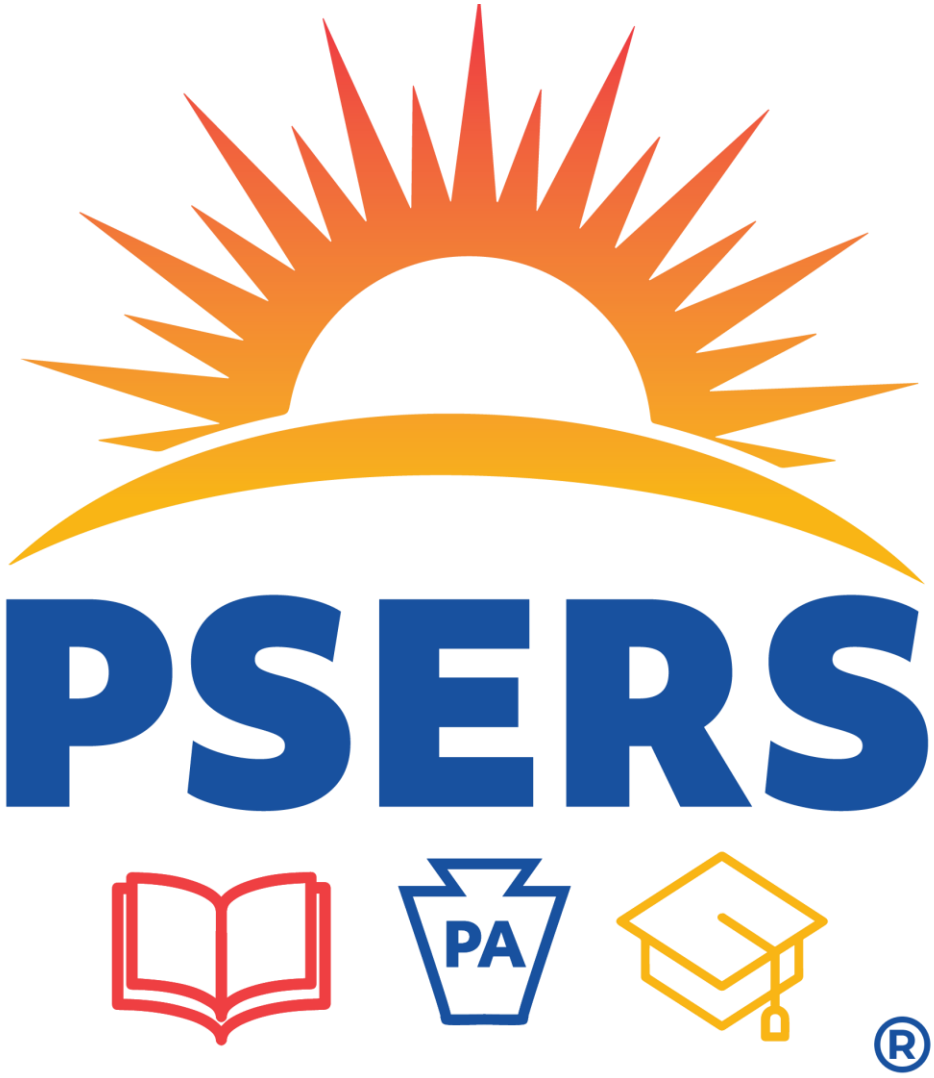

COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM

Derivatives and Leverage Policy

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Revision History

Derivatives Policy Established	**March 6, 2020**
Leverage Policy Established	**March 6, 2020**
Policy Revised	**March 5, 2021**
Policies Revised and Combined	**May 31, 2024**
Policy Revised	**October 23, 2025**

I. SCOPE

This Policy applies to the use of derivatives and leverage within the Pennsylvania, Public School Employees' Retirement System ("PSERS") Defined Benefit Fund (the "Fund").

II. PURPOSE

This Policy provides the broad strategic framework for managing the Fund's use of derivatives and leverage. Derivatives and leverage shall only be used to manage asset and risk exposures consistent with PSERS' Investment Policy Statement ("IPS"), inclusive of this Policy and other approved Investment Policies.

III. ROLES AND RESPONSIBILITIES

Roles and Responsibilities related to this Policy are identified within the IPS.

IV. PHILOSOPHY

Derivatives are financial instruments the value of which is derived, in whole or part, from the value of any one or more underlying securities or assets, or index of securities or assets (such as bonds, stocks, financial commodities, and currencies).

Leverage is a condition in which the economic or market exposure of an investment exceeds the total capital deployed. The use of leverage on a single asset or asset class will amplify profits or losses on a given amount of capital, thereby increasing the volatility of returns, although leverage as part of a portfolio construct does not necessarily create additional market risk or variation in market returns.

Derivatives and leverage can be effective tools to manage asset exposures and risks in a prudent, timely, efficient, and cost-effective manner. For example, they can be used to improve portfolio diversification and reduce portfolio concentration, for implementation efficiency (i.e., speed of trade execution and lower cost), to achieve exposures that are better achieved than with physical securities, to hedge currency, to manage interest rate risk, to rebalance, and for other similar purposes.

The use of derivatives and leverage for speculative purposes is not allowed. Derivatives and leverage are considered speculative if their use is inconsistent with the IPS and its supporting Policies, portfolio guidelines, or any other governing documents.

V. PERMITTED DERIVATIVES INSTRUMENTS

PSERS may invest in the following derivative instruments, subject to specific guidelines assigned to each separately managed portfolio: futures contracts; options; options on futures contracts; forward contracts; swap agreements, including swap contracts with embedded options; and any instrument or contract intended to manage transaction or currency exchange risk in purchasing, selling or holding investments.

Derivatives are grouped into two categories defined by PSERS as follows:

- Category A derivatives are cleared instruments. An example of a Category A derivative is a futures contract on the S&P 500. Common characteristics of Category A derivatives are that they are generally standardized instruments which are exchange-traded, cleared through a clearinghouse, and subject to regulation.

- Category B derivatives are non-cleared instruments. These are often also known as OTC (over the counter) derivatives. An example of a Category B derivative is a total return swap on an equity index. These types of derivatives are customized, rather than standardized, for the parties engaged in a transaction not cleared through a clearinghouse. Internal trading on non-cleared instruments are prohibited until such time as approved by the PSERS Board.

VI. PERMITTED TYPES OF LEVERAGE

There are two permitted types of leverage:

- Asset Allocation Leverage, also known as Explicit Leverage, is economic exposure in excess of capital for asset allocation purposes. Asset Allocation Leverage may be deployed within any Public Markets asset class and only in separate accounts. In the Asset Allocation section of the IPS, Asset Allocation Leverage is known as Explicit Leverage. Net Leverage is defined as the sum of the allocation to Cash and the allocation to Explicit Leverage (where the allocation to Explicit Leverage is expressed as a negative number). Net Leverage is bounded by a Policy Range as stipulated in the IPS.

- Strategy Leverage is defined as economic exposure in excess of capital for purposes of achieving the target return-risk characteristics of a specific fund, portfolio, or strategy. Strategy Leverage can be taken in separate accounts and fund structures as limited by each separate account portfolio's guidelines or governing fund documentation.

Illustrative Example of Asset Allocation Leverage (Explicit Leverage)

- $72 billion in the Fund
- $6 billion in exposure from total return swaps across a variety of asset classes such as Gold, Commodities, TIPS, REITs, and Public Infrastructure
- $1.5 billion of that $6 billion in exposure is backed by assets
- $5 billion of Cash that is not encumbered but available for investments and benefit payments
- Asset Allocation Leverage is the remaining $4.5 billion of that $6 billion in exposure
- Net Leverage is $0.5 billion, which equals the $5 billion of Cash less $4.5 billion of Asset Allocation Leverage

Illustrative Example of Strategy Leverage

- $1.2 billion in an actively managed, internally managed Core Fixed Income portfolio
- Portfolio in aggregate has longer interest rate duration than the benchmark
- To bring the duration of the portfolio in line with that of the benchmark, the portfolio manager enters into an interest rate hedge with $200 million in notional exposure
- Economic exposure is $1.4 billion
- Strategy Leverage is $200 million

The Investment Office is authorized to use the following as permitted by applicable law in order to create Asset Allocation Leverage or Strategy Leverage:

- Derivatives strategies in accordance with the risk parameters established by the asset allocation ranges of the IPS and applicable legal restrictions
- Short sales via derivatives
- Currency hedging in accordance with the IPS and the Currency Hedging Policy
- Embedded leverage within a non-recourse fund structure
- Collateralized fundings including securities lending activities, pledges, repurchase and reverse repurchase agreements and other external funding mechanisms.

Borrowings by the Fund through the incurrence or issuing of debt under a line of credit, pension obligation bond, or other similar facility, shall not be permitted without the prior approval of the Investment Committee.

VII. RISK MANAGEMENT

The primary approach to managing risks associated with derivatives and leverage is to establish and monitor both qualitative and quantitative constraints and through usage of standardized processes. Risks include:

A. Market Risk

Market risk may result when market conditions develop differently than expected, when there are mismatches between actual market exposure and the market exposure obtained from the derivative, and when market or economic exposure is greater than capital invested. These risks are primarily mitigated through tracking error constraints, gross notional exposure limits, or other limits and constraints, as defined in the IPS, applicable portfolio guidelines, or other account level governing documents.

B. Counterparty Risk

Counterparty risk is the risk that the other party in an investment, credit, or trading transaction may not fulfill its part of the transaction and may default on its contractual obligations. Derivative counterparty risk resides primarily in Category B derivatives (i.e., OTC derivatives) and is managed as follows:

- Counterparty (or its parent guarantor if the counterparty itself is an unrated subsidiary) must be rated at least BBB- or Baa3 by at least one of the Nationally Recognized Statistical Rating Organization's.
- Posting of adequate collateral by counterparties in accordance with the terms and conditions of their respective agreements.
- Setting exposure limits to any individual counterparty and/or setting minimum counterparty diversification requirements, as stipulated in the applicable portfolio guidelines.
- Applicable swap transactions must be approved by a "Qualified Independent Representative" ("QIR") duly authorized by PSERS, as documented in the QIR Policy.
- In order to ensure that PSERS is not the "reporting party", under parts 43, 45, and 46, of the Commodity Futures Trading Commission ("CFTC") regulations, swaps, forward foreign exchange transactions, and foreign exchange swaps may only be transacted with parties that are fully Registered Swap Dealers or Provisionally Registered Swap Dealers with the CFTC.

C. Operational Risk

Operational risk is the risk of inadequate or failed processes or systems. Operational risks are mitigated through the usage of procedures, IOP oversight and effective usage of technology resources.

D. Liability/Recourse Risk

If the capital or funding requirements associated with transacting derivatives results in leverage, this may create liability/recourse to the Fund.

There are three permitted types of liability/recourse involving leverage:

1. Non-recourse leverage in fund structures – This is Strategy Leverage taken in limited liability structures, where the terms of such structures shall limit the total potential loss to the amount invested or committed to by PSERS. These structures shall not have recourse to the Fund for losses beyond this. Operating documents, including partnership agreements, subscription agreements, and similar documents, govern the maximum and types of permissible leverage.
2. Non-recourse leverage in separate accounts - This is Strategy Leverage taken in separate account structures, where the terms of such structures shall limit the total potential loss to the amount invested or committed to by PSERS. These structures shall not have recourse to the Fund for losses beyond this. Investment management agreements and account guidelines govern the maximum and types of permissible usage of derivatives and leverage.
3. Recourse leverage in separate accounts - This is leverage taken in separate account structures, where the terms of such structures allow the total potential loss to be greater than the amount invested or committed to by PSERS. Investment management agreements and account guidelines govern the maximum and types of permissible leverage.

E. Legal and Regulatory Risk

The use of derivatives exposes PSERS to legal and regulatory risks. Legal risk is the risk of inadequate or deficient legal documentation. Regulatory risk is the risk of changing or more burdensome regulatory requirements than those in place at the time the derivatives position was established. Appropriate legal and regulatory documentation is required to mitigate these risks.

The use of leverage relies on the execution of various forms of operative documents, including but not limited to trading agreements (e.g., ISDA swap agreements), partnership agreements, and investment management agreements. PSERS Office of Chief Counsel reviews contracts and operative documents, as described above, to limit the risks of inadequate documentation.

F. Collateral Risk

Securities used as collateral in derivatives transactions – whether posted by the counterparty to PSERS or by PSERS to the counterparty -- may not perform as expected. To mitigate this risk, cash and cash equivalents are preferred as collateral. Other securities (such as investment grade bonds) may be acceptable with an appropriate haircut reflective of their credit risk and interest rate duration.

In addition, the (1) reinvestment or (2) re-use (re-hypothecation) of collateral proceeds (both cash and securities) may produce leverage resulting from the added economic exposure of the reinvestment or re-hypothecation activity.

Re-investment of collateral received as part of the Securities Lending program is permitted, subject to the any policy related to Securities Lending.

G. Liquidity Risk

Liquidity risk may result from the usage of derivatives, depending on the type of derivative and its characteristics. For example, if PSERS liquidity is being otherwise drawn down by market conditions and if the mark-to-market or settlement of derivatives requires PSERS to post liquid collateral (for the mark-to-market) or provide cash (for settlement), then PSERS' liquidity draw down may be greater.

Liquidity risk associated with margin or collateralization requirements or instrument illiquidity may increase with the use of leverage. For Asset Allocation Leverage this is managed through notional targets in line with the IPS Target, the aggregate Explicit Leverage limitations within the Asset Allocation section of the IPS, and portfolio guideline constraints.

The management of liquidity risk is described within the Liquidity Policy.

H. Settlement Risk

Settlement risk is the risk of loss if a derivatives counterparty defaults and PSERS has fulfilled its trade obligations while the counterparty has not delivered the corresponding cash or security. Settlement risk is negligible for exchanged-traded derivatives since PSERS is contractually bound to a regulated exchange, not an individual counterparty, once the trade has been accepted by both trading parties. Settlement risk is mitigated for Category B derivatives (i.e., OTC derivatives) by requiring the counterparty to post collateral for amounts owed to PSERS on a timely basis as described within the relevant derivatives trading agreements.

VIII. MONITORING AND REPORTING

An annual report on derivatives held in separate accounts containing the following information shall be provided to the Investment Committee:

- List of the separate accounts and asset classes in which derivatives reside.
- Indication whether each account allows recourse beyond the amounts invested in the account
- Type and purposes for which the derivatives are used (hedging, gaining asset class exposure, etc.)
- Exposure type and amounts (including notional amounts and mark-to-market balances)
- Primary counterparties and relevant initial margin and variation margin balances for Category B derivatives (i.e., OTC derivatives)
- Summary of applicable guideline provisions in place around their use.

For non-recourse leverage in limited liability fund structures, no information is required for the above-mentioned reporting.