

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY**

**FOR
CURRENCY OVERLAY PROGRAM**

May 19, 2014

This policy is effective immediately upon adoption and supersedes all previous Currency Overlay Program policies. This Policy incorporates the Tactical Management Program, the Externally Managed Currency Overlay Program, the Internally Managed Passive Currency Overlay Program, and the Internally Managed Active Currency Overlay Program.

I. PURPOSE

The California Public Employees' Retirement System ("CalPERS") Investment Beliefs Policy and Total Fund Statement of Investment Policy, adopted by the CalPERS Investment Committee ("Committee"), set forth CalPERS overarching investment purposes and objectives with respect to all of its investment programs.

This document sets forth the investment policy ("Policy") for the Currency Overlay Program ("Overlay Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by CalPERS take prudent and careful action while managing the Overlay Program. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with the Overlay Program.

There are several components to the Overlay Program:

- A. The static hedge ratio;
- B. Tactical management of the hedge ratio (Attachment A); and
- C. Implementation of the Overlay Program through:
 - 1. Externally Managed Currency Overlay Program (Attachment B);
 - 2. Internally Managed Passive Currency Overlay Program (Attachment C); and,
 - 3. Internally Managed Active Currency Overlay Program (Attachment D).

~~The attached sections include the components of the Overlay Program. This section is intended as the explanation of the Overlay Program as a whole, and as the controlling Policy.~~

~~Currency hedges may also be applied to particular strategies. In the event that the currency team may be asked to perform currency functions for other asset classes related to the prudent mitigation of currency risk, this Policy, coupled with any practical considerations specific to those asset classes, will govern unless and until a currency policy specific to those asset classes is approved.~~

~~II. STRATEGIC OBJECTIVE~~

~~The Overlay Program shall be managed to accomplish the following:~~

- ~~A. Lower volatility of Total Fund returns;~~
- ~~B. Increase the long-term return of the Total Fund through active management;~~
- ~~C. Hedge currency risk for particular assets; and~~
- ~~D. Protect CalPERS from incurring large currency losses during the near term (one-to-three years), at reasonable cost, with effective cash flow management in the settlement of derivative positions.~~

~~III. RESPONSIBILITIES~~

- ~~A. CalPERS Investment Staff ("Staff") is responsible for the following:
 - ~~1. All aspects of portfolio management including monitoring, analyzing, and evaluating performance relative to the appropriate benchmark;~~
 - ~~2. Reporting to the Committee no less than annually for externally managed programs and for internally managed programs about the performance of the Overlay Program;~~
 - ~~3. Monitoring the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes and all violations of the Policy at the next Committee meeting, or sooner if deemed necessary. These reports shall include explanations of any violations and appropriate recommendations for corrective action.~~~~

~~4. Asset Allocation Staff shall provide Program information including the target currency hedge by currency to the Currency Portfolio Manager and to the Custodian by the fifth business day prior to month-end.~~

~~B. The **General Pension Consultant** ("Consultant") is responsible for: monitoring, evaluating, and reporting to the Committee no less than annually, on the performance of the Overlay Program relative to the benchmark and Policy.~~

~~C. The **External Manager** ("Manager") is responsible for aspects of portfolio management as set forth in each Manager's contract with CalPERS and shall fulfill the following duties:~~

- ~~1. Communicate with Staff, as needed, regarding investment strategy and investment results.~~
- ~~2. Monitor, analyze, and evaluate performance relative to the agreed-upon benchmark;~~
- ~~3. Cooperate fully with CalPERS Staff, Custodian, and Consultant on requests for information.~~

~~IV. PERFORMANCE OBJECTIVE AND BENCHMARK~~

~~The primary concern shall be risk control with a secondary objective of return.~~

~~There are four separate parts to the Overlay Program and the performance objectives are outlined in the attachments.~~

~~The Policy currency hedge ratio shall be 15%.~~

~~The Total Fund foreign currency exposure is the sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks. Total Fund international assets in each category as of December 2008 are listed below:~~

~~Benchmark foreign currency weights (assets with international benchmarks)~~

~~A. Public Market Equity~~

~~B. Fixed Income~~

~~C. Inflation Linked Bonds included in the Inflation Linked Asset Class~~

~~D. Real Estate Investment Trusts (REITS) included in the Real Estate Asset Class~~

~~Actual foreign currency exposures (assets with domestic-only benchmarks)~~

~~A. Private Equity (AIM)~~

~~B. Private Real Estate~~

~~C. Infrastructure~~

~~D. Forestland~~

~~The target currency hedge is the product of the Policy currency hedge ratio times the Total Fund foreign currency exposure. The target currency hedge is the aggregate target value of exposure to foreign currencies that is to be converted to the U.S. dollar.~~

~~The aggregate target currency hedge shall be apportioned only to tradable currencies, currencies that can be traded at low cost as determined in advance by the Currency Portfolio Manager. As of December 2008, the thirteen tradable currencies were the following: Australian Dollar, Canadian Dollar, Danish Krone, Euro, Hong Kong Dollar, Israeli Shekel, Japanese Yen, New Zealand Dollar, Norwegian Krone, Singapore Dollar, Swedish Krona, Swiss Franc, and U.K. Pound Sterling.~~

~~Weights of all other currencies shall be converted pro rata to the weights of the tradable currencies.~~

~~V. INVESTMENT APPROACHES AND PARAMETERS~~

~~The risk and return characteristics of currency unhedged international asset returns may differ substantially from those of hedged returns. Therefore, asset allocation analysis will include unhedged asset returns and a currency hedge applied at the total fund, in accordance with the Asset Allocation Strategy Policy.~~

~~The approaches and parameters for each of the four Overlay Programs are included in the attachments.~~

~~VI. DERIVATIVES AND LEVERAGE POLICY~~

~~Any action or transaction not expressly permitted by this Policy is prohibited unless presented to and approved by the Committee.~~

VII. CALCULATIONS AND COMPUTATIONS

Investors, managers, consultants, and other participants selected by CalPERS shall make all calculations and computations on a market value basis, as recorded by CalPERS Custodian.

VIII. GLOSSARY OF CALPERS SPECIFIC TERMS

Italicized terms appearing in the Policy are CalPERS specific in nature and are defined in the CalPERS Specific Glossary of Terms.

Currency Overlay – Externally Managed

Approved by the Policy Subcommittee:	August 11, 1999
Adopted by the Investment Committee:	October 18, 1999
Attached to the Currency Overlay Program:	August 15, 2005

Passive Currency Overlay Program – Internally Managed

Approved by the Policy Subcommittee:	March 16, 2001
Adopted by the Investment Committee:	April 16, 2001
Attached to the Currency Overlay Program:	August 15, 2005

Currency Overlay Program – Overarching Policy with Portfolio Attachments

Approved by the Policy Subcommittee	June 10, 2005
Adopted by the Investment Committee	August 15, 2005
Revised by the Policy Subcommittee	October 16, 2006
Approved by the Investment Committee	November 13, 2006
Revised by the Policy Subcommittee	April 21, 2008
Approved by the Investment Committee	May 12, 2008
Revised by the Policy Subcommittee	February 17, 2009
Approved by the Investment Committee	March 16, 2009
Administrative changes made due to Policy Review Project	June 16, 2009
Administrative changes to update template format and to align this policy with the Global Derivatives and Counterparty Risk Policy	December 24, 2013
Administrative changes to standardize reporting frequencies to the Investment Committee to “no less than annually”	May 19, 2014
Administrative changes to reflect the Policy Glossary of Terms Update Project	May 19, 2014

Attachment A

TACTICAL MANAGEMENT PROGRAM

May 19, 2014

I. PERFORMANCE OBJECTIVE AND BENCHMARK

A. The primary performance objective for the Tactical Management Program (“Tactical Program”) is to add value over an economic cycle (approximately 3-8 years) over the Program Benchmark.

The means to accomplish this objective is to have a separate account that holds currency contracts equal to the intended adjustment away from the 15% hedge. The change in the value of these contracts measures performance.

B. The benchmark for the Tactical Program is specified in the Benchmarks Policy.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approaches

A currency staff committee (“Staff committee”), consisting of the Chief Investment Officer, the Senior Investment Officers (“SIO”) of Global Fixed Income, of Asset Allocation, and of Global Equities, and the Senior Portfolio Manager of Fixed Income International Research will seek to identify macro trends based on fundamental factors that have a high probability of success. Studies indicate that observable economic factors known to affect currency markets include, but are not limited to interest rate differentials, trade deficits, GDP growth, inflation, monetary policy, fiscal policy and productivity. These economic factors work slowly over time; therefore, the staff committee time focus will be over a cycle, typically 3 to 8 years. A shorter term approach does not always allow sufficient time for economic fundamentals to work their way through to be reflected in currency values. Therefore, it can be difficult for Managers to focus on long term inputs when those inputs can be overwhelmed by short term issues. The Staff committee will seek to capitalize on CalPERS long term investment nature by focusing on the cyclical nature of developed currencies. A decision to change the actual hedge ratio requires concurrence by at least three of the Staff committee members. The SIO of Asset Allocation is responsible for scheduling meetings and coordinating the decision-making process.

~~The variation of the hedge ratio shall be determined by considering the following:~~

- ~~1. Economic fundamentals which work over time;~~
- ~~2. Costs related to the hedge, particularly the cost of carry; and~~
- ~~3. Moves in the hedge ratio would only be made when convincing evidence exists for long term trends. Return on such decisions should be measured over a cycle, which is calculated in years. It is anticipated that there will be infrequent changes.~~

~~B. Specific Parameters~~

~~The Staff committee may vary the actual hedge ratio $\pm 5\%$ with respect to the benchmark currency hedge ratio (implying a permissible range of 10% to 20% for the actual hedge ratio). The Staff committee will discuss at least quarterly.~~

Attachment B

EXTERNALLY MANAGED CURRENCY OVERLAY PROGRAM

May 19, 2014

I. STRATEGIC OBJECTIVES

Lowering the volatility of CalPERS returns is the strategic objective of the External Program.

The External Program shall employ techniques to balance risk reduction with hedging cost and cash flow management. Therefore, it is expected that only under rare circumstances shall the External Program result in a 100% hedged (zero currency volatility) exposure.

II. PERFORMANCE OBJECTIVE AND BENCHMARK

A. Performance Objectives

1. The External Program controls risk rather than generates return. The External Program shall achieve results specific to the prevailing currency market environment as follows:
2. In appreciating foreign currency environments, the External Program shall seek to capture approximately 60% of currency gains;
3. In depreciating foreign currency environments, the External Program shall seek to limit losses to no more than 3% below the fully hedged benchmark; and
4. In flat or trendless environments, the External Program shall approximate the benchmark results.

B. The benchmark for the External Program is specified in the Benchmarks Policy. The External Program benchmark shall be a percentage of the Program Benchmark, fully hedged.

~~III. INVESTMENT APPROACHES AND PARAMETERS~~~~A. Investment Approaches~~

- ~~1. The execution of the External Program shall occur through a program(s)' investments in markets where currency market exposure is relatively predictable. Programs most suitable are passive index funds or semi-active approaches.~~
- ~~2. The External Program shall be implemented through the retention of a Manager(s).~~
- ~~3. The viability of the External Program shall be reviewed continually, with a formal review at least every 5 years.~~

~~B. Specific Parameters~~

- ~~1. The Manager(s) shall operate under a set of specific guidelines outlining their investment philosophies and approaches, representative portfolio characteristics, permissible and restricted securities and procedures, and performance objectives representative of their strategic role within the Overlay Program and the investment risk incurred.~~
- ~~2. The Managers shall comply at all times with CalPERS investment policies including, but not limited to, the following:
 - ~~a. Global Derivatives and Counterparty Risk Policy; and,~~
 - ~~b. Manager-Specific Investment Management Guidelines.~~~~
- ~~3. The Manager(s) shall execute currency transactions in the forward currency markets or in related currency derivative instruments over the long currency positions of the underlying program(s) of assets assigned.~~
- ~~4. The Manager(s) shall monitor their currency positions to avoid leverage.~~

~~IV. DERIVATIVES AND LEVERAGE POLICY~~~~A. Forwards, Options, and Swaps~~

~~All transactions involving derivatives are governed by the Global Derivatives and Counterparty Risk Policy. In addition to the restrictions defined in the Global Derivatives and Counterparty Risk Policy, the following conditions apply specifically to the Externally Managed Program:~~

- ~~1. Leverage shall be avoided as cited in Section III.B.4~~
- ~~2. The External Program may buy or sell non-exchange traded derivatives, which includes over-the-counter forwards, options, and swaps.~~
- ~~3. Bona fide hedging of foreign currency exposure is the only acceptable strategy.~~

Attachment C

INTERNALLY MANAGED PASSIVE CURRENCY OVERLAY PROGRAM

May 19, 2014

I. ~~PERFORMANCE OBJECTIVE AND BENCHMARK~~

A. ~~The primary performance objective for the Internally Managed Passive Currency Overlay Program (“Passive Program”) is to control risk rather than generate return. The Passive Program shall reduce the volatility of total fund returns. Results shall approximate that of the benchmark, within ± 50 basis points in a 12-month period.~~

B. ~~The benchmark for the Passive Program is specified in the Benchmarks Policy. The Passive Program benchmark shall be a percentage of the Program Benchmark, fully hedged.~~

~~Any international program may be passively hedged to reduce risk with the approval of that asset class SIO.~~

II. ~~INVESTMENT APPROACHES AND PARAMETERS~~

A. ~~Investment Approaches~~

~~The Passive Program will be passively managed and will target its share of the Program Benchmark.~~

B. ~~Specific Parameters~~

1. ~~The allocation to the Passive Program shall represent a portion of the total Overlay Program. The percent of assets allocated to the Program shall be determined by considering the following:~~

a. ~~Cost versus expected attained risk reduction versus other alternatives; and~~

b. ~~Optimal impact to the Overlay Program.~~

~~Staff shall conduct the appropriate analyses to support such a recommendation.~~

~~2. The below table specifies allowable hedge ratio ranges:~~

~~**Permissible Hedge Ratio Ranges**~~

Benchmark	Hedge Ratio Range
100%	95% – 105%

~~3. The Passive Program shall track a fully hedged benchmark that reflects the specific currencies of the underlying equity program as specified in Section II.B.2.~~

~~4. The Passive Program shall execute currency transactions in the forward currency markets or in related currency derivative instruments over the long currency positions of the underlying program(s) of assets assigned to it.~~

~~5. The Passive Program shall monitor its currency positions to avoid leverage. Currency positions taken shall constitute a designated hedge of the international assets identified in the underlying program.~~

~~6. CalPERS shall allow wider tracking error should there be deliberate decisions to redefine the Program Benchmark. This would include, but is not restricted to, the entry or exit of individual countries or the major rebalancing of country weightings.~~

~~7. Implementation of the Passive Program shall comply at all times with CalPERS investment policies including, but not limited to, the following:~~

~~a. Global Derivatives and Counterparty Risk Policy; and~~

~~b. Internal Program Operation Procedures Manual.~~

~~III. DERIVATIVES AND LEVERAGE POLICY~~~~A. Forwards, Options, and Swaps~~

~~All transactions involving derivatives are governed by the Global Derivatives and Counterparty Risk Policy. In addition to the restrictions defined in the Global Derivatives and Counterparty Risk Policy, the following conditions apply specifically to the Passive Program:~~

- ~~1. Leverage shall be avoided as cited in Section II.B.5.~~
- ~~2. The Passive Program may buy or sell non-exchange traded derivatives, which includes over-the-counter forwards, options, and swaps.~~
- ~~3. Bona fide hedging of foreign currency exposure is the only acceptable strategy.~~

Attachment D

~~INTERNALLY MANAGED ACTIVE CURRENCY OVERLAY PROGRAM~~

~~May 19, 2014~~

~~I. PERFORMANCE OBJECTIVE AND BENCHMARK~~

~~A. The primary performance objective for the Internally Managed Active Currency Overlay Program (“Active Program”) is to exceed the benchmark return.~~

~~B. The benchmark for the Active Program is specified in the Benchmarks Policy. The Active Program benchmark shall be a percentage of the Program Benchmark, fully hedged.~~

~~II. INVESTMENT APPROACHES AND PARAMETERS~~

~~A. Investment Approaches~~

~~The objective is to add incremental currency return by implementing various active strategies. Active management styles implemented in the program include:~~

~~1. Fundamental: Over the long run, currency prices deviate from fair value based on cyclical behavior of economies. Fundamental strategies attempt to identify over and undervalued currencies by using various economic indicators such as inflation, growth or trade data.~~

~~2. Technical: Technical strategies attempt to identify markets where prices are moving in clear and predictable trends. Price trends and stress points in currency markets can be identified and exploited using a number of indicators such as moving averages, chart patterns, support and resistance indicators and flow models.~~

~~3. Interest Rate (Carry): Carry strategies seek to anticipate currency movements driven by differences and changes in national interest rates. Overweighting currencies with high yields and underweighting currencies with lower yields tends to produce excess returns.~~

~~4. Volatility: Volatility strategies are used to exploit mispricing in currency options based on varying interpretations of changes in spot prices.~~

B. Specific Parameters

1. Shortfall Risk will be controlled by limiting the negative return to 300 basis points for a rolling 12 month period. A violation of this threshold shall require a review by the Senior Investment Officer of Global Fixed Income to determine if a partial or full liquidation of positions is warranted.
2. Benchmark Risk was reviewed by the Consultant.
3. Currency Risk will be managed by limiting the percentage deviation from the index by the table below. The following table specifies the allowable ranges. The table differentiates between major and minor currency pairs and specifies allowable ranges within which actual allocations can fluctuate. Allowable ranges for major currency pairs are between $\pm 20\%$ of the benchmark weight, while minor currencies can vary between $\pm 10\%$ of the benchmark weights.

Country Currency Allowable Ranges

Major Currency Pairs- Subject to index weights $\pm 20\%$

Currency	Benchmark country weight*	Permissible Range
Euro	33%	13% – 53%
UK Sterling	17%	-3% – 37%
Japanese Yen	22%	2% – 42%

Minor Currency Pairs- Subject to index weights $\pm 10\%$

Currency	Benchmark country weight*	Range
Canadian Dollar	7%	-3% – 17%
Swiss Franc	7%	-3% – 17%
Australian Dollar	6%	-4% – 16%
Hong Kong Dollar	4%	-6% – 14%
Israeli Shekel	1%	-9% – 11%
Swedish Krona	2%	-8% – 12%
Singapore Dollar	1%	-9% – 11%
Norwegian Kroner	1%	-9% – 11%
Danish Krone	1%	-9% – 11%
New Zealand Dollar	0.1%	-10% – 10%

*Benchmark country weights as of December 2008. Total may not sum to 100% due to rounding.

~~Net Program Weight must remain between 0% and 200%, hedged.~~

~~Index currencies and weights will change over time in line with movements in the underlying passive equity index program.~~

- ~~4. Liquidity Risk must be managed in a disciplined manner by maintaining numerous dealing relationships with geographically diverse counterparties.~~
- ~~5. Interest Rate Risk will be controlled by using forward contracts that are within 2 years of the benchmark. Forward currency contracts are a function of domestic relative to foreign country interest rates.~~
- ~~6. Implementation of the Active Program shall comply at all times with CalPERS investment policies including, but not limited to, the Global Derivatives and Counterparty Risk Policy.~~

~~III. DERIVATIVES AND LEVERAGE POLICY~~

~~A. Forwards, Options, and Swaps~~

~~All transactions involving derivatives are governed by the Global Derivatives and Counterparty Risk Policy. In addition to the restrictions defined in the Global Derivatives and Counterparty Risk Policy, the following condition applies specifically to the Active Program:~~

~~The Active Program may buy or sell exchange or non-exchange traded derivatives, which includes over-the-counter forwards, options, and swaps.~~

**California Public Employees' Retirement System
Investment Policy for
Liquidity Program**

Effective Date **November 16, 2015**

This Policy is effective immediately upon adoption and supersedes all previous Liquidity Program policies.

Introduction

The California Public Employees' Retirement System (CalPERS) Total Fund Investment Policy, adopted by the CalPERS Investment Committee (Committee), sets forth the CalPERS investment beliefs and overarching investment purposes and objectives with respect to its investment programs. The CalPERS Total Fund Investment Policy specifically covers key areas of investment strategy, including performance objectives, asset allocation strategies, benchmark selection, investment risk management, and derivatives, leverage, and divestment policies, among other elements that are applicable to all asset classes and programs at CalPERS.

This document sets forth the investment policy (Policy) for the Liquidity Program (Program). The design of this Policy ensures that staff, investors, managers, consultants, and other participants selected by CalPERS take prudent and careful action while managing the Program. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

This Policy should be read in conjunction with and is subject to conditions contained within the CalPERS Total Fund Investment Policy. This Policy shall also be managed to comply with all applicable Investment Office policies.

Strategic Objective

The Program seeks to provide liquid assets that could be converted to cash with little market impact, provide a partial hedge to liabilities, and provide diversification benefits.

Responsibilities

Details regarding various levels of responsibility for this Program are provided in Appendix 1, Reporting to the Investment Committee, and Appendix 2, Investment Responsibilities.

**California Public Employees' Retirement System
Investment Policy for
Liquidity Program**

**Investment
Approaches
& Parameters**

All investment programs shall have specific written guidelines. The guidelines shall outline the investment approaches, permissible and restricted activities, and a performance objective that is commensurate with the program's purpose.

Staff shall rely on short- or long-term ratings from authorized nationally recognized statistical rating organizations (NRSROs) only. Staff shall maintain and annually update internal ratings for securities that are not rated by any authorized NRSROs.

**Investment
Constraints/
Limitations**

See Appendix 3 for program investment constraints.

**Glossary of
CalPERS
Specific
Terms**

Italicized terms appearing in the Policy are CalPERS specific in nature and are defined in the CalPERS Specific Glossary of Terms.

**Policy
Document
History**

See Appendix 4 for historical details of Investment Committee adoption and revisions of this Policy.

California Public Employees' Retirement System
Liquidity Program Policy Appendices

See the Total Fund Investment Policy appendices for overarching reporting requirements and responsibilities for the Investment Committee, staff, **General Pension Consultant**, **Private Asset Class Board Investment Consultant**, and **External Manager**.

**Appendix 1
Reporting to the Investment Committee**

The following tables provide details regarding reporting to the Investment Committee:

- Investment Office staff
- General Pension Consultant

Investment Office Staff	
Report Content	Frequency
1. Staff shall provide an Annual Program Review that will include a program overview, investment review, and business review in general conformance with the Annual Program Review Template.	No less than annually
2. Staff shall report concerns, problems, material changes, and all violations of the Policy. These reports shall include explanations of any violations and appropriate recommendations for corrective action.	At the next Committee meeting, or sooner if deemed necessary.

General Pension Consultant	
Report Content	Frequency
1. The Consultant shall monitor, evaluate, and report on the performance of the Program relative to the benchmarks and this Policy and other applicable CalPERS Policies.	No less than annually

California Public Employees' Retirement System
Liquidity Program Policy Appendices

**Appendix 2
Investment Responsibilities**

The following tables provide details regarding investment related responsibilities for the:

- Investment Office staff
- General Pension Consultant
- External Manager

Investment Office Staff Responsibilities

1. All aspects of portfolio management including monitoring, trading, analyzing, evaluating performance relative to the appropriate benchmark, and selecting and contracting with managers.
2. Monitor the internal and external managers in the implementation of, and compliance with, the Policy.
3. Develop and maintain investment procedures, program guidelines, and sub-program guidelines.

General Pension Consultant Responsibilities

1. Provide independent perspective and counsel to the Committee, to include routine communication with the Investment Office staff and periodic reviews of processes and procedures.

External Manager Responsibilities

1. Manage the fund in accordance with each manager's contract with CalPERS and the Policy.
2. Communicate and cooperate with Investment Office staff and authorized third parties regarding the management of the fund.

California Public Employees' Retirement System
Liquidity Program Policy Appendices

**Appendix 3
Investment Constraints/Limitations**

Internally Managed Dollar-Denominated Short-Term Program

1. Interest Rate Risk must be managed using economic analysis, Federal Open Market Committee analysis, and projected cash flow requirements of CalPERS. All securities purchased shall have a maximum final stated maturity of 15 months unless specified otherwise within Investment Policy Procedures & Guidelines for the Program.

2. Authorized NRSROs are limited to:
- Standard & Poor's (S&P)
 - Moody's Investors Service, Inc. (Moody's)
 - Fitch Ratings (Fitch)

3. Credit Risk will be controlled by requiring minimum ratings outlined in the table below.

Asset	Minimum Credit Rating
All Securities (at time of purchase)	Short Term: A2/P2/F2, or Long Term: A-/A3/A-

Note: In the case of a split-rated security, staff may rely upon the highest rating. If a security is not rated by an authorized NRSRO, staff's equivalent rating would apply.

**Appendix 4
Liquidity Program Policy Document History**

Date	Detail
2015-11-16	Approved by the Investment Committee Reformatted to incorporate Investment Policy Revision Project and Investment Delegation Restructuring Project revisions

**California Public Employees' Retirement System
Investment Policy for
Low Duration Fixed Income Program**

Effective Date **November 16, 2015**

This Policy is effective immediately upon adoption and supersedes all previous Low Duration Fixed Income Program policies.

Introduction

The California Public Employees' Retirement System (CalPERS) Total Fund Investment Policy, adopted by the CalPERS Investment Committee (Committee), sets forth the CalPERS investment beliefs and overarching investment purposes and objectives with respect to its investment programs. The CalPERS Total Fund Investment Policy specifically covers key areas of investment strategy, including performance objectives, asset allocation strategies, benchmark selection, investment risk management, and derivatives, leverage, and divestment policies, among other elements that are applicable to all asset classes and programs at CalPERS.

This document sets forth the investment policy (Policy) for the Low Duration Fixed Income Program (Program). The design of this Policy ensures that staff, investors, managers, consultants, and other participants selected by CalPERS take prudent and careful action while managing the Program. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

This Policy should be read in conjunction with and is subject to conditions contained within the CalPERS Total Fund Investment Policy. This Policy shall also be managed to comply with all applicable Investment Office policies.

Strategic Objective

The Program seeks to diversify CalPERS investment programs and enhance CalPERS returns, while dampening overall risk of CalPERS investment programs.

Responsibilities

Details regarding various levels of responsibility for this Program are provided in Appendix 1, Reporting to the Investment Committee, and Appendix 2, Investment Responsibilities.

**California Public Employees' Retirement System
Investment Policy for
Low Duration Fixed Income Program**

**Investment
Approaches
& Parameters**

All investment programs shall have specific written guidelines. The guidelines shall outline the investment approaches, permissible and restricted activities, and a performance objective that is commensurate with the program's purpose.

Staff shall rely on short- or long-term ratings from authorized nationally recognized statistical rating organizations (NRSROs) only. Staff shall maintain and annually update internal ratings for securities that are not rated by any authorized NRSROs.

**Investment
Constraints/
Limitations**

See Appendix 3 for program investment constraints.

**Glossary of
CalPERS
Specific
Terms**

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**Policy
Document
History**

See Appendix 4 for historical details of Investment Committee adoption and revisions of this Policy.

California Public Employees' Retirement System
 Low Duration Fixed Income Program Policy Appendices

See the Total Fund Investment Policy appendices for overarching reporting requirements and responsibilities for the Investment Committee, staff, **General Pension Consultant**, **Private Asset Class Board Investment Consultant**, and **External Manager**.

**Appendix 1
 Reporting to the Investment Committee**

The following tables provide details regarding reporting to the Investment Committee:

- Investment Office staff
- General Pension Consultant

Investment Office Staff	
Report Content	Frequency
1. Staff shall provide an Annual Program Review that will include a program overview, investment review, and business review in general conformance with the Annual Program Review Template.	No less than annually
2. Staff shall report concerns, problems, material changes, and all violations of the Policy. These reports shall include explanations of any violations and appropriate recommendations for corrective action.	At the next Committee meeting, or sooner if deemed necessary.

General Pension Consultant	
Report Content	Frequency
1. The Consultant shall monitor, evaluate, and report on the performance of the Programs relative to the benchmarks and this Policy and other applicable CalPERS Policies.	No less than annually

California Public Employees' Retirement System
 Low Duration Fixed Income Program Policy Appendices

**Appendix 2
 Investment Responsibilities**

The following tables provide details regarding investment related responsibilities for the:

- Investment Office staff
- General Pension Consultant
- External Manager

Investment Office Staff Responsibilities

1. All aspects of portfolio management including monitoring, trading, analyzing, evaluating performance relative to the appropriate benchmark, and selecting and contracting with managers.
2. Monitor the internal and external managers in the implementation of, and compliance with, the Policy.
3. Develop and maintain investment procedures, program guidelines, and sub-program guidelines.

General Pension Consultant Responsibilities

1. Provide independent perspective and counsel to the Committee, to include routine communication with the Investment Office staff and periodic reviews of processes and procedures.

External Manager Responsibilities

1. Manage the fund in accordance with each manager's contract with CalPERS and the Policy.
2. Communicate and cooperate with Investment Office staff and authorized third parties regarding the management of the fund.

California Public Employees' Retirement System
 Low Duration Fixed Income Program Policy Appendices

**Appendix 3
 Investment Constraints/Limitations**

The following tables provide details regarding investment constraints/limitations related to the following programs:

- Dollar-Denominated Fixed Income **High Quality LIBOR** (HQL) Program
- Dollar-Denominated Fixed Income Short Duration (SD) Program
- Dollar-Denominated Fixed Income Limited Liquidity Enhanced Return (LLER) Program

All Dollar-Denominated Fixed Income Programs

1. Authorized NRSROs are limited to:
 - Standard & Poor's (S&P)
 - Moody's Investors Service, Inc. (Moody's)
 - Fitch Ratings (Fitch)

Dollar-Denominated Fixed Income HQL Program

1. Interest Rate Risk must be controlled by limiting duration to not exceed 90 days due to the stable return mandate of the HQL Program.
2. Credit Risk will be controlled by requiring minimum ratings by asset type as outlined in the table below. A downgrading of a security that causes a violation in the guidelines shall not require an immediate sale if the Managing Investment Director of Global Fixed Income believes that no further risk of credit deterioration exists or the sale diminishes the total return to CalPERS. The CalPERS internal research staff shall analyze such situations to ensure that an informed decision is made. The following is the minimum quality for each of the sectors:

Asset / Counterparty	Minimum Credit Ratings
US Treasury and Government Sponsored	AAA/Aaa/AAA
Repurchase Agreements	A1/P1/F1
Structured Securities	AAA/Aaa/AAA
Money Market Securities	A2/P2/F2
Corporate Securities	BBB+/Baa1/BBB+
Yankee Sovereign Securities	A-/A3/A-

Note: In the case of a split-rated security, staff may rely upon the highest rating. If a security is not rated by an authorized NRSRO, staff's equivalent rating would apply.

California Public Employees' Retirement System
 Low Duration Fixed Income Program Policy Appendices

Dollar-Denominated Fixed Income SD Program

1. Interest Rate Risk must be controlled by limiting the SD Program's duration to not exceed 180 days.

2. Credit Risk will be controlled by requiring minimum ratings by asset type as outlined in the table below. Credit Risk shall be actively managed on a risk/return basis. A downgrading of a security that causes a violation in the guidelines shall not require an immediate sale if the Managing Investment Director of Global Fixed Income believes that no further risk of credit deterioration exists or the sale diminishes the total return to CalPERS. The CalPERS internal research staff shall analyze such situations to ensure that an informed decision is made. The following is the minimum quality for each of the sectors.

Asset / Counterparty	Minimum Credit Rating
US Treasury and Government Sponsored Repurchase Agreements	AAA/Aaa/AAA
Structured Securities	A1/P1/F1
Money Market Securities	BBB/Baa2/BBB
Corporate Securities	A2/P2/F2
Yankee Sovereign Securities	BBB+/Baa1/BBB+
	A-/A3/A-

Note: In the case of a split-rated security, staff may rely upon the highest rating. If a security is not rated by an authorized NRSRO, staff's equivalent rating would apply.

Dollar-Denominated Fixed Income LLER Program

1. Interest Rate Risk must be controlled by limiting the LLER Program's duration to not exceed 270 days.

2. Credit Risk will be controlled by requiring minimum ratings by asset type as outlined in the table below. Credit Risk shall be actively managed on a risk/return basis. A downgrading of a security that causes a violation in the guidelines shall not require an immediate sale if the Managing Investment Director of Global Fixed Income believes that no further risk of credit deterioration exists or the sale diminishes the total return to CalPERS. The CalPERS internal research staff shall analyze such situations to ensure that an informed decision is made. The following is the minimum quality for each of the sectors.

Asset / Counterparty	Minimum Credit Rating
All Securities (at time of purchase)	BBB-/Baa3/BBB-

Note: In the case of a split-rated security, staff may rely upon the highest rating. If a security is not rated by an authorized NRSRO, staff's equivalent rating would apply.

California Public Employees' Retirement System
Low Duration Fixed Income Program Policy Appendices

Appendix 4
Low Duration Fixed Income Program Policy Document History

Date	Detail
2015-11-16	Approved by the Investment Committee Reformatted to incorporate Investment Policy Revision Project and Investment Delegation Restructuring Project revisions

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY**

**FOR
MULTI-ASSET CLASS PARTNERS PROGRAM**

June 24, 2014

This policy is effective immediately upon adoption and supersedes all previous Multi-Asset Class Partners Program Policies.

I. PURPOSE

The California Public Employees' Retirement System ("CalPERS") Investment Beliefs Policy and Total Fund Statement of Investment Policy, adopted by the CalPERS Investment Committee ("Committee"), set forth CalPERS overarching investment purposes and objectives with respect to all its investment programs.

This document sets forth the investment policy ("Policy") for the Multi-Asset Class Partners Program ("MAC" or "Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by CalPERS take prudent and careful action while managing the Program. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

II. STRATEGIC OBJECTIVE

The Program has two strategic objectives, each linked to the development of relationships with external investment managers (the "MAC Partners"):

- A. The Program is intended to provide a total rate of return in excess of the CalPERS target rate of return over a market cycle with lower volatility and downside risk than the CalPERS strategic asset allocation.
- B. The Program should facilitate meaningful information transfer from the MAC Partners to Staff to help Staff develop scalable, sustainable, and efficient methods of increasing the likelihood of meeting CalPERS investment return goals over the long term.

III. RESPONSIBILITIES

- A. CalPERS Investment Staff ("Staff") is responsible for the following:
 - 1. All aspects of portfolio management, including monitoring, analyzing, and evaluating performance relative to the appropriate benchmark.

- ~~2. Reporting to the Committee no less than annually, and more often as necessary or appropriate, about the Program's composition and performance.~~
 - ~~3. Monitoring the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of the Policy at the next Committee meeting, or sooner if deemed necessary. Staff will also report material concerns, problems or changes related to the Policy and Program to the Committee as appropriate. These reports shall include explanations of any violations and appropriate recommendations for corrective action.~~
 - ~~4. Evaluating, selecting, and monitoring the performance of MAC Partners.~~
- ~~B. The **General Pension Consultant** ("Consultant") is responsible for monitoring, evaluating, and reporting to the Committee no less than annually on the performance of the Program relative to appropriate benchmarks and this policy and other applicable CalPERS policies.~~
- ~~C. MAC Partners are responsible for aspects of portfolio management as set forth in each Partner's agreement with CalPERS and shall further fulfill the following duties with respect to knowledge transfer:~~
- ~~1. Communicating with Staff as needed regarding investment strategy and investment results. The Investment Manager is expected to monitor, analyze, and evaluate performance relative to any agreed-upon benchmarks.~~
 - ~~2. Complying with information requests by Staff and other parties.~~
 - ~~3. Presenting to Staff and/or the Committee on Program implementation and other topics as identified by Staff on an ad hoc basis.~~
 - ~~4. Educating Staff, including visits to CalPERS offices and extended training sessions with CalPERS Staff on-site at MAC Partner offices.~~

~~IV. PERFORMANCE OBJECTIVE AND BENCHMARK~~~~A. Performance Objectives~~

~~The Program shall pursue the following objectives:~~

~~1. Targeted Return~~

~~MAC Partners shall generally be expected to outperform the CalPERS target long-term rate of return over a market cycle (approximately five years).~~

~~2. Targeted Risk~~

~~MAC Partners shall generally be expected to manage Program portfolios with a targeted annualized volatility of no more than, and with lower downside risk than, the CalPERS Total Fund benchmark.~~

~~3. Targeted Liquidity~~

~~MAC Partners shall generally be expected to manage Program portfolios entirely through public market assets (equities, fixed income, commodities, and currencies, including through futures and options) which can be convertible to cash within 90 days in ordinary liquidity conditions.~~

~~B. Benchmark~~

~~The benchmark for the MAC Program is specified in the Benchmarks Policy. Benchmarks for each MAC Partner portfolio shall be established prior to investment and documented in the management agreements with each Partner.~~

~~V. INVESTMENT APPROACHES AND PARAMETERS~~~~A. Investment Approach~~

~~The Program is designed to identify and invest with managers who have demonstrated the ability to invest across asset classes to create long-term absolute returns consistent with CalPERS rate of return requirements while effectively managing risk.~~

~~MAC Partners may deploy leverage (including implicit leverage through derivatives), short selling of securities, or both. All transactions involving derivatives are governed by the Global Derivatives and Counterparty Risk Policy.~~

~~Program portfolios should focus on management of total risk and on generation of returns independent of broad market movements. This differs from “benchmark-driven investing,” where risk management and return generation are measured by reference to a broad market benchmark; in such instances, most or all of an investment’s total risk may be broad market risk. This does not prevent MAC Partners from including significant exposures to broad market risks, but it does place an emphasis on absolute returns, which are the ultimate determinant of whether CalPERS investment goals are met.~~

~~The long-term performance and risk parameters of the Program encourage Partners to deploy unique investment strategies and styles; the “knowledge transfer” element requires Partners to help Staff determine whether such approaches can be deployed more broadly across the CalPERS total portfolio to improve the likelihood of meeting CalPERS long-term investment goals. MAC Partners should not construct portfolios which resemble simple adherence to the CalPERS strategic asset allocation.~~

~~B. Investment Selection~~

- ~~1. Staff shall develop and maintain selection guidelines for prospective MAC Partners. To ensure conformity to the Committee’s risk and return expectations, these criteria shall be subject to review by Staff and the Consultant.~~
- ~~2. The selection process shall use specific criteria with the objective of identifying and selecting MAC Partner(s) that have, but are not limited to, the following characteristics:~~
 - ~~a. Multiple senior personnel with significant amount of experience managing a broad range of asset classes in diverse market environments.~~
 - ~~b. Breadth of expertise across many investment strategies.~~
 - ~~c. Robust qualitative and quantitative disciplines for risk controls.~~

- ~~d. Sound qualitative and quantitative processes for portfolio construction.~~
- ~~e. Proper alignment of interests with CalPERS.~~
- ~~f. Willingness and ability to maintain a high degree of interaction with CalPERS Staff and the Committee, including but not limited to Committee presentations and CalPERS Staff education.~~
- ~~g. Commitment to providing CalPERS access to the most senior people within their organization.~~
- ~~h. Other relevant characteristics that may apply.~~

~~C. Investment Parameters~~

~~MAC Partners shall operate under specific, written investment guidelines and risk parameters. The guidelines and parameters shall outline the Investment Manager's investment philosophy and approaches, representative portfolio characteristics, permissible and restricted securities and procedures, and a performance objective commensurate with the investment risk to be incurred.~~

~~While the performance objectives and risk parameters for each MAC Partner are generally expected to be similar to those set forth for the total Program, parameters may be adjusted to reflect the varying investment approaches and attributes of each Partner.~~

~~Implementation of this Program shall comply at all times with applicable CalPERS investment policies.~~

~~D. Investment Structuring~~

- ~~1. The Program shall invest with MAC Partners through legal structures such as limited partnerships or limited liability companies (LLCs) which limit potential CalPERS losses to the amount invested. Such legal structures are important because of the potential for MAC Partners to utilize derivatives and leverage.~~
- ~~2. The negotiation of terms and conditions for investments with MAC Partners shall protect the interests of CalPERS and shall address at a minimum the following issues:~~

- ~~a. Alignment of Interests: Vehicle terms including fees shall be negotiated in an effort to align the MAC Partner’s interests with CalPERS. The fee structure, performance objective, risk parameters, restrictions on permitted investments, and other relevant terms shall seek to protect CalPERS in the event of adverse performance results, while ensuring that limited liability status is maintained.~~
- ~~b. Control of Assets: Vehicle terms shall be negotiated to allow CalPERS to terminate relationships and take control of Program assets as Staff deems appropriate.~~
- ~~c. Transparency of Risks and Exposures; Reporting Requirements: Each investment with MAC Partners shall provide complete portfolio and position transparency. In addition, each MAC Partner will be required to provide financial and investment reports which provide Staff adequate information to properly assess and account for performance, fees, expenses, invested capital, and any other items affecting the investment.~~

~~VI. CALCULATIONS AND COMPUTATIONS~~

~~Investors, managers, consultants, and other participants selected by CalPERS shall make all calculations and computations on a market value basis as recorded by CalPERS Custodian.~~

~~VII. GLOSSARY OF CALPERS SPECIFIC TERMS~~

~~*Italicized* terms appearing in the Policy are CalPERS specific in nature and are defined in the CalPERS Specific Glossary of Terms.~~

Adopted by the Investment Committee	October 15, 2012
Administrative changes to update template format and to align this policy with the Global Derivatives and Counterparty Risk Policy	December 24, 2013
Administrative changes to standardize reporting frequencies to the Investment Committee to “no less than annually”	June 24, 2014
Administrative changes to reflect the Policy Glossary of Terms Update Project	June 24, 2014

**California Public Employees' Retirement System
Investment Policy for
Securities Lending**

Effective Date **November 16, 2015**

This Policy is effective immediately upon adoption and supersedes all previous Securities Lending policies.

Introduction

The California Public Employees' Retirement System (CalPERS) Total Fund Investment Policy, adopted by the CalPERS Investment Committee (Committee), sets forth the CalPERS investment beliefs and overarching investment purposes and objectives with respect to its investment programs. The CalPERS Total Fund Investment Policy specifically covers key areas of investment strategy, including performance objectives, asset allocation strategies, benchmark selection, investment risk management, and derivatives, leverage, and divestment policies, among other elements that are applicable to all asset classes and programs at CalPERS.

This document sets forth the investment policy (Policy) for the Securities Lending Program (Program). The design of this Policy ensures that staff, investors, managers, consultants, and other participants selected by CalPERS take prudent and careful action while managing the Program. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

The Program is comprised of two separate functions: (1) lending both equity and fixed income securities to borrowers, and (2) reinvesting the cash collateral posted by borrowers.

CalPERS expects strict conformity with this policy and shall let market mechanics determine the demand for securities and resulting incremental income. It is intended that the Program shall generate income primarily from fees from loans and secondarily through a low risk collateral investment strategy.

This Policy should be read in conjunction with and is subject to conditions contained within the CalPERS Total Fund Investment Policy. This Policy shall also be managed to comply with all applicable Investment Office policies.

**California Public Employees' Retirement System
Investment Policy for
Securities Lending**

Strategic Objective

The Program seeks to generate income from fees derived from lending its positions in invested capital. The Program will be operated in a manner that maintains sufficient liquidity for the Program and to adhere to the Investment Policy for Global Governance.

Responsibilities

Details regarding various levels of responsibility for this Program are provided in Appendix 1, Reporting to the Investment Committee, and Appendix 2, Investment Responsibilities.

Investment Approaches & Parameters

All investment programs shall have specific written guidelines. The guidelines shall outline the investment approaches, permissible and restricted activities, and a performance objective that is commensurate with the program's purpose.

Staff shall rely on short or long term ratings from authorized nationally recognized statistical rating organizations (NRSROs) only. Staff shall maintain and annually update internal ratings for securities that are not rated by any authorized NRSROs.

Investment Constraints/ Limitations

See Appendix 3 for program investment constraints.

Glossary of CalPERS Specific Terms

Italicized terms appearing in the Policy are CalPERS specific in nature and are defined in the CalPERS Specific Glossary of Terms.

Policy Document History

See Appendix 4 for historical details of Investment Committee adoption and revisions of this Policy.

California Public Employees' Retirement System
Securities Lending Policy Appendices

See the Total Fund Investment Policy appendices for overarching reporting requirements and responsibilities for the Investment Committee, staff, **General Pension Consultant**, **Private Asset Class Board Investment Consultant**, and **External Manager**.

**Appendix 1
Reporting to the Investment Committee**

The following tables provide details regarding reporting to the Investment Committee:

- Investment Office staff
- General Pension Consultant

Investment Office Staff	
Report Content	Frequency
1. Staff shall provide an Annual Program Review that will include a program overview, investment review, and business review in general conformance with the Annual Program Review Template.	No less than annually
2. Staff shall report, concerns, problems, material changes, and all violations of Policy. These reports shall include explanations of any violations and appropriate recommendations for corrective action.	At the next Committee meeting, or sooner if deemed necessary

General Pension Consultant	
Report Content	Frequency
1. The Consultant shall monitor, evaluate, and report on the performance of the Program relative to the benchmarks and this Policy and other applicable CalPERS Policies.	No less than annually

**Appendix 2
Investment Responsibilities**

The following tables provide details regarding investment related responsibilities for the:

- Investment Office staff
- General Pension Consultant
- External Manager

Investment Office Staff Responsibilities	
1. All aspects of portfolio management, including monitoring, trading, analyzing, evaluating performance relative to the appropriate benchmark, and selecting and contracting with managers.	
2. Monitor the implementation of and compliance with the Policy by lending agents, cash collateral managers, and principal borrowers.	
3. Develop and maintain investment procedures, program guidelines, and sub-program guidelines.	

California Public Employees' Retirement System
Securities Lending Policy Appendices

General Pension Consultant Responsibilities

1. Provide independent perspective and counsel to the Committee, to include routine communication with the Investment Office staff and periodic reviews of processes and procedures.

External Manager Responsibilities

1. Manage the fund in accordance with each manager's contract with CalPERS and the Policy.
2. Communicate and cooperate with Investment Office staff and authorized third parties regarding the management of the fund.

**Appendix 3
Investment Constraints/Limitations**

The following tables provide details regarding investment constraints/limitations related to the following:

- Lending Guidelines
- Cash Collateral Re-Investment Guidelines
- Liquidity Guidelines

Lending Guidelines

1. Initial Margin: The proper amount of collateralization shall be market value times the appropriate percentage for each security type.
 - a. Domestic securities — 102%
 - b. Matching currency investment for G10 domiciled issuers — 102%
 - c. All other international securities — 105%
2. Maintenance Margin: Loan collateral below these specified maintenance levels must be adjusted within the next business day and before the securities being re-lent to the same borrowers.
 - a. The maintenance margin is 102% for securities with an initial margin of 102%
 - b. The maintenance margin is 105% for securities with an initial margin of 105%
3. Non-material Margin Call: Despite the maintenance margin percentages above, non-material margin calls of \$100,000 or less need not be made as long as collateral is 101.5% or more for securities with an initial maintenance margin of 102% and 104.5% or more for securities with an initial maintenance margin of 105%.

Cash Collateral Re-Investment Guidelines

1. The duration of the collateral investment portfolio shall not differ from the duration of the outstanding loans by more than 60 days.

California Public Employees' Retirement System
 Securities Lending Policy Appendices

Liquidity Guidelines

1. A minimum of 10% of the Securities Lending cash collateral pool must be invested in securities that mature or are subject to a demand feature exercisable within one business day.
 2. A minimum of 20% of the Securities Lending cash collateral pool must be invested in securities that mature or are subject to a demand feature exercisable within seven business days.*
 3. A minimum of 30% of the Securities Lending cash collateral pool must be invested in securities that mature or are subject to a demand feature exercisable within thirty days.*
- *The liquidity constraint includes the preceding requirement(s) as cumulative.

**Appendix 4
 Securities Lending Policy Document History**

Date	Detail
2015-11-16	Approved by the Investment Committee Reformatted to incorporate Investment Policy Revision Project and Investment Delegation Restructuring Project revisions.