



Agenda Item 6a

November 16, 2015

ITEM NAME: Revision of Fixed Income Policies – Second Reading

PROGRAM: Fixed Income

ITEM TYPE: Policy & Delegation – Action

RECOMMENDATIONS

(1) Approve the following five revised Fixed Income Programs Policies (Attachment 1)

- Global Fixed Income Program Policy
- Inflation Assets Policy
- Liquidity Program Policy
- Low Duration Fixed Income Program Policy
- Securities Lending Policy

(2) Repeal the Credit Enhancement Program Policy as it has been consolidated with the Global Fixed Income Program Policy (Attachment 2)

Current Fixed Income Programs Policies are provided in Attachment 3. The Wilshire Associates Opinion Letter is provided as Attachment 4.

EXECUTIVE SUMMARY

The Fixed Income Programs Policies were presented to the Investment Committee (Committee) for first review on October 19, 2015.

The revised Fixed Income Programs Policies include the following changes based on feedback from the first review by the Committee:

- The introduction sections were modified to include changes that resulted from Committee direction that took place during the Global Equity Policy discussion in October.
- External Manager responsibilities were included to provide consistency among all program policies moving forward.
- Credit Enhancement Program limits were added to Appendix 3 of the Global Fixed Income Program Policy.
- The Inflation Assets Policy Appendix 3 table was modified to denote that the total bond portfolio is a compilation of the various subsequent subsets.
- The Low Duration Fixed Income Program Policy Appendix 3 Dollar-Denominated minimum S&P credit rating was corrected to BBB- and added the corresponding Fitch and/or Moody's ratings to various tables to enhance clarity.
- The Investment Policy for Securities Lending Appendix 3 Liquidity Guidelines was modified to indicate that the three liquidity categories are cumulative.

There are no changes proposed to staff reporting obligations (Appendix 1), as staff will continue with the current level of reporting. Changes made to the Fixed Income Programs Policies based on the Committee's feedback are denoted by track changes within Attachment 1.

Staff seeks approval of the Fixed Income Programs Policies to align with the Total Fund Investment Policy and to simplify the policies through the removal of procedures.

STRATEGIC PLAN

This agenda item supports the CalPERS Strategic Plan to improve long-term pension and health benefit sustainability. The review of the revised policies will ensure that CalPERS is able to effectively achieve the System's investment objectives through clear and current investment policy documentation.

INVESTMENT BELIEFS

This agenda item supports CalPERS Investment Belief 9, Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error, and Belief 10, Strong processes and teamwork and deep resources are needed to achieve CalPERS goals and objectives.

BACKGROUND

Investment Policy Development was identified as posing a medium compliance and operational risk during Fiscal Year 2013-2014, and as such became a key initiative of both the 2014-16 Investment Office Roadmap and Target Operating Model (TOM). As part of that initiative, in March 2015, the Committee approved the adoption of the Total Fund Investment Policy while repealing 14 legacy investment policies. The adoption of the new Total Fund Investment Policy allowed for minimizing complexity, improving transparency, and strengthening processes, systems, governance, and controls. The next phase of the Project is to incorporate revisions to the asset class policies aligning Fixed Income with the Project's objective of consolidation, clarity, and standardization.

ANALYSIS

Incorporating these revisions will continue the policy simplification process while aligning the Fixed Income Programs Policies with the Total Fund Investment Policy, eliminating procedural or duplicative language, and reducing operational risks by more clearly defining the Committee's desires and intentions with respect to staff's role in implementing the policies.

BUDGET AND FISCAL IMPACTS

Not Applicable

BENEFITS/RISKS

Approving the requested policy changes will enhance the transparency of investment processes and strategy. The risks of not approving the policies include lack of clarity and direction to staff as they implement the various investment programs, thereby increasing the risks of missed opportunities and failure to comply with the Committee's policy directives.

ATTACHMENTS

- Attachment 1 – Revised Fixed Income Programs Policies (Global Fixed Income, Inflation Assets, Liquidity, Low Duration Fixed Income, Securities Lending)
- Attachment 2 – Policy Proposed for Repeal – Credit Enhancement Program Policy
- Attachment 3 – Current Fixed Income Programs Policies corresponding to policies in Attachment 1
- Attachment 4 – Wilshire Associates Opinion Letter – Revision of Fixed Income Programs Policies

CURTIS D. ISHII
Managing Investment Director
Global Fixed Income

WYLIE TOLLETTE
Chief Operating Investment Officer

THEODORE ELIOPOULOS
Chief Investment Officer

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

Effective Date November 16, 2015

This Policy is effective immediately upon adoption and supersedes all previous Global Fixed Income Program and Credit Enhancement 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, but not limited to, investment beliefs, performance objectives, asset allocation strategies, benchmarks 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 Global 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 the 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 and reduce overall risk for CalPERS investment programs while enhancing CalPERS total returns.

**Responsibil-
ities**

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
Global 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.

Authorized CalPERS external credit ratings agencies are limited to Moody's, Standard and Poor's (S&P), and Fitch. If a security is not rated by one of those three agencies, a rating equivalent to the ratings required by external credit ratings agencies, as specified in Policy or guidelines, must be provided by CalPERS internal staff at time of purchase and updated annually.

**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
Global 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 Program relative to the benchmark and this Policy and other applicable CalPERS Policies.	No less than annually

California Public Employees' Retirement System
Global 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.

Appendix 3
Investment Constraints/Limitations

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

- Dollar-Denominated Fixed Income
- International Fixed Income
- Credit Enhancement

Ranges for Domestic and International Programs relative to the benchmark are listed below.

Domestic Program	-10% - +10%
International Program	-10% - +10%

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

Dollar-Denominated Fixed Income Program

1. Interest Rate Risk must be controlled using duration management. Duration shall be maintained at -50% to +10% of the Barclays Capital Long Liabilities (BCLL) Index on an option-adjusted basis. Decisions shall be managed using historical real return relationships and economic analysis.
2. Sector Risk must be controlled using the ranges below. Based on the economic outlook, historical factors, and break-even analysis, Staff shall estimate the impact on various sectors' spreads and make allocations accordingly.

Sector Ranges – the following are ranges by which actual allocations can fluctuate from the benchmark sector weightings.

Total Domestic Program Weightings

Sector	BCLL Index	Permitted Sector Ranges
U.S. Treasury & Government Sponsored	40%	10% - 80%
Mortgage	30%	15% - 45%
Corporate	24%	10% - 40%
Opportunistic	3%	0% - 12%
Sovereign	3%	0% - 10%
Total	100%	N/A

International Fixed Income Program

1. Interest Rate Risk must be managed by the Manager within -50% to +10% of the benchmark duration
2. Sector Risk will be controlled using the ranges below. Managers are responsible for determining appropriate allocations based on market analysis.

Sector Ranges – The following table specifies ranges within which allocations can fluctuate from benchmark weights:

Total International Program Weightings

Sector	Benchmark	Permitted Net Ranges
U.S. Treasury (ex TIPS)	0%	-10% - +10%
Governments (ex US)	100%	90% - 100%
Investment Grade Corporate	0%	-10% - +10%
Mortgages	0%	0% - +10%
Non-Investment Grade Corporate	0%	0% - 5%
Total	100%	N/A

Note: The total of non-government securities cannot exceed 10% of the total International Program.

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

<u>Credit Enhancement Program</u>	
1.	<u>Credit Rating Portfolio Limits – The average credit quality of the Program's portfolio shall be "single-A" long-term credit rating designation (A2 by Moody's, A by S&P and A by Fitch).</u>
2.	<u>Program Transaction Limits – The maximum holding in any given transaction in California shall be 25% of the issue in order to be in compliance with the Safe Harbor rules established under Section 503(e) of the Internal Revenue Code (IRC).</u>

Appendix 4 Global 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

The Credit Enhancement Program Policy was consolidated with the Global Fixed Income Program Policy and was repealed on November 16, 2015.

**California Public Employees' Retirement System
Investment Policy for
Inflation Assets**

Effective Date November 16, 2015

This Policy is effective immediately upon adoption and supersedes all previous Inflation Assets policies, including Commodities and Inflation-Linked Bonds.

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, but not limited to, investment beliefs, performance objectives, asset allocation strategies, benchmarks 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 Inflation Assets 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 includes two components: commodities and inflation-linked bonds (ILB).

The Program seeks long-term returns above inflation, to diversify CalPERS investments, and to hedge against inflation risks.

**Responsibil-
ities**

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
Inflation Assets**

**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.

Authorized CalPERS external credit ratings agencies are limited to Moody's, Standard and Poor's (S&P), and Fitch. If a security is not rated by one of those three agencies, a rating equivalent to the ratings required by external credit ratings agencies, as specified in Policy or guidelines, must be provided by CalPERS internal staff at time of purchase and updated annually.

**Investment
Constraints/
Limitations**

See Appendix 3 for program investment constraints.

**Glossary of
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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
Inflation Assets 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**.

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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 benchmark and this Policy and other applicable CalPERS Policies.	No less than annually

California Public Employees' Retirement System
Inflation Assets 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 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
Inflation Assets Policy Appendices

Appendix 3
Investment Constraints/Limitations

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

- Commodities
- Inflation-Linked Bonds

Program Allocation Targets and Ranges

Allocations are expressed as a percentage of the Inflation Assets Program

Component	Target	Range
Commodities	25%	0% - 75%
Inflation-Linked Bonds (ILB)	75%	25% - 100%

Commodities Program

1. Sector risk will be mitigated by maintaining net option-adjusted commodities exposures within +/- 20% points of benchmark weights.

Inflation-Linked Bond Program

1. Interest Rate Risk is the price volatility produced by changes in the overall level of interest rates as measured by option-adjusted duration. Duration shall be maintained at -50% to +10% of the benchmark duration.

2. Permitted Investments and Ranges

ILB Program targets and permissible ranges as a percentage of the total portfolio are:

Sector	Policy Target	Permitted Range
Total investment grade inflation-linked government bonds	100%	80% - 100%
• U.S. inflation-linked bonds	67%	52% - 82%
• Investment grade international inflation-linked bonds	33%	18% - 48%
• Non-government investment grade inflation-linked bonds	0%	0% - 10%
• Investment grade nominal government bonds	0%	0% - 15%
• Short-term fixed income	0%	0% - 10%
• Non-investment grade inflation-linked government bonds	0%	0% - 5%

The market value of non-benchmark investments, defined as the sum of the last four rows of the above table, shall not exceed 20% of the ILB Program.

California Public Employees' Retirement System
Inflation Assets Policy Appendices

Appendix 4 Inflation Assets Policy Document History
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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
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, but not limited to, investment beliefs, performance objectives, asset allocation strategies, benchmarks 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.

**Responsibil-
ities**

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.

Authorized CalPERS external credit ratings agencies are limited to Moody's, Standard and Poor's (S&P), and Fitch. If a security is not rated by one of those three agencies, a rating equivalent to the ratings required by external credit ratings agencies, as specified in Policy or guidelines, must be provided by CalPERS internal staff at time of purchase and updated annually.

**Investment
Constraints/
Limitations**

See Appendix 3 for program investment constraints.

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**Policy
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History**

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California Public Employees' Retirement System
Liquidity Program Policy Appendices

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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.

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

Asset	Minimum Credit Rating
All Securities	A2/P2 or Investment Grade

California Public Employees' Retirement System
Liquidity Program Policy Appendices

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, but not limited to, investment beliefs, performance objectives, asset allocation strategies, benchmarks 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.

**Responsibil-
ities**

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.

Authorized CalPERS external credit ratings agencies are limited to Moody's, Standard and Poor's (S&P), and Fitch. If a security is not rated by one of those three agencies, a rating equivalent to the ratings required by external credit ratings agencies, as specified in Policy or guidelines, must be provided by CalPERS internal staff at time of purchase and updated annually.

**Investment
Constraints/
Limitations**

See Appendix 3 for program investment constraints.

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**Policy
Document
History**

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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**.

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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

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 outlined in the table below. A downgrading of a security, which 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 and the external rating agencies 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 / <u>Aaa</u> / <u>AAA</u>
Repurchase Agreements	A1 / <u>P1</u> / <u>F1</u>
Structured Securities	AAA / <u>Aaa</u> / <u>AAA</u>
Money Market Securities	A2 / <u>P2</u> / <u>F2</u>
Corporate Securities	Baa1 / <u>BBB+</u> / <u>Baa1</u> / <u>BBB+</u>
Yankee Sovereign Securities	A3/A- / <u>A3</u> / <u>A-</u>

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 and the external rating agencies 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 A1/P1/F1
Structured Securities	Baa2 or BBB/Baa2/BBB
Money Market Securities	A2/P2/F2
Corporate Securities	Baa1 /BBB+/Baa1/BBB+
Yankee Sovereign Securities	A3/A-/A3/A-

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 and the external rating agencies 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)	Baa3/BBB-/BBB-

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
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, but not limited to, investment beliefs, performance objectives, asset allocation strategies, benchmarks 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. <u>Authorized CalPERS external credit ratings agencies are limited to Moody's, Standard and Poor's (S&P), and Fitch. If a security is not rated by one of those three agencies, a rating equivalent to the ratings required by external credit ratings agencies, as specified in Policy or guidelines, must be provided by CalPERS internal staff at time of purchase and updated annually.</u>
Investment Constraints/ Limitations	See Appendix 3 for program investment constraints.
Glossary of CalPERS Specific Terms	<i>Italicized</i> 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.	Daily : 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.	Weekly : 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.	Monthly : 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.*
<u>*The liquidity constraint includes the preceding requirement(s) as cumulative.</u>	

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.

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

**FOR
CREDIT ENHANCEMENT PROGRAM**

May 19, 2014

This Policy is effective immediately upon adoption and supersedes all previous Credit Enhancement 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 Credit Enhancement Program ("Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by the 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 the management and oversight of the Program.

II. STRATEGIC OBJECTIVES

The Program shall be managed to accomplish the following:

Earning fee income through a zero loss underwriting standard. Fees will be generated from annual commitments, up front closings, amendments, and waivers.

CalPERS expects strict conformity with the Policy and will allow the market to set pricing for credit enhancement vehicles.

III. RESPONSIBILITIES

A. CalPERS Investment Staff ("Staff") is responsible for the following:

1. All aspects of portfolio management, including monitoring, analyzing, and evaluating performance;
2. Reporting to the Committee no less than annually and more often, if necessary, about the performance of the Program;

CREDIT ENHANCEMENT PROGRAM

3. ~~Monitoring the implementation of, and compliance with, the Policy. Staff shall report, orally or in writing, concerns, problems, material changes, and any violations of the Policy immediately to the Senior Investment Officer ("SIO")~~

4. ~~Preparing a Prudence Certificate for each transaction.~~

B. ~~The **General Pension Consultant** is responsible for monitoring, evaluating, and reporting no less than annually to the Committee on the performance of the Program.~~

IV. VIOLATION REPORTING

A. ~~The violation reporting process shall be as follows:~~

1. ~~Staff shall report orally, or in writing, all Policy violations immediately to the Senior Investment Officer, Global Fixed Income Unit.~~

2. ~~The Senior Investment Officer, Global Fixed Income Unit (SIO) shall immediately report orally, or in writing, any Policy violation to the Chief Investment Officer (CIO), and the Chief Operating Investment Officer.~~

3. ~~The CIO shall determine the appropriate means of further reporting based on his or her judgment of the magnitude, sensitivity and severity of the violation.~~

a. ~~All Policy violations shall be reported to the Committee as part of a quarterly report agenda item on the Committee's regular agenda.~~

b. ~~Depending on the Policy violation, and at the discretion of the CIO, reporting may also be made to the Committee as a separate agenda item or as a portion of the CIO Report at the next scheduled Committee meeting. These reports shall include explanations of the violations and appropriate recommendations for corrective action.~~

c. ~~If a Policy violation is to be reported to the Committee, the Consultant shall be asked to provide an opinion as to the impact of the Policy violation to the Program and overall fund.~~

CREDIT ENHANCEMENT PROGRAM

V. INVESTMENT APPROACHES AND PARAMETERS

A. Eligible vehicles for credit enhancement:

1. ~~Letters of Credit — These are irrevocable obligations used to provide credit and liquidity on variable or fixed rate note and bond transactions. The legal obligation to fund under these documents is **unconditional**. Letters of Credit are irrevocable draws by the Trustee and will be funded according to the established funding procedures.~~
2. ~~Lines of Credit — These are also referred to as Standby Bond or Note Purchase Agreements or Liquidity Lines. These are designed to provide liquidity (as opposed to credit enhancement) in the event of financial market disruption. The legal obligation to fund under these vehicles is **conditional**. These are also referred to as revocable vehicles~~

B. Exclusions:

1. ~~CalPERS will not provide direct funded loans.~~
2. ~~The Program will not consider transactions with municipal issuers or conduit issuers on their behalf (obligors) that have declared bankruptcy in the last fifteen years.~~
3. ~~The Program will not consider Certificates of Participations (COPs) other than those transactions for Essential Municipal Services.~~

C. Credit Ratings:

1. ~~All issuers under the Program shall be rated investment grade by at least two nationally recognized credit rating agencies (e.g., Moody's, Investors Service, Standard and Poor's and Fitch Ratings) and any outstanding rating must be investment grade by at least two nationally recognized credit rating agencies. In addition, such an issuer should not have been rated in the non-investment grade category by any nationally recognized credit rating agencies at any time within the last five years.~~
2. ~~If an issuer is not initially rated, an independent Rating Category Determination (RCD) letter shall be procured from at least two nationally recognized credit rating agencies. The RCD will provide a determination as to whether a proposed transaction is of investment grade quality.~~

CREDIT ENHANCEMENT PROGRAM

D. Credit Rating Portfolio Limits:

1. The average credit quality of the Program's portfolio shall be "single A" long-term credit rating designation (A2 by Moody's, A by S&P and A by Fitch. See Appendix I for equivalent ratings by Moody's, S&P and Fitch).
2. Where a credit transaction has a split rating, i.e. BBB+/A from two or more credit rating agencies, Staff shall use the lower rating for purposes of calculating the average credit quality of the Program's portfolio.

E. Portfolio Average Maturity

The weighted average maturity of the Program's portfolio shall not exceed 5 years.

F. Portfolio Diversification

1. Geographic Distribution

a. Philosophy: Municipalities in ten States — **California, New York, Florida, New Jersey, Texas, Pennsylvania, Illinois, Massachusetts, Michigan and Ohio** — have the largest municipal issuance volume and have consistently been in the "top-ten" states for municipal issuance for at least the last ten years. The Program's portfolio will be aligned with states having the largest populations and largest municipal issuance volume.

b. Implementation: Staff will construct a credit enhancement portfolio, using an aggregate dollar total, that will be distributed on a parallel basis to municipal issuance across the entire market with limitations as shown in Table 1 below.

2. Direct State Government Issued Debt Limits (Table 1)

a. Philosophy: The overall mission of the Program is to earn fee income on an expected zero loss underwriting basis. The Program envisions the majority of primary obligors to be municipalities, not state governments.

CREDIT ENHANCEMENT PROGRAM

- b. ~~Implementation: To further control risks and increase portfolio diversification, Direct State Government Issued Debt (voter or non voter approved) shall not exceed 40% of the Total Aggregate Program Portfolio within a particular state.~~

Table 1: State Geographic Distribution and Debt Limits

State Geographic Distribution	Percentage of Aggregate Program Portfolio	Direct State Government Issued Debt Limits
California	Not to exceed 45%	Not to exceed 18%
New York	Not to exceed 35%	Not to exceed 14%
Florida	Not to exceed 30%	Not to exceed 12%
All Other States*	Not to exceed 20%	Not to exceed 8%

** Includes the other 47 states and US Territories & Possessions (Guam, Midway Islands, Puerto Rico, US Virgin Islands and Wake Islands)*

3. ~~Municipal Sector Exposure~~

- a. ~~Philosophy: Only those entities rated investment grade within the traditional municipal sectors, secured by revenues from the particular entity or back stopped by the taxing authority of the municipality, and with demonstrated low default rates will be eligible for the Program.~~
- b. ~~Implementation: The Program's portfolio exposure within each state shall be diversified through transactions in different municipal market sectors. All of the issuers within the portfolio shall come from one of the outlined governmental and public sectors below (including non-profit 501(c)(3) institutions) that comprise the U.S. municipal market:~~

~~For any issuer which is a public agency employer for purposes of participation in CalPERS credit enhancement program or entity that might become a public agency employer, a written opinion of counsel for issuer is required that either:~~

CREDIT ENHANCEMENT PROGRAM

- i. ~~Issuer's securities are exempt pursuant to Section 3(a)(2) of the Securities Act of 1933 (as security issued by a state or any political subdivision of a state or by any public instrumentality of a state or any political subdivision thereof); or~~
- ii. ~~Issuer's securities are exempt pursuant to section 3(a)(4) of the Securities Act of 1933 (the 501(c)(3) exemption).~~

Table 2: Municipal Sector Limits

Sector Nos.	Market Sectors	Percentage of Total Aggregate Program Portfolio
1	General Obligation/Short Term General Fund/Cash Flow Notes	Not to Exceed 100%
2	Public Infrastructure, Facilities and Equipment	Not to Exceed 80%
3	Transportation and Highway	Not to Exceed 70%
4	Water and Waste Water	Not to Exceed 70%
5	Education	Not to Exceed 60%
6	Municipal Utility Systems	Not to Exceed 50%
7	Airport and Marine Ports	Not to Exceed 40%
8	Student Loan and Pooled Loan Programs	Not to Exceed 30%
9	Housing	Not to Exceed 25%
10	Securitization Programs	Not to Exceed 15%
11	Public Supported Stadiums/Arenas	Not to Exceed 15%
12	Solid Waste Facilities/Resource Recovery/Environmental	Not to Exceed 10%
13	Healthcare	Not to Exceed 10%
14	Other*	Not to Exceed 10%

~~* This category is established for exceptions to the Policy. It is desirable to respond to changing market conditions and to take advantage of key opportunities that might not specifically fit into the Policy. .~~

4. ~~Special Assessment Districts~~

- a. ~~Philosophy: Some studies have generally categorized Special Assessment Districts as having a higher default profile in the municipal bond market.~~
- b. ~~Implementation: Accordingly, the Program shall only consider such tax allocation/special assessment bonds with the following characteristics:~~

CREDIT ENHANCEMENT PROGRAM

- i) ~~The location is within the geographic region or city limit of a substantial, investment grade rated entity with an identifiable level of past and likely future growth and demand for housing and related infrastructure;~~
- ii) ~~The District is not a “start up”, with at least five years of existing track record and debt servicing record;~~
- iii) ~~Raw land sales have been steady or increasingly strong due to demographic demand and population growth; and~~
- iv) ~~The developer or sponsor is of investment grade quality with excellent debt repayment history and strong construction/management experience.~~

G. ~~Program Transaction Limits~~

~~The maximum holding in any given transaction in California shall be 25% of the issue in order to be in compliance with the Safe Harbor rules established under Section 503(e) of the Internal Revenue Code (IRC).~~

H. ~~Program Partnerships~~

~~The Program shall co invest with at least one Financial Partner on each transaction. The Financial Partner(s) shall contribute to a sizeable interest on the transaction.~~

VI. ~~CALCULATIONS AND COMPUTATIONS~~

- A. ~~Computations and calculation shall be based upon the total aggregate amount of \$10 billion committed to the Program.~~
- B. ~~The “primary obligor” shall be used in computing geographic distribution limits, direct State government issued debt limits and municipal market sector limits.~~

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.~~

CREDIT ENHANCEMENT PROGRAM

Approved by the Policy Subcommittee	September 12, 2003
Adopted by the Investment Committee	October 14, 2003
Revised by the Policy Subcommittee	December 10, 2004
Approved by the Investment Committee	February 14, 2005
Revised by the Policy Subcommittee	June 16, 2006
Approved by the Investment Committee	August 14, 2006
Revised by the Policy Subcommittee	October 12, 2007
Approved by the Investment Committee	November 13, 2007
Approved by the Investment Committee	June 16, 2008
Administrative changes made due to Policy Review Project	June 16, 2009
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

CREDIT ENHANCEMENT PROGRAM

APPENDIX I

Equivalent Credit Ratings

Credit Risk	Moody's*	Standard & Poor's**	Fitch**
INVESTMENT GRADE			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium-grade (strong)	A	A	A
Medium-grade	Baa	BBB	BBB
NON INVESTMENT GRADE			
Lower medium-grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	B	B	B
Poor quality (may default)	Caa	CCC	CCC
Most speculative	Ga	CC	CC
No interest being paid or bankruptcy petition filed	C	C	C
In default	C	D	D

Source: The Bond Market Association

* The ratings from Aa to Ca by Moody's may be modified by the addition of a 1,2 or 3 to show relative standing within the category.

** The ratings from AA to CC by Standard and Poor's and Fitch may be modified by the addition of a plus or minus sign to show relative standing within the category.

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

**FOR
GLOBAL FIXED INCOME PROGRAM**

May 19, 2014

This policy is effective immediately upon adoption and supersedes all previous Global Fixed Income Program, Dollar-Denominated Fixed Income Program, International Fixed Income Program, and Foreign Debt 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 Global Fixed Income Programs ("GFI Programs"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by CalPERS take prudent and careful action while managing the GFI Programs. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with the GFI Programs.

This Policy is the controlling document for the following GFI Programs:

- A. Attachment A – Dollar-Denominated Fixed Income Program (Domestic Program);
- B. Attachment B – International Fixed Income Program (International Program); and
- C. Attachment C – Foreign Debt Policy.

II. STRATEGIC OBJECTIVE

The GFI Programs shall be managed to accomplish the following:

- A. Diversify CalPERS overall investment programs;
- B. Dampen the overall risk of CalPERS investment programs; and
- C. Enhance CalPERS total returns.

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 if needed about the performance of the GFI Programs.
3. Monitoring internal and **external managers** in the implementation of, and compliance with, the Policy. Staff shall report, concerns, problems, material changes, and all violations of Policies at the next Committee meeting, or sooner if deemed necessary. These reports shall include explanations of any violations and appropriate recommendations for corrective action.

B. The **General Pension Consultant** (“Consultant”) is responsible for monitoring, evaluating, and reporting no less than annually, to the Committee, on the performance of the GFI Programs relative to the benchmark and Policy.

C. The External Manager(s) (“Manager(s)”), is/are 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 concerning requests for information.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

The specific Performance Objective for each GFI Program is detailed in the appropriate attachment and the benchmark for each GFI Program is specified in the Benchmarks Policy.

V. INVESTMENT APPROACHES AND PARAMETERS

The specific Investment Approaches and Parameters for each GFI Program are detailed in the appropriate attachment.

Ranges for Domestic and International Programs relative to the benchmark are listed below.

Domestic Program	-10% - +10%
International Program	-10% - +10%

VI. LEVERAGE POLICY

A. Guidelines

1. Non-recourse debt is prohibited.
2. Recourse debt is prohibited.
3. Notional leverage is created when a derivative position either lacks full collateralization, or when non-cash collateral underlies a derivative exposure. Global Fixed Income shall only incur notional leverage through the use of investment grade non-cash collateral and such exposure shall not exceed 10% of the Global Fixed Income market value. Gross market exposure shall not exceed 100% of the asset class allocation.
4. Foreign currency hedges are treated separately and controlled within this Policy under Attachment B, Section II.B.8.

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](#).

GLOBAL FIXED INCOME PROGRAM**Page 4 of 4****Global Fixed Income Program**

Approved by the Policy Subcommittee	April 21, 2008
Adopted by the Investment Committee	May 12, 2008
Technical Revision to Reflect Benchmark Name Change	December 15, 2008
Revised by the Policy Subcommittee (CLNs)	December 15, 2008
Approved by the Investment Committee	February 17, 2009
Revised by the Policy Subcommittee	April 17, 2009
Approved by the Investment Committee	May 11, 2009
Administrative changes made due to Policy Review Project	June 16, 2009
Administrative changes due to adoption of Benchmark Policy	October 28, 2009
Revised by the Policy Subcommittee	August 16, 2010
Approved by the Investment Committee	September 13, 2010
Approved by the Investment Committee	May 14, 2012
Approved by the Investment Committee	February 19, 2013
Approved by the Investment Committee	June 17, 2013
Administrative change regarding implementation date	July 30, 2013
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

The following attachments were previously individual policies and are now consolidated into the Global Fixed Income Program policy. The dates below reflect the revision history for each document

Attachment A – Dollar-Denominated Fixed Income Program:

Approved by the Policy Subcommittee:	September 14, 2001
Adopted by the Investment Committee:	November 13, 2001
Revised by the Policy Subcommittee:	September 10, 2004
Approved by the Investment Committee:	October 18, 2004
Revised by the Policy Subcommittee:	September 16, 2005
Approved by the Investment Committee:	October 17, 2005
Revised by the Policy Subcommittee:	December 14, 2007
Approved by the Investment Committee:	February 19, 2008
Approved by the Investment Committee:	May 14, 2012
Approved by the Investment Committee:	June 17, 2013
Administrative Change regarding implementation date:	July 30, 2013

Attachment B – Externally Managed Active International Fixed Income Program:

Approved by the Policy Subcommittee:	August 11, 1999
Adopted by the Investment Committee:	October 18, 1999
Revised by the Policy Subcommittee:	June 11, 2004
Approved by the Investment Committee:	August 16, 2004
Revised by the Policy Subcommittee:	September 16, 2005
Approved by the Investment Committee:	October 17, 2005

GLOBAL FIXED INCOME PROGRAM

Page 5 of 4

Revised by the Policy Subcommittee:	April 13, 2007
Approved by the Investment Committee:	May 14, 2007
Approved by the Investment Committee:	May 14, 2012
Name changed to <u>International Fixed Income Program</u>	
Approved by the Investment Committee:	June 17, 2013
Administrative Change regarding implementation date:	July 30, 2013

Current Policy

Attachment A

DOLLAR-DENOMINATED FIXED INCOME PROGRAM

May 19, 2014

I. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. The primary performance objective for the Dollar-Denominated Fixed Income Program ("Domestic Program") is to exceed the return of the Barclays Capital Long Liabilities Index ("BCLL Index") while maintaining a high level of diversification.
- B. The benchmark for the Domestic Program is specified in the Benchmarks Policy.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approach

Staff will identify opportunities across bond market sectors and invest where risks are both understood and manageable while complying with specifications in this Policy. Corporate, sovereign, and mortgage-backed securities may receive a greater allocation than the BCLL Index given the higher return expectations. Studies indicate that optimal sector allocations in fixed income favor corporate and mortgage-backed securities over U.S. Treasuries and Agencies relative to the BCLL Index. Equally important for management of the Domestic Program is flexibility in managing durations. In general, the program is expected to remain duration-neutral to the BCLL Index unless real returns and economic analysis dictate otherwise. This flexibility is expected to add value versus a passive approach.

B. Specific Risk Parameters

CalPERS shall manage the following major categories of fixed income risk:

1. Benchmark Risk was reviewed by the Consultant who determined that the BCLL Index is the appropriate reference point.
2. Interest Rate Risk must be controlled using duration management. Duration shall be maintained at -50% to +10% of the BCLL Index on an option-adjusted basis. Decisions shall be managed using historical real return relationships and economic analysis.

DOLLAR-DENOMINATED FIXED INCOME PROGRAM

3. Yield Curve Risk must be managed in a controlled, disciplined fashion by monitoring key rate durations and principal component analysis.
4. Convexity Risk must be managed using option-adjusted and scenario analysis.
5. Sector Risk must be controlled using the ranges below. Based on the economic outlook, historical factors, and break-even analysis, Staff shall estimate the impact on various sectors' spreads and make allocations accordingly.

Sector Ranges - The following are ranges by which actual allocations can fluctuate from the benchmark sector weightings:

TOTAL DOMESTIC PROGRAM WEIGHTINGS

Sector	BCLL Index	Permitted Sector Ranges
U.S. Treasury & Government Sponsored	40%	10% - 80%
Mortgage	30%	15% - 45%
Corporate	24%	10% - 40%
Opportunistic	3%	0% - 12%
Sovereign	3%	0% - 10%
Total	100%	N.A.

6. Credit Risk must be controlled by requiring minimum ratings by sector as outlined below in Section II.B.6.a-d. Credit Risk must be actively managed on a risk/return basis. A downgrading of a security, which causes a violation of the guidelines, shall not require an immediate sale if the Senior Investment Officer of Global Fixed Income determines that no further risk of credit deterioration exists or the sale diminishes the total return to CalPERS. The CalPERS internal research staff and the external rating agencies shall analyze such situations to ensure that an informed decision is made. The following is the minimum quality for each of the sectors:

- a. Treasury & Government Sponsored

Interest rate swaps are allowable and excluded from the minimum credit calculation. All swaps must comply with Section III.A.

DOLLAR-DENOMINATED FIXED INCOME PROGRAM

b. Investment Grade Corporate

- 1) Holdings in the investment grade **corporate sector** shall, at a minimum, be rated investment grade by a recognized credit rating agency (at least Baa3 by Moody's or BBB- by S&P or by Fitch Ratings). This sector includes both domestic and foreign U.S. dollar and hedged into U.S. dollars public utilities, transportation, industrials, and bank and finance companies.
- 2) Non-rated bonds must receive an investment grade rating (BBB- or above) from the CalPERS internal research staff at the time of purchase. The CalPERS internal research staff shall review at least annually all corporate issuers, where the investment decision was driven by the attractiveness of the individual issuer. Where the investment in corporate bonds is driven by a favorable macro-view of the corporate sector versus either Treasuries or mortgages, the annual review of issuers shall not apply, as credit risk shall be managed through extensive issue diversification and industry constraints to minimize event and idiosyncratic risk.
- 3) The corporate sector may include credit mortgages. All credit mortgages must receive an investment grade rating (BBB- or above) from the CalPERS internal research staff at the time of purchase and shall be reviewed at least annually.
- 4) Investment grade Local Currency debt of corporations must meet the requirements of the Foreign Debt Policy (Attachment C).

c. Mortgage

- 1) Holdings in the mortgage sector must at a minimum be rated investment grade by a recognized credit rating agency (at least Baa3 by Moody's or BBB- by S&P or by Fitch). This category includes mortgage-backed and asset-backed securities. Additionally, it includes commercial mortgages where the primary focus for rating purposes is the underlying collateral and leases.

DOLLAR-DENOMINATED FIXED INCOME PROGRAM

- 2) Non-rated bonds must receive an investment grade rating (BBB- or above) from the CalPERS internal research staff at the time of purchase. Staff shall review each investment at least annually.

d. Sovereign

- 1) Holdings in the sovereign sector must at a minimum be rated investment grade by a recognized credit rating agency (at least Baa3 by Moody's or BBB- by S&P or by Fitch Ratings).
- 2) All sovereign securities must be U.S. dollar-denominated or non-dollar securities hedged into U.S. dollars. All holdings must meet the requirements of the Foreign Debt Policy (Attachment C).

7. Structure Risk must be managed using option-adjusted scenario and prepayment analysis.
8. Reinvestment Risk must be managed through call risk and cash flow analysis.
9. Liquidity Risk is reduced due to CalPERS strong cash flow.
10. Currency Risk is reduced by requiring all securities to be denominated or hedged into U.S. dollars.

C. Restrictions and Prohibitions

1. Except for U.S. Treasuries and Agencies, investments in a single issuer shall not exceed 1% of the **total** Domestic Program. For asset-backed securities, each separate trust (pool of assets) is defined as a separate issuer. For AAA rated mortgage-backed securities, CalPERS **High Quality LIBOR**, CalPERS Short Duration Program, and Short Term Investment Program, no single issuer limit exists.
2. Total non-investment grade securities shall not exceed a maximum of 12% of the **total** Domestic Program. Sub-sector limits are as follows:
 - a. Non-investment grade corporate securities must not exceed 10% of the total Domestic Program.
 - b. Non-investment grade mortgage securities must not exceed 5% of the total Domestic Program.

DOLLAR-DENOMINATED FIXED INCOME PROGRAM

- c. Non-investment grade sovereign securities must not exceed 5% of the total Domestic Program.
- 3. Section II.B.2 specifies the Interest Rate Risk parameters.
- 4. Section II.B.5 specifies the Sector Risk parameters.
- 5. Non-investment grade collateralized bond, loan, or debt obligations (CBO/CLO/CDO) must not exceed a maximum of 3% of the total Domestic Program.
- 6. Tobacco company investments are prohibited.
- 7. Shorting will be limited to investment grade securities. Section III.A.1 governs the short selling of securities.
- D. Authorized Securities
 - 1. U.S. Treasury and Government Sponsored Securities including derivative securities whose deliverable instrument is a U.S. Treasury or government obligation, but excluding mortgages and mortgage-backed securities (MBS).
 - 2. U.S. Publicly Traded Investment Grade Corporate Bonds.
 - 3. U.S. Privately Placed Investment Grade Corporate Bonds.
 - 4. U.S. Publicly Traded Investment Grade Mortgage-Backed Securities including derivative securities whose deliverable instrument or underlying collateral is a U.S. mortgage-backed security.
 - 5. U.S. Privately Placed Investment Grade Mortgage-Backed Securities including single-family residences, commercial loans, and other privately placed mortgage-backed securities.
 - 6. Investment Grade Asset-Backed Securities.
 - 7. Investment Grade Global bonds.
 - 8. Investment Grade Municipal bonds.
 - 9. Investment Grade Preferred Stock.
 - 10. Investment Grade Non-Dollar Bonds Hedged into U.S. dollars that are consistent with the Foreign Debt Policy (Attachment C).

DOLLAR-DENOMINATED FIXED INCOME PROGRAM

11. Derivatives, subject to the requirements of Section III.
12. Opportunistic Securities pursuant to Section IV.

III. DERIVATIVES POLICY

A. Financial Futures, Swaps, and Options

All transactions involving derivatives and leverage 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:

1. Short selling of securities is allowed in the following areas:
 - a. Financial futures and investment grade indices.
 - b. Investment grade corporate securities or derivatives thereon where the actual cash position of any short securities plus the notional value of any derivatives is subject to a maximum limit of 5% of the total Domestic Program.
 - c. Investment grade sovereign securities or derivatives thereon where the actual cash position of any short securities plus the notional value of any derivatives is subject to a maximum limit of 5% of the total Domestic Program.
 - d. Investment grade mortgage securities or derivatives thereon where the actual cash position of any short securities plus the notional value of any derivatives is subject to a maximum limit of 2% of the total Domestic Program.
2. Staff may buy or sell the following fixed income related derivatives: Credit Default Swaps (CDS) both on securities and indices (examples are CDX and ABX), financial futures, options on financial futures, options on volatility, options on underlying securities, and options on securities indices, which includes over-the-counter options (as specified in Section II.D.1.).

DOLLAR-DENOMINATED FIXED INCOME PROGRAM

3. Acceptable strategies include bona fide hedges (to help achieve the target durations or short positions that stay within the duration and sector range parameters set forth in Section II.B.2 and 5) and strategies that exploit the market's erroneous estimation of the volatility of interest rates. Other acceptable strategies include taking advantage of inaccurately priced instruments or using a more efficient method of implementing the investment objectives of the Domestic Program.

B. Restrictions and Prohibitions

1. Uncovered call writing is prohibited.
2. Speculation or arbitrage between two derivatives is prohibited. If a derivative is more attractively priced than the underlying security, the transaction is considered a substitution.
3. A maximum of 2% of the total Domestic Program may be invested in mortgage securities that are leveraged (e.g., inverse floaters).

IV. OPPORTUNISTIC INVESTMENTS

- A. Securities or sub-asset classes, which are candidates for inclusion, shall have risk, return, and correlation profile sufficiently different from other sectors such that its inclusion or exclusion can affect the risk and return expectations of the Domestic Program. The criteria for inclusion into this classification shall include, but are not limited to:
1. Sufficient size, liquidity, and cost efficiency to allow a meaningful amount to be invested and have an impact on the total return.
 2. Availability of sufficient internal or external investment and technical expertise to insure prudent implementation of an investment in that sub-asset class.
 3. Presence of diversification, return enhancement, or some other readily identifiable attribute which is sufficiently different from other asset classes and which enhances the Domestic Program's ability to achieve the strategic objectives outlined in this Policy.
 4. Acceptance by other large money managers or financial institutions as a viable and meaningful sub-asset class or in the absence of such acceptance, academic basis, or foundation for its inclusion.

DOLLAR-DENOMINATED FIXED INCOME PROGRAM

5. Availability of sufficient data, history, or expertise to assess the viability or benefit of the asset class to the Domestic Program and to have an investment outcome that is measurable from such an asset class. Further, the asset class must have a basis for developing expected investment return, risk, and correlations for purposes of the financial study.
- B. A sub-asset class may be approved for investment provided that it meets the criteria above and that the Senior Investment Officer of Global Fixed Income has reviewed educational literature and other sources or both to fulfill fiduciary responsibility and has received approval by the Chief Investment Officer.
- C. Permitted Opportunistic Investments
1. Non-Investment Grade Domestic and Hedged Non-Dollar corporate, including corporate zero coupon and PIK securities.
 2. Leveraged and Un-**Leveraged Bank Loans**.
 3. Asset Based Loans.
 4. Non-investment grade CBO/CLO/CDO/CLN securities.
 5. Convertible Bonds.
 6. CMO residuals.
 7. Non-Investment Grade Dollar Denominated and Non-Dollar Global Sovereign Bonds hedged into U.S. dollars that are consistent with the Foreign Debt Policy (Attachment C).
 8. Non-investment grade mortgage securities.
 9. Other sub-asset classes may be added if they meet the criteria outlined in Section IV, A and B.

Attachment B

INTERNATIONAL FIXED INCOME PROGRAM

May 19, 2014

I. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. The primary performance objective for the International Fixed Income Program (“International Program”) is to exceed the return of the benchmark.
- B. The benchmark for the International Program is specified in the Benchmarks Policy.

II. INVESTMENT APPROACHES AND PARAMETERS

- A. Investment Approach
 - 1. The International Program shall be managed to:
 - a. Maximize risk adjusted returns through the selection and allocation of permissible bond markets.
 - b. Within those markets, manage the selection and allocation of maturities, durations, credits, currencies, and approved derivative instruments.
 - c. Consider macro and relevant micro-economic factors including, but not limited to, economic growth, inflation, monetary and fiscal policy of permissible countries, the credit risk of market and issuer, and risk-adjusted yields.
 - 2. The International Program shall be implemented through internal and external manager(s) (“Manager” or “Managers”).
 - 3. Each external manager shall operate under a set of manager specific guidelines that outlines its investment philosophy, representative portfolio characteristics, authorized and restricted securities and procedures, and strategic and performance objectives. All guidelines will be consistent with the Investment Parameters set forth in Section II, III, and the Foreign Debt Policy (Attachment C).
 - 4. The viability of the International Program shall be reviewed annually.

INTERNATIONAL FIXED INCOME PROGRAM

B. Specific Risk Parameters

1. Benchmark Risk was reviewed by the Consultant who determined that the benchmark is the appropriate reference point.
2. Interest Rate Risk must be managed by the Manager within -50% to +10% of the benchmark duration.
3. Yield Curve Risk must be managed by the Manager.
4. Credit Risk is managed by using specific credit limits. Minimum credit ratings for sovereign credit are specified in the Foreign Debt Policy (Attachment C).
5. Convexity Risk must be managed by the Manager.
6. Reinvestment Risk must be managed by the Manager.
7. Liquidity Risk is reduced due to CalPERS strong cash flows.
8. Currency Risk will be controlled using the ranges below.

The following table specifies ranges within which net currency positions may be taken:

Net Individual Currency Ranges Relative to the Benchmark

Reserve Currency Benchmark Markets (EUR, JPY, GBP)	-15% - +15%
Other Benchmark Currencies	-10% - +10%
Non-benchmark Currencies (ex USD)	-5% - +5%
U.S. dollar	-15% - +15%

Maximum cumulative long currency exposure relative to benchmark +30%

Maximum cumulative short currency exposure relative to benchmark -30%

9. Sector Risk will be controlled using the ranges below. Managers are responsible for determining appropriate allocations based on market analysis.

Sector Ranges - The following table specifies ranges within which allocations can fluctuate from benchmark weights:

Total International Program Weightings

Sector	Benchmark	Permitted Net Ranges
US Treasuries (ex TIPS)	0%	-10 - +10
Governments (ex US)	100%	90% - 100%
Invest. Grade Corporate	0%	-10% - +10%
Mortgages	0%	0% - +10%
Non-Investment Grade Corporate	0%	0% - 5%

Note: The total of non-government securities cannot exceed 10% of the total International Program.

10. Country Risk will be controlled using the ranges below. Managers are responsible for determining appropriate country allocations based on market analysis.

Net Country Permitted Ranges - The following table specifies ranges within which country allocations can fluctuate from benchmark weights:

Net Individual Country Range Relative to the Benchmark

Benchmark Countries rated AA- and higher	-15% - +15%
Other Benchmark Countries	-10% - +10%
Non-benchmark countries (ex US)	-5% - +5%
U.S.	-10% - +10%

Note: Issuance by a Monetary Union such as the European Financial Stability Facility (EFSF) will be considered as a separate single country.

C. Restrictions and Prohibitions

1. Total non-investment grade securities is limited to 10%.
2. Shorting non-investment grade bonds and U.S. mortgage backed securities is prohibited.
3. The maximum total International Program net short bond or currency position is 30%.
4. The International Program must comply with the Foreign Debt Policy, (Attachment C).

INTERNATIONAL FIXED INCOME PROGRAM

5. The maximum net long or net short holdings per corporate issuer is 1% of the total International Program.

D. Authorized Securities

1. Non-dollar and U.S. dollar bonds issued by national governments, subnational governments (i.e. provincial, state, and municipal), and supranational entities that meet the requirements of Foreign Debt Policy (Attachment C). Subnational governments may be substituted for the sovereign national government or any entity that has full faith and credit of the sovereign. Supranationals may also be a substitute for national governments.
2. Non-U.S. dollar and U.S. dollar publicly traded corporate bonds that meet the requirements of Foreign Debt Policy (Attachment C).
3. U.S. Treasury and Government sponsored securities.
4. U.S. dollar Federal National Mortgage Association (FNMA), Federal Home Loan Mortgage Corporation (FHLMC), and Government National Mortgage Association (GNMA) securities.
5. Structured products denominated in major developed currencies and the U.S. dollar, including but not limited to, ABS, ABL, and CDS.
6. Derivatives, subject to the requirements of Section III.

III. DERIVATIVES POLICY

All transactions involving derivatives managed by both internal and external managers are governed by the Global Derivatives and Counterparty Risk Policy, except that leverage and shorting will be permitted in accordance with this Policy as outlined in Sections II, B and C.

A. Permitted and Restricted Instruments

Managers may buy and sell the following derivatives: currency forward contracts, currency options, swaps, credit default swaps, structured notes, financial futures, options on financial futures, options on volatility, options on underlying securities, options on securities indices, including over-the-counter options.

INTERNATIONAL FIXED INCOME PROGRAM

B. Reporting Requirements

External managers shall prepare a monthly report for CalPERS Staff outlining the following information:

1. The derivatives and the counterparties used and the market value, cost-value, gain or loss, notional exposure, and amount of exposure;
2. A description of the strategy and the expected outcome of the derivative use; and,
3. The quantified impact to the International Program.

Attachment C

FOREIGN DEBT POLICY

May 19, 2014

Debt Issued by National Governments

1. External Currency Bonds issued by national governments must have a foreign currency credit rating of BB- or higher from S&P or Fitch, or Ba3 or higher from Moody's. Local Currency Bonds issued by national governments must have a local currency credit rating of BB- or higher from S&P or Fitch, or Ba3 or higher from Moody's.
2. For Local Currency Bonds the country's currency must be convertible for foreign investors, so that managers may retrieve CalPERS funds without limit or obstruction.

Debt of Foreign Corporations and Subnational Governments (i.e., Provincial, State, and Municipal)

1. If corporate debt or debt of subnational governments is below investment grade, it is eligible for investment if both the issuer's country of domicile and the country under whose laws the debt is issued are rated at least A+ by S&P or Fitch, or A1 by Moody's.
2. For Local Currency Bonds the country's currency must be convertible for foreign investors, so that managers may retrieve CalPERS funds without limit or obstruction.

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

**FOR
CREDIT ENHANCEMENT PROGRAM**

May 19, 2014

This Policy is effective immediately upon adoption and supersedes all previous Credit Enhancement 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 Credit Enhancement Program ("Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by the 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 the management and oversight of the Program.

II. STRATEGIC OBJECTIVES

The Program shall be managed to accomplish the following:

Earning fee income through a zero loss-underwriting standard. Fees will be generated from annual commitments, up-front closings, amendments, and waivers.

CalPERS expects strict conformity with the Policy and will allow the market to set pricing for credit enhancement vehicles.

III. RESPONSIBILITIES

A. CalPERS Investment Staff ("Staff") is responsible for the following:

1. All aspects of portfolio management, including monitoring, analyzing, and evaluating performance;
2. Reporting to the Committee no less than annually and more often, if necessary, about the performance of the Program;

3. Monitoring the implementation of, and compliance with, the Policy. Staff shall report, orally or in writing, concerns, problems, material changes, and any violations of the Policy immediately to the Senior Investment Officer ("SIO")
 4. Preparing a Prudence Certificate for each transaction.
- B. The **General Pension Consultant** is responsible for monitoring, evaluating, and reporting no less than annually to the Committee on the performance of the Program.

IV. VIOLATION REPORTING

- A. The violation reporting process shall be as follows:
1. Staff shall report orally, or in writing, all Policy violations immediately to the Senior Investment Officer, Global Fixed Income Unit.
 2. The Senior Investment Officer, Global Fixed Income Unit (SIO) shall immediately report orally, or in writing, any Policy violation to the Chief Investment Officer (CIO), and the Chief Operating Investment Officer.
 3. The CIO shall determine the appropriate means of further reporting based on his or her judgment of the magnitude, sensitivity and severity of the violation.
 - a. All Policy violations shall be reported to the Committee as part of a quarterly report agenda item on the Committee's regular agenda.
 - b. Depending on the Policy violation, and at the discretion of the CIO, reporting may also be made to the Committee as a separate agenda item or as a portion of the CIO Report at the next scheduled Committee meeting. These reports shall include explanations of the violations and appropriate recommendations for corrective action.
 - c. If a Policy violation is to be reported to the Committee, the Consultant shall be asked to provide an opinion as to the impact of the Policy violation to the Program and overall fund.

V. INVESTMENT APPROACHES AND PARAMETERS**A. Eligible vehicles for credit enhancement:**

1. Letters of Credit – These are irrevocable obligations used to provide credit and liquidity on variable or fixed rate note and bond transactions. The legal obligation to fund under these documents is **unconditional**. Letters of Credit are irrevocable draws by the Trustee and will be funded according to the established funding procedures.
2. Lines of Credit – These are also referred to as Standby Bond or Note Purchase Agreements or Liquidity Lines. These are designed to provide liquidity (as opposed to credit enhancement) in the event of financial market disruption. The legal obligation to fund under these vehicles is **conditional**. These are also referred to as revocable vehicles

B. Exclusions:

1. CalPERS will not provide direct-funded loans.
2. The Program will not consider transactions with municipal issuers or conduit issuers on their behalf (obligors) that have declared bankruptcy in the last fifteen years.
3. The Program will not consider Certificates of Participations (COPs) other than those transactions for Essential Municipal Services.

C. Credit Ratings:

1. All issuers under the Program shall be rated investment grade by at least two nationally-recognized credit rating agencies (e.g., Moody's, Investors Service, Standard and Poor's and Fitch Ratings) and any outstanding rating must be investment grade by at least two nationally-recognized credit rating agencies. In addition, such an issuer should not have been rated in the non-investment grade category by any nationally-recognized credit rating agencies at any time within the last five years.
2. If an issuer is not initially rated, an independent Rating Category Determination (RCD) letter shall be procured from at least two nationally-recognized credit rating agencies. The RCD will provide a determination as to whether a proposed transaction is of investment grade quality.

D. Credit Rating Portfolio Limits:

1. The average credit quality of the Program's portfolio shall be "single-A" long-term credit rating designation (A2 by Moody's, A by S&P and A by Fitch. See Appendix I for equivalent ratings by Moody's, S&P and Fitch).
2. Where a credit transaction has a split rating, i.e. BBB+/A- from two or more credit rating agencies, Staff shall use the lower rating for purposes of calculating the average credit quality of the Program's portfolio.

E. Portfolio Average Maturity

The weighted average maturity of the Program's portfolio shall not exceed 5 years.

F. Portfolio Diversification

1. Geographic Distribution

- a. Philosophy: Municipalities in ten States – **California, New York, Florida, New Jersey, Texas, Pennsylvania, Illinois, Massachusetts, Michigan and Ohio** -- have the largest municipal issuance volume and have consistently been in the "top-ten" states for municipal issuance for at least the last ten years. The Program's portfolio will be aligned with states having the largest populations and largest municipal issuance volume.
- b. Implementation: Staff will construct a credit enhancement portfolio, using an aggregate dollar total, that will be distributed on a parallel basis to municipal issuance across the entire market with limitations as shown in Table 1 below.

2. Direct State Government Issued Debt Limits (Table 1)

- a. Philosophy: The overall mission of the Program is to earn fee income on an expected zero loss-underwriting basis. The Program envisions the majority of primary obligors to be municipalities, not state governments.

- b. Implementation: To further control risks and increase portfolio diversification, Direct State Government Issued Debt (voter or non-voter approved) shall not exceed 40% of the Total Aggregate Program Portfolio within a particular state.

Table 1: State Geographic Distribution and Debt Limits

State Geographic Distribution	Percentage of Aggregate Program Portfolio	Direct State Government Issued Debt Limits
California	Not to exceed 45%	Not to exceed 18%
New York	Not to exceed 35%	Not to exceed 14%
Florida	Not to exceed 30%	Not to exceed 12%
All Other States*	Not to exceed 20%	Not to exceed 8%

* Includes the other 47 states and US Territories & Possessions (Guam, Midway Islands, Puerto Rico, US Virgin Islands and Wake Islands)

3. Municipal Sector Exposure

- a. Philosophy: Only those entities rated investment grade within the traditional municipal sectors, secured by revenues from the particular entity or back-stopped by the taxing authority of the municipality, and with demonstrated low default rates will be eligible for the Program.
- b. Implementation: The Program's portfolio exposure within each state shall be diversified through transactions in different municipal market sectors. All of the issuers within the portfolio shall come from one of the outlined governmental and public sectors below (including non-profit 501(c)(3) institutions) that comprise the U.S. municipal market:

For any issuer which is a public agency employer for purposes of participation in CalPERS credit enhancement program or entity that might become a public agency employer, a written opinion of counsel for issuer is required that either:

- i. Issuer's securities are exempt pursuant to Section 3(a)(2) of the Securities Act of 1933 (as security issued by a state or any political subdivision of a state or by any public instrumentality of a state or any political subdivision thereof); or
- ii. Issuer's securities are exempt pursuant to section 3(a)(4) of the Securities Act of 1933 (the 501(c)(3) exemption).

Table 2: Municipal Sector Limits

Sector Nos.	Market Sectors	Percentage of Total Aggregate Program Portfolio
1	General Obligation/Short Term General Fund/Cash Flow Notes	Not to Exceed 100%
2	Public Infrastructure, Facilities and Equipment	Not to Exceed 80%
3	Transportation and Highway	Not to Exceed 70%
4	Water and Waste Water	Not to Exceed 70%
5	Education	Not to Exceed 60%
6	Municipal Utility Systems	Not to Exceed 50%
7	Airport and Marine Ports	Not to Exceed 40%
8	Student Loan and Pooled Loan Programs	Not to Exceed 30%
9	Housing	Not to Exceed 25%
10	Securitization Programs	Not to Exceed 15%
11	Public-Supported Stadiums/Arenas	Not to Exceed 15%
12	Solid Waste Facilities/Resource Recovery/Environmental	Not to Exceed 10%
13	Healthcare	Not to Exceed 10%
14	Other*	Not to Exceed 10%

* This category is established for exceptions to the Policy. It is desirable to respond to changing market conditions and to take advantage of key opportunities that might not specifically fit into the Policy. .

4. Special Assessment Districts

- a. Philosophy: Some studies have generally categorized Special Assessment Districts as having a higher default profile in the municipal bond market.
- b. Implementation: Accordingly, the Program shall only consider such tax allocation/special assessment bonds with the following characteristics:

- i) The location is within the geographic region or city limit of a substantial, investment grade rated entity with an identifiable level of past and likely future growth and demand for housing and related infrastructure;
- ii) The District is not a “start-up”, with at least five years of existing track record and debt servicing record;
- iii) Raw land sales have been steady or increasingly strong due to demographic demand and population growth; and
- iv) The developer or sponsor is of investment grade quality with excellent debt repayment history and strong construction/management experience.

G. Program Transaction Limits

The maximum holding in any given transaction in California shall be 25% of the issue in order to be in compliance with the Safe Harbor rules established under Section 503(e) of the Internal Revenue Code (IRC).

H. Program Partnerships

The Program shall co-invest with at least one Financial Partner on each transaction. The Financial Partner(s) shall contribute to a sizeable interest on the transaction.

VI. CALCULATIONS AND COMPUTATIONS

- A. Computations and calculation shall be based upon the total aggregate amount of \$10 billion committed to the Program.
- B. The “primary obligor” shall be used in computing geographic distribution limits, direct State government issued debt limits and municipal market sector limits.

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](#).

CREDIT ENHANCEMENT PROGRAM

Page 8 of 9

Approved by the Policy Subcommittee	September 12, 2003
Adopted by the Investment Committee	October 14, 2003
Revised by the Policy Subcommittee	December 10, 2004
Approved by the Investment Committee	February 14, 2005
Revised by the Policy Subcommittee	June 16, 2006
Approved by the Investment Committee	August 14, 2006
Revised by the Policy Subcommittee	October 12, 2007
Approved by the Investment Committee	November 13, 2007
Approved by the Investment Committee	June 16, 2008
Administrative changes made due to Policy Review Project	June 16, 2009
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

APPENDIX I

Equivalent Credit Ratings

Credit Risk	Moody's*	Standard & Poor's**	Fitch**
INVESTMENT GRADE			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (strong)	A	A	A
Medium grade	Baa	BBB	BBB
NON-INVESTMENT GRADE			
Lower medium grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	B	B	B
Poor quality (may default)	Caa	CCC	CCC
Most speculative	Ca	CC	CC
No interest being paid or bankruptcy petition filed	C	C	C
In default	C	D	D

Source: The Bond Market Association

* The ratings from Aa to Ca by Moody's may be modified by the addition of a 1,2 or 3 to show relative standing within the category.

** The ratings from AA to CC by Standard and Poor's and Fitch may be modified by the addition of a plus or minus sign to show relative standing within the category.

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

**FOR THE
INFLATION ASSETS**

May 19, 2014

This policy is effective immediately upon adoption and supersedes all previous Inflation-Linked Assets, Commodities and Inflation-Linked Bonds 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 Inflation Assets ("IA Asset Class" or "Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by the 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 includes two components: commodities and inflation-linked bonds. The Policy includes investment guidelines for the Program structure followed by an attachment for each component.

- A. Attachment A – Commodities ("Commodities Program") and
- B. Attachment B – Inflation-Linked Bond Program ("ILB Program")
Attachment B1 – Foreign Debt Policy

II. STRATEGIC OBJECTIVE

The Program shall be managed to accomplish the following:

- A. Prudently achieve long-term returns above inflation;
- B. Diversify CalPERS investments; and
- C. Hedge against inflation risks.

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 if needed about the performance of the Programs.
3. Monitoring the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes and all violations of Guidelines and Policies at the next Committee meeting, or sooner if deemed necessary. All events deemed materially important will be reported to the Committee immediately. These reports shall include explanations of any violations and appropriate recommendations for corrective action.

The Senior Investment Officer, Global Fixed Income ("SIO-Global Fixed Income") will be responsible for the Program.

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

C. For those programs that are managed by an **External Manager** ("Manager"), the Manager is responsible for aspects of portfolio management as set forth in each Manager's contract with CalPERS and shall, at a minimum, 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 assigned to the Program concerning requests for information.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. The primary performance objective for the Program is to exceed the benchmark, net of all fees.
- B. The benchmarks for the Program and for each of the two components are specified in the Benchmarks Policy.

V. INVESTMENT APPROACHES AND PARAMETERS

The specific Investment Approaches and Parameters for the components of the program (ILB and Commodities) are detailed in the appropriate attachment.

Program allocation targets and ranges are listed below. Allocations are expressed as a percentage of the market value of the CalPERS fund.

Program Allocations:

Component	Target*	Range*
Commodities	1.0%	0.5% - 3.0%
Inflation-Linked Bonds	3.0%	1.0% - 5.0%
IL Asset Class	4.0%	1.5% - 7.0%

* Percentage of the CalPERS Fund.

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](#).

INFLATION ASSETS**Page 4 of 4****Inflation Assets Policy**

Approved by the Policy Subcommittee:	April 11, 2011
Adopted by the Investment Committee:	May 16, 2011
Policy Effective:	July 1, 2011
Administrative Update to Attachment A – Commodities Program	January 12, 2013
Approved by the Investment Committee:	June 17, 2013
Administrative Change regarding implementation date	July 30, 2013
Admin 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

The following attachments were previously individual policies, and have been consolidated into the Inflation Assets Program policy. The dates below reflect the revision history for these documents:

Attachment A – Commodities Program

Approved by the Policy Subcommittee:	December 15, 2006
Adopted by the Investment Committee:	December 18, 2006
Revised by the Policy Subcommittee:	December 14, 2007
Approved by the Investment Committee:	February 19, 2008
Administrative Change Made	January 12, 2013

Attachment B – Inflation-Linked Bond Program

Approved by the Policy Subcommittee:	December 14, 2007
Adopted by the Investment Committee:	February 19, 2008
Technical Revision to Reflect Benchmark Name Change:	December 15, 2008
Approved by the Investment Committee:	June 17, 2013
Administrative Change regarding implementation date	July 30, 2013

Previously named policy: Inflation-Linked Asset Class Policy

Approved by the Policy Subcommittee:	December 14, 2007
Adopted by the Investment Committee:	February 19, 2008
Technical Revision to Reflect Benchmark Name Change:	December 15, 2008
Administrative changes made due to Policy Review Project:	June 16, 2009
Admin changes due to adoption of Benchmark Policy:	October 12, 2009
Revised by the Policy Subcommittee:	April 19, 2010
Approved by the Investment Committee:	May 17, 2010

Attachment A

COMMODITIES PROGRAM

May 19, 2014

I. STRATEGIC OBJECTIVE

The Commodities Program shall be managed to accomplish the following:

- A. Enhance CalPERS risk-adjusted returns;
- B. Diversify CalPERS investments; and
- C. Hedge against inflation risks.

II. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. The primary performance objective for the Commodities Program is to outperform the Benchmark, net of all fees.
- B. The benchmark for the Commodities Program is specified in the Benchmarks Policy.

III. INVESTMENT APPROACHES AND PARAMETERS

A. Permitted Investment Instruments

The following classes of Commodities Program overlay instruments are permitted:

- 1. Futures contracts;
- 2. Forward contracts;
- 3. Swaps;
- 4. Structured notes; and,
- 5. Options.

Individual positions may be long or short the commodity risk exposure.

Direct investments in physical commodities are not permitted.

COMMODITIES PROGRAM

Derivative Instruments may be standardized and exchange traded (e.g., futures), or privately negotiated and over-the-counter (OTC), e.g., swaps. All transactions involving derivatives are governed by the Global Derivatives and Counterparty Risk Policy.

B. Instrument Risk Exposure

The risk exposure of the investment instruments may be long or short, or a combination of both.

The underlying risk exposure may be to a cash commodity or a commodity derivative.

Instruments incorporating multiple commodity risk exposures, such as commodity baskets and commodity indices, are allowed.

The risk exposure for exchange traded instruments is with the exchange's clearinghouse, and with the approved counterparty for OTC transactions.

C. Listing Requirements

Exchange traded commodity futures, options and any related instruments may be traded on any exchange regulated by the CFTC (Commodities and Futures Trading Commission) or the FSA (Financial Services Authority) of the United Kingdom, or on any exchange that lists a commodity future included in the Commodities Program benchmark.

D. Other Risk Management

1. **Liquidity risk** shall be managed by adhering to the above counterparty requirements.
2. **Pricing risk** will be minimized by using standardized or market accepted instruments for OTC derivatives. Exchange-traded derivatives will be used when appropriate to minimize pricing risk.
3. **Sector risk** will be mitigated by maintaining net option-adjusted commodities exposures within plus and minus twenty percentage points of benchmark weights for the following commodity overlay sectors: energy, metals, and "soft" commodities (currently food and other agricultural products). The benchmark commodity index provider will be the source in determining the sector of individual commodities. Each of these three sectors shall have a positive net option-adjusted commodities exposure.

COMMODITIES PROGRAM

E. Commodity Collateral**1. Collateral Market Value**

The market value of the commodities collateral shall be maintained at 100% or greater of the net option-adjusted notional value of the commodities overlay exposure at the time of any new commodities overlay position. The intent of this constraint is to avoid incurring economic leverage (commodities value exceeding the value of the collateral) due to investing in commodities, while recognizing that the amount of collateral relative to the amount of commodities exposure may drift from time to time due to a variety of possible factors, which may cause the collateral value to drop below the value of commodities. If the collateral market value falls below the net option adjusted value of the overlay, portfolio adjustments will be made at the earliest reset opportunity to bring the collateral value up to the notional value of the overlay.

2. Permitted Investments

The following classes of Commodities Program collateral investments are permitted.

- a. Units of an internal short term investment fund ("STIF");
- b. Inflation linked bond investments held in the IL Asset Class (subject to no more than 20% of the Commodities Program);
- c. Cash or treasury debt obligations used for futures margin requirements; and
- d. Any receivable due from an approved counterparty to a commodity-related investment.

Attachment B

INFLATION-LINKED BOND PROGRAM

May 19, 2014

I. STRATEGIC OBJECTIVE

The Inflation-Linked Bond Program (“ILB Program”) shall be managed to accomplish the following:

- A. Enhance CalPERS risk adjusted returns;
- B. Diversify CalPERS investments; and,
- C. Hedge against inflation risks.

II. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. The primary performance objective for the ILB Program is to outperform the Benchmark, net of all fees.
- B. The benchmark for the ILB Program is specified in the Benchmarks Policy.

INFLATION-LINKED BOND PROGRAM**III. INVESTMENT APPROACHES AND PARAMETERS****A. Permitted Investments and Ranges**

ILB Program targets and permissible ranges as a percentage of total portfolio are listed below:

Sector	Policy target	Permitted range
Total investment grade inflation-linked government bonds	100%	80% - 100%
U.S. inflation-linked bonds	67%	52% - 82%
Investment grade international inflation-linked bonds	33%	18% - 48%
Non-government investment grade inflation-linked bonds	0%	0% - 10%
Investment grade nominal government bonds	0%	0% - 15%
Short-term fixed income	0%	0% - 10%
Non-investment grade inflation-linked government bonds	0%	0% - 5%

The market value of non-benchmark investments, defined as the sum of the last four rows of the above table, shall not exceed 20% of the ILB Program.

All transactions involving derivatives are governed by the Global Derivatives and Counterparty Risk Policy.

B. Interest Rate Risk

Interest Rate Risk is the price volatility produced by changes in the overall level of interest rates as measured by option-adjusted duration. Duration shall be maintained at -50% to +10% of the benchmark duration.

C. Sovereign Ranges

The non-U.S. segment of the ILB benchmark is a custom benchmark of ILBs issued by selected countries in the benchmark based on size and liquidity criteria.

INFLATION-LINKED BOND PROGRAM

Net Country Permitted Ranges - The following table specifies ranges within which country allocations can fluctuate from the non-U.S. segment of the ILB benchmark weights:

Net Individual Country Range Relative to the non-U.S. segment of the ILB Benchmark

United Kingdom	-10% - +10%
AA- rated or higher	-5% - +5%
Below AA- rated	-3% - +3%

Note: Issuance by a Monetary Union such as the European Financial Stability Facility (EFSF) will be considered as a separate single country

D. Currency Risk

Currency Risk is the risk of having different weights in currency than the index.

Net Individual Currency Ranges Relative to the non-U.S. segment of the ILB Benchmark

Reserve Currency Benchmark Markets (EUR, JPY, GBP)	-15% - +15%
Other Benchmark Currencies	-10% - +10%
Non-benchmark Currencies (ex USD)	-5% - +5%
U.S. dollar	-15% - +15%

Note: Treasury Inflation Protected Securities are not included in these calculations.

Maximum cumulative long currency exposure relative to benchmark +30%

Maximum cumulative short currency exposure relative to benchmark -30%

E. Restrictions and Prohibitions

1. Except for government issuers, investments in a single issuer shall not exceed 2% of the ILB Program during the holding period for such investment. For **High Quality LIBOR** and STIF, no single issuer limit exists.
2. Non-investment grade securities are not to exceed 5% of the total Program.
3. Portfolio leverage is not permitted at any time.
4. Sections III.A and III.C of this attachment specify sector and issuer ranges.

INFLATION-LINKED BOND PROGRAM

5. All non-US securities must be compliant with the Foreign Debt Policy which specifies minimum credit ratings. The Foreign Debt Policy is included as Attachment B1.

Current Policy

Attachment B1

FOREIGN DEBT POLICY

May 19, 2014

Debt Issued by National Governments

1. External Currency Bonds issued by national governments must have a foreign currency credit rating of BB- or higher from S&P or Fitch, or Ba3 or higher from Moody's. Local Currency Bonds issued by national governments must have a local currency credit rating of BB- or higher from S&P or Fitch, or Ba3 or higher from Moody's.
2. For Local Currency Bonds the country's currency must be convertible for foreign investors, so that managers may retrieve CalPERS funds without limit or obstruction.

Debt of Foreign Corporations and Subnational Governments (i.e., Provincial, State, and Municipal)

1. If corporate debt or debt of subnational governments is below investment grade, it is eligible for investment if both the issuer's country of domicile and the country under whose laws the debt is issued are rated at least A+ by S&P or Fitch, or A1 by Moody's.
2. For Local Currency Bonds the country's currency must be convertible for foreign investors, so that managers may retrieve CalPERS funds without limit or obstruction.

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

**FOR
LIQUIDITY PROGRAM**

May 19, 2014

This policy is effective immediately upon adoption and supersedes all previous Internally Managed Dollar-Denominated Short-Term 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 Liquidity Program ("LP Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected CalPERS take prudent and careful action while managing the Programs. Additionally, use of this policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

This Policy is the controlling document for the following Programs:

- A. Attachment A – U.S. Treasury 2-10 year Program ("UST Program");
- B. Attachment B – Internally Managed Dollar-Denominated Short-Term Program ("ST Program").

II. STRATEGIC OBJECTIVE

The LP Programs shall be managed to accomplish the following:

- A. Provide liquid assets that could be converted to cash with little market impact for funding equity oriented ventures during equity market downturns;
- B. Provide a partial hedge to liabilities; and,
- C. Provide diversification benefits.

III. RESPONSIBILITIES

A. CalPERS Investment Staff (“Staff”) is responsible for the following:

1. All aspects of portfolio management and oversight including monitoring, analyzing, and evaluating performance relative to the appropriate benchmark.
2. Reporting on the performance and risk metrics for each individual LP Program to the Committee, no less than annually for externally managed, and for internally managed LP Programs.
3. Monitoring the internal and **external managers** in the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of Guidelines and Policies to the Committee. All events deemed materially important will be reported to the Committee immediately. These reports shall include explanations of any violations and appropriate recommendations for corrective action.

B. The **General Pension Consultant** (“Consultant”) is responsible for:

Monitoring, evaluating, and reporting no less than annually, to the Committee, on the performance of the LP Programs relative to the appropriate benchmarks and the Policy.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. The specific performance objective for each LP Program is detailed in the appropriate attachment.
- B. The Benchmark for the LP Program is specified in the Benchmarks Policy.

V. INVESTMENT APPROACHES AND PARAMETERS

The specific Investment Approaches and Parameters for each LP Program are detailed in the appropriate attachment.

Program allocation targets and ranges are listed below. Allocations are expressed as a percentage of the market value of the CalPERS Fund.

Program Allocations

Component	Target*	Range*
UST 2-10 Year	3%	1% - 5%
ST	1%	0% - 2%
Total Liquidity Program	4%	1% - 7%

*Percentage of the CalPERS Fund

VI. LP PROGRAM CHARACTERISTICS

The LP Program is composed of two portfolios: UST Program and ST Program. The ST Program is designed to have high liquidity to fund the everyday liquidity requirements of the total fund. The UST Program is designed to provide a higher return from yield curve extension over market cycles than the ST Program while also providing for greater diversification to equity markets.

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, unless otherwise provided in attachments.

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](#).

Liquidity Program Policy

Approved by the Policy Subcommittee	April 11, 2011
Adopted by the Investment Committee	May 16, 2011
Policy Effective	July 1, 2011
Administrative changes to remove "AAA" rating for U.S. Treasury and U.S. Government Agency Securities	January 12, 2013
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

The following attachment was previously an individual policy, and is now consolidated into the Liquidity Program policy. The dates below reflect the revision history for the document:

Attachment B – Dollar-Denominated Short-Term Program – Internally Managed

Approved by the Policy Subcommittee:	September 27, 1996
Adopted by the Investment Committee:	November 18, 1996
Revised by the Policy Subcommittee:	June 11, 2004
Adopted by the Investment Committee:	August 16, 2004
<i>Moved into Low Duration FI Program Policy as Attachment B:</i>	
Approved by the Policy Subcommittee:	April 21, 2008

LIQUIDITY PROGRAM

Page 4 of 4

Adopted by the Investment Committee:	May 12, 2008
Revised by the Policy Subcommittee:	October 20, 2008
Approved by the Investment Committee:	November 17, 2008
Technical Revision to Delete Lehman from Attachment A3:	December 15, 2008
Administrative changes made due to Policy Review Project:	June 16, 2009
Admin changed due to adoption of Benchmark Policy:	October 30, 2009
Revised by the Policy Subcommittee:	December 13, 2010
Approved by the Investment Committee:	February 14, 2011
Placed in Liquidity Policy	July 1, 2011

Current Policy

Attachment A

US TREASURY 2-10 YEAR PROGRAM

May 19, 2014

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective for the US Treasury 2-10 Year Program (“UST Program”) is to exceed the return of the Barclays Capital 2-10 year US Treasury while maintaining a high level of liquidity.

The benchmark for the UST Program is specified in the Benchmarks Policy.

II. INVESTMENT PARAMETERS

A. Specific Risk

CalPERS manages the following major categories of fixed income risk:

1. Benchmark Risk was determined by the CalPERS Asset Allocation Unit who determines the benchmark was appropriate for the fund given the objective.
2. Interest Rate Risk must be controlled using duration management. Duration will be +/- 10% of the benchmark on an option adjusted basis. Decisions shall be managed using economic analysis.
3. Yield Curve Risk must be managed in a controlled, disciplined fashion by monitoring key rate durations and principal component analysis.
4. Convexity Risk must be managed using option adjusted and scenario analysis.
5. Sector Risk is controlled by using the ranges below

Sector	BCLL Index	Permitted Ranges
U.S. Treasury	100%	90%-100%
STIF	0%	0%-10%

6. Credit Risk is controlled as only US Treasury securities are allowed in the portfolio.
7. Structure Risk is minimal as US Treasury securities are predominately non-callable.

U.S. TREASURY 2-10 YEAR PROGRAM

8. Reinvestment Risk must be managed through cash flow and scenario analysis.
9. Liquidity Risk is controlled by using the following ranges.

U.S. Treasury Maturities	BCLL Index	Permitted Ranges
Nominal 2 – 10 year	100%	70% - 100%
Nominal 0 – 2 year	0%	0% - 20%
Zeros (Principal and Coupons)	0%	0% - 10%

10. Currency Risk is reduced as the portfolio is limited to US Treasury securities which are denominated in US dollars.

B. Restrictions and Prohibitions

1. Leverage is prohibited.
2. Options are prohibited.
3. Investments in any single STIF shall not exceed 5% of the UST Program during the holding period for such investment.

C. Authorized Securities

1. U.S. Treasury (including futures whose deliverable instrument is a U.S. Treasury).
2. STIF from custodial bank or internal CalPERS STIF.

IV. DERIVATIVES AND LEVERAGE POLICY

All transactions involving derivatives and leverage 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 UST Program.

A. Financial Futures, Swaps, and Options

1. Short selling of securities is prohibited, except in financial futures (as outlined in Section IV. A. 4.);
2. Leverage is prohibited except futures position where there is an associated cash position (which effectively creates a synthetic bond);

U.S. TREASURY 2-10 YEAR PROGRAM

3. The Staff may buy or sell the following fixed income related derivatives: financial futures including index swaps, and interest rate swaps; and,
4. Acceptable strategies include bona fide hedges (to help achieve the target durations) and strategies that result in a more efficient method of implementing the investment objectives of the Program.

B. Restrictions and Prohibitions

1. Uncovered Call writing is prohibited.
2. Speculation or arbitrage between two derivatives is prohibited. If a derivative is more attractively priced than the underlying security, the transaction is considered a substitution.

Attachment B

INTERNALLY MANAGED DOLLAR-DENOMINATED SHORT-TERM PROGRAM

May 19, 2014

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective for the Internally Managed Dollar-Denominated Short-Term Program ("ST Program") is to exceed the benchmark.

The benchmark for the ST Program is specified in the Benchmarks Policy.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approach

The goals of the ST Program are to provide liquidity to CalPERS and to maximize investment returns at a prudent level of risk. The investment approach is to identify opportunities in the short end of the yield curve and invest where risks are understood and manageable, while maintaining liquidity, credit quality, weighted-average days to maturity, and diversification as specified in this Policy.

To ensure liquidity, all ST Program investment transactions shall be made in conjunction with CalPERS projected cash flow needs.

B. Specific Risk Parameters

CalPERS shall manage the following major categories of short-term risk:

1. Benchmark Risk was reviewed by the Consultant who determined that the SSB STIF is the appropriate reference point for the ST Program.
2. Liquidity Risk must be managed within the context of CalPERS projected cash flow needs.
3. 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 **except** for the following securities:

INTERNALLY MANAGED DOLLAR-DENOMINATED SHORT-TER

- a. Callable securities having a high probability of being “called” as projected using option-adjusted and scenario analysis. Callable securities shall have a maximum anticipated time to call of 12 months.
- b. Fixed rate asset-backed securities shall have a maximum projected average life of 15 months and a final stated maturity that does not exceed 5 years.
- c. Floating rate asset-backed securities shall have a maximum projected average life of 3 years and a final stated maturity that does not exceed 5 years.
- d. Corporate and U.S. Government Agency floating rate securities shall have a final stated maturity not exceeding 3 years.
- e. Securities with short-term ratings that are split-rated shall have a maximum final stated maturity of 120 days (including floating rate securities).
- f. Securities rated A2/P2 shall have a maximum final stated maturity of 75 days (including floating rate securities).
- g. Deliveries versus payment repurchase agreements (DVP Repo) and tri-party repurchase agreements are limited to a maximum of 14 days from the trade date to the date of repurchase.
- h. Investments in short-term obligations of issuers domiciled outside the United States shall have a maximum final stated maturity of 120 days.
4. Yield Curve Risk must be managed in a controlled, disciplined fashion by employing break-even and economic analysis.
5. Credit Risk must be managed with a goal of zero defaults. A downgrading of a security, which causes a violation of the Policy, shall not require an immediate sale if the Senior Investment Officer of Global Fixed Income believes that no further risk of credit deterioration exists, or that the sale diminishes the total rate of return to CalPERS. CalPERS internal research staff and the external rating agencies shall be utilized in analyzing such situations to ensure that an informed decision is made. The following are minimum credit quality standards for each of the sectors:

INTERNALLY MANAGED DOLLAR-DENOMINATED SHORT-TER

- a. Asset-backed securities must be in the highest rating category for short-term debt obligations (A1+/P1 or A1/P1) or rated on a long-term debt obligation basis by Moody's (Aaa) and S&P (AAA).
- b. Broker/dealer securities must be in the highest rating category for short-term debt obligations (A1+/P1 or A1/P1).
- c. Domestic money market securities must be in one of the two highest rating categories for short-term debt obligations (A2/P2 or higher). If the security is only rated by one of the credit agencies (S&P or Moody's) then the security must be in the highest rating category for short-term debt obligations (A1+, A1 or P1). All corporate issuers with a short-term rating below A1/P1 shall be monitored by the CalPERS internal research staff annually or as events warrant.
- d. Domestic corporate securities (bonds, notes, medium term notes, and floating rate securities) without a short-term debt obligation rating must have a minimum long-term debt obligation rating by Moody's of A2 and by S&P of A.
- e. Investments in U.S. Dollar bonds and money market securities issued in the United States by foreign borrowers (Yankee) or U.S. Dollar bonds and money market securities issued outside the United States by domestic or foreign borrowers (Eurodollar) must be debt obligations of companies located in a country with a long-term sovereign rating by Moody's of Aa3 (or higher) and by S&P AA- (or higher) and have a short-term rating of A1/P1 (or higher).

6. Structure Risk must be managed using option adjusted and scenario analysis.

7. Reinvestment Risk must be managed through call risk and cash flow analysis.

C. Authorized Securities

- 1. U.S. Treasury and U.S. Government Agencies including U.S. Treasury strips.
- 2. Publicly traded domestic corporate bonds, notes, and medium term notes.

INTERNALLY MANAGED DOLLAR-DENOMINATED SHORT-TER

3. Asset-backed securities collateralized by credit cards, automobile loans, or leases and agricultural equipment.
4. Publicly and privately traded domestic money market securities.
5. Floating rate securities tied to LIBOR, Fed Funds, Treasury bills and commercial paper indices.
6. State Street Bank Short Term Investment Fund (STIF).
7. Delivery Vs. Payment and Repurchase Agreements and Tri-party repurchase agreements.
8. Broker/Dealer Securities.
9. U.S. Dollar bonds and money market securities issued in the United States by foreign borrowers ("Yankee").
10. U.S. Dollar bonds and money market securities issued outside the United States by domestic or foreign borrowers ("Eurodollar").

D. Restrictions and Prohibitions

1. Investments in a single issuer (including parent, subsidiary and guaranteed debt) whose securities are rated A1+/P1 or A1/P1, shall not exceed 10% of the ST Program over the holding period for such investments. However, holdings in such issuers with maturities in excess of 7 days shall not exceed 5% of the ST Program. For asset-backed securities, each separate trust (pool of assets) is defined as a separate issuer.
2. Investments in a single issuer (including parent, subsidiary and guaranteed debt) whose securities are split-rated (A2/P1 or A1/P2), shall not exceed 6% of the ST Program over the holding period for such investments. However, holdings in such issuers with maturities exceeding 7 days shall not exceed 3% of the ST Program.
3. Investments in a single issuer (including parent, subsidiary and guaranteed debt) whose securities are rated A2/P2, shall not exceed 4% of the ST Program over the holding period for such investments. However, holdings in such issuers with maturities exceeding 7 days shall not exceed 2% of the ST Program.
4. Aggregate investments in securities split-rated or A2/P2 shall not exceed 30% of the ST Program over the holding period for such investments.

INTERNALLY MANAGED DOLLAR-DENOMINATED SHORT-TER

5. Aggregate investments in floating rate securities shall not exceed 50% of the ST Program over the holding period for such investments.
 6. Aggregate investments in fixed rate asset-backed securities shall not exceed 25% of the ST Program over the holding period for such investments.
 7. Aggregate investments in DVP Repos with maturities exceeding the next business day shall not exceed 20% of the ST Program.
 8. Non-dollar denominated securities are prohibited.
 9. Collateralized mortgage obligations and mortgage-backed securities are prohibited.
 10. Financial futures and options are prohibited.
- E. Counterparty Exposure for DVP Repos
1. The lesser of \$200 million or 25% of the total ST Program can be maintained, with any one counterparty for DVP Repos.
 2. The counterparty must be in the highest rating category for short-term debt obligations (A1+/P1 or A1/P1). Transactions shall be executed with only domestic brokers. The CalPERS internal research staff shall actively review these brokers.
 3. Collateral received on a repurchase agreement must consist of U.S. Treasury or U.S. Government Agency securities with a maximum final stated maturity of 5 years. All collateral must be marked-to-market on a daily basis and maintained at 102% of the amount of funds loaned plus accrued interest.

III. CALCULATIONS AND COMPUTATIONS

- A. Calculations and computations shall be on a mark-to-market or amortized cost method depending on market convention. Securities for which there are market quotations readily available shall be accounted for utilizing the mark-to-market method. When no market quote is available, the amortized cost method shall be used for determining the securities value.
- B. For securities with periodic principal payments, the weighted-average days to maturity calculation shall be calculated from the evaluation date to the date of the security's average life.

INTERNALLY MANAGED DOLLAR-DENOMINATED SHORT-TER

- C. For floating rate securities, the program weighted-average days to maturity calculation shall be calculated from the evaluation date to the date of the next coupon reset.
- D. References to short-term credit ratings shall be presented with S&P rating first followed by Moody's (i.e., S&P (A1) and Moody's (P1) shall be presented as A1/P1).

Current Policy

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

**FOR
LOW DURATION FIXED INCOME PROGRAM**

May 19, 2014

This policy is effective immediately upon adoption and supersedes all previous Low Duration Fixed Income Program, Dollar-Denominated Fixed Income Limited Duration Program, Dollar-Denominated Fixed Income High Quality Libor Program, Dollar-Denominated Fixed Income Short Duration Program, and Internally Managed Dollar-Denominated Short-Term 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 Low Duration Fixed Income Program ("LD 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 Programs. Additionally, use of this policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

This Policy is the controlling document for the following Programs:

- A. Attachment A – Dollar-Denominated Fixed Income Limited Duration Program;
 - 1. Attachment A1 – Dollar-Denominated Fixed Income **High Quality LIBOR** Program ("HQL Program");
 - 2. Attachment A2 – Dollar-Denominated Fixed Income Short Duration Program ("SD Program"); and
 - 3. Attachment A3 – Dollar-Denominated Fixed Income Low Liquidity Enhanced Return Fund (LLER Program").

LOW DURATION FIXED INCOME PROGRAM

- B. Attachment B – Short Duration Programs Comparison.

II. STRATEGIC OBJECTIVE

The LD Programs shall be managed to accomplish the following:

- A. Diversify CalPERS overall investment programs;
- B. Dampen the overall risk of CalPERS investment programs; and
- C. Enhance CalPERS total returns.

III. RESPONSIBILITIES

- A. CalPERS Investment Staff (“Staff”) is responsible for the following:
 - 1. All aspects of portfolio management and oversight including monitoring, analyzing, and evaluating performance relative to the appropriate benchmark.
 - 2. Reporting on the performance and risk metrics for each individual LD Program to the Committee, no less than annually for externally managed, and for internally managed LD Programs.
 - 3. Monitoring the internal and **external managers** in the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of Guidelines and Policies at the next Committee meeting. All events deemed materially important will be reported to the Committee immediately. These reports shall include explanations of any violations and appropriate recommendations for corrective action.
- B. The **General Pension Consultant** (“Consultant”) is responsible for:
 - Monitoring, evaluating, and reporting no less than annually, to the Committee, on the performance of the LD Programs relative to the appropriate benchmarks and the Policy.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. The specific performance objective for each LD Program is detailed in the appropriate attachment.
- B. The Benchmark for the Low Duration Fixed Income Program is specified in the Benchmarks Policy.

V. INVESTMENT APPROACHES AND PARAMETERS

The specific Investment Approaches and Parameters for each LD Program are detailed in the appropriate attachment.

VI. LIMITED DURATION INVESTMENT PROGRAM CHARACTERISTICS

Although the HQL Program, SD Program, and LLER Program are designed to be limited-duration in nature, the three investment programs differ in their targeted investment horizon, program objectives, and expected program participants. While the HQL Program is an appropriate investment for numerous CalPERS sub-strategies, the SD Program is designed to be a slightly more aggressively managed limited duration program for participants having a longer investment horizon that allows for higher monthly return volatility in exchange for higher expected long-term alpha. For instance, the SD Program is viewed as an appropriate investment for the “core” portion of the securities lending assets. The LLER Program is designed for participants that require low to no liquidity and will only be appropriate for holdings that are not expected to be liquidated. For instance, the LLER Program is viewed as an appropriate investment for an enhanced equity overlay portfolio when it is a very small allocation of the overall CalPERS Global Equity asset class and thus will not need to be liquidated.

Given the different investment time horizons, program objectives, and expected program participants, the investment policies that govern the three programs do have some major policy differences and multiple minor differences.

LOW DURATION FIXED INCOME PROGRAM

The following table summarizes the basic program characteristics.

	High Quality LIBOR	Short Duration Program	LLER Program
Investment Horizon	Less than 30 days	6 - 12 months	Hold to Maturity
Objective	Medium / High Liquidity	Medium Liquidity	Low Liquidity
	Capital Preservation	Total Rate of Return	Total Rate of Return
	Total Rate of Return		
Participants	Global Fixed Income	Securities Lending	Enhanced Equity
	Domestic Equity		Global Fixed Income
	Securities Lending		
Liquidity Requirement	High	Medium	Low to None
Program Duration Constraint	90 Days Max	180 Days Max	270 Days Max
WAL Constraint			
Fixed Rate Securities	90 Days	2 Years	3 Years
AAA-Rated Floating Rate Securities	5 Years	7 Years	10 Years
Minimum Credit Quality			
Structured Securities	AAA	BBB	BBB- at Purchase

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, unless otherwise provided in attachments.

The HQL Program and SD Program portfolios under this program will be considered in their ramp-up period until the portfolio reaches \$1 billion. During the portfolio ramp-up period, calculation of asset and sector diversification limits (see Attachments) will be based on the assumption of a \$1 billion portfolio size.

LOW DURATION FIXED INCOME PROGRAM

The LLER Program portfolio under this program will be considered in its ramp-up period until the portfolio reaches \$2 billion. During the portfolio ramp-up period, calculation of asset and sector diversification limits (see Attachments) will be based on the assumption of a \$2 billion portfolio size. The larger ramp-up period portfolio size relative to the HQL and SD Programs is needed due to the larger security concentration nature of the security purchases in the LLER Program. Larger concentration in fewer securities is prudent as long as the LLER Program represents a small portion of the overall assets for the asset class utilizing the LLER Program.

Given the hold to maturity expectation of holding low liquidity securities in the LLER Program, all security calculations will be performed at time of purchase.

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](#).

Low Duration Fixed Income Program

Approved by the Policy Subcommittee	April 21, 2008
Adopted by the Investment Committee	May 12, 2008
Revised by the Policy subcommittee	October 20, 2008
Approved by the Investment Committee	November 17, 2008
Technical Revision to Delete Lehman from Attachment A3	December 15, 2008
Administrative changes made due to Policy Review Project	June 16, 2009
Administrative changes due to adoption of Benchmarks Policy	October 30, 2009
Revised by the Policy subcommittee	December 13, 2010
Approved by the Investment Committee	February 14, 2011
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

LOW DURATION FIXED INCOME PROGRAM

The following attachments were previously individual policies and are now consolidated into the Global Fixed Income Program policy. The dates below reflect the revision history for each document

Attachment A – Dollar-Denominated Fixed Income Limited-Duration**Dollar-Denominated Fixed Income Short-Duration**

Approved by the Policy Subcommittee:	June 13, 2003
Adopted by the Investment Committee:	August 18, 2003
Revised by the Policy Subcommittee:	June 11, 2004
Adopted by the Investment Committee:	August 16, 2004

Name changed to Dollar-Denominated Fixed Income Limited-Duration

Revised by the Policy Subcommittee:	December 9, 2005
Adopted by the Investment Committee:	February 14, 2006

Attachment B – Dollar-Denominated Short-Term Program – Internally Managed

Approved by the Policy Subcommittee:	September 27, 1996
Adopted by the Investment Committee:	November 18, 1996
Revised by the Policy Subcommittee:	June 11, 2004
Adopted by the Investment Committee:	August 16, 2004
Extracted and placed in new Liquidity Policy as att.	July 1, 2011

Attachment A

**DOLLAR-DENOMINATED FIXED INCOME
LIMITED-DURATION PROGRAM**

May 19, 2014

**I. DOLLAR DENOMINATED FIXED INCOME, LIMITED DURATION
INVESTMENT PROGRAM**

A. The High Quality LIBOR Program (“HQL Program”) is designed to be a limited duration, highly liquid program that can be used by CalPERS Portfolio Managers as a way to invest in a limited duration asset that provides low volatility versus a floating-rate based benchmark.

1. Uses for the HQL Program include, but are not limited to:

- a. a stand-alone asset in the fixed income mortgage portfolio as a proxy for high coupon mortgage pass-throughs;
- b. an asset in the securities lending portfolio that will be managed internally;
- c. the cash component of mortgage dollar roll transactions;
- d. the cash component of interest rate swap transactions; and
- e. the cash component of the Equity Dynamic Completion Fund transactions.
- f. the cash component of the Synthetic Enhanced Equity Strategy.

DOLLAR-DENOMINATED FIXED INCOME LIMITED-DURATION

2. The Policy for the HQL Program is Attachment A1.
- B. The Short Duration Program (“SD Program”) is designed to earn a return premium versus traditional limited duration assets through a modest increase in portfolio duration and by purchasing a broader universe of limited duration securities than those typically available to traditional money market portfolios. Expanding the allowable universe of limited duration securities provides the opportunity to increase return by taking advantage of some structural aspects inherent in the limited duration sector. Traditionally there are three strategies that provide incremental alpha opportunities for limited duration investors. These strategies include extending duration out the yield curve, accepting lower liquidity, and investing down the credit spectrum. The SD Program will be designed to take advantage of all three strategies, as well as other strategies that add incremental value, within a controlled manner and will result in a modest increase in risk relative to the HQL Program.
1. Uses for the SD Program include, but are not limited to:
 - a. the “core” asset of the internally managed securities lending portfolio;
 - b. a stand-alone asset in the fixed income mortgage portfolio as a proxy for high coupon mortgage pass-throughs; and
 - c. the cash component of mortgage dollar roll transactions and interest rate swap transactions.
 2. The key determinant for the use of the SD Program is the identification of a pool of funds that require less liquidity than that provided by the HQL Program. It is anticipated that the majority of CalPERS sub-strategies desiring limited-duration assets will use both the HQL Program and SD Program at various times depending on liquidity needs.
 3. The Policy for the Dollar-Denominated Fixed Income, Short Duration Program is Attachment A2.
- C. The Low Liquidity Enhanced Return Program (“LLER Program”) is designed to earn a substantial return premium versus traditional limited duration assets by purchasing a broader universe of limited duration securities than those typically available to traditional money market portfolios. Expanding the allowable universe of limited duration securities provides the opportunity to increase return by taking advantage of some structural aspects inherent in the limited duration sector. Traditionally

DOLLAR-DENOMINATED FIXED INCOME LIMITED-DURATION

there are three strategies that provide incremental alpha opportunities for limited duration investors. These strategies include extending duration out the yield curve, accepting lower liquidity, and investing down the credit spectrum. The LLER Program will be designed to take advantage of all three strategies, as well as other strategies that add incremental value, and will result in a substantial increase in risk and illiquidity relative to the HQL and SDF Programs.

1. Uses for the LLER Program include, but are not limited to:
 - a. a stand-alone asset in the fixed income high yield mortgage or high yield asset-backed portfolios; and
 - b. the fixed income return component of the Synthetic Enhanced Equity Strategy.
2. The key determinant for the use of the LLER Program is the identification of a pool of funds that have no expected liquidity requirement.
3. The Policy for the Dollar-Denominated Fixed Income, Limited Liquidity Enhanced Return Program is Attachment A3.

Attachment A1

**DOLLAR-DENOMINATED FIXED INCOME
HIGH QUALITY LIBOR PROGRAM**

May 19, 2014

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective for the Dollar-Denominated Fixed Income High Quality LIBOR Program ("HQL Program") is to exceed the return of a Federal Funds based index while maintaining a high level of diversification and liquidity.

The benchmark for the Dollar-Denominated Fixed Income High Quality Libor Program is specified in the Benchmarks Policy.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approach

Identifying opportunities across limited duration bond market sectors and investing where risks are both understood and manageable while maintaining credit quality, duration, convexity, and liquidity as specified in the High Quality Libor Policy ("Policy") is the investment approach of the HQL Program. Given the mandate for the HQL Program to be a high liquidity, preservation of capital fund, measured versus a Federal Funds based benchmark, it is expected that AAA rated Floating Rate Securities will represent a majority of the HQL Program holdings.

B. Specific Risk Parameters

CalPERS shall manage the following major categories of fixed income risk:

1. Benchmark Risk was reviewed by the Consultant who determined that the Federal Funds based index was the appropriate reference point.
2. Interest Rate Risk will be controlled by limiting duration to not exceed 90 days due to the stable return mandate of the HQL Program. Decisions shall be managed using historical real return relationships and economic analysis.

Maturity and Duration Constraints

Asset	Maturity Limits
US Treasury & Govt. Sponsored	91 days
Repurchase Agreements	
US Treasury/Agency Collateral	3 months
Non US Treasury/Agency Collateral	1 month
AAA Rated Fixed Rate Structured Securities	90 day WAL
AAA Rated Floating Rate Structured Securities	5 year WAL
Money Market Securities	
> = A1/P1	90 days
< A1/P1	35 days
Corporate & Yankee Sovereign (AAA rated)	90 days
Corporate & Yankee Sovereign (less than AAA rated)	35 days

3. Yield Curve Risk must be managed in a controlled, disciplined fashion by employing break-even, economic analysis, partial duration, and principal component analysis.
4. Convexity Risk must be managed using option-adjusted and scenario analyses.
5. Sector Risk and Asset Risk will be controlled using the below ranges. Based on the economic outlook, historical factors, and break-even analysis, Staff shall estimate the impact on various sectors' and assets' spreads and make allocations accordingly.

Asset and Sector Diversification

Asset / Counterparty	Diversification Limits
US Treasury & Govt. Sponsored	No Restriction
2a-7 Money Market Funds	No Restriction
State Street Bank's STIF	No Restriction
Repurchase Agreements	25%
AAA Rated Structured Securities	10%
Corporate & Yankee Sovereign (AAA rated)	10%
Corporate & Yankee Sovereign (less than AAA rated)	5%
Money Market Securities	
> = A1/P1 (next business day maturity)	15%
> = A1/P1	10%
< A1/P1 (next business day maturity)	10%
< A1/P1	5%

DOLLAR-DENOMINATED FIXED INCOME HIGH QUALITY LIBOR

Sector	Diversification Limits
Floating Rate	No Restriction
Fixed Rate (greater than 35 day maturity)	20%
US Treasury & Govt. Sponsored	No Restriction
2a-7 Money Market Funds	No Restriction
State Street Bank's STIF	No Restriction
Repurchase Agreements	No Restriction
AAA Rated Fixed Rate Structured Securities	20%
AAA Rated Floating Rate Structured Securities	No Restriction
Credit Card Collateral	75%
Auto Collateral	75%
Student Loan Collateral	75%
Any Other Individual Structured Collateral Sector	50%
Any One Corporate Sector	15%
Total Yankee Sovereign Sector	15%
Total Corporate/Yankee Sovereign	50%
Money Market Securities	
> = A1/P1	No Restriction
< A1/P1 (next business day maturity)	50%
< A1/P1	25%

6. Credit Risk will be controlled by requiring minimum ratings by asset type, outlined in the table below. A downgrading of a security, which causes a violation in the guidelines, shall not require an immediate sale if the Senior Investment Officer 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 and the external rating agencies 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 & Govt. Sponsored	AAA
Repurchase Agreements	A1/P1
Structured Securities	AAA
Money Market Securities	A2/P2
Corporate Securities	Baa1/BBB+
Yankee Sovereign Securities	A3/A-

DOLLAR-DENOMINATED FIXED INCOME HIGH QUALITY LIBOR

7. Structure Risk must be managed using option-adjusted and scenario analysis.
8. Reinvestment Risk must be managed through call risk and cash flow analysis.
9. Liquidity Risk is reduced due to the requirement of the HQL Program's mandate as a liquid, limited duration program, and high liquidity.
10. Currency Risk is reduced by requiring all securities to be denominated in U.S. dollars.

C. Restrictions and Prohibitions

1. Except for U.S. Treasuries and Agencies, investments in a AAA-rated single issuer with a maturity that exceeds one business day shall not exceed 10% of the HQL Program during the holding period for such investment. Exceptions to this restriction are 2a-7 money market funds, State Street Bank's STIF, and repurchase agreements (See Section II.B.5.) For structured securities, each separate trust (pool of assets) is defined as a separate issuer.
2. Investments in any non-AAA rated single issuer with a maturity that exceeds one business day shall not exceed 5% of the HQL Program during the holding period for such investment.
3. The option-adjusted duration of the HQL Program shall not exceed 90 days.
4. Non-investment grade securities are prohibited.
5. Collateralized Bond Obligation (CBO) and Collateralized Loan Obligation (CLO) investments are prohibited.
6. Tobacco company investments are prohibited.
7. Privately Placed Investment Grade Corporate Bonds are prohibited.
8. Collateralized Mortgage Obligations (CMO) are prohibited.

DOLLAR-DENOMINATED FIXED INCOME HIGH QUALITY LIBOR

9. Adjustable rate securities, which are not allowed, include but are not limited to, the following:
 - a. Inverse floaters, leveraged floaters and any securities whose interest rate reset provisions are based on a formula that magnifies changes in interest rates.
 - b. Constant Maturity Treasury (CMT) floaters and securities whose interest rate reset provisions are tied to long-term interest rates so that a change in the slope of the yield curve could result in the value of the instrument falling below par.
 - c. Dual Index Floaters and securities whose interest rate reset provisions are tied to more than one index so that a change in the relationship between these indices may result in the value of the instrument falling below par.
 - d. Cost of Funds Index (COFI) floaters, prime floaters, and securities whose interest rate reset provision is tied to an index materially lagging short-term interest rates.

D. Authorized Securities

1. U.S. Treasury and Government Sponsored Securities (including derivative securities whose deliverable instrument is a U.S. Treasury or government obligation) excluding mortgages and mortgage-backed securities (MBS).
2. Money market instruments, including obligations of the U.S. Government and its agencies, and domestic money market instruments (Commercial Paper, bank time deposits, Certificates of Deposit, and Banker's Acceptances). Non-domestically domiciled money market issuers must be domiciled in countries defined in the Master Glossary under Yankee Sovereign.
3. Repurchase Agreements and Tri-Party Repurchase Agreements (repos and tri-party repos) collateralized at 102% by debt obligations of the U.S. Government or its agencies (this does not include mortgage-backed securities). Repurchase agreements and Tri-Party Repurchase agreements collateralized at 105% by A3/A- or higher rated corporate debt or AAA structured securities or commercial paper with a minimum A1/P1 rating. Repurchase agreements and Tri-Party Repurchase agreements collateralized at 105% by common stock of companies included in one of the following indices: Nasdaq composite, Russell 3000, or the S&P 500. Individual common stock concentration is limited to 5% per issuer. Repurchase agreements

and Tri-Party Repurchase agreements must be marked-to-market daily. Mortgage-backed securities are prohibited. Collateral for Tri-party repurchase agreements must be a minimum of \$1 million in size.

Guidelines for Eligible Repo Counterparties can be found in the Global Derivatives and Counterparty Risk Policy.

4. Notes, bonds, and debentures issued by the U.S. Government and its agencies, U.S. corporations, Canadian, Supranational, and Yankee Sovereign entities subject to the maturity and credit quality limitations specified in this Policy.
5. Money market funds as defined under SEC Regulation 270.2a-7.
6. Structured securities with a minimum credit rating of AAA, subject to the maturity constraints specified in this Policy.
7. Floating rate and variable rate securities, subject to maturity, credit quality, and reset limitations specified in this Policy. The HQL Program can invest in adjustable rate securities tied to LIBOR, Fed Funds, Treasury Bills, and Commercial Paper Indices.
8. Derivatives, subject to Section IV.

III. CALCULATIONS AND COMPUTATIONS

- A. For securities with periodic principal payments, the weighted-average days to maturity must be calculated from the evaluation date to the date of the security's average life.
- B. The HQL Program weighted-average days to maturity must be calculated from the evaluation date to the date of the next coupon reset for floating rate securities.

IV. DERIVATIVES AND LEVERAGE POLICY

All transactions involving derivatives and leverage 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 HQL Program.

A. Financial Futures, Swaps, and Options

1. Short selling of securities is prohibited, except in financial futures (as outlined in Section IV. A. 4.);

2. Leverage is prohibited except futures position where there is an associated cash position (which effectively creates a synthetic bond);
3. The Staff may buy or sell the following fixed income related derivatives: financial futures including eurodollar futures, total return swaps, index swaps, credit default swaps, interest rate swaps, and over-the-counter options; and
4. Acceptable strategies include bona fide hedges (to help achieve the target durations) and strategies that result in a more efficient method of implementing the investment objectives of the HQL Program.

B. Restrictions and Prohibitions

1. Uncovered Call writing is prohibited.
2. Speculation or arbitrage between two derivatives is prohibited. If a derivative is more attractively priced than the underlying security, the transaction is considered a substitution.

Attachment A2

**DOLLAR-DENOMINATED FIXED INCOME
SHORT DURATION PROGRAM**

May 19, 2014

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective of the Dollar-Denominated Fixed Income Short Duration Program ("SD Program") is to exceed the return of a Federal Funds based index while maintaining a high level of diversification and prudent liquidity.

The benchmark for Dollar-Denominated Fixed Income Short Duration Program is specified in the Benchmarks Policy.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approach

Identifying opportunities across limited duration bond market sectors and investing where risks are both understood and manageable while maintaining credit quality, duration, convexity, and liquidity as specified in this Policy is the investment approach of the Short Duration Program. Given the mandate for the SD Program to be a medium liquidity, total rate of return program, measured versus a Federal Funds based benchmark, it is expected that AAA rated Floating Rate Securities will represent a majority of the SD Program holdings.

B. Specific Risk Parameters

CalPERS shall manage the following major categories of fixed income risk:

1. Benchmark Risk was reviewed by the Consultant who determined that the Federal Funds based index was the appropriate reference point.
2. Interest Rate Risk must be controlled by limiting the SD Program's duration to not exceed 180 days and by limiting duration by the asset type through the table below. Decisions shall be managed using historical real return relationships and economic analysis.

DOLLAR-DENOMINATED FIXED INCOME SHORT DURATION**Maturity and Duration Constraints**

Asset	Floating Rate Maturity Limits	Fixed Rate Maturity Limits
US Treasury & Govt. Sponsored		2 years
Repurchase Agreements		
US Treasury/Agency Collateral	3 months	
Non US Treasury/Agency Collateral	1 month	
AAA Rated Structured Securities	7 year WAL	2 year WAL
Non-AAA Rated Structured Securities	5 year WAL	18 month WAL
<i>Note: Mortgage-backed securities maximum WAL calculation to be run at 100 PSA</i>		
Money Market Securities		
> = A1/P1		270 days
< A1/P1		90 days
Corporate & Yankee Sovereign (AAA rated)	5 Years	2 years
Corporate & Yankee Sovereign (less than AAA rated)	4 Years	8 months

3. Yield Curve Risk must be managed in a controlled, disciplined fashion by employing break-even, economic analysis, partial duration, and principal component analysis.
4. Convexity Risk must be managed using option-adjusted and scenario analyses.
5. Sector Risk and Asset Risk will be controlled using the table below. Based on the economic outlook, historical factors, and break-even analysis, Staff shall estimate the impact on various sectors' and assets' spreads and make allocations accordingly.

DOLLAR-DENOMINATED FIXED INCOME SHORT DURATION**Asset and Sector Diversification**

Asset / Counterparty	Diversification Limits
US Treasury & Govt. Sponsored	No Restriction
2a-7 Money Market Funds	No Restriction
State Street Bank's STIF	No Restriction
Repurchase Agreements	25%
AAA Rated Structured Securities	
Less than or = 1.5 year WAL	15%
Greater than 1.5 year WAL	10%
Non-AAA Rated Structured Securities	5%
Corporate & Yankee Sovereign (AAA rated)	10%
Corporate & Yankee Sovereign (less than AAA rated)	5%
Money Market Securities	
> = A1/P1 (next business day maturity)	15%
> = A1/P1	10%
< A1/P1 (next business day maturity)	10%
< A1/P1	5%

Sector	Sector Limits
Floating Rate	No Restriction
Fixed Rate (greater than 35 day WAL)	35%
Non-AAA Rated Securities	50%
US Treasury & Govt. Sponsored	No Restriction
2a-7 Money Market Funds	No Restriction
State Street Bank's STIF	No Restriction
Repurchase Agreements	No Restriction
AAA Rated Structured Securities	No Restriction
Credit Card Collateral	75%
Auto Collateral	75%
Student Loan Collateral	75%
Home Equity Loan Collateral	75%
Any Other Individual Structured Collateral Sector	50%
Non-AAA Rated Structured Securities	
Each Sector (e.g., credit card, auto)	20%
Any One Corporate Sector	15%
Total Yankee Sovereign Sector	15%
Total Corporate/Yankee Sovereign	50%
Money Market Securities	
> = A1/P1	No Restriction
< A1/P1 (next business day maturity)	50%
< A1/P1	25%

DOLLAR-DENOMINATED FIXED INCOME SHORT DURATION

6. 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, which causes a violation in the guidelines, shall not require an immediate sale if the Senior Investment Officer 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 and the external rating agencies 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 & Govt. Sponsored	AAA
Repurchase Agreements	A1/P1
Structured Securities	Baa2 or BBB
Money Market Securities	A2/P2
Corporate Securities	Baa1/BBB+
Yankee Sovereign Securities	A3/A-

7. Structure Risk must be managed using option-adjusted and scenario analysis.
8. Reinvestment Risk must be managed through call risk and cash flow analysis.
9. Liquidity Risk is reduced through the SD Program's mandate as a limited duration program that will provide prudent liquidity.
10. Currency Risk is reduced by requiring all securities to be denominated in U.S. dollars.

C. Restrictions and Prohibitions

1. Except for U.S. Treasuries and Agencies, investments in a AAA-rated single issuer with a maturity that exceeds one business day shall not exceed 10% of the SD Program during the holding period for such investment. Exceptions to this restriction are 2a-7 money market funds, State Street Bank's STIF, repurchase agreements and structured securities that have average lives less than or equal to 1.5 years (Section II.B.5.) For structured securities, each separate trust (pool of assets) is defined as a separate issuer.

DOLLAR-DENOMINATED FIXED INCOME SHORT DURATION

2. Investments in any non-AAA rated single issuer with a maturity that exceeds one business day shall not exceed 5% of the SD Program during the holding period for such investment. For structured securities, each separate trust (pool of assets) is defined as a separate issuer.
3. The option-adjusted duration of the SD Program must not exceed 180 days.
4. Non-investment grade securities are prohibited.
5. Tobacco company investments are prohibited.
6. Privately Placed Investment Grade Corporate Bonds are prohibited.
7. Adjustable rate securities, which are not allowed include, but are not limited to, the following:
 - a. Inverse floaters, leveraged floaters and any securities whose interest rate reset provisions are based on a formula that magnifies changes in interest rates.
 - b. Constant Maturity Treasury (CMT) floaters and securities whose interest rate reset provisions are tied to long-term interest rates so that a change in the slope of the yield curve could result in the value of the instrument falling below par.
 - c. Dual Index Floaters and securities whose interest reset provisions are tied to more than one index so that a change in the relationship between these indices may result in the value of the instrument falling below par.
 - d. Cost of Funds Index (COFI) floaters, and securities whose interest rate reset provision is tied to an index materially lagging short-term interest rates.

D. Authorized Securities

1. U.S. Treasury and Government Sponsored Securities (including derivative securities whose deliverable instrument is a U.S. Treasury or government obligation) excluding mortgages and mortgage-backed securities (MBS).

DOLLAR-DENOMINATED FIXED INCOME SHORT DURATION

2. Money market instruments, including obligations of the U.S. Government and its agencies, and domestic money market instruments (Commercial Paper, bank time deposits, Certificates of Deposit, and Banker's Acceptances). Non-domestically domiciled money market issuers must be domiciled in countries defined in the Master Glossary under Yankee Sovereign.
3. Repurchase Agreements and Tri-Party Repurchase Agreements (repos and tri-party repos) collateralized at 102% by debt obligations of the U.S. Government or its agencies (this does not include mortgage-backed securities). Repurchase agreements and Tri-Party Repurchase agreements collateralized at 105% by A3/A- or higher rated corporate debt or AAA structured securities or commercial paper with a minimum A1/P1 rating. Repurchase agreements and Tri-Party Repurchase agreements collateralized at 105% by common stock of companies included in one of the following indices: Nasdaq composite, Russell 3000, or the S&P 500. Individual common stock concentration is limited to 5% per issuer. Repurchase agreements and Tri-Party Repurchase agreements must be marked-to-market daily. Mortgage-backed securities are prohibited. Collateral for Tri-party repurchase agreements must be a minimum of \$1 million in size.

Guidelines for Eligible Repo Counterparties can be found in the Global Derivatives and Counterparty Risk Policy.

4. Notes, bonds, and debentures issued by the U.S. Government and its agencies, U.S. corporations, Canadian, supranational, and Yankee Sovereign entities subject to the maturity and credit quality limitations specified in this Policy.
5. Money market funds as defined under SEC Regulation 270.2a-7.
6. Structured securities with a minimum credit rating of Baa2/BBB. Subject to the maturity constraints detailed in this Policy.
7. Floating rate and variable rate securities, subject to maturity, credit quality, and reset limitations specified in this Policy. The SD Program can invest in adjustable rate securities tied to LIBOR, Fed Funds, Treasury Bills, and Commercial Paper Indices.
8. Participation shares in CalPERS construction loan program with BRIDGE Housing Corporation.
9. CalPERS Asset-Based Loan (ABL) program investments.

10. Derivatives, subject to the requirements of Section IV.

III. CALCULATIONS AND COMPUTATIONS

- A. For securities with periodic principal payments, the weighted-average days to maturity must be calculated from the evaluation date to the date of the security's average life.
- B. The SD Program weighted-average days to maturity must be calculated from the evaluation date to the date of the next coupon reset for floating rate securities.

IV. DERIVATIVES AND LEVERAGE POLICY

All transactions involving derivatives and leverage 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 SD Program.

A. Financial Futures, Swaps, and Options

1. Short selling of securities is prohibited, except in financial futures (as outlined in Section IV.A.4).
2. Leverage is prohibited except futures position where there is an associated cash position (which effectively creates a synthetic bond).
3. Staff may buy or sell the following fixed income related derivatives: financial futures including eurodollar futures, total return swaps, index swaps, credit default swaps, interest rate swaps, and over-the-counter options.
4. Acceptable strategies include bona fide hedges (to help achieve the target durations) and strategies that result in a more efficient method of implementing the investment objectives of the SD Program.

B. Restrictions and Prohibitions

1. Uncovered Call writing is prohibited.
2. Speculation or arbitrage between two derivatives is prohibited. If a derivative is more attractively priced than the underlying security, the transaction is considered a substitution.

Attachment A3

**DOLLAR-DENOMINATED FIXED INCOME
LIMITED LIQUIDITY ENHANCED RETURN PROGRAM**

May 19, 2014

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective of the Dollar-Denominated Fixed Income Limited Liquidity Enhanced Return Program ("LLER Program") is to exceed the return of a one-month LIBOR based index while maintaining a low level of diversification. The low level of diversification within the LLER Program portfolio is balanced by the expectation that the LLER Program will represent a small portion of the overall assets for the asset class utilizing the LLER Program.

The benchmark for Dollar-Denominated Fixed Income Short Duration Program is specified in the Benchmarks Policy.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approach

Identifying opportunities across limited duration bond market sectors and investing where risks are both understood and manageable while maintaining credit quality, duration, convexity, and liquidity as specified in this Policy is the investment approach of the LLER Program. Given the mandate for the LLER Program to be a low liquidity, total rate of return program, measured versus a LIBOR based benchmark, it is expected that investment grade rated, Floating Rate Securities, will represent a majority of the LLER Program holdings.

Given the higher risk, lower liquidity nature of the LLER Program, the portfolio will likely have high security concentrations. Larger concentration in fewer securities is prudent as long as the LLER Program represents a small portion of the overall assets for the asset class utilizing the LLER Program.

B. Specific Risk Parameters

CalPERS shall manage the following major categories of fixed income risk:

1. Benchmark Risk was reviewed by the Consultant who determined that the one-month LIBOR based index was the appropriate reference point.

2. Interest Rate Risk must be controlled by limiting the LLER Program's duration to not exceed 270 days and by limiting duration by the asset type through the table below. Decisions shall be managed using historical real return relationships and economic analysis.

Maturity and Duration Constraints

Asset	Floating Rate Maturity Limits	Fixed Rate Maturity Limits
AA & AAA Rated Structured Securities	10 year WAL	3 year WAL
Less than AA Rated Structured Securities	7 year WAL	18 month WAL
<i>Note: Mortgage-backed securities maximum WAL calculation to be run at 100 PSA</i>		
Corporate & Yankee Sovereign (AA & AAA rated)	10 Years	2 years
Corporate & Yankee Sovereign (less than AA rated)	5 Years	15 months

3. Yield Curve Risk must be managed in a controlled, disciplined fashion by employing break-even, economic analysis, partial duration, and principal component analysis.
4. Convexity Risk must be managed using option-adjusted and scenario analyses.
5. Sector Risk and Asset Risk will be controlled using the table below. Based on the economic outlook, historical factors, and break-even analysis, Staff shall estimate the impact on various sectors' and assets' spreads and make allocations accordingly.

Given the higher risk, lower liquidity nature of the LLER Program, the portfolio will likely have large security concentrations. Larger concentration in fewer securities is prudent as long as the LLER Program represents a small portion of the overall assets for the asset class utilizing the LLER Program. Accordingly, during the portfolio ramp-up period, calculation of asset and sector diversification limits will be based on the assumption of a \$2 billion portfolio size. The larger ramp-up period portfolio size relative to the HQL and SD Programs is needed due to the larger security concentration nature of the security purchases in the LLER Program.

Asset and Sector Diversification

Asset / Counterparty	Diversification Limits
AA & AAA Rated Structured Securities	15%
Less than AA Rated Structured Securities	5%
Corporate & Yankee Sovereign	2%

Sector	Sector Limits
Floating Rate	No Restriction
Fixed Rate	25%
AA & AAA Rated Securities	No Restriction
Less than AA Rated Securities	25%

6. 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, which causes a violation in the guidelines, shall not require an immediate sale if the Senior Investment Officer 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 and the external rating agencies 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)	Baa3/BBB-/BBB-

7. Structure Risk must be managed using option-adjusted and scenario analysis.
8. Reinvestment Risk must be managed through call risk and cash flow analysis.
9. Liquidity Risk is a low priority given the LLER Program's mandate as a limited duration program that will provide little to no liquidity.
10. Currency Risk is reduced by requiring all securities to be denominated in U.S. dollars.

C. Restrictions and Prohibitions

1. Investments in a AA & AAA-rated single issuer shall not exceed (at the time of purchase) 15%. For structured securities, each separate trust (pool of assets) is defined as a separate issuer.
2. Investments in less than AA rated single issuer shall not exceed (at the time of purchase) 5%. For structured securities, each separate trust (pool of assets) is defined as a separate issuer.
3. The option-adjusted duration of the LLER Program must not exceed 270 days.
4. Non-investment grade securities (at the time of purchase) are prohibited.
5. Tobacco company investments are prohibited.

D. Authorized Securities

1. Notes, bonds, and debentures issued by the U.S. Government and its agencies, U.S. corporations, Canadian, supranational, and Yankee Sovereign entities subject to the maturity and credit quality limitations specified in this Policy.
2. Structured securities subject to the maturity and credit quality constraints detailed in this Policy.
3. Floating rate and variable rate securities, subject to maturity, credit quality, and reset limitations specified in this Policy.
4. Derivatives, subject to the requirements of Section IV.

III. CALCULATIONS AND COMPUTATIONS

- A. For securities with periodic principal payments, the weighted-average days to maturity must be calculated from the evaluation date to the date of the security's average life.
- B. The LLER Program weighted-average days to maturity must be calculated from the evaluation date to the date of the next coupon reset for floating rate securities.

IV. DERIVATIVES AND LEVERAGE POLICY

All transactions involving derivatives and leverage 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 LLER Program.

A. Financial Futures, Swaps, and Options

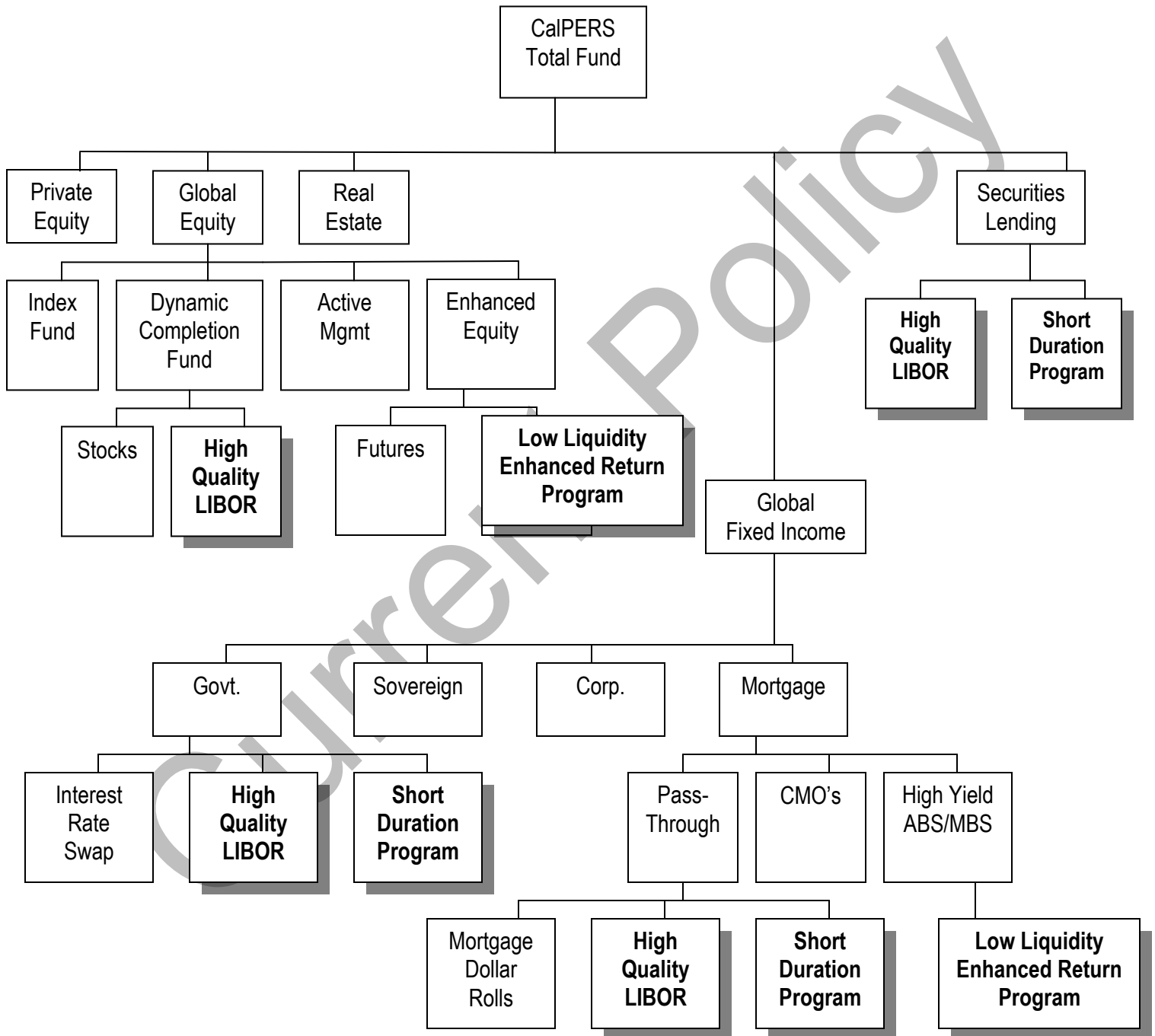
1. Short selling of securities is prohibited, except in financial futures (as outlined in Section IV.A.4).
2. Leverage is prohibited except futures position where there is an associated cash position (which effectively creates a synthetic bond).
3. Staff may buy or sell the following fixed income related derivatives: financial futures including eurodollar futures, total return swaps, index swaps, credit default swaps, interest rate swaps, and over-the-counter options.
4. Acceptable strategies include bona fide hedges (to help achieve the target durations) and strategies that result in a more efficient method of implementing the investment objectives of the LLER Program.

B. Restrictions and Prohibitions

1. Uncovered Call writing is prohibited.
2. Speculation or arbitrage between two derivatives is prohibited. If a derivative is more attractively priced than the underlying security, the transaction is considered a substitution.

Attachment B

SHORT DURATION PROGRAMS COMPARISON



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

**FOR
SECURITIES LENDING**

July 6, 2015

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

*The policy changes, once adopted and approved, shall apply to any new purchases in the Securities Lending Cash Collateral Pool. Effective July 11, 2013 this policy will govern **legacy commitments** purchased by **external managers** and by CalPERS Fixed Income Unit.*

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"), sets forth CalPERS overarching investment purposes and objectives with respect to all its investment programs.

This document sets forth the investment policy ("Policy") for the Securities Lending Program ("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 the management and oversight of the Program.

The Program is comprised of two separate functions; lending both equity and fixed income securities to borrowers and reinvesting the cash collateral posted by borrowers. This Policy is the controlling document for the following functions of the Program:

- A. Attachment A – Lending Guidelines. These apply to the lending/borrowing transaction and is effective for both equity and fixed income securities.
- B. Attachment B – Cash Collateral Reinvestment Guidelines. These apply to the reinvestment of cash collateral received on lending and is effective for reinvestment managers, either in-house or external.
- C. Attachment C – Securities Lending Investment Policy Tracking Log. This attachment will log any changes made to Attachment A or Attachment B.

SECURITIES LENDING

II. STRATEGIC OBJECTIVES

The Program shall be managed to accomplish the following:

- A. It is intended that the Program generate income primarily from fees derived from lending its positions in invested capital from debt or equity securities to qualified borrowers and secondarily through a low risk collateral investment strategy.
- B. The Program will be operated in a manner which maintains sufficient liquidity for the Program and act as a back-up source of liquidity for the overall fund.
- C. The Program shall adhere to the Investment Policy for Global Proxy Voting Principles.

III. RESPONSIBILITIES

- A. CalPERS Investment Staff ("Staff") is responsible for the following:
 - 1. Approving and updating all attachments to this policy as necessary.
 - 2. Reporting to the Committee no less than annually and more if needed about the performance of the Program.
 - 3. Updating the Committee at least annually on any changes to the collateralization levels, acceptable counter party credit tiers and diversification limits, liquidity, leverage targets and any changes to permissible securities including changes in duration targets and credit ratings.
 - 4. Monitoring the implementation of, and compliance with the Policy by lending agents, cash collateral managers and principal borrowers. Staff shall report concerns, problems, changes, and all violations of the Policy immediately to the Senior Investment Officer, Global Fixed Income ("SIO"). These reports shall include explanations of any violations and appropriate recommendations for corrective action.
- B. Borrowers (Lending Agents and Principal Borrowers) are responsible for the following:
 - 1. Reporting to Staff immediately on violations of the Delegated Lending Guidelines.

SECURITIES LENDING

2. Providing daily and monthly standardized reports which will include detailed daily lending activity (including but not limited to securities on-loan, market values and collateralization, loan duration, security location and currency, and borrower information) and monthly portfolio level statistics (including but not limited to market values, average on-loan positions, utilization rates rebates, intrinsic earnings, fees, and sell fail statistics).

C. The **General Pension Consultant** ("Consultant") is responsible for:

Monitoring, evaluating, and reporting no less than annually to the Committee, on the performance of the Program relative to the Program's Strategic Objectives.

3. Cash Collateral Manager Internal is responsible for reporting immediately, orally and in writing, all violations of this Policy.
4. Cash Collateral Manager External is responsible for the following:
5. Notifying Staff immediately, both orally and in writing on all violations of this Policy.
6. Providing daily and monthly standardized reports as specified by Staff. The standardized reports will include but are not limited to security information (including but not limited to cusip, description, par value, market value, duration, yield to maturity, coupon, credit quality, collateral (Repo), location, currency, and broker information), portfolio weighted average life, and monthly portfolio level statistics (including but not limited to reinvestment earnings, rebates and fees).

IV. VIOLATION REPORTING

A. The violation reporting process shall be as follows:

1. The lending agents, Cash Collateral Manager External or principal borrower shall report all violations to Staff immediately by telephone, followed by a written notification describing the violation. The internal cash collateral manager shall report all internal cash collateral pool violations immediately to the SIO, Global Fixed Income.
2. Staff shall report in writing, all violations immediately to the SIO, Global Fixed Income.
3. The SIO, Global Fixed Income shall immediately report in writing, any violation to the Chief Investment Officer ("CIO") and the Chief Operating Investment Officer ("COIO"), and the Chief Compliance Officer ("CCO").

SECURITIES LENDING

4. The CIO shall determine the appropriate means of further reporting based on his or her judgment of the magnitude, sensitivity, and severity of the violation.
 - a. All violations shall be reported to the Committee as part of a quarterly report agenda item on the Committee's regular agenda.
 - b. Depending on the violation, and at the discretion of the CIO, reporting may also be made to the Committee as a separate agenda item or as a portion of the CIO Report at the next scheduled Committee meeting. These reports shall include explanations of the violations and appropriate recommendations for corrective action.
 - c. If a Policy violation is to be reported to the Committee, the Consultant shall be asked to provide an opinion as to the impact of the Policy violation to the Program and overall fund.
- B. Violations caused by the sale of assets on loans need not be reported to the Committee unless the following occurs:
 1. The violation is not returned to compliance within five business days; or,
 2. The violation exceeds the limits specified for this scenario within the Policy.

V. PERFORMANCE OBJECTIVE AND BENCHMARK

CalPERS expects strict conformity with its guidelines 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.

VI. CALCULATIONS AND COMPUTATIONS

Calculations and computations for the Cash Collateral Reinvestment function are included in Attachment B of this Policy.

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](#).

SECURITIES LENDING**Attachments**

Attachment A – Lending Guidelines

Attachment B – Cash Collateral Reinvestment Guidelines

Attachment C – Securities Lending Investment Policy Tracking Log

Approved by the Policy Subcommittee:	August 12, 1998
Adopted by the Investment Committee:	September 14, 1998
Revised by the Policy Subcommittee:	December 14, 2001
Approved by the Investment Committee:	February 19, 2002
Revised by the Policy Subcommittee:	December 10, 2004
Revised by the Policy Subcommittee:	March 11, 2005
Approved by the Investment Committee:	April 18, 2005
Revised by the Policy Subcommittee:	October 12, 2007
Approved by the Investment Committee:	November 13, 2007
Technical Revision to Approved Borrower's List:	December 2008
Administrative changes made due to Policy Review Project:	June 16, 2009
Revised by the Policy Subcommittee:	December 14, 2009
Approved by the Investment Committee:	February 16, 2010
Revised by the Policy Subcommittee:	August 16, 2010
Administrative changes made due to Approved Borrowers List Updated:	September 22, 2011
Administrative changes made due to credit rating changes:	November 14, 2011
Administrative changes made to Attachment A and C	May 1, 2012
Administrative changes made to Attachment B and C	July 5, 2012
Administrative changes made to Attachment A and C	August 31, 2012
Administrative changes made to Attachment A, B and C	July 11, 2013
Administrative changes made to Attachment A, B and C	November 14, 2013
Administrative changes to:	March 26, 2014
• Update template format and to align this policy with the Global Derivatives and Counterparty Risk Policy • Repurchase agreements, excluding US Treasuries or agencies, maximum term from one month to three months (Attachment B)	
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
Administrative change to Attachment B to permit a Line of Credit with a Systemically Important Financial Market Utility (SIFMU)	October 14, 2014
Administrative changes to Attachment B regarding SIFMU line of credit draws	July 6, 2015

Attachment A

Lending Guidelines

I. Lending Guidelines

A. Securities eligible for loan must meet the following criteria:

1. The lending agent may only lend securities and the principal borrower may only borrow securities of issuers headquartered in countries contained in CalPERS Approved Countries for Equity Lending and Fixed Income Lending:

As of March 26, 2014

APPROVED EQUITY LENDING MARKETS

Australia	Italy	South Africa
Austria	Japan	South Korea
Belgium	Luxembourg	Spain
Canada	Malaysia	Sweden
Czech Republic	Mexico	Switzerland
Denmark	Netherlands	Taiwan
Finland	New Zealand	Thailand
France	Norway	Turkey
Germany	Portugal	United Kingdom
Hong Kong	Poland	United States of
Hungary	Singapore	America

APPROVED FIXED INCOME LENDING MARKETS

Australia	Germany	Norway
Austria	Ireland	Spain
Belgium	Italy	Sweden
Canada	Japan	Switzerland
Denmark	Luxembourg	United Kingdom
Finland	Netherlands	United States of
France	New Zealand	America

2. Securities Lending in International Markets is only permissible if the following conditions are met:
 - a. Local regulations permit securities lending.

SECURITIES LENDING – Attachment A

- b. A central depository exists providing free deliveries without penalties.
 - c. Settlement guidelines allow for avoidance of transaction delivery failures.
 - d. Collateral value is received before or simultaneously with the movement of loaned securities.
 - e. The lending of securities does not adversely affect the fund's tax liabilities.
 - f. American Depository Receipts (ADR), Global Depository Receipts (GDR), Eurobonds, Yankee Bonds, Exchange Traded Funds (ETF) and dually listed securities may be lent so long as the exchange is located in a country contained in CalPERS Approved Countries for Equity Lending and Fixed Income Lending.
3. Staff shall inform the lending agent or principal borrower or both in writing from which accounts they may lend securities.

B. Collateralization

- 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%.

SECURITIES LENDING – Attachment A

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%.

C. Counterparty

1. All borrowers must be explicitly listed in the matrix section of CalPERS Risk Management Counterparty Risk Monitoring report and compliant with the counterparty guidelines in the Global Derivatives and Counterparty Risk Policy and meet certain other financial criteria as determined by CalPERS.
2. Diversification: CalPERS Securities Lending exposure is limited to 25% of the total collateral pool per approved counter party. If CalPERS aggregate assets on loan through both principal and agent programs exceeds 25% of the total collateral pool, no additional lending to that counter party may take place until the exposure is returned below the established limit.¹
3. If the percentage of loans to any individual counter party exceeds 25% of the portfolio at any given time, it shall be considered a violation.¹

¹ Lending limit applies to all approved counterparties which have not agreed to credit default swap and/or additional collateralization terms.

Attachment B

Cash Collateral Re-Investment Guidelines

I. Collateral Guidelines

All cash collateral managers, both internal and external, shall follow these guidelines explicitly. If, at any time, the cash collateral pool violates these guidelines (e.g., a credit rating downgrade) the cash collateral manager(s) shall immediately notify Staff. Staff will notify the SIO, Global Fixed Income, who shall determine if immediate action is necessary to bring the portfolio into compliance.

A. Permissible Securities

1. Money market instruments, including obligations of the U.S. Government and its agencies, government guaranteed programs, and domestic money market instruments (commercial paper, bank time deposits, certificates of deposit, and banker's acceptances). Non-domestic money market instruments must be on CalPERS Lists of Approved Countries for Equity Lending and Fixed Income Lending, copies of which are included in Attachment A.
 - a. Asset-Backed Commercial Paper ("ABCP"): Only the following types of ABCP programs are permitted.
 - (1) Single and multi-seller programs fully-supported by institutions. The underlying assets in these programs is not limited due to the full support.
 - (2) Multi-seller programs partially supported by institutions. No partially supported program may have more than 5% exposure to mortgage-backed securities.
 - b. The following types of ABCP are excluded:
 - (1) Securities arbitrage programs;
 - (2) Partially-supported hybrid programs; and,
 - (3) Extendable programs longer than thirty (30) days.
2. Repurchase Agreements and Tri-Party Repurchase Agreements (repos and tri-party repos) collateralized at 102% by debt obligations of the U.S. Government or its agencies (this does not include mortgage-backed securities), Repurchase agreements and

SECURITIES LENDING – Attachment B

Tri-Party Repurchase agreements collateralized at 105% by A3/A-/A- or higher rated corporate debt or AAA asset-backed securities or commercial paper with a minimum A1/P1/F1 rating. Repurchase agreements and Tri-Party Repurchase agreements collateralized at 105% by common stock of companies included in one of the following indices: Nasdaq composite, Russell 3000, or the S&P 500. Individual common stock concentration is limited to 5% per issuer on settlement date of a repo transaction. If concentration limit breaches 5% during repo term, manager has three business days to restore to 5% limit. Repurchase agreements and Tri-Party Repurchase agreements must be marked-to-market daily. Mortgage-backed securities are prohibited.

- a. Repurchase agreements and Tri-Party Repurchase agreements must be with counterparties explicitly listed in the matrix section of CalPERS Risk Management Counterparty Risk Monitoring report, compliant with the counterparty guidelines in the Global Derivatives and Counterparty Risk Policy and meet certain other financial criteria as determined by CalPERS at time of purchase.
3. Notes, bonds, and debentures issued or guaranteed by the U.S. Government and its agencies, Canadian, supranational, and foreign sovereign entities subject to the maturity and credit quality limitations specified in the Credit Quality Section.
4. U.S. Corporate Notes from issuers included in the Barclays Aggregate Index, subject to the maturity and credit quality limitations specified in the Credit Quality Section. Structured Investment Vehicles are prohibited. Any Special Purpose Entity / Vehicle (according to Bloomberg's Security Description page), must be pre-approved by Staff prior to purchase. Any sectors not mentioned expressly herein must be pre-approved by Staff prior to purchase.
5. Money market funds as defined under SEC Regulation 270.2a-7.
6. Bank Bonds from CalPERS Credit Enhancement Program.
7. CalPERS Global Custodian's Short Term Investment Fund ("STIF") or US Government Short Term Investment Fund ("GSTIF").
8. Asset-backed securities whose underlying loans or receivables are against automobiles (including motorcycle and recreation vehicles), stranded assets, credit cards, Rate Reduction Bonds, Student Loans, dealer floor plans or equipment loans and leases, subject to

SECURITIES LENDING – Attachment B

the maturity and credit quality limitations specified in the Credit Quality Section. Any sectors not mentioned expressly herein must be pre-approved by Staff prior to purchase.

9. Floating rate securities, subject to maturity, credit quality, and reset limitations specified below. The Cash Collateral Investment Portfolio can invest in adjustable rate securities tied to LIBOR, Fed Funds, Treasury Bills, and Commercial Paper Indices. Adjustable rate securities, which are specifically excluded include, but are not limited to, the following:
 - a. “Inverse floaters,” “leveraged floaters” and any securities whose interest rate reset provisions are based on a formula that magnifies changes in interest rates.
 - b. “Constant Maturity Treasury (CMT) floaters” and securities whose interest rate reset provisions are tied to long-term interest rates so that a change in the slope of the yield curve could result in the value of the instrument falling below par.
 - c. “Capped floaters,” “range floaters,” and securities on which interest is not paid above a certain level or cease paying any interest when a certain level is reached.
 - d. “Dual index floaters” and securities whose interest reset provisions are tied to more than one index so that a change in the relationship between these indexes may result in the value of the instrument falling below par.
 - e. “Cost of Funds Index (“COFI”) floaters,” “prime floaters,” and securities whose interest rate reset provision is tied to an index materially lagging short-term interest rates.
 - f. “Auction-Rate” securities.
10. To help mitigate currency risk, non-U.S. G10 currency may be received as collateral for loaned securities of the corresponding G10 country. The currency must be invested in eligible securities denominated within the same currency and in compliance with CalPERS collateral investment guidelines.
11. Non-U.S. sovereign debt is acceptable as payment for G10 loaned securities provided the debt is the same country as the loaned security. The investment must be in accordance with CalPERS collateral investment guidelines.

SECURITIES LENDING – Attachment B

12. Unless specifically permitted in this Policy, investment in derivatives as defined in the Global Derivatives and Counterparty Risk Policy are prohibited.
13. Line of Credit with a Systemically Important Financial Market Utility (SIFMU) which is an approved counterparty listed in the matrix section of CalPERS Risk Management Counterparty Risk Monitoring report.²

B. Maturity and Duration

1. The duration of the collateral investment portfolio shall not differ from the duration of the outstanding loans by more than 60 days.
 - a. The portfolio weighted-average duration shall be calculated from the evaluation date to the date of the next coupon reset for floating rate securities.
 - b. Loans on an open basis (i.e., can be called by either party on one day notice) are considered one day instruments.
2. These guidelines are intended to mitigate negative convexity risk (i.e., contraction or extension risk). The lending agent or cash collateral manager or both shall invest in the collateral portfolio with full spirit of this intention.
3. Fixed-rate notes, bonds, debentures, and asset-backed securities shall have a projected maximum average life of 14 months. Fixed Rate ABS securities must have a final expected maturity (per Bloomberg, using pricing speed indicated in the prospectus which corresponds to the original weighted average life) that does not exceed three years.
4. All floating rate securities shall have a WAL of 3 years or less.
5. Repurchase agreements, excluding U.S. Treasury or agencies, shall have a maximum term of three months (95 days). Repo agreements with U.S. Treasury or agencies shall have a maximum term of 6 months.
6. Money Market Mutual Funds and commingled STIF and GSTIF funds will be considered to have a maturity of one day

² The SIFMU Line of Credit, when drawn, requires SIFMU to post collateral, effectively making the draw a Repo transaction. This Repo must meet requirements of Repo defined under Section 2 and 2a of Permissible Securities.

SECURITIES LENDING – Attachment B

- C. Credit Quality: Securities must receive the required credit quality level if rated by all ratings agencies. Ratings are required from at least two of the three following Rating Agencies: Standard & Poor's, Moody's and Fitch Investor Services. The minimum credit rating per instrument category is as follows:

Asset Side – Credit Rating	
Security	Minimum Credit Rating *
US Treasury	No Restriction
US Govt. sponsored	Aa3/AA-/AA-
Asset backed securities **	Aa3/AA-/AA-
Money Market Instruments (ST Rating)	A2/P2/F2
Non-domestic US dollar denominated securities	Aa3/AA-/AA-
Domestic corporate notes, bonds and debentures	Aa3/AA-/AA-
Canadian corporate notes, bonds and debentures	Aa3/AA-/AA-
Supranational and foreign (excluding Canadian)	Aa3/AA-/AA-
Sovereign issues	Aa3/AA-/AA-
Financials (Broker Dealers)	Investment in corporate notes, bonds, and/or debentures issued by broker dealers is specifically prohibited.
* The minimum credit rating will not consider enhanced credit from a monoline wrap or guarantee.	
** Or reciprocal short term rating.	
<i>Note: Split-rated securities are considered to have the highest of two or more ratings. *Does not apply to Money Market instruments, MM instruments cannot have rating below A2/P2/F2</i>	

SECURITIES LENDING – Attachment B

- D. Diversification: Following are investment limits for individual issuers and sectors:

Asset Side – Diversification	
Asset / Counterparty ¹	Diversification Limit
US Treasury & Govt. Sponsored	No Restriction
CalPERS Global Custodian's STIF/GSTIF	No Restriction
2a-7 Money Market Funds ⁶	No Restriction
Per Fund	10%
Total Repurchase Agreements	No Restriction
Government Repo Agreements	No Restriction
Per Issuer ²	20%
Equity Repo Agreements	50%
Per Issuer ²	10%
Total Repo Agreements per issuer	20%
SIFMU Line of Credit	No Restriction
Per Issuer	\$2 Billion
Money Market Instruments ⁶	No Restriction
Asset-Backed Commercial Paper	25%
Per A1/P1/F1 Issuer ⁴	10%
Per less than A1/P1/F1 Issuer ⁴	5%
Total Corporate Sector	35%
Any One Corporate Sector ³	15%
Individual Issuer ⁵	2%
Total Asset-Backed Securities (fixed rate)	10%
Total Asset-Backed Securities (floating rate)	50%
Student Loan Sector	35%
Credit Card Sector	35%
Auto Loans/Leases Sector	35%
Other ABS Sector	20%
Individual Master Trust/ABS Issuer Limit	
AAA Less than 1 year	20%
AAA Greater than 1 year	10%
Issuer less than AAA	5%
¹ Investment in securities issued by broker dealers is specifically prohibited.	
² Except funds or securities carrying explicit government guarantees on Line of Credit draws.	
³ Corporate sector will be determined by CalPERS Fixed Income group trading software classification.	
⁴ Fully-supported ABCP, CP, & Notes are amalgamated per issuer diversification calculations.	
⁵ Individual issuer limit does not apply to money market instruments.	
⁶ Investments in Money Market Funds and/or Instruments must not exceed 10% total ownership of Money Market Fund/Instrument.	

SECURITIES LENDING – Attachment B

II. Liquidity Guidelines**A. Liquidity Requirements:**

1. Daily: 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. Weekly: 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. Monthly: 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.

If at any point the Liquidity Requirements are not met it will be considered a violation (see the Securities Lending Policy on Violation Reporting). An immediate sale to restore liquidity shall not be required if the SIO, Global Fixed Income believes that asset sales will diminish the total return to CalPERS. The CalPERS internal research staff shall analyze such situations to ensure that an informed decision is made.

Only purchases consistent with restoring liquidity may be made while in violation.

III. Leverage Guidelines

- A. In accordance with the Leverage Policy, Staff will monitor and report quarterly to the Risk Management unit the actual leverage for the Program. In the Program, notional leverage is when cash collateral is invested in non-cash-like securities. Cash-like securities are fixed income securities with a maturity of less than 91 days and a credit rating of A1/P1 or better.

B. Leverage Limit:

1. The maximum notional leverage permissible is 70%. If at any point the notional leverage exceeds 70% a policy violation will be triggered (see the Securities Lending Policy on Violation Reporting). An immediate sale to restore leverage requirements shall not be required if the SIO, Global Fixed Income believes that asset sales will diminish the total return to CalPERS. The CalPERS internal research staff shall analyze such situations to ensure that an informed decision is made.

IV. Cash Collateral Allocation

CalPERS has the ability to allocate Securities Lending cash collateral to a variety of internal programs. The returns of the internal programs will be commensurate with the levels of returns received with external securities lending cash collateral opportunities, all of which fall within the collateral guidelines. CalPERS internal cash collateral manager is excluded from these provisions.

- A. Prior to receiving any cash collateral, CalPERS program must provide an internal indemnification to the Securities Lending Program. The internal indemnification will be in the form of a Memorandum of Understanding (“MOU”) between the Securities Lending Program and the internal program.
- B. All allocations of Securities Lending cash collateral will be structured to have a maturity no longer than 90 days.
- C. When advanced, cash collateral allocation to internal programs will be limited to 20% of the outstanding cash collateral balance for the Program.
- D. The SIO, Global Fixed Income, must sign off on each transaction.

V. CALCULATIONS AND COMPUTATIONS

- A. Investors, managers, consultants, and other participants selected by CalPERS shall make all calculations and computations as follows:
 - 1. Money Market Securities shall be accounted for using the amortized cost method.
 - 2. Non-Money Market Securities shall be accounted for using the marked-to-market method.

Attachment C

SECURITIES LENDING INVESTMENT POLICY TRACKING LOG

Effective Date	Update to Investment Policy
July 6, 2015	Administrative changes to Attachment B regarding SIFMU Line of Credit draws
October 14, 2014	Administrative change to Attachment B to permit a Line of Credit with a Systemically Important Financial Market Utility (SIFMU)
May 19, 2014	- Administrative changes to standardize reporting frequencies to the Investment Committee to “no less than annually” - Administrative changes to reflect the Policy Glossary of Terms Update Project
March 26, 2014	- Administrative changes to update template format and to align this policy with the Global Derivatives and Counterparty Risk Policy. - Administrative change to Repurchase agreements, excluding US Treasuries or agencies, maximum term from one month to three months (Attachment B)
November 14, 2013	- Malaysia approved as equity lending country (Attachment A). - Administrative changes to Asset Side – Credit Rating (Attachment B).
July 11, 2013	- Administrative changes to harmonize Eligible Repo Counterparties list with CalPERS internal risk monitoring process. - Administrative changes to Asset Side credit rating and diversification limits in Attachment B.
August 31, 2012	Poland approved as equity lending country
July 5, 2012	Eligible Repo Counterparties list and credit ratings updated
May 1, 2012	- Administrative changes to harmonize approved borrowers with CalPERS internal risk monitoring process. - Added Eurobonds as an eligible security to be lent in section I. A. 2. F.
November 14, 2011	Administrative changes made due to credit rating changes.
September 22, 2011	- Approved Borrowers list updated. - Eligible Repo Counterparties list updated.
March 28, 2011	Taiwan approved as equity lending country.
January 21, 2011	- Approved Borrowers list updated and reformatted. - Added Exchange Traded Funds (ETF) as a security eligible for lending as long as exchange is located in a country on the Approved Markets listing. - Czech Republic approved as equity lending country. - Approved Repo counterparties list updated

SECURITIES LENDING – Attachment C

Effective Date

Update to Investment Policy

- | | |
|-------------------|--|
| March 9, 2010 | • Approved Borrowers list updated. |
| March 23, 2009 | • Hungary approved as equity lending country. |
| February 23, 2009 | <ul style="list-style-type: none"> • Reconfirmed with external cash manager that they are prohibited from making any term asset purchases without CalPERS prior approval. Term-asset is any permissible security as defined by our Policy, with duration greater than 30 days. • Repo concentration limits changed to 10% of fund overnight, 5% if 2 to 30 day duration. |
| November 20, 2008 | • US Treasury Bills approved to be collateralized at 100% of market value. |

Current Policy

***Andrew Junkin, CFA, CAIA
President, Wilshire Consulting***

October 27, 2015

Mr. Henry Jones
Chair of the Investment Committee
California Public Employees' Retirement System
400 Q Street
Sacramento, CA 95814

Re: Global Fixed Income Policies Revisions

Dear Mr. Jones:

Overview

As part of the ongoing policy review project, Staff is bringing forward revisions to the Global Fixed Income Policies. These policies include revisions made at the Investment Committee's request following the presentation of the proposed Global Equity and Global Fixed Income Policies in October.

Investment Beliefs and Discussion

As we have noted in the past, Wilshire believes that CalPERS' Investment Belief #9 – Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error; and Belief # 4 – Long term value creation requires effective management of three forms of capital: financial, physical and human; speak directly to the need for strong governance in the form of robust policies and procedures.

Staff has made a number of changes from the prior iteration of these proposed policies. The language in the Introduction reflects the changes that are being proposed for the Global Equity Policy, which was discussed during the October Investment Committee meeting. Staff has added a section on the responsibilities of external managers located in Appendix 2. Appendix 3, which reflects guidelines by program, has also been updated for the Credit Enhancement Program, the Inflation Assets Program, the Low Duration Program, and the Securities Lending Policy. Wilshire has reviewed each of these changes and believe they are appropriate updates.

Conclusion

Wilshire judges that the proposed Policies, when combined with Staff procedures documents and regular testing by Compliance, provides a robust, holistic approach to governance for the Global Fixed Income Program. Staff has made revisions to comply with the suggestions and requests of the Investment Committee. Naturally, these policies will evolve over time and as the markets and CalPERS investments mandate.

Wilshire recommends that the Investment Committee adopt the Global Fixed Income policies as proposed.

Should you require anything further or have any questions, please do not hesitate to contact us.

Best regards,

A handwritten signature in black ink, appearing to read 'Am Jin'.