



Agenda Item 5b

June 17, 2013

ITEM NAME: Revision of the Global Fixed Income Program Policy

PROGRAM: Global Fixed Income

ITEM TYPE: Policy & Delegation – Action

RECOMMENDATION

Approve the revised Global Fixed Income Program (GFI) Policy as shown in Attachment 1, the consultant opinion letter is provided as Attachment 2.

EXECUTIVE SUMMARY

The GFI Policy was presented to the Investment Committee for initial review on May 13, 2013.

The Investment Committee did not request any changes to the proposed Policy at the time of the initial review.

Wilshire Associates, in discussion with Global Fixed Income staff, added one point of clarity to the Debt of Foreign Corporations and Subnational Governments (i.e., Provincial, State, and Municipal) section within the Foreign Debt Policy (FDP). The addition is regarding currency convertibility that mirrors the same clause within the Debt Issued by National Governments section. This change is denoted with yellow highlighting within Attachment 1.

Staff seeks approval of the GFI Policy to incorporate the changes in the benchmark and create greater controls on allocations for international, domestic, and high yield securities as well as interest rate risk.

STRATEGIC PLAN

This agenda item supports the CalPERS Strategic Plan goal to improve long-term pension and health benefit sustainability. Making the recommended changes to the GFI Policy will support efforts to meet the System's investment objectives and contribute to higher risk adjusted total returns.

BACKGROUND

GFI represents \$44 billion and 16% of the Total Fund assets. The International Fixed Income Program (IFI) is \$3.2 billion or 1% of the Total Fund assets. IFI assets have traditionally all been managed externally. Effective July 1, 2012, staff began internally managing \$500 million in international assets. Fiscal year-to-date returns ending April 30, 2013 for the internally managed international program have been

quite favorable with excess return versus the benchmark at +196 basis points. Externally managed international fixed income assets, which represent \$2.7 billion, have also done well by generating +85 basis points of excess return.

The Dollar-Denominated Fixed Income Program (DFI) is \$41 billion and 15% of the Total Fund assets. Currently, 97% of the DFI assets are internally managed. The fiscal year-to-date returns for DFI ending April 30, 2013 have been excellent with excess return relative to the benchmark at +127 basis points.

ANALYSIS

The GFI Policy is broken down into three sections: DFI, IFI, and the FDP. Suggested changes are in all three sections of the GFI Policy. The significant changes are in five areas:

- Restricting deviations from benchmark for the total DFI and IFI,
- Restricting the number of countries that could be +/- 15% in the IFI,
- Changing the FDP,
- Restricting the percentage of non-investment grade securities for IFI, and
- Changing the downside duration range limit from -10% to -50% for both the DFI and IFI.

First staff proposes to add restrictions in ranges relative to the benchmark on DFI and IFI to +/- 10% (Section V in the GFI Policy). In the past, DFI and IFI were separately managed programs with separate allocations. In 2008, the two programs were merged to form the GFI Policy. At that time staff failed to put any restrictions on deviation from benchmark for the DFI and IFI. This recommendation will rectify this oversight.

Second, staff proposes to restrict the amount of countries that could be +/- 15% (Section II.B.10) by changing the definition of the category from reserve currency markets to AA- rated and higher. Since this category was intended for credits that were relatively stable, the unintended consequence of the current policy is to allow Italy or Spain to be in this category. This change will rectify this issue as Spain and Italy will move down to the +/- 10% category.

Third, staff proposes a major revision of the FDP attachment of the GFI Policy. The most significant revision is the elimination of the requirement that the country must be part of the Barclays Capital Global Aggregate Index. The FDP was initially written with the idea of limiting the amount of emerging market exposure and insuring that CalPERS only invested in liquid and well developed markets. With the new proposed changes in the benchmark, modifications to the FDP were necessary. These changes will allow for inclusion of the new countries in the benchmark as well as increasing the opportunity set. The following countries will be added to the local currency bond investible universe (subject to any operational constraints): Croatia, Jordan, Nigeria, and Vietnam. If new countries issue local currency bonds, staff will

ensure that any operational issues are identified and addressed prior to investing in these countries. Lastly, in regards to non-investment grade corporate or subnational government, staff proposes to lower the rating requirement for the country of domicile and country whose laws the debt is issued from AA- to A+. This proposed change introduces non-investment grade issuers from Slovakia.

Fourth, there currently is no limit on non-investment grade securities in the IFI attachment of the GFI Policy and staff proposes a 10% limit (Section II.C.1). This would allow the IFI to be in closer alignment with the DFI Policy restriction of a 12% maximum on non-investment grade securities.

In the fifth area of significant change, staff proposes to increase the downside duration range limit for DFI (Attachment A Section II.B.2) and for IFI (Attachment B Section II.B.2) from -10% to -50%. The proposed duration range of -50% to +10% is asymmetric which addresses the historically low level of interest rates and financial repression currently in the developed markets. This will allow staff the ability to reduce interest rate exposure in half relative to the benchmark.

BENEFITS/RISKS

Revisions to the IFI attachment of the GFI Policy will reduce risk by establishing restrictions where policy was silent. Revisions to the FDP attachment of the GFI Policy will allow for more sovereign issuers from smaller countries; however this is offset by the benefits of diversification.

ATTACHMENTS

Attachment 1 – Global Fixed Income Program Policy
Attachment 2 – Wilshire Associates' Opinion Letter

CURTIS D. ISHII
Senior Investment Officer
Global Fixed Income

JOSEPH A. DEAR
Chief Investment Officer

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

**FOR
GLOBAL FIXED INCOME PROGRAM**

~~February 19, 2013~~ June 17, 2013

This policy is effective immediately upon adoption and supersedes all previous Global Fixed Income Program, Dollar-Denominated Fixed Income Program, ~~Externally Managed Active~~ International Fixed Income Program, and Foreign Debt policies.

I. PURPOSE

The California Public Employees Retirement System ("CalPERS") 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 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 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 at least 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 and the benchmark for each GFI Program is specified in the Benchmarks Policy.

V. INVESTMENT APPROACHES AND PARAMETERS

GLOBAL FIXED INCOME PROGRAM

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.

<u>Domestic Program</u>	<u>-10% - +10%</u>
<u>International Program</u>	<u>-10% - +10%</u>

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 TERMS

Key words used in the policy and attachments are defined in CalPERS Master Glossary of Terms.

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

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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 changed 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
<u>Approved by the Investment Committee:</u>	<u>June 17, 2013</u>

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
<u>Approved by the Investment Committee:</u>	<u>May 14, 2012</u>
<u>Approved by the Investment Committee:</u>	<u>June 17, 2013</u>

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

Attachment A

DOLLAR-DENOMINATED FIXED INCOME PROGRAM

~~February 19, 2013~~ June 17, 2013

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The 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.

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 $\pm$ 10% of the BCLL Index on an option-adjusted basis. Decisions shall be managed using historical [real return relationships](#) and economic analysis.
3. [Yield Curve Risk](#) must be managed in a controlled, disciplined fashion by monitoring key rate durations and [principal component analysis](#).

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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.
 - b. [Investment Grade](#) Corporate
 - 1) Holdings in the investment grade [corporate sector](#) shall, at a minimum, be rated investment grade by a

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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.
- 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.

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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.
 - 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.

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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);
11. Derivatives, subject to the requirements of Section III; and,
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 CalPERS' Statement of Investment Policy for Development of Derivatives Strategies or CalPERS' Statement of Investment Policy for Derivative-External Money Managers (collectively "Derivatives Policies"). In addition to the restrictions defined in the Derivatives Policies, 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. The 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.); and,
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](#)).

C. Counterparty Exposure for Options, Swaps and Futures

1. The greater of \$500 million or 25% of the total notional derivative exposure can be maintained with any one counterparty for non-exchange-traded derivatives (e.g., swaps, [caps](#), [floors](#), and options).
2. Transactions shall be executed with only domestic or non-U.S. brokers registered in the U.S. or the U.K. who have a short-term debt rating by at least two of the following three rating agencies:

A1 (S&P) and P1 (Moody's), or F1 (Fitch Ratings), or rated on a long-term basis A3 (Moody's) A- (S&P), or A- (Fitch Ratings Services). The CalPERS internal research staff shall actively review these brokers.

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.

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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.
 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; and,
 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

~~February 19, 2013~~ June 17, 2013

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective for the International Fixed Income Program ("International Program") is to exceed the return of the benchmark ~~Barclays Capital International Fixed Income Index ("BCIFI Index")~~.

~~The benchmark for the International Program is specified in the Benchmarks Policy.~~

II. INVESTMENT APPROACHES AND PARAMETERS

A. 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.

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B. Specific Risk Parameters

1. Benchmark Risk was reviewed by the Consultant who determined that the ~~BCIFI Index~~ benchmark is the appropriate reference point.
2. Interest Rate Risk must be managed by the Manager within $\pm$ 50% to +10% of the ~~index~~ 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 ~~BCIFI Index~~ Benchmark

<u>Reserve Currency Benchmark Markets</u> (EUR, JPY, GBP)	-15% - +15%
Other Benchmark Countries <u>Currencies</u>	-10% - +10%
Non-benchmark countries <u>Currencies</u> (ex USD)	-5% - +5%
U.S. dollar	-15% - +15%
<u>Emerging Markets</u>	-5% - +5%

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:

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Total International Program Weightings

Sector	BCIFI Index 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 Index the Benchmark

Reserve Currency Benchmark Markets (EUR, JPY, GBP) <u>Benchmark Countries rated AA- and higher</u>	-15% - +15%
Other Benchmark Countries	-10% - +10%
Non-benchmark countries (ex USD)	-5% - +5%
U.S. dollar	-10% - +10%
Emerging Markets	-5% - +5%

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. Emerging Market bond exposure is limited to $\pm 5\%$ of the benchmark weight on a Manager's combined holdings as well as a concentration limit of the benchmark weight $\pm 5\%$ of the benchmark weights on holdings of a single country.~~

1. Total non-investment grade securities is limited to 10%.

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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).
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 CalPERS Statement of Investment Policy for Derivatives - External Money Managers, 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

INTERNATIONAL FIXED INCOME PROGRAM

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.

B. Counterparty Exposure for Options, Swaps, and Futures

1. A maximum 33% of the total notional derivative exposure can be maintained with any one counterparty for non-exchange traded derivatives (e.g., swaps, caps, floors, and options). An exception is allowed if total derivative exposure in the International Program is less than \$100 million. Where netting agreements approved by CalPERS' Chief Investment Officer or his or her authorized designee are in place with the counterparty, only the net amount applies toward the \$100 million limit.
2. Transactions shall be executed with only domestic or non-U.S. brokers registered in the U.S. or U.K. who have a short-term debt rating by at least two of the following three rating agencies:

A1 (S&P) and P1 (Moody's), or F1 (Fitch), or rated on a long-term basis A- (S&P), A3 (Moody's), or A- (Fitch).
3. Counterparty creditworthiness shall equal or exceed "A3" as defined by Moody's or "A-" by S&P. The use of counterparties holding a split rating with one of the ratings below A3/A- is prohibited. External managers shall notify CalPERS if a counterparty is downgraded below A3/A- while an instrument held in the International Program is outstanding with that counterparty. The use of unrated counterparties is prohibited.
4. Any entity acting as a counterparty shall be regulated in either the United States or the United Kingdom.

C. 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,

INTERNATIONAL FIXED INCOME PROGRAM

3. The quantified impact to the International Program.

Attachment C

FOREIGN DEBT POLICY

~~February 19, 2013~~ June 17, 2013

Global Debt Issued by National Governments

~~The policy stipulations for global debt issued in major markets differ somewhat for holdings denominated in major non-dollar currencies and for holdings denominated in the dollar. The differences are found in the approach to limiting portfolio concentration in emerging markets, while minimum credit rating requirements are the same for both. The stipulations are as follows:~~

- ~~1. For both externally and internally managed programs, global~~ 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. Holdings of global bonds are counted toward the aggregate limit of the benchmark weight +5% on internal or external manager's combined holdings of emerging market debt and are subject to the benchmark weight +5% limit on holdings of a single country.~~

Local-Currency Debt of Foreign National Governments and All Debt of Foreign Corporations and Subnational Governments (i.e., Provincial, State, and Municipal)

- ~~1. The debt is eligible for investment if both the issuer and the issuer's national government (if the issuer is not the national government itself) are rated investment grade, at least BBB- by S&P or Fitch, or Baa3 by Moody's. Even in the case of local-currency debt, this requirement must be satisfied by long-term foreign currency ratings instead of local currency ratings, which are generally higher because a country can easily print more of its own currency to meet its local debt obligations. This unconventional, very conservative application of the rating requirement will give extra protection against the special foreign-exchange valuation and retrieval risks of local-currency debt. In addition:~~
- ~~2. The country must be part of the Barclays Capital Global Aggregate Index, a widely followed index which includes only those local markets that are fairly liquid and fairly well developed.~~
- ~~3. The country's currency must be fully convertible in the spot market for foreign investors, so that managers may retrieve CalPERS funds without limit or obstruction.~~

FOREIGN DEBT POLICY

4. ~~Holdings of local currency debt are subject to an aggregate limit of the benchmark weight +5% on a Manager's combined holdings of emerging market debt, as well as a concentration limit of the benchmark weight +5% on a Manager's holdings of a single country.~~
1. ~~The exception to requirements 1 through 4 is as follows:~~ 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 ~~AA~~ A+ by S&P or Fitch, or ~~Aa3~~ A1 by Moody's.
- 5.2. 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.

Asset Class Glossary: Global Fixed Income Glossary
Policy: Global Fixed Income Program
June 17, 2013

Arbitrage

The simultaneous purchase and sale of two instruments for the purpose of capturing a pricing disparity between them. The instruments do not need correlated price movements.

Asset Based Loans

Secured debt that is loaned to primarily non-investment grade borrowers for mostly working capital, acquisitions, turnarounds, growth financing, debtor-in-possession financing (DIP Financing), exit financing, and corporate recapitalization/reorganizations.

Asset-Backed Security

A security collateralized by assets such as automobile loans, agricultural equipment loans, and credit card loans. The loans are securitized by the issuer and usually placed with a trustee.

~~Barclays Capital International Fixed Income Index~~

~~The index covers the available market for foreign currency-denominated government bonds. It contains an all-inclusive universe of institutionally traded bonds. It includes all fixed rate bonds with a remaining maturity of one year or longer with amounts of at least the equivalent of U.S. \$25 million outstanding. The index excludes floating or variable-rate bonds, and private placement type securities. The Index provides an accurate, replicable fixed income benchmark for market performance. It measures the total return performance of the foreign currency-denominated government bond market. The index captures returns in U.S. dollars.~~

Barclays Capital Long Liability

A custom index developed by Lehman Brothers composed of dollar-denominated securities issued in the United States with a focus on longer maturity securities that have an issue size of at least \$200 million. The index has fixed weights of 30 percent mortgages, 24 percent investment grade corporates, 3 percent Yankee Sovereigns, 40 percent U.S. governments, and 3 percent high yield. The index is considered appropriate for CalPERS, due to the long nature of the CalPERS' liabilities.

Benchmark Risk

Benchmark Risk addresses whether the index chosen is the appropriate reference point for the program in question.

Bond

A unit of debt, \$1,000 of principal or par amount. For 200 years municipal bonds were sold in \$1,000 denominations. Since the mid-1970s the minimum bond denomination has been \$5,000; nevertheless, "A Bond" is bought, sold, referred to, and priced as if it were \$1,000.

Break-Even Analysis

Uses results from the scenario analysis. Since all projections should be viewed as risky, evaluating the sensitivity of the projected return to adverse market movements is critical. The break-even analysis calculates the movement required to reduce the sector or portfolio returns to a specified level at some horizon. This analysis creates a form of risk/return ratio. The higher the break-even value, the more the cushion against an adverse movement in rates.

Call Risk Analysis

Examines the portfolio's callable securities and estimates the amount of principal returned for a given drop in interest rates.

Caps

Designed to provide insurance against the rate of interest on a floating rate loan rising above a certain level (known as the cap rate).

Chief Investment Officer

Heads the CalPERS Investment Office and works with the Investment Committee to develop a long-term investment policy and asset allocation strategy for the Public Employees' Retirement Fund.

Collateralized Debt Obligation (CDO)

A structured debt security backed by a portfolio consisting of secured or unsecured senior or junior bonds issued by a variety of corporate or sovereign obligors and secured or unsecured loans made to a variety of corporate commercial and industrial loan customers of one or more lending banks.

Collateralized Loan Obligation (CLO)

A structured debt security backed by a portfolio consisting of secured or unsecured loans made to a variety of corporate commercial and industrial loan customers of one or more lending banks.

Collateralized Mortgage Obligation (CMO)

A mortgage-backed security that pools together mortgages and separates the cash flows into short, medium, and long classes (often called tranches), allowing a wider range of risk and return characteristics than in the more homogeneous pass-through market.

Convertible Bond

A bond that has a provision that permits conversion to the issuer's stock at some fixed ratio.

Convexity

The price change from a move in interest rate that cannot be explained by duration only. Positive convexity (when price rises more than expected and falls less) comes at a cost

(lower yield). Negative convexity (price rises less than expected and falls more) usually comes with higher yield.

Convexity Risk

Convexity Risk is the downside risk of an equal move up or down in interest rates, causing greater price loss than price gain.

Corporate

Securities issued in the U.S. market by U.S. corporations or foreign corporations (Yankee bonds).

Corporate Sector

As defined by CalPERS' corporate investment managers in BlackRock Solutions, Aladdin product. Examples of sectors include banking, independent finance, diversified telecom, etc.

Country Risk

Country Risk is the risk of holding the securities of countries different from the Index.

Credit Linked Note (CLN)

A CLN is an investment structure that issues securities which are purchased by investors. The proceeds from the investors are placed into a trust and invested into a portfolio of loans or securities. The returns on the portfolio are passed through to the holders of the securities issued by the structure.

Credit Mortgages

Defined as loans or securities that are generally backed by lease structures. The primary underwriting analysis and source of repayment are clearly based on the credit-paying ability of the tenant or the borrower directly as opposed to the income-producing ability of the real estate itself.

Credit Rating

A current opinion of an obligor's overall financial capacity (its creditworthiness) to pay its financial obligations. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. In the case of split ratings, the higher rating of either Moody's, Standard & Poor's, or Fitch Investor Services shall apply.

Credit Risk

Credit Risk is the uncertainty surrounding the borrower's ability to repay its obligations.

Currency

The monetary unit of a sovereign state.

Currency Risk

The risk of hedging currency differently than the index.

Custodian

A bank or other financial institution that provides custody of stock certificates and other assets of an institutional investor.

Derivative

An instrument whose value is based on the performance of an underlying financial asset, index, or other investment. Classes of derivatives include futures contracts, options, currency forward contracts, swaps, and options on futures.

Duration

A measure of price sensitivity to interest rate changes. Duration is the anticipated percentage move in price given a 100 basis point (1 percent) move in interest rates.

Economic Analysis

Examines reference points for indications on what to look for and what events are considered significant in the economy to understand relationships among complex and often seemingly unrelated events. This analysis is used in making decisions concerning duration and sector weightings.

Emerging Fixed Income Market

~~Countries not classified as having developed capital markets by internationally recognized index providers.~~

Event Risk

The risk that the credit quality of a bond will drop suddenly because of some event like a takeover.

External Currency Debt

Debt issued by a national government, subnational entity or corporation denominated in a foreign currency and issued in foreign markets, under foreign laws.

External Manager

An outside money management firm retained under contract by CalPERS.

Financial Futures

A contract to trade a financial investment, like a Treasury bond, at a specific price and future date. As interest rates rise or fall, the value of such contract falls or rises respectively.

Fitch Ratings (Fitch)

A nationally-recognized credit rating agency that grades the investment quality of bonds in a 10-symbol system. The ranges extend from the highest investment quality, which is AAA, to the lowest credit rating, which is D. Securities rated BBB- or greater are considered investment-grade. Securities rated BB+ or below are considered to be speculative.

Floors

Provide insurance against rate of interest on a floating rate loan dropping below a certain level.

Foreign Debt Policy

CalPERS' guidelines for permissible country debt investments, as most recently amended.

Futures

Exchange-traded contracts to buy or sell a standard quantity of a given instrument, at an agreed price, and date. A future differs from an option in that both parties are obliged to abide by the transaction. Futures are traded on a range of underlying instruments including commodities, bonds, currencies, and stock indices.

General Pension Consultant

An individual or organization that provides specialized professional assistance to the Investment Committee in determining the pension fund's asset allocation model or optimal combination of investments in order to maximize risk-adjusted investment returns in a manner consistent with the State's long-term pension liabilities.

Government Sponsored Securities

Issuer that benefits from sponsorship with or underlying guarantee from a single or multiple sovereign or regional government entity.

Hedge (Hedging)

A strategy used to offset investment risk. A perfect hedge is one eliminating the possibility of future gain or loss.

High Quality LIBOR

A limited-duration, highly liquid, LIBOR-based fund managed by CalPERS staff.

Historical Factors

A review of past relationships and the environment associated with them to assess the relative investment potential of the current market conditions and relationships.

Idiosyncratic Risk

Risk particular to an individual or group of issuers.

Interest Rate Risk

Interest Rate Risk is the price volatility produced by changes in the overall level of interest rates as measured by an option-adjusted duration.

Inverse Floaters

A derivative instrument with a coupon rate, which cannot go below zero, that moves inversely with an index rate like London Interbank Offer Rate or 11th District Cost of

Funds Index, usually with a leverage factor. The higher the leverage factor, the greater the price sensitivity.

Investment Grade

A minimum credit rating of Baa3 by Moody's Investor Service or BBB- for Standard & Poor's Corporation, and BBB- by Fitch. Investment grade ratings apply to issuers whose financial risk is relatively low and the probability of future payment relatively high.

Issuer

A state or local unit of government that borrows money through the sale of bonds and/or notes.

Leverage

A condition where a portfolio's market obligation may exceed the market-value-adjusted capital commitment by the amount of borrowed capital (debt).

Leveraged Bank Loans

Loans made by banks that are typically partially secured by assets and are made to non-investment grade companies with a debt/EBITDA ratio greater than 3.5 and have a spread to LIBOR of greater than 250 basis points.

LIBOR

An acronym for London Interbank Offer Rate. These rates are based on rates quoted by 16 (for U.S. dollars) British Bankers' Association designated banks as being in their view, the offered rate at which deposits are being quoted to prime banks in the London Interbank Market at 11:00 a.m. London time. Of the 16 contributors, the four highest and four lowest rates are eliminated. An average of the remaining eight is taken.

Liquidity Risk

Liquidity Risk is the ease with which an issue or specified amount can be sold at or near prevailing market prices.

Local Currency Debt

Debt issued by a national government, subnational entity or corporation denominated in local currency and issued in the local market, under local laws.

Moody's Investors Service (Moody's)

A nationally-recognized credit rating agency that grades the investment quality of bonds in a 9-symbol system. The ranges extend from the highest investment quality, which is Aaa, to the lowest credit rating, which is C. Securities rated Baa3 or greater are considered investment grade. Securities rated Ba1 or below are considered to be speculative.

Mortgage-Backed Security (MBS)

A general term used to describe securities backed by mortgages. MBSs are broken down into four types of securities: mortgage pass-through, mortgage-backed bond,

collateralized mortgage obligation (CMO), and stripped mortgage-backed bonds. Mortgage pass-throughs are pooled loans, typically issued by the Government National Mortgage Association, Federal National Mortgage Association, and Federal Home Loan Mortgage Corporation. Mortgage-backed bonds have mortgage loans as collateral, but the term and interest payments are fixed. CMOs are defined above. Stripped mortgage-backed securities have the principal and interest distribution altered from a pro rata distribution to an unequal distribution.

Municipal Bond

Bonds issued by any of the 50 states, the territories and their subdivisions, counties, cities, towns, villages and school districts, agencies (such as authorities and special districts created by the states), and certain federally-sponsored agencies (such as local housing authorities). There are two broad groups of municipals: 1) Public Purpose bonds, which remain tax-exempt and can be issued without limitation; and (2) Private Purpose Bonds, which are taxable unless specifically exempted.

Non-Investment Grade

Securities that are rated at or below Ba1 by Moody's, BB+ by Standard & Poor's, and BB+ by Fitch Ratings. These securities are also known as high yield, speculative, or "junk" bonds.

Option ~~(on a Fixed Income Security)~~

Contracts that give the purchaser the right, but not the obligation, to buy or sell an underlying instrument at a certain price (the exercise or strike price) on or before an agreed date (the exercise period). For this right, the purchaser pays a premium to the seller. The seller (writer) of an option has a duty to buy or sell at the strike price, should the purchaser exercise his right. ~~The right or privilege to either buy (call option) or sell (put option) a designated amount of a particular fixed income security or class of securities during a time period ending on the expiration date of the option.~~

Option-Adjusted Analysis

A method that strips out embedded options in securities such as callable bonds and mortgage-backed securities, enabling comparisons with other security types within a consistent framework.

Over-the-Counter (OTC)

The market for securities and traded products that are not listed on the major exchanges. OTC options are options with negotiated premium, strike price, and expiration date.

PIK (Payment in Kind)

Bonds or preferred stock whose interest is paid in the form of additional bonds or preferred stock.

Preferred Stock

Stock shares that represent a portion of ownership in a company, with the shares

normally carrying fixed dividends. Sometimes the shares have voting rights, but not generally.

Prepayment Analysis

A method that stress tests Collateralized Mortgage Obligations by varying the prepayment assumptions to understand and anticipate how the structure changes in a constantly fluctuating interest rate environment.

Principal Component Analysis

A method that measures the movements of the yield curve in terms of three main factors: level, slope, and curvature.

Privately Placed

Privately Placed is a negotiated sale in which the securities are sold directly to institutional or private investors, rather than a public offering. Such placements are not registered with the Securities and Exchange Commission.

Ratings (Rated)

Various alphabetical and numerical designations used by institutional investors, Wall Street underwriters, and commercial rating companies to give relative indications of bond and note creditworthiness. Standard & Poor's and Fitch use the same system, starting with their highest rating of AAA, AA, A, BBB, BB, B, CCC, CC, C, and D for default. Moody's Investors Services uses Aaa, Aa, A, Baa, Ba, B, Caa, Ca, C, and D. Each of the services use + or - or +1 to indicate half steps in between. The top four grades are considered investment grade ratings.

Real Return Relationships

The historical perspective looking at expected returns, less inflation with the expectation that the real return is mean reverting.

Reinvestment Risk

Reinvestment Risk is the uncertain future yield opportunities for investing funds that become available due to call, maturity, or coupon payments.

Reserve Currency Benchmark Country

Reserve Currency Benchmark Countries are those countries ~~in the Barclays Capital International Fixed Income Index~~ whose currency is held in significant quantities by other national governments as part of their foreign exchange reserves. Reserve currencies typically consist of the U.S. dollar, the Euro, the British Pound, and the Japanese Yen.

Scenario Analysis

Projects returns over a number of changing situations (such as interest rates, curve twists, spreads, etc.) and weighs each situation to arrive at an average expected return. This process allows comparisons to varying types of securities and portfolios.

Sector Risk

Sector Risk is the risk of holding sectors proportionally different from the index.

Security

Instrument that signifies an ownership position in a corporation (stock), a creditor relationship with a corporation or governmental body (bond), or rights to ownership such as those represented by an option, subscription right, and subscription warrant.

Senior Investment Officer of Global Fixed Income

The Senior Investment Officer is responsible for all Global Fixed Income programs and reports directly to the Chief Investment Officer of CalPERS.

Short Duration Program

A program managed by CalPERS staff that is designed to earn a return premium versus traditional short duration assets through a modest increase in portfolio duration and by purchasing a broader universe of short duration securities than those typically available to traditional money market portfolios.

Short Selling

Selling securities that are not owned and buying them back later to: 1) take advantage of an anticipated decline in the price; or 2) to protect a profit in a long position.

Sovereign

A security issued by a foreign government or government sponsored agency.

Speculation

Assumption of risk in anticipation of gain but recognizing a higher than average possibility of loss.

Standard & Poor's (S&P)

A nationally-recognized credit rating agency that grades the investment quality of bonds in a 10-symbol system. The ranges extend from the highest investment quality, which is AAA, to the lowest credit rating, which is D. Securities rated BBB- or greater are considered investment grade. Securities rated BB+ or below are considered speculative.

Structure Risk

Structure Risk arises from the options implicit in bonds (e.g. callable and optional sinking fund bonds) or the rules governing cash flow that differs from expectations.

Structured Securities

An instrument that is secured by assets like receivables, mortgages, and bonds. Examples of structured securities are asset backed securities, mortgage backed securities, commercial mortgage backed securities, collateralized mortgage obligations, collateralized debt obligations, and collateralized loan obligations.

Swap

Private agreement between two companies to exchange cash flows in the future according to a prearranged formula.

Un-leveraged Bank Loans

Loans made by banks that are typically partially secured by assets and are made to investment grade companies with a debt/EBITDA ratio less than 3.5 and have a spread to LIBOR of less than 250 basis points.

Uncovered Call

A strategy in which an investor writes (sells) call options on the open market without owning the underlying security. This stands in contrast to a covered call strategy, where the investor owns the security shares that are eligible to be sold under the options contract.

Yield Curve

Graph showing the term structure of interest rates by plotting the yields of all bonds of the same quality with maturities ranging from the shortest to the longest available.

Yield Curve Risk

Yield Curve Risk is the price changes induced by the changing slope of the yield curve.

***Andrew Junkin, CFA, CAIA
Managing Director & Principal***

May 24, 2013

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

Re: Proposed Changes to the Global Fixed Income Program Policy

Dear Mr. Jones:

You requested Wilshire's opinion with respect to Staff's proposed changes to the Global Fixed Income (GFI) Policy. These proposed changes accompany the agenda item with respect to changes in the policy benchmarks for the international components of the GFI program and the Inflation Assets (IA) program. Wilshire commented on these proposed changes at the May Investment Committee meeting and there have been no significant changes since then.

Recommendation

Wilshire recommends that the Investment Committee approve the proposed changes. Wilshire believes that the changes will allow for additional diversification within the non-U.S portion of the Global Fixed Income program. Additional changes to the risk controls available, particularly with respect to the duration limits, give Staff the opportunity to position the portfolio more defensively as they deem appropriate.

Wilshire made the following comments in our opinion letter for the May agenda item.

The majority of the substantive changes in the Policy deal with the inclusion of the new benchmark and changes the language throughout the policy to address the change. The proposed policy establishes ranges for U.S. and non-U.S. weights in the portfolio (+/- 10%, relative to a 10% target to non-U.S. holdings) and establishes a limit on the use of non-investment grade securities in the non-U.S. portion of the portfolio. Limits relative to Emerging Markets are now captured by "Other Benchmark Countries" or "Non-Benchmark Countries." The proposed Policy also changes the requirement that emerging market countries be part of the Barclays Capital Global Aggregate index, which would no longer be the

policy index for the non-U.S fixed income portfolio, depending on the Investment Committee's views with respect to the proposed benchmark changes proposed in a different agenda item.

Additionally, a significant change has been proposed that would allow Staff to shorten the duration of the portfolio to half of the duration of the benchmark. If Staff foresaw a period of significantly rising rates, this would allow them to position the portfolio conservatively to protect against declines driven by interest rate changes. The upper limit on duration remains unchanged at 110% of the benchmark's duration. This change addresses the concerns of many Investment Committee members about rising interest rates.

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

Best regards,

