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.

Responsibilities

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

California Public Employees' Retirement System Investment Policy for 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.

See the <u>Total Fund Investment Policy</u> 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
program overview, inv	Annual Program Review that will include a estment review, and business review in with the Annual Program Review Template.	No less than annually
violations of the Policy	erns, problems, material changes, and all These reports shall include explanations of propriate recommendations for corrective	At the next Committee meeting, or sooner if deemed necessary

General Pension Consultant		
Report Content	Frequency	
 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	

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

 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.
- 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

- 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 optionadjusted 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

Credit Enhancement Program

- 1. 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).
- 2. 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).

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 inflationlinked bonds (ILB).

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

Responsibilities

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

California Public Employees' Retirement System Investment Policy for 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 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.

See the <u>Total Fund Investment Policy</u> 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	
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	

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

 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:

- 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.

Appendix 4 Inflation Assets 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 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.

Responsibilities

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

California Public Employees' Retirement System Investment Policy for Liquidity Program

Investment Approaches & Parameters

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

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 Liquidity Program Policy Appendices

See the <u>Total Fund Investment Policy</u> 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
prog	shall provide an Annual Program Review that will include a ram overview, investment review, and business review in eral conformance with the Annual Program Review Template.	No less than annually
viola	shall report concerns, problems, material changes, and all tions of the Policy. These reports shall include explanations of violations and appropriate recommendations for corrective on.	At the next Committee meeting, or sooner if deemed necessary.

General Pension Consultant	
Report Content	Frequency
 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

- 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.

Responsibilities

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

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

Investment Approaches & Parameters

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

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.

See the <u>Total Fund Investment Policy</u> 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 Con	sultant
Report Content	Frequency
The Consultant shall monitor, evaluate, and report of performance of the Programs relative to the benchm Policy and other applicable CalPERS Policies.	

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 *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/AAA</u>
Repurchase Agreements	A1/P1 <u>/F1</u>
Structured Securities	AAA <u>/Aaa/AAA</u>
Money Market Securities	A2/P2 <u>/F2</u>
Corporate Securities	Baa1/BBB+/Baa1/BBB+
Yankee Sovereign Securities	A3/A-/A3/A-

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	AAA <u>/Aaa/Aaa</u>
Repurchase Agreements	A1/P1 <u>/F1</u>
Structured Securities	Baa2 or BBB/Baa2/BBB
Money Market Securities	A2/P2 <u>/F2</u>
Corporate Securities	Baa1/BBB+/Baa1/BBB+
Yankee Sovereign Securities	A3/ A- <u>/A3/A-</u>

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/ <u>B</u> BB-/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.

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 Securities Lending Policy Appendices

See the <u>Total Fund Investment Policy</u> 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
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.*

*The liquidity constraint includes the preceding requirement(s) as cumulative.

Appendix 4 Securities Lending Policy Document History

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