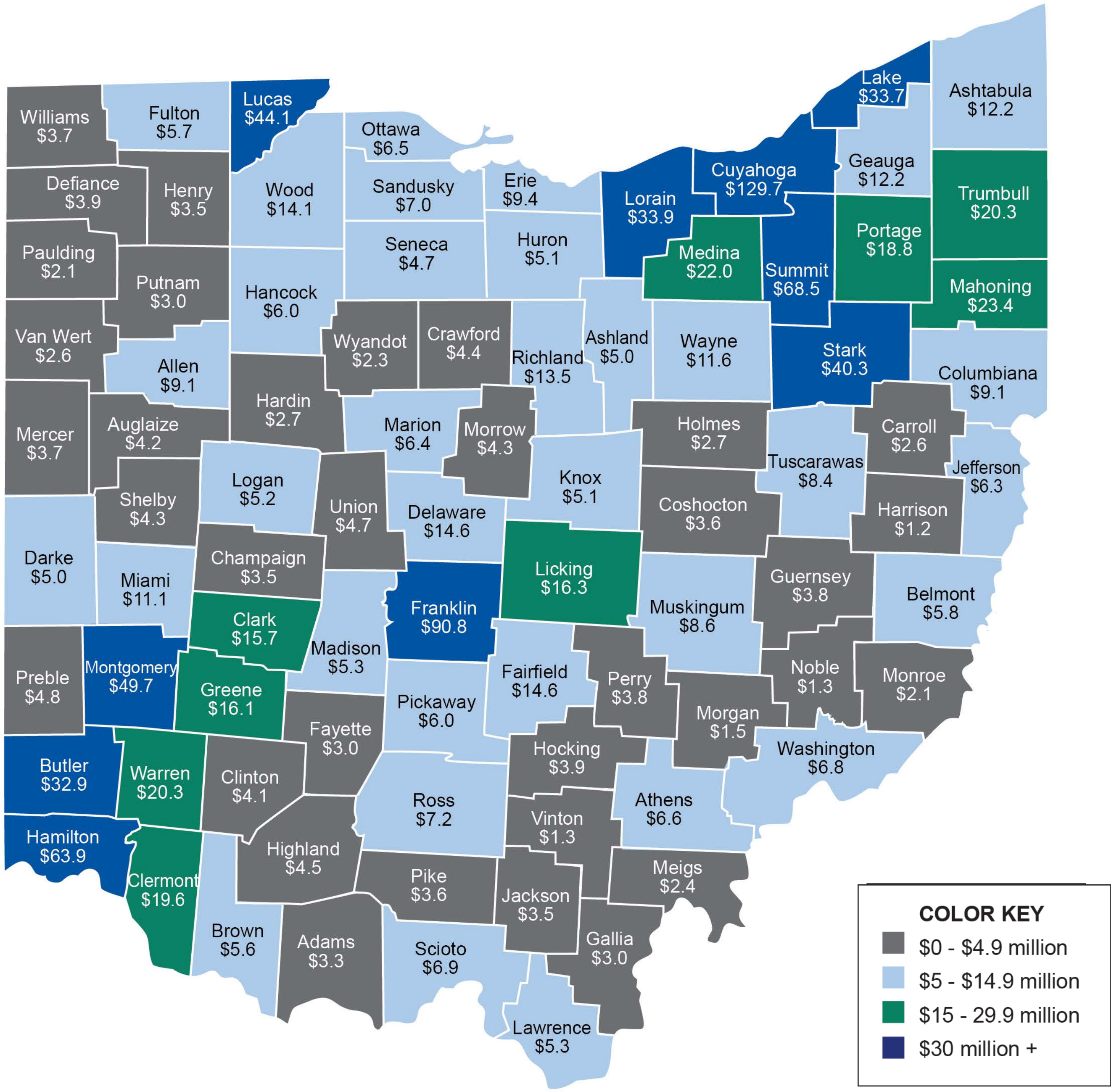
FROM THE 115TH CONGRESS:

S 915 Social Security Fairness Act (04/24/2017, Referred to Senate Committee on Finance) - This bill repeals the Government Pension Offset and Windfall Elimination Provisions. Companion bill to HR 1205.

HR 1205 Social Security Fairness Act (03/06/2017, Referred to the House Subcommittee on Social Security) - This bill repeals the Government Pension Offset and Windfall Elimination Provisions. Companion bill to S 915.

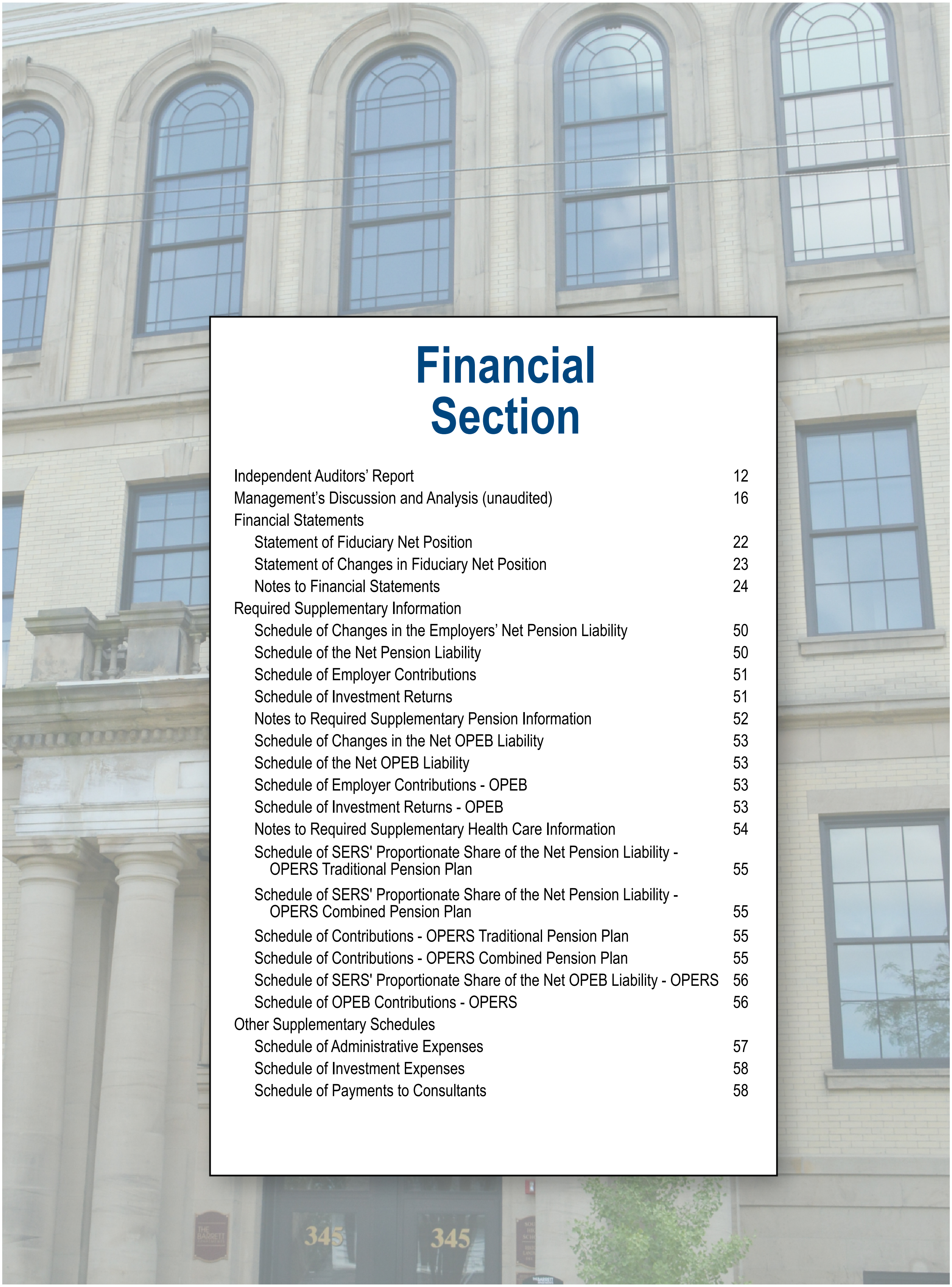
HR 6290 Public Employee Pension Transparency Act (06/28/2018, Referred to the House Committee on Ways and Means) - This bill would require public pension systems to value their liabilities using a new "risk-free" rate of return, and report that figure to the Treasury for a public database. States that did not comply would lose their ability to issue tax-exempt bonds.

Pension Benefits by County FY2018 *($ in millions)*



Public pensions positively impact Ohio's economy. Of the 81,332 individuals receiving pension benefits from SERS, 93% live in Ohio.

In FY2018 alone, benefit payments of more than $1.2 billion were distributed among Ohio's 88 counties, positively impacting the state's economy. For every dollar in employer contributions invested in SERS' pensions last year, $2.75 was returned to local economies.



Financial Section

RSM US LLP

Independent Auditor's Report

The Retirement Board
School Employees Retirement System of Ohio
and The Honorable Dave Yost

Report on the Financial Statements
We have audited the accompanying financial statements of School Employees Retirement System of Ohio (SERS), which comprise the statement of fiduciary net position as of June 30, 2018, and the related statement of changes in fiduciary net position for the year ended June 30, 2018, 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.

Auditor's Responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America 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 audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the 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.

Independent Auditor's Report (Continued)

Opinion
In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of SERS as of June 30, 2018, and the changes in fiduciary net position for the year ended June 30, 2018, in accordance with accounting principles generally accepted in the United States of America.

Other Matters
Required Supplementary Information
Accounting principles generally accepted in the United States of America require that management's discussion and analysis and the Schedule of Changes in the Employers' Net Pension Liability, the Schedule of the Net Pension Liability, the Schedule of Employer Contributions, the Schedule of Investment Returns, the Schedule of Changes in the Net OPEB Liability, the Schedule of the Net OPEB Liability, the Schedule of Employer Contributions – OPEB, the Schedule of Investment Returns – OPEB, the Schedule of SERS' Proportionate Share of the Net Pension Liability – Traditional Pension Plan, the Schedule of SERS' Proportionate Share of the Net Pension Liability – Combined Pension Plan, the Schedule of Contributions – Traditional Pension Plan and the Schedule of Contributions – Combined Pension Plan and the related notes, on pages 50 – 58, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Additional Information
Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The additional information, including the schedules of administrative expenses, investment expenses, and payments to consultants, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements. 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 basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the additional information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

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

Independent Auditor's Report (Continued)

Other Reporting Required by *Government Auditing Standards*
In accordance with *Government Auditing Standards*, we have also issued our report dated December 19, 2018 on our consideration of SERS' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of SERS' 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 SERS' internal control over financial reporting and compliance.

RSM US LLP

Cleveland, Ohio
December 19, 2018

THIS PAGE INTENTIONALLY
LEFT BLANK

Management's Discussion and Analysis (Unaudited)

This section presents management's discussion and analysis of the School Employees Retirement System of Ohio's financial performance for fiscal year ended June 30, 2018. This information is based on SERS' financial statements, which begin on page 22. We encourage readers to consider the information presented here in conjunction with the information in our Letter of Transmittal, which is found in the Introductory Section of this report. In addition to historical information, Management's Discussion and Analysis includes forward-looking statements that involve certain risks and uncertainties. Actual results, performance, and achievements may differ from those expressed or implied in such forward-looking statements, due to a wide range of factors, including changes in the securities markets, general economic conditions, and legislative changes, as well as other factors.

FINANCIAL HIGHLIGHTS

- SERS' total assets at June 30, 2018 were $15,024.6 million, an increase of $658.8 million, or 4.6%, compared to FY2017 assets.
- SERS' total liabilities at June 30, 2018 were $317.6 million, a decrease of $70.3 million, or, 18.1% compared to FY2017 liabilities.
- Total additions to plan net assets were $2,211.0 million, comprised of contributions of $940.8 million and net investment income of $1,270.2 million.
- Total deductions from plan net assets for FY2018 totaled $1,490.1 million, including benefits payments of $1,407.7 million and administrative expenses of $29.6 million, an increase of 3.7% over FY2017 deductions.
- The net increase in plan net assets was $720.9 million compared to a net increase of $1,163.4 million in FY2017.

OVERVIEW OF FINANCIAL STATEMENTS

SERS' financial statements are prepared in accordance with generally accepted accounting principles in the United States of America. Management's Discussion and Analysis is intended to serve as an introduction to SERS' financial statements, which are prepared using the accrual basis of accounting. Following Management's Discussion and Analysis are the basic financial statements. Reviewing these statements, along with the accompanying notes, gives the reader a better understanding of SERS' financial position. The Statement of Fiduciary Net Position is a point-in-time snapshot of the amount the plans have accumulated in assets to pay for future benefits and any liabilities that are owed as of the statement date. The Statement of Changes in Fiduciary Net Position presents the additions and deductions for the fiscal year. Major sources of additions are contributions and investment income. Major sources of deductions are benefits, refunds, and administrative expenses.

The Notes to Financial Statements supply additional information that is essential for a full understanding of the data provided in the financial statements. The notes describe the history and purpose of the plans; present information about accounting policies; and disclose material risks, subsequent events, and contingent liabilities, if any, that may significantly impact SERS' financial position. In addition to the financial statements and notes, Required Supplementary Information (RSI) is also provided. This supplementary information includes data on funding progress and employer contributions, along with other information useful in evaluating the financial condition of SERS. The financial statements, notes, and RSI, for the first time this year, includes information as required by GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. Our financial information is also presented in compliance with GASB Statement No. 84, *Fiduciary Activities*. Following the RSI is other supplementary information, including schedules with detailed information and administrative expenses.

CONDENSED SUMMARY OF TOTAL FIDUCIARY NET POSITION

($ in millions)			Change	
ASSETS	2018	2017	Amount	Percent
Cash	$ 1,235.4	$ 610.7	$ 624.7	102.3 %
Receivables	162.0	239.1	(77.1)	(32.2)
Investments	13,473.4	13,365.6	107.8	0.8
Capital Assets, Net	68.5	70.4	(1.9)	(2.7)
Other Assets	85.3	80.0	5.3	6.6
Total Assets	15,024.6	14,365.8	658.8	4.6
DEFERRED OUTFLOWS OF RESOURCES				
Deferred Outflows	6.1	7.8	(1.7)	(21.8)
LIABILITIES				
Benefits & Accounts Payable	44.9	51.9	(7.0)	(13.5)
Other Liabilities	272.7	336.0	(63.3)	(18.8)
Total Liabilities	317.6	387.9	(70.3)	(18.1)
DEFERRED INFLOWS OF RESOURCES				
Deferred Inflows	6.7	0.2	6.5	3,250.0
Net Position	$ 14,706.4	$ 13,985.5	$ 720.9	5.2 %

CONDENSED SUMMARY OF CHANGES IN TOTAL FIDUCIARY NET POSITION

($ in millions)			Change	
ADDITIONS	2018	2017	Amount	Percent
Contributions	$ 940.8	$ 950.7	$ (9.9)	(1.0)%
Net Investment Income	1,270.2	1,649.1	(378.9)	(23.0)
Total Additions	2,211.0	2,599.8	(388.8)	(15.0)
DEDUCTIONS				
Benefits	1,407.7	1,341.3	66.4	5.0
Refunds & Transfers	52.8	57.6	(4.8)	(8.3)
Admin. Expenses	29.6	37.5	(7.9)	(21.1)
Total Deductions	1,490.1	1,436.4	53.7	3.7
Net Increase (Decrease)	720.9	1,163.4	(442.5)	(38.0)
Balance, Beginning of Year*	13,985.5	12,822.1	1,163.4	9.1
Balance, End of Year	$ 14,706.4	$ 13,985.5	$ 720.9	5.2 %

* FY2017 was restated to reflect GASB 75 implementation.

In accordance with GASB Statement No. 68, which significantly revised accounting for pension costs and liabilities, the net pension liability equals SERS' proportionate share of the Ohio Public Employees Retirement System's (OPERS) unfunded actuarial accrued liability. However, SERS is not responsible for certain key factors affecting the balance of this liability. In Ohio, the employee shares the obligation of funding pension benefits with the employer. Both employer and employee contribution rates are capped by state statute. A change in these caps requires action of both houses of the general assembly and approval by the governor. Benefit provisions also are determined by state statute. In Ohio, public employers are not legally bound to pay off the unfunded liabilities of the public pension systems. The pension systems are solely responsible for the prudent fiscal administration of their plans.

In accordance with GASB Statement No. 75, which significantly revised accounting for postemployment benefits, the net OPEB liability equals SERS' proportionate share of the OPERS' unfunded liability. However, SERS is not responsible for certain key factors affecting the balance of this liability. The total member and employer contribution rates for the State and Local divisions are currently set at the maximums authorized by the Ohio Revised Code (ORC) of 10% and 14%, respectively. The Public Safety and Law Enforcement employer rates are also set at the maximum authorized rate of 18.1%. The member rate for Public Safety is determined by the Board and has no maximum rate established by the ORC. The member rate for Law Enforcement is also determined by the Board, but is limited by the ORC to not more than 2% greater than the Public Safety rate.

OPERS' Board of Directors determines on an annual basis the percentage of total employer contributions to be allocated to health care. The portion of Traditional Pension Plan and Combined Plan employer contributions was 1% for calendar year 2017. The 2018 calendar year allocation is expected to be 0% for health care funding and to continue at that rate for the next several years.

In Ohio, health care is a discretionary benefit; it is not guaranteed by statute. Public employers are also not legally bound to pay off the OPEB liabilities of the public pension systems. The pension systems are solely responsible for the prudent fiscal administration of their plans.

Most long-term liabilities have set repayment schedules or, in the case of compensated absences (i.e. sick and vacation leave), are satisfied through paid time-off or termination payments. There is no repayment schedule for the net pension liability or the net OPEB liability. Changes in pension benefits, OPEB benefits, contribution rates, and return on investments affect the balance of the net pension liability and the net OPEB liability, but are outside the control of the local government. In the event that contributions, investment returns, and other changes are insufficient to keep up with required pension payments, state statute does not assign/identify the responsible party for the unfunded portion.

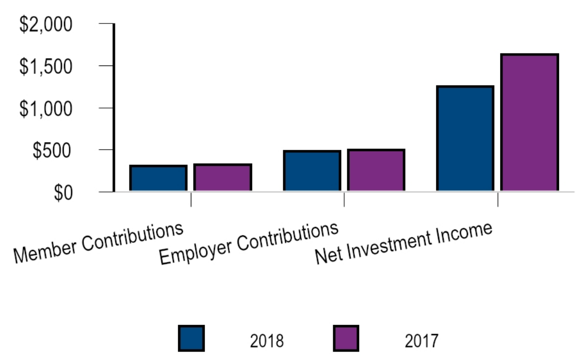
FINANCIAL ANALYSIS

A cost-sharing, defined-benefit, public retirement system, such as SERS, has a long-term perspective on financial activities. SERS' primary responsibility is to assure that sufficient funds will be available to provide retirement, disability, and survivor benefits, Medicare B, and lump sum death benefits. Laws governing SERS' financing intend the contribution rates to remain approximately level from generation to generation.

A Condensed Summary of Total Fiduciary Net Position and a Condensed Summary of Changes in Fiduciary Net Position as of June 30, 2018 and 2017, and for the years then ended are shown in the table on page 16.

Comparative Additions by Source FY2018 and FY2017

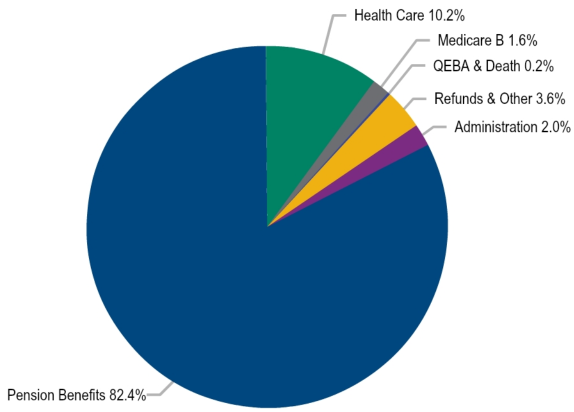
($ in millions)



SERS is comprised of five separate plans – the Pension Trust Fund, the Medicare B Fund, the Death Benefit Fund, the Qualified Excess Benefit Arrangement (QEBA) Fund, and the Health Care Fund. Pension benefits are funded through a combination of employee and employer contributions and investment income. Medicare Part B premium reimbursements and death benefits are funded through employer contributions and investment income. The QEBA, a separate plan under Internal Revenue Code §415, is funded by contributions from the retiree's last employer and invested separately in a short-term investment fund. Funding for the health care program comes from employers, retiree premium payments, the federal government, and investment income. The graph above "Comparative Additions by Source FY2018 and FY2017" depicts the proportion that each source added to the fund's assets.

Expenses are incurred primarily for the purpose for which SERS was created: the payment of benefits to non-teaching Ohio public school, community school, and community college employees. Included in the deductions from net position were benefit payments, refunds of contributions due to member terminations or deaths, net transfers to other Ohio retirement systems to provide benefits for those members who had membership in more than one system, and administrative expenses.

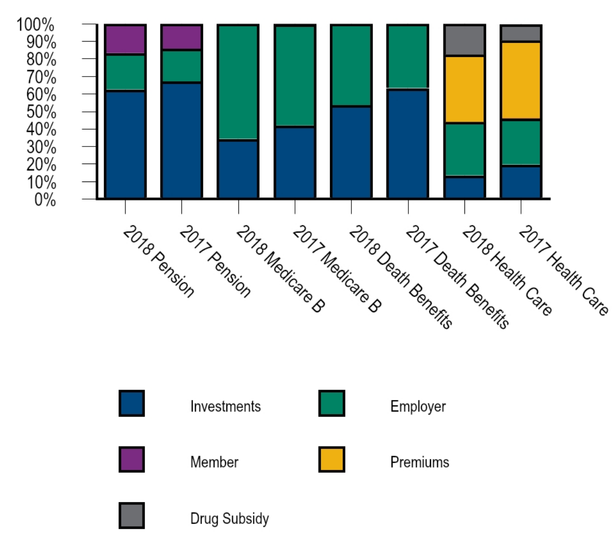
Deductions from Plan Fiduciary Net Position FY2018



SERS' net position increased by $720.9 million during FY2018, compared to a net increase of $1,163.4 million in FY2017.

- For financial statement purposes, employee contributions consist of 10% of reported payroll, and member purchases of restored and optional service credits. Employer contributions include 14% of reported payroll, the employer's share of optional and compulsory purchased service credit, early retirement incentives, and the health care surcharge. Employer contributions in excess of those required to support the Pension, Medicare B, and Death Benefits Funds may be allocated to the Health Care Fund. Effective June 18, 2015, SERS adopted a new funding policy that allocates a higher portion of the employer contribution toward the Pension, Medicare B, and Death Benefits Funds until the fund achieves a funded status of 90%.
- Employee contributions and employer contributions, excluding the surcharge, decreased 3.5% based on a decrease in reported payroll.
- Employer contributions to the Health Care Fund are derived from two sources. The first source is an allocation of the employers' 14% contribution after pension benefits are actuarially funded. Because of the change in SERS' funding policy, 0.50% of the employer contribution was allocated to the Health Care Fund in FY2018. The second is a health care surcharge for members who earn less than an actuarially determined minimum salary, which is established annually by the Board based on the actuary's recommendation. Regardless of the minimum compensation amount, legislated limits on SERS' surcharge revenue restrict the actual surcharge to 1.5% of statewide payroll, and no employer pays more than 2.0% of the district's payroll. Because of a decrease in reported payroll, the surcharge also decreased from $47.7 million in FY2017 to $47.6 million in FY2018.
- Along with employer contributions and investment income, additions to the Health Care Fund include health care premiums paid by retirees. Enrollment and total premiums remained substantially the same from FY2017 to FY2018.
- The other sources of contributions to the Health Care Fund include a net reimbursement from the federal program for Medicare Part D qualified prescription drug plans (PDP) and from our primary Medicare Advantage provider based on a risk-sharing contract effective January 1, 2011. Premiums for this program are estimated at the beginning of the contract and then adjusted based on actual claims experience and Medicare reimbursements. If experience is favorable, SERS receives a payment for the adjusted premium; however if experience is not favorable, SERS pays an additional premium to the provider.
- Investment income is allocated to all funds except the QEBA. It is presented net of investment fees and is comprised of interest, dividends, and realized and unrealized investment gains and losses. Investment expense is comprised of external manager, custody, and master record keeper fees and internal investment and accounting expenses. SERS' investment portfolio, with the exception of cash and short-term investments, is managed by external investment managers. SERS had a net investment gain of $1,270.2 million compared to a gain of $1,649.1 million in FY2017. Staff continued with the implementation of the strategic plan adopted in FY2013. Significant progress was made in terms of improving the portfolio structure to optimize risk and return and reduce fees.

Comparison of Additions to Fiduciary Net Position by Fund

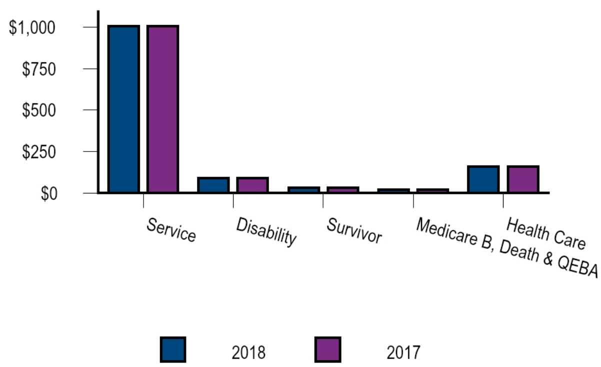


- Payments to service, disability, and survivor benefit recipients increased $80.5 million, or 6.9% during FY2018. Service retirement payments increased 7.6% while disability and survivor benefits payments increased by 0.7% and 2.1%, respectively. Each year, a portion of the increase in payment amounts comes from the 3% cost-of-living adjustment

(COLA) calculated on the base benefit amount. The remainder of the increase is the relatively higher benefits of new retirees due to higher final average salary. New service retirements increased as we approached August 1, 2017, the date when legislated changes in age and service credit requirements for retirement eligibility became effective. New retirees being added to the retiree rolls also have outpaced those being removed from the retiree rolls by 2-3% each year since FY2011. Subsequent to August 1, 2017 additions and deletions to the retiree rolls have leveled out.

Comparative Benefit Payments FY2018 and FY2017

($ in millions)



- Total refunds paid decreased 1.8% from FY2017 to FY2018. A lump sum of employee contributions is only distributed to members who have terminated public employment, applied for a refund, and waited for expiration of the 90-day waiting period that begins with the last day of service. SERS' members cannot take partial distributions. Reemployed retirees who are eligible for an annuity may elect a lump sum distribution, which includes the employee's contributions, a portion of the employer's contributions, and interest.
- If a member has been employed in a job covered by the State Teachers Retirement System of Ohio (STRS) or the Ohio Public Employees Retirement System (OPERS) defined-benefit plans as well as in a job covered by SERS, the member may receive a retirement benefit independently from each system, if eligible, or combine the service credit and accounts in all the systems to receive one benefit at retirement. The system that holds the greatest service credit will calculate and pay the benefit; the employee's full contributions and a share of the employer contributions and interest are transferred to the paying system. Net transfers to other Ohio systems increased in FY2018 when compared to FY2017.
- SERS reimburses a portion ($45.50) of the Medicare Part B monthly premium to retirees eligible for SERS' health care program who provide proof of enrollment in Medicare Part B. The reimbursement amount, established by statute, has not changed since 2001; therefore, changes in expense are driven by eligible retirees' enrollment in Medicare Part B or termination of a benefit. Medicare Part B expense remained substantially the same in FY2018. The eligibility of new retirees to receive the Part B reimbursement is now tied to enrollment in one of SERS' health care plans.
- SERS pays a $1,000 death benefit, established by statute in 2001, to the designated beneficiary of service and disability retirees. Death benefit payments increased 24.4% in FY2018.
- Most retirees and dependents choosing SERS' health care coverage are over the age of 65 and, therefore, enrolled in a fully insured Medicare Advantage plan; however, SERS maintains a traditional, self-insured preferred provider organization for its non-Medicare retiree population. For both groups, SERS offers a self-insured prescription drug program. Health care expenses decreased $14.7 million, or 8.8%, to $152.4 million. Our goals for the non-Medicare program are to provide access to quality coverage at an affordable cost and to focus on care management to improve the quality of care and to lower costs. Health care is a benefit that is permitted, not mandated, by statute. Our funding policy is to maintain the Health Care Fund with a 20-year solvency period to insure that the fluctuations in the cost of health care do not cause an interruption in the program.

ACTUARIAL

The annual actuarial valuation measures the total liability for all benefits earned to date. The accrued liability is a present value estimate of all the benefits that have been earned to date but not yet paid. The actuarial accrued liability (AAL) for the four funds changed as follows:

AAL *($ in millions)*

Fund	AAL FY2018	AAL FY2017	Increase/ (Decrease)	% Change
Pension	$ 19,559	$ 19,148	$ 411	2.15%
Medicare B	400	402	(2)	(0.50)
Death	39	38	1	2.63
Health Care	2,525	2,396	129	5.38

The unfunded accrued liability (UAL) is the present value of the future benefits payable that are not covered by the actuarial value of assets as of the valuation date. The funded ratio reflects the percentage of the accrued liability covered by the actuarial value of assets. A decrease in the UAL indicates progress towards funding. The unfunded liability and the funded ratio changed as follows:

UAL *($ in millions)*

Fund	UAL FY2018	UAL FY2017	Increase/ (Decrease)	% Change	Funded Ratio FY2018	Funded Ratio FY2017
Pension	$ 5,735	$ 5,611	$ 124	2.21%	70.7%	70.7%
Medicare B	236	249	(13)	(5.22)	41.1	38.0
Death	15	15	—	—	61.6	61.0
Health Care	2,089	2,014	75	3.72	17.3	15.9

In FY2018, SB 8 School Infrastructure and Technology, effective March 23, 2018, contained a cost-of-living adjustment delay amendment. For benefits beginning after the effective date, the SERS Retirement Board determines the number of benefit anniversaries that members must obtain prior to receiving their first COLA. The Board approved a resolution to suspend receiving a cost-of-living adjustment until the fourth (4th) anniversary date following commencement of the allowance, pension, or benefit. This change in plan amendments resulted in a $358 million gain, which offset some Investment and Non-Investment losses.

CONDITIONS EXPECTED TO AFFECT FINANCIAL POSITION OR RESULTS OF OPERATIONS

SERS' primary objective is to assure that at the time benefits commence, sufficient funds will be available to provide retirement, disability, and survivor benefits for its members. In addition, SERS is committed to sustaining contribution rates that remain level from generation to generation.

SERS' benefits are separated to comply with various sections of the Internal Revenue Code (IRC), and then reported and valued for funding purposes in accordance with applicable GASB statements. For FY2018, the funded ratios for the three benefits mandated by statutes increased, which was due primarily to the changes in assumptions adopted as a result of the enactment of SB 8 and Board adoption of the COLA suspension for new retirees until their fourth anniversary. This change, in conjunction with HB 49 that was enacted last year, will allow the board to suspend COLA's for both new and existing retirees. This will help strengthen our funded ratios over the next few years.

Markets are expected to continue to be volatile over the next several years. The Strategic Investment Plan has been designed to improve the portfolio structures to optimize returns while minimizing risks. Overweight portions of investments in Global Equities have been gradually reduced. Global Fixed Income investments are underweight and Cash Equivalent investments are overweight to try to mitigate risk.

Implementation of GASB Statement No. 87, *Leases* is expected to have some impact on the financial reporting of the system. SERS has minimal equipment that it leases. But, SERS does own the building that it occupies and unoccupied space is leased out to several tenants. The leases to tenants will result in lease receivables and deferred inflows of resources both being recorded. The statement is effective for periods beginning after December 15, 2019.

REQUEST FOR INFORMATION

This financial report is designed to provide the Retirement Board, our membership, employers, and investment managers with a general overview of SERS' finances. Questions concerning any of the information provided in this report or requests for additional financial information should be directed to:

School Employees Retirement System of Ohio
Finance Department
300 East Broad Street, Suite 100
Columbus, Ohio 43215

THIS PAGE INTENTIONALLY
LEFT BLANK

Statement of Fiduciary Net Position as of June 30, 2018

	Pension Trust Fund	Medicare B Fund	Death Benefit Fund	QEBA Fund	Health Care Fund	TOTAL
ASSETS						
Cash & Operating Short Term Investments	$ 1,137,225,017	$ 21,448,593	$ 2,070,062	$ 214,376	$ 74,448,960	$ 1,235,407,008
Receivables						
Contributions						
Employer	163,752	10,537	744	—	47,711,373	47,886,406
Employee	3,517,919	—	—	—	—	3,517,919
Investments Receivable	95,822,672	1,106,568	170,839	299	2,427,113	99,527,491
Other Receivables	1,115,846	—	—	—	9,937,512	11,053,358
Total Receivables	100,620,189	1,117,105	171,583	299	60,075,998	161,985,174
Investments at Fair Value						
US Equity	4,014,603,730	45,693,481	7,133,165	—	99,413,973	4,166,844,349
Non-US Equity	3,234,323,863	36,812,479	5,746,760	—	80,091,836	3,356,974,938
Private Equity	1,713,208,557	19,499,424	3,044,036	—	42,424,329	1,778,176,346
Fixed Income	1,850,627,970	21,063,507	3,288,204	—	45,827,258	1,920,806,939
Real Estate	2,067,329,281	23,529,961	3,673,239	—	51,193,451	2,145,725,932
Total Investments at Fair Value	12,880,093,401	146,598,852	22,885,404	—	318,950,847	13,368,528,504
Securities Lending Collateral at Fair Value	101,062,097	1,150,270	179,568	—	2,502,609	104,894,544
Capital Assets						
Land	3,315,670	—	—	—	—	3,315,670
Property & Equipment, at Cost	95,472,596	—	—	—	—	95,472,596
Accumulated Depreciation and Amortization	(30,310,061)	—	—	—	—	(30,310,061)
Property & Equipment, Book Value	68,478,205	—	—	—	—	68,478,205
Prepaids and Other Assets	85,254,589	—	—	5,050	330	85,259,969
TOTAL ASSETS	14,372,733,498	170,314,820	25,306,617	219,725	455,978,744	15,024,553,404
DEFERRED OUTFLOWS OF RESOURCES						
Deferred Outflows - Pension	5,129,692	—	—	—	—	5,129,692
Deferred Outflows - OPEB	1,030,598	—	—	—	—	1,030,598
LIABILITIES						
Accounts Payable & Accrued Expenses	29,820,778	57,637	6,545	2,384	13,842,116	43,729,460
Benefits Payable	868,428	—	308,115	—	—	1,176,543
Investments Payable	163,456,442	1,860,431	290,430	—	4,047,686	169,654,989
Obligations under Securities Lending	99,313,372	1,130,367	176,460	—	2,459,305	103,079,504
TOTAL LIABILITIES	293,459,020	3,048,435	781,550	2,384	20,349,107	317,640,496
DEFERRED INFLOWS OF RESOURCES						
Deferred Inflows - Pension	5,852,311	—	—	—	—	5,852,311
Deferred Inflows - OPEB	858,161	—	—	—	—	858,161
NET POSITION HELD IN TRUST FOR PENSIONS AND OTHER POSTEMPLOYMENT BENEFITS	$ 14,078,724,296	$ 167,266,385	$ 24,525,067	$ 217,341	$ 435,629,637	$ 14,706,362,726

See accompanying notes to the financial statements.

Statement of Changes in Fiduciary Net Position for the year ended June 30, 2018

	Pension Trust Fund	Medicare B Fund	Death Benefit Fund	QEBA Fund	Health Care Fund	TOTAL
ADDITIONS						
Contributions						
Employer	$ 406,953,261	$ 26,291,404	$ 1,858,955	$ 375,600	$ 63,539,354	$ 499,018,574
Employee	324,842,074	—	—	—	—	324,842,074
Other Income						
Health Care Premiums	—	—	—	—	80,376,052	80,376,052
Federal Subsidies & Other Receipts	—	—	—	—	36,517,382	36,517,382
	731,795,335	26,291,404	1,858,955	375,600	180,432,788	940,754,082
Income from Investment Activity						
Net Appreciation in Fair Value	1,000,472,240	11,161,018	1,746,788	—	22,420,488	1,035,800,534
Interest and Dividends	317,517,697	3,648,903	561,089	1,709	7,806,250	329,535,648
	1,317,989,937	14,809,921	2,307,877	1,709	30,226,738	1,365,336,182
Investment Expenses	(93,784,272)	(1,046,346)	(163,762)	—	(2,101,293)	(97,095,673)
Net Income from Investment Activity	1,224,205,665	13,763,575	2,144,115	1,709	28,125,445	1,268,240,509
Income from Securities Lending Activity						
Gross Income	2,964,976	33,077	5,177	—	66,444	3,069,674
Brokers' Rebates	(954,950)	(10,653)	(1,667)	—	(21,400)	(988,670)
Management Fees	(126,601)	(1,412)	(221)	—	(2,837)	(131,071)
Net Income from Securities Lending Activity	1,883,425	21,012	3,289	—	42,207	1,949,933
Total Investment Income	1,226,089,090	13,784,587	2,147,404	1,709	28,167,652	1,270,190,442
TOTAL ADDITIONS	1,957,884,425	40,075,991	4,006,359	377,309	208,600,440	2,210,944,524
DEDUCTIONS						
Benefits						
Retirement	1,091,624,986	22,072,596	—	373,916	—	1,114,071,498
Disability	97,027,548	1,330,670	—	—	—	98,358,218
Survivor	39,155,013	981,344	—	—	—	40,136,357
Death	—	—	2,639,464	—	—	2,639,464
Health Care Expenses	—	—	—	—	152,447,415	152,447,415
	1,227,807,547	24,384,610	2,639,464	373,916	152,447,415	1,407,652,952
Refunds and Lump Sum Payments	59,575,036	—	—	—	—	59,575,036
Net Transfers to Other Ohio Systems	(6,734,065)	—	—	—	—	(6,734,065)
Administrative Expenses	26,931,754	6,143	55,996	3,450	2,632,948	29,630,291
	79,772,725	6,143	55,996	3,450	2,632,948	82,471,262
TOTAL DEDUCTIONS	1,307,580,272	24,390,753	2,695,460	377,366	155,080,363	1,490,124,214
Net Increase (Decrease)	650,304,153	15,685,238	1,310,899	(57)	53,520,077	720,820,310
NET POSITION HELD IN TRUST FOR PENSIONS AND OTHER POSTEMPLOYMENT BENEFITS						
Net Position, Beginning of Year*	13,428,420,143	151,581,147	23,214,168	217,398	382,109,560	13,985,542,416
Net Position, End of Year	$ 14,078,724,296	$ 167,266,385	$ 24,525,067	$ 217,341	$ 435,629,637	$ 14,706,362,726

*FY2017 was restated to reflect GASB 75 implementation.
See accompanying notes to the financial statements.

Notes to Financial Statements June 30, 2018

1. Summary of Significant Accounting Policies

Basis of Accounting The financial statements of the School Employees Retirement System of Ohio (SERS) are prepared using the accrual basis of accounting. Member and employer contributions are recognized in the period in which the contributions are due based on statutory or contractual requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

Use of Estimates In preparing financial statements in conformity with governmental accounting principles generally accepted in the United States of America, SERS' 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. Certain SERS investment assets, in particular Global Real Assets, Global Private Equity, and Opportunistic investments, use estimates in reporting fair value in the financial statements. These estimates are subject to uncertainty in the near term, which could result in changes in the values reported for those assets in the Statement of Fiduciary Net Position.

Health Care Expenses Incurred and Unpaid Amounts accrued for health care expenses payable for recipients less than age 65 in the Health Care Fund are based upon estimates that have been developed from prior claims experience.

Allocation of Expenses to Plans Direct expenses are charged to the plan for which they are incurred. All indirect expenses are paid by the Pension Trust Fund and are reimbursed by the Medicare B, Death Benefit, and Health Care Funds in proportion to their use of the assets.

Benefit Payments Benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms.

Investments Investment purchases and sales are recorded as of the trade date. Dividend income is recognized on the ex-dividend date. Other investment income is recognized when earned.

Investments are reported at fair value. Fair value is the amount reasonably expected to be received for an investment in a current sale between a willing buyer and a willing seller. Fixed income securities, real estate investment trusts (REITs), derivatives, and common and preferred stocks are valued based on published market prices and quotations from national security exchanges and securities pricing services. International stocks are then adjusted to reflect the current exchange rate of the underlying currency. Investments for which no national exchanges or pricing services exist, such as private equity assets, are valued at fair value by the investment partnership based on the valuation methodology outlined in the partnership agreement. Real estate may be valued by the manager or independent appraisers.

Commingled assets that are not traded on a national exchange are valued by the commingled manager. SERS performs due diligence reviews of the investment pricing, process, and infrastructure of private equity, commingled, and real estate investments to assure that the asset values provided by the managers are reasonable.

Net appreciation (depreciation) is determined by calculating the change in the fair value of investments between the beginning of the year and the end of the year, less purchases of investments at cost, plus sales of investments at fair value. Investment expenses consist of external expenses directly related to SERS' investment operations, as well as the internal administrative expenses associated with SERS' investment program.

The monies held by the Pension Trust, Medicare B, Death Benefit, and Health Care Funds are pooled for the purpose of the investment of those plans. Each plan holds units of the investment pool, which are adjusted on a monthly basis. The value of one unit of the pool on June 30, 2018, was $2,379.25. The unit holdings and net value of each of the funds at the close of the fiscal year were:

INVESTMENT POOL AS OF JUNE 30, 2018

	Units		Value
Pension Trust Fund	5,855,537	$	13,931,793,773
Medicare B Fund	66,647		158,569,112
Death Benefits Fund	10,404		24,754,069
Health Care Fund	145,001		344,994,192
Total	**6,077,589**	**$**	**14,460,111,146**

Office Building, Equipment, and Fixtures (Non-Investment Assets) The cost of equipment and fixtures in excess of $5,000 is capitalized at cost when acquired. Improvements that increase the useful life of the property are capitalized. Maintenance and repairs are charged to expense as incurred. Software costs in excess of $25,000 are capitalized. Intangible assets, such as internally-developed software, are capitalized in accordance with GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets.* Depreciation and amortization have been provided using the straight-line method over the following useful lives:

Description	Estimated Lives
Furniture, equipment, and software	3-7 years
Building and improvements	40 years
Internally-developed software	20 years

Reserves Ohio Revised Code Section 3309.60 establishes various reserves to account for future and current benefit payments. These are:

- **Employees' Savings Fund** Accumulated members' contributions are held in trust pending refund or transfer to another account other than the Guarantee Fund or Expense Fund.
- **Employers' Trust Fund** Accumulated employer contributions are held for future benefit payments.
- **Annuity and Pension Reserve Fund** This reserve contains the monies set aside to pay all annuities and pensions. Money is transferred to this fund from the Employees' Savings Fund, Employers' Trust Fund, and Guarantee Fund at the time of retirement.
- **Survivors' Benefit Fund** Monies in this account are set aside to finance payments to beneficiaries of deceased members. Money is transferred to this fund from the Employees' Savings Fund, Employers' Trust Fund, and Guarantee Fund in an amount to fund all liabilities at the end of each year.
- **Guarantee Fund** Income derived from the investment pool and any gifts or bequests are accumulated in this fund. The balance in this fund is transferred to other reserves to aid in the funding of future benefit payments and administrative expenses.
- **Expense Fund** This fund provides for the payment of administrative expenses with the necessary money allocated to it from the Guarantee Fund.

RESERVE BALANCES AS OF JUNE 30, 2018

		Reserve Amount Totals
Employees' Savings Fund	$	3,240,264,927
Employers' Trust Fund		(1,024,372,619)
Annuity and Pension Reserve Fund		12,119,002,961
Survivors' Benefit Fund		371,467,457
Guarantee Fund		—
Expense Fund		—
Total	**$**	**14,706,362,726**

2. Change in Accounting Principle and Restatement of Net Position

For FY2018, SERS implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. GASB Statement No. 75 establishes standards for recognizing and measuring the net other postemployment benefits liability, deferred outflows of resources, deferred inflows of resources, and expense/expenditures of other postemployment benefits (OPEB). For defined benefit OPEB plans, this Statement also identifies the methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service.

The implementation of GASB Statement No. 75 had the following effect on the net position as reported June 30, 2017:

Net position, June 30, 2017, as previously reported	$	13,995,965,548
Adjustments:		
Net OPEB liability		(10,423,132)
Restated net position, June 30, 2017	$	13,985,542,416

3. Description of the System

Organization SERS is a statewide, cost-sharing, multiple-employer defined benefit public employee retirement system. Established by state law in 1937, SERS provides retirement, disability, and survivor benefits to non-teaching employees of Ohio's public K-12 school districts, vocational, technical, and community schools, community colleges, and the University of Akron.

The Retirement Board is responsible for the general administration and management of the retirement system. The Board comprises nine members: four elected employee members; two elected retiree members; and three appointed investment expert members. One investment expert is appointed by the Governor, a second one by the State Treasurer, and the third one jointly by the Speaker of the House and President of the Senate.

Several separate plans comprise the Retirement System. The pension plans include the Pension Trust Fund, the Medicare B Fund, the Death Benefit Fund, and the Qualified Excess Benefit Arrangement (QEBA) Fund. The Pension Trust Fund holds the funds to pay the basic retirement, disability, and survivor benefits authorized under state law, Ohio Revised Code (ORC) Chapter 3309. The Medicare B Fund reimburses a portion of the Medicare Part B premiums paid by eligible benefit recipients as permitted under ORC Section 3309.69. The current reimbursement is $45.50 per month. The Death Benefit Fund pays $1,000 to a designated beneficiary of a deceased retiree or disability benefit recipient as allowed under ORC Section 3309.50. The QEBA Fund pays benefits as allowed by federal tax law to retirees whose SERS benefits exceed Internal Revenue Code (IRC) 415(b) limits. A fifth plan, the Health Care Fund, provides money for payment of health care expenses under SERS' health care coverage for retirees and other benefit recipients.

Pension Benefits Following the passage of Senate Bill 341, SERS' pension reform legislation, new age and service requirements for retirement became effective January 7, 2013. For members who retire on or after August 1, 2017, the new requirements are:

- age 67 with 10 years of service credit, or age 57 with 30 years of service credit, to retire with full benefits

- age 62 with 10 years of service credit, or age 60 with 25 years of service credit, to retire early with actuarially-reduced benefits

To protect the benefits of longtime members, SERS included a grandfather provision and a buy-up option that gave members the opportunity to retire under the previous age and service credit requirements after August 1, 2017.

The grandfather provision allowed members, who attained 25 years of service on or before August 1, 2017, to retire under the previous age and service credit eligibility requirements.

These age and service requirements were:

- any age with 30 years of service credit to retire with full benefits; or
- age 60 with 5 years of service credit, or age 55 with 25 years of service credit to retire with actuarially-reduced benefits

The buy-up option allowed members with fewer than 25 years of service credit as of August 1, 2017, to retire under the previous retirement eligibility requirements if they paid the actuarial difference between the benefit they would have received under the new requirements and the benefit they would have received under the previous requirements. Members who wanted to buy-up must have completed their payment on or before August 1, 2017.

The current formula used in calculating an annual retirement benefit is as follows: number of years of service credit up to 30 years x 2.2% of the member's final average salary (FAS) + number of years of service credit over 30 years x 2.5% of FAS. For SERS, FAS equals the average of the highest three years of salary. If the member does not meet the age and service requirements to retire with full benefits, the annual benefit is reduced to cover a longer period of retirement.

EMPLOYER AND EMPLOYEE MEMBERSHIP DATA
(as of June 30, 2018)

Employer Members	
Local	372
City	191
Educational Service Center	53
Village	49
Higher Education	15
Vocational/Technical	49
Community Schools	325
Other	17
Total	1,071
Employee Members and Retirees	
Retirees and beneficiaries currently receiving benefits	81,332
Inactive employees entitled to but not yet receiving benefits	5,091
Total	86,423
Active Employees	
Vested active employees	47,793
Non-vested active employees	110,550
Total	158,343

If a member has been employed in a job covered by the State Teachers Retirement System of Ohio (STRS) or the Ohio Public Employees Retirement System (OPERS) as well as in a job covered by SERS, at retirement the member may receive a retirement benefit independently from each of the systems, if eligible, or may combine the service credit and accounts in all the systems to receive one benefit. The system with the greatest service credit will be the system that will calculate and pay the benefit. While the salaries in one year will be added together, if the member has service credit in each system for the same year, the member cannot be credited with more than one year of service credit.

If a retiree from OPERS, SERS, STRS, Ohio Police & Fire, or Ohio State Highway Patrol is employed in a SERS-covered position, then employee and employer contributions are required for the new position. The retiree accrues a new benefit in the form of an annuity based on the contributions paid by the retiree and the employer payable at age 65 or termination of employment, whichever is later. This is separate from the original SERS benefit. There are no other benefits available and the retiree does not accrue any additional service credit for the period of reemployment. Prior to age 65 and after termination of employment, a reemployed retiree may request a refund of the employee contributions for the reemployed period.

4. Contributions

State retirement law requires contributions by covered employees and their employers, and limits the maximum rate of contributions. The Retirement Board sets contribution rates within the allowable limits. The adequacy of employer contribution rates is determined annually by actuarial valuation using the entry age normal cost method. During FY2018, employees and their employers were required to contribute 10% and 14%, respectively, of active member payroll.

Employer (excluding surcharge discussed below) and employee contributions were $451.4 million and $324.8 million, respectively, in 2018. The contribution amounts also include contributions for purchased service credit.

The Retirement Board, acting with the advice of the actuary, allocates the current employer contribution rate among the plans of the System. For FY2018, the allocation of the employer contribution rate to pension plan benefits was established as the rate necessary to cover normal cost and amortize the unfunded accrued liability. The 14% contribution rate paid by employers was allocated to the funds as follows:

Pension Trust Fund	12.59%
Medicare B Fund	0.85%
Death Benefit Fund	0.06%
Health Care Fund	0.50%

The portion of the employer contribution not required to actuarially fund the pension plans (Pension Trust Fund, Medicare B Fund, and Death Benefit Fund) may be available for the Health Care Fund, depending on funded ratios. The funded ratio for the basic benefits in FY2018 was 70.07%, which was above the 70% funded ratio that would permit an allocation to the Health Care Fund. The amount of employer contributions directed to the Health Care fund in FY2018 was $15.9 million. A health care surcharge on employers is collected for employees earning less than an actuarially determined minimum compensation amount, and is pro-rated according to service credit earned during the year. Statutes provide that no employer shall pay a health care surcharge greater than 2.0% of that employer's SERS-covered payroll; nor may SERS collect in aggregate more than 1.5% of total statewide SERS-covered payroll for the health care surcharge. For FY2018, the minimum compensation level was established at $23,700. The surcharge accrued for FY2018 and included in employer contributions in the Statement of Changes in Fiduciary Net Position is $47.6 million.

5. Funding Policy

The statute sets a contribution cap of 24% of payroll; 14% from employers and 10% from employees. Employer contributions in excess of those required to support the basic benefits may be allocated to retiree health care funding. If the funded ratio is less than 70%, the entire 14% employers' contribution shall be allocated to SERS' basic benefits. If the funded ratio is 70% but less than 80%, at least 13.50% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 80% but less than 90%, at least 13.25% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 90% or greater, the Health Care Fund may receive any portion of the employers' contribution that is not needed to fund SERS' basic benefits.

6. Fair Value Measurement

SERS investments are measured at fair value within the fair value hierarchy established by GASB Statement No. 72, *Fair Value Measurement and Application*. This Statement established a three-tier, hierarchal reporting framework which ranks the level of market price observations used in measuring fair value. The hierarchy is based on the valuation inputs used to measure the fair value of the investment and gives the highest ranking to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest ranking to unobservable inputs (Level 3). Inputs refer to the assumptions that market participants would use in valuing the asset or liability, including assumptions about risk, for example, the risk inherent in a particular valuation technique used to measure fair value (such as a pricing model) and/or the risk inherent in the inputs to the valuation technique. The categorization of the investments within the hierarchy is based upon the valuation transparency of the instrument and should not be perceived as the particular investment's risk. The three-tier hierarchy is summarized as follows:

Level 1 – Unadjusted quoted prices for identical instruments in active markets.

Level 2 – Quoted prices in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

Level 3 – Valuations reflect practices where significant inputs are unobservable.

Investments in certain entities that calculate a net asset value (NAV) per share (or its equivalent) sometimes do not have a readily determinable fair value. For these investments, governmental accounting standards permit establishment of fair value using a practical expedient based on the NAV per share (or its equivalent).

The table on page 28, presents the fair value hierarchy of the SERS' investment portfolio as of June 30, 2018.

Bond Mutual Funds generally include investments in money market-type securities that are reported at either fair value or at cost plus accrued interest, which approximates market or fair value.

Equity, US Corporate Obligations, US Government and derivative securities classified in Level 1 are valued using prices quoted in active markets for those securities.

Debt and derivative securities classified in Level 2 are valued using either a bid evaluation or a matrix based pricing technique. Bid evaluations are typically based on market quotations, yields, maturities, call features, and ratings. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. Index linked debt securities are valued by multiplying the external market price by the applicable day's Index Ratio. Level 2 debt securities have non-proprietary information that was readily available to market participants, from multiple independent sources, which are known to be actively involved in the market.

Equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities.

Debt, equities, and investment derivatives classified in Level 1 of the fair value hierarchy are valued directly from a predetermined primary external pricing vendor. Assets classified in Level 2 are subject to pricing by an alternative pricing source due to lack of information available by the primary vendor.

The fair values of investments in certain equity, fixed income and marketable alternative funds are based on the investments' net asset value provided by the investee. Investments that are measured at fair value using the net asset value as practical expedient are not classified in the fair value hierarchy.

INVESTMENTS AND SHORT-TERM HOLDINGS MEASURED AT FAIR VALUE

($ in thousands)

		Fair Value Measurements Using		
Investments by Fair Value Level	**6/30/2018**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Debt Securities				
Bond Mutual Funds	$ 1,140,658	$ 1,140,658	$ —	$ —
Certificates of Deposit	12,901	—	12,901	—
Commercial Paper	15,913	—	15,913	—
Foreign Obligations	46,365	—	46,365	—
Mortgage and Asset Backed	194,699	—	194,699	—
Municipal Obligations	33,918	—	33,918	—
US Agency Obligations	442,909	—	442,909	—
US Corporate Obligations	673,213	8,205	664,969	39
US Government	470,653	393,219	77,434	—
Total Debt Securities	3,031,229	1,542,082	1,489,108	39
Equity Securities				
Foreign Stocks	1,948,272	1,947,515	757	—
US Common & Preferred Stock	3,084,561	3,077,867	6,694	—
Total Equity Securities	5,032,833	5,025,382	7,451	—
Total Investments by Fair Value Level	$ 8,064,062	$ 6,567,464	$ 1,496,559	$ 39
Investments Measured at the net asset value (NAV)				
Commingled Bond Funds	$ 30,692			
Commingled International Equity Funds	1,412,434			
Commingled Real Estate Investment Funds	52,495			
Hedge Funds	1,183,428			
Private Equity Funds	1,778,176			
Private Real Estate Funds	1,992,369			
Total Investments Measured at the NAV	6,449,594			
Total Investments Measured at Fair Value	$ 14,513,656			
Investment Derivative Instruments				
Foreign Fixed Derivatives	$ (960)	$ (140)	$ (820)	
Foreign Equity Derivatives	1,301	(525)	1,826	
US Equity Derivatives	(3,488)	(3,488)	—	
US Fixed Derivatives	109	786	(677)	
Total Investment Derivative Instruments	$ (3,038)	$ (3,367)	$ 329	

INVESTMENTS MEASURED AT THE NET ASSET VALUE

($ in thousands)

Investments by Fair Value Level		6/30/2018		Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Commingled Bond Funds(1)	$	30,692	$	—	Monthly	1-10 Days
Commingled International Equity Funds(1)		1,412,434		—	Daily, Semi-Monthly, Monthly	1-120 Days
Commingled Real Estate Investment Funds(1)		52,495		—	Daily	1 Day
Hedge Funds						
Equity Long / Short(2)		249,810		—	Monthly, Quarterly	45-60 Days
Event Driven(3)		387,645		—	Quarterly, Annually	60-90 Days
Multi-Strategy / Risk Focus(4)		144,612		—	Daily, Monthly	1-3 Days
Relative Value(5)		220,692		—	Monthly, Quarterly	60-90 Days
Tactical Trading(6)		180,669		—	Monthly, Quarterly	5-60 Days
Private Equity Funds(7)		1,778,176		989,345	Not Eligible	Not Eligible
Private Real Estate Funds(7)		1,992,369		220,326	Not Eligible	Not Eligible
Total Investments Measured at the NAV	$	6,449,594				

(1) *Commingled Bond Funds, Equity Funds and Real Estate Investment Funds* Three bond funds, 49 international equity funds, and one real estate investment fund are considered to be commingled in nature. Each is valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments.

(2) *Equity Long / Short Hedge Funds* Consisting of four funds, this strategy invests both long and short in US and global equity securities, with a goal of adding growth and minimizing market exposure. These investments are valued at NAV per share. Due to contractual lock-up restrictions, approximately 84% of the value of these investments are eligible for redemption in the next six months. The remaining 16% of the value of these investments remain restricted for anywhere ranging from 12 to 15 months.

(3) *Event Driven Hedge Funds* Consisting of six funds, 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. These investments are valued at NAV per share. Due to contractual lock-up restrictions, approximately 35% of the value of these investments are eligible for redemption in the next six months. The remaining 65% of the value of these investments remains restricted for anywhere ranging from 9 to 24 months.

(4) *Multi-Strategy / Risk Focus Hedge Funds* The two funds included in this group aim to pursue varying strategies in order to diversify risks and reduce volatility. These investments are valued at NAV per share, and are redeemable within a month or less, as they are not subject to lock-up restrictions.

(5) *Relative Value Hedge Funds* Consisting of four funds, this strategy's main focus is to benefit from valuation discrepancies that may be present in related financial instruments by simultaneously purchasing or selling these instruments. These investments are valued at NAV per share. Due to contractual lock-up restrictions, approximately 88% of these investments are eligible for redemption in the next six months. The remaining 12% of the value of these investments are eligible within the next 9 to 13 months.

(6) *Tactical Trading Hedge Funds* The primary focus of the three funds within this group is to invest across multiple strategies based upon the outcomes of economic and technical analyses, with the goal of long-term benefit. These investments are valued at NAV per share. Due to contractual lock-up restrictions, approximately 72% of these investments are eligible for redemption in the next six months. The remaining 28% of the value of these investments are eligible within the next 7 to 13 months.

(7) *Private Equity and Real Estate Funds* SERS' Private Equity portfolio consists of 92 funds, investing primarily in Buyout Funds, with some exposure to Distressed Funds, Special Situations, Structured Debt, and Venture Capital. The Real Estate portfolio, comprised of 34 funds, invests mainly in U.S. commercial real estate. The fair values of these funds are measured at net asset value, and are not eligible for redemption. Distributions are received as underlying investments within the funds are liquidated, which on average can occur over the span of 5 to 10 years.

FAIR VALUE SUBJECT TO ISSUER CREDIT RISK

Fair Value Based Upon S&P Credit Quality Rating *($ in thousands)*

	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	Not Rated	Total
Bond Mutual Funds	$1,140,658	$ 3,593	$ —	$ —	$ 27,099	$ —	$ —	$ —	$ —	$ —	$ —	$ 1,171,350
Commercial Paper	—	15,913	—	—	—	—	—	—	—	—	—	15,913
Foreign Obligations	4,287	—	14,741	5,954	10,416	4,329	—	—	—	—	5,679	45,406
Mortgage and Asset Backed	97,734	20,347	11,193	21,314	7,562	2,976	3,931	2,976	1,079	915	24,672	194,699
Municipal Obligations	—	12,189	16,991	4,300	—	—	—	438	—	—	—	33,918
Negotiable Certificates of Deposit	—	4,701	—	—	—	—	—	—	—	—	8,200	12,901
US Agency	—	442,909	—	—	—	—	—	—	—	—	—	442,909
US Corporate Obligations	11,081	27,007	132,703	377,124	93,178	18,547	3,533	—	48	755	9,345	673,321
US Government	—	470,653	—	—	—	—	—	—	—	—	—	470,653
Total	$1,253,760	$ 997,312	$175,628	$408,692	$138,255	$25,852	$7,464	$3,414	$1,127	$1,670	$47,896	$ 3,061,070

FAIR VALUE SUBJECT TO CONTERPARTY CREDIT RISK

	S&P Credit Quality Rating	Fair Value *($ in thousands)*
Foreign Fixed Derivatives	A+	$ (127)
	A-	15
	AA-	(409)
	NR*	(46)
Total		(567)
US Fixed Derivatives	A+	(538)
	A	88
	AA-	(219)
	BBB+	(5)
	NR*	784
Total		110
Total		**$ (457)**

*Excludes Futures and Options as they are facilitated via exchange and not subject to counterparty risk.

FAIR VALUE SUBJECT TO INTEREST RATE RISK

Investment	Fair Value *($ in thousands)*	Option Adjusted Duration *(in years)*
Bond Mutual Funds	$ 1,171,350	0.10
Certificates of Deposit	12,901	1.85
Commercial Paper	15,913	0.10
Foreign Fixed Derivatives*	(566)	2.63
Foreign Obligations	46,365	5.90
Mortgage and Asset Backed	194,699	1.77
Municipal Obligations	33,918	7.28
US Agency	442,909	3.71
US Corporate Obligations	673,213	5.93
US Fixed Derivatives	109	129.22
US Government	470,653	6.97
Total	**$ 3,061,464**	**3.25**

*Excludes Fixed Pending FX

7. Cash Deposits and Investments

Custodial Credit Risk, Deposits Custodial credit risk for deposits is the risk that in the event of a bank failure, SERS' deposits may not be returned. In accordance with state law, the Board of Deposit designates SERS' depository bank, and the Treasurer of State serves as custodian and contracts depository services for all SERS' deposits. Therefore, SERS does not have a policy for deposit custodial credit risk.

At June 30, 2018, the carrying amounts of SERS' operating and investment cash deposits totaled $94,749,335, and the corresponding bank balances totaled $13,665,984. Of the bank balances, the Federal Deposit Insurance Corporation insured $230,397. In accordance with state law, bank balances of $132,870 were collateralized at 102% with securities held in the name of SERS' pledging financial institutions. The remaining bank deposits of $13,302,717 were uninsured and uncollateralized.

Custodial Credit Risk, Investments Custodial credit risk for investments is the risk if the securities are uninsured, are not registered in the name of the SERS and are held by either the counterparty or the counterparty's trust department or agent, but not in the SERS name. As of June 30, 2018, approximately $6.4 billion of SERS' assets are not held by the custodians or registered in the SERS name.

Credit Risk Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. ORC 3309.15 and the Board's Statement of Investment Policy (adopted September 2015) direct that the funds of SERS will be invested following the prudent person standard. This fiduciary standard dictates that the Board consider the probable safety of investments, avoid speculative investments, and invest as persons of prudence, discretion, and intelligence would manage their own affairs. The Board accomplishes this through a combination of internal and external investment professionals.

Concentration of Credit Risk Concentration of credit risk is the risk of loss attributed to the magnitude of a plan's investment in a single issuer. SERS does not hold investments representing 5% or more of plan investment portfolio in any one issuer.

Interest Rate Risk Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. SERS does not have a policy for managing interest rate risk.

At June 30, 2018, SERS held interest-only strips that had a total fair value of $67,374,183. These securities are based on cash flows from interest payments on underlying mortgages. Therefore, they are sensitive to prepayments by mortgagees, which may result from a decline in interest rates. SERS also held principal-only strips that had a total fair value of $10,152,840. These principal-only strips are sensitive to interest rate increases that may result in decreasing mortgage prepayments, thus increasing the average maturity of this investment.

Foreign Currency Risk Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. SERS' exposure to foreign currency risk derives from its positions in foreign currency and foreign currency-denominated investments.

FAIR VALUE SUBJECT TO FOREIGN CURRENCY RISK *($ in thousands)*

Currency	Cash & Cash Equivalents	Fixed Income	Non-US Equities	Real Estate	Private Equity	Derivative Securities
Argentina Peso	$ 1,974	$ 1,297	$ —	$ —	$ —	$ —
Australian Dollar	(26,301)	(26)	68,214	—	—	2,638
Brazilian Real	(4,720)	2,791	35,373	—	—	(32)
British Pound Sterling	61,148	3,067	221,213	—	15,298	6,423
Bulgarian Lev	9	—	—	—	—	—
Canadian Dollar	42,983	(100)	57,932	—	—	3,369
Chilean Peso	(2,234)	65	—	—	—	—
Chinese Yuan	9,727	144	8,966	—	—	—
Colombian Peso	162	3,520	—	—	—	—
Czech Koruna	17,497	521	1,144	—	—	—
Danish Krone	1,178	—	26,863	—	—	—
Dominican Republic Peso	—	5	—	—	—	—
Egyptian Pound	9	—	208	—	—	—
Euro	(261,294)	3,786	325,988	64,746	188,849	(13,718)
Hong Kong Dollar	(7,903)	—	174,700	—	—	1,648
Hungarian Forint	16	—	417	—	—	—
Indian Rupee	(3,246)	—	36,792	—	—	—
Indonesian Rupiah	(1,411)	3,796	8,167	—	—	—
Israeli Shekel	(987)	—	4,608	—	—	—
Japanese Yen	(53,490)	—	321,011	—	—	(1,989)
Malaysian Ringgit	38	11	8,446	—	—	(11)
Mexican Peso	(16,538)	12,647	6,225	—	—	—
New Zealand Dollar	(9,289)	—	3,379	—	—	—
Norwegian Krone	25,946	—	13,539	—	—	—
Philippines Peso	(3,330)	—	2,859	—	—	—
Polish Zloty	459	2,619	4,583	—	—	—
Romanian Leu	351	416	—	—	—	—
Russian Ruble	(3,438)	3,379	3,398	—	—	—
Singapore Dollar	13,732	—	10,794	—	—	—
South African Rand	(7,242)	6,053	24,015	—	—	—
South Korean Won	(2,751)	219	126,294	—	—	(219)
Swedish Krona	(57,851)	—	25,521	—	—	942
Swiss Franc	(70,201)	—	77,287	—	—	—
Taiwan Dollar	(2,378)	—	37,782	—	—	—
Thailand Baht	59	—	18,800	—	—	—
Turkish Lira	(2,360)	2,257	14,985	—	—	—
UAE Dirham	—	—	1,876	—	—	—
Uruguayan Peso	7	369	—	—	—	—
	$ (361,669)	$ 46,836	$ 1,671,379	$ 64,746	$ 204,147	$ (949)

FAIR VALUE OF FORWARD CURRENCY AND HEDGED CONTRACTS

As of June 30, 2018 and 2017 *($ in thousands)*

	FY2018	FY2017
Forward Currency Purchases	$ 1,054,470	$ 1,336,537
Forward Currency Sales	1,793,436	1,943,224
Unrealized gain (loss)	1,431	7,066

FUTURES CONTRACTS

As of June 30, 2018 and 2017 *($ in thousands)*	FY2018			FY2017		
Type	**Number of Contracts**	**Notional Value**	**Contract Value**	**Number of Contracts**	**Notional Value**	**Contract Value**
Equity Features						
International Equity Index Futures - Long	437	$ 40,149	$ (525)	393	$ 33,891	$ (547)
U.S. Stock Index Futures - Long	1,463	182,058	(3,488)	236	28,714	(147)
Fixed Income / Cash Equivalent Futures						
Cash Equivalent (Eurodollar) Futures - Long	768	186,613	(313)	129	31,570	100
Cash Equivalent (Eurodollar) Futures - Short	(676)	(164,930)	331	(511)	(125,530)	(102)
International Fixed Income Index Futures - Long	19	2,796	25	72	10,874	97
International Fixed Income Index Futures - Short	(176)	(42,594)	(165)	(163)	(39,279)	506
US Treasury Futures Long	1,602	232,954	(341)	1,197	164,320	119
US Treasury Futures Short	(557)	(71,924)	1,249	(426)	(59,298)	(580)
Total Futures (Net)	2,880	$ 365,122	$ (3,227)	927	$ 45,262	$ (554)

OPTIONS CONTRACTS

As of June 30, 2018 and 2017 *($ in thousands)*	FY2018			FY2017		
Type	**Number of Contracts**	**Notional Value**	**Fair Value**	**Number of Contracts**	**Notional Value**	**Fair Value**
Fixed Income Options						
Fixed Income Call Options on Foreign Currency - Purchased	9,200,000	$ 75	$ 66	—	$ —	$ —
Fixed Income Call Options on Foreign Currency - Written	(5,460,000)	(50)	—	—	—	—
Fixed Income Put Options on Foreign Currency - Purchased	6,830,000	104	74	—	—	—
Fixed Income Put Options on Foreign Currency - Written	(6,822,969)	(51)	(46)	—	—	—
Fixed Income Call Options on Futures (non-dollar) - Purchased	443	92	80	403	197	56
Fixed Income Call Options on Futures (non-dollar) - Written	(699)	(218)	(211)	(339)	(97)	(37)
Fixed Income Put Options on Futures (non-dollar) - Purchased	520	30	30	133	64	94
Fixed Income Put Options on Futures (non-dollar) - Written	(315)	(41)	(40)	(37)	—	42

SWAPTIONS

As of June 30, 2018 and 2017 *($ in thousands)*	FY2018			FY2017		
Type	**Shares/Par**	**Notional Value**	**Fair Value**	**Shares/Par**	**Notional Value**	**Fair Value**
Call Swaptions - Purchased	6,900	$ 7	$ 3	—	$ —	$ —
Put Swaptions - Purchased	(6,900)	(7)	(7)	—	—	—

Derivatives Derivatives are investment instruments whose cash flows or fair values are derived from the value of some other asset or index. SERS uses a variety of derivatives primarily to maximize yields and offset volatility due to interest rate and currency fluctuations. SERS is exposed to various types of credit, market, and legal risks related to these investments. The investment staff continually monitors these types of investments.

Foreign exchange forward currency contracts are legal agreements between two parties to purchase and sell a foreign currency, for a price specified at the contract date, with delivery and settlement in the future. SERS enters into these contracts to hedge the foreign currency movements of assets held in the underlying funds. The contracts do not subject SERS to risk due to exchange rate movements since gains and losses on the contracts offset gains and losses on the transactions being hedged. SERS could be at risk for replacing these contracts at current market rates, should the counterparty default. SERS seeks to control this risk through contracting only with counterparties who meet certain credit guidelines.

SWAP CONTRACTS				
As of June 30, 2018 and 2017 *($ in thousands)*				
	FY2018		FY2017	
Type	Notional Value	Fair Value	Notional Value	Fair Value
Credit Default	$ 53,025	$ (390)	$ 43,595	$ 111
Interest Rate	632,570	(803)	4,079,772	817

A futures contract is a contract to buy or sell units of an index or financial instrument on a specified future date at a price agreed upon when the contract is originated. SERS uses equity and fixed income futures during the fiscal year to rebalance its asset allocation and overlay its cash exposure in the US and Non-US equity portfolios. Only the most liquid futures are used by SERS to overlay the temporary and transactional cash held, and to rebalance asset allocations between asset classes.

Options give buyers the right, but not the obligation, to buy or sell an asset at a predetermined strike price over a specified period. The option premium is usually a small percentage of the underlying asset's value. When writing an option, SERS receives a premium up front and bears the risk of an unfavorable change in the price of the underlying asset during the option's life.

Swaps represent an agreement between two or more parties to exchange a sequence of cash flows during a predetermined timeframe. SERS utilizes swaps to manage interest rate fluctuations, default by a borrower, and to gain market exposure without having to actually own the asset.

Swaptions are options on swaps that give the purchaser the right, but not the obligation, to enter into a swap at a specific date in the future. An interest-rate swaption gives the buyer the right to pay or receive a specified fixed interest rate in a swap in exchange for a floating rate for a stated time period. When writing a swaption, SERS as the seller is obligated to pay or receive a fixed rate in exchange for a floating rate for a stated period of time. When purchasing a swaption, SERS as the buyer is obligated to receive or pay a fixed rate in exchange for a floating rate for a stated period of time.

Securities Lending SERS participates in a securities lending program that directly holds equity and fixed income investments using Goldman Sachs Agency Lending (GSAL) as a third-party lending agent. Securities are loaned to independent broker/dealers in exchange for cash collateral equal to approximately 102% of the market value of domestic securities on loan and 105% of the market value of international securities on loan, with a simultaneous agreement to return the collateral for the same securities in the future. At the same time, SERS records a liability for the collateral held in the securities lending program. Total net proceeds from GSAL were $1,949,933 during FY2018.

At June 30, 2018, SERS had no credit risk exposure on the securities lending collateral because the collateral exceeded the value of the securities loaned.

Under the terms of the lending agreement, SERS is fully indemnified against losses that might occur in the program due to the failure of a broker to return a security that was borrowed where the collateral is inadequate to replace the security. SERS is also indemnified should the borrower fail to pay distributions of earnings on the securities lent.

SECURITIES LENDING		
As of June 30, 2018 *($ in thousands)*	Fair Value of Securities on Loan	Collateral Value (Securities and Cash)
Foreign Commingled Equity	$ 21	$ 21
Foreign Stocks	44,038	45,028
US Common & Preferred Stock	52,424	53,330
US Corporate Obligations	4,565	4,701
	$ 101,048	$ 103,080

Securities on loan can be recalled on demand by SERS or returned by the borrower at any time. There is no matching of the securities lent with the invested cash collateral. The lending agent mitigates risk by focusing on intrinsic value lending, and BNY Mellon reinvests the cash collateral in accordance with contractual investment guidelines that are designed to ensure the safety of principal and obtain a moderate rate of return. Earnings generated from the collateral investments, less the amount of rebates paid to the dealers, result in the gross earnings from lending activities, which is then split on an 85%/15% basis with GSAL. SERS is at risk to contribute additional funds should the earnings from the invested SERS collateral not be sufficient to pay the negotiated dealer rebate. At June 30, 2018, the GSAL collateral portfolio had an average weighted maturity of eight days. SERS receives pro-rated income from participation in the securities lending program of a commingled investment. SERS has no direct responsibility for this program and the collateral held by this securities lending program is not held in SERS' name. Total net direct proceeds from the commingled investment during FY2018 were $206,821.

Commitments As of June 30, 2018, unfunded commitments related to the opportunistic, private equity, and real estate investments totaled $1.21 billion.

8. Capital Assets (Non-Investment Assets)

CAPITAL ASSETS ACTIVITY for the year ended June 30, 2018					
Cost:	Land	Office Building & Improvements	Furniture & Equipment	Internally-Developed Software	Total Capital Assets
Balances, June 30, 2017	$ 3,315,670	$ 53,309,941	$ 6,853,765	$ 33,282,592	$ 96,761,968
Additions	—	331,194	355,559	1,339,545	2,026,298
Disposals	—	—	—	—	—
Balances, June 30, 2018	3,315,670	53,641,135	7,209,324	34,622,137	98,788,266
Accumulated Depreciation:					
Balances, June 30, 2017	—	20,532,604	5,806,495	—	26,339,099
Additions	—	1,362,429	366,766	2,241,767	3,970,962
Disposals	—	—	—	—	—
Balances, June 30, 2018	—	21,895,033	6,173,261	2,241,767	30,310,061
Net Capital Assets, June 30, 2018	**$ 3,315,670**	**$ 31,746,102**	**$ 1,036,063**	**$ 32,380,370**	**$ 68,478,205**

9. Net Pension Liability and Actuarial Information – Defined Benefit Plan

The components of the net pension liability as of June 30, 2018:

Plan funds	
Total Pension Liability (a)	$ 19,997,700,966
Fiduciary Net Position (b)	$ 14,270,515,748
Net Pension Liability (Surplus) (a) - (b)	$ 5,727,185,218
Fiduciary Net Position as a Percent of Total Pension Liability (b) / (a)	71.36%

The total pension liability is determined by SERS' actuaries in accordance with GASB Statement No. 67, as part of their annual actuarial valuation for each defined benefit retirement plan. Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts (e.g., salaries, credited service) and assumptions about the probability of occurrence of events far into the future (e.g., mortality, disabilities, retirements, employment terminations). Actuarially determined amounts are subject to continual review and potential modifications, as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employers and plan members to that point. The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations.

Actuarial calculations reflect a long-term perspective. For a newly hired employee, actuarial calculations will take into account the employee's entire career with the employer and also take into consideration the benefits, if any, paid to the employee after termination of employment until the death of the employee and any applicable contingent annuitant. In many cases, actuarial calculations reflect several decades of service with the employer and the payment of benefits after termination.

The long-term return expectation for the Pension Plan Investments has been determined by using a building-block approach and assumes a time horizon, as defined in the Statement of Investment Policy. A forecasted rate of inflation serves as the baseline for the return expectation. Various real return premiums over the baseline inflation rate have been established for each asset class. The long-term expected nominal rate of return has been determined by calculating an arithmetic weighted average of the expected real return premiums for each asset class, adding the projected inflation rate, and adding the expected return from rebalancing uncorrelated asset classes.

The asset allocation, as used in the June 30, 2015 five-year experience study, is summarized as follows:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Cash	1.00%	0.50%
US Equity	22.50	4.75
International Equity	22.50	7.00
Fixed Income	19.00	1.50
Private Equity	10.00	8.00
Real Assets	15.00	5.00
Multi-Asset Strategies	10.00	3.00

Total pension liability was calculated using the discount rate of 7.50%. The projection of cash flows used to determine the discount rate assumed that employers would contribute the actuarially determined contribution rate of projected compensation over the remaining 26-year amortization period of the unfunded actuarial accrued liability. The actuarially determined contribution rate of FY2018 was 13.50%. Projected inflows from investment earnings were calculated using the long-term assumed investment rate of return (7.50%). Based on those assumptions, the plan's fiduciary net position was projected to be available to make all future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefits to determine the total pension liability. The annual money-weighted rate of return, calculated as the internal rate of return on pension plan investments, for FY2018 was 9.37%.

Key methods and assumptions used in calculating the Total Pension Liability	
Valuation Date	June 30, 2018
Actuarial Cost Method	Entry Age Normal (Level Percent of Payroll)
Actuarial Assumptions:	
Experience Study Date	Period of 5 years ended June 30, 2015
Investment Rate of Return	7.50%, net of System expenses
Cost of Living Increases (COLA) or "Ad Hoc" COLA	2.50%, on and after April1, 2018, COLA's for future retirees will be delayed for three years following commencement.
Future Salary Increases, including Inflation	3.50% - 18.20%
Inflation	3.00%
Mortality Assumptions	For post-retirement mortality, the table used in evaluating allowances to be paid is the RP-2014 Blue Collar Mortality Table with fully generational projection and Scale BB, with 120% of male rates and 110% of female rates used. The RP-2000 Disabled Mortality Table with 90% for male rates and 100% for female rates set back five years is used for the period after disability retirement.

Net pension liability is sensitive to changes in the discount rate, and to illustrate the potential impact the table presents the net pension liability calculated using the discount rate of 7.50%, as well as what the plan's net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.50%), or one percentage point higher (8.50%) than the current rate.

Net pension liability sensitivity to changes in the discount rate	
1% Decrease (6.50%)	$ 8,067,172,229
Current Discount Rate (7.50%)	$ 5,727,185,218
1% Increase (8.50%)	$ 3,765,262,702

10. Defined Benefit Pension Plans

Net Pension Liability The net pension liability reported on the Statement of Fiduciary Net Position represents a liability to employees for pensions. It is included in accounts payable and accrued expenses in the Statement of Fiduciary Net Position. Pensions are a component of exchange transactions, between an employer and its employees, of salaries and benefits for employee services. Pensions are provided to an employee, on a deferred-payment basis as part of the total compensation package offered by an employer for employee services each financial period. The obligation to sacrifice resources for pensions is a present obligation because it was created as a result of employment exchanges that already have occurred.

The net pension liability represents SERS' proportionate share of Ohio Public Employees Retirement System (OPERS) pension plan's collective actuarial present value of projected benefit payments attributable to past periods of service, net of OPERS pension plan's fiduciary net position. The net pension liability calculation is dependent on critical long-term variables, including estimated average life expectancies, earnings on investments, cost-of-living adjustments, and others. While these estimates use the best information available, unknown future events require this estimate to be adjusted annually.

Ohio Revised Code limits SERS' obligation for this liability to annually required payments. SERS cannot control benefit terms or the manner in which pensions are financed; however, SERS does receive the benefit of employees' services in exchange for compensation including pension.

GASB Statement No. 68 assumes the liability is solely the obligation of the employer, because (1) they benefit from employee services; and (2) state statute requires all funding to come from these employers. All contributions to date have come solely from these employers (which also includes costs paid in the form of withholdings from employees). State statute requires the pension plans to amortize unfunded liabilities within 30 years. If the amortization period exceeds 30 years, each pension plan's board must propose corrective action to the state legislature. Any resulting legislative change to benefits or funding could significantly affect the net pension liability. Resulting adjustments to the net pension liability would be effective when the changes are legally enforceable.

Plan Description – Ohio Public Employees Retirement System (OPERS) SERS' employees participate in Ohio Public Employees Retirement System (OPERS), a cost-sharing, multiple-employer public employee retirement system administered by OPERS. OPERS provides retirement and disability benefits to members and death and survivor benefits to beneficiaries. OPERS also provides health care benefits to some retirees and beneficiaries. OPERS issues a stand-alone financial report that includes financial statements, required supplementary information, and detailed information, about OPERS' fiduciary net position. That report can be obtained by writing OPERS, 277 E. Town Street, Columbus, OH 43215, or by visiting the OPERS website: www.opers.org/financial/reports.shtml.

New members have a choice of three retirement plans: The Traditional Plan (defined benefit plan); the Combined Plan (combination of defined benefit and defined contribution plans); and the Member Directed Plan (defined contribution plan). Benefits are established by Chapter 145 of the Ohio Revised Code. The defined benefit (DB) plan offers an annual retirement allowance based on final average salary multiplied by a percentage that varies based on years of service.

Senate Bill (SB) 343 was enacted into law with an effective date of January 7, 2013. In the legislation, members were categorized into three groups with varying provisions of the law applicable to each group. Members who were eligible to retire under law in effect prior to SB 343 or who will be eligible to retire no later than five years after January 7, 2013, comprise transition Group A. Members who have 20 years of service credit prior to January 7, 2013, or who will be eligible to retire no later than 10 years after January 7, 2013, are included in transition Group B. Group C includes those members who are not in either of the other groups and members who were hired on or after January 7, 2013.

Benefit payments vary in amount depending on years of service credit, FAS, age, and plan of payment selection. FAS is the average of the three highest years of earnable salary for Groups A and B; and the average of the five highest years of earnable salary for members in Group C. The age-and-service formula benefit cannot exceed 100% of the FAS (Law Enforcement is 90%) or the limits under Internal Revenue Code Section 415 and may be subject to the contribution-based benefit cap. The base benefit amount calculated by the formula will be reduced if a member begins receiving a retirement benefit before reaching the age-and-service requirements for an unreduced benefit.

In the Traditional Pension Plan (DB), the benefit formula for state and local members in transition Groups A and B applies a factor of 2.2% to the member's FAS for the first 30 years of service. A factor of 2.5% is applied to years of service in excess of 30. The benefit formula for State and Local members in transition Group C applies a factor of 2.2% to the member's FAS for the first 35 years of service and a factor of 2.5% is applied to years of service in excess of 35.

In the Combined Plan, the benefit formula for the defined benefit component of the plan for state and local members in transition Groups A and B applies a factor of 1.0% to the member's FAS for the first 30 years of service. A factor of 1.25% is applied to years of service in excess of 30. The benefit formula for transition Group C applies a factor of 1.0% to the member's FAS and the first 35 years of service and a factor of 1.25% is applied to years in excess of 35.

When a benefit recipient has received benefits for 12 months, an annual COLA is provided. This COLA is calculated on the base retirement benefit at the date of retirement and is not compounded. For those retiring prior to January 7, 2013, the COLA will continue to be a 3% simple annual COLA. For those retiring after January 7, 2013, beginning in calendar year 2019, the COLA will be based on the average percentage increase in the Consumer Price Index, capped at 3%.

A DB or Combined Plan member with five or more years of credited service who is determined to be disabled may qualify for a disability benefit.

Funding Policy – OPERS Employees covered by OPERS are required to contribute 10% of their salary to the plan and employers are required to contribute 14%. Both rates are at the statutory maximum.

SERS' contractually required employer contributions to OPERS were $2,116,019 for FY2018. Of this amount, $154,481 is reported as an intergovernmental payable.

Discount Rate – OPERS The discount rate used to measure the total pension liability was 7.5% for both the Traditional Pension Plan and the Combined Plan. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and those of the contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments for both the Traditional Pension Plan and the Combined Plan was applied to all periods of projected benefit payments to determine the total pension liability.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions The net pension liability was measured as of December 31, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. SERS' proportion of the net pension liability was based on SERS' share of contributions to the pension plan relative to the contributions of all participating entities.

Following is information related to the proportionate share and pension expense:

OPERS		Traditional		Combined		Total
SERS' Proportionate Share of the Net Pension Asset	$	—	$	307,116	$	307,116
SERS' Proportionate Share of the Net Pension Liability	$	15,272,959	$	—	$	15,272,959
SERS' Proportion of the Net Pension Asset/Liability		0.097354%		0.225601%		0.0977496%
SERS' Pension Expense	$	516,588	$	43,630	$	560,218

At June 30, 2018, SERS reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

OPERS		Traditional		Combined		Total
Deferred Outflows of Resources						
Assumption Changes	$	1,792,596	$	27,094	$	1,819,690
Net Difference between projected and actual earnings on pension plan investments		2,025,494		20,693		2,046,187
Differences between expected and actual experience		15,320		—		15,320
Actuarial Losses		—		—		—
Changes in Proportion		381,125		5,080		386,205
Contributions subsequent to the measurement date *		804,513		57,777		862,290
Total Deferred Outflows of Resources	**$**	**5,019,048**	**$**	**110,644**	**$**	**5,129,692**
Deferred Inflows of Resources						
Net Difference between projected and actual earnings on pension plan investments	$	(5,389,398)	$	(68,055)	$	(5,457,453)
Differences between expected and actual experience		(300,370)		(93,667)		(394,037)
Actuarial Gains		—		—		—
Changes in proportion		—		(821)		(821)
Total Deferred Inflows of Resources	**$**	**(5,689,768)**	**$**	**(162,543)**	**$**	**(5,852,311)**

*$862,290 reported as deferred outflows of resources related to pensions resulting from SERS' contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in pension expense as indicated in the schedule above. Deferrals arising from differences between expected and actual earnings on pension plan investments will be amortized over five years for both plans. Deferrals arising from differences between projected and actual experience and changes in proportionate share will be amortized over the average remaining service life of the entire pool of employees. The Traditional Plan has 2.9546 years of average remaining service. The Combined Plan has 9.3216 years of average remaining service life.

OPERS - Amortization of net deferred inflows of resources

Fiscal Year Ending June 30		Traditional		Combined		Total
2019	$	1,535,784	$	(14,593)	$	1,521,191
2020		(221,540)		(15,998)		(237,538)
2021		(1,442,129)		(27,376)		(1,469,505)
2022		(1,347,348)		(26,220)		(1,373,568)
2023		—		(9,206)		(9,206)
2024		—		(7,138)		(7,138)
2025		—		(3,804)		(3,804)
2026		—		(3,987)		(3,987)
2027		—		(1,354)		(1,354)
Totals	**$**	**(1,475,233)**	**$**	**(109,676)**	**$**	**(1,584,909)**

Actuarial Assumptions – OPERS OPERS' total pension liability was determined by their actuaries in accordance with GASB Statement No. 67, as part of their annual actuarial valuation for each defined benefit retirement plan. Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts (e.g., salaries, credited service) and assumptions about the probability of occurrence of events far into the future (e.g., mortality, disabilities, retirements, employment termination). Actuarially determined amounts are subject to continual review and potential modifications, as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employers and plan members to that point. The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations.

Actuarial calculations reflect a long-term perspective. For a newly hired employee, actuarial calculations will take into account the employee's entire career with the employer and also take into consideration the benefits, if any, paid to the employee after termination of employment until the death of the employee and any applicable contingent annuitant. In many cases, actuarial calculations reflect several decades of service with the employer and the payment of benefits after termination.

Key methods and assumptions used in calculating the total pension liability in the latest actuarial valuation, prepared as of December 31, 2017, are presented below:

Key methods and assumptions used in valuation of Total Pension Liability		
Actuarial Information	**Traditional Pension Plan**	**Combined Plan**
Valuation Date	December 31, 2017	December 31, 2017
Experience Study	5-Year Period Ended Dec. 31, 2015	5-Year Period Ended Dec. 31, 2015
Actuarial Cost Method	Individual entry age	Individual entry age
Actuarial Assumptions:		
Investment Rate of Return	7.50%	7.50%
Wage Inflation	3.25%	3.25%
Projected Salary Increases	3.25% - 10.75% (includes wage inflation at 3.25%)	3.25% - 8.25% (includes wage inflation at 3.25%)
Cost-of-living Adjustments	Pre-1/7/2013 Retirees: 3.00% Simple Post-1/7/2013 Retirees: 3.00% Simple through 2018 then 2.15% Simple	Pre-1/7/2013 Retirees: 3.00% Simple Post-1/7/2013 Retirees: 3.00% Simple through 2018 then 2.15% Simple

Pre-retirement mortality rates are based on the RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively.

Sensitivity of SERS' Proportionate Share of the Net Pension Liability to Changes in the Discount Rate The following table presents SERS' proportionate share of the net pension liability calculated using the current period discount rate assumption of 7.5%, as well as what SERS' proportionate share of the net pension liability would be if it were calculated using a discount rate that is one-percentage-point lower (6.5%) or one-percentage-point higher (8.5%) than the current rate:

SERS' proportionate share of the Net Pension Liability/ (Asset)	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
Traditional Plan	$ 27,120,884	$ 15,272,959	$5,395,360
Combined Plan	(166,945)	(307,116)	(403,826)

The following table displays OPERS' Board-approved asset allocation policy of the Defined Benefit portfolio for 2017 and the long-term expected real rates of return.

Asset Class	Target Allocation for 2017	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed Income	23.00%	2.20%
Domestic Equities	19.00	6.37
Real Estate	10.00	5.26
Private Equity	10.00	8.97
International Equities	20.00	7.88
Other Investments	18.00	5.26
TOTAL	**100.00%**	**5.66%**

The long-term expected rate of return on defined benefit investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation.

OPERS manages investments in four investment portfolios: the Defined Benefit portfolio, the 401(h) Health Care portfolio, the 115 Health Care Trust portfolio, and the Defined Contribution portfolio. The Defined Benefit portfolio includes the investment assets of the Traditional Pension Plan, the defined benefit component of the Combined Plan, and the annuitized accounts of the Member-Directed Plan. Within the Defined Benefit portfolio, contributions into the plans are all recorded at the same time, and benefit payments all occur on the first of the month. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The money-weighted rate of return, net of investment expense, for the Defined Benefit portfolio is 16.82% for 2017.

11. Compensated Absences

As of June 30, 2018, and 2017, $2,579,095, and $2,855,735, respectively, were accrued for the unused vacation leave of all employees and the unused sick leave of SERS' employees who are eligible to retire within five years with the following limitations. Employees who retire or become disabled after five years of service are entitled to receive payment for all unused sick time up to 960 hours. If an employee accumulated unused sick time in excess of 960 hours as of June 30, 2018, then compensation of 50% of the excess hours of their unused sick time balance as of June 30, 2018, will also be paid. Unused sick leave pay is forfeited upon resignation or termination. Employees who retire or separate employment from SERS are entitled to full compensation for all earned unused vacation. If an employee dies after five years of service, the beneficiaries are entitled to receive the same unused vacation and sick leave benefits as an employee who retires.

12. Self-insured Health Care for Employees of SERS

SERS is self-insured for employee benefits for dental, medical, and hospitalization. A third-party administrator manages the program. SERS holds a stop-loss policy of $225,000 per employee per year. SERS also accrues incurred claims from the current fiscal year that have not yet been billed in the current fiscal year. The amount accrued in FY2017 was $225,000, and the amount accrued in FY2018 was $135,000.

13. Federal Income Tax Status

The SERS Pension Trust Fund is a qualified plan under Internal Revenue Code (IRC) Section 401(a) and is therefore exempt from federal income taxes. The Medicare B Fund is established pursuant to IRC Section 401(h). The Death Benefit Fund is an insurance fund and is in compliance with IRC Section 101(a). The QEBA Fund is a qualified entity, created in accordance with IRC Section 415(b). The Health Care Fund is structured to meet the requirements of IRC Section 105(e).

14. Risk Management

SERS is exposed to various risks of loss, including theft or destruction of assets, general liability, employee injuries, and legal challenges to fiduciary decisions. SERS self-insures some risks through deductibles and retention, and purchases insurance for the remainder. For the past four years, there has been no reduction in coverage, and no claims have exceeded purchased limits.

15. Contingent Liabilities

Deutsche Bank Trust Company Americas, et al. v. Huntington National Bank, et. al. - On June 3, 2011, SERS was named as a defendant in an action brought by Deutsche Bank. Deutsche Bank claims that SERS and other shareholders benefited from the 2007 leveraged buyout of the Tribune Company while creditors such as Deutsche were harmed and that the leveraged buyout helped cause the Tribune's bankruptcy in 2008. Deutsche has asked for SERS and other shareholders to divulge money received from the leveraged buyout. On December 19, 2011, the United States Judicial Panel on Multidistrict Litigation transferred this action and others like it around the country to the United States District Court, Southern District of New York, for coordinated or consolidated pretrial proceedings. On November 6, 2012, SERS and other defendants filed a Motion to Dismiss the individual creditor actions. On September 23, 2013, the Court granted defendants' Motion to Dismiss the individual creditor actions. On September 30, 2013, the plaintiffs appealed the Court's decision to the United States Court of Appeals for the Second Circuit. On March 24, 2016, the Second Circuit Court of Appeals affirmed the District Court's earlier decision to dismiss individual creditor actions. On September 9, 2016, plaintiffs in the individual creditor actions that were dismissed by the Second Circuit filed their Petition for a Writ of Certiorari with the U.S. Supreme Court seeking review of the Second Circuit's decision. In May 2018, the Second Circuit recalled the "mandate" in the individual creditor actions appeal, which effectively terminates the appeal to U.S. Supreme Court, bringing it back to the Second Circuit for further consideration in light of the Supreme Court's decision in Merit Management. Previously pending in the District Court was a Motion to Dismiss intentional fraudulent conveyance claims brought by the Litigation Trustee on behalf of the bankruptcy estate for the Tribune Company, known as the FitzSimons case. However, on January 6, 2017, the District Court granted defendants' Motion to Dismiss the Litigation Trustee's claims in FitzSimons. While the final outcome of this litigation 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 SERS' financial position.

Ohio Association of Public School Employees v. School Employees Retirement System, et al. - On January 29, 2018, SERS was named as a defendant in a lawsuit filed by the Ohio Association of Public School Employees (OAPSE) pertaining to the SERS Board's October 9, 2017, decision to enact a three-year COLA freeze, as well as legislation that allows the Board to determine the number of anniversaries a new benefit recipient must achieve before they are eligible for their first COLA. SERS' actuary and the Ohio Attorney General's Office were also named as defendants.

OAPSE alleges that:

- SERS exceeded its statutory authority by adopting a three-year freeze instead of reviewing the COLA annually;
- The Ohio Legislature improperly delegated its lawmaking duties to SERS;
- The COLA provisions in HB 49 (makes the COLA discretionary) violate the One Subject Rule;
- The COLA freeze violates retirees' equal protection rights;
- COLA eligibility for new retirees contained in SB 8 violates the One Subject Rule; and
- The three-year COLA freeze was procured through fraud and misrepresentation on the part of SERS' management and its actuary.

OAPSE is asking the Court to void the COLA freeze passed by the Board in October 2017, and declare that the COLA provisions contained in HB 49 and SB 8 are void and unenforceable. SERS filed a Motion to Dismiss OAPSE's lawsuit in March 2018, and is currently awaiting a decision from the Court.

16. Net Other Postemployment Benefits (OPEB) Liability and Actuarial Information - Defined Benefit Plan

Plan administration School Employees Retirement System of Ohio (SERS) administers School Employees Retirement System of Ohio Health Care Plan – a cost-sharing, multiple-employer, defined benefit OPEB plan that provides various levels of health care to retired, disabled, and beneficiaries, as well as their dependents, of non-teaching personnel of 1,056 Ohio schools, the University of Akron, ten community colleges, and four technical colleges. The Board of SERS governs the plan under Section 3309.375 of the Ohio Revised Code.

Plan membership At June 30, 2018, SERS' Health Care Plans membership consisted of the following:

Plan Membership	
Currently Receiving Benefits:	
Retirees, or Their Beneficiaries	37,649
Inactive Members Entitled to But Not Yet Receiving Benefits	5,089
Active Members	158,343
Total	201,081

Benefits provided SERS' Health Care Plan provides health care benefits to eligible individuals receiving retirement, disability, and survivor benefits, and to their eligible dependents. Members who retire after June 1, 1986, need 10 years of service credit, exclusive of most types of purchased credit, to qualify to participate in SERS' health care coverage. The following types of credit purchased after January 29, 1981, do not count toward health care coverage eligibility: military, federal, out-of-state, municipal, private school, exempted, and early retirement incentive credit. In addition to age and service retirees, disability benefit recipients and beneficiaries who are receiving monthly benefits due to the death of a member or retiree, are eligible for SERS' health care coverage. Most retirees and dependents choosing SERS' health care coverage are over the age of 65 and, therefore, enrolled in a fully insured Medicare Advantage plan; however, SERS maintains a traditional, self-insured preferred provider organization for its non-Medicare retiree population. For both groups, SERS offers a self-insured prescription drug program. Health care is a benefit that is permitted, not mandated, by statute.

Contributions The Health Care Plan is financed through a combination of employer contributions, recipient premiums, investment returns, and any funds received on behalf of SERS' participation in Medicare programs. The System's goal is to maintain a health care reserve account with a 20-year solvency period in order to ensure that fluctuations in the cost of health care do not cause an interruption in the program. However, during any period in which the 20-year solvency period is not achieved, the System shall manage the Health Care Fund on a pay-as-you-go basis.

Investment policy The Health Care Plan follows the same investment policy as the Pension Plan, as defined in the Statement of Investment Policy.

Discount rate (SEIR) The discount rate used to measure the total OPEB liability at June 30, 2018 was 3.70%. The discount rate used to measure total OPEB liability prior to June 30, 2018 was 3.63%. The projection of cash flows used to determine the discount rate assumed that contributions will be made from members and the System at the contribution rate of 2.00% of projected covered payroll each year, which includes a 1.50% payroll surcharge and 0.50% of contributions from the basic benefits plan. Based on these assumptions, the OPEB plan's fiduciary net position was projected to become insufficient to make future benefit payments during the fiscal year ending June 30, 2026. Therefore, the long-term expected rate of return on OPEB plan assets was used to present value the projected benefit payments through the fiscal year ending June 30, 2025 and the Fidelity General Obligation 20-year Municipal Bond Index rate of 3.62%, as of June 30, 2018 (i.e., municipal bond rate), was used to present value the projected benefit payments for the remaining years in the projection. The total present value of projected benefit payments from all years was then used to determine the single rate of return that was used as the discount rate.

Rate of return The long-term expected rate of return on plan factors are considered in evaluating the long-term rate of return assumption including long-term historical data, estimates inherent in current market data, and a long-normal distribution analysis in which best-estimate ranges of expected future real rates of return were developed by the investment consultant for each major asset class. These ranges were combined to produce the long-term expected rate of return, 7.50%, by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The capital market assumptions developed by the investment consultant are intended for use over a 10-year horizon and may not be useful in setting the long-term rate of return for funding pension plans which covers a longer timeframe. The assumption is intended to be a long-term assumption and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.

Periods of projected benefit payments The projection of future benefit payments for all current plan members was until the benefit payments ran out.

Assumed asset allocation The target asset allocation and best estimates of arithmetic real rates of return for each major asset class, as used in the June 30, 2015 five-year experience study, are summarized as follows:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Cash	1.00%	0.50%
US Equity	22.50	4.75
International Equity	22.50	7.00
Fixed Income	19.00	1.50
Private Equity	10.00	8.00
Real Assets	15.00	5.00
Multi-Asset Strategies	10.00	3.00

Net OPEB liability of SERS The components of the net OPEB liability of SERS at June 30, 2018, were as follows:

Plan funds	
Total OPEB Liability (a)	$ 3,209,899,769
Plan Fiduciary Net Position (b)	435,629,637
SERS’ Net OPEB Liability (a) - (b)	$ 2,774,270,132
Plan Fiduciary Net Position as a Percent of Total OPEB Liability (b) / (a)	13.57%

Actuarial Assumptions The total OPEB liability was determined by an actuarial valuation as of June 30, 2018. The actuarial assumptions used in the valuation are based on results from the most recent actuarial experience study, which covered the five-year period ending June 30, 2015. The experience study report is dated April 2016. The total OPEB liability used the following assumptions and other inputs:

Key methods and assumptions used in valuation of Total OPEB Liability	
Long-term rate of return, net of System expenses, including price inflation	7.50%
Price inflation	3.00%
Wage increases, including price inflation	3.50% - 18.20%
Municipal bond index rate	
Prior measurement date	3.56%
Measurement date	3.62%
Year FNP is projected to be depleted	2026
Single equivalent interest rate, net of plan investment expense, including price inflation	
Prior measurement date	3.63%
Measurement date	3.70%
Medical Trend Assumption	
Pre-Medicare	7.25% - 4.75%
Medicare	5.375% - 4.75%
Mortality	RP-2014 Blue Collar Mortality Table with fully generational projection and Scale BB, 120% of male rates and 110% of female rates. RP-2000 Disabled Mortality Table with 90% for male rates and 100% for female rates set back five years.

Sensitivity of the net OPEB liability to changes in the discount rate and health care cost trend rate The following table presents the net OPEB liability of SERS, what SERS' net OPEB liability would be if it were calculated using a discount rate that is 1% lower (2.70%) and higher (4.70%) than the current discount rate (3.70%).

Net OPEB Liability		
1% Decrease (2.70%)	Discount Rate (3.70%)	1% Increase (4.70%)
$3,366,358,701	$2,774,270,132	$2,305,446,902

The following table presents the OPEB liability of SERS, what SERS' net OPEB liability would be based on health care cost trend rates that are 1% lower (6.25% decreasing to 3.75%) and 1% higher (8.25% decreasing to 5.75%) than the current rate.

Net OPEB Liability		
1% Decrease (6.25% decreasing to 3.75%)	Health Care Cost Trend Rates (7.25% decreasing to 4.75%)	1% Increase (8.25% decreasing to 5.75%)
$2,238,327,059	$2,774,270,132	$3,483,954,923

17. Defined Benefit OPEB Plan

Net OPEB Liability The net OPEB liability reported on the Statement of Fiduciary Net Position represents the liability of employers and non-employer contributing entities to employees for defined benefit other postemployment benefits other than pensions. It is included in accounts payable and accrued expenses in the Statement of Fiduciary Net Position. SERS, a cost-sharing employer, is required under GASB Statement No. 75 to recognize a liability for its proportionate share of the net OPEB liability from Ohio Public Employees Retirement System (OPERS). The net OPEB liability is an actuarially determined portion of the present value of projected benefit payments to be provided to current active and inactive employees that is attributed to those employees' past periods of total service (total OPEB liability), less the amount of the OPEB plan's fiduciary net position. SERS is also required to recognize OPEB expense and report deferred outflows and inflows of resources related to OPEB.

OPEB plan description - Ohio Public Employees Retirement System (OPERS) OPERS is a cost-sharing, multiple-employer public employee retirement system comprised of three separate pension plans: the Traditional Pension Plan, a defined benefit plan; the Combined Plan, a combination defined benefit/defined contribution plan; and the Member-Directed Plan, a defined contribution plan. All state and local governmental employees in Ohio, except those covered by one of the other state or local retirement systems in Ohio, are members of OPERS. New public employees (those who establish membership in OPERS on or after January 1, 2003) have 180 days from the commencement of employment to select membership in one of the three pension plans. Contributions to OPERS are effective with the first day of the member's employment. Contributions made prior to the member's plan selection are maintained in the Traditional Pension Plan and later transferred to the plan elected by the member, as appropriate.

As of December 2016, OPERS maintains one health care trust, the 115 Health Care Trust (115 Trust), which was established in 2014 to initially provide a funding mechanism for a health reimbursement arrangement (HRA), as the prior trust structure could not support the HRA. In March 2016, OPERS received two favorable rulings from the Internal Revenue Service (IRS) allowing OPERS to consolidate health care assets into the 115 Trust. The 401(h) Health Care Trust (401(h) Trust) was a pre-funded trust that provided health care funding for eligible members of the Traditional Pension Plan and the Combined Plan through December 31, 2015, when plans funded through the 401(h) Trust were terminated. The Voluntary Employees' Beneficiary Association Trust (VEBA Trust) accumulated funding for retiree medical accounts for participants in the Member-Directed Plan through June 30, 2016. The 401(h) Trust and the VEBA Trust were closed as of June 30, 2016, and the net positions transferred to the 115 Trust on July 1, 2016. Beginning in 2016, the 115 Trust, established under Internal Revenue Code (IRC) Section 115, is the funding vehicle for all health care plans.

The OPERS health care plans are reported as other post-employment benefit plans (OPEB) based on the criteria established by the Governmental Accounting Standards Board (GASB). Periodically, OPERS modifies the health care program design to improve the ongoing solvency of the plans. Eligibility requirements for access to the OPERS health care options have changed over the history of the program for Traditional Pension Plan and Combined Plan members. Prior to January 1, 2015, 10 or more years of service were required to qualify for health care coverage. Beginning January 1, 2015, generally, members must be at least age 60 with 20 years of qualifying service credit to qualify for health care coverage or 30 years of qualifying service at any age. Beginning 2016, Traditional Pension Plan and Combined Plan retirees enrolled in Medicare A and B were eligible to participate in the OPERS Medicare Connector (Connector). The Connector, a vendor selected by OPERS, assists eligible retirees in the selection and purchase of Medicare supplemental coverage through the Medicare market. Retirees that purchase supplemental coverage through the Connector may receive a monthly allowance in their HRA that can be used to reimburse eligible health care expenses.

Upon termination or retirement, Member-Directed Plan participants can use vested retiree medical account funds for reimbursement of qualified medical expenses. Members who elect the Member-Directed Plan after July 1, 2015 will vest in health care over 15 years at a rate of 10% each year starting with the sixth year of participation. Members who elected the Member-Directed Plan prior to July 1, 2015, vest in health care over a five-year period at a rate of 20% per year. Health care coverage is neither guaranteed nor statutorily required.

OPERS is administrated in accordance with Chapter 145 of the Ohio Revised Code (ORC). OPERS is not part of the state of Ohio financial-reporting entity, nor is OPERS a component unit of the state of Ohio. Responsibility for the organization is vested in the OPERS Board of Trustees (Board); there is no financial interdependency with the state of Ohio. The Board is the governing body of OPERS, with responsibility for administration and management. Of the Board, seven members are elected by the group they represent: the retirees (two representatives), employees of the state, employees of counties, employees of municipalities, non-teaching employees of state colleges and universities and miscellaneous employees. The remaining four members are appointed or designated by position. The Governor, General Assembly and the Treasurer of the state of Ohio each appoint a representative. The Director of the Ohio Department of Administrative Services completes the Board.

The Board appoints the Executive Director, an actuary, investment consultants and other consultants necessary for the transaction of business. The Board meets monthly and receives no compensation, but is reimbursed for necessary expenses.

All state and local governmental employees, except those covered by another state retirement system in Ohio or the Cincinnati Retirement System, are required to become contributing members of OPERS when they begin public employment unless they are exempted or excluded as defined by the ORC. For actuarial purposes, employees who have earned sufficient service credit (60 contributing months) are entitled to a future pension benefit from OPERS. Employer, employee and retiree data as of December 31, 2017, can be found in the OPERS 2017 CAFR.

OPEB benefits - OPERS All benefits of the System, and any benefit increases, are established by the legislature pursuant to ORC Chapter 145. The Board, pursuant to ORC Chapter 145, has elected to maintain funds to provide health care coverage to eligible Traditional Pension Plan and Combined Plan retirees and survivors of members. Health care coverage does not vest and is not required under ORC Chapter 145. As a result, coverage may be reduced or eliminated at the discretion of the Board. The health care portion of the employer contribution rate for the Traditional Pension Plan and Combined Plan is comparable, as the same coverage options are provided to participants in both plans.

Prior to January 1, 2015, the System provided comprehensive health care coverage to retirees with 10 or more years of qualifying service credit and offered coverage to their dependents on a premium deduction or direct bill basis. Beginning January 1, 2015, the service eligibility criteria for health care coverage increased from 10 years to 20 years with a minimum age of 60, or 30 years of qualifying service at any age. Beginning with January 2016 premiums, Medicare-eligible retirees could select supplemental coverage through the Connector, and may be eligible for monthly allowances deposited to an HRA to be used for reimbursement of eligible health care expenses. Coverage for non-Medicare retirees includes hospitalization, medical expenses and prescription drugs. The System determines the amount, if any, of the associated health care costs that will be absorbed by the System and attempts to control costs by using managed care, case management, and other programs.

Participants in the Member-Directed Plan are not eligible for health care coverage offered to benefit recipients in the Traditional Pension Plan and Combined Plan. A portion of employer contributions for these participants is allocated to a retiree medical account. Upon separation or retirement, participants may be reimbursed for qualified medical expenses from these accounts.

An additional retiree medical account (RMA) was also established several years ago when three health care coverage levels were available to retirees. Monthly allowance amounts in excess of the cost of the retiree's selected coverage were notionally credited to the retiree's RMA. Retirees and their dependents could seek reimbursements from the RMA balances for qualified medical expenses. In 2013, the number of health care options available to retirees was reduced from three to one, eliminating the majority of deposits to the RMA. Wellness incentive payments were the only remaining deposits made to this RMA. Wellness incentives are no longer awarded starting with the 2017 plan year. These RMA balances were transferred to the HRA for retirees with both types of accounts. In addition, OPERS initiated an automatic claims payment process for reimbursements for retiree health care costs paid through pension deduction. This process will reimburse members for eligible health care premiums paid to OPERS, currently through pension deduction, up to the member's available RMA balance.

OPEB funding policy - OPERS The OPERS funding policy provides for periodic member and employer contributions to all three plans (Traditional Pension, Combined and Member-Directed) at rates established by the Board, subject to limits set in statute. The rates established for member and employer contributions were approved based upon the recommendations of the System's external actuary. All contribution rates were within the limits authorized by the ORC.

Member and employer contribution rates, as a percent of covered payroll, were the same for each covered group across all three plans for the year ended December 31, 2017. Within the Traditional Pension Plan and Combined Plan, member and employer contributions (employer contributions only for the Combined Plan) and an actuarially determined rate of return are adequate to accumulate sufficient assets to pay defined benefits when due. Member contributions within the Combined Plan are not used to fund the defined benefit retirement allowance. Employer contribution rates as a level percent of payroll dollars are determined using the entry age actuarial funding method. This formula determines the amount of contributions necessary to fund: (1) the current service cost, representing the estimated amount necessary to pay for defined benefits earned by the members during the current service year; and (2) the prior service cost for service earned prior to the current year and subsequent benefit increases. These contributions represent the amount necessary to fund accrued liabilities for retirement allowances and survivor benefits over a period of time. The annual employer contributions reported for the Traditional Pension Plan for 2017 were $1,722,856,378. Employer contributions for the Combined Plan for 2017 were $53,636,897. Employers satisfied 100% of the contribution requirements.

The member and employer contribution rates for the State and Local divisions are currently set at the maximums authorized by the ORC of 10% and 14%, respectively. With the assistance of the System's actuary and Board approval, a portion of each employer contribution to OPERS may be set aside for the funding of post-employment health care coverage. The portion of Traditional Pension Plan and Combined Plan employer contributions allocated to health care was 1.0% for 2017. The employer contribution as a percent of covered payroll deposited for Member-Directed Plan health care accounts for 2017 was 4.0%. The 2018 allocation is expected to be 0.0% for health care funding, and expected to continue at the rate thereafter.

Due to the discretionary nature of health care funding and the potential for frequent changes in allocations, including no funding to health care for some plans, the calculation of proportionate shares of employers is based on total employer contributions. Total employer contributions were $1,989,941,685 for the year ended December 31, 2017. These contributions are included in the OPERS Combining Statement of Changes in Fiduciary Net Position included in the OPERS 2017 CAFR and provided the basis for the proportionate share percentages calculated by OPERS and reported in the Schedule of Employer Allocations.

As of December 31, 2017, the date of the last pension actuarial study, the funding period for all defined benefits of the System was 18 years.

SERS' contractually required employer contributions to OPERS for OPEB funding were $187,370 for FY2018. Of this amount, $13,759 is reported as an intergovernmental payable.

OPEB investment policy The allocation of investment assets within the Health Care portfolio is approved by the Board as outlined in the annual investment plan. Assets are managed on a total return basis with a long-term objective of continuing to offer a sustainable health care program for current and future retirees. The System's primary goal is to achieve and maintain a fully funded status for benefits provided through the defined pension plans. Health care is a discretionary benefit. The table below displays the Board-approved asset allocation policy for 2017 and the long-term expected real rates of return.

Asset Class	Target Allocation for 2017	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed Income	34.00%	1.88%
Domestic Equities	21.00	6.37
Real Estate	6.00	5.91
International Equities	22.00	7.88
Other Investments	17.00	5.39
Total	**100.00%**	**4.98%**

The long-term expected rate of return on health care investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation.

During 2017, OPERS managed investments in three investment portfolios: the Defined Benefit portfolio, the Health Care portfolio and the Defined Contribution portfolio. The Health Care portfolio includes the assets for health care expenses for the Traditional Pension Plan, Combined Plan and Member-Directed Plan eligible members. Within the Health Care portfolio, contributions into the plans are assumed to be received continuously throughout the year based on the actual payroll payable at the time contributions are made, and health care-related payments are assumed to occur mid-year. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Health Care portfolio is 15.2% for 2017.

OPEB liabilities (assets), OPEB expense, and deferred outflows of resources and deferred inflows of resources related to OPEB The net OPEB liability was measured as of December 31, 2017, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of that date. SERS' proportionate share of the net OPEB liability was based on SERS' portion of employer contributions to the pension plan that were allocated to health care (1.0% of the 14% Traditional Pension Plan and Combined Plan employer contributions and 4.0% of the 14% Member-Directed Plan employer contributions). Gains and losses related to changes in total OPEB liability and fiduciary net position are recognized in OPEB expense systematically over time. Amounts are first recognized as deferred outflows and deferred inflows of resources related to OPEB and are to be recognized in future OPEB expense. The recognition period differs depending on the source of the gain or loss: net difference between projected and actual earning on OEPB plan investments are recognized over a five-year period; all other amounts are recognized over expected average remaining service lives of all plan members. The following is information relative to the OPEB proportionate share and OPEB expense:

OPERS	
SERS' Proportionate Share of the Net OPEB Liability	$ 11,519,966
SERS' Proportion of the Net OPEB Liability	0.1060842%
SERS' OPEB Expense	$ 924,397

OPERS	
Deferred Outflows of Resources	
Assumption Changes	$ 838,775
Differences between expected and actual experience	8,974
Changes in Proportion	92,719
Contributions subsequent to the measurement date*	90,129
Total Deferred Outflows of Resources	**$ 1,030,597**
Deferred Inflows of Resources	
Net Difference between projected and actual earnings on pension plan investments	$ (858,160)
Total Deferred Inflows of Resources	**$ (858,160)**

*$90,129 reported as deferred outflows of resources related to pensions resulting from SERS' contributions subsequent to the measurement date will be recognized as a reduction of the net OPEB liability in the year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in OPEB expense as indicated in the schedule above. Deferrals arising from differences between expected and actual earnings on pension plan investments will be amortized over five years for both plans. Deferrals arising from differences between projected and actual experience and changes in proportionate share will be amortized over the average remaining service life of the entire pool of employees of 3.0916 years.

OPERS - Amortization of net deferred inflows of resources	
Fiscal Year Ending June 30	
2019	$ (235,101)
2020	(235,101)
2021	173,353
2022	214,541
Totals	**$ (82,308)**

OPEB discount rate - OPERS A single discount rate of 3.85% was used to measure the OPEB liability on the measurement date of December 31, 2017. Projected benefit payments are required to be discounted to their actuarial present value using a single discount rate that reflects (1) a long-term expected rate of return on OPEB plan investments (to the extent that the health care fiduciary net position is projected to be sufficient to pay benefits), and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate are not met). This single discount rate was based on an expected rate of return on the health care investment portfolio of 6.50% and a municipal bond rate of 3.31%. The projection of cash flows used to determine this single discount rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on these assumptions, the health care fiduciary net position and future contributions were sufficient to finance health care costs through 2034. As a result, the long-term expected rate of return on health care investments was applied to projected costs through the year 2034, and the municipal bond rate was applied to all health care costs after that date.

Sensitivity of SERS' proportionate share of the net OPEB liability to changes in the discount rate The following table presents the OPEB liability calculated using the single discount rate of 3.85%, and the expected net OPEB liability if it were calculated using a discount rate that is 1.0% lower (2.85%) or 1.0% higher (4.85%) than the current rate:

Sensitivity of SERS' proportionate share of the net OPEB liability to changes in the discount rate

	1% Decrease (2.85%)	Single Discount Rate (3.85%)	1% Increase (4.85%)
As of December 31, 2017	$ 15,304,772	$ 11,519,966	$ 8,458,095

Sensitivity to SERS' proportionate share of the net OPEB liability to changes in the health care cost trend rate Retiree health care valuations use a health care cost-trend assumption that changes over several years built into the assumption. The near-term rates reflect increases in the current cost of health care; the trend starting in 2018 is 7.50%. If this trend continues for future years, the projection indicates that years from now virtually all expenditures will be for health care. A more reasonable alternative is that in the not-too-distant future, the health plan cost trend will decrease to a level at, or near, wage inflation. On this basis, the actuaries project premium rate increases will continue to exceed wage inflation for approximately the next decade, but by less each year, until leveling off at an ultimate rate, assumed to be 3.25% in the most recent valuation.

Changes in the health care cost trend rate may also have a significant impact on the net OPEB liability. The following table presents the net OPEB liability calculated using the assumed trend rates, and the expected net OPEB liability if it were calculated using a health care cost trend rate that is 1.0% lower or 1.0% higher than the current rate:

Sensitivity of SERS' proportionate share of the net OPEB liability to changes in the health care cost trend rate

	1% Decrease (6.50%)	Current Health Care Cost Trend Rate Assumption (7.50%)	1% Increase (8.50%)
As of December 31, 2017	$ 11,022,151	$ 11,519,966	$ 12,034,195

OPEB average remaining service life GASB Statement No. 75 requires that changes arising from differences between expected and actual experience or from changes in actuarial assumptions be recognized in OPEB expense over the average remaining service lives of all employees provided with coverage through the health care plans (active and inactive). This is to consider these differences on a pooled basis, rather than an individual basis, to reflect the expected remaining service lives of the entire pool of employees with the understanding that inactive employees have no remaining service period. As of December 31, 2017, the average of the expected remaining service lives of all employees calculated by OPERS' external actuaries was 3.0916 years.

OPEB actuarial assumptions - OPERS Projections of health care costs for financial reporting purposes are based on the substantive plan and include the types of coverage provided at the time of each valuation and the historical pattern of sharing of costs between the System and plan members. The total OPEB liability was determined by an actuarial valuation as of December 31, 2016, rolled forward to the measurement date of December 31, 2017.

The actuarial valuation used the following actuarial assumptions applied to all prior periods included in the measurement in accordance with the requirements of GASB Statement No. 74:

Key Methods and Assumptions Used in Valuation of Total OPEB Liability	
Actuarial Information	
Actuarial Valuation Date	December 31, 2016
Rolled-Forward Measurement Date	December 31, 2017
Experience Study	5-Year Period Ended December 31, 2015
Actuarial Cost Method	Individual entry age normal
Actuarial Assumptions:	
Single Discount Rate	3.85%
Investment Rate of Return	6.50%
Municipal Bond Rate	3.31%
Wage Inflation	3.25%
Projected Salary Increases (with wage inflation)	3.25% - 10.75%
Health Care Cost Trend Rate	7.50% initial, 3.25% ultimate in 2028

Pre-retirement mortality rates are based on the RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to all of the above described tables.

18. Recently Issued Accounting Pronouncements

The GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The requirements of this Statement are effective for financial statements for fiscal years beginning after June 15, 2017. It establishes new accounting and financial reporting requirements for governments whose employees are provided with OPEB. The Statement has been implemented as required in SERS' financial statements, note disclosures and Required Supplementary Information included in this report.

The GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*. The requirements of this Statement are effective for fiscal years ending December 31, 2017 and after. This Statement provides recognition and measurement guidance for situations in which a government is a beneficiary of an irrevocable split-interest agreement. Management has reviewed this Statement and determined SERS is not impacted.

The GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. The requirements of this Statement are effective for fiscal years ending on or after June 30, 2019. This Statement requires the measurement and recognition of a legally enforceable liability for retirement of an asset. The measurement of an asset retirement obligation is required to be based on the best estimate of the *current value* of outlays to be incurred. Additionally, the Statement requires that a deferred outflow of resources be measured at the amount of the corresponding liability upon initial measurement, and that the current value be adjusted for general inflation and deflation annually. Management has reviewed this Statement and determined SERS is not impacted.

The GASB issued Statement No. 84, *Fiduciary Activities*. The requirements for this Statement are effective for reporting periods ending on or after December 31, 2019. The focus of this Statement is on identifying fiduciary activities of all state and local governments. Activity meeting the criteria set forth in the Statement should be reported in a fiduciary fund in the basic financial statements. There are four fiduciary funds that should be reported, if applicable: pension trust funds, investment trust funds, private-purpose trust funds, and custodial funds. SERS has determined there is no impact to its financial reporting.

The GASB issued Statement No. 85, *Omnibus 2017*. The requirements of this Statement will take effect starting with fiscal years ending June 30, 2018. This Statement addresses practice issues that have been identified while implementing certain prior GASB Statements. Topics include: fair value measurement and application of certain investments; pension and other postemployment benefits (OPEB) liabilities should be measured from the end of the reporting period; recognizing expenditures for pension or OPEB payments employers made on behalf of their employees equal to the total of the amounts paid during the period by nonemployer contributing entities and the change in nonemployer contributing entities amounts that are normally expected to be liquidated; clarifying covered payroll in RSI and the measurement of payroll for trust-administered OPEB plans; classifying payments made by an employer to satisfy employee contributions be presented as employee contributions and recognizing them in the period for which the contribution is assessed; and, additional OPEB financial note requirements. The requirements of this Statement have been reflected in this report.

The GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*. The requirements of this Statement will take effect beginning with fiscal years that end June 30, 2018. This Statement establishes rules for accounting for transactions in which cash and other monetary assets acquired with only existing resources are placed in an irrevocable trust for the sole purpose of extinguishing debt. Management has reviewed this Statement and determined SERS is not impacted.

The GASB issued Statement No. 87, *Leases*. The requirements for this Statement are effective for financial statements beginning with the fiscal year that ends December 31, 2020. This Statement's objective is to improve accounting and financial reporting for leases by governments. The payments for short-term leasing of equipment should be recognized as outflows of resources based on the provisions of the lease contract. The impact of the requirements of this Statement to SERS is still being determined by management.

The GASB issued Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*. The requirements of this Statement are effective for reporting periods beginning after July 15, 2018. The objective of this Statement is to improve note disclosures in government financial statements related to debt, including direct borrowings and direct placements. Requirements include that additional essential information related to debt be disclosed in notes to financial statements, including unused lines of credit; assets pledged as collateral for the debt; and terms specified in debt agreements related to significant events of default with finance-related consequences, significant termination events with finance-related consequences, and significant subjective acceleration clauses. Management of SERS is still determining the impact of this Statement.

The GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period.* The requirements of this Statement are effective for periods beginning after December 15, 2019. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. This Statement does not impact SERS' financial reporting.

The GASB issued Statement No. 90, *Majority Equity Interests-an amendment of GASB Statements No. 14 and No. 61*. The requirements for this Statement are effective for reporting periods beginning after December 15, 2018. This Statement will improve financial reporting by providing users of financial statements with essential information related to presentation of majority equity interests in legally separate organizations that was previously reported inconsistently. In addition, requiring reporting of information about component units if the government acquires a 100 percent equity interest provides information about the cost of services to be provided by the component unit in relation to the consideration provided to acquire the component unit. It defines a majority equity interest, specifies that majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment, and establishes that ownership of a majority equity interest in a legally separate organization results in the government being financially accountable for the legally separate organization and, therefore, the government should report that organization as a component unit. The impact of the requirements of this Statement to SERS is still being determined by management.

THIS PAGE INTENTIONALLY
LEFT BLANK

Required Supplementary Pension Information

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY(1)

	2018	2017	2016	2015	2014
Total pension liability					
Service Cost	$ 368,167,321	$ 335,918,449	$ 344,059,634	$ 338,060,547	$ 332,975,336
Interest	1,420,093,605	1,436,626,290	1,385,878,598	1,341,777,662	1,296,763,757
Benefit changes	(357,618,668)	(998,484,758)	—	—	—
Difference between expected and actual experience	286,313,613	275,031,424	50,307,199	78,749,615	53,951,305
Changes of assumptions	—	—	668,216,579	—	—
Benefit payments	(1,248,097,556)	(1,170,689,006)	(1,110,694,355)	(1,076,498,383)	(993,355,839)
Refunds of contributions	(59,575,036)	(60,692,833)	(70,340,495)	(60,635,651)	(55,668,466)
Net change in total pension liability	409,283,279	(182,290,434)	1,267,427,160	621,453,790	634,666,093
Total pension liability – beginning	19,588,417,687	19,770,708,121	18,503,280,961	17,881,827,171	17,247,161,078
Total pension liability – ending (a)	$ 19,997,700,966	$ 19,588,417,687	$ 19,770,708,121	$ 18,503,280,961	$ 17,881,827,171
Plan net position					
Contributions – employer	$ 435,103,620	$ 467,796,738	$ 436,421,681	$ 395,804,105	$ 405,029,627
Contributions – member	324,842,074	336,627,658	314,325,716	303,866,076	295,690,550
Net investment income	1,242,021,081	1,613,368,560	106,543,126	441,455,552	1,888,288,396
Benefit payments	(1,248,097,556)	(1,170,689,006)	(1,110,694,355)	(1,076,498,383)	(993,355,839)
Administrative expense	(26,993,893)	(24,403,350)	(21,808,880)	(19,305,477)	(19,582,190)
Refunds of contributions	(59,575,036)	(60,692,833)	(70,340,495)	(60,635,651)	(55,668,466)
Other	—	—	—	1,874,997	—
Net change in plan net position	667,300,290	1,162,007,767	(345,553,207)	(13,438,781)	1,520,402,078
Plan net position – beginning	13,603,215,458*	12,451,630,823	12,797,184,030	12,810,622,811*	11,300,482,029
Plan net position – ending (b)	14,270,515,748	13,613,638,590*	12,451,630,823	12,797,184,030	12,820,884,107*
Net pension liability – ending (a) – (b)	$ 5,727,185,218	$ 5,974,779,097	$ 7,319,077,298	$ 5,706,096,931	$ 5,060,943,064

(1)The effort and cost to re-create financial statement information for the previous five years was not practical. Information was prepared prospectively from June 30, 2014 for GASB 67 purposes. Additional years will be added to the schedule as they become available.

*Beginning Net Position was restated in FY2015 due to the implementation of GASB 68, and in FY2018 due to the implementation of GASB 75.

SCHEDULE OF THE NET PENSION LIABILITY(1)

	2018	2017	2016	2015	2014
Total pension liability	$ 19,997,700,966	$ 19,588,417,687	$ 19,770,708,121	$ 18,503,280,961	$ 17,881,827,171
Plan net position	14,270,515,748	13,613,638,590	12,451,630,823	12,797,184,030	12,820,884,107
Net pension liability	$ 5,727,185,218	$ 5,974,779,097	$ 7,319,077,298	$ 5,706,096,931	$ 5,060,943,064
Ratio of plan net position to total pension liability	71.36%	69.50%	62.98%	69.16%	71.70%
Covered payroll	$ 3,332,395,171	$ 3,302,805,662	$ 2,932,236,551	$ 2,845,443,802	$ 2,922,291,681
Net pension liability as a percentage of covered payroll	171.86%	180.90%	249.61%	200.53%	173.18%

(1)The effort and cost to re-create financial statement information for the previous five years was not practical. Information was prepared prospectively from June 30, 2014 for GASB 67 purposes. Additional years will be added to the schedule as they become available.

See accompanying notes to the required supplementary information.

SCHEDULE OF EMPLOYER CONTRIBUTIONS *($ in millions)*

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined employer contribution	$ 435.1	$ 467.8	$ 436.4	$ 397.7	$ 402.0	$ 402.2	$ 399.7	$ 379.3	$ 402.0	$ 291.1
Actual employer contributions	435.1	467.8	436.4	397.7	402.0	402.2	399.7	379.3	402.0	291.1
Annual contribution deficiency (excess)	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Covered payroll	$3,332.4	$3,302.8	$2,932.2	$2,845.4	$2,922.3	$2,905.7	$2,971.9	$3,017.5	$2,969.3	$2,958.0
Actual contributions as a percentage of covered payroll	13.06%	14.16%	14.88%	13.98%	13.76%	13.84%	13.45%	12.57%	13.54%	9.84%

SCHEDULE OF INVESTMENT RETURNS[1]

Year ended June 30	2018	2017	2016	2015	2014
Annual money weighted rate of return, net of investment expense	9.37%	13.27%	0.81%	3.45%	17.21%

[1]The effort and cost to re-create financial statement information for the previous five years was not practical. Information was prepared prospectively from June 30, 2014 for GASB 67 purposes. Additional years will be added to the schedule as they become available.

See accompanying notes to the required supplementary information.

Notes to Required Supplementary Pension Information June 30, 2018

Changes of Benefit and Funding Terms

In FY2018, post-retirement increases in benefits included the following changes:

1. Members, or their survivors, retiring prior to January 1, 2018, receive a COLA increase of 3% of their base benefit on the anniversary of their initial date of retirement.
2. Members, or their survivors, retiring on and after January 1, 2018, receive a COLA increase on each anniversary of their initial date of retirement equal to the annual rate of increase in the CPI-W measured as of the June preceding the beginning of the applicable calendar year. The annual rate of increase shall not be less than 0%, nor greater than 2.5%. COLAs are suspended for calendar years 2018, 2019, and 2020.
3. Members, or their survivors, retiring on and after April 1, 2018, will have their COLA delayed for three years following their initial date of retirement.

Changes in Actuarial Assumptions from 2017

The COLA was changed from a fixed 3.00% to a COLA that is indexed to CPI-W not greater than 2.50% with a floor of 0.0% beginning January 1, 2018. In addition, with the authority granted the Board under HB 49, the Board has enacted a three-year COLA delay for benefit recipients in calendar years 2018, 2019, and 2020.

Additional Actuarial Information

The following actuarial methods and assumptions (from the June 30, 2017 actuarial valuation) were used to determine the Actuarially Determined Contribution reported for FY2018 in the Schedule of Employer Contributions:

Actuarial cost method:	Entry age normal
Amortization method:	Level percent of payroll
Remaining amortization period:	27 years
Asset valuation method:	4-year smoothed market
Inflation:	3.00%
Salary increase, including price inflation:	3.50% - 18.20%
Investment rate of return:	7.50% net of investment expense, including inflation
Mortality:	The RP-2014 Blue Collar Mortality Table with fully generational projection and Scale BB, 120% of male rates and 110% of female rates is used to evaluate allowances to be paid. The RP-2000 Disabled Mortality Table with 90% for male rates and 100% for female rates set back five years is used for the period after disability retirement. These assumptions are used to measure the probabilities of each benefit payment being made after retirement.

Required Supplementary Health Care Information

SCHEDULE OF CHANGES IN NET OPEB LIABILITY(1)

		2018		2017
Total OPEB liability				
Service Cost	$	155,385,800	$	178,649,865
Interest		109,982,145		101,409,264
Benefit changes		—		—
Difference between expected and actual experience		53,656,583		—
Changes of assumptions		(102,900,217)		(295,667,088)
Benefit payments*		(72,071,363)		(86,257,389)
Net change in total OPEB liability		144,052,948		(101,865,348)
Total OPEB liability - beginning		3,065,846,821		3,167,712,169
Total OPEB liability - ending (a)	$	3,209,899,769	$	3,065,846,821
Plan net position				
Contributions - employer	$	100,056,736	$	65,013,891
Net investment income		28,167,652		35,730,747
Benefit payments*		(72,071,363)		(86,257,389)
Administrative expense		(2,632,948)		(2,582,204)
Other		—		—
Net change in plan net position		53,520,077		11,905,045
Plan net position - beginning		382,109,560		370,204,515
Plan net position - ending (b)		435,629,637		382,109,560
Net OPEB liability - ending (a) - (b)	$	2,774,270,132	$	2,683,737,261

*Benefit payments are net of retiree contributions

(1)Additional years will be added to the schedule as they become available.

SCHEDULE OF NET OPEB LIABILITY(1)

		2018		2017
Total OPEB liability	$	3,209,899,769	$	3,065,846,821
Plan net position		435,629,637		382,109,560
Net OPEB liability	$	2,774,270,132	$	2,683,737,261
Ratio of plan net position to total OPEB liability		13.57%		12.46%
Covered payroll	$	3,332,395,171	$	3,303,055,969
Net OPEB liability as a percentage of covered payroll		83.25%		81.25%

(1)Additional years will be added to the schedule as they become available.

SCHEDULE OF EMPLOYER CONTRIBUTIONS *($ in millions)*

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined employer contribution	$ 189.4	$ 178.0	$ 161.6	$ 164.2	$ 190.4	$ 171.4	$ 155.9	$ 169.1	$ 315.5	$ 373.8
Actual employer contributions	100.1	65.0	77.3	89.0	75.3	45.5	56.5	86.9	84.6	186.9
Annual contribution deficiency (excess)	$ 89.3	$ 113.0	$ 84.3	$ 75.2	$ 115.1	$ 125.9	$ 99.4	$ 82.2	$ 230.9	$ 186.9
Covered payroll	$3,332.4	$3,303.1	$2,932.2	$2,845.4	$2,759.3	$2,746.8	$2,788.2	$2,852.4	$2,842.7	$2,787.4
Actual contributions as a percentage of covered payroll	3.00%	1.97%	2.64%	3.13%	2.73%	1.66%	2.03%	3.05%	2.97%	6.71%

SCHEDULE OF OPEB INVESTMENT RETURNS(1)

Year ended June 30	2018	2017
Annual money weighted rate of return, net of investment expense	8.05%	11.59%

(1)Additional years will be added to the schedule as they become available.
See accompanying notes to the required supplementary information.

Notes to Required Supplementary Health Care Information

Changes of Benefit and Funding Terms

In FY2018, SERS' funding policy allowed a 2.0% health care contribution rate to be allocated to the Health Care fund. The 2.0% is a combination of 0.5% employer contributions and 1.5% surcharge.

Changes in Actuarial Assumptions from 2017

Medical trend rates have been adjusted to reflect premium decreases.

Additional Actuarial Information

The following actuarial methods and assumptions (from the June 30, 2017 actuarial valuation) were used to determine the Actuarially Determined Contribution reported for FY2018 in the Schedule of Employer Contributions – OPEB:

Actuarial cost method:	Entry age normal
Amortization method:	Level percent of payroll
Remaining amortization period:	30 years
Asset valuation method:	Market value
Price inflation:	3.00%
Salary increase, including price inflation:	3.50% - 18.20%
Actuarial assumptions:	Investment rate of return 5.25%, compounded annually
Medical trend assumptions:	Pre-Medicare - 7.50% initially, decreasing to 4.00% by 2022 Medicare - 5.50% initially, decreasing to 5.00% by 2022

OPERS related Required Supplementary Pension Information

Schedule of SERS' Proportionate Share of the Net Pension Liability
Ohio Public Employees Retirement Plan - Traditional Pension Plan

Last 10 Fiscal Years*	2018	2017	2016	2015
SERS' proportion of the net pension liability (asset)	0.0973540%	0.0956142%	0.0937745%	0.0925739%
SERS' proportionate share of the net pension liability (asset)	$ 15,272,959	$ 21,712,365	$ 16,242,931	$ 11,165,446
SERS' covered payroll	11,946,483	10,594,473	10,003,875	9,728,270
SERS' proportionate share of the net pension liability (asset) as a % of its covered payroll	128%	205%	162%	115%
Plan fiduciary net position as a % of the total pension liability	84.66%	77.25%	81.08%	86.45%

*The amounts presented were determined as of 12/31 of the prior calendar year. GASB 68 was implemented in 2015. Additional years will be added to the schedule as they become available.

Schedule of SERS' Proportionate Share of the Net Pension Liability
Ohio Public Employees Retirement Plan - Combined Pension Plan

Last 10 Fiscal Years*	2018	2017	2016	2015
SERS' proportion of the net pension liability (asset)	0.2256010 %	0.2277590 %	0.2364605 %	0.2391363 %
SERS' proportionate share of the net pension liability (asset)	$ (307,116)	$ (126,764)	$ (115,067)	$ (92,073)
SERS' covered payroll	857,951	759,911	737,594	749,257
SERS' proportionate share of the net pension liability (asset) as a % of its covered payroll	(36%)	(17%)	(16%)	(12%)
Plan fiduciary net position as a % of the total pension liability	137.28%	116.55%	116.90%	114.83%

*The amounts presented were determined as of 12/31 of the prior calendar year. GASB 68 was implemented in 2015. Additional years will be added to the schedule as they become available.

Schedule of Contributions
Ohio Public Employees Retirement Plan - Traditional Pension Plan

Last 10 Fiscal Years*	2018	2017	2016	2015
Contractually required contribution	$ 1,672,507	$ 1,483,226	$ 1,400,542	$ 1,361,957
Contributions in relation to the contractually required contribution	1,672,507	1,483,226	1,400,542	1,361,957
Contribution deficiency (excess)	—	—	—	—
SERS' covered payroll	$ 12,044,350	$ 10,800,014	$ 10,306,504	$ 9,877,210
Contributions as a % of covered payroll	14%	14%	14%	14%

*The amounts presented were determined as of 6/30 of the fiscal year. GASB 68 was implemented in 2015. Additional years will be added to the schedule as they become available.

Schedule of Contributions
Ohio Public Employees Retirement Plan - Combined Pension Plan

Last 10 Fiscal Years*	2018	2017	2016	2015
Contractually required contribution	$ 120,113	$ 106,388	$ 103,263	$ 104,896
Contributions in relation to the contractually required contribution	120,113	106,388	103,263	104,896
Contribution deficiency (excess)	—	—	—	—
SERS' covered payroll	$ 864,979	$ 774,654	$ 759,907	$ 760,728
Contributions as a % of covered payroll	14%	14%	14%	14%

*The amounts presented were determined as of 6/30 of the fiscal year. GASB 68 was implemented in 2015. Additional years will be added to the schedule as they become available.

OPERS related Required Supplementary OPEB Information

Schedule of SERS' Proportionate Share of the Net OPEB Liability
Ohio Public Employees Retirement Plan

Last 10 Fiscal Years*	2018	2017
SERS' proportion of the net OPEB liability	0.1060842%	0.1047274%
SERS' proportionate share of the net OPEB liability	$ 11,519,966	$ 10,577,819
SERS' covered payroll	1,338,357	2,243,369
SERS' proportionate share of the net OPEB liability as a % of its covered payroll	861%	472%
Plan fiduciary net position as a % of the total OPEB liability	54.14%	54.05%

*The amounts presented were determined as of 12/31 of the prior calendar year. GASB 75 was implemented in 2018. Additional years will be added to the schedule as they become available.

Schedule of OPEB Contributions
Ohio Public Employees Retirement Plan

Last 10 Fiscal Years*	2018	2017
Contractually required contribution	$ 187,370	$ 314,072
Contributions in relation to the contractually required contribution	187,370	314,072
Contribution deficiency (excess)	—	—
SERS' covered payroll	$ 1,349,321	$ 2,286,892
Contributions as a % of covered payroll	14%	14%

*The amounts presented were determined as of 6/30 of the fiscal year. GASB 75 was implemented in 2018. Additional years will be added to the schedule as they become available.

Supplementary Information

Schedule of Administrative Expenses
for the year ended June 30, 2018

	General Expenses	Investment Related Expenses	Total
Personnel Services			
Salaries	$ 12,290,475	$ 2,881,916	$ 15,172,391
Retirement Contributions	4,349,418	347,906	4,697,324
Insurance	2,639,531	263,517	2,903,048
Total Personnel Services	19,279,424	3,493,339	22,772,763
Professional Services			
Actuarial Advisors	283,688	—	283,688
Audit Services	251,250	—	251,250
Custodial Banking	128,900	1,204,743	1,333,643
Investment Related	69,245	2,921,656	2,990,901
Medical	40,000	—	40,000
Technical	1,435,564	93,799	1,529,363
Total Professional Services	2,208,647	4,220,198	6,428,845
Communications			
Postage	609,359	—	609,359
Telecommunications Services	165,220	—	165,220
Member / Employer Education	62,031	—	62,031
Printing and Publication	121,224	—	121,224
Total Communications	957,834	—	957,834
Other Services			
Computer Support Services	1,157,078	—	1,157,078
Office Equipment and Supplies	185,466	438	185,904
Training	248,238	10,016	258,254
Transportation and Travel	132,351	63,619	195,970
Memberships and Subscriptions	85,893	57,990	143,883
Property and Fiduciary Insurance	365,888	—	365,888
Facilities Expense	713,133	—	713,133
Maintenance	77,796	—	77,796
Staff Support	127,803	130	127,933
Ohio Retirement Study Council	45,485	—	45,485
Miscellaneous	74,293	—	74,293
Total Other Services	3,213,424	132,193	3,345,617
Total Administrative Expenses before Depreciation	25,659,329	7,845,730	33,505,059
Depreciation			
Furniture & Equipment	2,608,533	—	2,608,533
Building	1,362,429	—	1,362,429
Total Depreciation	3,970,962	—	3,970,962
Total Administrative Expenses	$ 29,630,291	$ 7,845,730	$ 37,476,021

See accompanying independent auditor's report.

Supplementary Information
Schedule of Investment Expenses
for the year ended June 30, 2018

Description of Expenses		Net Assets Under Management		Direct Fees
US Equity	$	3,350,227,339	$	7,918,818
Non-US Equity		3,293,469,112		15,462,439
Global Private Equity		1,486,215,604		16,496,094
Global Fixed Income		1,949,529,904		4,302,380
Multi-Asset Strategies		1,183,619,761		17,294,543
Global Real Assets		2,044,857,442		19,779,821
Opportunistic Investments		380,727,423		4,111,262
Cash Equivalents		769,649,520		3,884,586
Total Investment Management Fees			$	89,249,943
Custody Service Fees				1,204,743
Master Recordkeeper Fees				1,361,876
Investment Consulting and Performance/Analytics Fees				1,559,780
Investment Administrative Expenses				3,719,331
Total Other Investment Expenses				7,845,730
Total Investment Expenses			$	97,095,673

Schedule of Payments to Consultants

SERS paid the following non-investment related consulting fees in FY2018:

Actuarial Advisors	$	283,688
Audit Services		251,250
Legal Counsel		43,998
Medical Consultant		40,000
Information Technology Consultants		783,859
Health Care Consultants		283,504
Other Consultants		522,348
Total	$	2,208,647

See accompanying independent auditor's report.

Investment Section

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO
300 E. BROAD ST., SUITE 100 • COLUMBUS, OHIO 43215-3746
614-222-5853 • Toll-Free 800-878-5853 • www.ohsers.org

RICHARD STENSRUD
Executive Director

JOSEPH MAROTTA
Interim Deputy Executive Director

December 14, 2018

Retirement Board, Members, Retirees, and Beneficiaries of the Retirement System:

On behalf of the SERS Investment Department, I respectfully submit the Investment Section of the Comprehensive Annual Financial Report for the year ended June 30, 2018. Information in this section was compiled by SERS' Investment and Finance Staff, and BNY Mellon Global Risk Solutions. Investment results are based upon a time-weighted rate of return methodology, and assets are shown at fair value.

SERS' portfolio generated strong performance in FY2018 in both absolute and relative terms. The Total Fund return of 9.2% (net) for FY2018 exceeded the policy benchmark by 0.9% and the 7.5% actuarial rate. All asset classes generated positive returns with Global Private Equity recording the highest return at 19.8%, followed by US Equity at 14.8%. Investment performance has steadily improved over the past six years with implementation of the Investment Strategic Plan adopted in 2012. SERS' five year gross return ranks in the top decile of the public fund peer universe. While returns over the past five years have been exceptional, staff expects returns to moderate going forward as markets appear to be fully valued and the economy is entering a late cycle phase. The overweight portion in Global Equities has been gradually reduced. Global Fixed Income remains underweight due to the risking rate environment, and Cash Equivalents are overweight at 5.4% as of June 30, 2018. These measures are being implemented to reduce risk.

In FY2018, Staff continued to implement the Strategic Investment Plan. Significant progress continued in terms of improving the portfolio structures within asset classes to optimize risk and return, rationalizing manager line-ups, and reducing fees. These initiatives have resulted in excess returns over the benchmark as noted above. Details about each portfolio are included on the following pages.

I wish to thank the Investment staff for their dedication and accomplishments this year, and I appreciate the support of the Board and the Executive team. We look forward to working with the Board and the Executive team in the coming year to serve our members with excellence.

Respectfully,

Farouki Majeed
Chief Investment Officer

Investment Report

Chapter 3309 of the Ohio Revised Code and the Board-adopted Investment Policy govern investment activity at the School Employees Retirement System of Ohio (SERS). The Board is responsible for managing the assets of the Fund effectively, prudently, and for the exclusive benefit of SERS' members and beneficiaries.

INVESTMENT POLICY

The Board approves the Statement of Investment Policy. The purpose of the policy is to set forth SERS' investment philosophy and objectives. The policy establishes investment policies and describes the organization and division of responsibilities necessary to implement the Board's philosophy and objectives prudently; and establishes a framework for making investment decisions, monitoring investment activity, and promotes effective communication between the Board, Staff, and other involved parties.

INVESTMENT OBJECTIVES

The primary objective of the investment portfolio is to achieve investment returns exceeding the return of our Policy Benchmark within prudent risk parameters. Over the long term, it is expected that investment returns also should meet or exceed the Board approved actuarial assumed rate of 7.5%.

INVESTMENT STRATEGIES

Asset Allocation The most recent adjustment was made during FY2013 to reduce multi-asset strategies from 15% to 10% with a corresponding increase in real assets. No changes to the asset allocation were made in FY2018. On June 30, 2018, SERS' asset allocation and its corresponding benchmarks were as follows:

Asset Class	Policy	Benchmark
Global Equities	45%	50% Russell 3000 Index; 50% MSCI ACWI ex-US Index (net dividends)
Global Private Equity	10%	Burgiss All Private Equity Benchmark (BAPE) (one quarter in arrears)
Global Fixed Income	19%	Bloomberg Barclays Capital US Aggregate Bond Index
Global Real Assets	15%	NCREIF Property Index (one quarter in arrears)
Cash Equivalents	1%	Citigroup 30-day T-Bill Index
Strategy		**Benchmark**
Multi-Asset Strategies	10%	HFRI Fund of Funds Composite Index plus 1.0%
Opportunistic Investments	0%	Total Fund Benchmark Return

Diversification Broad diversification within an investment portfolio is used to control the level of risk and volatility within the portfolio over the long term. SERS has adopted a broadly diversified asset allocation policy, and the strategies used within each asset class also have been diversified.

Besides the broad diversification of assets and strategies within SERS' portfolio, SERS also employs a diverse group of investment managers with the goal of outperforming the respective benchmark while managing relative risks.

SERS' multi-asset strategies consultant, Aksia LLC, assists the Staff with the construction and diversification of SERS' multi-asset strategies portfolio and the selection of multi-asset strategies managers. Wilshire Associates, Inc., SERS' general investment consultant, assists the Board on matters of investment policy and asset allocation recommendations. Wilshire also reports to the Board on quarterly performance reviews of the Fund and each portfolio.

Proxy Voting In 2012, the Board adopted SERS' Corporate Governance Principles. The Board authorizes the Proxy Review Committee, which consists of staff members from Executive and Investments, to vote proxies according to SERS Proxy Voting Guidelines. This committee implements a process for voting proxies as described in the Proxy Voting Policy and Procedures document. Staff hires a proxy voting advisor, Institutional Shareholder Services (ISS), to vote proxies according to SERS' custom vote policy and provide advice on corporate governance-related matters.

Sustainability and Corporate Governance Good governance of markets and entities comprising the markets improves outcomes for investors. SERS' Board and Staff will exercise corporate ownership responsibly and with the best fiduciary interest of members and stakeholders. SERS' Board and Staff must be attentive to important environmental, social, and governance issues that affect markets and promote its interests in a responsible manner in the best fiduciary interest of members and stakeholders.

Global Equities

Notwithstanding an increase in macro uncertainty and market volatility, global equities posted another year of gains, establishing one of the longest bull runs on record. As measured by the MSCI All Country World Index (Net), the fiscal year return for global equity was 10.8%. A stable US economy supported by strong growth, solid earnings, and tax cuts created a risk on environment and ample preference for domestic equities as US stocks outpaced other global markets with an annual gain of 14.8% (Russell 3000 Index). Small cap stocks ended the year up 17.6% (Russell 2000 Index) versus the 14.5% posted by large cap (Russell 1000 Index). Though small cap had a strong year, large cap growth posted the highest return across all broad market indices registering an annual return of 22.5%. The subpar performance of value stocks persisted over the year as growth trumped value regardless of region or market cap. The spread between US large cap value and US large cap growth was fairly significant at nearly 16% by fiscal year end. While US markets would go on to set record highs, a desynchronization from international equities that started in February persisted through year end. Although fundamentals looked strong, geopolitical risks, softer economic data, US dollar strength and trade tensions put a damper on markets outside of the US. Developed market performance excluding the US (MSCI World ex-US Index) trailed the US (Russell 3000) by 7.5%. The strong US dollar environment was a significant detractor for emerging markets which posted a return of 8.2%.

Global Private Equity

Calendar year 2017 was another strong year for the global private equity market as asset values and exits showed meaningful gains from the previous year. Investors continued to respond positively to the outperformance of private equity versus other asset classes, driving a further increase in fundraising and adding to the level of capital available for investment, commonly referred to as “Dry Powder.” Taking a closer look, the total number of platform companies purchased in 2017 was relatively flat, being up just 2%, however the value of these purchases was up by 19% to $440 billion reflecting the increased size of transactions. This increase is a direct result of the abundance of low-cost debt financing and the $517 billion of dry powder at the start of 2017. The intense competition for assets has led to increased purchase price multiples and made it very difficult for private equity firms to source attractive deals. Purchase price multiples have risen from 8.5 times earnings in 2008 to an average of 11.2 times earnings in 2017. The positive environment and high valuations paved the way for an excellent exit market. Private equity exits increased 3% in 2017 to a total of $366 billion. The continued positive momentum for private equity produced an abundant fundraising market and private equity backed funds were able to raise an additional $701 billion in 2017. Buyout funds led the way closing on over $300 billion of new commitments, however, this total was aided by the record number of mega buyout funds raised during the year. Current market conditions underscores the importance of identifying and backing high quality private equity managers that remain disciplined in their process, due diligence, and selection criteria throughout investment cycles.

Global Fixed Income

Fixed income outperformed the benchmark during FY2018 primarily due to over-weighting corporates and maintaining a short duration stance as interest rates rose during the fiscal year. The Federal Reserve raised interest rates three times during the fiscal year, ending the Fed Fund rate at 2.0% - 2.3%. Thus, US Treasuries declined 0.7% for the fiscal year, reflecting higher rates. The high yield index returned 2.6%, emerging market debt local currency posted a 0.8% decline, and US investment grade corporates fell 0.8%.

Multi-Asset Strategies

The MAS portfolio consists of long/short hedge fund strategies and other liquid alternatives. For FY2018, the long/short equity sector was the top performing sector at 8.2%, helped by a positive economic backdrop. Gains in long/short equity were driven by technology and health care sectors as momentum and growth factors were the major performance drivers. Event driven strategies which capitalize on corporate activity returned 5.8%. Relative value strategies were up 3.9% with structured and corporate credit strategies performing best. Macro strategies have been the lowest performing sector for the fiscal year at 1.1%. Steady economic growth, low unemployment, and benign inflation in the US continue to suppress market volatility leading to a less than ideal environment for macro strategies. MAS’s multi-strategy sector was up 5.5% and benefited from the risk parity allocation, with equities, bonds, and commodities all earning positive returns during the fiscal year. Overall the MAS return was 3.9%.

Global Real Assets

During the fiscal year, market conditions and fundamentals were favorable for both commercial real estate and infrastructure assets. Interest rates and vacancy rates remained low, rent and net operating income growth remained healthy, yet moderated, and construction levels remained reasonable in most markets. Real estate returns for the fiscal year moderated to long-term average levels of 7.0% - 9.0%, with expectations that returns going forward will be below long-term averages due to high valuations. Infrastructure assets continued to produce returns in excess of 10.0% for the fiscal year with long-term visibility into the assets’ net operating income. Cash yield continues to be the focus for the asset class, which produced a one-year income return in excess of 4.0% gross of fees.

Opportunistic Investments

The Opportunistic and Tactical portfolio generated strong returns, returning 11.6% net of fees. The portfolio is comprised of non-traditional investment opportunities which do not fit neatly within SERS' strategic asset classes. Opportunistic investments are defined as tactical or non-traditional investment opportunities. Such investments may involve capitalizing on short-term market dislocations or other unique situations or innovative strategies including tactical allocation. The opportunistic portfolio has a 0.0% policy target allocation with a maximum of 5.0%, giving Staff flexibility to invest only when market conditions present attractive opportunities. SERS made three opportunistic investments in FY2018, committing a total of $160 million, including follow-on commitments to two private debt strategies as well as a commitment to a manager who will pursue investments in asset-backed strategies.

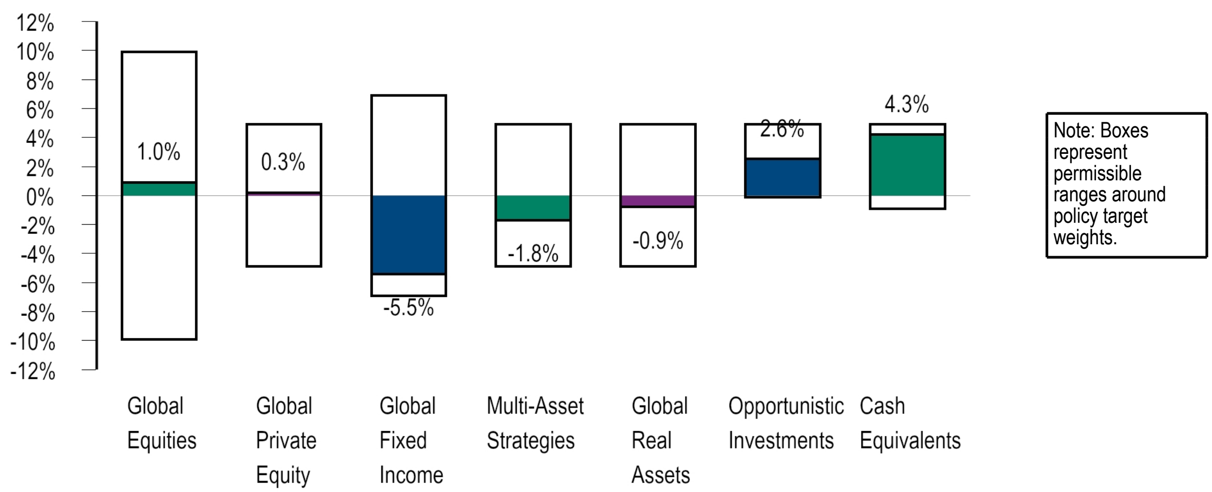
Cash Equivalents

The Cash Equivalent portfolio is a combination of a Short-Term Cash and Overlay program which in turn is comprised of the Enhanced Asset Allocation and Active Currency programs. While the Short-Term Cash has a role of liquidity provision for the Total Fund, the Overlay Program aims at adding value by taking active positions in the broad asset classes and foreign exchange markets, with a tight risk budget. The Cash Equivalents Portfolio returned 1.5% for the FY2018, outperforming the benchmark by 19 bps. For FY2018, the Overlay Program generated a gain of $14.3 million aggregate. As of June 30, 2018, the actual weight of the Cash Equivalents was 5.4%, 40 bps higher than the 5.0% asset allocation maximum, due to gains in the Overlay program and cash movements for portfolio repositioning.

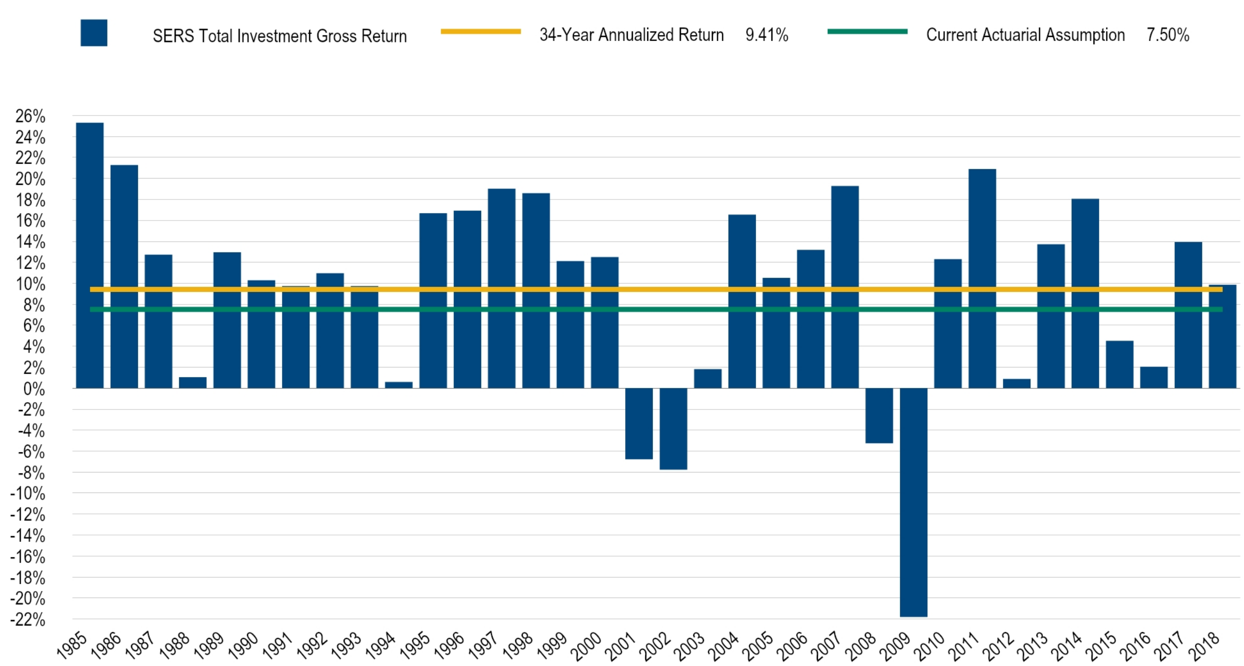
Investment Summary as of June 30, 2018

		Fair Value	% of Fair Value	Policy	Range
Global Equities	$	6,643,696,451	46.0%	45.0%	35% - 55%
Global Private Equity		1,486,215,604	10.3	10.0	5 - 15
Global Fixed Income		1,949,529,904	13.5	19.0	12 - 26
Multi-Asset Strategies		1,183,619,761	8.2	10.0	5 - 15
Global Real Assets		2,044,857,442	14.1	15.0	10 - 20
Opportunistic Investments		380,727,423	2.6	0.0	0 - 5
Cash Equivalents		769,649,520	5.3	1.0	0 - 5
Total Portfolio	$	14,458,296,105	100.0%	100.0%	

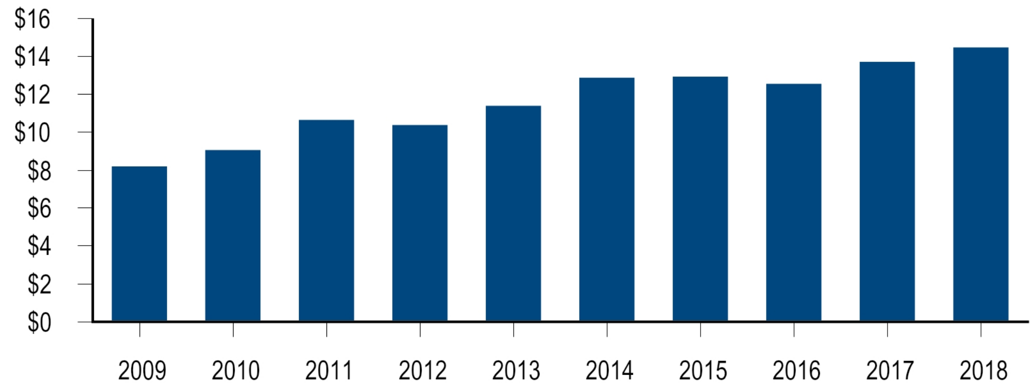
Asset Allocation vs. Policy



SERS Total Investment Return (Gross of Fees)



Total Investment Fund at Fair Value *($ in billions)*



Schedule of Investment Results for the years ended June 30 (Gross of Fees)

		2018	2017	2016	Annualized Rates of Return 3 Years	5 Years	10 Years
Global Equities							
SERS		11.3%	20.3%	(3.1)%	9.0%	10.3%	7.2%
Custom Global Equities Benchmark	(1)	11.0	19.6	(4.2)	8.3	9.5	6.7
Global Private Equity							
SERS	(2)	21.3	18.4	12.9	17.5	19.5	13.3
Custom Global Private Equity Benchmark	(3)	16.3	11.7	4.9	11.7	13.3	11.1
Global Fixed Income							
SERS		0.1	2.1	5.4	2.5	3.0	5.4
Barclays Capital US Aggregate Bond Index		(0.4)	(0.3)	6.0	1.7	2.3	3.7
Multi-Asset Strategies							
SERS	(4)	5.4	10.8	(3.5)	4.1	5.5	5.5
Custom Multi-Asset Strategies Benchmark	(5)	6.5	7.3	(4.4)	3.1	4.5	3.0
Global Real Assets							
SERS	(6)	10.9	8.9	13.5	11.1	12.4	4.4
Custom Global Real Assets Benchmark	(7)	7.1	7.3	11.8	8.7	10.0	6.6
Opportunistic Investments							
SERS	(8)	13.0	21.6	(7.7)	8.3	10.2	n/a
Policy Benchmark	(9)	8.3	11.5	0.9	6.9	8.0	n/a
Cash Equivalents							
SERS		2.3	(0.1)	4.7	2.3	1.5	1.1
Citigroup 30 Day Treasury Bill Index		1.3	0.4	0.1	0.6	0.4	0.3
Total Fund (Gross of Fees)							
SERS		9.9	13.9	2.0	8.5	9.5	6.7
Policy Benchmark	(9)	8.3	11.5	0.9	6.9	8.0	6.3
Total Fund (Net of Fees)							
SERS		9.2	13.2	1.4	7.8	8.8	6.0
Policy Benchmark	(9)	8.3	11.5	0.9	6.9	8.0	6.3

Source: BNY Mellon Global Risk Solutions

Investment results provided by BNY Mellon Global Risk Solutions are based upon a time-weighted rate of return methodology. Market value adjustments made to global private equity, global real assets, opportunistic investments and multi-asset strategies as of June 30 will be reflected in the investment returns in the next financial statement.

Notes to Investment Results

(1) Custom Global Equities Benchmark:
- a) Effective January 1, 2014
  50.0% Russell 3000 Index
  50.0% MSCI ACWI ex-US (net dividends) Index
- b) Effective July 1, 2013
  50.0% Russell 3000 Index
  50.0% MSCI ACWI ex-US (net dividends) Index (developed markets 50% hedged)
- c) Prior to July 1, 2013
  50.0% Russell 3000 Index
  50.0% MSCI ACWI ex-US (gross dividends) Index (developed markets 50% hedged)

(2) Global Private Equity returns are reported one quarter in arrears.

(3) Custom Global Private Equity Benchmark:
- a) Effective January 1, 2014 Burgiss All Private Equity Benchmark (BAPE) (one quarter in arrears)
- b) Prior to January 1, 2014 S&P 500 Index plus 3%

(4) Prior to July 1, 2013 Multi-Asset Strategies was known as Hedge Funds

(5) Custom Multi-Asset Strategies Benchmark:
- a) Effective July 1, 2013 HFRI Fund of Funds Composite Index + 1.0%
- b) Effective July 1, 2010 HFRI Fund of Funds Composite Index
- c) Effective June 1, 2008 (inception of the strategy) HFRI fund Weighted Index

(6) Global Real Asset partnership returns are reported one quarter in arrears. Public real asset returns are reported in the current quarter.

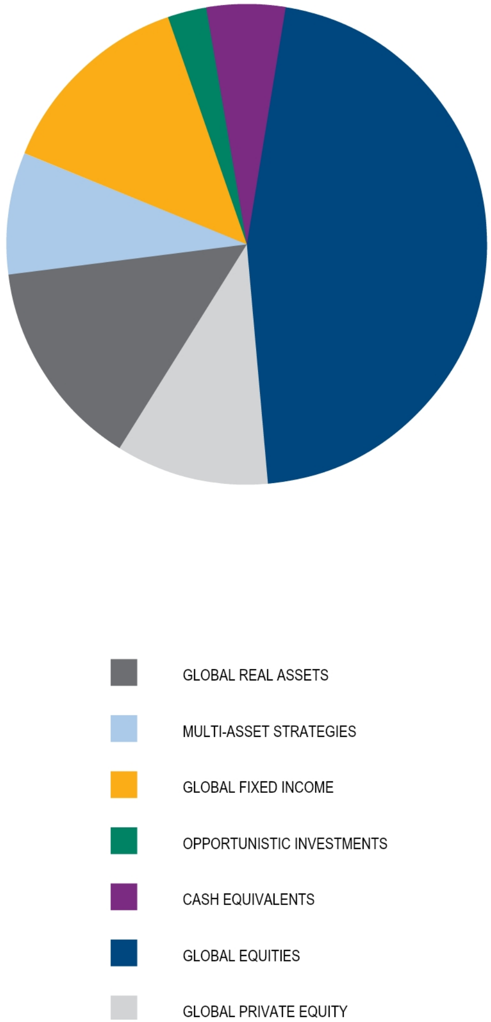
(7) Custom Global Real Assets Benchmark:
- a) Effective July 1, 2010 NCREIF Property Index (one quarter in arrears)
- b) Prior to July 1, 2010
  80.0% NCREIF Property Index (one quarter in arrears)
  20.0% FTSE EPRA/NAREIT Developed Index

(8) Opportunistic Investments inception date occurred in June 2013

(9) SERS Policy Benchmark weightings for the past 10 years:
- a) Effective January 1, 2016
  22.5% Russell 3000 Index
  22.5% MSCI ACWI ex-US (net dividends) Index
  19.0% Barclays Capital US Aggregate Bond Index
  15.0% NCREIF Property Index (one quarter in arrears)
  10.0% Burgiss All Private Equity Benchmark (BAPE) (one quarter in arrears)
  10.0% HFRI Fund of Funds Composite Index + 1.0%
  1.0% Citigroup 30 Day T-Bill Index
- b) Effective January 1, 2015
  22.5% Russell 3000 Index
  19.0% Barclays Capital US Aggregate Bond Index
  12.0% NCREIF Property Index (one quarter in arrears)
  10.0% Burgiss All Private Equity Benchmark (BAPE) (one quarter in arrears)
  13.0% HFRI Fund of Funds Composite Index + 1.0%
  1.0% Citigroup 30 Day T-Bill Index
- c) Effective July 1, 2014
  22.5% Russell 3000 Index
  22.5% MSCI ACWI ex-US (net dividends) Index
  19.0% Barclays Capital US Aggregate Bond Index
  15.0% NCREIF Property Index (one quarter in arrears)
  10.0% Burgiss All Private Equity Benchmark (BAPE) (one quarter in arrears)
  10.0% HFRI Fund of Funds Composite Index + 1.0%
  1.0% Citigroup 30 Day T-Bill Index
- d) Effective January 1, 2014
  22.5% Russell 3000 Index
  22.5% MSCI ACWI ex-US (net dividends) Index
  19.0% Barclays Capital US Aggregate Bond Index
  12.0% NCREIF Property Index (one quarter in arrears)
  10.0% Burgiss All Private Equity Benchmark (BAPE) (one quarter in arrears)
  13.0% HFRI Fund of Funds Composite Index + 1.0%
  1.0% Citigroup 30 Day T-Bill Index
- e) Effective July 1, 2013
  22.5% Russell 3000 Index
  22.5% MSCI ACWI ex-US (net dividends) Index (developed markets 50% hedged)
  19.0% Barclays Capital US Aggregate Bond Index
  12.0% NCREIF Property Index (one quarter in arrears)
  10.0% SERS Custom Private Equity Benchmark
  13.0% HFRI Fund of Funds Composite Index + 1.0%
  1.0% Citigroup 30 Day T-Bill Index
- f) Effective July 1, 2010
  22.5% Russell 3000 Index
  22.5% MSCI ACWI ex-US Index (developed markets 50% hedged)
  19.0% Barclays Aggregate Index
  10.0% NCREIF
  10.0% SERS Custom Private Equity Benchmark
  15.0% HFRI Fund of Fund Index
  1.0% Citigroup 30 Day T-Bill Index
- g) Effective February 1, 2009
  27.5% Russell 3000 Index
  27.5% MSCI ACWI ex-US Index (developed markets 50% hedged)
  24.0% Barclays Aggregate Index
  10.0% SERS Custom Real Estate Benchmark
  10.0% SERS Custom Private Equity Benchmark
  1.0% Citigroup 30 Day T-Bill Index
- h) Effective May 31, 2007
  29.0% Russell 3000 Index
  29.0% MSCI ACWI ex-US Index (developed markets 50% hedged)
  24.0% Lehman Brothers Aggregate Index (In 2009 renamed as Barclays Aggregate Index)
  10.0% SERS Custom Real Estate Benchmark
  7.0% SERS Custom Private Equity Benchmark
  1.0% Citigroup 30 Day T-Bill Index
- i) Effective October 21, 1994
  46.0% Russell 3000 Index
  16.0% MSCI ACWI ex-US Index (developed markets 50% hedged)
  23.0% Lehman Brothers Aggregate Index (In 2009 renamed as Barclays Aggregate Index)
  10.0% SERS Custom Real Estate Benchmark
  3.0% SERS Custom Private Equity Benchmark
  2.0% Citigroup 30 Day T-Bill Index

SERS Detailed Asset Allocation

GLOBAL REAL ASSETS	**14.1%**
Global Real Assets w/o REITs	**13.7%**
Office	3.4%
Industrial	3.1%
Residential	2.8%
Retail	1.8%
Infrastructure	1.6%
Hospitality/ Other	1.0%
REITs	**0.4%**
MULTI-ASSET STRATEGIES	**8.2%**
Event Driven	2.3%
Relative Value	1.9%
Equity Long/Short	1.7%
Multi Asset	1.3%
Tactical Trading	1.0%
GLOBAL FIXED INCOME	**13.5%**
US Government & Government Backed Mortgages	6.5%
Corporate Bonds	5.3%
Collaterized Mortgage Obligations and Asset-Backed	1.4%
Foreign Bonds	0.3%



OPPORTUNISTIC INVESTMENTS	**2.6%**
CASH EQUIVALENTS	**5.3%**
Short-Term	4.9%
Currency Overlay	0.3%
Enhanced Asset Allocation	0.1%
GLOBAL EQUITIES	**46.0%**
US Equity	**23.2%**
Market-Oriented	10.9%
Large Cap Value	3.8%
Large Cap Core	3.4%
Large Cap Growth	1.5%
Small Cap Value	2.2%
Small Cap Growth	1.4%
Non-US Equity	**22.8%**
Developed Markets Market-Oriented	6.5%
Emerging Markets	5.9%
Developed Markets Core	4.2%
Developed Markets Growth	3.5%
Developed Markets Value	2.7%
GLOBAL PRIVATE EQUITY	**10.3%**
Buyout	8.2%
Special Situations	1.5%
Venture Capital	0.6%

Largest Individual Global Equities Holdings as of June 30, 2018

	Description	Country	Shares	Market Price	Fair Value
1	Microsoft Corp.	United States	716,590	$ 98.61	$ 70,662,940
2	Apple, Inc.	United States	333,075	185.11	61,655,513
3	Amazon.com, Inc.	United States	26,304	1,699.80	44,711,539
4	UnitedHealth Group, Inc.	United States	140,898	245.34	34,567,915
5	Alphabet, Inc. Class A	United States	30,499	1,129.19	34,439,166
6	Facebook, Inc.	United States	174,159	194.32	33,842,577
7	Samsung Electronics	South Korea	806,919	41.86	33,777,629
8	Taiwan Semiconductor Manufacturing Co.	Taiwan	855,210	36.56	31,266,478
9	Johnson & Johnson	United States	248,817	121.34	30,191,455
10	Visa, Inc.	United States	224,025	132.45	29,672,111

All monetary values stated in US dollars.
A complete listing of holdings is available upon request.

Largest Individual Global Fixed Income Holdings as of June 30, 2018

	Description	Rating	Par Value	Market Price	Fair Value
1	FNMA TBA 4.50% 07/01/2048	AA+	$ 27,460,000	$ 1.04	$ 28,593,000
2	GNMA TBA 4.50% 07/20/2048	AA+	15,900,000	1.04	16,526,142
3	US Treasury Note 1.75% 11/30/2021	AA+	16,131,000	0.97	15,654,652
4	US Treasury Bond 2.75% 08/15/2047	AA+	15,607,000	0.95	14,893,136
5	US Treasury Note 2.00% 11/30/2022	AA+	12,670,000	0.97	12,296,869
6	GNMA TBA 3.50% 07/20/2048	AA+	8,640,000	1.00	8,673,264
7	US Treasury Note 2.50% 03/31/2023	AA+	8,527,000	0.99	8,441,730
8	US Treasury Note 2.25% 03/31/2020	AA+	8,170,000	1.00	8,132,990
9	US Treasury Bond 2.50% 02/15/2045	AA+	8,660,000	0.91	7,895,842
10	FNMA Pool #0MA2909 3.50% 02/01/2037	AA+	7,713,608	1.01	7,779,714

All monetary values stated in US dollars.
A complete listing of holdings is available upon request.

Investment Consultants and Investment Managers as of June 30, 2018

Investment Consultants
- Aksia LLC
- Wilshire Associates, Inc.

Investment Managers - US Equity
- AllianceBernstein, LP
- BNY Mellon Asset Management North America
- Brown Capital Management, Inc.
- Bridgeway Capital Management, Inc.
- Coho Partners Ltd.
- Donald Smith & Co.
- Jackson Square Partners
- Martingale Asset Management, LP
- Neumeier Poma Investment Counsel, LLC
- PineBridge Investments, LLC
- State Street Global Advisors
- TWIN Capital Management, Inc.

Investment Managers - Non-US Equity
- Arrowstreet Capital, LP
- Axiom International Investors, LLC
- City of London Investment Management Co. Ltd.
- Dimensional Fund Advisors
- Genesis Asset Managers
- GlobeFlex Capital, LP
- Highclere International Investors
- LSV Asset Management
- State Street Global Advisors
- Walter Scott & Partners Ltd.

Investment Manager - Futures
- Russell Implementation Services, Inc.

Investment Managers - Global Private Equity
- Bridgepoint Advisers Ltd.
- Charterhouse Capital Partners
- Cinven Capital Management Ltd.
- Coller Investment Management Ltd.
- Evergreen Pacific Partners
- FdG Associates, LLC
- Ford Ultimate Management II, LLC
- Francisco Partners
- Freeman Spogli Management Co., LP
- Goldman Sachs Asset Management, LP
- Graham Partners
- J.P. Morgan Investment Management, Inc.
- Kohlberg & Co.
- Leonard Green & Partners
- Levine Leichtman Capital Partners, Inc.
- Linsalata Capital Partners, LLC
- Mason Wells, Inc.
- Monomoy Capital Partners
- NGP Energy Capital Management, LLC
- Oak Hill Capital Partners
- Oaktree Capital Management, LP
- Odyssey Investment Partners
- Primus Venture Partners
- Quantum Energy Partners
- Silver Lake Partners
- Swander Pace Capital Partners
- Thomas H. Lee Partners
- Transportation Resource Partners
- Warburg Pincus

Investment Managers - Global Fixed Income
- C.S. McKee, LP
- Dodge & Cox
- Goldman Sachs Asset Management, LP
- J.P. Morgan Investment Management, Inc.
- Johnson Investment Counsel, Inc.
- Loomis, Sayles & Co.
- Stone Harbor Investment Partners, LP
- Western Asset Management Co.

Investment Managers - Multi-Asset Strategies
- Angelo, Gordon & Co.
- Archer Capital Management
- Aristeia Capital, LLC
- Bain Capital, LP
- BlackRock Institutional Trust Company, N.A.
- Bridgewater Associates, Inc.
- BRG Fund Management Services LLC
- Caspian Select Credit International, Ltd.
- D.E. Shaw & Co., LLC
- Eminence Capital, LLC
- GoldenTree Asset Management, LP
- GSA Capital Partners, LLP
- Invesco National Trust Co.
- King Street Capital Management, LLC
- Marathon Asset Management, LLC
- Nephila Capital Ltd.
- Oceanwood Capital Management, LLP
- Pharo Global Advisors Ltd.
- Redwood Capital Management, LLC
- Rockhampton
- Scopia Capital Management, LP
- Stark Offshore Management, LLC
- Stone Milliner Asset Management, LLP
- Viking Global Investors, LP
- Visium Asset Management, LP

Investment Managers - Global Real Assets
- AMP Capital
- Almanac Realty Investors, LLC
- Beacon Capital Partners, LLC
- BlackRock Institutional Trust Company, N.A.
- CB Richard Ellis Investors, LLC
- Clarion Partners, LLC
- Colony Capital, LLC
- Deutsche Asset & Wealth Management
- Fillmore Capital Partners, LLC
- J.P. Morgan Investment Management, Inc.
- Industry Fund Management Pty, Ltd.
- LA Financial Management, LLC
- Madison Marquette Property Investments, LLC
- Mesa West Capital, LLC
- PGIM Real Estate
- Rockspring Property Investment Managers
- The Carlyle Group
- UBS Realty Investors, LLC

Investment Managers - Opportunistic Investments
- Barings Global Advisers, Ltd.
- Barings LLC
- Blackstone Group LLC
- BlueBay Asset Management, LLP
- GoldenTree Asset Management, LP
- HPS Investment Partners, LLC
- LBC Credit Partners
- Oceanwood Capital Management, LLP
- Pacific Investment Management Co.

Currency Overlay
- BNP Paribas Asset Management USA, Inc.
- J.P. Morgan Investment Management, Inc.
- P/E Global, LLC

Securities Lending Agent
- Goldman Sachs Agency Lending

Custodians
- Citibank, N.A.
- The Bank of New York Mellon
- Huntington National Bank

Master Recordkeeper
- BNY Mellon Asset Servicing

Investment Analytics
- BNY Mellon Global Risk Solutions

Summary Schedule of Brokers' Fees for US Equity Transactions for the Year Ended June 30, 2018

Broker Name	Fees Paid	# of Shares Traded	Avg. Commission per Share
UBS Securities, LLC	$ 105,975	4,163,806	$ 0.025
Goldman Sachs & Co.	93,672	7,673,892	0.012
Merrill Lynch, Pierce, Fenner & Smith, Inc.	83,838	5,686,516	0.015
Pershing, LLC	62,513	5,496,657	0.011
J.P. Morgan Securities, LLC	59,372	3,623,758	0.016
Barclays Capital, Inc.	52,146	2,387,162	0.022
Jefferies, LLC	46,207	2,370,001	0.019
State Street Global Markets, LLC	43,746	5,765,006	0.008
Instinet, LLC	41,672	2,997,779	0.014
National Financial Services, LLC	37,459	1,187,654	0.032
Sanford C. Bernstein & Co., LLC	36,329	2,100,669	0.017
Loop Capital Markets, LLC	36,235	1,174,106	0.031
Morgan Stanley & Co., Inc.	35,843	1,364,838	0.026
ISI Group, LLC	32,900	1,644,994	0.020
Stifel, Nicolaus & Co., Inc.	29,589	753,876	0.039
HSBC Securities, Inc.	27,775	2,448,438	0.011
ITG, Inc.	27,754	4,188,749	0.007
Sidoti & Co., LLC	27,136	678,400	0.040
Citigroup Global Markets, Inc.	24,033	3,114,337	0.008
SG Americas Securities, LLC	21,447	1,691,298	0.013
Marquarie Capital Markets North America Ltd.	20,476	1,670,412	0.012
D. A. Davidson & Co.	19,449	587,125	0.033
Euroclear Bank SA/NV	18,722	1,132,603	0.017
Abel Noser Corp.	17,596	481,331	0.037
Wells Fargo Securities, LLC	17,255	1,420,109	0.012
Robert W. Baird & Co., Inc.	14,330	374,773	0.038
Cantor, Fitzgerald & Co.	14,151	628,560	0.023
CIBC World Markets Corp.	13,569	904,600	0.015
Credit Suisse Securities, LLC	13,520	375,489	0.036
BTIG, LLC	13,328	527,865	0.025
Dowling & Partners Securities, LLC	12,300	255,000	0.048
Cowen & Co., LLC	11,531	693,475	0.017
Scotia Captial (USA), Inc.	10,919	267,465	0.041
Weeden & Co., LP	10,052	1,780,567	0.006
William Blair & Co., LLC	10,051	268,705	0.037
Deutsche Bank Securities, Inc.	9,328	262,948	0.035
RBC Capital Markets, LLC	9,182	449,003	0.020
Credit Agricole Securities, Inc.	9,144	226,064	0.040
Dinosaur Group Holdings, LLC	9,065	1,673,548	0.005
Gordon, Haskett Capital Corporation	8,090	174,600	0.046
Piper Jaffray & Co.	7,566	187,441	0.040
Liquidnet, Inc.	6,550	647,258	0.010
B.Riley & Co., LLC	6,441	161,025	0.040
Convergex Execution Solutions, LLC	6,381	556,265	0.011
Raymond James & Associates, Inc.	6,356	168,055	0.038
Pavilion Global Markets, Ltd.	5,998	757,133	0.008
Bloomberg Tradebook, LLC	5,558	1,389,512	0.004
Roth Capital Partners, LLC	4,616	115,400	0.040
Penserra Securities, LLC	4,104	682,399	0.006
Craig-Hallum Capital Group, LLC	3,995	99,875	0.040
Brokers with less than $3,995 (39)	38,212	2,873,119	0.013
Total US	$ 1,283,476	$ 82,303,660	$ 0.016

Summary Schedule of Brokers' Fees for Non-US Equity Transactions for the Year Ended June 30, 2018

Broker Name	Fees Paid	# of Shares Traded	Avg. Commission per Share
Instinet, LLC	$ 187,675	84,811,221	$ 0.002
ITG, Inc.	120,504	54,728,600	0.002
Goldman Sachs & Co.	108,607	26,385,950	0.004
UBS Securities, LLC	107,542	30,170,836	0.004
J.P. Morgan Securities, LLC	96,071	62,321,406	0.002
Citigroup Global Markets, Inc.	90,477	64,854,868	0.001
HSBC Securities, Inc.	83,494	32,992,443	0.003
Credit Agricole Securities, Inc.	56,729	16,996,146	0.003
SG Securities, LLC	50,015	29,197,068	0.002
Marquarie Capital Markets North America Ltd.	49,303	26,689,632	0.002
CSLA Americas, LLC	46,250	7,324,009	0.006
Merrill Lynch Professional Clearing Corp.	43,294	18,743,717	0.002
Sanford C. Bernstein & Co., LLC	35,704	7,645,861	0.005
Convergex Execution Solutions, LLC	32,241	5,518,491	0.006
BNP Parabas Investment Services, LLC	28,102	6,406,128	0.004
Exane, Inc.	18,004	3,476,021	0.005
ICICI Securities, Inc.	17,719	4,720,738	0.004
Credit Suisse Securities, LLC	14,393	4,395,355	0.003
Morgan Stanley & Co., Inc.	14,051	2,307,980	0.006
Daiwa Capital Markets, Inc.	11,780	3,512,122	0.003
SG Warburg & Co., Inc.	11,663	519,371	0.022
Jefferies, LLC	9,914	1,772,372	0.006
Kepler Capital Markets, Inc.	9,726	400,294	0.024
SMBC Nikko Securities America, Inc.	8,138	548,600	0.015
Deutsche Bank Securities, Inc.	8,128	1,207,660	0.007
XP Securities, LLC	8,040	1,664,700	0.005
Pavilion Global Markets, Ltd.	8,012	949,098	0.008
SG Americas Securities, LLC	7,960	2,563,675	0.003
Barclays Capital, Inc.	7,896	745,529	0.011
Merrill Lynch, Pierce, Fenner & Smith, Inc.	6,324	2,745,476	0.002
First Rand Bank Co.	6,299	904,418	0.007
DBS Vickers Securities, Inc.	6,207	2,328,700	0.003
Concordia SA CVMCC	6,047	1,293,600	0.005
North South Capital, LLC	5,934	58,267	0.102
Societe Generale Securities Services	5,573	518,500	0.011
Bradesco S/A Ctvm	5,317	1,288,160	0.004
UBS Financial Services, Inc.	4,911	7,515,111	0.001
Winterflood Securities, Inc.	4,903	728,061	0.007
Sinopac Securities Corp.	4,650	4,633,835	0.001
Cowen & Co., LLC	2,979	404,970	0.007
Samsung Securities, Inc.	2,770	46,672	0.059
Cantor, Fitzgerald & Co.	2,764	1,283,836	0.002
RBC Capital Markets, LLC	2,272	88,037	0.026
Garantia, Inc.	2,163	960,152	0.002
Numis Securities, Inc.	1,896	293,876	0.006
Socgen-Crosby Securities, Inc.	1,840	667,657	0.003
The Fig Group, LLC	1,711	14,900	0.115
Tera Menkul Degerler A.S.	1,527	626,317	0.002
Goodbody Securities, Inc.	1,007	23,300	0.043
Danske Markets, Inc.	838	20,100	0.042
Brokers with less than $838 (24)	6,790	3,715,974	0.002
Total Non-US	$ 1,376,154	$ 533,729,810	$ 0.003

Reconciliation to Statement of Fiduciary Net Position

Asset Class/Strategy		Fair Value	% of Total Fair Value
Global Equities	$	6,643,696,451	46.0%
Global Private Equity		1,486,215,604	10.3
Global Fixed Income		1,949,529,904	13.5
Multi-Asset Strategies		1,183,619,761	8.2
Global Real Assets		2,044,857,442	14.1
Opportunistic Investments		380,727,423	2.6
Cash Equivalents		769,649,520	5.3
Net Portfolio Value	$	14,458,296,105	100.0%

Investments receivable, securities sold		(99,390,638)
Investments payable, securities purchased		169,654,989
Cash and cash equivalents		(1,160,031,952)
Investments per Statement of Fiduciary Net Position	$	13,368,528,504

Statement of Investment Policy (effective September 17, 2015)

I. Purpose of Statement of Investment Policy

The purpose of this Statement of Investment Policy (SIP) is to set forth the investment philosophy and objectives of the Retirement Board (Board) for the School Employees Retirement System of Ohio (SERS).

This SIP:

A. incorporates and is subject to all restrictions and obligations set forth in Chapter 3309 of the Ohio Revised Code;

B. establishes investment policies and describes the organization and division of responsibilities necessary to implement the Board's philosophy and objectives prudently; and

C. establishes a framework for making investment decisions, and monitoring investment activity, and promotes effective communication between the Board, Staff, and other involved parties.

This SIP is subject to change at any time by the Board. The Board will review the SIP and revise it periodically to assure it continues to reflect the investment philosophy, objectives and strategies of the Board.

II. Investment Philosophy

The Board recognizes the need to manage SERS assets prudently (the Total Fund) to meet its statutory and fiduciary obligations and to achieve or exceed its objectives. The Board's investment philosophy is grounded in fundamental, prudent investment principles, incorporating modern portfolio theory, risk management and portfolio management practices. These principles are incorporated in the "Investment Beliefs" below. The Board believes it can provide consistent, long-term performance at appropriate levels of risk. By delineating responsibilities and defining policy objectives, this SIP reflects the Board's investment philosophy and governance.

SERS Investment Beliefs:

Financial Markets

A. Capital markets are not perfectly efficient. Inefficiencies create opportunities that skilled investors could exploit to generate excess returns. Investment Staff will prudently attempt to add value by exploiting such inefficiencies across different assets selectively, although it is not easily achieved.

B. Markets generally afford higher prospective returns for riskier assets, such as equity or credit risk premiums over the long term. Anomalies could occur in intermittent periods on account of shifting valuations. When valuations are elevated returns tend to be lower.

Investment Process

C. Strategic asset allocation is the key determinant of risk and return and represents the Board's tolerance for risk in achieving funding goals. It is important to diversify across risk factors and return sources and to be explicit about the role of asset classes.

D. Risk is the likelihood of loss or less than expected outcomes and is not fully captured by a single metric such as volatility. Risk has many dimensions, subjective and objective, which must be comprehensively assessed and managed in the investment process.

E. Long-term horizon is an advantage as it enables SERS to tolerate volatility, capture illiquidity and other risk premia, and take advantage of trends and opportunities.

F. Costs matter. Managing fees and transaction costs adds value to the Fund. Costs must be judged relative to expected value added.

Organizational Skills and Design

G. Investment success is dependent on good governance, decision process, skill and judgment. Having an experienced and talented staff with appropriate decision authority is an advantage. SERS' Board will delegate authority as appropriate to staff to facilitate execution of the investment process, but retain policy and oversight powers.

H. Explicit investment objectives, guidelines and collaborative teamwork among staff as well as external partners is essential for success.

Sustainability and Corporate Governance

I. Good governance of markets and entities comprising the markets improves outcomes for investors. SERS Board and Staff will exercise corporate ownership responsibly and with the best fiduciary interest of members and stakeholders.

J. SERS Board and Staff must be attentive to important environmental, social and governance issues that affect markets and promote its interests in a responsible manner in the best fiduciary interest of members and stakeholders.

III. Investment Objectives

The Investment Objectives of SERS are:

A. to assure that SERS provides statutorily-mandated retirement benefits;

B. to earn a net-of-fees total return that equals or exceeds over the long term the Actuarial Assumed Rate approved by the Board; and

C. to enhance risk-adjusted investment returns of the Total Fund in a prudent and cost-effective manner.

IV. Risk Management

A. The Board evaluates risk in terms of the probability of not earning the actuarial assumed rate over the long term. Diversification across asset classes, within asset classes, and across investment styles, sectors, and securities will be employed to manage overall portfolio risk and volatility.

B. SERS utilizes a risk budgeting approach in management of volatility risk of investment portfolios. Active risk of the Total Fund, asset class and individual portfolios and their respective risk contribution to total risk are important factors in the management of the capital allocations to individual asset classes and portfolios. The Total Fund shall be managed within a forecast active risk (tracking error) range of 0% to 3.0% relative to the policy benchmark and within the asset allocation range specified elsewhere in this SIP. Active risk is determined by asset allocation deviations and active security selection decisions as well as underlying market volatility. In times of high market volatility the active risk may exceed 3%. In any event, if the active risk exceeds 3% staff will discuss this with the Board and present appropriate recommendations. The realized tracking error is also expected to be below 3% over rolling three-year periods. Individual asset classes will be managed within the tracking error range specified in the respective asset class implementation guideline. Private asset classes (Private Equity and Real Asset) are excluded at this point from tracking error guidelines.

C. Other risks, including but not limited to those such as interest rate risk, credit risk, and liquidity risk, will be managed and carefully monitored by Investment Managers and Investment Staff.

V. Implementation Approach

A. The Board reserves certain responsibilities for itself, while delegating other responsibilities to the Executive Director, the Chief Investment Officer, the Investment Committee, Investment Staff, Investment Managers, Investment Consultants, the Investment Compliance and Governance Officer, and other Investment Service Providers. These responsibilities are described in this SIP.

B. In fulfilling its fiduciary duties the Board utilizes a competent and qualified Staff to implement the investment program and to manage daily operations.

C. The Board utilizes Investment Managers or Funds selected by Staff to invest most assets of the Total Fund. The Board recognizes that costs associated with external Investment Managers and Funds are typically higher than costs associated with internal management. However, the Board believes external Investment Managers that act as fiduciaries possess specialized investment expertise and economies of scale, and can generate higher returns on a net-of-fee basis.

D. The Board requires regular reporting on the Total Fund's investment program to ensure compliance with its SIP.

VI. Investment Organization and Responsibilities

A. Responsibilities of the ***Board***

The Board as a fiduciary is responsible for ensuring that Total Fund assets are managed prudently and effectively, in compliance with applicable laws and with this SIP, for the exclusive benefit of participants and beneficiaries.

Responsibilities of the Board include:

1. establishing controls and systems to ensure that Total Fund fiduciaries comply with applicable laws;
2. establishing asset allocation and investment policies for SERS assets;
3. appointing and discharging the Executive Director and Board Investment consultants;
4. confirming or rejecting the Executive Director's proposed appointment of a Chief Investment Officer for SERS;
5. designating the individual as Chief Investment Officer of SERS for purposes of R.C. 3309.043, and then notifying the Ohio Department of Commerce, Division of Securities in writing of the designation as required by the Ohio Revised Code;
6. monitoring and reviewing investment performance and policy compliance;
7. requesting, receiving and reviewing reports from Investment Staff, Board consultants and other entities, if applicable;
8. approving an Annual Investment Plan;

9. approving Statement of Investment Policy and changes thereto; and
10. conducting an annual evaluation of the performance of the Board's Investment Consultant.

B. Responsibilities of ***Staff***

Staff will administer Total Fund assets as fiduciaries in accordance with applicable federal and state laws and regulations, and in accordance with this SIP, ethics laws, codes of professional conduct (in particular, the CFA Code of Ethics and Standards of Professional Conduct), and other applicable codes and/or regulations. Staff will establish plans, policies and procedures to carry out these duties.

1. The ***Executive Director*** is responsible for:
   a. ensuring that reports of the Total Fund's investment performance are presented on a timely basis;
   b. retaining vendors, consultants and advisors as necessary to assist Staff, and assist the Board in the retention of Investment consultants;
   c. appointing, discharging and retaining the Chief Investment Officer, and Investment Staff;
   d. overseeing the investment function,
   e. executing investment documents when necessary,
   f. Conducting a fiduciary audit of investment operations at least on a seven- to ten-year cycle unless circumstances require an audit to be conducted sooner, and
   g. Conducting a peer group benchmarking of SERS investment costs performed by an independent entity every two- to three-years.
2. The ***Chief Investment Officer*** is responsible for:
   a. overseeing the Investment Program and keeping the Executive Director advised;
   b. conducting periodic asset liability studies with the assistance of investment consultants and recommending asset allocation targets and ranges.
   c. reviewing the SIP on an annual basis and recommending changes as needed for approval by the Board.
   d. preparing and presenting the Annual Investment Plan to the Board for approval;
   e. implementing the Annual Investment Plan;
   f. investigating, researching and recommending new and emerging investment concepts and strategies, and implementing appropriate strategies in accordance with approved policies and procedures;
   g. informing Investment Managers, Investment Consultants and others providing investment services to SERS about the requirements of applicable laws and Board policies, and monitoring their compliance with said laws and policies;
   h. adjusting allocations to Asset Classes, Investment Managers and Funds as needed, subject to any approved allocation ranges;
   i. approving implementation guidelines for each asset class to establish allocation ranges for sub-strategies, risk parameters and risk limits and providing such guidelines to the Board.
   j. appointing and discharging Investment Managers and approving investments in or redemptions from Funds subject to conditions and guidelines in Section VII.;
   k. activating previously approved Backup Investment Managers;
   l. executing investment documents;
   m. approving Investment Manager guidelines, changes and additions;
   n. supervising Investment Staff;
   o. monitoring and evaluating the effectiveness of executed securities transactions and reporting annually to the Board regarding the performance of agents who execute securities transactions on behalf of SERS; and
   p. regularly reporting the status of the Total Fund and its multi-period performance to the Board relative to benchmarks and on market conditions. Performance will be calculated on a gross-of-fees and net-of-fees basis.
3. The ***Investment Committee*** is responsible for:
   a. ensuring that a procedure is in place defining the Committee's structure and establishing rules for reviewing and approving investments;

b. reviewing Investment Manager and Fund due diligence; and

c. approving or discharging Investment Managers or Funds.

4. The ***Investment Staff*** is responsible for:

a. regularly reporting the status of the respective asset classes and Total Fund and its multi-period performance to the Chief Investment Officer;

b. periodically meeting and speaking with existing or potential Investment Managers to review and assess the quality of their investments and management of assets;

c. performing ongoing due diligence to evaluate and monitor Investment Manager capabilities relative to managing Total Fund assets;

d. recommending to the Chief Investment Officer implementation guidelines for the respective asset classes to establish allocation ranges for sub-strategies, risk parameters and risk limits; and managing the portfolio to the approved implementation guidelines.

e. recommending to the Chief Investment Officer any additions or withdrawals from Investment Manager accounts or Funds, or rebalancing of asset class allocations;

f. recommending to the Chief Investment Officer and the Investment Committee the appointment or discharge of Investment Managers and investments in or redemptions from Funds;

g. investing assets of the cash equivalents portfolio;

h. investigating and researching new and emerging investment concepts and strategies, and recommending those strategies to the Chief Investment Officer;

i. preparing periodic reports for the Chief Investment Officer on the performance of agents who execute securities transactions on behalf of SERS; and

j. maintaining a list of Ohio-qualified Investment Managers and their investment products.

C. Responsibilities of ***Investment Service Providers***

Investment Service Providers who do business or seek to do business with SERS will act in the best interest of SERS when providing services to SERS or the Total Fund. Investment Service Providers will:

1. comply with all applicable federal and state laws and regulations, with this SIP, and with all applicable professional codes and regulations;
2. have established ethics and conflict of interest policies and procedures, and proper internal compliance controls in place as needed;
3. at the earliest opportunity disclose to Investment Staff any actual or potential conflict of interest;
4. as permitted by law disclose any investigation of, or litigation involving, its operations to Investment Staff; and
5. provide annual or other periodic disclosures as required.

The Chief Investment Officer will adopt procedures as appropriate to implement this section.

D. Responsibilities of ***Investment Managers***

Investment Managers and Investment Staff managing assets internally are responsible as fiduciaries for investing prudently the Total Fund assets. In addition to those applicable responsibilities described in VI.B., Investment Managers and internal staff members will:

1. manage assets within their control in compliance with all applicable federal and state laws and regulations, including but not limited to applicable ethics requirements, this SIP, contractual obligations, and applicable professional codes of conduct;
2. inform the Chief Investment Officer and Investment Staff of any substantial changes in investment strategy, portfolio structure, asset value, and of any organizational changes, including that of ownership, affiliation, organizational structure, financial condition, or changes in professional personnel staffing in the investment management organization;
3. present in-depth reports to Investment Staff;
4. recommend to Investment Staff changes to investment guidelines the Investment Manager believes would enhance investment performance on a risk adjusted basis; and
5. select such agents for the execution of transactions, at such prices, and at such commission rates as in the good faith judgment of the Investment Manager will be in the best interest of the Total Fund, taking into consideration in the selection of such agents not only the available prices and rates of brokerage commissions, but also other factors relevant to the transaction.

E. Responsibilities of ***Investment Consultants***

Investment Consultants will:

1. provide services as fiduciaries and in accordance with all applicable federal and state laws and regulations, including but not limited to applicable ethics requirements; in accordance with this SIP; and with all applicable professional codes and/or regulations;
2. provide independent and unbiased research, information and advice to the Board and Staff;
3. assist in the development and amendment of this SIP;
4. assist in the development of investment guidelines as may be requested by Staff;
5. assist in the development of strategic asset allocation targets and ranges;
6. assist in the development of performance measurement standards;
7. monitor and evaluate Investment Manager and Fund performance as appropriate on an ongoing basis;
8. recommend to Staff the retention or discharge of Investment Managers and investment in or redemption from Funds;
9. collaborate with Investment Staff on the due diligence of potential Investment Managers and Funds, and existing Investment Managers and Funds, as requested by Staff;
10. assist in the development of criteria for and procedures to be utilized in the selection of Investment Managers and Funds;
11. provide research, information and advice on investment topics and strategies considered relevant by the Investment Consultant, or when requested by the Board or Investment Staff;
12. provide those services delineated in the Advisory or Consultant Agreement;
13. provide any other advice or services that the Board, Executive Director or Chief Investment Officer determines are necessary, useful or appropriate to fulfill the objectives of this SIP; and
14. regularly report the status of the Total Fund and its multi-period performance to the Board. Performance will be calculated on a net-of-fee basis.

F. Responsibilities of the ***Investment Compliance and Governance Officer***

The Investment Compliance and Governance Officer is responsible for:

1. monitoring and reporting compliance with this SIP and Board Resolutions;
2. ensuring that investment management agreements and related contracts comply with the SIP;
3. ensuring that Investment Service Providers and Investment Managers comply with Sections VI.C. and D., herein;
4. identifying and, in concert with Investment Staff, resolving compliance violations by Investment Managers and Investment Staff relative to their respective investment guidelines. Staff will ensure that those accounts with guideline violations are efficiently and effectively brought back into compliance;
5. promptly voting proxies and related actions in accordance with Board approved procedures, and maintaining detailed records of proxy votes and related actions for the Proxy Review Committee; and
6. reporting proxy voting activity to the Board on a quarterly basis and highlighting any emerging issues related to this activity.

VII. Conditions and Guidelines for Making Investments

A. Conditions

1. In cooperation with legal counsel, Staff will endeavor to ensure that the legal structure of each investment limits potential losses to no more than the amount invested;
2. Investments will be of institutional quality;
3. Investments will require the approval of the Chief Investment Officer and the Investment Committee;
4. Investment documents must be approved by SERS' Legal Department and the Investment Compliance and Governance Officer;
5. The Investment Committee will develop and implement definitive procedures for approving investments in accordance with this SIP
6. The Chief Investment Officer or the Executive Director must sign the necessary investment documents when making investments.

B. Guidelines

1. Selected Investment Managers and Funds will have proven track records in the strategy;
2. Monthly reporting by the Fund or Investment Manager is preferred, but there shall be quarterly reporting at a minimum;
3. The liquidity of an investment will be prudent, both for the strategy and for the Total Fund;
4. The amount invested with an Investment Manager or in a Fund will be prudent for the strategy;
5. Investment limits established by Board resolution remain in effect unless modified or eliminated by the Board.

VIII. Implementation Strategies

A. Asset Allocation

The Board will conduct an asset and liability study every three- to five-years or sooner, if necessary, in order to establish allocation targets and ranges for asset classes within distinct capital markets. Staff, with the assistance of consultants, will review annually the market outlook and expected returns for asset classes with the Board. If there are significant changes in return assumptions, Staff will conduct an interim review of the Asset Allocation Policy.

In order to identify the investment horizon of SERS and its cash flow requirements, liability considerations will include but not be limited to current and expected future values of the benefits, contributions and total assets.

After giving due consideration to an asset and liability study conducted by the Investment Consultant, which study meets the requirements of this SIP, the Board hereby recognizes and reaffirms the following asset allocation for SERS:

ASSET CLASS	TARGET	RANGE
Equity	**55%**	**45% - 65%**
Global Equities	45%	35% - 55%
Global Private Equity	10%	5% - 15%
Income	**35%**	**30% – 40%**
Global Bonds	19%	12% - 26%
Global Real Assets	15%	10% - 20%
Cash Equivalents	1%	0% - 5%
STRATEGY		
Multi-Asset Strategies	10%	5% - 15%
Opportunistic Investments	0%	0 – 5%
Total		**100%**

B. Derivatives

The Board authorizes the use of derivatives in the Total Fund and authorizes the Chief Investment Officer, with the advice and assistance of the Investment Consultant, to develop and implement derivatives strategies as needed. The Chief Investment Officer will adopt a derivatives policy setting forth general guidelines for the use of derivatives.

C. Leverage

The Board authorizes the use of leverage in the Total Fund and authorizes the Chief Investment Officer, with the advice and assistance of the Investment Consultant, to develop and implement certain leverage strategies. The Chief Investment Officer will adopt a leverage policy setting forth general guidelines for the use of leverage.

D. Rebalancing

The Chief Investment Officer will adopt a rebalancing strategy for the Total Fund which ensures adherence to the asset allocation strategy in Section VIII.A. The strategy may delegate certain authority to Investment Staff.

E. Currency Hedging

The Board authorizes currency hedging in the Total Fund and authorizes the Chief Investment Officer, with the advice and assistance of the Investment Consultant, to develop and implement currency hedging strategies as needed.

F. Transition Management

The Board authorizes the Executive Director and the Chief Investment Officer to hire Transition Managers as needed.

G. Proxy Voting

The Board authorizes the Proxy Review Committee, which consists of staff members from Executive and Investments, to vote proxies of common stock owned by SERS and to hire proxy services as required to implement this strategy. The Proxy Review Committee will adopt and implement a process for voting proxies as described in the Proxy Voting Procedures document.

H. Securities Lending

The Board authorizes Investment Staff to develop and implement a securities lending program which may involve the appointment or discharge of third party securities lending agents by the Executive Director or the Chief Investment Officer. The Board recognizes that while the practice of securities lending can generate meaningful income for the Total Fund, it is not without investment risk. To mitigate investment risk the securities lending program will focus on intrinsic value lending and use conservative collateral reinvestment guidelines similar to current SEC 2a-7 guidelines. If Staff determines the risk/reward relationship of the program is no longer advantageous for the Total Fund, the program will be discontinued.

I. Opportunistic Investments

The Board authorizes Investment Staff to invest up to 5% of Total Assets in Opportunistic Investment Strategies. These investments will comply with the Opportunistic Investment Policy approved by the Board.

J. Investment Managers and Funds

The Board authorizes the Chief Investment Officer and the Investment Committee to approve and discharge Investment Managers, Funds and Backup Investment Managers based upon recommendations of Investment Staff or Investment Consultants, as may be appropriate, and discussions with Managers. Allocations to approved Investment Managers and Funds will be determined or adjusted by the Chief Investment Officer in accordance Section VI.B.2.f. Allocations and adjustments are subject to any maximum allocation amounts established by the Board.

Investment Managers will adhere to investment guidelines established by Investment Staff, as well as all applicable laws and policies. The Chief Investment Officer is authorized to establish and amend investment guidelines as needed.

It is a goal of the Board to increase the utilization of Ohio-qualified Investment Managers when an Ohio-qualified Investment Manager offers quality, services and safety comparable to other Investment Managers available to the Board, and the use of such Investment Manager is consistent with the Board's fiduciary duties.

The Board will require that a list of Ohio-qualified Investment Managers and their investment products be maintained, and that public notice be given to Ohio-qualified Investment Managers of Investment Manager searches and search criteria. Staff will report to the Board annually on the utilization of Ohio-qualified managers and efforts to increase utilization.

SERS will give equal consideration to minority owned and controlled firms, and firms owned and controlled by women.

K. Collective Investment Funds

To the extent SERS' assets are invested in a group trust described in IRS Revenue Ruling 81-100, the instruments governing such trusts, as they may be amended from time to time, are hereby incorporated by reference and made part of the SIP as if fully set forth herein.

L. Approved Brokers

Brokers (or broker/dealers) who may provide execution of securities transactions for SERS will be evaluated on the basis of financial soundness, underwriting capabilities, research services, execution costs, and any other capabilities necessary in the execution of such transactions. Investment Managers which use such brokers will use their good faith judgment to ensure that said brokers will perform in the best interest of the Total Fund.

It is a goal of the Board to increase its utilization of Ohio-qualified brokers for the execution of domestic equity and domestic fixed income trades when an Ohio-qualified broker offers quality, services, and safety comparable to other brokers available to the Board or its Investment Managers, and the use of such broker is consistent with the Board's fiduciary duties.

SERS will give equal consideration to minority owned and controlled firms, and firms owned and controlled by women.

M. Soft Dollars

SERS allows investment managers to enter into limited soft dollar trading arrangements as governed by the "safe harbor" provision of Section 28(e) of the Securities and Exchange Act of 1934, and guided by the CFA Institute Soft Dollar Standards. SERS does not support any new soft dollar arrangements outside of these noted provisions.

N. Securities Litigation

SERS will follow the securities litigation policy and procedures as approved by the Board in setting out a course of action that best represents the interests of SERS' participants and beneficiaries.

O. Other

The strategies listed herein are not meant to constrain the Chief Investment Officer from managing the Investment Program in a prudent manner. The Chief Investment Officer may develop additional investment strategies as needed and will discuss such additional strategies with the Board prior to implementation.

IX. Performance

A. Performance Measurement Standard

Performance evaluation for the Total Fund will focus on total return, on an accrual accounting basis, including realized and unrealized capital gains and losses, and income. Valuations are to be made at least on a quarterly basis, and period returns are to be geometrically linked. Private market asset returns may be reported one quarter in arrears. Cash and cash equivalents will be included in the portfolio's return. Performance will be calculated on a gross-of-fee and net-of-fee basis.

B. Performance Benchmark – Total Fund

Performance of the Total Fund relative to benchmarks will be examined monthly, and will be reported for multiple time periods as needed. The Board's Investment Consultant will calculate and report performance net-of-fees on a quarterly basis.

The performance benchmark for the Total Fund will be the target-weighted average of the performance benchmark for each asset class and strategy grouping as stated in Section VIII. A.

In the event of a significant change in policy targets, the Board may approve interim targets for a period to move progressively toward the final target; interim targets may be used for the purpose of calculating the Total Fund policy benchmark in the interim period.

C. Performance Benchmarks – Asset Classes and Strategies

The long-term performance benchmark for each asset class is shown below. Performance benchmarks are determined as appropriate for SERS in cooperation with SERS' Investment Consultant. For purposes of this section, long-term refers to rolling three- to five-year periods. Performance in each asset class should meet or exceed the Benchmark measure.

Asset Class	Benchmark Measure
Global Equities	50% Russell 3000 Index; 50% MSCI ACWI ex-US Index (net dividends)
Global Private Equity	Burgiss All Private Equity Benchmark (BAPE)(one quarter in arrears)
Global Fixed Income	Barclays Capital US Aggregate Bond Index
Global Real Assets	NCREIF Property Index (one quarter in arrears)
Cash Equivalents	Citigroup 30-day T-Bill Index
Strategy	Benchmark Measure
Multi-Asset Strategies	HFRI Fund of Funds Composite Index plus 1.0%
Opportunistic Investments	Total Fund Benchmark Return

D. Performance Benchmarks – Individual Investment Managers

Investment Staff will establish performance benchmarks for each Investment Manager based on its respective style.

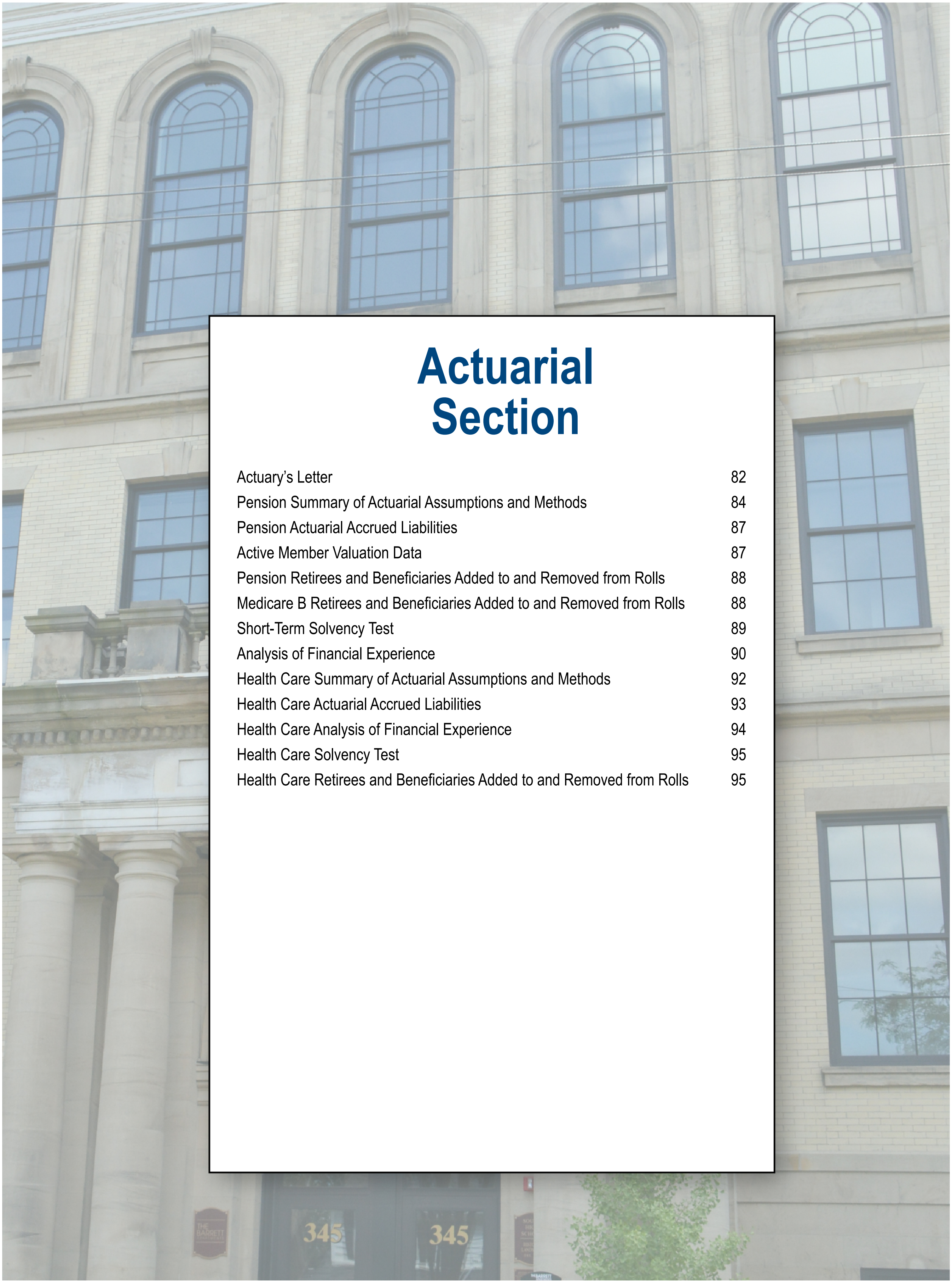
X. Review and Evaluation

The Board will review and evaluate periodic reports on the investment performance of Total Fund assets. Greater emphasis will be placed on three- to five-year results. The intended frequency for review and evaluation, subject to change by the Board, is as follows:

A. Monthly – Investment Report including Total Fund market value, asset allocation, performance of the Total Fund and each asset class, and the Total Fund's compliance with this SIP.

B. Quarterly – Summary Investment Report presented by the Investment Consultant, including highlights and commentary about market conditions, investment performance, asset composition and characteristics for each asset class, and relevant manager level information.

This policy supersedes the policy adopted August 2, 1985 and all revised policies dated 6/18/15; 12/18/14; 5/01/14; 1/01/14; 7/01/13; 1/19/12; 7/21/11; 7/01/10; 2/01/09; 8/01/08; 2/21/08; 10/01/07; 10/20/05; 9/15/00; 10/23/98; 6/19/98; 12/12/97; 7/25/97; 3/21/97; 12/20/96; 11/22/96; 6/21/96; 4/25/96; 9/15/95; 7/28/95; 6/16/95; 3/17/95; 1/20/95; 10/21/94; 5/20/94; 3/06/92; 4/07/89; 9/04/87; 1/09/87.



Actuarial Section

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

November 9, 2018

Board of Trustees
School Employees Retirement System of Ohio
300 East Broad Street, Suite 100
Columbus, OH 43215-3746

Dear Board Members:

The basic financial objective of the School Employees Retirement System of Ohio (SERS) is to establish and receive contributions which, when expressed in terms of percents of active member payroll, will remain approximately level from generation to generation of members, and which, when combined with present assets and future investment returns, will be sufficient to meet the present and future financial obligations of SERS.

In order to measure progress toward this fundamental objective, SERS has an actuarial valuation performed each year. The valuation (i) measures present financial position, and (ii) establishes contribution rates that provide for the current cost and level percent of payroll amortization of the unfunded actuarial accrued liability over a reasonable period. The valuation performed as of June 30, 2018 indicates that a contribution rate of 10.71% of payroll for 158,343 school employees meets the basic financial objective over a 26-year period.

The statutory employer contribution is 14.00% of payroll. The funding policy establishes ranges of the funded ratio for basic benefits that restrict the allocation of employer contributions to the Health Care Fund. The funded ratio is equal to the actuarial value of assets divided by the actuarial accrued liability of promised benefits. The Board seeks to maintain a funded ratio of at least 90% for basic benefits. If the basic benefit funded ratio is less than 70%, the entire 14.00% of the employers' contribution shall be allocated to basic benefits. If the funded ratio is at least 70% but less than 80%, the minimum portion of the employers' contribution allocated to basic benefits is 13.50% of payroll, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is at least 80% but less than 90%, at least 13.25% of the employers' contribution shall be allocated to basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 90% or greater, the Health Care Fund may receive any portion of the employers' contribution that is not needed to fund basic benefits. The funding policy is intended to accelerate the pace at which SERS' basic benefits will achieve a funded ratio equal to 90%.

The funded ratio for basic benefits is 70.07%. Since the funded ratio is at least 70% but less than 80%, at least 13.50% of the employer's 14.00% of payroll contribution must be allocated toward basic benefits. The Board may allocate up to 0.50% of the employer's contribution to the Health Care fund. Any portion of the 0.50% employer's contribution which is not allocated to the Health Care Fund will be allocated toward basic benefits.

The actuarial valuation of the pension benefits, the post-retirement death benefit, and the Medicare Part B reimbursement are based upon two factors. The first is financial and participant data as of the valuation date and the second is economic and demographic assumptions.

The valuation is based upon data concerning active, inactive and retiree members along with pertinent financial information. The data was furnished by the SERS staff and has been certified by the System's auditor. While not verifying the data at the source, we performed tests for consistency and reasonableness.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com
Offices in Kennesaw, GA • Bellevue, NE

Board of Trustees
November 9, 2018
Page 2

Economic assumptions address future rates of investment return and inflation; and demographic assumptions relate to future rates of retirement, turnover, death and disability among SERS members and their beneficiaries. We review the data for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Trustees and were based upon actual experience of SERS during the 2011-2015 fiscal years. Assets are valued according to a method that fully recognizes expected investment returns and averages unanticipated market return over a four-year period. The assumptions and methods used for financial reporting purposes meet the parameters set by the Actuarial Standards of Practice (ASOPs).

The financial condition of health care is different and is being significantly affected by the provisions of Act 290 of 1988 and Act 270 of 2001. Act 290 established a health care surcharge, a program to determine a minimum annual pay for use in calculating employer contribution dollars. Act 270 placed limits on the amount of health care surcharge that can be assessed to each employer and in total.

On the basis of projections of health care fund activity and the surcharge limit established by Act 270, the allocated contributions are insufficient in the long-term to provide for a 20-year solvency period for the health care fund. This result is based on the projected claims and premium contributions for the next 20 years, as is described in the Statement of Funding Policy adopted by the Board. Since total claims are projected to exceed total contributions in future years, it is currently anticipated that future fund amounts will be depleted in 2035.

The current benefit structure is outlined in the Plan Summary. Since the previous valuation, SB 8 granted authority to the Board to decide how many anniversaries a new benefit recipient must achieve before they become eligible to receive a COLA. The Board exercised its authority and set forth a rule that benefit recipients must wait until the fourth anniversary to become eligible for a COLA. This change became effective for benefits commencing on or after April 1, 2018.

We provided information used in the schedules of Actuarial Accrued Liabilities, Active Member Valuation Data, Retirees and Beneficiaries Added To and Removed From Rolls, Analysis of Financial Experience, the Schedule of Funding Progress, and the Schedule of Employer Contributions in the Financial Section.

The main purpose of the Basic Benefits Valuation is to determine the System's funded status and the actuarially determined employer contribution rate as of June 30, 2018 necessary to satisfy the funding objectives of the Board. The Basic Benefit Valuation indicates the School Employees Retirement System of Ohio is expected to continue in sound condition in accordance with actuarial principles of level percent of payroll financing provided all actuarial assumptions for future experience are met. Should future adverse experience develop, SERS may find it necessary to seek benefit reductions and/or contribution rate increases from employers, members, or both. Upcoming detailed projection analyses will provide a more complete indication concerning the future actuarial condition of the System.

Sincerely,

Todd B. Green ASA, FCA, MAAA
Principal and Consulting Actuary

Alisa Bennett, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

John Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

PENSION

Summary of Actuarial Assumptions and Methods

The SERS Retirement Board adopted the following actuarial assumptions and methods April 21, 2016, on the recommendation of its actuary. These assumptions were based on an analysis of plan experience for the five-year period July 1, 2010 through June 30, 2015, and were adopted for use in the valuation as of June 30, 2018.

Funding Method Basic benefits are determined using the entry age normal actuarial cost method. Under this cost method, projected service retirement, termination, disability, and death benefits are determined for all active members. Cost factors, which are developed to produce level annual costs in each year from the age at hire (entry age) to the assumed retirement age, are applied to the projected benefits to determine the “normal cost.” The normal cost is the portion of the total cost of the plan allocated to the current year. The normal cost for contribution refunds is assumed to end in the last year of the assumed eligibility, and is spread over all years of service.

The “actuarial accrued liability” for active members is then calculated as the portion of the total cost of the plan allocated to prior years. The actuarial accrued liability for retirees currently receiving benefits, for active members beyond the assumed retirement age, and for inactive members entitled to future benefits, is equal to the present value of the benefits expected to be paid.

The dollar amount of the total actuarial accrued liability in excess of the value of the plan net position is called the “unfunded actuarial accrued liability.” Funding requirements under the entry age actuarial cost method are determined by adding the normal cost and the cost to amortize the unfunded liability.

Actuarial assumptions are used to determine the projected benefits and cost factors. The effect of differences between these assumptions and the actual experience of the plan is calculated each year when the annual actuarial valuation is performed. These differences produce either actuarial gains or losses that result in an adjustment of the unfunded liability.

Funding Policy The Board adopted a new funding policy on June 18, 2015, effective with the June 30, 2015 valuation. The funding policy established ranges of the funded ratio for basic benefits that restrict the allocation of employer contributions to the Health Care Fund. The Board seeks to maintain a funded ratio of at least 90% for basic benefits. If the basic benefit funded ratio is less than 70%, the entire 14% of the employers’ contributions shall be allocated to basic benefits. If the funded ratio is at least 70% but less than 80%, the minimum portion of the employers’ contribution allocated to basic benefits is 13.50% of payroll; the remainder may be allocated to the Heath Care Fund at the Board’s discretion. If the funded ratio is at least 80% but less than 90%, at least 13.25% of the employers’ contribution shall be allocated to basic benefits; the remainder may be allocated to the Health Care Fund at the Board’s discretion. If the funded ratio is 90% or greater, the Health Care Fund may receive any portion of the employers’ contribution that is not needed to fund basic benefits.

Contributions During FY2018, active members and their employers were required to contribute 10% and 14%, respectively, of active member payroll. The Board allocates the employer contribution rate of 14% among basic benefits (pension, Medicare B, and death benefit) and health care in accordance with its funding policy. For the year ended June 30, 2018, the policy required the determination of a rate for basic benefits to cover normal cost and to amortize the unfunded actuarial accrued liabilities over a 26-year period.

Pension Trust Fund	12.59%
Death Benefit Fund	0.85%
Medicare B Fund	0.06%
Health Care Fund	0.50%
	14.00%

The Ohio Revised Code (ORC) also provides for an employer contribution surcharge as an additional source of funding for health care. The surcharge is equal to 14% of the difference between a minimum pay amount and the member’s pay, if below that minimum, it is pro-rated for partial service credit. For FY2018, the minimum pay amount was established at $23,700. The employer surcharge cap is applied at 2.0% of each employer’s payroll and at 1.5% of total payroll statewide.

Asset Valuation Method Differences between assumed and actual experience (actuarial gains and losses) become part of unfunded actuarial accrued liabilities. When these differences between assumed and actual experience have been observed to be sizeable and persistent, a change is made to the actuarial assumptions.

SERS’ Board adopted a method of valuing investment assets that recognizes a “smoothed” market value of those assets. The smoothed value of assets recognizes the difference between actual and expected performance for each year in equal amounts over a four-year period.

Economic Assumptions The following economic assumptions were used in the actuarial valuation as of June 30, 2018:

- **Investment Return** Net after all SERS’ expenses, the return on investments is compounded annually at 7.50%.
- **Inflation Rate** The inflation assumption is 3.00% per year. The real rate of return is the portion of total investment return, which is more than the inflation rate. Considering inflation recognition of

3.00%, the 7.50% investment return rate translates to an assumed real rate of return of 4.50%.

- **Benefit increases** Cost-of-living adjustments of 2.50% per year after retirement are assumed.
- **Payroll Growth** Salary increases attributable to payroll growth of 3.50% are projected and compounded annually. Additional projected salary increases ranging from 0.0% to 14.2% per year are attributable to seniority and merit. Pay increase assumptions for individual active members are shown for service durations in the table below.

Years of Service	Merit & Seniority	Salary Inflation	Total
0	14.20%	3.50%	18.20%
1	5.55	3.50	9.25
2	3.14	3.50	6.75
3	2.17	3.50	5.75
4	1.45	3.50	5.00
5	1.20	3.50	4.75
6	0.97	3.50	4.50
7	0.72	3.50	4.25
8	0.48	3.50	4.00
9	0.24	3.50	3.75
10 & over	—	3.50	3.50

Non-Economic Assumptions

- **Retirements** Representative values of the assumed annual rates of service retirement are:

Annual Rates of Retirement								
	Eligible prior to 8/1/17				Eligible on or after 8/1/17			
Age	Reduced	Reduced (55/25)	First Eligible Unreduced	Subsequent Unreduced	Reduced	Reduced (55/25)	First Eligible Unreduced	Subsequent Unreduced
50			27%	19%				
55		10%	27	19				
60	11%	14	27	19		14%	30%	19%
65			25	19	11%	14	30	19
70			20	22			30	22
75			100	100			100	100

- **Death-in-Service and Disability Benefits** Separation from active service other than retirement or termination of employment assumed rates are:

	Annual Rates of			
	Death*		Disability	
Age	Male	Female	Male	Female
20	0.022%	0.013%	0.020%	0.010%
25	0.053	0.018	0.038	0.010
30	0.063	0.019	0.068	0.026
35	0.059	0.024	0.122	0.055
40	0.068	0.032	0.212	0.102
45	0.081	0.044	0.311	0.170
50	0.126	0.074	0.411	0.300
55	0.218	0.124	0.530	0.450
60	0.361	0.188	0.590	0.450
65	0.607	0.274	0.550	0.300
70	1.071	0.415	0.300	0.200
74	1.570	0.629	0.300	0.200

*Pre-retirement mortality is based on the RP-2014 Blue Collar Mortality Table with fully generational projection and a five year set-back for both males and females. The rates in the table above represent the base rates used.

- **Death after Retirement** The RP-2014 Blue Collar Mortality Table with fully generational projection and Scale BB, 120% of male rates and 110% of female rates is used to evaluate allowances to be paid. The RP-2000 Disabled Mortality Table with 90% for male rates and 100% for female rates set back five years is used for the period after disability retirement. These assumptions are used to measure the probabilities of each benefit payment being made after retirement.

- **Marriage Assumption** Based on prior experience, it is assumed that 80% of retirees are married, with the husband three years older than his wife.

Actuarial Accrued Liabilities

Actuarial accrued liabilities are the present value of plan promises to pay benefits in the future, based upon service already rendered. A liability has been established or accrued because the service has been performed, but the resulting monthly cash benefit may not be payable until years in the future. Actuarial accrued liabilities are the result of complex mathematical calculations performed by the plan's actuaries. The results of the computed actuarial accrued liabilities, using the entry age normal actuarial cost method, are disclosed in the following schedule.

ACTUARIAL ACCRUED LIABILITIES AS OF JUNE 30, 2018

Present value of:	Pension Benefits	Medicare Part B	Post-Retirement Death Benefit	Total Basic Benefits
Future benefits to present retirees and survivors	$ 11,862,831,988	$ 236,229,932	$ 30,343,075	$ 12,129,404,995
Benefits and refunds to present inactive members	563,793,631	14,769,034	832,343	579,395,008
Allowances to present active members				
Service	6,806,173,300	133,497,430	7,098,605	6,946,769,335
Disability	230,742,933	3,805,769	440,003	234,988,705
Survivor benefits	123,874,430	2,193,344	—	126,067,774
Withdrawal	(28,455,848)	9,137,386	393,611	(18,924,851)
Total Active AAL	7,132,334,815	148,633,929	7,932,219	7,288,900,963
Total AAL	$ 19,558,960,434	$ 399,632,895	$ 39,107,637	$ 19,997,700,966

Active Member Valuation Data

Actuarial Valuation as of June 30	Number of Active Members	Annual Payroll *($ in millions)*	Average Annual Salary	% Increase in Average Salary
2018	158,343	$ 3,332	$ 21,045	0.7%
2017	157,981	3,303	20,906	(0.1)
2016	124,540	2,932	23,545	1.7
2015	122,855	2,845	23,161	1.8
2014	121,251	2,759	22,757	0.8
2013	121,642	2,747	22,581	(1.3)
2012	121,811	2,788	22,889	0.6
2011	125,337	2,852	22,758	0.9
2010	126,015	2,843	22,558	1.5
2009	125,465	2,787	22,216	4.2

Pension Retirees and Beneficiaries Added to and Removed from Rolls

Year Ended	Added to Rolls		Removed from Rolls		Rolls at Year End		% increase in Annual Allowances	Average Annual Allowances
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances		
2018	5,339	$ 74,311,354	3,164	$ 24,391,232	81,332	$ 1,211,935,637	4.3%	$ 14,901
2017	5,499	70,973,748	2,622	(7,420,188)	79,157	1,162,015,515	7.2	14,680
2016	4,388	66,860,652	2,480	3,607,967	76,280	1,083,621,579	6.2	14,206
2015	4,909	70,608,680	3,142	8,777,486	74,372	1,020,368,894	6.5	13,720
2014	4,144	61,331,002	2,310	1,060,903	72,605	958,537,700	6.7	13,202
2013	4,197	62,841,820	2,464	2,650,786	70,771	898,267,601	7.2	12,693
2012	4,137	61,519,329	2,320	1,353,680	69,038	838,076,567	7.7	12,139
2011	3,472	49,577,804	2,378	1,526,603	67,221	777,910,918	6.6	11,572
2010	2,694	37,351,889	2,324	1,331,166	66,127	729,859,717	5.2	11,037
2009	3,103	41,970,065	2,164	504,642	65,727	693,838,994	6.4	10,552

Medicare B Retirees and Beneficiaries Added to and Removed from Rolls(1)

Year Ended	Added to Rolls		Removed from Rolls		Rolls at Year End		% Decrease in Annual Allowances	Average Annual Allowances
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances		
2018	1,752	$ 956,592	2,848	$ 1,555,008	43,645	$ 23,830,170	(2.45)%	$ 546
2017	1,853	1,011,738	3,278	1,789,788	44,741	24,428,586	(3.09)	546
2016	2,006	1,095,276	2,459	1,342,614	46,166	25,206,636	(0.97)	546
2015	1,853	1,011,738	2,532	1,382,472	46,619	25,453,974	(1.44)	546
2014	2,225	1,214,850	2,303	1,257,438	47,298	25,824,708	(0.16)	546
2013	2,569	1,402,674	2,824	1,541,904	47,376	25,867,296	(0.54)	546

(1) The effort and cost to re-create financial statement information for the previous four years was not practical. Additional years will be displayed as they become available.

Short-Term Solvency Test

SERS' financing objective is to pay for pension benefits through contributions that remain approximately level from year to year as a percent of member payroll.

If the contributions are level in concept and soundly executed, SERS will pay all promised benefits when due, which is the ultimate test of financial soundness. Testing for level contribution rates is the long-term test. A short-term solvency test is one means of checking a system's progress under its funding program. In a short-term solvency test, the present assets (cash and investments) are compared with:

1. Active member contributions on deposit.

2. The liabilities for future benefits to present retired lives.

3. The liabilities for service already rendered by active members.

Under the level percent of payroll financing, liabilities for active member contributions on deposit and the liabilities for future benefits to present retirees and beneficiaries will be fully covered by present assets except in rare circumstances. In addition, liabilities for active member benefits earned or to be earned in the future will be partially covered by the remainder of present assets. Generally, because SERS has been using level cost financing, the funded portion of active member benefits will increase over time.

Solvency Test *($ in millions)*

Valuation as of June 30	Aggregate Accrued Liabilities For (1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)	Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset (1)	(2)	(3)
PENSION							
2018	$ 2,733	$ 12,427	$ 4,399	$ 13,824	100.0%	89.0%	0.0%
2017	3,010	11,690	4,449	13,537	100.0	90.0	0.0
2016	2,914	11,689	4,728	13,015	100.0	86.0	0.0
2015	2,979	11,046	4,062	12,446	100.0	86.0	0.0
2014	2,892	10,437	4,128	11,882	100.0	86.0	0.0
2013	2,860	9,796	4,196	10,988	100.0	83.0	0.0
2012	2,826	9,190	4,322	10,266	100.0	81.0	0.0
2011	2,749	8,525	4,636	10,378	100.0	90.0	0.0
2010	2,569	7,850	4,404	10,766	100.0	100.0	7.9
2009*	2,470	7,496	4,224	9,704	100.0	97.0	0.0
MEDICARE B							
2018	$ 0	$ 251	$ 149	$ 164	100.0%	65.3%	0.0%
2017	0	251	151	153	100.0	61.0	0.0
2016	0	251	151	142	100.0	57.0	0.0
2015	0	252	130	134	100.0	53.0	0.0
2014	0	259	131	128	100.0	49.0	0.0
2013	0	255	132	119	100.0	47.0	0.0
2012	0	251	132	113	100.0	45.0	0.0
2011	0	245	138	116	100.0	47.0	0.0
2010	0	239	128	122	100.0	51.0	0.0
2009	0	239	121	113	100.0	47.0	0.0
DEATH BENEFIT							
2018	$ 0	$ 31	$ 8	$ 24	100.0%	77.4%	0.0%
2017	0	30	8	23	100.0	77.0	0.0
2016	0	30	8	22	100.0	73.0	0.0
2015	0	28	7	21	100.0	75.0	0.0
2014	0	27	8	21	100.0	76.0	0.0
2013	0	27	7	19	100.0	73.0	0.0
2012	0	26	8	18	100.0	70.0	0.0
2011	0	26	7	19	100.0	74.0	0.0
2010	0	25	7	21	100.0	84.0	0.0
2009	0	24	7	19	100.0	79.0	0.0

Analysis of Financial Experience

Gains and Losses in Accrued Liabilities Resulting from Differences Between Assumed Experience and Actual Experience in the Pension, Medicare B, and Death Benefit Funds

($ in millions)

Type of Risk Area	2018				2017			
	Pension	Medicare B	Death Benefit	Total	Pension	Medicare B	Death Benefit	Total
Age and Service Retirements If members retire at older ages, there is a gain. If younger ages, there is a loss.	$ (211.1)	$ 1.2	$ 0.3	**$ (209.6)**	$ (211.0)	$ (0.5)	$ (0.3)	**$ (211.8)**
Disability Retirements If disability claims are less than assumed, there is a gain. If more claims, there is a loss.	(14.6)	(0.1)	0.0	**(14.7)**	(37.0)	(0.7)	(0.1)	**(37.8)**
Post-Retirement Death Benefits If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(6.4)	(0.2)	0.0	**(6.6)**	(0.1)	0.0	0.0	**(0.1)**
Pay Increases If there are smaller pay increases than assumed, there is a gain. If greater increases, there is a loss.	85.2	0.0	0.0	**85.2**	(69.2)	0.0	0.0	**(69.2)**
Investment Income (Loss) If there is greater investment income than assumed, there is a gain. If less income, there is a loss.	(159.0)	(1.9)	(0.2)	**(161.1)**	(12.1)	0.1	0.0	**(12.0)**
Withdrawal From Employment If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, there is a loss.	(124.0)	(0.5)	0.0	**(124.5)**	21.7	0.2	0.0	**21.9**
New Members Additional accrued liability attributable to members who entered the plan since the last valuation.	(34.6)	(1.0)	(0.1)	**(35.7)**	(45.0)	(2.9)	(0.2)	**(48.1)**
Death After Retirement If retired members live longer than assumed, there is a loss. If not as long, there is a gain.	4.6	10.5	(0.1)	**15.0**	85.3	14.0	(2.1)	**97.2**
Other Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	(0.7)	5.5	(0.2)	**4.6**	(32.1)	1.8	3.6	**(26.7)**
Non-Recurring Items Adjustments for plan amendments, assumption changes, or method changes.	357.6	0.0	0.0	**357.6**	998.5	0.0	0.0	**998.5**
Total Gain (Loss) During Year	$ (103.0)	$ 13.5	$ (0.3)	**$ (89.8)**	$ 699.0	$ 12.0	$ 0.9	**$ 711.9**

2016				2015				2014				2013*	2012*	2011*	2010*	2009*
Pension	Med B	Death Benefit	Total	Pension	Med B	Death Benefit	Total	Pension	Med B	Death Benefit	Total					
$ (141.6)	$ 0.7	$ (0.1)	**$(141.0)**	$ (124.4)	$ 1.5	$ (0.1)	**$(123.0)**	$ (122.0)	$(0.5)	$ (0.1)	**$(122.6)**	$(121.9)	$(154.8)	$ (59.2)	$ (40.6)	$ (50.8)
(49.9)	(0.6)	(0.1)	**(50.6)**	(52.4)	(0.6)	(0.1)	**(53.1)**	(55.3)	(0.6)	(0.1)	**(56.0)**	(53.6)	(47.7)	(28.1)	(23.4)	(28.7)
(27.9)	(0.6)	0.0	**(28.5)**	0.0	0.0	0.0	**0.0**	0.1	0.0	0.0	**0.1**	0.0	(0.2)	(0.7)	(0.5)	(0.6)
70.0	0.0	0.0	**70.0**	53.3	0.0	0.0	**53.3**	103.4	0.0	0.0	**103.4**	219.2	178.7	198.4	182.5	107.5
49.6	0.9	0.1	**50.6**	60.6	1.3	0.2	**62.1**	398.0	4.5	0.8	**403.3**	241.0	(692.0)	(1,082.9)	390.5	(2,265.2)
29.2	1.1	0.1	**30.4**	63.2	1.7	0.2	**65.1**	43.0	5.1	0.2	**48.3**	61.1	46.5	15.4	11.0	(11.9)
(42.3)	(1.6)	(0.1)	**(44.0)**	(46.0)	(1.5)	(0.1)	**(47.6)**	(26.7)	(1.4)	(0.1)	**(28.2)**	(35.1)	(29.5)	(36.4)	(38.1)	(50.4)
104.4	10.6	(1.2)	**113.8**	39.0	16.9	(0.1)	**55.8**	2.5	0.5	0.1	**3.1**	2.9	51.9	(1.0)	46.5	51.8
(3.3)	1.0	1.6	**(0.7)**	(0.8)	0.4	0.3	**(0.1)**	(4.6)	2.3	0.2	**(2.1)**	1.9	(6.2)	(10.0)	(29.6)	200.1
(643.5)	(22.4)	(2.3)	**(668.2)**	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	27.8	194.7	(436.2)	0.0	0.0
$ 0.0	$ 0.0	$ 0.0	**$(668.2)**	$ (7.5)	$19.7	$ 0.3	**$ 12.5**	$ 338.4	$ 9.9	$ 1.0	**$ 349.3**	$ 343.3	$(458.6)	$(1,440.7)	$498.3	$(2,048.2)

*Breakdowns by fund for prior years are not available.

HEALTH CARE

Summary of Actuarial Assumptions and Methods

Governmental Accounting Standards Board (GASB) Statements 74 and 75 require actuarial valuations of retiree medical and other post-employment benefit plans.

Funding Method The medical and drug benefits of the plan are included in the actuarially calculated contribution rates, which are developed using the entry age normal actuarial cost method with the normal cost rate determined as a level percentage of payroll. GASB requires the discount rate used to value a plan to be based on the likely return of the assets held in trust to pay benefits. The discount rate used in this valuation is 5.25%.

Contributions Gains and losses are reflected in the unfunded accrued liability that is amortized by regular annual contributions as a level percentage of payroll within a 30-year period, on the assumption that payroll will increase 3.50% annually. The assumptions recommended by the actuary are, in the aggregate, reasonably related to the experience under the plan and to reasonable expectations of anticipated experience under the plan. They also meet the parameters for the disclosures under GASB Statement No. 74 and Statement No. 75.

Year Ended June 30	Annual Required Contribution (ARC)	Employer Contribution	Retiree Drug Subsidy (RDS) & Other Contribution	Total Contribution	Percentage of ARC Contributed
	(a)	(b)	(c)	(d) = (b) + (c)	(d) / (a)
2018	$ 176,950,184	$ 63,539,354	$ 36,517,382	$ 100,056,736	56.5%
2017	178,034,717	47,672,886	17,341,005	65,013,891	36.5
2016	161,566,234	44,855,441	32,493,250	77,348,691	47.9
2015	164,182,107	68,904,867	20,084,826	88,989,693	54.2
2014	190,390,431	46,097,206	29,200,200	75,297,406	39.5
2013	171,402,038	45,489,443	—	45,489,443	26.5
2012	155,857,785	56,476,230	—	56,476,230	36.2
2011	169,146,052	86,908,283	—	86,908,283	51.4
2010	315,535,278	60,142,014	24,414,855	84,556,869	26.8
2009	373,789,127	163,411,488	23,504,101	186,915,589	50.0

Asset Valuation Method Fair Market Value

Economic Assumptions The following economic assumptions were used in the actuarial valuation as of June 30, 2018:

- **Investment Return** Net after all plan expenses, the return on investments is compounded annually at 5.25%.
- **Inflation Rate** The inflation assumption is 3.00% per year. The real rate of return is the portion of total investment return, which is more than the inflation rate. Considering inflation recognition of 3.00%, the 5.25% investment return rate translates to an assumed real rate of return of 2.25%.
- **Health Care Cost Trend Rates** To the right, is a chart detailing trend assumptions:

Calendar Year	Non-Medicare	Medicare
2018	7.25%	5.375%
2019	7.00	5.250
2020	6.75	5.130
2021	6.50	5.000
2022	6.25	4.750
2023	6.00	4.750
2024	5.75	4.750
2025	5.50	4.750
2026	5.25	4.750
2027	5.00	4.750
2028 and beyond	4.75	4.750

Non-Economic Assumptions

- **Age-related morbidity** Per capita costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims is assumed to be:

	Annual Increase	
Participant Age	Medical	Prescription
41 - 45	2.50%	1.25%
46 - 50	2.60	1.30
51 - 55	3.20	1.60
56 - 60	3.40	1.70
61 - 65	3.70	1.85
66 - 70	3.20	1.60
71 - 75	2.40	1.20
76 - 80	1.80	0.90
81 - 85	1.30	0.65

- **Anticipated Plan Participation** 50% of male retirees will choose spousal coverage, while only 30% of female retirees will choose spousal coverage.

Years of Service at Retirement	Service Retiree Participation	Disabled Retiree Participation
10 - 14	25.0%	50.0%
15 - 19	45.0	70.0
20 - 24	70.0	75.0
25 - 29	75.0	75.0
30 - 34	80.0	80.0
35 and over	90.0	90.0

Actuarial Accrued Liabilities

The results of the computed actuarial accrued liabilities, using the entry age normal actuarial cost method, are disclosed in the following schedule:

HEALTH CARE FUND ACTUARIAL ACCRUED LIABILITIES AS OF JUNE 30, 2018	
Present value of benefits payable on account of present retired members and beneficiaries	$ 947,646,519
Present value of benefits payable on account of active members	2,480,042,878
Present value of benefits payable on account of deferred vested members	20,310,571
Total AAL	$ 3,447,999,968

Analysis of Financial Experience

Gains and Losses in Accrued Liabilities Resulting from Differences Between Assumed Experience and Actual Experience in the Health Care Fund
($ in millions)

Type of Risk Area	2018	2017	2016	2015	2014*
Age and Service Retirements If members retire at older ages or participate in lower numbers, there is a gain. If younger ages or higher participation, there is a loss.	$ 30.8	$ (4.8)	$ (10.6)	$ 2.8	$ 2.7
Disability Retirements If disability claims are less than assumed, there is a gain. If more claims, there is a loss.	(0.4)	(5.1)	2.8	2.6	3.8
Death-In-Service Benefits If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(1.9)	(2.4)	(1.0)	(0.7)	(1.5)
Claims Increases (Including Wrap Plan) If there are smaller claims increases than assumed, there is a gain. If greater increases, there is a loss.	(71.4)	124.0	170.7	112.7	561.2
Investment Income (Loss) If there is greater investment income than assumed, there is a gain. If less income, there is a loss.	4.7	14.3	(21.0)	(12.5)	29.2
Withdrawal From Employment If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, there is a loss.	39.2	3.4	29.4	30.1	51.0
Contribution Shortfall If there are more contributions than the ACR, there is a gain. If less contributions, there is a loss.	(78.9)	(116.0)	(86.4)	(77.2)	(118.1)
New Members Additional accrued liability attributable to members who entered the plan since the last valuation.	(21.2)	(39.0)	(24.7)	(18.2)	(31.4)
Death after Retirement If retirees live longer than assumed, there is a loss. If not as long, there is a gain.	35.4	18.4	12.2	14.3	24.3
Other Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	9.2	31.1	(2.9)	9.0	19.3
Non-Recurring Items Adjustments for plan amendments, assumption changes, or method changes.	0.0	0.0	(72.1)	0.0	(36.1)
Total Gain (Loss) During Year	**$ (54.5)**	**$ 23.9**	**$ (3.6)**	**$ 62.9**	**$ 504.4**

*Breakdowns by fund for prior years are not available.

Health Care Solvency Test

($ in millions)

The following table provides the Health Care solvency test for SERS members:

Valuation as of June 30	Aggregate Accrued Liabilities For			Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
2018	$ 0	$ 968	$ 1,557	$ 436	100.0%	45.0%	0.0%
2017	0	916	1,480	382	100.0	41.7	0.0
2016	0	918	1,489	370	100.0	40.3	0.0
2015	0	979	1,507	408	100.0	41.7	0.0
2014	0	968	1,508	414	100.0	42.8	0.0
2013	0	1,157	1,761	379	100.0	32.8	0.0
2012	0	1,074	1,617	355	100.0	33.1	0.0
2011	0	897	1,513	356	100.0	39.7	0.0
2010	0	970	1,399	325	100.0	33.5	0.0
2009	0	1,895	2,385	376	100.0	19.8	0.0

Health Care Retirees and Beneficiaries Added to and Removed from Rolls

Year Ended	Added to Rolls		Removed from Rolls[(1)]		Rolls at Year-End		% Increase in Projected Benefits	Average Projected Benefits
	No.	Projected Benefits	No.	Projected Benefits	No.	Projected Benefits		
2018	2,383	$ 10,099,985	2,820	$ 5,004,204	43,421	$ 90,696,175	(0.94)%	$ 2,089
2017	2,355	10,099,985	2,774	4,834,866	43,858	91,554,056	1.18	2,088
2016	2,820	10,209,470	2,650	4,258,016	44,277	90,484,518	(0.41)	2,044
2015	2,329	8,897,861	2,932	4,682,901	44,107	90,855,858	4.42	2,060
2014	2,251	8,658,731	2,873	4,834,922	44,710	87,007,272	(13.44)	1,946
2013	2,110	8,944,566	3,217	4,370,993	45,332	100,514,730	10.81	2,217
2012	2,073	9,280,779	3,785	5,391,796	46,439	90,708,513	11.49	1,953
2011	1,842	6,078,819	4,296	6,244,776	48,151	81,358,997	(7.63)	1,690
2010	1,779	5,931,864	3,039	6,978,743	50,605	88,077,033	n/a	1,740
2009*								

(1)The benefits removed from rolls do not include subsidies that were changed due to premium changes, plan election changes, or reductions due to members obtaining Medicare eligibility.

* The effort and cost to re-create financial statement information for the fiscal years prior to 6/30/2010 was not practical. Additional years will be added to the schedule as they become available.

THIS PAGE INTENTIONALLY
LEFT BLANK

Statistical Section

Statistical Section

The objectives of the statistical section are to provide additional historical perspective, context, and relevant details to assist readers in using information in the financial statements, notes to the financial statements, and required supplementary information in order to understand and assess SERS' overall financial condition.

The schedules and graphs beginning on page 99 show financial trend information about the change in SERS' assets for the past 10 years. These schedules provide detailed information about the trends of key sources of asset additions and deductions, which assist in providing a context framing how SERS' financial position has changed over time. The financial trend schedules presented are:

- Net Position by Fund
- Total Net Position
- Changes in Net Position
- Benefit and Refund Deductions from Net Position by Type

The schedules beginning on page 106 show demographic and economic information. This information is designed to assist in understanding the environment in which SERS operates. The demographic and economic information and the operating information presented include:

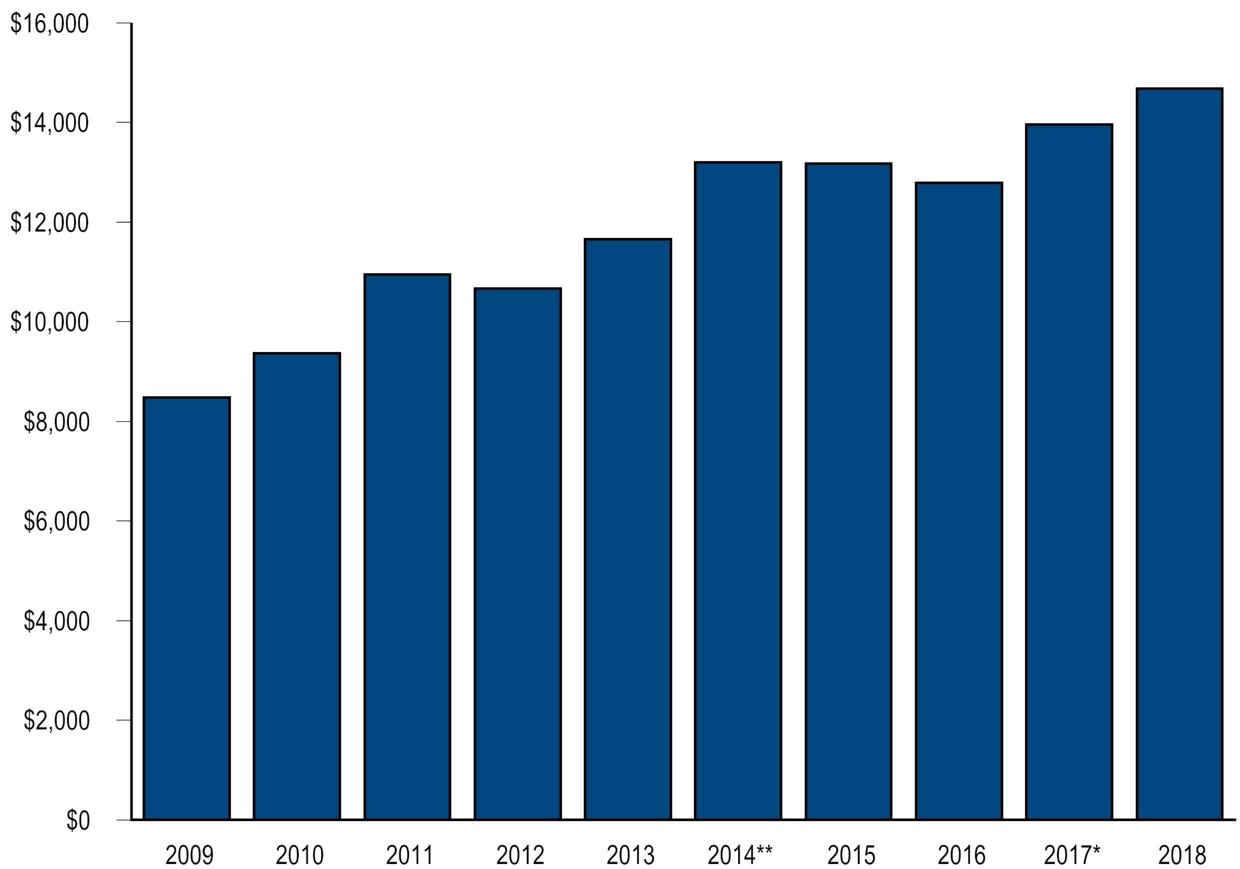
- Employee and Employer Contribution Rates
- Demographics of New Pension Benefit Recipients
- Demographics of Active and Retired Members Used for Valuation Purposes
- Retired Members by Type of Benefit
- Retirees, Spouses, and Dependents Receiving Health Care Coverage
- Principal Participating Employers
- Average Benefit Payments - New Retirees (Service Only)

Net Position by Fund

Last 10 years

June 30	Pension Trust Fund	Medicare B Fund	Death Benefit Fund	QEBA Fund	Health Care Fund	Total Fund
2018	$ 14,078,724,296	$ 167,266,385	$ 24,525,067	$ 217,341	$ 435,629,637	$ 14,706,362,726
2017*	13,428,420,143	151,581,147	23,214,168	217,398	382,109,560	13,985,542,416
2016	12,296,016,233	134,623,247	20,991,343	223,565	370,204,515	12,822,058,903
2015	12,638,892,425	136,580,030	21,711,575	193,687	408,363,598	13,205,741,315
2014**	12,652,514,842	136,115,160	21,992,809	165,480	413,858,201	13,224,646,492
2013	11,160,574,582	120,363,782	19,543,665	144,750	379,181,026	11,679,807,805
2012	10,201,185,790	112,200,252	18,272,350	107,877	355,110,407	10,686,876,676
2011	10,483,076,014	116,849,347	19,249,940	102,596	355,705,744	10,974,983,641
2010	8,953,363,488	101,513,452	17,054,072	87,129	325,004,169	9,397,022,310
2009	8,024,889,206	93,243,651	15,974,467	74,585	376,459,222	8,510,641,131

Total Net Position *($ in millions)*



* Net Position was restated due to the implementation of GASB 75 during FY2018.

** Net Position was restated due to the implementation of GASB 68 during FY2015.

Changes in Net Position
Last 10 fiscal years

ALL FUNDS COMBINED	2018	2017*	2016	2015
ADDITIONS				
Employer Contributions	$ 499,018,574	$ 515,834,904	$ 481,635,982	$ 466,904,369
Employee Contributions	324,842,074	336,627,658	314,325,716	303,866,076
Other Income	116,893,434	98,190,524	113,932,903	116,501,166
Total Investment Income (Loss), Net	1,270,190,442	1,649,100,073	108,787,810	452,598,520
TOTAL ADDITIONS	2,210,944,524	2,599,753,159	1,018,682,411	1,339,870,131
DEDUCTIONS				
Benefits	1,407,652,952	1,341,304,984	1,309,740,098	1,248,400,086
Refunds and Lump Sum Payments	59,575,036	60,692,833	70,340,495	60,635,651
Net Transfers to Other Ohio Systems	(6,734,065)	(3,139,875)	(2,272,514)	28,139,159
Administrative Expenses	29,630,291	37,411,704	24,556,744	21,600,412
TOTAL DEDUCTIONS	1,490,124,214	1,436,269,646	1,402,364,823	1,358,775,308
Net Increase (Decrease)	720,820,310	1,163,483,513	(383,682,412)	(18,905,177)
Net Position Held in Trust:				
Beginning of Year	13,985,542,416	12,822,058,903	13,205,741,315	13,224,646,492
End of Year	**$ 14,706,362,726**	**$ 13,985,542,416**	**$ 12,822,058,903**	**$ 13,205,741,315**

PENSION TRUST FUND	2018	2017*	2016	2015
ADDITIONS				
Employer Contributions	$ 406,953,261	$ 442,032,882	$ 412,712,475	$ 374,724,343
Employee Contributions	324,842,074	336,627,658	314,325,716	303,866,076
Other Income	—	—	—	—
Total Investment Income (Loss), Net	1,226,089,090	1,593,050,588	105,116,336	435,966,343
TOTAL ADDITIONS	1,957,884,425	2,371,711,128	832,154,527	1,114,556,762
DEDUCTIONS				
Pension Benefits	1,227,807,547	1,146,987,656	1,085,216,541	1,020,154,456
Refunds and Lump Sum Payments	59,575,036	60,692,833	70,340,495	60,635,651
Net Transfers to Other Ohio Systems	(6,734,065)	(3,139,875)	(2,272,514)	28,139,159
Administrative Expenses	26,931,754	34,766,604	21,746,197	19,249,913
TOTAL DEDUCTIONS	1,307,580,272	1,239,307,218	1,175,030,719	1,128,179,179
Net Increase (Decrease)	650,304,153	1,132,403,910	(342,876,192)	(13,622,417)
Net Position Held in Trust:				
Beginning of Year	13,428,420,143	12,296,016,233	12,638,892,425	12,652,514,842
End of Year	**$ 14,078,724,296**	**$ 13,428,420,143**	**$ 12,296,016,233**	**$ 12,638,892,425**

HEALTH CARE FUND	2018	2017	2016	2015
ADDITIONS				
Employer Contributions	$ 63,539,354	$ 47,672,886	$ 44,855,441	$ 68,904,867
Other Income	116,893,434	98,190,524	113,932,903	116,501,166
Total Investment Income (Loss), Net	28,167,652	35,730,747	2,244,300	11,142,837
TOTAL ADDITIONS	208,600,440	181,594,157	161,032,644	196,548,870
DEDUCTIONS				
Health Care Expenses	152,447,415	167,106,908	196,445,600	199,750,908
Administrative Expenses	2,632,948	2,582,204	2,746,127	2,292,565
TOTAL DEDUCTIONS	155,080,363	169,689,112	199,191,727	202,043,473
Net Increase (Decrease)	53,520,077	11,905,045	(38,159,083)	(5,494,603)
Net Position Held in Trust:				
Beginning of Year	382,109,560	370,204,515	408,363,598	413,858,201
End of Year	**$ 435,629,637**	**$ 382,109,560**	**$ 370,204,515**	**$ 408,363,598**

2014**	2013	2012	2011	2010	2009
$ 451,402,553	$ 447,901,887	$ 456,375,083	$ 466,365,125	$ 462,322,570	$ 454,596,164
295,690,550	292,958,056	296,974,146	303,114,258	301,649,643	295,788,567
127,867,227	135,705,046	154,832,793	122,232,090	96,449,404	97,284,347
1,939,269,151	1,329,495,903	(37,922,409)	1,789,850,651	1,087,495,208	(2,526,406,966)
2,814,229,481	2,206,060,892	870,259,613	2,681,562,124	1,947,916,825	(1,678,737,888)
1,174,068,175	1,120,377,591	1,083,844,151	1,033,791,708	999,045,882	938,903,072
55,668,466	48,979,203	47,920,393	42,223,739	37,159,685	34,213,067
7,535,690	22,301,557	4,976,841	6,394,075	5,085,923	3,224,094
32,118,463	21,471,412	21,625,193	21,191,271	20,244,156	20,501,565
1,269,390,794	1,213,129,763	1,158,366,578	1,103,600,793	1,061,535,646	996,841,798
1,544,838,687	992,931,129	(288,106,965)	1,577,961,331	886,381,179	(2,675,579,686)
11,679,807,805	10,686,876,676	10,974,983,641	9,397,022,310	8,510,641,131	11,186,220,817
$ 13,224,646,492	**$ 11,679,807,805**	**$ 10,686,876,676**	**$ 10,974,983,641**	**$ 9,397,022,310**	**$ 8,510,641,131**

2014**	2013	2012	2011	2010	2009
$ 382,098,970	$ 380,083,642	$ 376,816,938	$ 355,959,304	$ 378,201,685	$ 268,645,839
295,690,550	292,958,056	296,974,146	303,114,258	301,649,643	295,788,567
—	—	—	—	—	—
1,864,902,017	1,277,940,348	(38,010,415)	1,722,754,363	1,042,542,982	(2,434,825,781)
2,542,691,537	1,950,982,046	635,780,669	2,381,827,925	1,722,394,310	(1,870,391,375)
957,757,668	901,072,882	845,683,445	784,875,283	734,080,237	696,152,597
55,668,466	48,979,203	47,920,393	42,223,739	37,159,685	34,213,067
7,535,690	22,301,557	4,976,841	6,394,075	5,085,923	3,224,094
29,789,453	19,239,612	19,090,214	18,622,302	17,594,183	17,694,009
1,050,751,277	991,593,254	917,670,893	852,115,399	793,920,028	751,283,767
1,491,940,260	959,388,792	(281,890,224)	1,529,712,526	928,474,282	(2,621,675,142)
11,160,574,582	10,201,185,790	10,483,076,014	8,953,363,488	8,024,889,206	10,646,564,348
$ 12,652,514,842	**$ 11,160,574,582**	**$ 10,201,185,790**	**$ 10,483,076,014**	**$ 8,953,363,488**	**$ 8,024,889,206**

2014	2013	2012	2011	2010	2009
$ 46,097,206	$ 45,489,443	$ 56,476,230	$ 86,908,283	$ 60,142,014	$ 163,411,488
127,867,227	135,705,046	154,832,793	122,232,090	96,449,404	97,284,347
50,980,652	35,523,491	541,940	45,247,242	31,472,744	(58,751,419)
224,945,085	216,717,980	211,850,963	254,387,615	188,064,162	201,944,416
187,994,468	190,468,991	209,965,344	221,167,270	236,915,618	215,409,645
2,273,442	2,178,370	2,480,956	2,518,770	2,603,597	2,756,280
190,267,910	192,647,361	212,446,300	223,686,040	239,519,215	218,165,925
34,677,175	24,070,619	(595,337)	30,701,575	(51,455,053)	(16,221,509)
379,181,026	355,110,407	355,705,744	325,004,169	376,459,222	392,680,731
$ 413,858,201	**$ 379,181,026**	**$ 355,110,407**	**$ 355,705,744**	**$ 325,004,169**	**$ 376,459,222**

*Net Position was restated due to the implementation of GASB 75 during FY2018.

** Net Position was restated due to the implementation of GASB 68 during FY2015.

Changes in Net Position (continued)

Last 10 fiscal years

MEDICARE B FUND	2018	2017	2016	2015
ADDITIONS				
Employee Contributions	$ 26,291,404	$ 24,155,026	$ 22,208,623	$ 21,499,206
Other Income	—	—	—	—
Total Investment Income (Loss), Net	13,784,587	17,527,764	1,233,948	4,716,932
TOTAL ADDITIONS	40,075,991	41,682,790	23,442,571	26,216,138
DEDUCTIONS				
Pension Benefits	24,384,610	24,718,613	25,391,810	25,743,861
Administrative Expenses	6,143	6,277	7,544	7,407
TOTAL DEDUCTIONS	24,390,753	24,724,890	25,399,354	25,751,268
Net Increase (Decrease)	15,685,238	16,957,900	(1,956,783)	464,870
Net Position Held in Trust:				
Beginning of Year	151,581,147	134,623,247	136,580,030	136,115,160
End of Year	**$ 167,266,385**	**$ 151,581,147**	**$ 134,623,247**	**$ 136,580,030**

DEATH BENEFIT FUND	2018	2017	2016	2015
ADDITIONS				
Employer Contributions	$ 1,858,955	$ 1,608,830	$ 1,500,583	$ 1,455,553
Other Income	—	—	—	—
Total Investment Income (Loss), Net	2,147,404	2,790,208	192,842	772,277
TOTAL ADDITIONS	4,006,359	4,399,038	1,693,425	2,227,830
DEDUCTIONS				
Death Benefits	2,639,464	2,122,612	2,358,518	2,460,907
Administrative Expenses	55,996	53,601	55,139	48,157
TOTAL DEDUCTIONS	2,695,460	2,176,213	2,413,657	2,509,064
Net Increase (Decrease)	1,310,899	2,222,825	(720,232)	(281,234)
Net Position Held in Trust:				
Beginning of Year	23,214,168	20,991,343	21,711,575	21,992,809
End of Year	**$ 24,525,067**	**$ 23,214,168**	**$ 20,991,343**	**$ 21,711,575**

QEBA FUND	2018	2017	2016	2015
ADDITIONS				
Employer Contributions	$ 375,600	$ 365,280	$ 358,860	$ 320,400
Other Income	—	—	—	—
Total Investment Income (Loss), Net	1,709	766	384	131
TOTAL ADDITIONS	377,309	366,046	359,244	320,531
DEDUCTIONS				
Pension Benefits	373,916	369,195	327,629	289,954
Administrative Expenses	3,450	3,018	1,737	2,370
TOTAL DEDUCTIONS	377,366	372,213	329,366	292,324
Net Increase (Decrease)	(57)	(6,167)	29,878	28,207
Net Position Held in Trust:				
Beginning of Year	217,398	223,565	193,687	165,480
End of Year	**$ 217,341**	**$ 217,398**	**$ 223,565**	**$ 193,687**

2014	2013	2012	2011	2010	2009
$ 21,517,805	$ 20,672,040	$ 21,450,368	$ 22,172,922	$ 22,619,935	$ 21,688,294
—	—	—	—	—	—
20,040,557	13,702,584	(378,593)	18,521,800	11,348,331	(27,612,707)
41,558,362	34,374,624	21,071,775	40,694,722	33,968,266	(5,924,413)
25,800,345	26,204,777	25,715,070	25,353,175	25,694,354	25,449,935
6,639	6,317	5,800	5,652	4,111	9,145
25,806,984	26,211,094	25,720,870	25,358,827	25,698,465	25,459,080
15,751,378	8,163,530	(4,649,095)	15,335,895	8,269,801	(31,383,493)
120,363,782	112,200,252	116,849,347	101,513,452	93,243,651	124,627,144
$ 136,115,160	**$ 120,363,782**	**$ 112,200,252**	**$ 116,849,347**	**$ 101,513,452**	**$ 93,243,651**

2014	2013	2012	2011	2010	2009
$ 1,412,852	$ 1,398,442	$ 1,454,763	$ 1,166,996	$ 1,225,772	$ 734,970
—	—	—	—	—	—
3,345,822	2,329,326	(75,490)	3,327,059	2,130,920	(5,218,168)
4,758,674	3,727,768	1,379,273	4,494,055	3,356,692	(4,483,198)
2,262,136	2,410,943	2,309,922	2,254,894	2,236,215	1,780,430
47,394	45,510	46,941	43,293	40,872	40,782
2,309,530	2,456,453	2,356,863	2,298,187	2,277,087	1,821,212
2,449,144	1,271,315	(977,590)	2,195,868	1,079,605	(6,304,410)
19,543,665	18,272,350	19,249,940	17,054,072	15,974,467	22,278,877
$ 21,992,809	**$ 19,543,665**	**$ 18,272,350**	**$ 19,249,940**	**$ 17,054,072**	**$ 15,974,467**

2014	2013	2012	2011	2010	2009
$ 275,720	$ 258,320	$ 176,784	$ 157,620	$ 133,164	$ 115,573
—	—	—	—	—	—
103	154	149	187	231	1,109
275,823	258,474	176,933	157,807	133,395	116,682
253,558	219,998	170,370	141,086	119,458	110,465
1,535	1,603	1,282	1,254	1,393	1,349
255,093	221,601	171,652	142,340	120,851	111,814
20,730	36,873	5,281	15,467	12,544	4,868
144,750	107,877	102,596	87,129	74,585	69,717
$ 165,480	**$ 144,750**	**$ 107,877**	**$ 102,596**	**$ 87,129**	**$ 74,585**

Benefit and Refund Deductions from Net Position by Type

Last 10 fiscal years

PENSION BENEFITS	**2018**	**2017**	**2016**	**2015**
Service Retirement	$ 1,091,624,986	$ 1,012,404,884	$ 952,950,117	$ 891,831,626
Disability Retirement	97,027,548	96,312,675	94,595,437	91,265,121
Survivor Benefits	39,155,013	38,270,097	37,670,987	37,057,709
Total Pension Benefits	$ 1,227,807,547	$ 1,146,987,656	$ 1,085,216,541	$ 1,020,154,456
Refunds				
Separation	$ 59,496,216	$ 59,541,576	$ 68,857,916	$ 59,875,564
Beneficiaries	78,820	1,151,257	1,482,579	760,087
Total Refunds	$ 59,575,036	$ 60,692,833	$ 70,340,495	$ 60,635,651

MEDICARE B REIMBURSEMENT	**2018**	**2017**	**2016**	**2015**
Service Retirement	$ 22,072,596	$ 22,336,187	$ 22,855,321	$ 23,105,680
Disability Retirement	1,330,670	1,336,790	1,413,048	1,428,700
Survivor Benefits	981,344	1,045,636	1,123,441	1,209,481
Total Medicare B Reimbursement	$ 24,384,610	$ 24,718,613	$ 25,391,810	$ 25,743,861

DEATH BENEFITS	**2018**	**2017**	**2016**	**2015**
Service	$ 2,377,087	$ 1,939,771	$ 2,133,523	$ 2,256,060
Disability	262,377	182,841	224,995	204,847
Total Death Benefits	$ 2,639,464	$ 2,122,612	$ 2,358,518	$ 2,460,907

HEALTH CARE EXPENSES	**2018**	**2017**	**2016**	**2015**
Medical	$ 81,873,185	$ 87,845,475	$ 108,821,435	$ 117,389,938
Prescription	70,574,230	79,261,433	86,997,168	80,843,448
Other	—	—	626,997	1,517,522
Total Health Care Expenses	$ 152,447,415	$ 167,106,908	$ 196,445,600	$ 199,750,908

2014	2013	2012	2011	2010	2009
$ 834,865,512	$ 781,736,903	$ 731,236,350	$ 675,549,301	$ 629,474,136	$ 595,262,076
87,804,462	85,514,086	81,219,934	77,524,938	74,632,571	72,571,590
35,087,694	33,821,893	33,227,161	31,801,044	29,973,530	28,318,931
$ 957,757,668	$ 901,072,882	$ 845,683,445	$ 784,875,283	$ 734,080,237	$ 696,152,597
55,018,577	48,392,410	47,272,246	41,753,113	36,344,287	33,499,028
649,889	586,793	648,147	470,626	815,398	714,039
$ 55,668,466	$ 48,979,203	$ 47,920,393	$ 42,223,739	$ 37,159,685	$ 34,213,067

2014	2013	2012	2011	2010	2009
$ 23,099,058	$ 23,460,682	$ 23,006,643	$ 22,677,282	$ 23,024,413	$ 22,790,277
1,436,026	1,425,456	1,405,443	1,373,592	1,364,728	1,340,431
1,265,261	1,318,639	1,302,984	1,302,301	1,305,213	1,319,227
$ 25,800,345	$ 26,204,777	$ 25,715,070	$ 25,353,175	$ 25,694,354	$ 25,449,935

2014	2013	2012	2011	2010	2009
$ 2,052,993	$ 2,197,804	$ 2,101,093	$ 2,040,327	$ 1,969,489	$ 1,538,800
209,143	213,139	208,829	214,567	266,726	241,630
$ 2,262,136	$ 2,410,943	$ 2,309,922	$ 2,254,894	$ 2,236,215	$ 1,780,430

2014	2013	2012	2011	2010	2009
$ 109,622,130	$ 110,990,977	$ 112,818,198	$ 119,184,041	$ 120,931,746	$ 112,696,150
76,945,975	78,135,361	94,731,407	100,474,453	113,971,467	99,283,588
1,426,363	1,342,653	2,415,739	1,508,776	2,012,405	3,429,907
$ 187,994,468	$ 190,468,991	$ 209,965,344	$ 221,167,270	$ 236,915,618	$ 215,409,645

Employee and Employer Contribution Rates

Last 10 fiscal years

Fiscal Year	Employee Rate	Employer Rate				
		Pension	Medicare B	Death Benefit	Health Care	Total
2018	10.00%	12.59%	0.85%	0.06%	0.50%	14.00%
2017	10.00	13.20	0.75	0.05	0.00	14.00
2016	10.00	13.21	0.74	0.05	0.00	14.00
2015	10.00	12.39	0.74	0.05	0.82	14.00
2014	10.00	13.05	0.76	0.05	0.14	14.00
2013	10.00	13.05	0.74	0.05	0.16	14.00
2012	10.00	12.65	0.75	0.05	0.55	14.00
2011	10.00	11.77	0.76	0.04	1.43	14.00
2010	10.00	12.74	0.76	0.04	0.46	14.00
2009	10.00	9.06	0.75	0.03	4.16	14.00

Demographics of New Pension Benefit Recipients

Last 10 fiscal years

Average Service Benefit

Year Ended June 30	Service Credit	Monthly Amount	Age	Final Average Salary
2018	21.2	$ 1,281	63.9	$ 34,090
2017	19.8	1,078	63.4	30,256
2016	21.4	1,224	63.4	31,785
2015	21.6	1,254	63.2	32,263
2014	21.7	1,228	63.4	31,617
2013	21.7	1,236	63.2	31,558
2012	22.9	1,246	63.6	31,600
2011	22.7	1,203	63.4	30,579
2010	23.5	1,159	64.0	29,644
2009	21.9	1,098	62.6	28,211

Average Disability Benefit

Year Ended June 30	Service Credit	Monthly Amount	Age	Final Average Salary
2018	17.4	$ 1,315	55.5	$ 31,736
2017	17.0	1,245	56.6	30,570
2016	16.5	1,296	55.9	31,118
2015	15.9	1,291	54.1	31,091
2014	15.8	1,250	54.5	29,965
2013	16.1	1,254	54.0	29,484
2012	16.0	1,249	54.9	29,071
2011	15.4	1,272	55.7	29,417
2010	18.0	1,258	55.4	29,055
2009	16.0	1,306	53.0	29,074

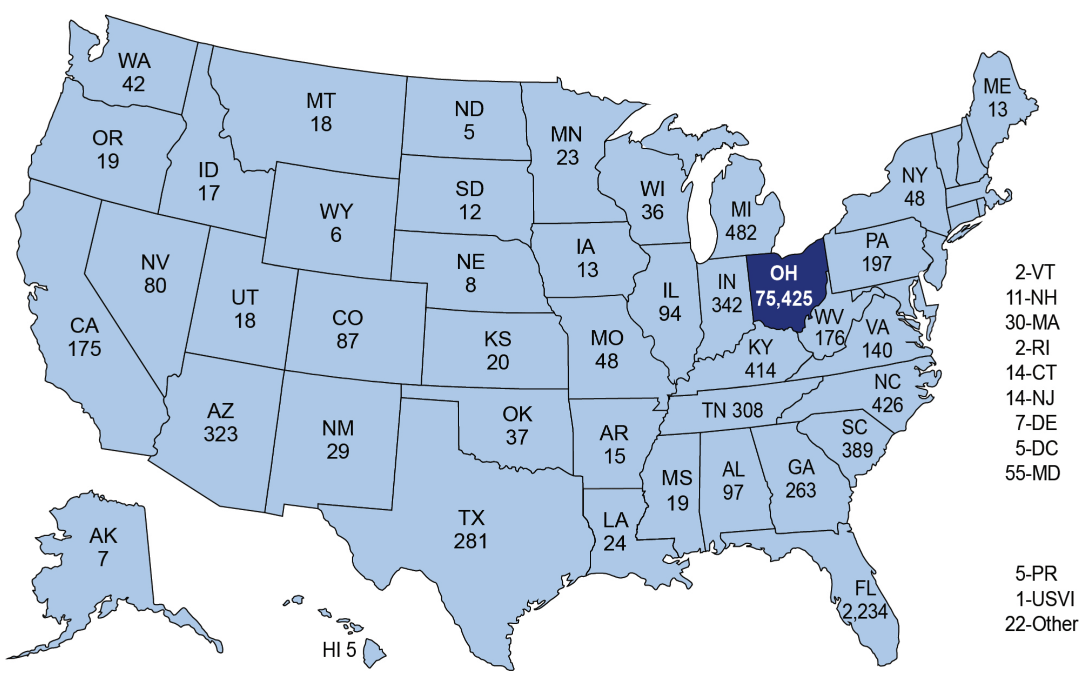
Demographics of Active and Retired Members Used for Valuation Purposes

Fiscal Year 2018

	Active Members			Percentage of Distribution		
	Male	Female	Total	Male	Female	Total
Under 20	1,785	1,306	3,091	1%	1%	2%
20 to 29	9,336	11,973	21,309	6	8	14
30 to 39	8,450	16,304	24,754	5	10	15
40 to 49	10,663	25,851	36,514	7	16	23
50 to 54	5,881	15,990	21,871	4	10	14
55 to 59	5,896	17,521	23,417	4	11	15
60 to 64	4,869	11,658	16,527	3	7	10
65 to 69	2,497	4,539	7,036	2	3	5
70 and over	1,535	2,289	3,824	1	1	2
	50,912	107,431	158,343	33%	67%	100%

	All Benefit Recipients			Percentage of Distribution		
	Male	Female	Total	Male	Female	Total
Under 55	515	816	1,331	1%	1%	2%
55 to 59	1,214	1,783	2,997	1	2	3
60 to 64	3,058	8,103	11,161	4	10	14
65 to 69	4,409	11,786	16,195	5	15	20
70 to 74	4,000	10,926	14,926	5	13	18
75 to 79	3,346	9,488	12,834	4	12	16
80 to 84	2,611	7,768	10,379	3	10	13
85 to 89	1,572	5,206	6,778	2	6	8
90 to 94	687	2,875	3,562	1	4	5
95 to 99	155	876	1,031	—	1	1
100 and over	16	122	138	—	—	—
	21,583	59,749	81,332	26%	74%	100%

All Benefit Recipients by State



Retired Members by Type of Benefit

Amount of Monthly Benefit				Total	Service	Disability	Survivor
$	1	- $	250	10,726	9,895	45	786
	251	-	500	11,754	10,237	366	1,151
	501	-	750	11,154	9,682	642	830
	751	-	1,000	9,745	8,306	867	572
	1,001	-	1,500	14,284	12,371	1,379	534
	1,501	-	2,000	8,632	7,567	864	201
	over		2,000	15,037	13,612	1,189	236
				81,332	71,670	5,352	4,310

	Service	Disability	Survivor
Average Monthly Benefit	$ 1,242	$ 1,595	$ 751
Average Age	74.4	65.7	72.4

Retirees, Spouses, and Dependents Receiving Health Care Coverage

Attained Age	Number of		Total Number
	Males	Females	
Under 30	126	136	262
30 - 39	5	6	11
40 - 49	27	37	64
50 - 59	662	847	1,509
60 - 64	1,320	2,392	3,712
65 - 69	2,122	4,888	7,010
70 - 74	2,107	5,360	7,467
75 - 79	2,302	5,600	7,902
80 - 84	2,102	4,966	7,068
85 - 89	1,254	3,403	4,657
90 - 94	532	2,204	2,736
95 - 99	138	745	883
100 and over	16	124	140
	12,713	**30,708**	**43,421**

Principal Participating Employers

Current fiscal year and nine years ago

	Fiscal Year 2018			Fiscal Year 2009		
	Covered Employee Members	Rank	Percentage of Total System	Covered Employee Members	Rank	Percentage of Total System
Columbus City Schools	3,828	1	2.42%	3,898	1	3.11%
Cincinnati Public Schools	3,210	2	2.03	2,855	3	2.28
Cleveland Metropolitan School District	3,055	3	1.93	3,260	2	2.60
Educational Service Center Council of Governments	1,888	4	1.19	—	—	—
Toledo City Schools	1,853	5	1.17	1,720	5	1.37
Akron Public Schools	1,842	6	1.16	1,670	6	1.33
University Of Akron	1,757	7	1.11	2,191	4	1.75
South-Western City Schools	1,296	8	0.82	1,233	8	0.98
Olentangy Local Schools	1,295	9	0.82	—	—	—
Dayton City Schools	1,170	10	0.74	1,398	7	1.11
Lakota Local Schools	—	—	—	1,162	9	0.93
Parma City Schools	—	—	—	1,001	10	0.80
All Other	137,149		86.61	105,077		83.74
Total	**158,343**		**100.00%**	**125,465**		**100.00%**

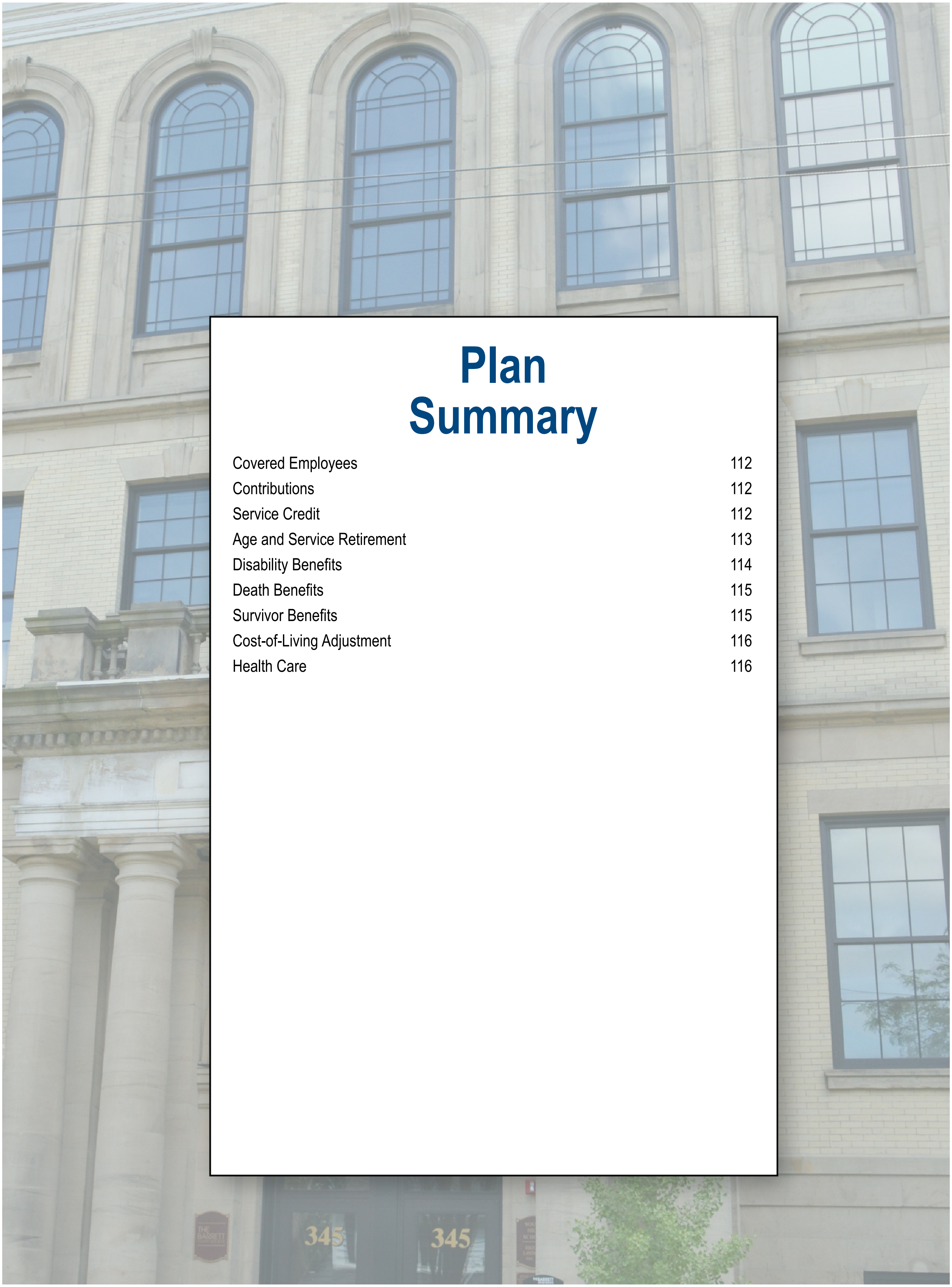
In FY2018 "All Other" consisted of:

	Covered Employee Members	Number of School Districts
City School Districts	56,845	184
Local School Districts	50,890	371
Educational Service Centers	8,736	52
Exempted Village Districts	7,398	49
Community Schools	4,952	325
Higher Education	3,692	14
Vocational Schools	3,205	49
Other	1,431	17

Average Benefit Payments - New Retirees (Service Only)

Last 10 fiscal years

	Years of Credited Service					
Retirement Effective Dates	5-9	10-14	15-19	20-24	25-29	30+
Period 7/1/17 to 6/30/18						
Average Monthly Benefit	$ 243	$ 497	$ 880	$ 1,241	$ 1,555	$ 2,537
Monthly Final Average Salary	1,734	2,151	2,700	2,950	3,027	3,741
Number of Retirees	500	668	949	977	656	1,021
Period 7/1/16 to 6/30/17						
Average Monthly Benefit	$ 212	$ 488	$ 767	$ 1,044	$ 1,487	$ 2,439
Monthly Final Average Salary	1,532	2,084	2,360	2,498	2,937	3,654
Number of Retirees	715	847	951	948	692	857
Period 7/1/15 to 6/30/16						
Average Monthly Benefit	$ 241	$ 510	$ 762	$ 1,110	$ 1,456	$ 2,392
Monthly Final Average Salary	1,608	2,104	2,341	2,644	2,869	3,582
Number of Retirees	535	671	615	630	769	1,013
Period 7/1/14 to 6/30/15						
Average Monthly Benefit	$ 247	$ 511	$ 804	$ 1,123	$ 1,459	$ 2,404
Monthly Final Average Salary	1,587	2,157	2,479	2,675	2,875	3,576
Number of Retirees	515	636	535	505	764	994
Period 7/1/13 to 6/30/14						
Average Monthly Benefit	$ 239	$ 506	$ 756	$ 1,053	$ 1,390	$ 2,391
Monthly Final Average Salary	1,554	2,130	2,357	2,511	2,785	3,586
Number of Retirees	468	622	489	527	736	957
Period 7/1/12 to 6/30/13						
Average Monthly Benefit	$ 227	$ 483	$ 732	$ 1,086	$ 1,403	$ 2,815
Monthly Final Average Salary	1,540	2,069	2,270	2,585	2,830	3,224
Number of Retirees	483	639	437	538	744	965
Period 7/1/11 to 6/30/12						
Average Monthly Benefit	$ 237	$ 475	$ 759	$ 1,066	$ 1,376	$ 2,439
Monthly Final Average Salary	1,555	2,029	2,342	2,548	2,863	3,136
Number of Retirees	468	557	478	498	643	1,089
Period 7/1/10 to 6/30/11						
Average Monthly Benefit	$ 211	$ 456	$ 706	$ 1,018	$ 1,354	$ 2,490
Monthly Final Average Salary	1,462	1,998	2,168	2,455	2,782	3,255
Number of Retirees	493	473	315	375	540	901
Period 7/1/09 to 6/30/10						
Average Monthly Benefit	$ 196	$ 427	$ 680	$ 993	$ 1,283	$ 2,216
Monthly Final Average Salary	1,343	1,848	2,105	2,422	2,681	2,906
Number of Retirees	393	349	275	315	346	725
Period 7/1/08 to 6/30/09						
Average Monthly Benefit	$ 204	$ 419	$ 681	$ 938	$ 1,250	$ 2,178
Monthly Final Average Salary	1,402	1,802	2,115	2,264	2,504	2,765
Number of Retirees	364	341	379	492	528	732



Plan Summary

Plan Summary

Established by state law in 1937, SERS is a statewide defined benefit plan that provides retirement, disability, and survivor benefits to non-teaching employees of Ohio's public, vocational, technical, and community schools; community colleges; and the University of Akron.

The Retirement Board is responsible for the general administration and management of the Retirement System. The Board comprises nine members: four elected employee members; two elected retiree members; and three appointed investment expert members. One investment expert is appointed by the Governor, a second one by the State Treasurer, and the third one jointly by the Speaker of the House and President of the Senate of the General Assembly.

The day-to-day operations are administered by a professional staff led by the Executive Director.

The plan summary in effect at June 30, 2018, is described below.

COVERED EMPLOYEES

All non-teaching employees of Ohio's public, vocational, technical, and community schools; community colleges; and the University of Akron are required to be members unless their position permits exemption from membership, optional membership, or the position is excluded from membership.

Compulsory or Mandatory Coverage

Compulsory coverage is required for any employee who:

- Is employed in a position for which the person is not required to have a certificate or license issued pursuant to sections 3319.22 to 3319.31 of the Revised Code; or
- Performs a service common to the normal daily operation of an educational unit even though the person is employed and paid by one who has contracted with the school to perform the service.

Exemption from Coverage

The following individuals may choose exemption from coverage by filing a written application with the employer within the first month after being employed:

- A student who is not a member at the time of the student's employment and who is employed by the school, college, or university in which the student is enrolled and regularly attending classes;
- An emergency employee serving on a temporary basis in case of fire, snow, earthquake, flood, or other similar emergency; or
- An individual employed in a program established under the Workforce Innovation and Opportunity Act.

Optional Coverage

A school or governing board member may choose to become a member by making application within thirty (30) days of taking office. A school board member is a member of a city, local, exempted village, or joint vocational school district board of education, and a governing board member is a member of an educational service center governing board.

Exclusion from Coverage

The following employees are excluded from SERS coverage:

- Any person having a license issued by the Ohio Department of Education (ODE) and employed in a public school in this state in an educational position, as determined by the ODE, under programs under federal law and financed in whole or in part from federal funds, but for which no licensure requirements for the position can be made under the provisions of such federal law.
- Any person who participates in an alternative retirement plan (ARP) established by a college or university.
- University of Akron police officers who are covered by the Ohio Public Employees Retirement System (OPERS).
- Nonteaching University of Akron employees hired on or after September 28, 2016. These employees are covered by OPERS unless terminated and rehired within 1 year of September 28, 2016.
- Employees of community school operators who withhold Social Security taxes beginning with their first paycheck: whose initial employment with the community school operator is on or after July 1, 2016, or; who previously worked for a community school operator and returned to work for that same operator on or after July 1, 2016, provided the employee was not previously employed by the same operator at any time between July 1, 2015 to June 30, 2016 and whose date of reemployment is before July 1, 2017. The community school operator must have withheld Social Security taxes for employees on or before February 1, 2016 in order for employers to fall under this exemption.

CONTRIBUTIONS

The employee and employer are required to contribute a percentage of the employee's compensation to SERS to fund the benefits available. Employees contribute 10% of their gross compensation. Employers contribute 14% of the employee's compensation. Members are entitled to a return of their contributions, either in the form of monthly benefits, provided they meet eligibility requirements, or a single lump-sum payment after the termination of employment.

SERVICE CREDIT

The amount of a member's service credit is a factor in determining:

- Eligibility for retirement or disability benefits
- The amount of a benefit

- Eligibility for health care coverage and the amount of the health care premium

It also determines the eligibility of a member's dependents for survivor benefits, the amount of benefits, and availability of health care coverage.

Service credit is accrued through contributions during school employment, for other periods at no cost, and for other service that may be purchased.

Contributing Service Credit

One year of service credit is granted upon completion of 120 or more days of paid school employment within a fiscal year (July 1 through the following June 30). Any portion of a day constitutes one full day. If service is less than 120 days, a fractional amount of service credit is prorated on the basis of a 180-day school year.

Free Service Credit

Additional service credit up to three years is available at no cost for periods a member received Workers' Compensation. In addition, certain periods of military service may be available at no cost.

Purchased Service Credit

The following additional service credit may be available for purchase:

- Previously refunded SERS service credit
- Employer authorized unpaid leaves of absence
- Any service after July 1, 1991, in a position for which SERS membership was compulsory, but for which a member was permitted to, and did, sign an exemption from membership form
- Any service before July 1, 1991, in a position for which SERS membership was optional, and a member did not choose to become a member
- Up to five years of service with public or private school, college, or university in another state, or operated by the federal government, which has been chartered or accredited by the proper government agency if the service in a comparable position in Ohio would have been covered by an Ohio state retirement system, or an Ohio municipal retirement system except the Cincinnati Retirement System
- Periods of military service
- Up to two years for periods when the member was required to resign because of pregnancy or adoption of a child
- School board member service prior to July 1, 1991
- Cincinnati Retirement System covered service
- Service covered by the Ohio Police & Fire Pension Fund or Ohio Highway Patrol Retirement System if not being used in a benefit under those systems

Other Ohio State Retirement System Service Credit

If a member has been employed in a job covered by the State Teachers Retirement System of Ohio (STRS) or the Ohio Public Employees Retirement System (OPERS) as well as in a job covered by SERS, at retirement the member may receive a retirement benefit independently from each of the systems if eligible, or may combine the service credit and accounts in all the systems to receive one benefit. The system with the greatest service credit will be the system that will calculate and pay the benefit. While the salaries in one year will be added together, if the member has service credit in each system for the same year, the member cannot be credited with more than one year of service credit for each 12 months in a year.

Early Retirement Incentive Program

An employer may establish an Early Retirement Incentive program (ERI), which allows employees who are at least 57 years old to retire early. Under an ERI, an employer may purchase up to five years of service credit for its eligible employees. If an employer has an ERI, it notifies all eligible employees of the plan and its requirements.

AGE AND SERVICE RETIREMENT

Eligibility

A member who retired on or before August 1, 2017, from SERS could retire under the following age and service credit guidelines:

- Five (5) years of service credit and is at least 60 years old
- 25 years of service credit and is at least 55 years old
- 30 years of service credit irrespective of age

These guidelines also apply to grandfathered members. To be grandfathered, as of August 1, 2017, the member must have had at least 25 years of service credit or purchased the right to be grandfathered.

A member who is not grandfathered, may retire under the following age and service credit guidelines:

- 10 years of service credit and is at least 62 years old
- 25 years of service credit and is at least 60 years old
- 30 years of service credit and is at least 57 years old

Calculating a Benefit

The calculation of a benefit is determined using the member's salary, service credit, and age.

The **salary** used is the Final Average Salary (FAS) which is the average of the three (3) highest years of salary. If a member has more than one covered job, the salaries will be combined.

The **service credit** used is the total service credit at the time of retirement.

The **age** used to calculate a benefit is the member's actual age at the time of retirement.

The formula used in calculating a benefit is as follows:

1. The value of a year of service credit is determined by multiplying the member's FAS by 2.2%, and by 2.5% for each year above 30 years of service credit. If the result is less than $86.00, then $86.00 is the value of each year.
2. The number of years of service credit is then multiplied by this value of each year to determine the annual retirement benefit.
3. Depending on the member's service credit and age at retirement, the annual benefit may be reduced to cover a longer period of retirement.

Payment Plans

At retirement, a member must choose a payment plan. There are three categories of plans. All plans pay a monthly benefit for the retiree's life. Under the first category, payments cease with the retiree's death; this is Plan B (Single Life Allowance). Another category provides a continuing benefit to a designated beneficiary after the retiree's death. The plans in this category are Plan A, C, D (Joint Life plans), and F (Multiple Beneficiaries plan). The third category provides payment to a designated beneficiary for a specified period of time if the retiree dies during the specified period; this is Plan E (Time Limited). Choosing a plan other than the Single Life Allowance will result in a reduced monthly benefit to the retiree depending on the retiree's age, the beneficiary's age, and the plan chosen.

Partial Lump Sum Option Payment

In addition to selecting a payment plan, a member may take part of a benefit in a one-time partial lump sum option payment (PLOP), which will permanently reduce the lifetime monthly benefit.

Reemployment

A retiree may be reemployed after retirement. A job in the private sector does not affect the retiree's benefit.

However, if the job is in a position covered by SERS, the State Teachers Retirement System of Ohio, the Ohio Public Employees Retirement System, the Ohio Police & Fire Pension Fund, or the Ohio Highway Patrol Retirement System, SERS must be notified. If the retiree returns to work in a job covered by any of these systems before the retiree has received a SERS benefit for two months, the retiree forfeits the benefit payment for each of the two months in which the retiree worked.

If the retiree returns to a SERS-covered position, then employee and employer contributions are required for the new position. The retiree accrues a new benefit in the form of an annuity based on the contributions paid by the retiree and the employer. This is separate from the original SERS benefit. There are no other benefits available, and the retiree does not accrue any additional service credit for the period of reemployment.

DISABILITY BENEFITS

A member is entitled to a benefit under one of two disability plans. A member who became a member on or after July 29, 1992, is covered under the **new disability plan**. A member who became a member before July 29, 1992, is covered by the **old disability plan** unless they exercised a one-time election to switch to the new plan.

The following describes the common and different features of both plans.

Eligibility

Under both plans, a member is eligible for disability benefits if the member:

- Has at least five (5) years of total service credit;
- Files an application no later than two (2) years from the date that the contributing service stopped;
- Is permanently disabled, either physically or mentally, for work in a SERS-covered position as determined by a physician appointed by SERS;
- Became disabled after becoming a SERS member;
- Did not receive a refund of the member's contributions;
- Does not receive a service retirement benefit;
- Is not receiving a disability benefit from State Teachers Retirement System of Ohio, the Ohio Public Employees Retirement System, the Ohio Police & Fire Pension Fund, the Ohio Highway Patrol Retirement System, or the Cincinnati Retirement System;
- Is not applying for a disability benefit based on a disabling condition that resulted from a felony the member was convicted of, pled guilty to, or was found not guilty of by reason of insanity.

Under the old disability plan, a member also must apply before turning 60 years old. Under the new disability plan a member may apply at any age.

All disability recipients are required to apply for Social Security disability benefits, if eligible.

Benefit Payment

Old Disability Plan

Under the old disability plan, an annual benefit is calculated by the following formula using total service credit and Final Average Salary (FAS):

1. The value of a year of service credit is determined by multiplying the member's FAS by 2.2%. If the result is less than $86.00, then $86.00 is the value of each year.
2. The number of years of service credit is then multiplied by this value of each year.

Service credit includes all service credit the member has at the time of the benefit effective date plus the number of years between the member's current age and age 60. The benefit cannot be less than 30% of FAS or more than 75%.

New Disability Plan

Under the new disability plan, the amount of an annual benefit is the greater of 45% of FAS, or total service credit at the time of the application multiplied by 2.2% of FAS. The following chart shows the approximate applicable percentage amounts under this plan:

Years of Service Credit	Percentage of the Member's FAS
5-21	45.0%
22	48.4
23	50.6
24	52.8
25	55.0
26	57.2
27	59.4
28 or more	60.0

Termination of Benefits

Under the **new disability plan**, benefits also will end after a specified number of months as shown:

Age at Effective Date	Period Benefits Payable
Younger than 60	Until age 65
60 or 61	60 months
62 or 63	48 months
64 or 65	36 months
66, 67, or 68	24 months
69 or older	12 months

At the end of the period, the member can apply for a service retirement benefit.

A disability benefit under either plan stops if any one of the following events occurs:

- A subsequent SERS medical re-examination finds that the member meets the applicable standard for termination, which changes 3 or 5 years after the disability benefits began (depending on whether the member is receiving rehabilitation or treatment).
    - The member is no longer disabled from their SERS-covered position, or
    - The member is capable of performing other job duties with pay at or above 75% of his or her annual compensation, for which he or she is qualified, and can reasonably be found.
- The member returns to a SERS-covered job
- The member's death
- The member requests that benefits end

DEATH BENEFIT

At death after retirement or receipt of a disability benefit, the retiree's beneficiary or disability benefit recipient's beneficiary is entitled to a one-time lump sum payment of $1,000.

SURVIVOR BENEFITS

Eligibility

If a member dies while working, before the member begins receiving a monthly service retirement benefit, or while receiving a disability benefit, the member's qualified survivors are entitled to certain benefits.

A beneficiary qualifies for benefits in the following order:

1. Person designated in writing by the member on a form provided by SERS
2. If there is no designated beneficiary or the beneficiary died before the member, the statutory order of beneficiaries applies

The statutory order of succession is as follows, the member's:

1. Surviving spouse
2. Surviving children
3. Dependent parent who is age 65 or older
4. Surviving parents
5. Estate

The first qualifying beneficiary is entitled to a one-time, lump-sum payment of only the member's employee contributions to SERS, or monthly benefits if otherwise eligible. However, if the member is survived by children under age 19, only a monthly benefit is available to the qualifying survivors.

Monthly benefit payments are available if the member:

1. Had at least one and one-half (1½) years of contributing service credit;
2. Had at least one-quarter (¼) year of Ohio service credit earned within two and one-half (2½) years prior to death;
3. Was not receiving a service retirement benefit

The following survivors are eligible for monthly benefits:

1. Surviving spouse at age 62
2. Surviving spouse at any age if the member had 10 or more years of service credit; or if there are qualified children; or has been declared mentally or physically incompetent by a court
3. Children who have never married, are under 19, or have been declared mentally or physically incompetent by a court
4. Dependent parent age 65 or older

Benefit Payments

The amount of the monthly benefit is determined under one of the following schedules, whichever pays the greater benefit:

	SCHEDULE I	SCHEDULE II
Number of Qualified Beneficiaries	Monthly Benefit Shall Not be Less than	As a Percentage of the Member's Final Average Salary
1	$96*	25%
2	186	40
3	236	50
4	236	55
5 or more	236	60

*Not less than $106 to spouse if the member had 10 or more years of service credit.

SCHEDULE III	
Years of Service	As a Percent of the Member's 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

COST-OF-LIVING ADJUSTMENT

An individual whose benefit effective date is before April 1, 2018, is eligible for a cost of living adjustment (COLA) on the first anniversary date of the benefit. Beginning April 1, 2018, new benefit recipients must wait until the fourth anniversary of their benefit for COLA eligibility. The COLA is added each year to the base benefit amount on the anniversary date of the benefit.

A three-year COLA suspension is in effect for all benefit recipients for the years 2018, 2019, and 2020. Upon resumption of the COLA, it will be indexed to the percentage increase in the CPI-W, not to exceed 2.5% and with a floor of 0%.

HEALTH CARE

Currently, SERS offers medical and prescription health care coverage to qualifying benefit recipients. To the extent that resources permit, SERS intends to continue offering access to health care coverage. However, the Retirement System reserves the right to change or discontinue any plan or program at any time.

Currently a **service retiree** qualifies for health care coverage if the retiree has 10 years of qualified years of service credit at retirement. Qualifying service credit does not include:

- Military other than free or interrupted military service credit
- Other government and school service credit
- Exempted service credit
- Service credit purchased by an employer under an Early Retirement Incentive plan (ERI)

A beneficiary of a deceased service retiree who receives a monthly benefit qualifies for health care coverage if the retiree had qualified for such coverage.

Disability benefit recipients qualify for the SERS health care coverage upon receipt of a disability benefit.

Survivor benefit recipients qualify for health care coverage upon receipt of a survivor benefit.