

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

**FOR  
BENCHMARKS**

~~February 20, 2012~~ April 15, 2013

*This policy is effective immediately upon adoption and supersedes all previous Benchmarks 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 selection and modification of program benchmarks ("Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by CalPERS take prudent and careful action when selecting program benchmarks and managing the benchmark modification process. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with managing Program benchmarks.

**II. STRATEGIC OBJECTIVE**

The Program shall be managed to accomplish the following:

- A. Manage total portfolio risk and return characteristics; and,
- B. Establish controls for the selection and modification of benchmarks.

**III. RESPONSIBILITIES**

- A. The Committee is responsible for approving total fund policy benchmarks.
- B. 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. Modifying benchmarks as applicable.

3. Providing a report to the Chief Operating Investment Officer (“COIO”), annually, in July, listing all new benchmark, benchmark replacement and modification requests submitted during the previous fiscal year.
  4. Reporting to the Committee quarterly, and more often if needed, any benchmark changes.
  5. Monitoring the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of Guidelines and Policies at the next Committee meeting, or sooner if deemed necessary. These reports shall include explanations of any violations and appropriate recommendations for corrective action.
- C. The General Pension Consultant (“Consultant”) is responsible for:
1. Monitoring, evaluating, and reporting quarterly, to the Committee, on the performance of the Program relative to the Policy.
  2. Reviewing and approving all requests for benchmark replacements and modifications.

#### **IV. PERFORMANCE OBJECTIVE AND BENCHMARK**

- A. The performance objective is for the various asset classes and programs to meet or exceed their respective benchmarks.
- B. The benchmark for individual programs or strategies is listed in one of the following attachments:
  1. Attachment A: Total Fund Policy
  2. Attachment B: Asset Allocation Policies
  3. Attachment C: Growth Policies
  4. Attachment D: Income Policies
  5. Attachment E: Inflation Assets Policies
  6. Attachment F: Real Assets Policies
  7. Attachment G: Liquidity Policies
  8. Attachment H: Multi Asset Class Partners Policies

9. Attachment I: Absolute Return Strategies Policies
10. Attachment J: Other (Non-PERF) Investment Portfolio Policies

Policies included in the following categories do not have referenced benchmarks; therefore, they are not listed in the attachments: Investment and Risk Management, Ethics, Operations, and Shareowner Activities.

- C. Benchmark Definitions – Please see the applicable attachments for a definition of each program’s component (i.e., industry, sector, country, etc.) benchmark.

## **V. INVESTMENT APPROACHES AND PARAMETERS**

The purpose of a benchmark is to establish target investment exposures, facilitate the periodic reporting to the Committee, and to provide a relative measure to gauge success.

### **A. Desirable Benchmark Characteristics**

The desirable characteristics of a suitable program benchmark are set forth below.

1. Public Market Securities / Programs
  - a. Investable – The securities contained in the benchmark should represent tradable positions. Ideally, the benchmark should be constructed with low turnover to minimize transactions costs.
  - b. Measurable – The pricing of the benchmark should be transparent, making it possible to track benchmark performance.
  - c. Unambiguous – The names and weights of the securities in the benchmark should be clearly defined.
2. Private Market Programs
  - a. Measurable – The pricing of the benchmark should be transparent, making it possible to track benchmark performance.
  - b. Predetermined – The names and weights of the components of the benchmark should be clearly defined.

- c. Representative – The components of the benchmark should be suitably representative of the investments and their associated risk and return levels.

**B. Benchmark Modification Indicators:**

The following factors may indicate that modification of a benchmark should be considered:

1. When a more cost efficient alternative is available that captures the risk return characteristics of the asset class or program.
2. When a component (i.e., industry, sector, country, etc.) of the benchmark is exposed to economic risks that are of such a degree that the future economic viability of that industry or sector is in doubt. Examples of such indicators:
  - a. The industry, not an individual company, shares common exposure to product liability judgments, settlements, and ongoing litigation that have the potential to exceed the industry's net worth.
  - b. Significant threat of a specific component filing bankruptcy.
  - c. Regulatory or legislative actions or both that have the potential to substantially impair specific component earnings.
  - d. Policy actions in the institutional investor community that, in aggregate, have the potential to have a deleterious effect on specific component share prices.
3. In the event that these or other indicators are evidenced, Staff or a member of the Committee may bring the matter before the Committee for due diligence and consideration. This due diligence will include:
  - a. Analysis by Staff, in consultation with third-party experts, that the indicators are evidenced and have the potential to adversely impact the benchmark performance.
  - b. Analysis of the expected effect of the benchmark modification on the total portfolio risk/return characteristics.
  - c. Analysis of the expected costs associated with implementation of the benchmark modification.

- d. A timetable for review of the benchmark modification.

**C. Benchmark Modification Process**

1. Staff is responsible for completing the Benchmark Change Control Form, obtaining the appropriate Senior Investment Officer approval, and submitting the form to the Investment Servicing Division – Portfolio Analytics Unit (“ISD – PA”).
2. ISD – PA Staff is responsible for reviewing the proposed purpose of the benchmark replacement or benchmark component modification.
3. The Consultant is responsible for reviewing and approving the benchmark replacement or benchmark component modification.
4. The Chief Investment Officer (“CIO”) or the COIO must also approve the benchmark replacement or benchmark component modification.
5. Once the Consultant and the CIO or COIO has approved the benchmark modification, ISD – PA Staff will notify the Office of Enterprise Compliance, the Asset Allocation Unit and the Custodian.

**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 the policy are defined in CalPERS Master Glossary of Terms.

**BENCHMARKS**

Approved by the Policy Subcommittee:	June 15, 2009
Adopted by the Investment Committee:	August 17, 2009
Revised by the Policy Subcommittee:	November 16, 2009
Approved by the Investment Committee:	December 14, 2009
Revised by the Policy Subcommittee:	April 11, 2011
Approved by the Investment Committee:	May 16, 2011
Policy Effective:	July 1, 2011
Administrative Update to Attachment F – Real Asset Policies:	February 7, 2012
Administrative Update to Attachment B - Asset Allocation Policies Program Benchmark:	March 1, 2012
Administrative Update to change AIM to Private Equity (PE):	October 10, 2012
Administrative Update to add Multi Asset Class Partners Allocation and Program	December 10, 2012
Administrative Update to Attachment B – Asset Allocation Policies Program Benchmark:	February 20, 2013
Approved by the Investment Committee:	<del>May 13</del> April 15, 2013
Policy Effective:	July 1, 2013

## ATTACHMENT A

## TOTAL FUND POLICY BENCHMARKS

~~December 10, 2012~~ April 15, 2013

The total fund policy benchmark is the average return of the asset class benchmark indices weighted by asset class benchmark allocations plus the benchmark return of the total fund currency overlay program and the benchmark return of the Multi Asset Class Partners allocation.. The fund benchmark return is the return attributable to the target asset class allocations. Staff employs active strategies in an effort to achieve a fund portfolio return that exceeds the fund benchmark return.

Asset Class	Benchmark	Weight
Growth	78% * Public Equity benchmark + 22% * Private Equity benchmark.	63.0%
Income	90% Barclays Long Liabilities + 10% Barclays International Fixed Income <u>Index GDP weighted ex-US.</u>	16.0%
Inflation Assets	75% * ILB benchmark + 25% * Commodities benchmark.	4.0%
Real Assets	77% * Real Estate benchmark + 15% * Infrastructure benchmark + 8% * Forestland benchmark.	13.0%
Liquidity	75% * Barclays Treas 2-10 yr. + 25% * 1 mo. T-bill	4.0%

The total fund policy benchmark return will be scaled to reflect the target asset class allocations along with the addition of the Multi Asset Class Partners allocation as per the following weights:

Asset Class	Benchmark	Weight
Total Fund	See details above for composition	99.50%
Multi Asset Class Partners	Absolute 7.5%	0.50%

The allocation above will become effective on February 1, 2013.

## ATTACHMENT B

ASSET ALLOCATION POLICIES  
PROGRAM BENCHMARKS~~February 20~~ April 15, 2012 2013

Policy	Program	Benchmark
Asset Allocation Strategy		Policy Index.
California Employers' Retiree Benefit Trust (CERBT) Funds		The benchmark for each asset allocation fund is a weighted benchmark determined by weighting each asset class benchmark by its policy target.
	Global Equity	MSCI ACWI IMI (Net)
	U.S. Fixed Income	Barclays <del>Capital</del> Long Liability Index
	TIPS	Barclays Capital Global Real: U.S. TIPS Index
	Commodities	S&P GSCI Total Return Daily
	REITs	FTSE EPRA/NAREIT Developed Liquid (Net)
Judges' Retirement System II		The benchmark for each asset allocation fund is a weighted benchmark determined by weighting each asset class benchmark by its policy target.
	Global Equity	CalPERS Custom FTSE Global Composite
	U.S. Fixed Income	Barclays <del>Capital</del> Long Liability Index
	TIPS	Barclays <del>Capital</del> Global Real: U.S. TIPS Index
	Commodities	S&P GSCI Total Return Daily
	REITs	FTSE EPRA/NAREIT Developed Index
Legislators' Retirement System		The benchmark for each asset allocation fund is a weighted benchmark determined by weighting each asset class benchmark by its policy target.
	Global Equity	CalPERS Custom FTSE Global Composite
	U.S. Fixed Income	Barclays <del>Capital</del> Long Liability Index
	TIPS	Barclays <del>Capital</del> Global Real: U.S. TIPS Index
	Commodities	S&P GSCI Total Return Daily

	REITs	FTSE EPRA/NAREIT Developed Index
Long-Term Care Fund		The benchmark for each asset allocation fund is a weighted benchmark determined by weighting each asset class benchmark by its policy target.
	Global Equity	MSCI ACWI IMI (Net)
	U.S. Fixed Income	Barclays <del>Capital</del> Long Liability Index
	TIPS	Barclays <del>Capital</del> Global Real: U.S. TIPS Index
	Commodities	S&P GSCI Total Return Daily
	REITs	FTSE EPRA/NAREIT Developed Liquid (Net)
SIP CalPERS Risk-Based & Target Retirement Date Funds		The benchmark for each asset allocation fund is a weighted benchmark determined by weighting each asset class benchmark by its policy target.
	Global Equity	Individual Global Equity pool portfolio benchmarks.
	U.S. Fixed Income	Barclays <del>Capital</del> Aggregate Index.
	TIPS	Barclays <del>Capital</del> Global Real: U.S. TIPS Index.
	Commodities	Standard & Poor's GSCI Total Return Index.
	REITS	FTSE EPRA/NAREIT Developed.

**ATTACHMENT C****GROWTH POLICIES  
PROGRAM BENCHMARKS****October 10, 2012**

<b>Policy</b>	<b>Program</b>	<b>Benchmark</b>
Growth	Total Growth	78% * Public Equity benchmark + 22% * Private Equity benchmark
Private Equity (PE)	Total Private Equity	(67% FTSE U.S. TMI + 33% FTSE AW ex U.S. TMI) +3% lagged one quarter.
Restricting Private Equity Investments in Public Sector Outsourcers		Not Applicable.
Public Equity	Total Public Equity	CalPERS Custom Global Equity.
Public Equity Sub Asset Class Allocation Ranges	Domestic Equity	CalPERS Custom Domestic All Cap.
	International Equity	CalPERS All-World Ex U.S. All Cap.
Public Equity Emerging Manager Fund of Funds		Custom weighted average benchmark.
Corporate Governance	Corporate Governance (Externally Managed) Funds	The benchmark shall be recommended by the fund manager with input from the due diligence consultant and input and approval from the Corporate Governance Senior Portfolio Manager and Portfolio Manager.
	Corporate Governance Co-Investment Strategy	The benchmark is the portfolio market value weighted total return for the benchmark for each external partner with whom an actual co-investment has been made.
Emerging Equity Markets Principles		Not Applicable.

Externally Managed Strategies	Domestic Active Equity	CalPERS Custom Domestic Large / Mid Cap.
	Domestic Enhanced Indexing Equity	CalPERS Custom Domestic Large / Mid Cap.
	Domestic Relaxed Long-Only Equity	CalPERS Custom Domestic Large / Mid Cap.
	International Active Equity	CalPERS Custom Developed International Large / Mid Cap.
	International Enhanced Indexing Equity	CalPERS Custom Developed International Large / Mid Cap.
Manager Development Program (MDP) I and II Policy and Manager Transition Policy		Custom weighted average benchmark.
Monitoring Externally Managed Portfolios		Specific performance objectives and benchmarks for each externally managed program are outlined in policy and External Manager guidelines.
Internally Managed Affiliate Equity Index Funds	Deferred Compensation Index (SIP Large Cap Equity Index)	Standard & Poor's 500.
	Pooled Index	Standard & Poor's 500Ex Tobacco.
	Deferred Compensation Small and Mid Cap Index (SIP Small and Mid Cap Equity Index)	Russell 2500 Index.
Internally Managed Public Enhanced Equity Strategies	Fundamental Factor Model – Domestic	CalPERS Custom Domestic Large / Mid Cap.
	Fundamental Factor Model – Developed Markets - International	CalPERS Custom Developed International Large / Mid Cap.
	Environmental Factor Model – HSBC	CalPERS /Custom Global Equity
	Fundamental Factor Model – Emerging Markets – International	CalPERS Custom Emerging Markets.
	Country-Tiered Emerging Markets	CalPERS Custom Emerging Markets
	Synthetic Enhanced Equity	Standard & Poor's 500 Index.

Internally Managed Public Equity Index Funds	Domestic Large / Mid Cap	CalPERS Custom Domestic Large / Mid Cap.
	Domestic Microcap	CalPERS Custom Domestic Microcap.
Internally Managed Public Equity Index Funds, cont.	International Large / Mid Cap	CalPERS Custom Developed International Large / Mid Cap.
	International Small/Microcap	CalPERS Custom Developed International Small Cap.
	Emerging Markets	CalPERS Custom Emerging Markets.
	Cash Equitization	CalPERS Custom Global Equity
	Dynamic Completion	CalPERS Custom DCF.

**BENCHMARK DETAILS:****CalPERS Custom Global Equity**

The CalPERS Custom Global Equity benchmark is a custom composite that comprises the CalPERS Custom Domestic All Cap and CalPERS Custom All-World ex US All Cap benchmarks on a [capitalization weighted](#) basis.

**CalPERS Custom Domestic All Cap**

The CalPERS Custom Domestic All Cap benchmark is a custom composite that comprises the CalPERS Custom Domestic Large / Mid Cap and CalPERS Custom Domestic Microcap benchmarks on a capitalization weighted basis.

**CalPERS Custom All-World ex US All Cap**

The CalPERS Custom All-World ex US Cap benchmark is a custom composite that comprises the CalPERS Custom Developed International Large / Mid Cap, CalPERS Custom Developed International Small Cap, CalPERS Custom emerging Markets Large/Mid Cap, and CalPERS Custom Emerging Markets Small Cap benchmarks on a capitalization weighted basis.

**CalPERS Custom Developed International Large / Mid Cap**

The CalPERS Custom Developed International Large / Mid Cap benchmark is a custom index constructed and maintained by FTSE. It is defined as the FTSE All World Developed benchmark excluding US domestic and tobacco (as defined by RiskMetrics) securities. It is based on market capitalization and is reconstituted quarterly.

**CalPERS Custom Developed International Small Cap**

The CalPERS Custom Developed International Small Cap benchmark is a custom index constructed and maintained by FTSE. It is defined as the FTSE GEIS (Global Equity Index Series) Developed Small Cap benchmark excluding US domestic and tobacco (as

defined by RiskMetrics) securities. It is based on market capitalization and is reconstituted quarterly.

**CalPERS Custom Domestic Large / Mid Cap**

The CalPERS Custom Domestic Large / Mid Cap benchmark is a custom index constructed and maintained by FTSE. It is defined as the top 3000 securities in the FTSE US Total Market Index (TMI), excluding tobacco securities (as defined by RiskMetrics), based on market capitalization and is reconstituted quarterly.

**CalPERS Custom Domestic Microcap**

The CalPERS Custom Domestic Microcap benchmark is a custom index constructed and maintained by FTSE. It is defined as the FTSE US TMI, excluding tobacco securities (as defined by RiskMetrics), less the securities included in the CalPERS Custom Domestic Large / Mid Cap benchmark. It is based on market capitalization and is reconstituted quarterly.

**CalPERS Custom DCF**

The CalPERS Custom DCF (Dynamic Completion Fund) benchmark is a custom index constructed and maintained by Nuveen Investment Solutions (formerly Richards and Tierney). Its construction is a function of the style and market cap biases generated by the composite of the benchmarks for all Global Equity portfolios in the aggregate. This custom index complements the above-mentioned biases, completing the benchmark exposure to CalPERS strategic, custom, Global Equity benchmark, and is reconstituted as needed based on changes in the Global Equity program.

**CalPERS Custom Emerging Markets Large / Mid Cap**

The CalPERS Custom Emerging Markets Large / Mid Cap benchmark is a custom index constructed and maintained by FTSE. It is defined as the FTSE All World Emerging markets Large / Mid Cap benchmark excluding tobacco (as defined by RiskMetrics) securities, KLD-restricted securities, and Argentine securities. It is based on market capitalization and is reconstituted quarterly.

**CalPERS Custom Emerging Markets Small Cap**

The CalPERS Custom Emerging markets Small Cap benchmark is a custom index constructed and maintained by FTSE. It is defined as the FTSE All World Emerging markets small cap benchmark excluding tobacco (as defined by RiskMetrics) securities, KLD-restricted securities, and Argentine securities. It is based on market capitalization and is reconstituted quarterly.

**Russell 2500**

The Russell 2500 benchmark is a capitalization weighted benchmark designed to measure the performance of the US domestic small and mid cap equity market. It is composed of the largest 3000 securities, based on market capitalization, in the United States minus the largest 500 securities, and is reconstituted annually.

**Standard & Poor's 500**

The Standard & Poor's 500 benchmark is a capitalization weighted benchmark designed to measure the performance of the US domestic large cap equity market. It is composed of the largest 500 securities, based on market capitalization, in the United States and is reconstituted quarterly.

**Standard & Poor's 500 Ex Tobacco**

The Standard & Poor's 500 Ex Tobacco benchmark is a capitalization weighted benchmark designed to measure the performance of the US domestic large cap equity market. It is composed of the largest 500 securities, excluding tobacco securities (as defined by RiskMetrics), based on market capitalization, in the United States and is reconstituted quarterly.

**ATTACHMENT D****INCOME POLICIES  
PROGRAM BENCHMARKS**~~March 1, 2012~~ April 15, 2013

<b>Policy</b>	<b>Program</b>	<b>Benchmark</b>
Currency Overlay	Currency Overlay Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks fully hedged.
	Tactical Management Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks fully hedged.
	Externally Managed Currency Overlay Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks fully hedged.
	Internally Managed Passive Currency Overlay Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks fully hedged.
	Internally Managed Active Currency Overlay Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks fully hedged.
Global Fixed Income Program	Dollar-Denominated Fixed Income Program	Barclays <del>Capital</del> Long Liabilities Index.

Global Fixed Income Program, cont.	<del>Externally Managed Active</del> International Fixed Income Program	Barclays <del>Capital</del> International Fixed Income Index <u>GDP</u> <u>weighted ex-US</u> .
	Foreign Debt Policy Program	Not Applicable.
Low Duration Fixed Income Program	Dollar-Denominated Fixed Income High Quality Libor (HQL) Program	Federal Funds based index.
	Dollar-Denominated Fixed Income Short Duration Program	Federal Funds based index.
	Internally Managed Dollar- Denominated Short-Term Program	Total rate of return of the State Street Bank Short-Term Investment Fund after investment management fees.
Treasury Inflation Protected Securities (TIPS)		Barclays <del>Capital</del> Group Real: U.S. TIPS Index.

## ATTACHMENT E

INFLATION ASSETS POLICIES  
PROGRAM BENCHMARKSJuly 1, 2011 ~~April 15, 2013~~

Policy	Program	Benchmark
Inflation Assets	Overall Program	75% * ILB benchmark + 25% * Commodities benchmark.
	Commodities Program	Standard & Poor's GSCI Total Return Index.
	Inflation-Linked Bond Program	ILB Custom Index: Blend of 67% Barclays <del>Capital</del> Global Inflation-Linked U.S. and 33% Barclays <u>Universal Government Inflation Linked Bond Index ex-US.</u> <del>Capital Global Inflation-Linked United Kingdom, France, Italy, Germany and Canada only, unhedged.</del>
	Foreign Debt Policy	Not Applicable.

**ATTACHMENT F****REAL POLICIES  
PROGRAM BENCHMARKS****October 10, 2012**

<b>Policy</b>	<b>Program</b>	<b>Benchmark</b>
Real Assets	Total Real	77% Real Estate benchmark + 15% * Infrastructure benchmark + 8% * Forestland benchmark.
	Real Estate Program***	Exceed (net of fees) NCREIF ODCE lagged one quarter
	Infrastructure Program	Consumer Price Index +4%, lagged one quarter.
	Forestland Program	NCREIF Timberland lagged one quarter.

\*\*\* The interim Real Estate benchmark is a composite of the NCREIF ODCE and the previous global equity REIT index (FTSE EPRA NAREIT Global). Each quarter, the benchmark weight of the REIT index weight would equal the actual weight of the REIT portfolio at the end of the prior quarter. The portfolio REIT allocation is expected to decline to zero over the next one to three years. This transition plan is gradual and responsive to market conditions.

**ATTACHMENT G****LIQUIDITY POLICIES  
PROGRAM BENCHMARKS**

July 1, 2011

<b>Policy</b>	<b>Program</b>	<b>Benchmark</b>
Liquidity Program	Total Liquidity Program	75% * Barclays Treas 2-10 yr. + 25% * 1 mo. T-bill

**ATTACHMENT H**

**MULTI ASSET CLASS POLICIES  
PROGRAM BENCHMARKS**

**December 10, 2012**

<b>Policy</b>	<b>Program</b>	<b>Benchmark</b>
Multi Asset Class	Multi Asset Class Program	Absolute 7.5%

**ATTACHMENT I**

**ABSOLUTE RETURN STRATEGIES POLICIES  
PROGRAM BENCHMARKS**

**March 1, 2012**

<b>Policy</b>	<b>Program</b>	<b>Benchmark</b>
Absolute Return Strategies	Absolute Return Strategies Program	1 yr Treasury Note + 5%

## ATTACHMENT J

**OTHER (NON-PERF) INVESTMENT PORTFOLIO POLICIES  
PROGRAM BENCHMARKS**

~~March 1, 2012~~ April 15, 2013

<b>Policy</b>	<b>Program</b>	<b>Benchmark</b>
Barclays Aggregate Program		Barclays <del>Capital</del> -Aggregate Index.
Supplemental Income Plans (SIP)		The performance of each individual investment fund within SIP will be evaluated against its appropriate asset class benchmark.

**Asset Class Glossary: Investment & Risk Management**  
**Policy: Benchmarks**  
April 15, 2013

**Capitalization Weighted**

A weighting method based on the equity market capitalization of a stock. Market capitalization is calculated by multiplying the total outstanding shares of a stock by its price per share.