Investment Committee

California Public Employees' Retirement System

Agenda Item 5e

June 17, 2013

ITEM NAME: Revision of the Supplemental Income Plans (SIP) Target Retirement Date and POFF Funds Policies

PROGRAM: Affiliate Investment Programs

ITEM TYPE: Policy & Delegation – Action

RECOMMENDATION

Approve the revised "Statement of Investment Policy for Supplemental Income Plans (SIP)" and "Statement of Investment Policy for Supplemental Income Plans CalPERS Target Retirement Date and POFF (State Peace Officers' and Firefighters' Defined Contribution Plan, i.e. the "POFF") Funds" policies as shown in Attachment 2 and 3, respectively. The Wilshire Associates' Opinion Letter is provided in Attachment 4.

EXECUTIVE SUMMARY

On May 14, 2013, the Pension and Health Benefits Committee approved the SIP fund lineup change. Today, staff will present the analysis for the SIP Investment Lineup (Attachment 1) and Target Retirement Date Fund asset allocations.

STRATEGIC PLAN

This agenda item supports the CalPERS Strategic Plan goal to improve long-term pension and health benefit sustainability. Regular review of the SIP investment fund lineup is important to help ensure that CalPERS meet participants' retirement savings needs while being competitive in the supplemental savings market place.

BACKGROUND

The CalPERS SIP consists of the CalPERS 457 Plan, POFF, Supplemental Contributions Plan (SCP), and Placer Country 401(k) Plan. Staff provided information on the Strategic Review of the SIP to the Investment Committee in October 2012 and the Pension and Health Benefits Committee in April and May 2013. Highlights from the Strategic Review include:

- In late 2011, staff initiated the Strategic Review of the SIP to gauge the value proposition and competitiveness of the CalPERS SIP design and fund lineup. Though CalPERS monitors and evaluates performance of each investment fund option on an ongoing basis, staff wanted to undertake another holistic review of the fund lineup since it was implemented in 2008 to include CalPERS customized Target Retirement Date and Risk-based Funds.

- A survey conducted by RV Kuhns of employers and members about their supplemental savings preferences, and a review of the competitive environment for supplemental savings plans and investment offerings, including information on CalPERS SIP strengths and opportunities for improvement.

- RV Kuhns reviewed and recommended an investment fund lineup and refreshed the asset allocations for the Target Retirement Date and POFF funds.

ANALYSIS

The Investment Office, along with the Customer Support & Services leadership team, collaborated on the investment lineup review. Due to the various asset classes involved in this review, the Investment Office project team representatives included equity, fixed income, operations and compliance.

The project began with the team drafting guiding principles for the investment fund lineup based on the RV Kuhns research and Investment Office strategic priorities. The guiding principles include:

- An appropriate range of investment options intended to avoid an overly complex fund lineup that might confuse the average participant
- A cash equivalent option is important
- Custom Target Date Funds should be in the SIP fund lineup
- Self-Managed Account (SMA) Brokerage windows provide choices for participants looking for options beyond the SIP fund lineup
- Costs matter to participants
- Passively managed funds are less costly and generally preferred by participants
- Investment management could be internal or external
    - Internal capabilities
    - Costs
    - Operational risks

<u>The Revised SIP Fund Lineup</u>

As part of the Strategic Review project, the Investment Office worked with RV Kuhns to recommend an investment fund lineup while considering these principles and where possible, to leverage the investment management services of State Street Global Advisors (SSgA). SSgA was selected and awarded a contract in 2012 from the Investment Office Multi-Strategy Index Fund Request for Proposal solicitation process. The SSgA contract allows for the affiliate funds, including the SIP, to utilize the diversified menu of SSgA passive index funds that provide exposure across asset classes.

RV Kuhns recommended an investment fund lineup that was adopted by the project team, as shown below under the “Fund” column, in the New Fund Lineup table. This investment lineup was approved by the Pension and Health Benefits Committee on May 14, 2013.

New Fund Lineup

Current Lineup		New Lineup	
Fund	**Fund Manager**	**Fund**	**Fund Manager**
Active: Target Date	CalPERS and External	Passive: Target Date Funds	CalPERS and SSgA
Active: Risk-Based	CalPERS and External		
Cash: Short-Term Investment	SSgA	Cash: Short-Term Investment	SSgA
Active: U.S. Equity Small-Mid Cap (SMID) Growth	The Boston Company	Passive: U.S. Equity Index	SSgA
Active: U.S. Equity SMID Value	The Boston Company		
Passive: U.S. Equity SMID Index	CalPERS		
Passive: U.S. Equity Large Cap Index	CalPERS		
Active: International Equity	Pyramis Global Advisors	Passive: International Equity Index	SSgA
Passive: International Equity	CalPERS		
Active: Short-Term Bond	PIMCO	Passive: Short-Term Bond	SSgA
Active: Intermediate Bond	CalPERS	Passive: Intermediate Term Bond	SSgA
Active: Treasury Inflation Protected Securities (TIPS)	CalPERS	Passive: Real Assets*	SSgA
Self-Managed Account (SMA) Brokerage Window	SSgA	Self-Managed Account (SMA) Brokerage Window	SSgA

***Real Assets –** SSgA (State Street Global Advisors) Real Asset strategy objective is to mitigate the risk of loss of purchasing power by investing in TIPS, Commodities, Real Estate Investment Trusts (REITs) and resource stocks.

The new investment fund lineup reflects the elements from RV Kuhns’ research and analysis, as well as the project team’s guiding principles. It offers a diverse range of alternatives with materially different risk and return characteristics with broad market exposures, while avoiding an overly complex fund lineup that might confuse the average participant, and reduces operational complexity and risks. The Supplemental Income Plans Investment Policy which has been revised to reflect these principles and the new investment fund lineup, is provided in Attachment 2.

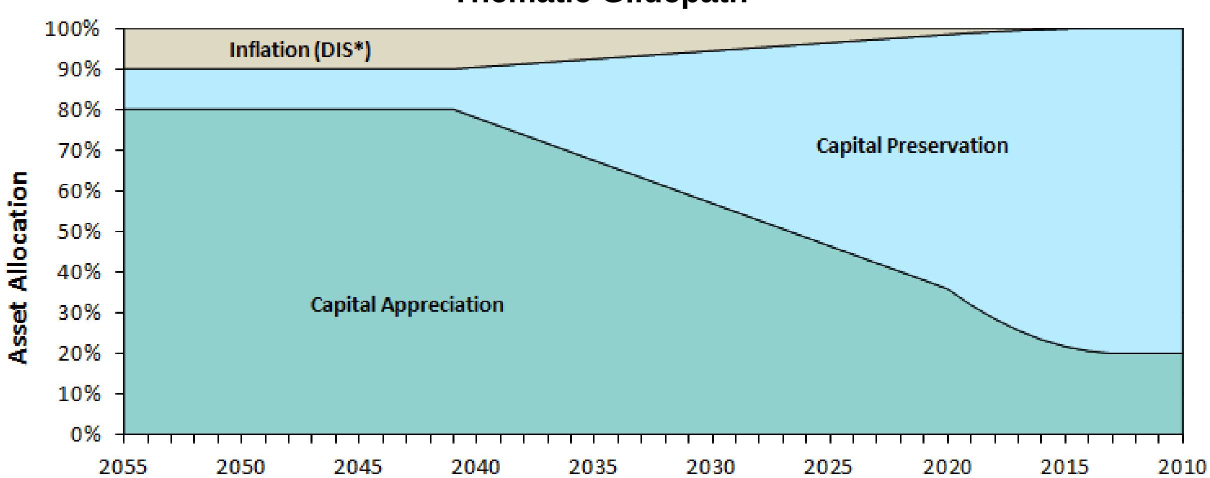
<u>Target Retirement Date Funds</u>
Another piece of the SIP fund lineup review included updating the Target Retirement Date Funds' asset allocations based on current market return assumptions, correlations and participant data. To do this, RV Kuhns gathered and analyzed member pension benefit and demographic data provided by the CalPERS Actuarial Office and the SIP record-keeper's systems.

RV Kuhns' analysis shows the average SIP participant:

- Retires around age 60
- Receives approximately 78% of their retirement income from their pension and social security
- Utilizes the SIP as a supplemental savings tool rather than for monthly income replacement
- Takes a complete distribution of their account in the first year after retirement

From this research, RV Kuhns analyzed the current SIP Target Retirement Date Funds' asset allocations and recommended a revised allocation by increasing capital preservation throughout the investment strategy and increasing liquidity near retirement. For 2013, the recommended asset allocation for each of the Target Retirement Date Funds is shown below in the Thematic Glidepath.

Thematic Glidepath



***DIS** – Diversified Investment Strategy

This graph is called a "glidepath" since it demonstrates how the asset allocation would change or "glide" as participants move toward retirement. As an example, an 18 year old participant in the 2055 fund would have an 80% allocation to capital appreciation. In contrast, a participant at or near 60 years of age and retirement would only have a 20% allocation to capital appreciation. The glidepath stops changing near the retirement date and becomes focused on capital preservation intended to protect participant retirement savings near the distribution date.

The POFF Fund

The POFF Fund consists of employer only contributions invested in the Moderate Risk-based fund. The new POFF Fund will maintain similar risk characteristics and a static asset allocation that is equivalent to the Target Retirement Date Fund 2030 shown in the Thematic Glidepath chart.

In Attachment 3, the Statement of Investment Policy for Supplemental Income Plans CalPERS Target Retirement Date and POFF Funds policy has been revised to include updated asset allocation targets and ranges for the Target Retirement Date and the POFF funds.

BENEFITS/RISKS

The new investment fund lineup requires changing the existing fund lineup with new funds where participants will be given an opportunity to select a new fund. If participants' contributions are invested in a fund that will be removed, they can control how those assets are redirected by affirmatively instructing the transfer of such assets to another investment fund offered under the SIP. If participants do not provide affirmative instructions, their assets will be mapped to the applicable new investment fund. To help ensure that participants understand their options and the new fund lineup, staff is developing an extensive communication plan with multiple communications to participants to request that participants provide affirmative instruction if they do not want their assets mapped to the applicable replacement fund.

ATTACHMENTS

Attachment 1 – Supplemental Income Plans Investment Lineup
Attachment 2 – Revised Statement of Investment Policy for Supplemental Income Plans
Attachment 3 – Revised Statement of Investment Policy for Supplemental Income Plans CalPERS Target Retirement Date Funds and POFF Fund
Attachment 4 – Wilshire Associates' Opinion Letter

ERIC BAGGESEN
Senior Investment Officer
Global Equity

JOSEPH A. DEAR
Chief Investment Officer

Supplemental Income Plans Investment Lineup

June 17, 2013

Supplemental Income Plan (SIP) Investment Lineup & Analysis

- SIP Overview and Strategic Review
- Investment Fund Lineup Guiding Principles
- Revised New Fund Lineup
- Target Retirement Date Fund Analysis and Glidepath
- The POFF Fund
- Next Steps
- Appendix
  - Fund, participant and asset mapping
  - Notable Participant fund usage
  - Fund performance

Supplemental Income Plans (SIP) Overview

Plan/ Program	Purpose	Assets (millions as of 3/31/13)	Number of Participants (as of 3/31/13)	Number of Employers (as of 3/31/13)	Plan Growth Trend
457 Plan	Tax deferred employee savings	$ 1,104.5	26,514	732	↑
Peace Officers and Firefighters (POFF) Plan	Employer contributions for tax deferred employee savings	$ 495.3	36,357	1	↓*
Supplemental Contribution Plan (SCP)	After-tax employee savings with earnings tax deferred	$ 19.7	558	1	↓**
Placer County 401 (k) Plan	Tax deferred employee savings	$ 25.3	921	1	→

* Plan termination likely in 2014

**Research being conducted by the Center for Innovation

SIP 457 Plan Strategic Review – Summary

- RV Kuhns surveyed employers and participants about their supplemental savings preferences, while also reviewing the competitive environment for supplemental savings plans and investment offerings.
- Drafted SIP Investment Fund Lineup Guiding Principles.
- RV Kuhns reviewed and recommended an investment fund lineup and refresh the asset allocations for the Target Retirement Date and POFF funds.
- Collaborative effort
  - Customer Support Services
  - Investment Office representatives: equity, fixed income, operations, and compliance
- May 14, 2013, the Pension and Health Benefits Committee (PHBC) approved the revised SIP fund lineup.

SIP Investment Fund Lineup Guiding Principles

- An appropriate range of investment options intended to avoid an overly complex fund lineup that might confuse the average participant
- A cash equivalent option is important
- Custom Target Date Funds (TDF) should be in the SIP fund lineup
- Self-managed account (SMA) brokerage window provides choices for participants looking for choice beyond the SIP fund lineup
- Costs matter to participants
- Passively managed funds are less costly and generally preferred by participants
- Investment management could be internal or external
  - Internal capabilities
  - Costs
  - Operational risks

SIP 457 Plan Investment Lineup – Moving Forward

RV Kuhns conducted an investment fund lineup analysis

Evaluated State Street Global Advisors (SSgA) index funds

- Investment Office Roadmap Strategic Priority to reduce operational risks
- Selected in 2012 through Request for Proposal solicitation process
- Extensive depth and expertise in defined contribution fund management
- Utilized for other Affiliate Funds

Recommended appropriate SIP Core investment alternatives

Updated and analyzed participant demographic data for Target Retirement Date funds

New Fund Lineup

Current Lineup		New Lineup	
Fund	**Fund Manager**	**Fund**	**Fund Manager**
Active: Target Date	CalPERS and External	Passive: Target Date Funds	CalPERS and SSgA
Active: Risk-Based	CalPERS and External		
Cash: Short-Term Investment	SSgA	Cash: Short-Term Investment	SSgA
Active: U.S. Equity Small-Mid Cap (SMID) Growth	The Boston Company	Passive: U.S. Equity Index	SSgA
Active: U.S. Equity SMID Value	The Boston Company		
Passive: U.S. Equity SMID Index	CalPERS		
Passive: U.S. Equity Large Cap Index	CalPERS		
Active: International Equity	Pyramis Global Advisors	Passive: International Equity Index	SSgA
Passive: International Equity	CalPERS		
Active: Short-Term Bond	PIMCO	Passive: Short-Term Bond	SSgA
Active: Intermediate Bond	CalPERS	Passive: Intermediate Term Bond	SSgA
Active: Treasury Inflation Protected Securities (TIPS)	CalPERS	Passive: Real Assets*	SSgA
Self-Managed Account (SMA) Brokerage Window	SSgA	Self-Managed Account (SMA) Brokerage Window	SSgA

*Real Assets - SSgA (State Street Global Advisors) Real Asset strategy objective is to mitigate the risk of loss of purchasing power by investing in TIPS, Commodities, Real Estate Investment Trusts (REITs) and resource stocks.

Current and New Investment Management Fees

Current Lineup – investment management fees in basis points (bps)

Fund/Manager	bps
Active: Target Date/CalPERS and External	52***
Active: Risk-Based/CalPERS and External	52***
Cash: Short-Term Investment /SSgA	7
Active: U.S. Equity Small-Mid Cap (SMID) Growth/ The Boston Company	75
Active: U.S. Equity SMID Value/ The Boston Company	75
Passive: U.S. Equity SMID Index/CalPERS	*
Passive: U.S. Equity Large Cap Index/CalPERS	*
Active: International Equity/Pyramis Global Advisors	52**
Passive: International Equity/CalPERS	*
Active: Short-Term Bond/PIMCO	15
Active: Intermediate Bond/CalPERS	*
Active: Treasury Inflation Protected Securities (TIPS)/CalPERS	*
Self-Managed Account (SWA) Brokerage Window/SSgA	N/A

New Lineup – investment management fees in basis points (bps) [1]

Fund/Manager	bps
Passive: Target Date Funds/CalPERS and SSgA	6***
Cash: Short-Term Investment/SSgA	7
Passive: U.S. Equity Index/SSgA	3
Passive: International Equity Index/SSgA	8
Passive: Short-Term Bond/SSgA	7
Passive: Intermediate Term Bond/SSgA	2
Passive: Real Assets/SSgA	17
Self-Managed Account (SWA) Broker Account Window/SSgA	N/A

CalPERS Investment Office
Affiliate Investment Programs

* Internally managed investment management costs approximately 4 bps
** Tiered Fee, Average Asset Weighted Fee
***Average Asset Weighted Fee for all externally managed funds
¹ Other operating expenses may apply

New Investment Fund Lineup

Offers a diversified range of investment options while avoiding an overly complex fund lineup

- 24 to 16 funds
- Passive only
- Broad market exposures

Leverages SSgA index fund management

Lowers costs - average external investment management costs for the Target Retirement Date Funds will be reduced from 52 bps to 6 bps

Target Retirement Date Fund Analysis

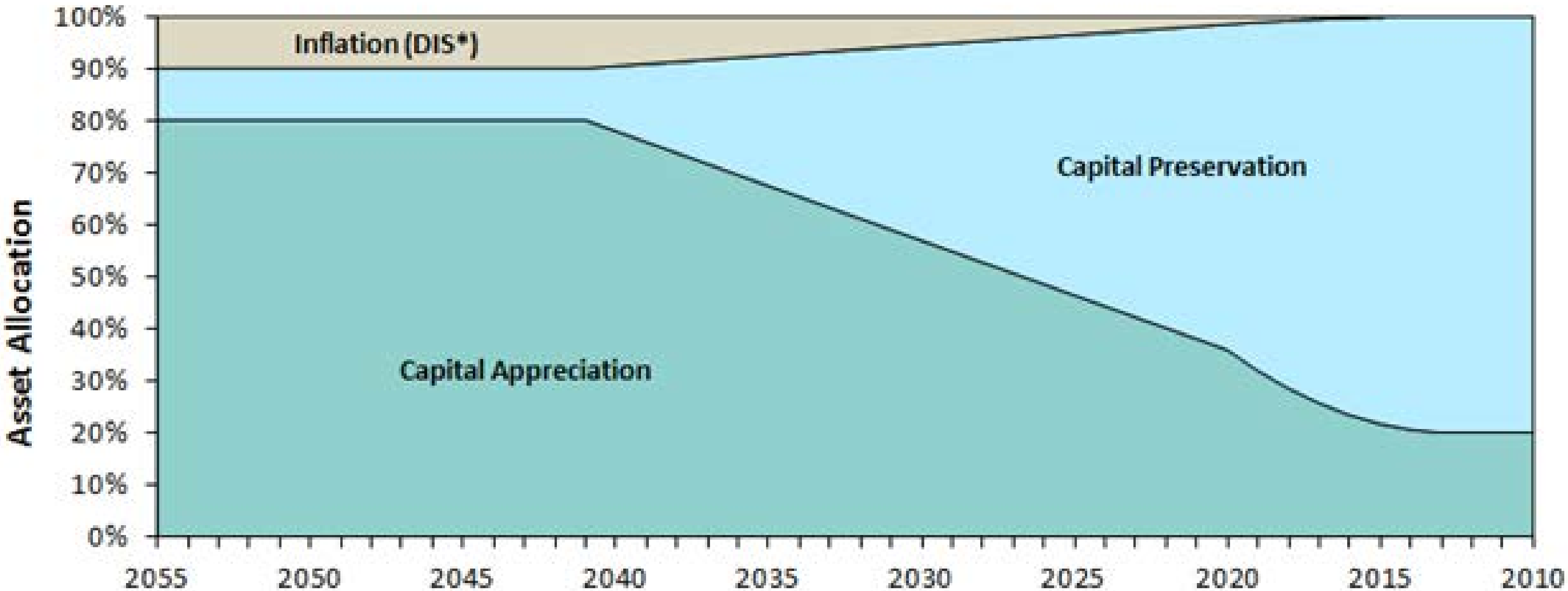
The average SIP participant generally

- Retires around age 60
- Receives approximately 78% of their retirement income from their pension and social security
- Utilizes the SIP as a supplemental savings tool rather than for monthly income replacement
- Takes a complete distribution of their account in the first year after retirement

Glidepath Focus

1. Capital preservation
2. Liquidity at retirement

Thematic Glidepath

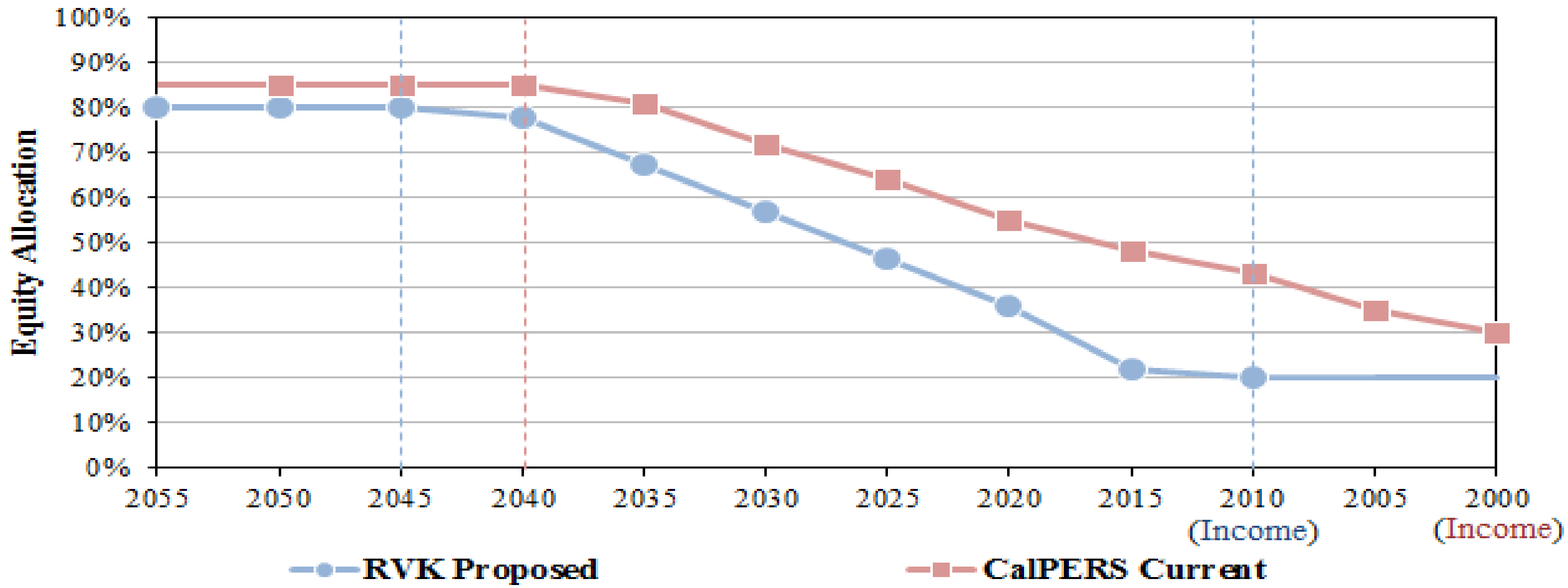


*DIS – Diversified Investment Strategy

Changes from current custom Glidepath

- Added the 2055 and consolidated 2005, 2010 and income funds
- In early years, focus on capital appreciation and protection against inflation
- As retirement draws closer, focus on capital preservation

Target Retirement Date Glidepath



For all Target Retirement Date (TRD) funds, the RV Kuhns proposed glidepath is generally more conservative with less equity exposure than the current TRD funds

- As proposed, at four years pre-retirement age, equity exposure drops to approximately 20% and remains there during retirement
- For CalPERS current TRD funds, equity exposure at retirement is approximately 43% and drops to 30% post retirement

The POFF Fund

- Employer only contributions invested in one static asset allocation fund
- Goals: Diversified multi-asset class fund intended to provide both capital appreciation and preservation
- New fund is static 2030 Target Retirement Date fund and has similar risk/return profile as POFF current fund

Asset Class	Current	New
U.S. and International Equity	60%	57%
U.S. Fixed Income	28%	25%
Cash equivalent	--	12%
Real Assets	12%	6%
Expected Return (standard deviation)	6.39%	6.22%
Expected Risk	11.84%	11.39%

Next Steps

- IC approval
  - SIP Policy (Attachment 2)
  - Target Retirement Date and POFF Funds Policy (Attachment 3)

- Transition Plan to PHBC in June
  - Focus on communications and education to employers and participants about the new investment lineup and fund transition
  - Target date October 2013

Appendix

Fund, participant & asset mapping

Current CalPERS SIP Fund	# of Participants as of 12/31/12	Proposed CalPERS SIP Fund
CASH		
SSgA Short-Term Investment Fund	7,938	SSgA Short-Term Investment Fund
Target Retirement Date Fund		
FIXED INCOME		
PIMCO Short-Term Bond	433	SSgA U.S. Short-Term Government/Credit Bond Index Fund
Target Retirement Date Fund		
CalPERS Total Return Bond	5,303	SSgA U.S. Bond Index Fund
Target Retirement Date Fund		
REAL ASSETS		
CalPERS Treasury Inflation Protected Securities (TIPS)	2,078	SSgA U.S. Short-Term Government/Credit Bond Index Fund
Target Retirement Date Fund		SSgA Real Assets Fund
CalPERS Commodities	N/A	
Target Retirement Date Fund		
CalPERS REITS	N/A	
Target Retirement Date Fund		
DOMESTIC EQUITY		
CalPERS S&P 500 Equity Index	11,425	SSgA Russell All Cap Index Fund
Target Retirement Date Fund		
The Boston Company Small/Mid Value	437	
Target Retirement Date Fund		
The Boston Company Small/Mid Growth	690	
Target Retirement Date Fund		
CalPERS Small/Mid Cap Equity Index	8,603	
INTERNATIONAL EQUITY - Developed		
Pyramis Select International	4,724	SSgA Global All Cap Equity ex U.S. Index Fund
Target Retirement Date Fund		
CalPERS International Index	1,921	
Target Retirement Date Fund		
INTERNATIONAL EQUITY - Emerging		
CalPERS Emerging Market	N/A	SSgA Global All Cap Equity ex U.S. Index Fund
Target Retirement Date Fund		
ASSET ALLOCATION-RISK BASED		
CalPERS Conservative Asset Allocation	2,615	CalPERS Target Retirement Date Fund
CalPERS Moderate Asset Allocation	6,601	
CalPERS Aggressive Asset Allocation	4,522	
ASSET ALLOCATION-AGE BASED		
CalPERS Target Retirement Date	8,165	CalPERS Target Retirement Date Fund

Core
Target Retirement Date Fund

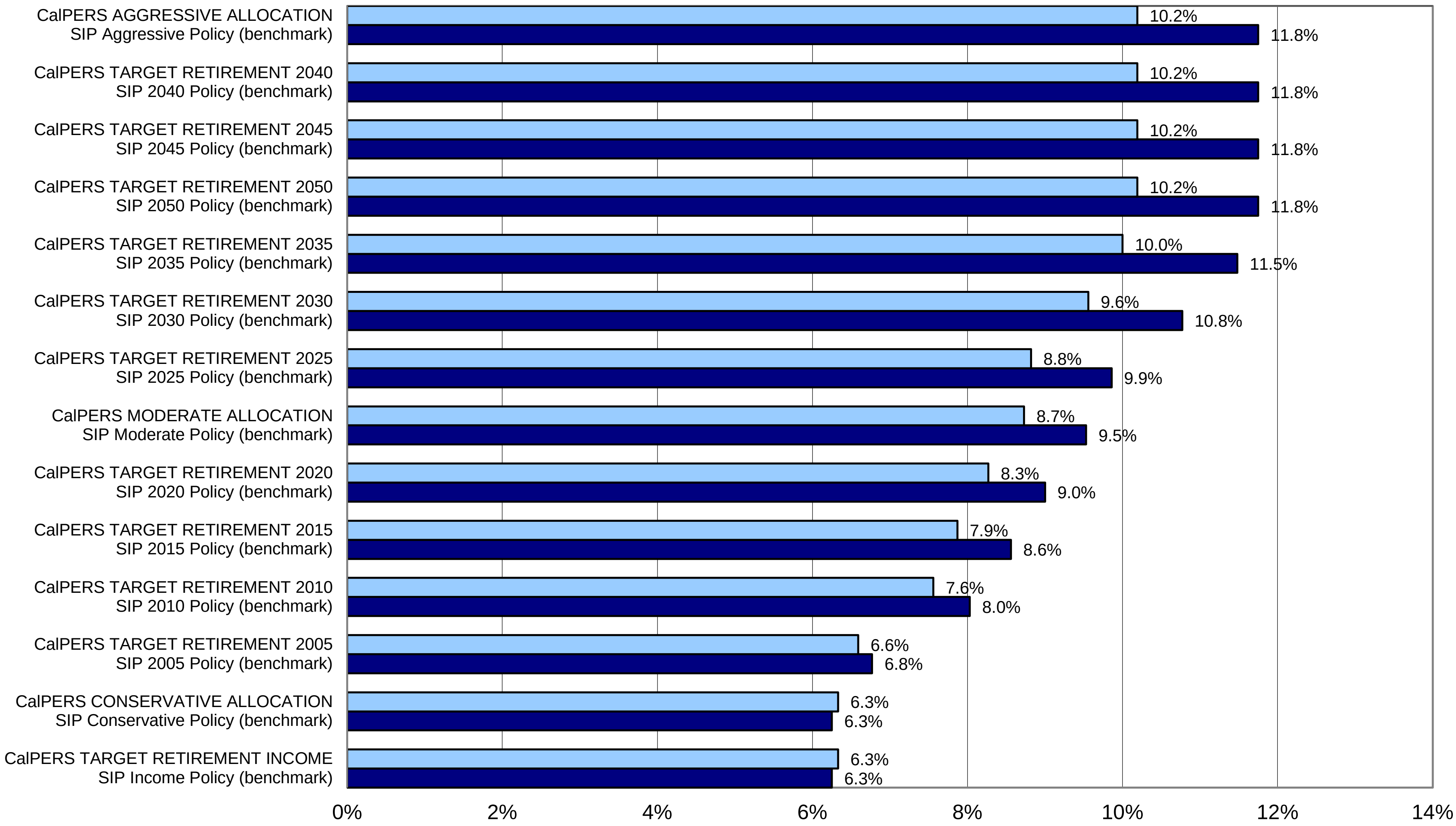
Notable Participant Fund Usage

- 32% of monthly contributions directed into asset allocation funds
- Target Retirement Date Funds are the fastest growing funds
  - Of new contributions, 64% remained in Target Retirement Date Funds (one year period)

- Introduced Easy Enrollment November 2011
  - Participants enroll with name and contribution amount
  - Participants must call or go online to affirmatively instruct how to invest their contributions otherwise contributions will be invested in the applicable Target Retirement Date Fund
    - Based on birthdate
    - Assuming retiring at age 59 (new Policy will be 60)

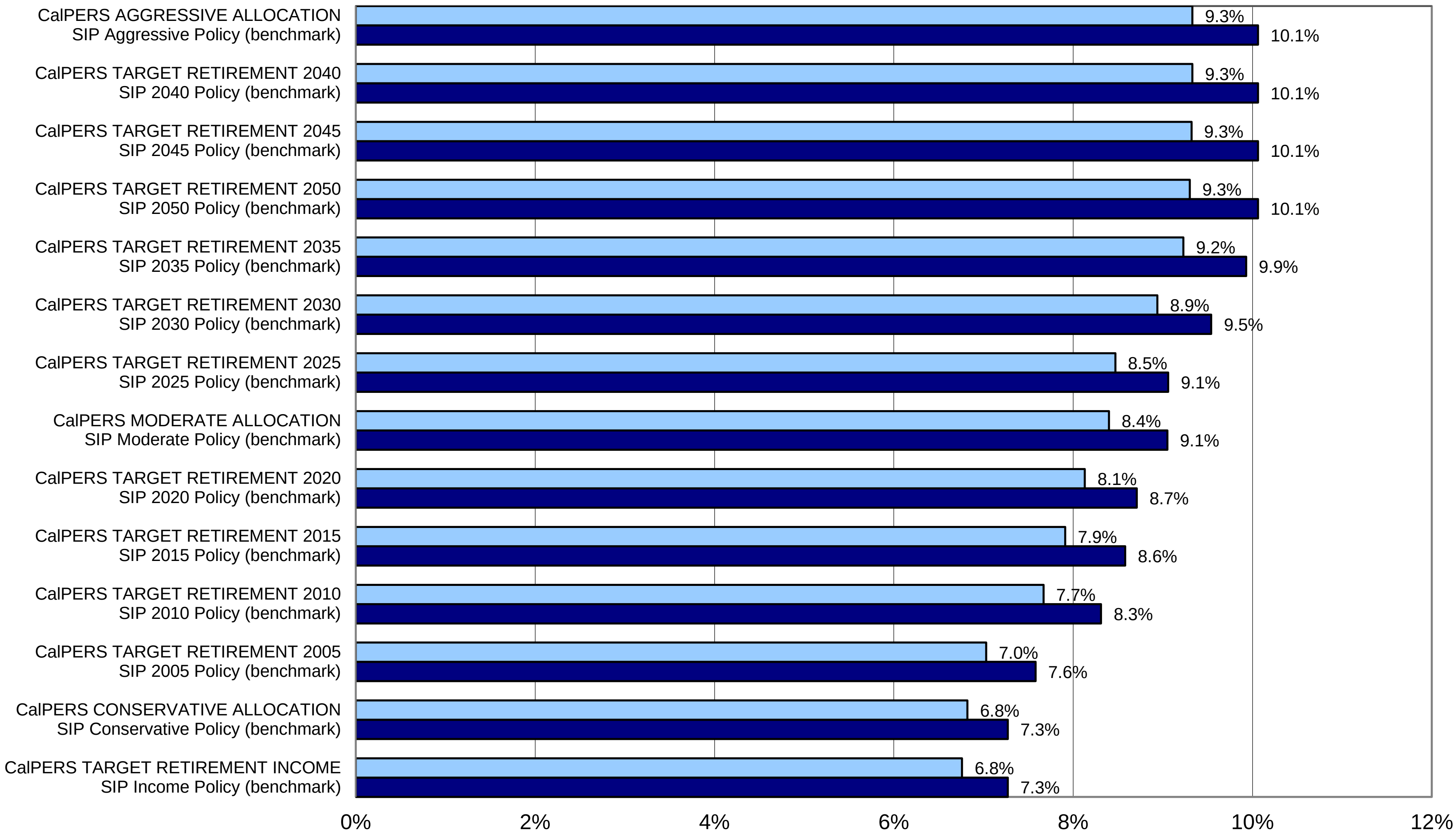
- Cash Equivalent – Short-Term Investment Fund (STIF)
  - Formerly Stable Value Fund
  - 7,729 participants in the STIF as of March 31, 2013
  - 2,369 participants with 100% of their savings in STIF
  - Low yielding environment reduces principal, net of fees
  - Focus on additional communications and education during fund transition

1-year* Investment Performance – SIP Asset Allocation Funds



*Gross returns ending 3/31/13

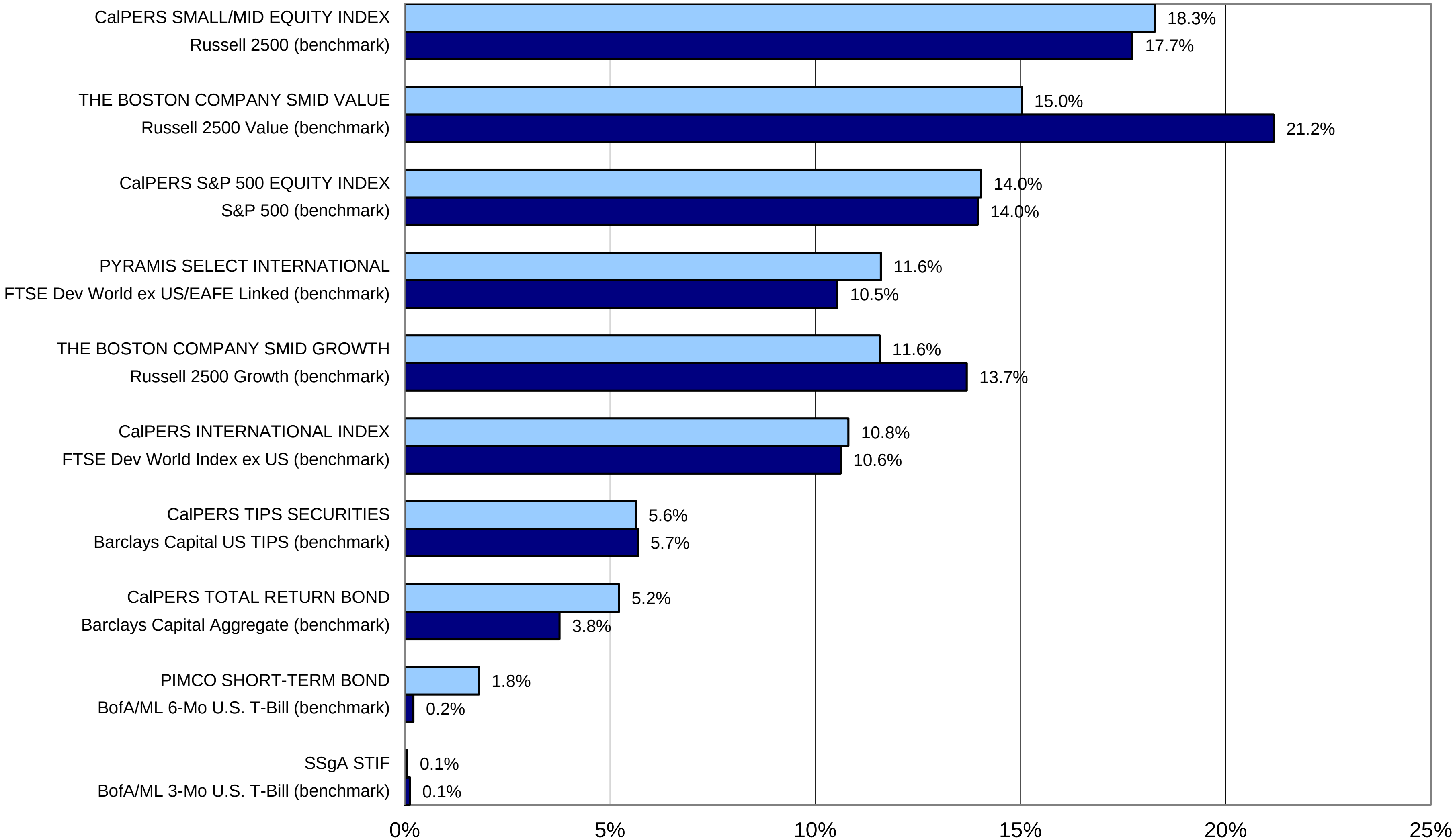
3-years* Investment Performance – SIP Asset Allocation Funds



CalPERS Investment Office Affiliate Investment Programs

*Annualized gross returns ending 3/31/13

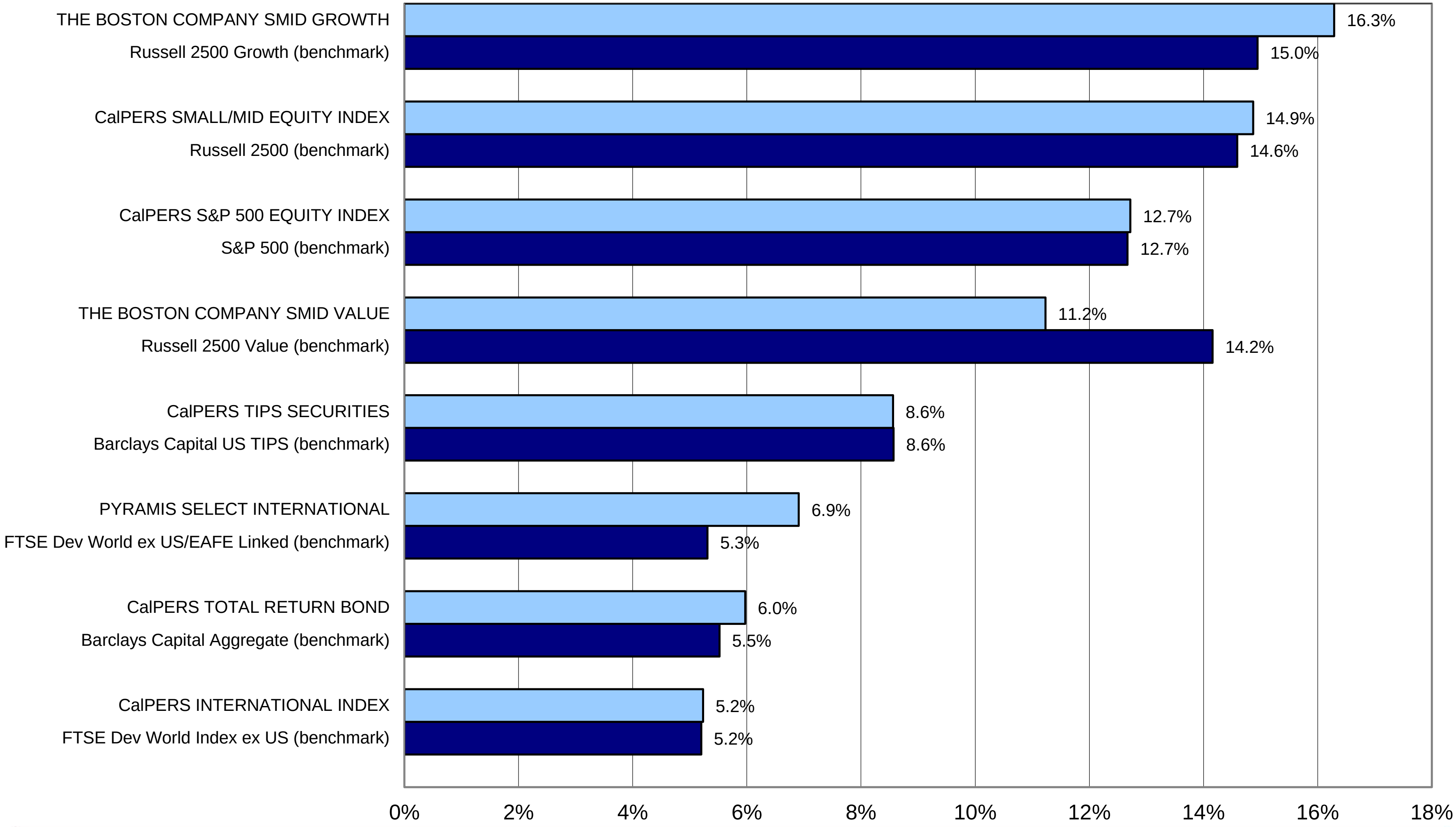
1-year* Investment Performance – SIP Core Funds



CalPERS Investment Office Affiliate Investment Programs

*Gross returns ending 3/31/13
Note: STIF fund performance is net of fees charged directly by SSgA.

3-years* Investment Performance – SIP Core Funds



CalPERS Investment Office
Affiliate Investment Programs

*Annualized gross returns ending 3/31/13

Note: The STIF Fund performance is net of fees changed directly by SSgA. The 3-year performance for the PIMCO Short-Term Bond Fund and STIF Funds will be available on 9/1/2013.

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY

FOR
SUPPLEMENTAL INCOME PLANS

~~August 13, 2012~~ June 17, 2013

This policy is effective immediately upon adoption and supersedes all previous Supplemental Income Plans policies.

I. PURPOSE

This document sets forth the investment policy ("Policy") for the California Public Employees Retirement System ("CalPERS") Supplemental Income Plans ("SIP" or "the SIP") and guidelines for the business needs and legal requirements applicable to the SIP program. Under the SIP, CalPERS administers various deferred compensation and defined contribution plans for employees of participating public agencies, schools and the State of California.[1] The Policy provides criteria against which results will be measured, and serves as a review document to guide ongoing operations and oversight. The Policy is also intended to ensure the Investment Committee ("Committee") is fulfilling its fiduciary responsibilities in the management of the SIP.

The Committee intends this Policy to be a dynamic document and will review it from time to time. The Policy will be modified periodically to reflect the changing nature of the SIP. In addition, the Committee has delegated to the CalPERS Staff certain authority that pertains to the ongoing management and administration of the SIP.

All of CalPERS SIP investment activities are designed and executed in order to serve the best interests of the Participants and beneficiaries of the SIP. All transactions will be for the sole economic benefit of CalPERS SIP Participants and beneficiaries and for the sole purpose of providing benefits to them.

The purpose of this Policy is to provide assurance to Participants that managers, consultants, and other entities selected by CalPERS take prudent and careful action while administering and managing the SIP. Under the SIP, Participants have an efficient and convenient method of setting aside and accumulating supplemental retirement savings over their period of employment. Overall investment plan and available individual investment options under the SIP will be designed to help Participants achieve their long-term retirement income goals by

[1] As of July 1, 2012, the Customer Services and Support Branch administers the CalPERS 457 Deferred Compensation Plan (the "457 Plan"), the Placer County 401(k) Plan, the Supplemental Contributions Program (the "SCP"), and the State Peace Officers' and Firefighters' Defined Contribution Plan (the "POFF") (collectively the "SIP")."

providing a diversified range of alternatives with materially different risk and return characteristics. Since SIP Participants' needs represent a wide range of investment time horizons, risk tolerances and return expectations, an appropriate range of investment options will be available while avoiding an overly complex fund line-up that might confuse the average Participant.

II. STRATEGIC OBJECTIVE

~~The investment options offered in the SIP will be broadly diversified. The SIP objective is to provide Participants with supplemental income during retirement. The SIP will accomplish this objective by:~~

~~A. Providing appropriate asset allocation funds as default investment options.~~

~~B. Offering a variety of high quality investment options based on age, risk tolerance and specific retirement income goals and objectives, so Participants may construct well-diversified portfolios should they not choose the default funds.~~

~~C. Self-directed brokerage option for participants wanting additional options.~~

The SIP objective is to help provide Participants with supplemental income during retirement consistent with the Participants' individual circumstances, goals, time horizons and risk tolerance. For the self-directed plans under the SIP, the Committee intends to accomplish this objective by offering the following three tiers of options:

A. Tier I will include customized Target Retirement Date Funds which are designed for Participants who do not wish to make active asset allocation decisions. The asset allocation of each Target Date Retirement Fund will change over time based on a Participant's expected time frame for entering retirement. In addition to offering Participants an all-in-one solution for retirement investing, these Target Date Retirement Funds will serve as the designated "default" option for investment of contributions by Participants who do not provide affirmative instruction on how to invest their contributions. CalPERS will develop the Target Retirement Date Funds and manage them in accordance with the Statement of Investment Policy for the Supplemental Income Plans Target Retirement Date and POFF Funds. Customization of the Target Retirement Date Funds will be based on CalPERS member demographic data, pension retirement income as the primary retirement income source, and average retirement age among all membership classifications.

B. Tier II will include a Core fund lineup for Participants who wish to actively design their own asset allocation based on their individual circumstances, goals, time horizons and risk tolerance. The Core funds are intended to offer an appropriate range of investment alternatives with materially different risk and return characteristics, which are style neutral, passively managed and provide exposure to major asset classes that are highly correlated with the market and bear lower fees. The Core investment fund lineup will include the following major asset classes:

1. U.S. Equity;
2. International Equity;
3. U.S. Short-Term Fixed Income;
4. U.S. Fixed Income;
5. Cash Equivalent; and
6. Inflation Hedging/Real Asset.

C. Tier III is the Self-directed brokerage window, which is available for employers that contract for this optional plan service. The Self-directed brokerage window, if elected by participating SIP employers, offers Participants a wide array of investment options in addition to the Core menu, if desired. It is generally designed for investors who have investing experience, are comfortable choosing from a wide variety of investments and understand how to research and evaluate a wide variety of investments on their own. The investments available under the Self-directed brokerage window are not endorsed, monitored, or selected by the CalPERS staff or the Committee.

For the POFF, with employer only contributions and where Participants do not self-direct the investment, a moderate risk asset allocation fund will be the investment fund as specified in accordance with the Statement of Investment Policy for the Supplemental Income Plans Target Retirement Date and POFF Funds.

III. RESPONSIBILITIES

To assist the Committee in fulfilling the management and administration responsibilities of the SIP, including selecting investment fund options consistent with the Policy's Strategic Objective, those involved will have the following responsibilities.

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

1. Selecting, monitoring, analyzing, and evaluating performance of each investment fund relative to an appropriate benchmark. The ongoing monitoring and evaluation of investment options will be a regular and disciplined process in accordance with established Investment Office Policies and procedures;

2. Establishing the fund line-up using internally and externally managed funds, including the default fund offerings;

3. Creating internally managed portfolios as fund offerings, as appropriate;

4. Directing cash contributions and rebalancing asset allocation funds as set forth in policy approved by the Committee;

5. Identifying ~~opportunities~~ fund line up considerations and making recommendations to the Committee consistent with pertinent delegations;

~~6. Setting, adjusting, or modifying the fees and premiums paid by participating employers and Participants as deemed necessary, advisable or appropriate to meet administrative needs of the SIP;~~

6. Reporting to the Committee at least annually on the investment performance of the investment fund options for ~~of~~ the SIP; and,

7. Monitoring implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of guidelines and policies at the next Committee meeting. All events deemed materially important will be reported to the Committee immediately. These reports shall include explanations of any violations and appropriate recommendations for corrective actions.

~~D.~~B. CalPERS Deputy Executive Officer – Customer Services and Support Branch ("DEO – CSS") is responsible for:

1. Providing guidance for the strategic objectives of the SIP funds.~~Educating Participants and providing information to allow them to make informed decisions about their need to supplement retirement income;~~

~~2. Administering the SIP to promote Participant investment practices consistent with achieving long-term retirement income goals; and~~

~~3. Selecting and overseeing a Third-Party Administrator for:~~

~~a. Recordkeeping, marketing, and processing transactions;~~

~~b. Receiving payroll contributions, rollovers and transfers from other retirement plans;~~

~~c. Processing distributions; and,~~

~~d. Monitoring and reviewing transactions at the plan and Participant level and reporting unusual transaction activity to Staff. Information from the Third-Party Administrator's Participant recordkeeping database shall be used to identify short-term and disruptive trading practices, and track specific fund trading violations of the SIP's Excessive Short-Term Trading policy as set forth under Section V of the Policy.~~

C. Internal and External Manager(s) ("Manager(s)") are responsible for aspects of portfolio management as set forth in their respective investment management contracts, guidelines or policies and shall fulfill the following duties:

1. Communicate with Staff as needed regarding investment strategy and investment results. The Manager(s) are expected to perform their duties in accordance with the objectives of each fund and to monitor, analyze, and evaluate performance relative to the agreed upon benchmark; ~~and,~~

2. Cooperate fully when Staff, SIP's custodian, the Third-Party Administrator and the consultant(s) request information; and,

3. Provide the fund fact sheets for the SIP investment fund options that include the fund's investment objective, strategy, exposures, risks, performance history, fees and expenses, and other material investment characteristics to help inform and educate the Participants and employers.

D. The SIP Participants may, if authorized by the applicable plan, choose to self-direct their investments, rather than accepting the default investment option. Individual accounts are established for each Participant and allow the Participants to exercise control over the assets in their accounts. In addition, Participants have the independence and authority to select those investment options they deem suitable to meet their retirement income goals and investment objectives, subject to certain investment and trading restrictions that may be adopted, from time to time, under the SIP program.

E. The Independent Investment Consultant is responsible for monitoring, evaluating, and reporting to the Committee, at least quarterly, about the internally and externally managed fund performance relative to the benchmarks and Policy guidelines.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

The benchmark for each of the SIP investment options is specified in the Benchmarks Policy. The objective is for each investment option under the SIP ~~funds~~ ~~to meet or exceed~~to track its respective ~~the appropriate~~ benchmark.

V. EXCESSIVE SHORT-TERM TRADING

The overall investment plan and the available individual investment options under the SIP are designed to help Participants achieve their long-term retirement income goals. Excessive short-term or disruptive trading of the funds is counter-productive to the long-term investment design of the SIP. To achieve a balance between the right of individual Participants to self-direct their investments, and the right of all Participants to enjoy appropriate growth of their assets in proportion to the risk they bear and at reasonable cost through investment in prudently managed investment funds, the SIP will employ administrative and procedural measures to restrain the use of excessive short-term or disruptive trading strategies by individual Participants that may occur at the expense of other Participants and result in the dilution of Participant value in the funds. Specifically, Staff in coordination with external managers will ~~take the following steps:~~ monitor all Participant trades to identify excessive short-term or disruptive trading. If such trading is identified, Staff will provide written notification to the Participant to explain the long-term focus of the SIP and to request that the Participant cease from engaging in this type of trading.

If after written notification, the Participant continues excessive short-term or disruptive trading, Staff will confer with the CalPERS Legal Office regarding the suitability of other measures used singly or in combination with one another as may be reasonably necessary to further address excessive trades, or other excessive short-term or disruptive trading by a Participant in contradiction of the Policy.

To avoid the need to monitor Participant trading while ensuring equitable treatment for all Participants, external managers may employ fair value pricing practices. Fair value pricing adjusts security prices when significant events occur after the closing of the local market. This price adjustment attempts to eliminate the potential profit a short-term trading strategy would seek to extract from the funds and therefore discourages the practice.

~~A. Perform monitoring, on a monthly basis, of all trades by Participants in both internally and externally managed SIP funds to identify Roundtrip Trades. An exempt transaction will not be counted as one of the legs of a Roundtrip Trade.~~

~~B. Provide written notice to a Participant who, within a 90-calendar day period, has completed two or more Roundtrip Trades to explain the long-~~

~~term focus of the SIP and to request that the Participant cease from engaging in this type of trading.~~

~~C. Provide written notice to a Participant who, within a 180-calendar day period following the initial written request to Participant, performs one or more Roundtrip Trades to describe trading restrictions that will be employed by SIP if Participant continues to engage in this type of trading.~~

~~D. If Participant completes a Roundtrip Trade following receipt of the SIP's second written request to Participant, SIP will direct the Third-Party Administrator to restrict Participant from trading back into the fund for a 90-calendar day period following the completion of the Roundtrip Trade. Trades out of the fund will be allowed at any time.~~

~~E. Confer with the CalPERS Legal Office regarding the suitability of other measures used singly or in combination with one another as may be reasonably necessary to further address Roundtrip Trades, or other excessive short-term or disruptive trading by a Participant in contradiction of the Policy.~~

VI. APPROACHES AND PARAMETERS

A. Philosophy and Approach

The SIP shall be managed in accordance with the CalPERS Total Fund Statement of Investment Policy and in a manner consistent with the respective investment policy governing each asset class. Upon adoption of significant Policy changes, a reasonable time period will be allowed to transition to the new Policy.~~The SIP will offer default asset allocation funds to provide Participants appropriate diversified funds providing a mix of investments allocated among different investment classes in pre-established proportions suited to specific investors' time horizons.~~

B. Strategy Process

A comprehensive strategy analysis shall be completed at least every three years and will be presented to the Committee for review and approval of the Policy. The CIO may recommend a more frequent analysis if expected returns, risks or liability value have substantially changed since the prior analysis.~~The core fund line-up of investments will be specifically designed and managed to offer funds that allow for appropriate growth of Participants' assets in light of the risk taken. This approach results in a compact line-up of institutionally managed, core investment options that span the risk-return spectrum, but avoid duplication, allowing Participants to diversify among investment asset classes.~~

C. Fund Structure

When SIP is invested with other CalPERS administered trust assets, the Custodian shall employ a unitized fund structure to maintain separate and distinct historical records and to produce individual net asset values (NAV's) for the SIP.

D. Restriction, Prohibitions and Authorized Securities

Restrictions, prohibitions and authorized securities of the SIP are defined in the policy governing each asset class or external investment guidelines.

VII. CALCULATIONS AND COMPUTATIONS

The Third-Party Administrator, Managers, consultants, and other entities 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 this policy are defined in CalPERS Master Glossary of Terms.

Approved by the Policy Subcommittee:	October 12, 2007
Adopted by the Investment Committee:	December 17, 2007
Revised by the Policy Subcommittee:	December 15, 2008
Approved by the Investment Committee:	February 17, 2009
Admin changes made due to Policy Review Project:	June 16, 2009
Admin changes due to adoption of Benchmark Policy:	September 29, 2009
Approved by the Investment Committee:	August 13, 2012
Approved by the Investment Committee:	June 17, 2013

Asset Class Glossary: Asset Allocation
Policy: Supplemental Income Plans
~~August 13, 2012~~June 17, 2013

~~Exempt Transaction~~
~~Any transaction that is initiated for purposes of depositing employer payroll contributions, processing a distribution or any administrator-initiated transaction (e.g., processing a Qualified Domestic Relations Order (QDRO), mapping assets from terminated funds, etc.). An Exempt Transaction will not be counted for purposes of determining whether a Participant has engaged in any short-term or disruptive trading under SIP's Excessive Short-Term Trading Policy.~~

Net Asset Value - NAV
The Net Asset Value or NAV is a term used to describe the value of an entity's assets less the value of its liabilities.

Participant
An individual that takes part in, or contributes to, one of the CalPERS Supplemental Income Plans.

Roundtrip Trade
~~Within a 30-calendar day period, a Participant purchases shares of an investment fund, subsequently sells shares of that same investment fund and then purchases back shares of the same investment fund, in any order (i.e., in/out/in or out/in/out), regardless of whether each leg of the Roundtrip Trade is made sequentially (i.e., purchases and sales are made in other investment funds in between each leg of the Roundtrip Trade). An Exempt Transaction will not be counted as one of the legs of a Roundtrip Trade.~~

Unitized Fund Structure
Unitized Fund Structure allows multiple participants to contribute to a pool of assets while maintaining historical records and producing individual Net Asset Values (NAVs) for each participant. Each participant's share in the portfolio is separately accounted for using a system that accounts for each class of shares' proportional entitlement to the portfolio's Total Net Assets. The system maintains all of the funds' holdings at the fund level, and maintains the fund prices at the class level.

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY

FOR
SUPPLEMENTAL INCOME PLANS
CalPERS ~~RISK-BASED AND~~ TARGET RETIREMENT DATE and POFF FUNDS

~~November 13, 2012~~June 17, 2013

This Policy is effective upon adoption and supersedes all previous Supplemental Income Plans CalPERS ~~Risk-Based and~~ Target Retirement Date and State Peace Officer and Firefighters' (POFF) Funds 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 CalPERS Supplemental Income Plans ("SIP") ~~Risk-Based Asset Allocation Funds and~~ Target Retirement Date and State Peace Officer and Firefighers' (POFF) Asset Allocation Funds, Asset Allocation Funds Strategy ("Program"). The design of this policy ensures that investors, managers, consultants, and other participants selected by CalPERS take prudent and careful action while managing the Program. Additionally, use of this policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

The Program furthers these goals by establishing asset class allocation targets and ranges, and managing asset class allocations within their policy ranges. For the Target Retirement Date Funds the asset class allocations are designed to change over time according to a pre-determined glidepath.

II. STRATEGIC OBJECTIVE

The investment options offered in the CalPERS ~~SIP Risk-Based Asset Allocation and~~ Target Retirement Date and POFF Asset Allocation Funds will be broadly diversified to minimize the effect of short-term losses within any mix of investments~~ self-directed by participants~~. The objective of these funds, in combination with defined benefit pension income and possibly social security, is to help participants achieve retirement adequacy. The Program shall further these objectives by seeking to accomplish the following:

A. Recommend asset allocation policies with targets and ranges based on a periodic assessment of estimated participant information such as:

retirement objectives and time horizons, demographics, other retirement assets and risk tolerances.

B. Offer asset allocation funds that achieve the highest rate of total return reasonably possible within prudent levels of risk and liquidity.

C. Maintain sufficient diversification to avoid large losses and preserve capital.

D. Ensure that the asset class policy ranges approved by the Committee are adhered to, and that any rebalancing is performed efficiently and prudently.

III. RESPONSIBILITIES

A. In addition to the Committee's responsibilities outlined in the SIP Statement of Investment Policy, the Committee is also responsible for approving asset classes for investment and approving a policy target allocation, permissible range, and benchmark for each asset class.

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. Managing CalPERS asset class allocations within policy ranges approved by the Committee, in accordance with Policy guidelines.

3. Reporting to the Committee annually and more frequently if needed about Program allocations, returns, risks, and activity.

4. Monitoring 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.

5. Providing recommendations to the Committee concerning the identification of asset classes and selection of asset class benchmarks, policy targets and ranges.

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

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

D. Internal and External Manager(s) ("Manager(s)") are responsible for aspects of portfolio management as set forth in their respective investment management contracts, guidelines or policies and shall fulfill the following duties:

1. Communicate with staff as needed regarding investment strategy and investment results.

2. Manage to the objectives of each fund.

3. Monitor, analyze, and evaluate performance relative to the agreed upon benchmark.

4. Cooperate fully with Staff, SIP's custodian, the Third Party Administrator and the consultant concerning requests for information.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

The benchmark for the Supplemental Income Plans CalPERS ~~Risk-Based and~~ Target Retirement Date and POFF Funds is specified in the Benchmarks Policy.

The objective is for the funds to meet the return of~~outperform~~ the appropriate benchmark.~~ and perform above the universe median.~~

V. INVESTMENT APPROACHES AND PARAMETERS

A. The Program asset classes and policy benchmarks are specified in the Benchmarks Policy.

B. Asset Class Policy Targets and Ranges

~~1. The policy asset class targets and permissible ranges for the Risk-Based Funds are shown below.~~

	~~Global Equity~~		~~US Fixed Income~~		~~TIPs~~		~~Commodities~~		~~REITs~~		~~Expected Return~~	~~Expected Risk~~
~~Fund~~	~~Target~~	~~Range~~	~~Target~~	~~Range~~	~~Target~~	~~Range~~	~~Target~~	~~Range~~	~~Target~~	~~Range~~		
~~Aggressive~~	~~85.0%~~	~~±6%~~	~~5.0%~~	~~±2%~~	~~0.0%~~	~~±0%~~	~~5.0%~~	~~±2%~~	~~5.0%~~	~~±2%~~	~~8.8%~~	~~14.5%~~
~~Moderate~~	~~60.0%~~	~~±5%~~	~~28.0%~~	~~±5%~~	~~5.0%~~	~~±2%~~	~~4.0%~~	~~±2%~~	~~3.0%~~	~~±1%~~	~~7.7%~~	~~10.4%~~
~~Conservative~~	~~30.0%~~	~~±5%~~	~~53.0%~~	~~±5%~~	~~15.0%~~	~~±4%~~	~~2.0%~~	~~±1%~~	~~0.0%~~	~~±0%~~	~~6.2%~~	~~5.4%~~

1. The policy asset class targets and permissible ranges for the Target Retirement Date Funds are shown in the glidepath below. Each Fund has asset allocation targets based on an expected retirement year. ~~(e.g. the 2050 Fund has an 85% target allocation to Global Equity in 2012 based on an expected retirement year of 2050).~~ The Funds' asset allocation targets are adjusted annually by moving each Fund to the asset allocation one row down in the glidepath table. When a Fund's asset allocation reaches those of the Income Fund, the Fund will be closed and participants in the Fund will be mapped to the Income Fund. Participants may self-select funds either based on their expected retirement date or based on their individual asset allocation preference. If no selection is made, the participant assets will be defaulted based on the participant age with an assumed retirement age of 60~~59~~. Funds were built and assigned with an initial retirement age of 60~~59~~, based on CalPERS member demographic data.

Target Retirement Date Funds Glidepath

Year*	Target Retirement Date Fund	Global Equity		US Fixed Income		TIPS		Commodities		REITs		Expected Return	Expected Risk
		Target	Range	Target	Range	Target	Range	Target	Range	Target	Range		
2012	2050	85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2013		85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2014		85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2015		85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2016		85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2012	2045	85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2013		85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2014		85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2015		85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2016		85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2012	2040	85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2013		85.0%	± 6%	5.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.8%	14.5%
2014		84.0%	± 6%	6.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.7%	14.3%
2015		83.0%	± 6%	7.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.7%	14.1%
2016		82.0%	± 6%	8.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.6%	13.9%
2012	2035	81.0%	± 6%	9.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.6%	13.7%
2013		79.0%	± 6%	11.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.5%	13.4%
2014		77.0%	± 6%	13.0%	± 2%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.5%	13.2%
2015		75.0%	± 6%	15.0%	± 5%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.4%	13.0%
2016		74.0%	± 6%	16.0%	± 5%	0.0%	-	5.0%	± 2%	5.0%	± 2%	8.3%	12.8%
2012	2030	72.0%	± 6%	17.0%	± 5%	1.0%	± 1%	5.0%	± 2%	5.0%	± 2%	8.2%	12.6%
2013		71.0%	± 5%	19.0%	± 5%	1.0%	± 1%	5.0%	± 2%	4.0%	± 2%	8.1%	12.3%
2014		70.0%	± 5%	20.0%	± 5%	1.0%	± 1%	5.0%	± 2%	4.0%	± 2%	8.1%	12.0%
2015		68.0%	± 5%	22.0%	± 5%	1.0%	± 1%	5.0%	± 2%	4.0%	± 2%	8.0%	11.8%
2016		66.0%	± 5%	23.0%	± 5%	2.0%	± 1%	5.0%	± 2%	4.0%	± 2%	7.9%	11.6%
2012	2025	64.0%	± 5%	24.0%	± 5%	3.0%	± 1%	5.0%	± 2%	4.0%	± 2%	7.9%	11.4%
2013		63.0%	± 5%	26.0%	± 5%	3.0%	± 1%	4.0%	± 2%	4.0%	± 2%	7.8%	11.1%
2014		61.0%	± 5%	28.0%	± 5%	4.0%	± 2%	4.0%	± 2%	3.0%	± 1%	7.8%	10.7%
2015		59.0%	± 5%	29.0%	± 5%	5.0%	± 2%	4.0%	± 2%	3.0%	± 1%	7.7%	10.3%
2016		57.0%	± 5%	30.0%	± 5%	6.0%	± 2%	4.0%	± 2%	3.0%	± 1%	7.6%	9.9%
2012	2020	55.0%	± 5%	31.0%	± 5%	7.0%	± 2%	4.0%	± 2%	3.0%	± 1%	7.5%	9.5%
2013		54.0%	± 5%	32.0%	± 5%	8.0%	± 2%	3.0%	± 2%	3.0%	± 1%	7.4%	9.3%
2014		53.0%	± 5%	32.0%	± 5%	9.0%	± 3%	3.0%	± 2%	3.0%	± 1%	7.4%	9.1%
2015		52.0%	± 5%	32.0%	± 5%	10.0%	± 3%	3.0%	± 2%	3.0%	± 1%	7.3%	8.8%
2016		50.0%	± 5%	33.0%	± 5%	11.0%	± 3%	3.0%	± 2%	3.0%	± 1%	7.2%	8.5%
2012	2015	48.0%	± 5%	34.0%	± 5%	12.0%	± 3%	3.0%	± 2%	3.0%	± 1%	7.1%	8.3%
2013		47.0%	± 5%	35.0%	± 5%	13.0%	± 3%	2.0%	± 1%	3.0%	± 1%	7.0%	8.1%
2014		46.0%	± 5%	36.0%	± 5%	14.0%	± 3%	2.0%	± 1%	2.0%	± 1%	7.0%	7.9%
2015		45.0%	± 5%	36.0%	± 5%	15.0%	± 4%	2.0%	± 1%	2.0%	± 1%	6.9%	7.7%
2016		44.0%	± 5%	37.0%	± 5%	15.0%	± 4%	2.0%	± 1%	2.0%	± 1%	6.9%	7.5%
2012	2010	43.0%	± 5%	37.0%	± 5%	16.0%	± 4%	2.0%	± 1%	2.0%	± 1%	6.8%	7.4%
2013		42.0%	± 5%	38.0%	± 5%	16.0%	± 4%	2.0%	± 1%	2.0%	± 1%	6.8%	7.3%
2014		40.0%	± 5%	40.0%	± 5%	16.0%	± 4%	2.0%	± 1%	2.0%	± 1%	6.7%	7.0%
2015		39.0%	± 5%	43.0%	± 5%	16.0%	± 4%	2.0%	± 1%	0.0%	-	6.7%	6.8%
2016		37.0%	± 5%	45.0%	± 5%	16.0%	± 4%	2.0%	± 1%	0.0%	-	6.6%	6.6%
2012	2005	35.0%	± 5%	47.0%	± 5%	16.0%	± 4%	2.0%	± 1%	0.0%	-	6.6%	6.4%
2013		33.0%	± 5%	49.0%	± 5%	16.0%	± 4%	2.0%	± 1%	0.0%	-	6.5%	6.2%
2014		31.0%	± 5%	51.0%	± 5%	16.0%	± 4%	2.0%	± 1%	0.0%	-	6.4%	6.0%
2015		30.0%	± 5%	52.0%	± 5%	16.0%	± 4%	2.0%	± 1%	0.0%	-	6.3%	5.7%
2016		30.0%	± 5%	53.0%	± 5%	15.0%	± 4%	2.0%	± 1%	0.0%	-	6.2%	5.4%
Target Income Fund (target allocation remains constant)		30.0%	± 5%	53.0%	± 5%	15.0%	± 4%	2.0%	± 1%	0.0%	-	6.2%	5.4%

~~* Asset allocations become effective on October 1 of each year.~~

Target Retirement Date Funds Glidepath

Year	Target Retirement Date Fund	US Equity		International Equity		US Fixed Income		Cash		Real Assets		Expected Return	Expected Risk
		Target	Range	Target	Range	Target	Range	Target	Range	Target	Range		
2013	2055	37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2014		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2015		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2016		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2017		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2013	2050	37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2014		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2015		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2016		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2017		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2013	2045	37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2014		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2015		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2016		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2017		37%	+/- 4	43%	+/- 4	10%	+/- 2	0%		10%	+/- 1	7.6%	15.9%
2013	2040	36%	+/- 4	42%	+/- 4	11%	+/- 2	1%	+/- 1	10%	+/- 1	7.5%	15.5%
2014		35%	+/- 4	41%	+/- 4	13%	+/- 2	2%	+/- 1	9%	+/- 1	7.3%	15.1%
2015		34%	+/- 4	40%	+/- 4	14%	+/- 2	3%	+/- 1	9%	+/- 1	7.2%	14.7%
2016		33%	+/- 4	39%	+/- 4	16%	+/- 2	4%	+/- 1	8%	+/- 1	7.1%	14.3%
2017		32%	+/- 4	37%	+/- 4	17%	+/- 2	6%	+/- 1	8%	+/- 1	7.0%	13.9%
2013	2035	31%	+/- 4	36%	+/- 4	18%	+/- 2	7%	+/- 1	8%	+/- 1	6.8%	13.4%
2014		30%	+/- 4	35%	+/- 4	20%	+/- 4	8%	+/- 1	7%	+/- 1	6.7%	13.0%
2015		29%	+/- 4	34%	+/- 4	21%	+/- 4	9%	+/- 1	7%	+/- 1	6.6%	12.6%
2016		28%	+/- 4	33%	+/- 4	23%	+/- 4	10%	+/- 1	6%	+/- 1	6.5%	12.2%
2017		27%	+/- 4	32%	+/- 4	24%	+/- 4	11%	+/- 2	6%	+/- 1	6.3%	11.8%
2013	2030	26%	+/- 4	31%	+/- 4	25%	+/- 4	12%	+/- 2	6%	+/- 1	6.2%	11.4%
2014		25%	+/- 4	30%	+/- 4	27%	+/- 4	13%	+/- 2	5%	+/- 1	6.1%	11.0%
2015		24%	+/- 4	28%	+/- 4	28%	+/- 4	14%	+/- 2	5%	+/- 1	6.0%	10.6%
2016		23%	+/- 4	27%	+/- 4	30%	+/- 4	15%	+/- 2	4%	+/- 1	5.8%	10.2%
2017		22%	+/- 4	26%	+/- 4	31%	+/- 4	17%	+/- 2	4%	+/- 1	5.7%	9.8%
2013	2025	21%	+/- 4	25%	+/- 4	32%	+/- 4	18%	+/- 2	4%	+/- 1	5.6%	9.4%
2014		20%	+/- 2	24%	+/- 4	34%	+/- 4	19%	+/- 2	3%	+/- 1	5.5%	9.0%
2015		19%	+/- 2	23%	+/- 4	35%	+/- 4	20%	+/- 2	3%	+/- 1	5.3%	8.6%
2016		18%	+/- 2	22%	+/- 4	37%	+/- 4	21%	+/- 4	2%	+/- 1	5.2%	8.2%
2017		18%	+/- 2	20%	+/- 4	38%	+/- 4	22%	+/- 4	2%	+/- 1	5.1%	7.8%
2013	2020	17%	+/- 2	19%	+/- 2	39%	+/- 4	23%	+/- 4	2%	+/- 1	5.0%	7.5%
2014		15%	+/- 2	17%	+/- 2	42%	+/- 4	25%	+/- 4	1%	+/- 1	4.8%	6.8%
2015		13%	+/- 2	15%	+/- 2	44%	+/- 4	26%	+/- 4	1%	+/- 1	4.6%	6.3%
2016		12%	+/- 2	14%	+/- 2	46%	+/- 4	27%	+/- 4	1%	+/- 1	4.4%	5.9%
2017		11%	+/- 2	13%	+/- 2	48%	+/- 4	28%	+/- 4	0%		4.3%	5.5%
2013	2015	10%	+/- 2	12%	+/- 2	49%	+/- 4	29%	+/- 4	0%		4.2%	5.3%
2014		9%	+/- 2	11%	+/- 2	50%	+/- 4	29%	+/- 4	0%		4.1%	5.2%
2015		9%	+/- 2	11%	+/- 2	50%	+/- 4	30%	+/- 4	0%		4.1%	5.1%
2016		9%	+/- 2	11%	+/- 2	50%	+/- 4	30%	+/- 4	0%		4.1%	5.1%
2017		9%	+/- 2	11%	+/- 2	50%	+/- 4	30%	+/- 4	0%		4.1%	5.1%
2013	2010 (Income)	9%	+/- 2	11%	+/- 2	50%	+/- 4	30%	+/- 4	0%		4.1%	5.1%
2014		9%	+/- 2	11%	+/- 2	50%	+/- 4	30%	+/- 4	0%		4.1%	5.1%
2015		9%	+/- 2	11%	+/- 2	50%	+/- 4	30%	+/- 4	0%		4.1%	5.1%
2016		9%	+/- 2	11%	+/- 2	50%	+/- 4	30%	+/- 4	0%		4.1%	5.1%
2017		9%	+/- 2	11%	+/- 2	50%	+/- 4	30%	+/- 4	0%		4.1%	5.1%

* Asset allocations become effective on October 1 of each year~~.~~

2. The POFF Fund asset class targets and permissible ranges are shown below.

POFF Fund	US Equity		International		US Fixed		Cash		Real Assets		Expected	Expected
	Target	Range	Target	Range	Target	Range	Target	Range	Target	Range	Return	Risk
	26%	+/- 4	31%	+/- 4	25%	+/- 4	12%	+/- 2	6%	+/- 1	6.2%	11.4%

C. Asset Allocation Fund Design Process

1. A comprehensive design analysis shall be completed for each asset allocation fund at least once every three years and will be presented to the Committee for review and approval of policy asset allocation targets and ranges. The Chief Investment Officer ("CIO") may recommend a more frequent analysis of asset allocation targets and ranges if expected returns, risks or estimated participant characteristics have substantially changed since the prior analysis. Additionally, the Program shall be reviewed by Staff at least annually to ensure that all assumptions used in establishing the Program continue to be reasonable. The CIO may also recommend to the Committee changes in the policy targets and ranges. ~~A target for cash is exempt from consideration.~~

2. The Program analyses shall also encompass the expected long-term capital markets outlook and expected inflation.

   a. Analyses shall identify suitable asset classes in accordance with Section V.D., and consider asset class expected returns, volatilities, and correlations.

   b. Analyses shall determine a suitable glidepath for the Target Date Retirement Funds taking into consideration the estimated participant characteristics.

   c. Analyses of alternative asset allocation strategies shall measure the estimated effect on expected risk and return, diversification, and likelihood of meeting participant retirement objectives.

   d. The Committee shall approve policy asset allocation targets and ranges expressed as a percentage of total assets. The Committee shall set policy ranges sufficiently wide to permit efficient and flexible implementation, yet sufficiently narrow to maintain the basic risk and return relationship established by the allocation targets.

D. Asset Class Criteria

A financial or real asset type shall be considered as an asset class if it has a risk, return, and correlation profile sufficiently different from existing CalPERS asset classes, and if its inclusion or exclusion materially affects the expected risk and return of the SIP Program.

1. Criteria for consideration when evaluating an asset class shall include the following:

   a. Sufficient size, liquidity, and cost efficiency to permit CalPERS SIP to invest meaningful amounts in that asset class, and have a material effect on CalPERS SIP return.

   b. Availability of sufficient internal or external investment and technical expertise to ensure prudent implementation of an investment in that asset class.

   c. Presence of diversification, return enhancement, liquidity provision, or some other readily identifiable attribute sufficiently different from other asset classes and which enhances CalPERS SIP ability to achieve the strategic objectives outlined in Section II.

   d. Acceptance by other large pension plan sponsors as a feasible and meaningful asset class, or in the absence of such acceptance, academic support for its inclusion.

   e. Availability of sufficient data, history, or expertise to assess the feasibility and benefit of the asset class to CalPERS SIP, by means of a measurable investment outcome. Further, the asset class must have a basis for developing expected investment returns, risks, and correlations for the purposes of the financial study.

2. The Committee may approve an asset class for investment provided it meets the above criteria.

3. Once CalPERS approves an asset class for investment, as part of the Program, the investment may only be made in accordance with a policy reviewed and approved by the Committee for that asset class. Such a policy shall specify the investment guidelines and provide for the monitoring of that asset class.

VI. INVESTMENT APPROACHES AND PARAMETERS - IMPLEMENTATION

A. Philosophy and Approach

The funds shall be managed in accordance with the approved Policy or Policies governing each asset class. Such policies shall specify the method and parameters for implementation and provide for the ongoing monitoring of that asset class.

B. Funds Structure/Parameters

Staff shall manage each fund in accordance with the approved strategic asset allocation. In order to increase the investment opportunities, selected internally managed funds shall be made available for investment in the form of pooled funds. When the Supplemental Income Plan is invested with other CalPERS administered trust assets, the ~~CalPERS~~ c~~C~~ustodian shall employ a unitized fund structure to maintain separate and distinct historical records and to produce individual net asset values ("NAV's").

C. Rebalancing

Asset class allocations shall be managed to be within policy ranges. Allocations may temporarily exceed policy ranges due to extreme market volatility or due to changing allocations established for a particular fund. In this case, the asset allocation will be returned to within its policy range in a timely manner, with the exact time period dependent upon transaction costs and liquidity.

Upon adoption of significant policy changes, a reasonable time period will be allowed to transition to the new asset allocations.

D. Restrictions, Prohibitions and Authorized Securities

Restrictions, prohibitions and authorized securities of the Fund are defined in the Policy governing each asset class.

VII. CALCULATIONS AND COMPUTATIONS

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

VIII. GLOSSARY OF TERMS

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

Approved by the Policy Subcommittee:	June 16, 2008
Adopted by the Investment Committee:	August 18, 2008
Technical Revision to Reflect Benchmark Name Change:	December 15, 2008
Revised by the Policy Subcommittee:	February 17, 2009
Approved by the Investment Committee:	March 16, 2009
Admin changes due to Policy Review Project:	June 16, 2009
Admin changes due to adoption of Benchmark Policy:	September 28, 2009
Approved by the Investment Committee:	October 15, 2012
Approved by the Investment Committee:	November 13, 2012
Approved by the Investment Committee:	June 17, 2013

Asset Class Glossary: Asset Allocation
Policy: Supplemental Income Plans CalPERS ~~Risk-Based and~~ Target Retirement Date and POFF Funds
~~November 13, 2012~~June 17, 2013

Asset Class Allocation
The net long market value of all non-derivative securities plus the net long futures-equivalent notional value of all derivatives.

Benchmark
A set of securities with associated weights that provides a passive representation of a market segment. A benchmark's return is often used as a comparative measure of a manager's performance results in an active portfolio.

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.

Diversification
Investing in multiple assets to avoid or reduce the exposure to any one source of risk.

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.

Glidepath
The pre-determined asset mix and asset allocation for a series of Target Date Retirement Funds. The glidepath automatically adjusts the asset allocation each year to achieve the appropriate risk and return for each stage of a participants' life.

Liquidity
The ability to quickly convert a particular investment into cash at a low transaction cost.

Net Asset Value - NAV
The Net Asset Value or NAV is a term used to describe the value of an entity's assets less the value of its liabilities.

Participant
A person that takes part in, or contributes to, one of the CalPERS Supplemental Income Plans.

Pooled Funds
Funds from many individual investors that are aggregated for the purposes of

investment, as in the case of a mutual or pension fund. Investors in pooled fund investments benefit from economies of scale, which allow for lower trading costs per dollar of investment, diversification and professional money management.

Rebalancing
The movement of portfolio asset class exposures closer to policy target weightings, generally resulting in a reduction in active (benchmark-relative) risk.

Return
A measure of the total performance of an investment over a designated time period. The return calculation for private equity is typically based on the internal rate of return, net of all fees and expenses.

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.

Target Retirement Date Funds
A series of diversified funds each of which has a pre-determined asset mix and allocation that will vary over time until and often into retirement. This dynamic asset allocation, or glidepath, is designed to reduce the level of risk as the participant approaches retirement. The target date refers to the date the participant reaches retirement age.

Unitized Fund Structure
Unitized Fund Structure allows multiple participants to contribute to a pool of assets while maintaining historical records and producing individual Net Asset Values (NAVs) for each participant.

Volatility
Expected or historical annualized standard deviation of returns. Returns can be total returns or the differential returns between a portfolio and its benchmark.

Andrew Junkin, CFA, CAIA
Managing Director & Principal

April 28, 2013

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

Re: Supplemental Income Program Review and First Reading of Associated Policy Changes

Dear Mr. Jones:

You requested Wilshire's opinion with respect to the program review of the Supplemental Income Program (SIP) and the proposed policy changes associated with the various changes Staff is undertaking in the SIP. Staff has engaged an outside consulting firm to review the SIP fund lineup and allocations for the target date funds. This review leads Staff to make several changes to the SIP.

Summary

Wilshire believes that the proposed changes to the SIP funds' lineup and to the glidepaths of the target date funds are appropriate, subject to the issues we raise for consideration in this memo. The proposed policy changes are also appropriate, and provide discussion as noted below.

Discussion

The construction of a three tier lineup (target retirement date funds, asset class funds, brokerage window) has become somewhat of a norm for defined contribution plans over the last few years. There has been considerable discussion in the defined contribution industry as to the use of brokerage windows. Many fund sponsors have offered them as a way to offer more customization to plan participants. Others have opted to not use them, viewing the other tiers as more appropriate vehicles for long term retirement savings. This more paternalistic view has gained momentum of late, spurred by concerns over the role a fiduciary should play in evaluating the brokerage window, discussions around regulations for brokerage windows, and fears that employees may be distracted by active trading within their portfolios.

The Investment Committee, as the ultimate fiduciary, should ensure they are comfortable with the role of the brokerage window in the SIP.

The consultant review of the fund lineup and construction has lead Staff to largely abandon active strategies within the SIP. While the prior active lineup had not added value, we do raise this issue as it is an ongoing topic during the Investment Beliefs project. The projected fee decrease of 46 basis points (as an example used by Staff) is significant and the simplicity of a mainly passive portfolio is attractive. However, to the extent that actively managed funds are desired by participants outside of the brokerage window, regardless of their success rate, the removal of active strategies could decrease the attractiveness of this plan to new or existing employees.

Another change recommended by Staff is the changing the glidepath of the target date funds to become more conservative, gliding "to" retirement rather than "through" retirement. While the logic is largely supported by the CalPERS SIP demographics, it should be noted that basing a glidepath on an average participant will lead to significant errors for those participants that do not look like the average (in this case, those with higher or lower income replacement levels from Social Security and/or the PERF or those who have significantly higher or lower SIP balances than the average participant). By choosing to glide more quickly to a conservative allocation, the fund should protect in declining markets, but may not provide the same level of returns and retirement dollars in normal and rising markets. In fact, some research[1] indicates that glidepaths are not nearly as important as the rate of savings in determining successful retirement outcomes and that static or inverse glidepaths may provide better results.

The proposed Policy changes match the changes to the SIP lineup and construction. However, we discussed with Staff that the roles previously ascribed to the Deputy Executive Officer – Customer Services and Support Branch are not investment roles and we questioned whether they are appropriately contained in an investment policy. This discussion prompted a revision of those roles in the Investment Policy to investment-related roles. We do believe that the rest of the duties should be formalized in some document, but our understanding is that there is not another policy that currently exists where these roles would be appropriately enumerated.

[1] Rob Arnott. "The Glidepath Illusion", 2012
http://www.researchaffiliates.com/Our%20Ideas/Insights/Fundamentals/Pages/F_2012_Sep_The_Glidepath_Illusion.aspx

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

Best regards,

Wilshire Associates
370 Interlocken Boulevard Suite 620 Broomfield, CO 80021 **TEL** 303.626.7444 **FAX** 303.466.1537
www.wilshire.com