



Agenda Item 5c

June 17, 2013

ITEM NAME: Revision of the Inflation Assets Policy

PROGRAM: Global Fixed Income

ITEM TYPE: Policy & Delegation – Action

RECOMMENDATION

Approve the revised Inflation Assets Program (IA) Policy as shown in Attachment 1, the consultant opinion letter is provided as Attachment 2.

EXECUTIVE SUMMARY

The IA 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 IA Policy to create a FDP and currency ranges that are consistent with the Global Fixed Income Program (GFI) Policy as well as creating greater opportunities through wider deviations from the benchmark. These wider deviations from the benchmark are somewhat offset by stricter ranges around U.S. and investment grade international inflation-linked bonds.

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 IA Policy will support efforts to meet the System's investment objectives and contribute to higher risk adjusted total returns.

BACKGROUND

Inflation assets represent \$10 billion or 4% of the Total Fund assets. The IA is composed of two sub-programs: commodities and inflation-linked bonds. Both programs are internally managed. The fiscal year-to-date performance ending April 30, 2013 for the IA is favorable with excess return versus the benchmark at +95 basis points.

ANALYSIS

Staff recommends four changes in the IA Policy that increases the risk limits. These recommendations, by Policy component, are as follows:

1. Section V.A. of the Inflation-Linked Bond Program (ILB) attachment
Increase the amount of nominal bonds (bonds to pay a fixed coupon until maturity) from a maximum of 10% to 15% to allow for investing in countries that have high real rates but do not have inflation-linked bonds.
2. Section V.D. of the ILB attachment
Increase the currency range for UK Sterling and Japanese Yen from +/- 10% to +/- 15%. This enables the IA Policy on currency ranges to be consistent with the GFI Policy.
3. FDP Attachment of the IA Policy
Make the FDP attachment of the IA Policy consistent with the FDP in the GFI Policy. As discussed in May Agenda Item 7b, *Proposed Revision of the Global Fixed Income Program Policy*, the most significant revision in the FDP is the elimination of the requirement that the country must be a part of the Barclays Capital Global Aggregate Index which allows for the benchmark changes and increased opportunity set. Staff believes CalPERS should have one debt policy to be applied to all international fixed income securities to reduce confusion. The proposed changes to the FDP attachment of the IA Policy will not introduce any additional countries into the investible universe for the ILB. If new countries issue local currency inflation linked bonds, staff will ensure that any operational issues are identified and addressed prior to investing in these countries.

Another proposed change in FDP is in regards to non-investment grade corporate or subnational government, where staff proposes to lower the rating requirement for the country of domicile and country whose laws that debt is issued from AA- to A+. This would add non-investment grade issuers from Slovakia and is consistent with the FDP in the GFI Policy. It should be noted that the ILB attachment of the IA Policy already limits the amount of non-investment grade to 5% of the total program.

4. Section V.B. of the ILB attachment

Increase the downside duration range limit 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 developing markets by allowing staff the ability to reduce interest rate exposure in half relative to the benchmark.

To offset the increase in risk, staff proposes the following:

1. Section V.C. of the ILB attachment

Reduce the ranges around the new benchmark with the exception of the United Kingdom. Benchmark changes, as outlined in Agenda Item 5a, that move from five countries to 16 countries require changes to be made to the country and currency ranges in the ILB attachment. The majority of the proposed changes are to either maintain or reduce allowable ranges relative to the benchmark. The current policy allows over-weights for any of the 5 existing countries to be 10%. The proposed change recommends moving from a specific range for individual countries towards ranges based on ratings. The recommendation allows:

- The United Kingdom to be similar to the existing policy at +/- 10%,
- The countries that are rated AA- and above are restricted to +/- 5%, and
- Those countries below AA- are restricted to +/- 3% relative to benchmark weightings.

2. Section V.A. of the ILB attachment

Staff proposes to lower permitted ranges for U.S. inflation-linked and investment grade international inflation-linked bonds from +/- 20% to +/- 15%.

BENEFITS/RISKS

The revisions to the ILB attachment of the IA Policy reduce risk by decreasing the permissible range of deviation from the benchmark between U.S. and international inflation-linked bonds while allowing a small increase in risk due to an increase of 5% in the permissible range in nominal government bonds.

Other changes, as outlined in Agenda Item 5a, to the benchmark for the IA Program required the establishment of ranges for the new countries being added to the benchmark. The establishment of the new ranges was done in a prudent fashion based on credit quality.

ATTACHMENTS

Attachment 1 – Inflation Assets Program Policy
Attachment 2 – Wilshire Associates' Opinion Letter

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

**FOR THE
INFLATION ASSETS**

~~January 12, 2013~~ June 17, 2013

This Policy is effective upon adoption and supersedes all previous policies on inflation-linked assets, commodities, and inflation-linked bonds.

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 Inflation Assets ("IL~~A~~ Asset Class" or "Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by the CalPERS take prudent and careful action while managing the Program. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

The Program includes two components: commodities and inflation-linked bonds. The Policy includes investment guidelines for the Program structure followed by an attachment for each component.

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

II. STRATEGIC OBJECTIVE

The Program shall be managed to accomplish the following:

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

INFLATION ASSETS

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

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

B. The [General Consultant](#) (“Consultant”) is responsible for:

Monitoring, evaluating, and reporting periodically to the Committee, on the performance of the Program relative to the benchmark and Policy.

C. For those programs that are managed by an External Manager (“Manager”), the Manager is responsible for aspects of portfolio management as set forth in each Manager’s contract with CalPERS and shall, at a minimum, fulfill the following duties:

1. Communicate with Staff as needed regarding investment strategy and investment results.
2. Monitor, analyze, and evaluate performance relative to the agreed upon benchmark.
3. Cooperate fully with CalPERS Staff, [Custodian](#), and consultant assigned to the Program concerning requests for information.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

INFLATION ASSETS

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

V. INVESTMENT APPROACHES AND PARAMETERS

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

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

Program Allocations:

<u>Component</u>	<u>Target*</u>	<u>Range*</u>
Commodities	1.0%	0.5% - 3.0%
Inflation-linked bonds	3.0%	1.0% - 5.0%
IL Asset Class	4.0%	1.5% - 7.0%

* Percentage of the CalPERS Fund.

VI. CALCULATIONS AND COMPUTATIONS

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

VII. GLOSSARY OF TERMS

Key words used in this policy are defined in CalPERS Master Glossary of Terms.

Approved by the Policy Subcommittee:	April 11, 2011
Adopted by the Investment Committee:	May 16, 2011
Policy Effective:	July 1, 2011
<u>Approved by the Investment Committee:</u>	<u>June 17, 2013</u>

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

Policy on Inflation-Linked Asset Class	
Approved by the Policy Subcommittee:	December 14, 2007
Adopted by the Investment Committee:	February 19, 2008
Technical Revision to Reflect Benchmark Name Change:	December 15, 2008

INFLATION ASSETS

Administrative changes made due to Policy Review Project:	June 16, 2009
Admin changes due to adoption of Benchmark Policy:	October 12, 2009
Revised by the Policy Subcommittee:	April 19, 2010
Approved by the Investment Committee:	May 17, 2010

Attachment A – Commodities Program

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

Attachment B – Inflation-Linked Bond Program

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

Attachment A

COMMODITIES PROGRAM

January 12, 2013

I. PURPOSE

This attachment to the Inflation Assets Policy sets forth the investment policy (“Commodities Policy”) for the CalPERS commodities investments (“Commodities Program”). The Commodities Program includes [overlay](#) exposures and [collateral](#) investments.

II. STRATEGIC OBJECTIVE

The Program shall be managed to accomplish the following:

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

III. RESPONSIBILITIES

Responsibilities are described in the Inflation Assets policy, Section III.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective for the Program is to outperform the Benchmark, net of all fees.

V. INVESTMENT APPROACHES AND PARAMETERS

A. Permitted Investment Instruments

The following classes of Commodities Program overlay instruments are permitted:

- 1. [Futures](#) contracts;
- 2. Forward contracts;
- 3. [Swaps](#);
- 4. [Structured notes](#); and,

5. [Options](#).

Individual positions may be long or short the [commodity](#) risk exposure.

Direct investments in physical commodities are not permitted.

[Derivative](#) Instruments may be standardized and exchange traded (e.g., futures), or privately negotiated and over-the-counter ([OTC](#)), e.g., swaps.

B. Instrument Risk Exposure

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

The underlying risk exposure may be to a [cash commodity](#) or a commodity derivative.

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

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

C. Listing Requirements

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

D. Counterparty Requirements

1. Counterparty creditworthiness, for non-exchange traded derivatives, shall be at a minimum of "A3" as defined by Moody's Investor Service, "A-" by Standard & Poor's and "A-" by Fitch. The use of counterparties holding a split rating with one of the ratings below A3/A- is prohibited. The use of unrated counterparties is prohibited unless the counterparty is a wholly owned affiliate of a parent company that unconditionally guarantees payment and meets the above credit standards.
2. Individual counterparty exposure, for non-exchange traded commodity derivatives, is limited to the 40% of the net notional option-adjusted exposure of the Commodities Program at the

COMMODITIES PROGRAM – ATTACHMENT A

inception of a new position. An exception is allowed if the total non-exchange traded commodity derivatives exposure is less than \$1 billion.

3. Swaps shall be settled monthly.
4. Any entity acting as counterparty shall be regulated in either the United States or the United Kingdom.

E. Other Risk Management

1. **Liquidity risk** shall be managed by adhering to the above counterparty requirements.
2. **Legal risk** will be minimized by engaging in over-the-counter (OTC) derivative transactions only where such transactions are enforceable under the laws of the governing jurisdiction and will be governed by an International Swaps and Derivatives Association, Inc. ([ISDA](#)) agreement where applicable.
3. **Pricing risk** will be minimized by using standardized or market accepted instruments for OTC derivatives. Exchange-traded derivatives will be used when appropriate to minimize pricing risk.
4. **Sector risk** will be mitigated by maintaining net option-adjusted commodities exposures within plus and minus twenty percentage points of benchmark weights for the following commodity overlay sectors: energy, metals, and “soft” commodities (currently food and other agricultural products). The benchmark commodity index provider will be the source in determining the sector of individual commodities. Each of these three sectors shall have a positive net option-adjusted commodities exposure.

F. Commodity Collateral

1. **Collateral Market Value**

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

COMMODITIES PROGRAM – ATTACHMENT A

value of commodities. If the collateral market value falls below the net option adjusted value of the overlay, portfolio adjustments will be made at the earliest reset opportunity to bring the collateral value up to the notional value of the overlay.

2. Permitted Investments

The following classes of Commodities Program collateral investments are permitted.

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

Attachment B

INFLATION-LINKED BOND PROGRAM

~~July 1, 2011~~ June 17, 2013

I. PURPOSE

This attachment to the Inflation Assets Policy sets forth the investment policy ("Policy") for Inflation-Linked Bond investments (ILB Program).

II. STRATEGIC OBJECTIVE

The Program shall be managed to accomplish the following:

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

III. RESPONSIBILITIES

Responsibilities are described in the Inflation Assets policy, section III.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective is to outperform the Benchmark, net of all fees.

V. INVESTMENT APPROACHES AND PARAMETERS

A. Permitted Investments and Ranges

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

Sector	Policy target	Permitted range
Total investment grade inflation-linked government bonds	100%	80% - 100%
U.S. inflation-linked bonds	67%	47-87% <u>52% - 82%</u>
Investment grade international inflation-linked bonds	33%	13-53% <u>18% - 48%</u>

INFLATION-LINKED BOND PROGRAM – ATTACHMENT B

Non-government investment grade inflation-linked bonds	0%	<u>0%</u> - 10%
Investment grade nominal government bonds	0%	0-10% <u>0% - 15%</u>
Short-term fixed income	0%	<u>0%</u> - 10%
Non-investment grade inflation-linked government bonds	0%	<u>0%</u> - 5%

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

Derivatives with risk and return characteristics substantially similar to bonds or bond indices included in the Program benchmark are permitted. Any use of derivatives shall be in compliance with the CalPERS Derivatives Investment Policy as stated in Section IX of the CalPERS Dollar-Denominated Fixed Income Program Policy.

B. Interest Rate Risk

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

C. Sovereign Ranges

The non-U.S. segment of the ILB benchmark is a custom benchmark of ILBs issued by selected countries in the ~~Barclays Capital Global Inflation Linked Index~~ benchmark based on size and liquidity criteria. ~~The selected countries and weights as of February, 2011 are listed in the table below and may be revised based upon periodic review.~~

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

Issuer	Benchmark Issuer Weight*	Range
United Kingdom	15%	5-25%
France	9%	0-19%
Italy	5%	0-15%
Japan	2%	0-12%
Germany	2%	0-12%

INFLATION-LINKED BOND PROGRAM – ATTACHMENT B

* Benchmark issuer weights as of February 2011. Total may not sum to 100% due to rounding.

INFLATION-LINKED BOND PROGRAM – ATTACHMENT B

The minimum portfolio allocation to each non-U.S. country shall be the greater of either zero or ten percentage points less than the benchmark weight. The maximum ILB investment by country shall be ten percentage points greater than the benchmark weight. The resulting permissible allocation ranges by country as of February 28, 2011 are listed in the right column of the above table.

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

<u>United Kingdom</u>	<u>-10% - +10%</u>
<u>AA- rated or higher</u>	<u>-5% - +5%</u>
<u>Below AA- rated</u>	<u>-3% - +3%</u>

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

D. Currency Risk

Currency Risk is the risk of having different weights in currency than the index. The permissible currency ranges shall be consistent with the sovereign ranges (Section V.C.) of $\pm 10\%$ of the benchmark weights. The table below lists the currency ranges as of February 28, 2011. Note, since Italy, France and Germany use the Euro as a currency, the upper end ranges for each country have been combined to equal 46% top end range for Euro exposure (France, Italy and Germany's top range is 20%, 15% and 11% respectively).

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

Currency	Benchmark Weight*	Range
Euro	16%	0-46%
UK Sterling	15%	5-25%
Japanese Yen	2%	0-12%

*Benchmark weights are as of February 2011.

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

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

Maximum cumulative long currency exposure relative to benchmark +30%

Maximum cumulative short currency exposure relative to benchmark -30%

INFLATION-LINKED BOND PROGRAM – ATTACHMENT B

E. Restrictions and Prohibitions

1. Except for government issuers, investments in a single issuer shall not exceed 2% of the ~~Inflation-Linked Bond Portfolio~~ ILB Program during the holding period for such investment. For High Quality LIBOR and STIF, no single issuer limit exists.
2. Non-investment grade securities are not to exceed 5% of the total ~~portfolio~~ Program.
3. Portfolio leverage is not permitted at any time.
4. Sections V.A and V.C of this attachment specify sector and issuer ranges.
5. All non-US securities must be compliant with the Foreign Debt Policy which specifies minimum credit ratings. The Foreign Debt Policy is included as Attachment B1.

Attachment B1

FOREIGN DEBT POLICY

~~July 1, 2011~~ June 17, 2013

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

1. ~~Both the issuer and issuer's national government (if the issuer is not the national government itself) must be 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.~~
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.~~

Global Debt ~~Debt~~ Issued by National Governments

1. ~~The policy stipulation 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 difference is found on the approach to limiting portfolio concentration in emerging markets, while minimum credit rating requirements are the same for both. The stipulation is as follows:~~
2.
1. ~~For externally managed portfolios, global External Currency ~~b~~ Bonds issued by national governments must have a foreign currency credit rating of BB- or higher from S&P or Fitch, or and Ba3 or higher from Moody's. Local Currency Bonds issued by national governments must have a local currency credit rating of BB- or higher from S&P or Fitch, or Ba3 or higher from Moody's.~~
2. ~~For Local Currency Bonds the country's currency must be convertible for foreign investors, so that managers may retrieve CalPERS funds without limit or obstruction.~~

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

FOREIGN DEBT POLICY – Attachment B1

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

Asset Class Glossary: Inflation Assets Glossary
Policy: Inflation Assets
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Benchmark

A set of securities with associated weights that provides a passive representation of a manager's investment process. The benchmark return is usually used to measure a manager's performance results.

Cash Commodity

A physical commodity, not a commodity future, the prices of which can be different for a variety of reasons.

Collateral

Assets used as a support for financial risk, and can be used to fulfill financial obligations. In the context of futures, the collateral on deposit as margin in brokerage accounts is typically low risk financial assets such as cash, Treasury bills or bonds held by the futures brokerage firm as security against adverse market moves of futures positions.

Commodities and Futures Trading Commission (CFTC)

An agency of the U.S. federal government that regulates the U.S. commodity futures and options markets. The CFTC is responsible for insuring market integrity and protecting market participants against manipulation, abusive trading practices, and fraud.

Commodity

A commodity is a good that can be traded and delivered. The prices of commodities are determined on the basis of an active market. Typically commodities are of uniform quality and are produced by many different producers. Physical commodities, which can be stored, include energy (oil and its products, natural gas), metals (both industrial and precious), and agricultural products (grain, livestock, other "softs"). Non-physical commodities include electricity and emission credits.

Counter Party

The entity which is in the opposing position to a transaction.

Custodian

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

Debt Service Coverage (DSC)

The annual net operating income divided by the annual debt service.

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.

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.

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.

Foreign Debt Policy

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

FSA

The Financial Services Authority in the United Kingdom. This is the main independent financial regulatory agency in the UK, authorized by the government. The FSA regulates most financial services markets, exchanges and firms in the UK.

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 Consultant

An individual or organization that provides specialized professional assistance to the CalPERS Board of Administration 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 CalPERS' long-term pension liabilities.

~~Global Debt~~

~~Debt issued by a national government, subnational entity or corporation denominated in the U.S. dollar or other major currency and issued in major markets, typically New York or London, under the laws of those markets.~~

High Quality LIBOR

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

ISDA

ISDA is an acronym for the International Swaps and Derivatives Association. ISDA represents participants in the privately negotiated derivatives industry, and is the largest global financial trade association. ISDA has pioneered efforts to identify and reduce the sources of risk in the derivatives and risk management business through the development of the ISDA Master Agreement

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.

Limited Partner

An investor in a limited partnership. Limited partners provide the capital, but have no direct involvement in the day-to-day management of the fund. Limited partners have limited liability, but also have limited control over the management of the fund.

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.

OECD

Organization for Economic Cooperation and Development. An organization that acts as a meeting ground for 30 countries which believe strongly in the free market system, The OECD provides a forum for discussing issues and reaching agreements, some of which are legally binding.

Option

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.

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.

Overlay

An investment process which is used to modify the risk profile of a portfolio using financial instruments. An overlay can either increase or decrease exposure to a set of financial risk factors.

Risk

A measurable probability of losing or not gaining value. Risk is differentiated from uncertainty, which is not measurable. Risk in this context is also referred to as "standard deviation", which is a statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution.

S&P GSCI TR

The S&P GSCI Total Return Index (S&P GSCI TR) (formerly the Goldman Sachs Commodity Index – Total Return) is an index which measures the returns from maintaining a passive, long only exposure to a basket of 1st nearby commodity futures contracts. There are currently 24 commodities that meet the requirements for inclusion. Since the 24 commodity futures contracts will come to expiry (often into physical delivery), the S&P GSCI TR deals with this by assuming that the index mechanically rolls out of the 1st nearby contracts into the next liquid nearby contracts at the official settlement prices on the 5th-9th business day of each month (essentially 20% per day). The S&P GSCI TR also includes the return on collateral, assumed to be cash in the amount equal to the value of the commodities, earning a daily Treasury bill rate.

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.

State Street Bank Short-Term Investment Fund (STIF)

An institutional money market mutual fund managed by State Street Global Advisors.

Structured Note

An instrument representing a financial obligation created by modifying one or more standard financial obligations or instruments (i.e., a bond or mortgage) to create a risk/return profile or cash flow payment stream. This type of risk or return profile differs from the standard financial instrument from which it derives.

Swap

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

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 Inflation Assets Policy

Dear Mr. Jones:

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

Recommendation

Wilshire recommends that the Investment Committee approve the proposed changes. Wilshire believes that the changes will allow for additional diversification within the inflation linked bond portfolio.

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. Additionally, the proposed policy permits additional flexibility in owning nominal bonds, which are out of benchmark securities (increasing from 10% to 15%). This will allow Staff to express views with respect to debt of countries with high real rates but no inflation linked bond structures. Other country and currency limits have been modified, but are appropriate in Wilshire's view for this program.

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."

The one subsequent change to the policy was to align the language about currency convertibility for Debt Issued of Foreign Corporations and Subnational Governments with the language that was already included for Debt Issued by National Governments. We view this as a clarification, but important nonetheless.

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

Best regards,

