

Statement of Investment Policy

For The

**School Employees Retirement
System of Ohio**



Effective September 17, 2015

STATEMENT OF INVESTMENT POLICY

Table of Contents

I. PURPOSE OF STATEMENT OF INVESTMENT POLICY	1
II. INVESTMENT PHILOSOPHY	1
III. INVESTMENT OBJECTIVES	2
IV. RISK MANAGEMENT	2
V. IMPLEMENTATION APPROACH	2
VI. INVESTMENT ORGANIZATION AND RESPONSIBILITIES	2
A. RESPONSIBILITIES OF THE <i>BOARD</i>	2
B. RESPONSIBILITIES OF <i>STAFF</i>	3
C. RESPONSIBILITIES OF <i>INVESTMENT SERVICE PROVIDERS</i>	5
D. RESPONSIBILITIES OF <i>INVESTMENT MANAGERS</i>	5
E. RESPONSIBILITIES OF <i>INVESTMENT CONSULTANTS</i>	5
F. RESPONSIBILITIES OF THE <i>INVESTMENT COMPLIANCE AND GOVERNANCE OFFICER</i>	6
VII. CONDITIONS AND GUIDELINES FOR MAKING INVESTMENTS	6
A. CONDITIONS.....	6
B. GUIDELINES	7
VIII. IMPLEMENTATION STRATEGIES	7
A. ASSET ALLOCATION	7
B. DERIVATIVES	7
C. LEVERAGE	7
D. REBALANCING.....	8
E. CURRENCY HEDGING	8
F. TRANSITION MANAGEMENT	8
G. PROXY VOTING	8
H. SECURITIES LENDING	8
I. OPPORTUNISTIC INVESTMENTS.....	8
J. INVESTMENT MANAGERS AND FUNDS	8
K. COLLECTIVE INVESTMENT FUNDS.....	9
L. APPROVED BROKERS	9
M. SOFT DOLLARS	9
N. SECURITIES LITIGATION.....	9
O. OTHER	9
IX. PERFORMANCE	9
A. PERFORMANCE MEASUREMENT STANDARD	9
B. PERFORMANCE BENCHMARK – TOTAL FUND.....	9
C. PERFORMANCE BENCHMARKS – ASSET CLASSES AND STRATEGIES.....	9
D. PERFORMANCE BENCHMARKS – INDIVIDUAL INVESTMENT MANAGERS	10
X. REVIEW AND EVALUATION	10
APPENDIX I - KEY POLICIES AND PROCEDURES	11
APPENDIX II – GLOSSARY OF TERMS	12

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:

<u>ASSET CLASS</u>	<u>TARGET</u>	<u>RANGE</u>
<u>Equity</u>	55%	45% - 65%
Global Equities	45%	35% - 55%
Global Private Equity	10%	5% - 15%
<u>Income</u>	35%	30% - 40%
Global Bonds	19%	12% - 26%
Global Real Assets	15%	10% - 20%
Cash Equivalents	1%	0% - 5%
<u>STRATEGY</u>		
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.

<u>Asset Class</u>	<u>Benchmark Measure</u>
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
<u>Strategy</u>	<u>Benchmark Measure</u>
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.

XI. Related Policies and Procedures

A list of related policies and procedures that govern the investment program is attached as Appendix I.

This policy supersedes the policy adopted August 2, 1985 and all revised policies dated 6/18/15; 12/18/14; 05/01/2014; 01/01/2014; 07/01/2013; 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.

Appendix I - Key Policies and Procedures

SIP	Number	Document	Recommended by	Approvers
	INV1-001	Statement of Investment Policy	Chief Investment Officer & Consultants	Board
VIII.B.	INV1-002	Derivatives Policy	Chief Investment Officer	Board
VIII.C.	INV1-003	Leverage Policy	Chief Investment Officer	Board
VIII.I.	INV1-004	Opportunistic Investment Policy	Chief Investment Officer	Board
VI.B.2	INV3-001	Investment Supervision Policy	Legal	Executive
VIII.L.	BD3-008	Securities Litigation Policy	Legal	Board
VIII.G.	INV1-001-001	U.S. and Non-U.S. Proxy Voting Policy Guidelines and Procedures	Inv. Compliance & Gov. Officer	Chief Investment Officer
VI.B.2	INV1-001-002	Investment Service Providers - Securities Transactions	Staff	Chief Investment Officer
VIII.D.	INV1-001-003	Fund and/or Portfolio Rebalancing	Staff	Chief Investment Officer
VI.B.3	INV1-001-004	Hiring External Public Market Managers	Staff	Chief Investment Officer
VI.B.4	INV1-001-005	Public Market and Private Market Manager Monitoring	Staff	Chief Investment Officer
VIII.F.	INV1-001-006	Hiring a Transition Manager	Staff	Chief Investment Officer
VIII.H.	INV1-001-007	Securities Lending	Staff	Chief Investment Officer
VI.B.3	INV1-001-008	Hiring External Private Market Managers	Staff	Chief Investment Officer
VIII.J.	INV1-001-010	Ohio Investment Manager Guidelines	Staff	Chief Investment Officer
VI.B.4	INV1-001-012	Cash Equivalents Portfolio Investment Guidelines	Staff	Chief Investment Officer
VIII.E.	INV1-001-013	Currency Hedging	Staff	Chief Investment Officer
VIII.A.	INV1-001-014	Cash Equitization	Staff	Chief Investment Officer
VIII.K.	INV1-001-015	Approved Agents (Brokers/Dealers)	Staff	Chief Investment Officer
VI.C.	INV1-001-016	Conflicts of Interest	Staff	Chief Investment Officer
VIII.A.	INV1-001-018	Allocations to Approved Managers	Staff	Chief Investment Officer
VI.B.3	INV1-001-019	Dismissing External Public Market Managers	Staff	Chief Investment Officer
VI.B.3	INV1-001-020	Dismissing External Private Market Managers	Staff	Chief Investment Officer
VI.B.3	INV1-001-024	Investment Committee and Investment Approval Procedure	Staff	Chief Investment Officer
VIII.B.	INV1-002-001	Derivatives Procedure	Staff	Chief Investment Officer

Appendix II – Glossary of Terms

Active Risk – also known as Tracking Error, describes how a portfolio's performance is different from its benchmark and is measured by the standard deviation of the differences in returns of the actual portfolio and the benchmark portfolio.

Active Share – the Active Share of a fund represents the percent of portfolio holdings that differ from the (declared) benchmark index holdings.

Actuarial Assumed Rate – also referred to as the actuarial discount rate. This rate is used to value a pension fund's liabilities and is also used as a long-term investment return objective.

Alpha – the premium an investment portfolio earns above a certain benchmark (such as the Standard & Poor's 500 Index). A positive alpha indicates the investor earned a return in excess of the index return.

Asset and Liability Study – a study to determine the appropriate level of overall investment risk for a pension plan, based on future liabilities and funding resources. The study helps maximize the probability that the return on plan assets exceeds the growth of plan liabilities.

Asset Allocation Decision – choosing among broad asset classes and strategies such as equities, fixed income securities, real assets and multi-asset strategies.

Backup Investment Manager – an Investment Manager approved by the Investment Committee, but not initially funded. As an approved manager, a Backup Investment Manager (also referred to as a "Backup Manager") may be activated by the Chief Investment Officer, thereby avoiding a potentially costly and lengthy search process.

Barclays Capital US Aggregate Bond Index – a market capitalization weighted US bond index published by Barclay's Capital. Most US traded investment grade bonds are represented in the index. SERS' global fixed income policy benchmark.

Basis Point – one hundredth of one percent. For example, an addition of 40 basis points to a yield of 7.50 percent would increase the yield to 7.90 percent. Basis points are normally used when quoting yields or returns, alpha, or fees paid to Investment Managers.

Benchmark – a gauge in the securities market by which investment performance can be measured, such as the Standard & Poor's 500 Index.

Beta – for purposes of this document, Beta is that portion of total performance attributable to market movements, as measured by a market index (e.g., S&P 500).

Broker – an individual or firm authorized to act on behalf of another, such as executing a transaction. The broker does not assume any financial risk in the transaction, as a dealer would.

Brokerage Commission – fee paid to a broker for the purchase and sale of securities.

Broker/dealer – any individual or firm in the business of buying and selling securities for itself and others. Broker/dealers must register with the SEC. When acting as a broker, a broker/dealer executes orders on behalf of a client. When acting as a dealer, a broker/dealer executes trades for the firm's own account. Securities bought for the firm's own account may be sold to clients or other firms, or become a part of the firm's holdings.

Burgiss All Private Equity (BAPE) – The BAPE is comprised of data from more than 5,000 private equity funds contributed by limited partners that are Burgiss clients and use Burgiss' web-based institutional portfolio management platform Private i. The benchmark data is sourced from Burgiss' limited partner clients and includes complete transactional and valuation history between the limited partner and their fund investments. Burgiss publishes a detailed breakdown of the dataset every quarter allowing for increased transparency.

Cash Securitization – Cash securitization is a method used to obtain asset-like returns on short-term cash investments in equity, fixed income or other accounts by overlaying the short-term cash investments with relevant futures. Securitization of equity cash is referred to as cash equitization.

Cash Equivalents – highly liquid, safe investments with maturities of 397 days or less, which can be easily converted into cash. Examples include Treasury Bills, money market funds, and quality commercial paper. The cash equivalents asset class serves as a liquidity pool for SERS.

Chapter 3309, Ohio Revised Code – the Ohio statute governing the School Employees Retirement Board and School Employees Retirement System of Ohio.

Citigroup 30-day T-Bill Index – an index that measures the rate of return for 30-day US Treasury Bills, which are considered representative of the performance of short-term money market instruments. The Citigroup 30-day T-Bill index is SERS' policy benchmark for Cash Equivalents.

Citigroup 3-month T-Bill Index – an index that measures monthly return equivalents of yield averages that are not marked to market. The Three-Month Treasury Bill Index consists of the last three three-month Treasury bill issues.

Co-investment – a direct investment in a single asset of a multi-asset Fund, made alongside the Fund's investment in the asset; typically involves more attractive terms and shorter time frames than those of the Fund.

Collective Investment Fund – A fund that is operated by a trust or bank and holds commingled (pooled) assets.

Conflict of Interest – a direct or indirect pecuniary interest or a relationship (without regard to whether the relationship is personal, private, commercial, or business) and the interest or relationship could diminish the Investment Service Provider's independence of judgment in the performance of its responsibilities to SERS; or bias the Investment Service Provider's evaluation of, or advice with respect to, a transaction or assignment on behalf of SERS.

Credit Risk – the possibility that a bond issuer will default by failing to repay principal and interest in a timely manner.

Currency Hedging – also known as Currency Management. A technique or strategy used to address foreign exchange fluctuations which affect investment returns on international investments. Currency hedging can be active, passive, or a combination of active and passive. Passive hedging is a strategy to neutralize fluctuations between US and Non-US currencies to a predetermined level. Active hedging is a strategy to manage currency fluctuations in an effort to generate returns.

Default Risk – see Credit Risk.

Derivatives (Derivative Instruments) – financial instruments (securities or contracts) whose values are derived from underlying financial assets, indices or other instruments. Derivative performance is based on the performance of assets, interest rates, currency exchange rates, and various domestic and foreign indices underlying the instruments.

Diversification – spreading a portfolio over many investments to avoid excessive exposure to any one source of risk.

Due Diligence – an investigation or audit of a potential or existing investment.

Equity Investment – claims held by the residual owners of a firm. May also be referred to as common stock. Investments in real estate and certain private markets classifications may also be considered equity.

External Management – the management or investment of fund assets by Investment Managers.

Fiduciary – a person, company or association holding assets in trust for a beneficiary. One who can exercise discretionary authority or can control important aspects of a pension plan's management.

Firm Level – as used in this SIP, Firm Level refers to an Investment Management Firm and includes all investment products, strategies or styles offered by the firm.

Fixed Income Investment – a security issued by a borrower that obligates the issuer to make specified payments to the holder over a specific period. May also be referred to as "debt" or "bonds."

Foreign Currency Risk – incurred by investing in foreign countries. Fluctuations in exchange rates between domestic and foreign currencies impact total returns. Impacts may be positive or negative.

Fund – Fund means a limited partnership, trust or commingled investment vehicle in which SERS invests or may invest (e.g., hedge fund, private equity fund, or real estate fund).

Global Equities – reflects the consolidation of what had been treated by SERS as US equity and Non-US equity asset classes; includes equities of US and non-US origin, equities of various capitalizations (e.g., large

cap, small cap, mid cap, etc.), equities from developed, emerging and frontier markets, growth and value equities, and passive and active strategies. Investments in global equities strategies are made in accordance with investment allocation guidelines established and amended as necessary, by mutual agreement between the Chief Investment Officer and the Investment Consultant.

Guidelines – refers to an Investment Manager’s “Investment Guidelines,” established between the Investment Manager and Staff as part of an investment management agreement. Guidelines may be general or specific.

Hedge – an investment made to reduce the risk of adverse price movements in a security by taking an offsetting position in a related security, such as an option or a short sale.

Hedge Fund – a private investment partnership or an offshore investment corporation in which the general partner has made a substantial personal investment, and whose offering memorandum allows for the Fund to take both long and short positions, using leverage and derivatives, and invest in many markets. Hedge funds often use strategies involving program trading, selling short, swaps and arbitrage.

HFRI Fund of Funds Composite Index – Published by Hedge Fund Research, Inc., the HFRI Fund of Funds Composite Index is an equally weighted index of over 800 constituent funds of hedge funds, offshore and onshore. Funds in the index must have at least \$50 million under management or must have been trading actively for at least 12 months.

Indexing – the weighting of investments that are in line with one of the major market indices, such as the Standard & Poor’s 500 Index. Also referred to as passive investing.

Interest Rate Risk – the risk that an investment’s value will change due to a change in the absolute level of interest rates.

Internal Management – the management or investment of fund assets by Investment Staff.

Intrinsic Value Lending – lending that produces returns based upon the securities loan itself, with little incremental benefit from collateral reinvestments.

Investment Committee – a committee of qualified investment professionals from SERS’ Investment Department who possess the Ohio State Retirement System Investment Officer license, and SERS’ Chief Financial Officer, with clearly defined structure, rules and procedures for reviewing and approving investments in a timely and prudent fashion.

Investment Consultant – any consultant hired by the Board or by Staff to advise or assist with the Investment Program in accordance with this SIP. Board investment consultants must be approved by the Board. Staff investment consultants shall be approved by the Executive Director.

Investment Manager – a manager or potential manager of SERS assets, both public market and private market. Includes, but is not limited to managers of equity, fixed income, private equity, real estate, hedge funds, commodities and cash.

Investment Program – the implementation of SERS’ investment responsibilities and the Board’s SIP by fund fiduciaries.

Investment Service Provider – an entity or person, other than a Retirement Board member or SERS employee, who provides investment advice to SERS intended to affect or form a basis for investment or fund management decisions by SERS, including but not limited to (a) Investment Consultants, (b) Investment Managers, (c) agents, (d) broker/dealers, and (e) master record keepers.

Investment Staff – members of the Investment Department of SERS, including the Chief Investment Officer, State Retirement System Investment Officers (SRSIO), and other department personnel.

Left Tail Risk – describes a possibility that the portfolio could generate a negative return that graphically plots on the left side and at least three standard deviations from the mean of the distribution graph.

Leverage – in investments, this is the control of a large amount of money by a smaller amount of money, such as buying on margin. In finance, this is the relationship of debt to equity on a company’s balance sheet in the form of the debt/equity ratio.

Liquidity Risk – the risk that a given security or asset cannot be traded quickly enough in the market to prevent a loss or to make the required profit.

Long-only – a phrase used to describe traditional public market investment strategies which invest almost exclusively in long securities positions.

Long-term – in the context of SERS' liability and investment horizons, long-term is assumed to be at least 10 years.

Mandate – mandate is the macro or high level strategy employed by a manager. Examples of macro strategies include US versus Non-US; large cap versus small cap; real estate versus private equity; etc.

Master Record Keeper – the master accountant used by SERS.

Modern Portfolio Theory – a theory about how rational investors can construct portfolios in order to optimize market risk for expected returns, emphasizing that risk is an inherent part of higher reward. According to the theory, it is possible to construct an "efficient frontier" of optimal portfolios offering the maximum possible expected return for a given level of risk. This theory was pioneered by Harry Markowitz in his paper "Portfolio Selection," published in 1952 by the *Journal of Finance*.

Morgan Stanley Capital International – All Country World Free ex-USA Index (\$Net) – an equity index representing 44 developed and emerging countries. "Free" indicates the index reflects actual investable opportunities for global investors by taking into account local market restrictions on share ownership by foreigners. "Net" indicates that dividends are reinvested after the deduction of withholding taxes applicable to non-resident institutional investors. The MSCI-ACWI ex-USA Index, net of dividends reinvested is SERS' policy benchmark for Non-US Equities.

Multi-Asset Strategies – Active investment strategies that aim to generate absolute returns with managed volatility, using all types of investable securities (equities, bonds, commodities, currencies, derivatives, etc.). These strategies typically apply non-traditional portfolio management techniques including, but not restricted to shorting securities, leverage, arbitrage and creating synthetic exposures using financial instruments. Also, funds in this portfolio may tactically allocate across asset classes and/or geographical regions depending upon the relative attractiveness of the respective asset classes. Generally, multi-asset strategies have low to medium correlation with global equities and much lower volatility.

NCREIF Property Index (NPI) – a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. The NCREIF Property Index is a component of SERS' global real estate policy benchmark.

Opportunistic Investments – refers to compelling tactical or non-traditional investment opportunities that may be short-term or otherwise time-constrained, or may not fit within the generally accepted risk/return parameters of specific asset classes.

Portfolio – a collection of investments owned, managed, or overseen by an individual or Investment Manager, a board or an organization. Portfolio can mean a manager account or subset thereof (e.g., Goldman Sachs Core Plus account), an asset class (e.g., US equity), or the entire fund (e.g., SERS' Total Fund).

Private Market Assets – broadly defined as those assets of alternative mandates utilizing either publicly- or privately-traded securities or other investment instruments. These include, but are not limited to, real estate, private equity and hedge funds.

Proxy – an agent legally authorized to act on behalf of another party. Shareholders not attending a company's annual meeting may choose to vote their shares by proxy by allowing someone else to cast votes on their behalf. Management often encourages shareholders to vote by proxy so that ownership interests are fully represented even if shareholders are unable to attend the company's annual meetings in person.

Prudent (Prudent Person) – this phrase generally refers to the prudent person rule which is a legal maxim restricting the discretion in a client's account to investments only in those securities that a prudent person seeking reasonable income and preservation of capital might buy for his or her own investment.

Rebalancing – the action of adjusting allocations relative to their targets or ranges to adjust for actual or anticipated market movements.

Redeem – to submit a request to take money out of a Fund.

Re-up – a new Fund investment with a current manager.

Right Tail Risk – describes a possibility that the portfolio could generate a positive return that graphically plots on the right side and at least three standard deviations from the mean of the distribution graph.

Risk – the chance that an investment's actual return will be different than expected. This includes the possibility of losing some or all of the original investment. It is usually measured by calculating the standard deviation of the historical returns or average returns of a specific investment.

Risk-adjusted Return – a measure of how much risk a Fund or portfolio takes on to earn its returns, usually expressed as a ratio. Usually expressed by a Sharpe Ratio or Information Ratio calculation.

Russell 3000 Index – a market-value weighted equity index published by the Frank Russell Company. The index measures the performance of the 3,000 largest US companies in terms of market capitalization. The Russell 3000 Index is SERS' Domestic Equity Policy Benchmark.

Securities Lending – the temporary loan of a security from an institutional investor's portfolio to a broker/dealer or dealer bank to support that firm's trading activities. These trading activities include short selling, selling on margin or the satisfaction of some other type of transaction. Loaned securities are generally collateralized, reducing the lender's credit exposure to the borrower. Except for the right to vote proxies, the lender retains entitlement to all the benefits of owning the original securities, including the receipt of dividends and interest.

Securities Litigation – for a definition of Securities Litigation please refer to SERS' Securities Litigation Policy.

SMID – refers to the range of market capitalization (cap) that includes both small and mid-sized companies.

Soft Dollars – Soft dollar trading arrangements refer to agreements whereby an investment manager directs transactions to a broker in exchange for brokerage and research services. The research services provided to the investment manager may be either proprietary or originate with a third-party.

Style – Style refers to an investment product, strategy or style offered by an Investment Management Firm and reflects how the assets are invested. For example, value versus growth; core versus value added; quantitative versus fundamental; etc.

Total Fund – Total Fund refers to SERS' total investment assets.

Total Return – the return on an investment, including income from dividends and interest, as well as appreciation or depreciation in the price of the security, over a given time period.

Tracking Error – a divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark. Calculated as the standard deviation of the difference in returns between a portfolio and its benchmark.

Transition Management – management of the transition of assets from one portfolio to another by a transition manager.