California Public Employees' Retirement System
Total Fund Investment Policy

Effective Date

~~April 18, 2016~~ **[Month DD, 2017]**
This policy supersedes the previous Total Fund Investment Policy and the consolidated policies listed in the table of contents below.

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Total Fund Investment Policy Overarching Statements

A. Introduction

The California Public Employees' Retirement System (CalPERS) Total Fund Investment Policy (Policy), adopted by the CalPERS Investment Committee (Committee), sets forth CalPERS' investment beliefs and overarching investment purposes and objectives with respect to all its investment programs.

The purpose of this Policy, and each of CalPERS' other investment policies (collectively the Policies), is to provide a framework for the management of CalPERS assets. The Policies outline objectives, benchmarks, restrictions and responsibilities so that the Committee, staff, consultants, managers, members, and beneficiaries, and all other CalPERS stakeholders, clearly understand the objectives and policies of the CalPERS investment program. The Policies also encourage effective communication, facilitate transparency and compliance, and provide a framework for reporting back to the Committee, as appropriate.

The Policies set forth the guidelines that the Committee deems to be appropriate and prudent in consideration of the needs of and legal requirements applicable to the CalPERS investment program. The Policies provide criteria against which investment results will be measured and serve as a review document to guide ongoing operations and oversight. The Policies are also intended to ensure that the Committee is fulfilling its fiduciary responsibilities in the management of CalPERS' investments.

The Committee intends for the Policies to be a dynamic document and will review them from time to time. Policies will be modified periodically to reflect the changing nature of CalPERS assets and investment programs, benefit and structural changes, and economic conditions. This Policy applies to all CalPERS investments and supersedes any contrary or inconsistent provisions within asset-class and individual program policies.

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B. Strategic Objective

The overall objective of the CalPERS investment program is to generate returns at an appropriate level of risk to provide members and beneficiaries with benefits as required by law. This will be accomplished through a carefully planned and executed long-term investment program that efficiently and effectively allocates and manages the assets of CalPERS.

The Policies have been designed to allow CalPERS to achieve a long-term total return. Accordingly, prudent risk-taking is appropriate within the context of overall diversification to meet CalPERS' long-term investment objectives. The assets of CalPERS will be broadly diversified to minimize the effect of short-term losses within any investment program. Consistent with California Constitution, Article XVI, section 17, all CalPERS investment activities, and all investment transactions, shall be designed and executed solely in the interest of, and for the exclusive purposes of, providing benefits to participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system.

C. Program Specific Investment Policies

In addition to this overarching Policy, there are other policies that focus on program-specific aspects of the CalPERS investment program. It is intended that those policies be read in conjunction with this Policy.

D. Responsibilities

Details regarding various levels of responsibility for all programs are provided in the following appendices:

1. Reporting to the Committee
2. Investment Responsibilities

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E. Performance Objectives

Specifically:

A. The assets of CalPERS will be invested with the objective of achieving a long term rate of return that meets or exceeds the CalPERS actuarial expected rate of return.
B. CalPERS will seek to maximize returns for the level of risk taken;
C. CalPERS will seek to achieve a return that exceeds the Policy Index; and
D. CalPERS will seek to invest its assets efficiently, bearing in mind the impact of management and transaction costs on investment returns.

Policy benchmarks are listed in Appendix 5.

F. Computations & Calculations

All calculations and computations required under this Policy shall be based on the market value and holdings detail recorded by the CalPERS Custodian.

G. Investment Constraints & Limitations

Details regarding various investment constraints and limitations are provided in Appendix 7 for all Policy sections.

H. Glossary of CalPERS Specific Terms

Italicized terms appearing in the Policy are CalPERS specific in nature and are defined in the CalPERS Specific Glossary of Terms.

I. Policy Document History

Historical details of the Committee's adoption of and revisions to the Policy are provided in Appendix ~~8~~9.

I. Investment Beliefs

Purpose

This Policy requires that CalPERS develop and maintain a set of Investment Beliefs. Managing the CalPERS investment program requires exercising judgment in the face of considerable uncertainty. The Investment Beliefs provide a framework for exercising judgment and making investment decisions. Investment Beliefs:

- Provide a basis for strategic management of the investment portfolio
- Inform organizational priorities
- Ensure alignment between the Committee and staff
- Guide development of CalPERS culture

Investment Beliefs also provide context for CalPERS actions. They reflect CalPERS values and acknowledge CalPERS responsibility to sustain its ability to pay benefits for generations. The Investment Beliefs also acknowledge the critical importance of a strong and durable economy in achieving CalPERS' objectives.

The Investment Beliefs are not a checklist to be applied by rote to every decision. They are a guide for making judgmental decisions that often require balancing multiple, inter-related decision factors.

The Investment Beliefs are included as Appendix 3.

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II. Asset Allocation Strategy

Purpose

Asset allocation involves establishing asset class allocation policy targets and ranges and managing those asset class allocations within their policy ranges. CalPERS recognizes that over 90% of the variation in investment returns of a large, well diversified pool of assets can typically be attributed to asset allocation decisions.

The performance objective is to achieve positive active asset allocation returns over rolling five-year periods.

The Asset Allocation Program shall be managed with the following objectives:

A. A rate of total return sufficient to meet or exceed the actuarial expected rate of return within prudent levels of risk and liquidity;

B. Sufficient diversification to minimize the risk of significant loss in any single investment and preserve capital to the extent possible;

C. Adherence to the asset class policy ranges approved by the Committee, with any rebalancing being performed efficiently and prudently;

D. Adequate liquidity to meet cash needs; and

E. Positive returns through any active asset allocation decisions subject to policy ranges and risk limits.

Investment Approaches & Parameters

Strategic

A. Asset Class Targets and Ranges
See Appendix 4, Table 1, for asset class allocation targets and ranges. Asset allocation targets and ranges for the Affiliate Funds are provided within the individual Statements of Investment Policy for each fund.

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II. Asset Allocation Strategy (continued)

Investment Approaches & Parameters (continued)

Strategic (continued)

B. Strategic Asset Allocation Process
Staff may recommend to the Committee changes in the policy asset allocation targets and ranges.

C. 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 CalPERS total return.

1. Criteria for consideration when evaluating an asset class shall include the following:
   a. Strategic role of the asset class in the asset liability management (ALM) framework based on fundamental characteristics and risk and return drivers.
   b. Sufficient size, liquidity, and cost efficiency to permit CalPERS to invest meaningful amounts in that asset class, and have a material effect on CalPERS return.
   c. Availability of sufficient internal or external investment and technical expertise to ensure prudent implementation of an investment in that asset class.
   d. Presence of diversification, return enhancement, liquidity provision, or some other readily identifiable attribute that is sufficiently different from other asset classes and enhances CalPERS' ability to achieve the strategic objectives outlined above.
   e. 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.
   f. Availability of sufficient data, history, or expertise to assess the feasibility and benefit of the asset class to CalPERS, 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. An asset class may be approved for investment provided it meets the above criteria, and the Committee has had the opportunity for sufficient education to enable it to fulfill its fiduciary responsibility in giving such approval.

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Total Fund Investment Policy Sections

II. Asset Allocation Strategy (continued)

Investment Approaches & Parameters (continued)

Strategic (continued)

3. Once CalPERS approves a new asset class, the new program may only be implemented in accordance with investment policies reviewed and approved by the Committee for that asset class.

Implementation

A. Staff shall determine an asset allocation mix for each investment trust with targets and ranges based on a periodic ALM review.

B. Following any action by the CalPERS Board of Administration (Board) having the potential to result in substantial changes to the forecasted benefits, contributions, premiums, or liabilities of a program, staff shall assess the potential impact and recommend to the Committee as soon as practicable following the board action whether the strategic asset allocation process for each program should be postponed pending completion of such board action.

C. As contemplated in the CalPERS Funding Risk Mitigation Policy, the occurrence of a Funding Risk Mitigation Event, shall trigger an adjustment to the expected investment return, which shall in turn trigger an automatic adjustment to the CalPERS asset allocation targets as detailed in Appendix 4, Table 2.

D. Asset class allocations shall be managed to seek compliance with existing policy ranges. Allocations may temporarily deviate from policy ranges due to extreme market volatility or to accommodate contributions, distributions, or other short-term cash needs. If an asset class allocation exceeds the policy range, staff shall return the asset allocation to within its policy range in a timely manner, with the exact time period primarily dependent on transaction costs and liquidity.

   Further limitations are specified in Appendix 7.

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II. Asset Allocation Strategy (continued)

Investment Approaches & Parameters (continued)

Implementation (continued)

E. Accounts may be established and used to adjust asset class allocations within policy ranges, or to return asset allocations that have exceeded a policy range to within the policy range.

F. Overlay portfolios may be established to manage currency risk within the parameters contained in Appendix 7.

G. Managers may be retained for Program implementation subject to policy asset allocation ranges and/or overlay portfolio constraints.

H. The active asset allocation return will be measured and included in the Total Fund return and reported to the Committee no less than annually.

I. Target Tracking Error
Limitations on the Asset Allocation Program target tracking error relative to the Total Fund Policy Benchmark are detailed in Appendix 7.

J. ***External Manager*** Investment Guidelines for the Asset Allocation Program:
   1. Manager Selection
      a. Managers retained in the Asset Allocation Program shall have recognized expertise in active asset allocation.
      b. The selected managers shall be registered or appropriately exempt from registration, with the Securities and Exchange Commission (SEC) or an equivalent regulatory body, in the case of a manager based outside of the United States.
      c. Managers shall be selected in accordance with the applicable California laws and regulations, and CalPERS policy.

   2. Investment Manager Guidelines
      Managers shall operate under guidelines that describe their specific investment strategies, representative portfolio characteristics, permissible and non-permissible activities, restrictions on the purchase of certain securities, benchmark, and performance objectives.

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II. Asset Allocation Strategy (continued)

Derivatives & Leverage

A. Strategies

Financial futures contracts, forward contracts, swaps, options, combinations of these derivatives, exchange traded funds, and structured notes may be used in the Asset Allocation Program for only the following purposes:

1. To adjust asset class allocations, within approved policy ranges;

2. To minimize the investment effect of average cash balances held in cash equivalents accounts by overlaying with asset-class-specific derivatives.

B. Risks

Any use of derivatives to adjust asset class allocations shall comply with this Policy.

C. Leverage

In connection with any such use of derivatives, staff shall comply with the Investment Leverage section of this Policy.

D. Exposure Limit

Derivative exposure used in the Asset Allocation Program is limited to amounts that maintain all asset class allocations within their approved ranges.

E. Collateral

Collateral for all derivatives used in the Asset Allocation Program shall consist of cash or investment grade fixed income securities.

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III. Benchmarks

Purpose

The purpose of a benchmark is to establish target investment exposures, and to provide a relative measure to gauge whether a particular investment strategy is meeting stated goals and objectives. CalPERS' benchmarks shall be established to manage portfolio risk and return characteristics. Each asset class and related components shall have a benchmark as specified herein. Asset class benchmarks shall be set by the Committee. Staff shall establish controls for the selection and modification of benchmarks.

See Appendix 5 for benchmark details.

Performance Objective & Benchmark

A. The performance objective is for the various asset classes and programs to meet or exceed their respective benchmarks in a manner that is consistent with the risk parameters established for such asset class or program.

B. The policy benchmarks for individual programs or strategies are listed in Appendix 5.

In the event that benchmark modification needs to be considered, staff or a member of the Committee may bring the matter before the Committee for due diligence and consideration. This due diligence shall 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.

Analysis of the expected effect of the benchmark modification on the total portfolio risk/return characteristics.

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IV. Investment Risk Management

Purpose

Risk management is central to managing the assets of CalPERS and to achieving the strategic objectives. A framework for investment risk management is established through (a) the adoption of investment policies for total fund strategic asset allocation, (b) individual asset classes and portfolios with appropriate benchmarks and (c) reasonable risk limits for the implementation of the program. The level of risk assumed will be monitored and reported using selected risk metrics as required herein.

The program does not require the elimination of risk but instead strives to achieve a balance between risk and return. CalPERS must take on risk to achieve desired levels of return. The objective is to ensure that economic and investment risk taken is prudent and properly managed with collaborative input from each asset class.

The program is not intended to manage other risks that CalPERS faces, such as operational risks and legal risks. These risks are managed by other units within CalPERS and are addressed within their separate policies.

The program shall be managed with the objective of accomplishing the following:

A. Provide an integrated process for overall investment risk management at both the Total Fund and asset class level;

B. Identify, measure, and communicate investment risks across the Total Fund and within each asset class;

C. Monitor investment returns as well as risk to determine if risks taken are adequately compensated; and

D. Ensure appropriate organizational independence of investment risk measurement systems and functions from investment decision-making functions.

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Total Fund Investment Policy Sections

IV. Investment Risk Management (continued)

Investment Approaches & Parameters

A. Investment Risk Management Framework
The CalPERS investment risk framework established herein is expected to evolve over time in alignment with industry best practices. The framework shall address the identification, measurement, assessment, and ongoing monitoring of investment risk.

B. Risk Management and Assessment
Investment risk is assessed using appropriate and consistent industry standard methodologies established at the Total Fund level and within each asset class.

C. Risk Limits and Guidelines
1. Total Fund tracking error limits (both total and active allocation) are specified in Appendix 7 and will be monitored and managed as identified risks within the overall investment risk framework.
2. The leverage report shall document the amount of leverage in each asset class relative to the leverage limit stated in Appendix 6.
3. The counterparty report establishes guidelines for each investment counterparty based on credit default swap spreads that will be used to monitor trends in the credit quality of each counterparty.
4. A "what if" risk analysis will be performed for any investment that exceeds the delegated authority of the applicable Managing Investment Director. Staff will also perform a "what if" risk analysis upon the request of other Investment Office staff or the Committee.

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Total Fund Investment Policy Sections

I. Global Derivatives and Counterparty Risk

Purpose

This section of the Policy is intended to provide a strategic framework for governance of the use of derivatives and derivatives strategies by the CalPERS Investment Office across both internally and externally managed portfolios. The policy is intended to ensure that CalPERS has effective operational, risk management, and compliance controls in place governing the use of derivatives within the investment process.

This section outlines the issues that must be addressed for each derivatives strategy, whether internally or externally managed, in regard to guidelines, development of procedures, and operational requirements.

Policy Scope

A. Benefit Plans/Trusts Covered under the Policy
This section applies to the use of derivatives by CalPERS within all CalPERS trusts and benefit plans.

B. This section shall apply to the use of derivatives by investment staff and external managers operating under Investment Management Agreements (IMAs).

C. Limited liability entity or registered/commingled fund managers may be required to provide information to staff on derivatives trading activities within each entity in order for CalPERS to comply with applicable aggregation or position limit regulations and reporting requirements.

Investment Approaches & Parameters

A. Derivatives subject to this section include, without limitation:
1. Futures contracts
2. Options
3. Options on futures contracts
4. Forward contracts
5. Swap agreements
6. Security based swap agreements
7. Swap contracts with embedded options
8. Instruments or contracts intended to manage transaction or currency exchange risk in purchasing, selling, or holding investments

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V. Global Derivatives and Counterparty Risk (continued)

Investment Approaches & Parameters (continued)

Spot Foreign Exchange transactions with settlement date up to T+5 shall be exempt from this section.

Cash transactions, in any asset class, are not derivatives. Collateralized Mortgage Obligations (CMOs) and convertible bonds and other investment instruments where the cash investment is similar to the market and notional exposure, are likewise excluded from the definition of derivative for purposes of this section.

B. Derivatives Application Permitted
Derivatives may be used to efficiently manage risk and return characteristics of the Public Employees' Retirement Fund (PERF)and/or individual sub-portfolios.

C. Derivatives Application Not Permitted
Derivatives may only be used to invest in asset classes that are consistent with this Policy and the Asset Allocation Program asset categories, implementation strategies, and risk-return characteristics.

Derivatives shall not be used to avoid or subvert existing delegated authorities or investment policy limits.

D. Derivatives Control Procedures
Staff shall adopt documented control procedures that cover the following areas:

1. Accounting and performance measurement for derivatives

2. Risk Management – procedures for evaluating the use of derivatives and monitoring market risk exposure, liquidity needs, and counterparty risk limits

3. Operational Risk – procedures that establish a process for evaluating operational activities associated with derivatives to ensure the use of proper systems, controls, staffing, and staff qualifications

4. Regulatory Compliance – procedures for ensuring compliance with any regulations in conjunction with derivatives activities undertaken by CalPERS

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VI. Investment Leverage

Purpose

The purpose of this section is to set forth a framework for comprehensively identifying, measuring, managing, and reporting various forms of leverage.

This section is intended to place limits on and set standards for the use of leverage that reasonably balances investment flexibility with risk management.

This section is also intended to result in greater consistency across investment units, and in greater ability of the Committee to direct policies concerning leverage.

Investment Approaches & Parameters

See Appendix 6 for investment leverage parameter details.

A. Use of leverage is prohibited unless expressly permitted in this section.

B. Direct debt, except for unsettled loss positions on non-exchange traded contracts, is prohibited unless authorized by the Committee for a defined purpose.

C. A capital commitment or credit enhancement program does not represent leverage or direct debt as these are considered contingent liabilities.

D. Any program that permits the use of recourse debt shall include the following risk management guidelines:
   1. A limit on the amount of recourse debt
   2. Diversification requirements and due diligence standards shall be considered in the investment decision on the assets with recourse debt

E. Recourse debt is prohibited for programs that may not have complete transparency on all investment positions. The maximum potential loss on these positions shall be the amount of investment.

F. The use of currency swaps does not result in notional leverage because the swaps merely convert exposure from one currency to another.

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VII. Divestment

Purpose

This section sets forth CalPERS policy (Policy) for responding to external or internal initiatives to cause CalPERS to sell investments or refrain from making additional investments (Divesting) for the purpose of achieving certain goals that do not appear to be primarily investment-related, such as promoting social justice (Divestment Initiatives). Typically, Divestment Initiatives focus on companies that do business in a specified country, are engaged in a specified industry, or in specific practices deemed undesirable by federal and state law (*e.g.*, human rights violations) (Targeted Companies).

CalPERS investment in a company does not necessarily signify that it approves of the company's policies, products, or actions. CalPERS, nevertheless, wants companies in which it invests to meet high corporate governance, ethical, and social standards of conduct. The Committee believes that this generally will promote superior long-term investment performance.

CalPERS Board of Administration (Board) and its Staff have fiduciary duties of loyalty and prudence, pursuant to the California Constitution, Article XVI, Section 17, and Government Code (GC) Section 20151, to invest "with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with those matters would use in the conduct of an enterprise of a like character and with like aims." (GC Section 20151(c).)~~.~~. The Board and Staff also have a constitutional fiduciary responsibility to "diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so." (Cal. Const., Art XVI, Sec. 17, subdiv. (d).).

These fiduciary obligations generally ~~forbid~~ precludeCalPERS from sacrificing investment performance for the purpose of achieving goals that do not directly relate to CalPERS operations or benefits. Divesting appears to almost invariably harm investment performance, such as by causing transaction costs (e.g., the cost of selling assets and reinvesting the proceeds) and compromising investment strategies.

In addition, there appears to be considerable evidence that Divesting is an ineffective strategy for achieving social or political goals, since the usual consequence is often a mere transfer of ownership of divested assets from one investor to another. Investors that divest lose their ability as shareowners to influence the company to act responsibly.

This Policy, therefore, generally prohibits Divesting in response to Divestment Initiatives, but permits CalPERS to use constructive engagement, where consistent with fiduciary duties, to help Divestment Initiatives achieve their goals.

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VII. Divestment (continued)

~~Statement of Policy~~Approaches & Parameters

A. CalPERS' Preferred Approach is Engagement

As reflected by CalPERS Investment Belief 3, CalPERS uses the following prioritization framework in considering whether to engage on issues raised by stakeholders:

- Principles and Policy – to what extent is the issue supported by CalPERS Investment Beliefs, Principles of Accountable Corporate Governance, or other Investment Policy?
- Materiality – does the issue have the potential for an impact on portfolio risk or return?
- Definition and Likelihood of Success – is success likely, in that CalPERS action will influence an outcome that can be measured? Can we partner with others to achieve success or would someone else be more suited to carry the issue?
- Capacity – does CalPERS have the expertise, resources, and standing to influence an outcome?

Consistent with the foregoing, CalPERS will undertake constructive engagement in support of Divestment Initiatives to the extent the Committee determines to be appropriate or as required by law, but CalPERS will not sell investments in Targeted Companies or refrain from investing in them in response to Divestment Initiatives except as follows:

1. CalPERS will sell Targeted Company investments or refrain from making them to the extent investment in the Targeted Company is imprudent and inconsistent with fiduciary duties. CalPERS recognizes that the prudence of an investment may depend on its purpose. ~~For example, it might be imprudent to retain an investment in an actively managed portfolio, but prudent to retain it in an indexed portfolio or as part of a long-short absolute return strategy.~~
2. To the extent required by law and consistent with fiduciary duties, CalPERS will comply with federal and constitutional California state laws that require Divesting.

B. Divestment Review

The following processes will be used to ensure that prior divestment decisions remain supportive of the prudent stewardship of the System's assets consistent with the Committee's fiduciary obligations:

1. The Board's General Pension Consultant will monitor and provide reports to the Committee on the estimated performance and risk impacts of all then in-force divestments for the affected portfolios.

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(*See* Appendix 1.)

2. For so long as any divestments remain in effect for any of the portfolios, staff shall conduct a review of all such in-force divestments at regular intervals, to include an economic analysis of the projected impact on the risk-return profile of the - affected portfolios, and present such analysis to the Committee for a determination whether continuation of the divestments is consistent with fiduciary duties.

C. Notice and Voting Protocol

For each divestment included in a regularly scheduled review as described above, continuation of the divestment will require an affirmative roll-call vote of the Committee.

In addition, any determination by the Committee that a divestment activity required pursuant to state legislative mandate would be, or, in the case of an in-force divestment, has become, inconsistent with the Committee's fiduciary duties, such that reinvestment is appropriate, will include:

1. A presentation and discussion of relevant findings in open session at a properly noticed meeting of the Committee, with 72-hour advance notice to interested stakeholders; and

2. A roll-call vote of the Committee.

~~This Policy does not require CalPERS to re-examine investment policies and practices in effect when this Policy was adopted to determine whether they were influenced by Divestment Initiatives or have or will result in Divesting.~~

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VIII. Liquidity Program

Purpose	The Liquidity Program seeks to provide liquid assets that could be converted to cash with little market impact.
Investment Approaches & Parameters	All investment programs shall have specific written guidelines. The guidelines shall outline the investment approaches, permissible and restricted activities, and a performance objective that is commensurate with the program's purpose. Staff shall rely on short- or long-term ratings from authorized nationally recognized statistical rating organizations (NRSROs). Staff shall maintain and annually update internal ratings for securities that are not rated by any authorized NRSROs.

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IX. Low Duration Fixed Income Program

Purpose

The Low Duration Fixed Income (LDFI) Program seeks to diversify CalPERS investment programs and enhance CalPERS returns, while dampening overall risk of CalPERS investment programs.

Investment Approaches & Parameters

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

Staff shall rely on short- or long-term ratings from authorized nationally recognized statistical rating organizations (NRSROs). Staff shall maintain and annually update internal ratings for securities that are not rated by any authorized NRSROs.

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X. Opportunistic Program

Purpose

The Opportunistic Program enables greater investment in assets perceived to be substantially undervalued, and this section specifies guidelines to manage the concurrent risks. The program also permits the establishment of innovative portfolios.

Performance Objective & Benchmark

The performance objective is to outperform the program benchmark over rolling three-year periods, net of all program costs and fees.

Investment Approaches & Parameters

A. Investment Guidelines
Program investments may be managed internally, or by external managers, or by a combination of internal and external managers.

1. Manager Selection
The selected managers shall be registered, or appropriately exempt from registration, with the Securities and Exchange Commission.

2. Investment Manager Guidelines
Manager guidelines shall not conflict with any CalPERS investment policy.

Implementation of this Program shall comply at all times with the manager guidelines and all CalPERS investment policies.

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XI. Securities Lending

Purpose

The Securities Lending Program is comprised of three functions: (1) lending both equity and fixed income securities to borrowers, (2) reinvesting the collateral posted by borrowers and (3) facilitating short-term liquidity needs of the Total Fund, through the use of leverage, subject to limits and constraints of the Liquidity Program. The program will be operated in a manner that maintains sufficient liquidity for the program and to adhere to the ~~Investment Policy for Global Governance~~Global Governance Principles.

Investment Approaches & Parameters

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

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XII. Terminated Agency Pool

Purpose

This section governs the management of the assets supporting the Terminated Agency Pool Program (TAP Program).

Investment Approaches & Parameters

A. The TAP Program shall be managed to closely match assets to the projected future benefit payments and to minimize the likelihood of the program becoming underfunded. Following the periodic recalculation of TAP Program liabilities by the CalPERS Actuarial Office, a segmented asset allocation process shall be utilized as follows:

1. An immunization segment intended to:

   a. Closely match, to the extent practicable, the cash flows of the assets to the forecasted benefit payment cash flows across a range of inflation scenarios;

   b. Invest a portion of the program assets in such a way as to ensure that cash flows beyond 30 years can be met across a range of inflation scenarios;

   c. Provide sufficient liquidity for two years of forecasted benefit payment cash flows;

2. A surplus segment consisting of TAP Program assets in excess of those needed for the "immunization" segment described above, to be invested consistent with the asset allocation utilized for the PERF;

B. Program Structure/Parameters
The CalPERS Custodian may employ a unitized fund structure to maintain separate and distinct historical records and to produce individual net asset values of all investments.

C. Rebalancing
The Investment Office and Actuarial Office shall collaborate to monitor the funded status of the TAP Program and to rebalance the recommended portfolio as the forecasted benefit payment cash flows are updated.

D. Restrictions, Prohibitions, and Authorized Securities
Authorized securities for the "immunization" and surplus segments are included in Appendix 7 of this Policy.

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XIII. Plan Level and Asset Class Transition Portfolios

Purpose

The purpose of this section of the Policy is to ensure that CalPERS staff takes prudent and careful action while performing transitions, and to establish appropriate controls and approvals governing transitions. Plan level and asset class transitions shall separate the cost and performance impacts on investment programs or asset classes related to cash or security movements and transactions not associated with the on-going investment management of affected portfolios. Transitions activity can be implemented using transition portfolios or an allocation costs capture system (ACCS).

A. A plan level transition may be established for any asset class for the purpose of achieving asset allocation or Total Fund related investment objectives. Plan level transition portfolio usage may be initiated by the Committee or by the Chief Investment Officer (CIO) or designated staff operating within their respective delegated authorities. All transaction costs and investment performance for these portfolios flows directly to the Total Fund, outside an individual asset class. Plan level transition portfolios may only be used for one or more of the following purposes:

   1. Rebalance of asset classes to achieve asset allocation objectives
   2. Raise or invest cash at the Total Fund level
   3. Trade to effectuate Total Fund investment objectives

   Plan level transitions may be accomplished through the use of designated plan level transitions portfolios or through the use of ACCS.

B. An asset class transition may be established within any asset class for the purpose of achieving asset class specific objectives. The MID from the specific asset class may initiate the use of an asset class transition portfolio after receiving approval from the CIO or COIO in advance. An asset class transition portfolio may be used by designated staff of the specific asset class operating within his or her delegated authority. All transaction costs and investment performance associated with the use of the asset class transition portfolio will flow to the asset class level. Asset class transition portfolios may only be used for one or more of the following purposes:

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XIII. Plan Level and Asset Class Transition Portfolios (continued)

Purpose (continued)

1. To terminate and fund external asset managers within the asset class;
2. To rebalance strategies and investment managers within an asset class; or,
3. To raise or invest cash within the asset class.

Asset class transitions may be accomplished through the use of designated asset class transitions portfolios or through the use of ACCS.

C. Transition portfolios shall be subject to additional oversight in order to:

1. Establish a control structure to ensure and validate that transition portfolio transactions are executed as intended; and,
2. Confirm that the transition portfolios are used for a permitted purpose and in the manner set forth by this and other related policies.

Investment Approaches & Parameters

All assets within the transition portfolios shall be held by the CalPERS Custodian and all transactions shall follow CalPERS' established execution and settlement procedures.

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XIV. Role of Private Asset Class Board Investment Consultants

Purpose

The roles of the ***Private Asset Class Board Investment Consultants*** are detailed in Appendix 2, Investment Responsibilities.

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XV. Custody Management

Purpose

The purpose of this section is to ensure the safe, efficient, and accurate custody of CalPERS assets. To carry out this objective, CalPERS shall contract with custodial firms with sufficient financial strength to protect the interests of CalPERS. Contracted custodians (Custodian) will be required, at a minimum, to demonstrate a long-term credit rating of Moody's A1 and S&P A+ (U.S. firms) or a similar measure of financial strength (non-U.S. firms).

Custodian Duties

The Custodian shall provide daily custodial, accounting, performance and reporting services for eligible assets held in CalPERS' name, in a manner consistent with industry standards. The Custodian shall provide services for any assets held by additional agents or sub-custodians appointed by CalPERS or the Custodian.

The Custodian shall register all of CalPERS' assets in the name of CalPERS or as required by the depository-provided books and records maintained by the Custodian. The Custodian shall maintain documentation to substantiate CalPERS ownership and chain of control for all assets.

The Custodian shall have a comprehensive system, acceptable to CalPERS, of selecting and evaluating sub-custodians and monitoring their internal control structures, performance and financial conditions.

Eligible foreign sub-custodians are entities that are incorporated or organized under the laws of a country other than the United States and meet the following criteria:

A. Qualified foreign banks or majority-owned direct or indirect subsidiaries of U.S. banks or bank holding companies.

B. Securities depositories or clearing agencies that act as systems for the central handling of securities or equivalent book entries in the countries that are regulated by foreign financial regulatory authorities.

C. Securities depositories or clearing agencies that act as transnational systems for the central handling of securities or equivalent book entries.

California Public Employees' Retirement System

Total Fund Investment Policy Sections

XV. Custody Management (continued)

Custodian Duties (continued)

The Custodian shall:

1. provide assurances, through a third-party review acceptable to CalPERS, that internal controls are sufficient to protect CalPERS assets;
2. adhere to US/Global accounting standards necessary for CalPERS to conform to its required financial reporting standards;
3. offer a robust technology platform with a strong control and security environment. Technology and data must be able to interface with multiple other systems supporting CalPERS business; and
4. have a global presence, supporting and providing services for international investments across the globe.

A. Fiduciary Relationship
Custodians, sub-custodians, and agents shall acknowledge their fiduciary relationship with CalPERS. They shall discharge each of their duties therein and exercise each of their powers (as those duties and powers are defined herein), with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters uses in the conduct of an enterprise of a like character and with like aims. The Custodian is required to contractually inform all sub-custodians and agents of this fiduciary relationship.

B. Ethics and Conflicts of Interest
Custodians shall comply with CalPERS policies and procedures, as amended from time to time, relating to ethics and conflicts of interest.

C. Custodian Liability
The Custodian shall be fully liable for any loss to, or diminution in, the value of the fund resulting from the Custodian's own acts or omissions. This liability shall extend to the acts or omissions of the Custodian's agents and sub-custodians.

CalPERS may, at its discretion, limit the liability of the Custodian when doing so does not compromise the rights of CalPERS or the safety or security of CalPERS assets.

California Public Employees' Retirement System

Total Fund Investment Policy Sections

XVI. Governance and Sustainability Strategy

Purpose

The CalPERS Governance and Sustainability Strategy (Strategy) shall be managed to accomplish the following objectives:

A. Support the achievement of sustainable (including environmental, social, and governance factors), long-term target risk-adjusted returns for the Total Fund.

B. Contribute to sustainable investment, advocacy, and engagement decision making across the Total Fund.

Approach & Parameters

The Strategy will be implemented through three channels, supported, where applicable, by the use of strategic partnerships to advance CalPERS' investment and policy objectives. The three channels are:

- Integration
- Engagement
- Advocacy

Additional information on reporting and responsibilities is available in Appendices 1 and 2. CalPERS Global Governance Principles are included as Appendix 8.

Appendix 1
Reporting to the Investment Committee

The following tables provide details regarding reporting to the Investment Committee by:

- Investment Office staff
- ***General Pension Consultant***
- Private Asset Class Board Investment Consultants

Investment Office Staff			
Program	**Responsible Party**	**Report Content**	**Frequency**
Total Fund	All Programs	1. Staff shall report problems with, material changes to, and all violations of this Policy. These reports shall include explanations of any violations and appropriate recommendations for corrective action.	At the next Committee meeting or sooner if deemed necessary
Investment Beliefs	All Programs	2. Staff shall report investment program strategy and its consistency with the Investment Beliefs.	No less than annually
Governance and Sustainability Strategy	All Programs	3. Staff shall report investment program strategy and its consistency with the CalPERS Governance and Sustainability Strategy and associated in-force strategic plan.	No less than annually
Asset Allocation	Asset Allocation & Risk Management	~~3.~~4. Staff shall report asset class allocations relative to their targets and ranges, as well as investment performance results for each asset class relative to benchmark returns. Allocations may temporarily deviate from policy ranges due to extreme market volatility and any such deviations shall be reported.	At the next Committee meeting or sooner if deemed necessary
		~~4.~~5. Staff shall report program allocations, returns, risks, and activity.	No less than annually
		~~5.~~6. Staff shall provide a comprehensive Asset Allocation Strategy analysis coincident with the review of actuarial methods and assumptions to be presented for review and approval of policy target asset class allocations and ranges.	Every 4 years
		~~6.~~7. Staff shall present a market-valuation-based analysis at the midpoint of the 4-year review cycle, or as needed in response to market conditions or changes affecting the capital market assumptions.	At midpoint of 4-year cycle or as needed
Benchmarks	Asset Allocation & Risk Management	~~7.~~8. Staff shall report any benchmark changes.	No less than annually

Investment Office Staff (continued)			
Program	**Responsible Party**	**Report Content**	**Frequency**
Risk Management	Asset Allocation & Risk Management	~~8.~~9. Staff shall report CalPERS investment risks and associated returns.	No less than annually
		~~9.~~10. Staff shall provide input and consulting on the design of risk reports used to measure and monitor risk. Reports should reflect the key risks identified as part of the overall risk framework.	No less than annually
		~~0.~~11. Volatility – Staff will report on both forecasted total risk and tracking error, measured as one standard deviation for the next year. These measures will be reported for each asset class and the Total Fund. In addition, staff will document the accuracy of risk forecasts for the Total Fund. Staff will accomplish this by presenting the history of monthly forecast and realized risk for both total risk and tracking error.	No less than annually
		~~1.~~12. Leverage – Staff will provide a report of recourse debt, non-recourse debt and notional leverage by asset class and the Total Fund. The report will also include capital commitments for the illiquid asset classes.	No less than annually
		~~2.~~13. Currency Risk – Staff will provide a report summarizing both actual portfolio and benchmark currency exposures of the Total Fund.	No less than annually
		~~3.~~14. Counterparty Risk – Staff will report on counterparty exposure, summarizing net amounts owed to or due from CalPERS investment counterparties. The report will include credit default swap spreads and credit ratings for use in determining when exposure to individual counterparties is to be limited.	No less than annually
		~~4.~~15. Concentration Risk – Staff will aggregate exposures across asset classes to create measures of concentration including industries, countries, and security issuer. This information will be presented for both the Total Fund portfolio and policy benchmark.	No less than annually
		~~5.~~16. Stress Testing –Staff will be responsible for the specification of stress testing and provide a periodic report that estimates the potential loss of market value to the Total Fund portfolio if certain economic events or historical scenarios were to occur.	No less than annually
		~~6.~~17. Liquidity Risk – During times of market stress, staff will report on the risk that assets cannot trade at or near the previous market price because of inadequate trading volume for particular instruments. Liquidity risk may also be evaluated based on capital commitments and debt restructuring requirements.	No less than annually

Investment Office Staff (continued)			
Program	**Responsible Party**	**Report Content**	**Frequency**
		~~7.~~18. Scenario Analysis – Staff will review the impact on total risk and tracking error of proposed new strategies or shifts in existing investments. The risk analysis will be performed at the asset class and total fund levels.	No less than annually
Leverage	Asset Allocation & Risk Management	~~8.~~19. Staff shall report recent estimates by asset class on recourse debt, non-recourse debt, and notional leverage. Leverage for the Currency, Credit Enhancement, and Securities Lending Programs shall be reported separately from asset class leverage.	No less than annually
		~~9.~~20. Staff shall report the amount of debt previously classified as recourse that CalPERS paid in the prior year.	No less than annually
Divestment	Investment Compliance & Operational Risk	~~0.~~21. Staff shall report to the Committee on (a) compliance activities undertaken pursuant to statutory divestment mandates from the state legislature, as applicable, and (b) any corresponding divestment decisions that may be required.	No less than annually
		~~1.~~22. Staff shall prepare and submit for Committee approval any divestment activity reports required by statute to be submitted to the California Legislature (*e.g.*, Iran, Sudan etc.).	No less than annually
Opportunistic	All Programs	~~2.~~23. Staff shall report on program investments, returns, risks, and activity.	No less than annually
Terminated Agency Pool	Asset Allocation & Risk Management	~~3.~~24. Staff shall report the current market value of assets and an analysis of the adequacy of the current program allocation to meet the forecasted benefit payment cash flows based on available data from CalPERS actuarial staff.	No less than annually
Plan Level & Asset Class Transition Portfolios	Investment Servicing Division	~~4.~~25. Staff shall report on the usage of transition portfolios.	No less than annually
~~Targeted Investments~~ Investment Manager Engagement Programs	~~Targeted Investments~~ Investment Manager Engagement Programs	~~5.~~26. Staff shall document CalPERS Total Fund investment presence in California via a comprehensive examination of CalPERS California-based investments across asset classes and the resulting ancillary benefits from these investments. The report will assess local jobs created or supported, investments in communities of interest such as low- to moderate-income communities, areas with high unemployment, and rural communities, and the broader economic impacts resulting from CalPERS investments statewide.	No less than annually

General Pension Consultant		
Program	**Report Content**	**Frequency**
Total Fund	1. Consultant shall report on the effectiveness of the Risk Management and Asset Allocation Programs, as well as use of Benchmarks relative to the policy.	No less than annually
Global Derivatives & Counterparty Risk	2. Consultant shall report the performance of portfolios to ensure that any derivative use does not have a long-term harmful effect on the portfolio.	No less than annually
Divestment	3. Consultant shall present to the Committee a comprehensive review and analysis of divestment activities to date.	No less than annually
Liquidity ~~~~~ **Low Duration Fixed Income** ~~~~~ **Securities Lending**	4. Consultant shall monitor, evaluate, and report on the performance of the Programs within this Policy relative to the benchmarks and other applicable CalPERS Policies.	No less than annually
Governance and Sustainability Strategy	5. The Consultant shall monitor, evaluate, and report on the progress of the CalPERS Governance and Sustainability Strategy for applicable programs, corresponding with the Annual Program Review process.	No less than annually

Private Asset Class Board Investment Consultants		
Program	**Report Content**	**Frequency**
Private Asset Classes	1. Review and provide an opinion letter to the Committee on investment policies and delegations of authority.	As needed
	2. Review and provide an opinion letter to the Committee on strategic and annual plans.	As needed
	3. Provide a report to the Committee on forecasts of asset class returns for total fund asset allocation purposes.	No less than annually
	4. Provide a report to the Committee that includes an analysis of market developments, market conditions, and macro-level view of market opportunities.	No less than annually
	5. Provide a report to the Committee regarding investment performance and portfolio risk and attribution analysis; monitor and report on deviations from policy benchmark performance and long-term expected performance.	No less than annually
	6. Review and provide an opinion letter to the Committee on appropriateness of asset class benchmarks	No less than annually
	7. Provide an opinion letter to the Committee on investments above staff's delegation of authority.	As needed
	8. ~~Perform annual review of major asset class sub-component programs and provide an opinion letter to the Committee on performance, risk, manager selection and monitoring processes, and on internal control processes and staffing.~~	~~No less than annually~~
	9. Perform annual review of ~~the~~ program(s) and provide an opinion letter to the Committee on performance, risk, manager selection and monitoring processes, and on internal control processes and staffing.	No less than annually

Private Asset Class Board Investment Consultants		
Program	**Report Content**	**Frequency**
	10. Monitor, evaluate, and report on the progress of the CalPERS Governance and Sustainability Strategy for applicable program(s).	No less than annually

Appendix 2
Investment Responsibilities

The following tables provide details regarding investment related responsibilities for the:

- Investment Committee
- Investment Office staff
- Actuarial Office staff
- General Pension Consultant
- Private Asset Class Board Investment Consultants
- External Manager

Investment Committee

Program	Responsible Party	Responsibility
Total Fund	Investment Committee	1. Approve adoption of and oversee compliance with Investment Policies designed to achieve CalPERS strategic objectives.
		2. Review policy recommendations made by staff.
		3. Approve asset classes for investment and set a policy target allocation, permissible range, and benchmark for each asset class, expressed as a percentage of total assets.
		4. Set the Total Fund policy benchmarks.
Divestment	Investment Committee	5. If necessary, engage an independent consultant to provide an analysis of the economic impact on the portfolio of any contemplated divestment activity, to include one-time transaction costs, predicted tracking error, and risk-return trade-offs, in order to aid the Committee in determining whether divestment is both appropriate and consistent with the Board's fiduciary duties. Staff can help facilitate this process as requested.

Investment Office Staff

Program	Responsible Party	Responsibility
Total Fund	All Programs	1. Periodically review the policies and make recommendations to the Committee regarding new policy development, policy revisions, repeals, and any other aspect that the staff considers pertinent.
		2. Engage with other asset class staff, consultants, and other pertinent parties to seek advice and counsel regarding investment strategy and investment results.
		3. Develop and maintain investment procedures, program guidelines, and sub-program guidelines.
		4. Develop and maintain all procedures, program guidelines, and sub-program guidelines required for the management and implementation of the CalPERS Governance and Sustainability Strategy.
		~~4.~~ 5. Implement and adhere to all policies.
		~~5.~~ 6. All aspects of program portfolio management, including investment transactions, use of leverage, and monitoring, analyzing, and evaluating performance relative to the appropriate benchmark.

Investment Office Staff		
Program	**Responsible Party**	**Responsibility**
		~~6.~~7. Manage CalPERS asset class allocations within policy ranges approved by the Committee, in accordance with policy guidelines.
		~~7.~~8. Modify benchmarks as applicable.
Investment Beliefs	Asset Allocation & Risk Management	~~8.~~9. Facilitate a periodic review of the Investment Beliefs in conjunction with the Strategic Asset Allocation process.
Asset Allocation	Asset Allocation & Risk Management	~~9.~~10. Provide recommendations to the Committee concerning the identification of asset classes and selection of asset class benchmarks and policy targets and ranges based on periodic asset liability management (ALM) review.
		~~10.~~11. Determine adjustments in asset class allocations, and direct rebalancing account activity and fund transfers across asset classes.
		~~11.~~12. For program tracking errors and CalPERS Total Fund tracking errors, staff will evaluate forecast values against subsequent realized values over rolling 3 year periods.
Risk Management	Asset Allocation & Risk Management	~~12.~~13. Select, maintain, and enhance the risk management tools used by the program to provide analyses that inform and support the investment actions of the entire CalPERS investment staff.
		~~13.~~14. Provide consulting to Investment Office staff regarding investments being contemplated, current investment risks and the attribution of risk and return.
		~~14.~~15. Provide consulting on the development of Investment Office Policies, Procedures and Guidelines with respect to the measurement, assessment, and management of investment risk.
		~~15.~~16. Provide consulting on the design of processes and reports used to measure and monitor risk.
Global Derivatives & Counterparty Risk	Asset Allocation & Risk Management	~~16.~~17. Monitor the implementation of and compliance with the policy including due diligence and oversight of derivatives activities by External Managers, limited liability entities, or registered/commingled fund vehicles.
		~~17.~~18. Monitor and evaluate the use of derivatives and counterparty risk exposures across CalPERS to ensure the appropriate investment risk controls are in place.
	Asset Allocation & Risk Management /Asset Class Staff	~~18.~~19. Exercise thorough due diligence in assessing the scope of each LLE limited liability entity or registered/commingled fund manager's use of derivatives, their purpose, experience of the fund manager's staff in managing these positions, inherent leverage, and the manager's systems, controls, and operations for determining appropriateness of these entities for CalPERS investment.
		~~19.~~20. Evaluate periodically (no less than annually) for any changes in the use of derivatives at each LLE limited liability entity or registered/commingled fund to reaffirm the appropriateness of these investments at inception.

Investment Office Staff (continued)		
Program	**Responsible Party**	**Responsibility**
Divestment	Asset Allocation and/or Asset Class/ Program Areas	~~20.~~21. Provide the Committee with an analysis of the economic impact on the portfolio of any contemplated divestment activity, or of any in-force divestments subject to review pursuant to the Divestment Section, to include one-time transaction costs, predicted tracking error, and risk-return trade-offs, in order to aid the Committee in determining whether divestment is both appropriate and consistent with the Board's fiduciary duties.
		~~21.~~22. Implement any required divestments or prohibitions on future investments.
	Investment Compliance & Operational Risk	23. Staff shall present to the Committee a comprehensive review and recommendation, consistent with the Divestment Section, on all in-force divestments for the Committee's consideration and action at a minimum every five years.
		~~22.~~24. Maintain the lists of companies subject to potential divestment.
		~~23.~~25. Monitor the implementation, or required reconsideration, of any ~~required~~ divestments or prohibitions on future investments as required by the Policy.
	Investment Compliance & Operational Risk~~Global Governance~~	~~24.~~26. As applicable in connection with a given divestment mandate, and with any proposed reinvestment in previously divested securities, implement an appropriate plan of engagement with the targeted portfolio companies.
Liquidity ~~~~~ Low Duration Fixed Income	Global Fixed Income	~~25.~~27. Monitor internal and external managers in the implementation of, and compliance with, the Policy.
		~~26.~~28. All aspects of portfolio management including monitoring, trading, analyzing, evaluating, performance relative to the appropriate benchmark, and selecting and contracting with managers.
Opportunistic	CIO	~~27.~~29. Responsible for management of the Opportunistic Program
		~~28.~~30. Pre-approve all terms of any transfer of assets between a program account and another CalPERS account.
	CIO & MIDs	~~29.~~31. Determine clear assignment of investment management responsibility for each program asset.
Securities Lending	Global Equity	~~30.~~32. Monitor the implementation of, and compliance with, the Policy by lending agents, cash collateral managers, and principal borrowers.
		~~31.~~33. All aspects of portfolio management including monitoring, trading, analyzing, evaluating, performance relative to the appropriate benchmark, and selecting and contracting with managers
Terminated Agency Pool	Asset Allocation & Risk Management	~~32.~~34. Ensure that program rebalancing and restructuring is performed as soon as practicable following the receipt of updated forecasted benefit payment cash flows from the CalPERS Actuarial Office.
Plan Level & Asset Class Transition	Investment Servicing Division	~~33.~~35. Maintain control of the movement of cash and securities at the CalPERS Custodian.

Investment Office Staff (continued)		
Program	**Responsible Party**	**Responsibility**
Portfolios		
Role of Private Asset Class Board Investment Consultants	Private Equity and Real Assets	~~34.~~36. For investment transactions within staff's delegated authority, staff will analyze the transaction and make the investment decision.
		~~35.~~37. For investment transactions exceeding staff's delegated authority, staff will analyze the transaction and provide a recommendation to the Committee.
Custody Management	Investment Servicing Division	~~36.~~38. Notify the Custodian in writing of the appointment, suspension, or termination of any investment manager.
		~~37.~~39. Develop and recommend to the Committee the criteria and methodology for selection of the Custodian, consistent with CalPERS' enterprise-wide competitive solicitation and contracting procedures.
		~~38.~~40. Ensure that all original investment documents including deeds, titles, partnerships, and insurance contracts are safeguarded in accordance with the CalPERS enterprise-wide Business Continuity Plan.
Governance and Sustainability Strategy	Sustainable Investment Program	41. Support asset classes and program areas to integrate relevant sustainability and governance issues into investment, advocacy, and engagement decision making.
		42. Staff shall maintain a Total Fund-level Governance and Sustainability Strategic Plan approved by the Committee setting forth CalPERS' long-term objectives for the Strategy. Changes to the Strategic Plan require Committee approval.
		43. Obtain annual Committee approval of the Global Governance Principles
	Global Equity	44. Execute all publically traded company proxies and voting instructions in alignment with the Global Governance Principles

Actuarial Office Staff		
Program	**Responsible Party**	**Responsibility**
Terminated Agency Pool	Actuarial Staff	1. Provide a forecast of benefit payment cash flow.
		2. Recalculate pool benefit payment cash flow when new agencies are added to the program.

General Pension Consultant		
Program	**Responsible Party**	**Responsibility**
Total Fund	General Pension Consultant	1. Provide independent review, analysis, and recommendations regarding the development and revision of policies to ensure overall consistency, use of best practices, a system-wide approach, and implementation of CalPERS policies.
		2. Provide independent perspective and counsel to the Committee, to include routine communication with the Investment Office staff and periodic review of processes and procedures.

General Pension Consultant		
Program	**Responsible Party**	**Responsibility**
Benchmarks	General Pension Consultant	3. Monitor and evaluate the appropriate use of benchmarks related to performance of the Total Fund and Programs relative to the policy.
		4. Review and recommend approval of all requests for benchmark replacements and modifications.

Private Asset Class Board Investment Consultants (PACBIC)					
Program	**Transaction Type/Size**	**Independent Due Diligence Report (not PACBIC)**	***Prudent Person Opinion*** **(not PACBIC)**	**PACBIC Transaction Role**	**Opinion to the Board**
Private Equity	1. Fund Investments	MID discretion	N/A	MID discretion	N/A
	2. Co-Investment	MID discretion	N/A	MID discretion	N/A
	3. ***Customized Investment Accounts*** that invest alongside other similarly structured funds in the same investments	MID discretion	N/A	MID discretion	N/A
	4. Customized Investment Accounts with an individual mandate that does not invest alongside other similarly structured funds in the same investments or a Direct Investment	N/A	Required	MID discretion	N/A
	5. >Staff Delegated Authority	N/A	Required	Required	Required
Real Assets	6. ≤ $50 million	N/A	MID discretion	MID discretion	N/A
	7. >$50 Million	N/A	Required	MID discretion	N/A
	8. >Staff Delegated Authority	N/A	Required	Required	Required

1. Except as noted below, the PACBIC shall not:
    a. Manage assets for CalPERS
    b. Perform work for staff on special projects
    c. Provide opinions to staff regarding specific investment transactions

2. In limited circumstances, the PACBIC may be engaged for roles enumerated above if the PACBIC possesses unique knowledge or expertise that is not available through other providers. Such an

arrangement must be approved by the Committee prior to engagement. In situations where adequate time is not available to request Committee approval, staff may request approval from the Chair of the Committee. Upon approval of the request, staff will notify the other Committee members.

External Manager		
Program	**Responsible Party**	**Responsibility**
Global Derivatives & Counterparty Risk	External Manager	1. Operate under Investment Management Agreements (IMAs).
		2. Communicate with staff as needed regarding investment strategy and investment results.
		3. Cooperate fully with CalPERS staff, Custodian, and General Pension Consultant concerning requests for information.
Liquidity, ~~~~~ Low Duration Fixed Income	Global Fixed Income	4. Manage investments in accordance with each manager's contract with CalPERS and the Policy.
		5. Communicate and cooperate with Investment Office staff and authorized third parties regarding the management of investments..
Securities Lending	Global Equity	6. Manage investments in accordance with each manager's contract with CalPERS and the Policy.
		7. Communicate and cooperate with Investment Office staff and authorized third parties regarding the management of investments.

Appendix 3
Investment Beliefs

October 14, 2013

Investment Belief I Liabilities must influence the asset structure.
A. Ensuring the ability to pay promised benefits by maintaining an adequate funding status is the primary measure of success for CalPERS.
B. CalPERS has a large and growing cash requirement and inflation-sensitive liabilities; assets that generate cash and hedge inflation should be an important part of the CalPERS investment strategy.
C. CalPERS cares about both income and appreciation components of total return.
D. Concentrations of illiquid assets must be managed to ensure sufficient availability of cash to meet obligations to beneficiaries.
Investment Belief II A long time investment horizon is a responsibility and an advantage.
Long time horizon **requires** that CalPERS:
A. Consider the impact of its actions on future generations of members and taxpayers.
B. Encourage investee companies and external managers to consider the long-term impact of their actions.
C. Favor investment strategies that create long-term, sustainable value and recognize the critical importance of a strong and durable economy in the attainment of funding objectives.
D. Advocate for public policies that promote fair, orderly and effectively regulated capital markets.
Long time horizon **enables** CalPERS to:
A. Invest in illiquid assets, provided an appropriate premium is earned for illiquidity risk.
B. Invest in opportunistic strategies, providing liquidity when the market is short of it.
C. Take advantage of factors that materialize slowly such as demographic trends.
D. Tolerate some volatility in asset values and returns, as long as sufficient liquidity is available.

Investment Belief III CalPERS investment decisions may reflect wider stakeholder views, provided they are consistent with its fiduciary duty to members and beneficiaries.
A. As a public agency, CalPERS has many stakeholders who express opinions on investment strategy or ask CalPERS to engage on an issue. CalPERS preferred means of responding to issues raised by stakeholders is engagement.
B. CalPERS primary stakeholders are members / beneficiaries, employers and California taxpayers as these stakeholders bear the economic consequences of CalPERS investment decisions.
C. In considering whether to engage on issues raised by stakeholders, CalPERS will use the following prioritization framework: 1. Principles and Policy – to what extent is the issue supported by CalPERS Investment Beliefs, Principles of Accountable Corporate Governance or other Investment Policy? 2. Materiality – does the issue have the potential for an impact on portfolio risk or return? 3. Definition and Likelihood of Success – is success likely, in that CalPERS action will influence an outcome which can be measured? Can we partner with others to achieve success or would someone else be more suited to carry the issue? 4. Capacity – does CalPERS have the expertise, resources and standing to influence an outcome?
Investment Belief IV Long-term value creation requires effective management of three forms of capital: financial, physical and human.
A. Governance is the primary tool to align interests between CalPERS and managers of its capital, including investee companies and external managers.
B. Strong governance, along with effective management of environmental and human capital factors, increases the likelihood that companies will perform over the long-term and manage risk effectively.
C. CalPERS may engage investee companies and external managers on their governance and sustainability issues, including: 1. Governance practices, including but not limited to alignment of interests. 2. Risk management practices. 3. Human capital practices, including but not limited to fair labor practices, health and safety, responsible contracting and diversity. 4. Environmental practices, including but not limited to climate change and natural resource availability.

Investment Belief V CalPERS must articulate its investment goals and performance measures and ensure clear accountability for their execution.
A. A key success measure for the CalPERS investment program is delivery of the long-term target return for the fund.
B. The long time horizon of the fund poses challenges in aligning interests of the fund with staff and external managers.
C. Staff can be measured on returns relative to an appropriate benchmark, but staff performance plans should include additional objectives or key performance indicators to align staff with the fund's long-term goals.
D. Each asset class should have explicit alignment of interest principles for its external managers.
Investment Belief VI Strategic asset allocation is the dominant determinant of portfolio risk and return.
A. CalPERS strategic asset allocation process transforms the fund's targeted rate of return to the market exposures that staff will manage.
B. CalPERS will aim to diversify its overall portfolio across distinct risk factors / return drivers.
C. CalPERS will seek to add value with disciplined, dynamic asset allocation processes, such as mean reversion. The processes must reflect CalPERS characteristics, such as time horizon and size of assets.
D. CalPERS will consider investment strategies if they have the potential to have a material impact on portfolio risk and return.
Investment Belief VII CalPERS will take risk only where we have a strong belief we will be rewarded for it.
A. An expectation of a return premium is required to take risk; CalPERS aims to maximize return for the risk taken.
B. Markets are not perfectly efficient, but inefficiencies are difficult to exploit after costs.
C. CalPERS will use index tracking strategies where we lack conviction or demonstrable evidence that we can add value through active management.
D. CalPERS should measure its investment performance relative to a reference portfolio of public, passively managed assets to ensure that active risk is being compensated at the Total Fund level over the long-term.

Investment Belief VIII Costs matter and need to be effectively managed.
A. CalPERS will balance risk, return and cost when choosing and evaluating investment managers and investment strategies.
B. Transparency of the total cost to manage the CalPERS portfolio is required of CalPERS business partners and itself.
C. Performance fee arrangements and incentive compensation plans should align the interests of the fund, staff and external managers.
D. CalPERS will seek to capture a larger share of economic returns by using our size to maximize our negotiating leverage. We will also seek to reduce cost, risk and complexity related to manager selection and oversight.
E. When deciding how to implement an investment strategy, CalPERS will implement in the most cost effective manner.
Investment Belief IX Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error.
A. CalPERS shall develop a broad set of investment and actuarial risk measures and clear processes for managing risk.
B. The path of returns matters, because highly volatile returns can have unexpected impacts on contribution rates and funding status.
C. As a long-term investor, CalPERS must consider risk factors, for example climate change and natural resource availability that emerge slowly over long time periods, but could have a material impact on company or portfolio returns.
Investment Belief X Strong processes and teamwork and deep resources are needed to achieve CalPERS goals and objectives.
A. Diversity of talent (including a broad range of education, experience, perspectives and skills) at all levels (Board, staff, external managers, corporate boards) is important.
B. CalPERS must consider the government agency constraints under which it operates (e.g., compensation, civil service rules, contracting, transparency) when choosing its strategic asset allocation and investment strategies.
C. CalPERS will be best positioned for success if it: 1. Has strong governance. 2. Operates with effective, clear processes. 3. Focuses resources on highest value activities. 4. Aligns interests through well designed compensation structures. 5. Employs professionals who have intellectual rigor, deep domain knowledge, a broad range of experience and a commitment to implement CalPERS Investment Beliefs.

Appendix 4
Public Employees' Retirement Fund Asset Allocation Targets & Ranges

The targets and ranges are effective ~~July 1, 2015~~October 1, 2016.

Table 1 – Strategic Asset Allocation Targets and Ranges

Asset Class	Policy Target	Interim Target	Policy Range Relative to Target
Growth	59%	~~61~~54%	+/- *7%*
Global Equity	47%	~~51~~46%	+/- 7%
Private Equity	12%	~~10~~8%	+/- 4%
Income - Global Fixed Income	19%	20%	+/- 5%
Real Assets	14%	~~12~~13%	+/- 5%
Real Estate	11%	~~10~~11%	+/- 5%
Infrastructure & Forestland	3%	2%	+/- 2%
Inflation	6%	~~6~~9%	+/-3%
Liquidity	2%	~~1~~4%	+/-6% ~~3%~~
Total Fund	100%	100%	N/A

Table 2 outlines the asset allocation target weight changes that will be implemented following a Funding Risk Mitigation Event as defined in the Funding Risk Mitigation Policy.

Table 2: Funding Risk Mitigation Event Asset Allocation Target Changes

Starting Point Target Allocations (%)	**Cumulative Reduction in Expected Investment Return of (%):**	**0.05**	**0.10**	**0.15**	**0.20**	**0.25**
	Asset Classes	**Allocation Target Weights with Reduced Expected Returns (%)**				
~~51~~**46**	**Public Equity**	45~~49~~	43~~48~~	42~~46~~	40~~45~~	39~~44~~
~~10~~**8**	**Private Equity**	8~~10~~	8~~10~~	8~~10~~	8~~10~~	8~~10~~
20	**Fixed Income**	21~~22~~	23~~23~~	24~~25~~	26~~26~~	27~~27~~
11~~0~~	**Real Estate**	11~~10~~	11~~10~~	11~~10~~	11~~10~~	11~~10~~
2	**Infrastructure & Forestland**	2~~2~~	2~~2~~	2~~2~~	2~~2~~	2~~2~~
9~~6~~	**Inflation Assets**	9~~6~~	9~~6~~	9~~6~~	9~~6~~	9~~6~~
4~~1~~	**Liquidity**	4~~1~~	4~~1~~	4~~1~~	4~~1~~	4~~1~~

Appendix 5
Investment Benchmarks
Effective ~~July 1, 2015~~October 1, 2016

Table 1: Public Employees' Retirement Fund Policy Benchmarks

The Total Fund Policy Benchmark is the average return of the asset class benchmark indices weighted by asset class benchmark allocations. The Total Fund Policy benchmark return is the return attributable to the target asset class allocations. Staff employs active strategies in an effort to achieve a Total Fund portfolio return that exceeds the Total Fund Policy benchmark return.

Asset Class	Benchmark	Policy Weight	Interim Target Weight
Growth	~~84~~85.2%Public Equity benchmark + ~~16~~14.8% Private Equity benchmark	59.0%	~~61~~54.0%
Income	90% Bloomberg Barclays Long Liabilities + 10% Bloomberg Barclays International Fixed Income Index GDP weighted ex-US	19.0%	20.0%
Inflation Assets	75% ILB benchmark + 25% Commodities benchmark	6.0%	~~6~~9.0%
Real Assets	~~83~~84.6% Real Estate benchmark + 7.7~~8.5~~% Infrastructure benchmark + 7.7~~8.5~~% Forestland benchmark	14.0%	~~12.0~~ 13.0%
Liquidity	91-day Treasury Bill	2.0%	~~1.0~~ 4.0%

During the transition of implementing the approved strategic policy targets, interim weights will be used to calculate the Total Fund Policy benchmark. Interim weights will remain in use at the discretion of the Committee and will be reviewed on an annual basis.

Table 2: Public Employees' Retirement Fund Policy Benchmarks

Policy	Program	Benchmark
TOTAL FUND POLICY BENCHMARK		
Asset Allocation Strategy		Policy Index (Total Fund Policy Benchmark)
GROWTH POLICIES		
Growth	Total Growth	85.2~~4~~% Public Equity benchmark +~~16~~14.8% Private Equity benchmark
Public Equity	Total Public Equity	FTSE CalPERS Global (All-World, All Capitalization) customized to exclude Board directed divestments
Private Equity (PE)	Total Private Equity	(67% FTSE U.S. TMI + 33% FTSE AW ex U.S. TMI) +3% lagged one quarter.
INCOME POLICIES		
Global Fixed Income Program	Dollar-Denominated Fixed Income Program	Bloomberg Barclays Long Liabilities Index
	International Fixed Income Program	Bloomberg Barclays International Fixed Income Index GDP weighted ex-US
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.
INFLATION ASSETS POLICIES		
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% Bloomberg Barclays Global Inflation-Linked U.S. and 33% Bloomberg Barclays Universal Government Inflation Linked Bond Index ex-US.

Table 2: Public Employees' Retirement Fund Policy Benchmarks		
Policy	**Program**	**Benchmark**
REAL ASSETS POLICIES		
Real Assets	Total Real Assets	84.6~~3~~% Real Estate benchmark + 7.7~~8.5~~%Infrastructure benchmark + 7.7~~8.5~~% Forestland benchmark.
	Real Estate Program	Exceed (net of fees) NCREIF ODCE
	Infrastructure Program	Consumer Price Index +4%, lagged one quarter
	Forestland Program	NCREIF Timberland
LIQUIDITY POLICIES		
Liquidity Program	Total Liquidity Program	91-day Treasury Bill
OPPORTUNISTIC POLICIES		
Opportunistic Program	Multi Asset Class Program	Absolute 7.5%
ABSOLUTE RETURN STRATEGIES POLICIES		
Absolute Return Strategies	Absolute Return Strategies Program	One year Treasury Note + 5%

Table 3: Affiliate Fund Policy Benchmarks		
Policy	**Asset Class**	**Benchmark**
California Employers' Retiree Benefit Trust (CERBT) 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	Bloomberg Barclays Long Liability Index
	Treasury Inflation-Protected Securities (TIPS)	Bloomberg Barclays U.S. TIPs Index, Series L
	Commodities	S&P GSCI Total Return Daily
	Real Estate Investment Trusts (REITs)	FTSE EPRA/NAREIT Developed Liquid (Net)
Judges' Retirement System Fund	Cash Equivalents	91-day Treasury Bill
Judges' Retirement System II 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	CalPERS Custom FTSE Global Composite
	U.S. Fixed Income	Bloomberg Barclays Long Liability Index
	TIPS	Bloomberg Barclays U.S. TIPs Index, Series L
	Commodities	S&P GSCI Total Return Daily
	REITs	FTSE EPRA/NAREIT Developed Index
Legislators' Retirement System 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	CalPERS Custom FTSE Global Composite
	U.S. Fixed Income	Bloomberg Barclays Long Liability Index
	TIPS	Bloomberg Barclays U.S. TIPs Index, Series L
	Commodities	S&P GSCI Total Return Daily
	REITs	FTSE EPRA/NAREIT Developed Index

Table 3: Affiliate Fund Policy Benchmarks		
Policy	**Asset Class**	**Benchmark**
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	Bloomberg Barclays Long Liability Index
	TIPS	Bloomberg Barclays U.S. Treasury Inflation Protected Securities(TIPS) Index
	Commodities	S&P GSCI Total Return Daily
	REITs	FTSE EPRA/NAREIT Developed Liquid (Net)
	Liquidity	91-day Treasury Bill
Public Employees' Health Care Fund	U.S. Fixed Income	Bloomberg Barclays U.S. Aggregate Bond Index
Supplemental Income Plans		The performance of each individual investment fund will be evaluated against its appropriate asset class benchmark. The benchmark for each asset allocation fund is a weighted benchmark determined by weighting each asset class benchmark by its policy target.
	U.S. Equity	Russell 3000 Index
	International Equity	MSCI ACWI ex-USA IMI Index (Net)
	U.S. Fixed Income	Bloomberg Barclays U.S. Aggregate Bond Index
		Bloomberg Barclays U.S. 1-3 Year Government/Credit Bond Index
	Real Assets	The benchmark is a weighted benchmark consisting of: Dow Jones-U.S. Select REIT Index; Bloomberg Roll Select Commodity Index; S&P Global Large MidCap Commodity and Resources Index; Bloomberg Barclays U.S. TIPS Bond Index; S&P Global Infrastructure Equity Index
	Cash Equivalents	BofA Merrill Lynch U.S. 3-Month Treasury Bill Index

Appendix 6
Summary of Permissible and Prohibited Types of Leverage

Program	Notional Leverage	Non-Recourse Debt	Recourse Debt
Forestland	Prohibited	Permissible: Loan-to-Value ratio (Non-Recourse + Recourse) shall not exceed 50%	Prohibited
Global Equity	Permissible: Will be calculated on a ***net exposure*** basis and shall not exceed 10% of the Global Equity market value.	Permissible	Prohibited
Global Fixed Income	Permissible: Shall not exceed 10% of the Global Fixed Income market value.	Prohibited	Prohibited
Inflation Assets	Prohibited	Prohibited	Prohibited
Infrastructure	Prohibited	Permissible: Loan-to-Value ratio (Non-Recourse + Recourse) shall not exceed 65%	Prohibited
Liquidity	Permissible: Total leverage within the Liquidity Program shall not exceed 2% of the total fund value	Not Applicable	Permissible: Total leverage within the Liquidity Program shall not exceed 2% of the total fund value
Low Duration Fixed Income Program	Prohibited	Prohibited	Prohibited
Opportunistic	Permissible	Permissible	Prohibited
Private Equity	Permissible	Permissible: Some investments may use non-recourse debt (leverage) which may increase the volatility of returns.	Permissible: Subscription Financing allowed providing that Total Recourse Debt Allocated shall not exceed 15% of the lower of the current Net Asset Value or the target Net Asset Value of the Portfolio.

Program	Notional Leverage	Non-Recourse Debt	Recourse Debt
Real Estate	Prohibited	Permissible: Loan-to-Value ratio (Non-Recourse + Recourse) shall not exceed 50%	Permissible: • Two types of recourse debt are allowed: Subscription Financing and Credit Accommodation • Loan-to-Value ratio (Non-Recourse + Recourse) shall not exceed 50% • Total Recourse Debt Allocated shall not exceed 10% of the lower of the current Net Asset Value or the target Net Asset Value of the Portfolio.
Securities Lending	Permissible: Shall not exceed 70% of the Program.	Prohibited	Prohibited

Appendix 7
Investment Constraints & Limitations
for Public Employees' Retirement Fund

Asset Allocation Strategy

A. With reference to the Asset Allocation Targets & Ranges indicated in Appendix 4:

1. For Global Equity and Global Fixed Income, the cumulative adjustment of the asset class weighting by staff shall not exceed 50% of the policy range of the asset class within any quarter without advance Committee consent.

B. Overlay portfolios may be established to manage currency risk within the following parameters:

1. Currency overlay portfolio risk will be managed within the Asset Allocation program target tracking error.

2. Currency overlay portfolios may only be utilized to hedge currency risk and will not decrease the net notional exposure to any one non USD underlying developed market currency (either in the portfolio or in the Policy benchmark) by more than 25%. The foregoing percentage limit restrictions do not apply to currency derivatives used to settle security transactions denominated in those foreign currencies and any authorized instrument or contract intended to manage transaction or currency exchange risk within an asset class implementation.

C. Target Tracking Error

1. The Asset Allocation Program will be managed within a target forecast annual tracking error to the Policy benchmark of 0.75% using the CalPERS Risk Management System. This implies that over any one-year period, there will be a less than 5% probability that the active asset allocation return will be less than negative 1.2%. The CalPERS Total Fund shall be managed with a target forecast annual tracking error of 1.5%, inclusive of active asset allocation and other active management decisions, using the CalPERS Risk Management System. For both of the above tracking error statistics, staff will evaluate forecast values against subsequent realized values over rolling three-year periods.

Benchmarks

See Appendix 5

Global Derivatives & Counterparty Risk

Derivatives Risk Limitations

A. Staff must reference the Investment Office Derivatives and Counterparty Risk Procedures Manual, and asset class investment policies for additional limitations specific to their portfolios inclusive of cash and derivatives instruments.

B. Managers should reference their Investment Management Agreements (IMAs) including Investment Guidelines for risk limitations specific to their portfolio or to the asset class or trust for which that they are managing investments.

Investment Leverage

See Appendix 6

Liquidity Program

Internally Managed Dollar-Denominated Short-Term Program

1. All securities purchased shall have a maximum final stated maturity of 15 months unless specified otherwise within Investment Policy Procedures & Guidelines for the Program.

2. Authorized nationally recognized statistical rating organizations (NRSROs) are limited to:
   - Standard & Poor's (S&P)
   - Moody's Investors Service, Inc. (Moody's)
   - Fitch Ratings (Fitch)

3. Credit Risk will be controlled by requiring minimum ratings outlined in the table below.

Asset	Minimum Credit Rating
All Securities (at time of purchase)	Short Term: A2/P2/F2, or Long Term: A-/A3/A-

Note: In the case of a split-rated security, staff may rely upon the highest rating. If a security is not rated by an authorized NRSRO, staff's equivalent rating would apply.

Low Duration Fixed Income Program

The following tables provide details regarding investment constraints/ limitations related to the following programs:

- Dollar-Denominated Fixed Income ***High Quality LIBOR*** (HQL) Program
- Dollar-Denominated Fixed Income Short Duration (SD) Program
- Dollar-Denominated Fixed Income Limited Liquidity Enhanced Return (LLER) Program

All Dollar-Denominated Fixed Income Programs
1. Authorized NRSROs are limited to: • Standard & Poor's (S&P) • Moody's Investors Service, Inc. (Moody's) • Fitch Ratings (Fitch)

Dollar-Denominated Fixed Income HQL Program
1. Interest Rate Risk must be controlled by limiting duration to not exceed 90 days due to the stable return mandate of the HQL Program.
2. Credit Risk will be controlled by requiring minimum ratings by asset type as outlined in the table below. A downgrading of a security that causes a violation in the guidelines shall not require an immediate sale if the Managing Investment Director of Global Fixed Income believes that no further risk of credit deterioration exists or the sale diminishes the total return to CalPERS. The CalPERS internal research staff shall analyze such situations to ensure that an informed decision is made. The following is the minimum quality for each of the sectors.

Asset / Counterparty	Minimum Credit Ratings
US Treasury and Government Sponsored	AAA/Aaa/AAA
Repurchase Agreements	A1/P1/F1
Structured Securities	AAA/Aaa/AAA
Money Market Securities	A2/P2/F2
Corporate Securities	BBB+/Baa1/BBB+
Yankee Sovereign Securities	A-/A3/A-

Note: In the case of a split-rated security, staff may rely upon the highest rating. If a security is not rated by an authorized NRSRO, staff's equivalent rating would apply.

Low Duration Fixed Income Program (continued)

Dollar-Denominated Fixed Income SD Program
1. Interest Rate Risk must be controlled by limiting the SD Program's duration to not exceed 180 days.
2. Credit Risk will be controlled by requiring minimum ratings by asset type as outlined in the table below. Credit Risk shall be actively managed on a risk/return basis. A downgrading of a security that causes a violation in the guidelines shall not require an immediate sale if the Managing Investment Director of Global Fixed Income believes that no further risk of credit deterioration exists or the sale diminishes the total return to CalPERS. The CalPERS internal research staff shall analyze such situations to ensure that an informed decision is made. The following is the minimum quality for each of the sectors.

Asset / Counterparty	Minimum Credit Rating
US Treasury and Government Sponsored	AAA/Aaa/AAA
Repurchase Agreements	A1/P1/F1
Structured Securities	BBB/Baa2/BBB
Money Market Securities	A2/P2/F2
Corporate Securities	BBB+/Baa1/BBB+
Yankee Sovereign Securities	A-/A3/A-

Note: In the case of a split-rated security, staff may rely upon the highest rating. If a security is not rated by an authorized NRSRO, staff's equivalent rating would apply.

Dollar-Denominated Fixed Income LLER Program
1. Interest Rate Risk must be controlled by limiting the LLER Program's duration to not exceed 270 days.
2. Credit Risk will be controlled by requiring minimum ratings by asset type as outlined in the table below. Credit Risk shall be actively managed on a risk/return basis. A downgrading of a security that causes a violation in the guidelines shall not require an immediate sale if the Managing Investment Director of Global Fixed Income believes that no further risk of credit deterioration exists or the sale diminishes the total return to CalPERS. The CalPERS internal research staff shall analyze such situations to ensure that an informed decision is made. The following is the minimum quality for each of the sectors.

Asset / Counterparty	Minimum Credit Rating
All Securities (at time of purchase)	BBB-/Baa3/BBB-

Note: In the case of a split-rated security, staff may rely upon the highest rating. If a security is not rated by an authorized NRSRO, staff's equivalent rating would apply.

Opportunistic Program

A. Allocation

1. The market value of program investments shall not exceed 3% of the Total Fund. A violation of this limit shall be restored in a timely manner not to exceed three months, with the exact time period primarily dependent on transaction costs and liquidity.

B. Diversification Guidelines

1. The market value of program non-publicly traded investments (excluding fixed income securities) shall not represent more than 1.5% of the Total Fund.

2. The market value of any program strategy or type of asset shall not exceed 2% of the Total Fund.

3. The aggregate market value of program assets of a single country other than the United States shall not exceed 1% of the Total Fund.

Securities Lending

The following tables provide details regarding investment constraints/ limitations related to the following:

- Lending Guidelines
- Cash Collateral Re-Investment Guidelines
- Liquidity Guidelines

Lending Guidelines
1. Initial Margin: The proper amount of collateralization shall be market value times the appropriate percentage for each security type. a. Domestic securities – 102% b. Matching currency investment for G10 domiciled issuers – 102% c. All other international securities – 105%
2. Maintenance Margin: Loan collateral below these specified maintenance levels must be adjusted within the next business day and before the securities being re-lent to the same borrowers. a. The maintenance margin is 102% for securities with an initial margin of 102% b. The maintenance margin is 105% for securities with an initial margin of 105%
3. Non-material Margin Call: Despite the maintenance margin percentages above, non-material margin calls of $100,000 or less need not be made as long as collateral is 101.5% or more for securities with an initial maintenance margin of 102% and 104.5% or more for securities with an initial maintenance margin of 105%.

Securities Lending (continued)

Cash Collateral Re-Investment Guidelines
1. The duration of the collateral investment portfolio shall not differ from the duration of the outstanding loans by more than 60 days.

Liquidity Guidelines
1. A minimum of 10% of the Securities Lending cash collateral pool must be invested in securities that mature or are subject to a demand feature exercisable within one business day.
2. A minimum of 20% of the Securities Lending cash collateral pool must be invested in securities that mature or are subject to a demand feature exercisable within seven business days.*
3. A minimum of 30% of the Securities Lending cash collateral pool must be invested in securities that mature or are subject to a demand feature exercisable within thirty days.*
*The liquidity constraint includes the preceding requirement(s) as cumulative.

Terminated Agency Pool

Authorized securities for the "immunization" and surplus segments are indicated in the following table.

Segment	Authorized Securities
"Immunization"	U.S. Treasury STRIPS U.S. Treasury TIPS Cash or cash equivalents
Surplus	All securities included within the rest of the PERF

Appendix 8
CalPERS Global Governance Principles
Table of Contents

California Public Employees' Retirement System
Total Fund Investment Policy Appendices

I. INTRODUCTION

"Our mission is to provide responsible and efficient stewardship of the System to deliver promised retirement and health benefits, while promoting wellness and retirement security for members and beneficiaries."

The California Public Employees' Retirement System (CalPERS, System) is the nation's largest public pension fund with a duty to deliver the retirement and health benefits promised to our members. This responsibility applies not just to our current beneficiaries, but also to future members who may not retire for several decades. We therefore need to ensure that our commitments can be honored over the long-term.

A vital part of this is ensuring that our investments, which fund around two-thirds of our pension payments every year, generate the highest possible returns at an acceptable level of risk. This is a task managed by the CalPERS Investment Office, overseen by the CalPERS Board of Administration, and guided by our Investment Beliefs[1] and Core Values[2].

Over the years the CalPERS Governance Principles have evolved from a guide to proxy voting in public markets, to a broader statement of our views on best practices guiding our engagement with companies, advocacy agenda with policy makers, and expectations for both our internal and external managers across the total fund.

As the governance and sustainability agenda has developed, so too have the CalPERS principles. An important area of development has been integrating consideration of environmental and social factors alongside our governance agenda. We have given an economic framework to what is often called ESG in investing. As reflected in our Investment Beliefs, CalPERS considers that long-term value creation requires the effective management of three forms of capital – Financial, Physical, and Human[3]. This economic approach grounds our sustainable investment agenda in our fiduciary duty to generate risk adjusted returns for our beneficiaries.

A further important area of development has been the recognition that financial markets' safety and soundness are vitally important to CalPERS ability to achieve its risk adjusted returns. Recognizing this – the program was renamed Global Governance in order to capture the various dimensions relevant to a long-term investor such as CalPERS. This focus on financial markets is also reflected in CalPERS' Investment Beliefs, which recognize that a long-term investment horizon is both an advantage and imposes a responsibility. That responsibility requires that

[1] In October 2013, CalPERS adopted a set of ten Investment Beliefs intended to guide decision-making, facilitate the management of a complex portfolio, and enhance consistency. The Investment Beliefs can be found at www.calpers-governance.org

[2] Quality, Respect, Accountability, Integrity, Openness, and Balance.

[3] CalPERS discloses its progress of the System's efforts, sustainability work, and goals towards sustainable decision making in its publicly available report, *Towards Sustainable Investment & Operations*, which can be found at www.calpers-governance.org.

CalPERS advocate for policies which support the long-term with policy makers, companies, and investment managers.

The current edition distills some 20 years of experience in governance and sustainability. We continue to develop our approach on new issues which are emerging and to refresh our thinking as we learn from experience.

CalPERS expects all internal and external managers of CalPERS capital to integrate the Global Principles into investment decision making, including proxy voting, consistent with fiduciary duty. CalPERS recognizes that countries and companies are in different developmental stages. We are mindful of differing laws and practices in jurisdictions – of governance outcomes and need to be carefully addressed. CalPERS' investment managers will need to exercise their best judgment after taking all relevant factors into account.

We have learned that company managers want to perform well, in both an absolute sense and as compared to their peers. They also want to adopt long-term strategies and vision, but often do not feel that their shareowners are patient enough. Our experience has shown all companies – whether governed under a structure of full accountability or not – will inevitably experience both ascents and descents along the path of profitability.

We have also learned, and firmly embrace the belief that strong, accountable corporate governance means the difference between long periods of failure in the depths of the performance cycle, and responding quickly to correct the corporate course.

This work has been integrated into CalPERS Investment Beliefs which address sustainable investment, risk management, and CalPERS engagement with companies, regulators, managers, and stakeholders.

We recognize that much of our experience in this area comes from investments in public equities but that our evolution to a "Total Fund" approach means these Principles may need to be suitably adapted to work across other asset classes. We continue to listen and learn in this area.

We encourage and welcome feedback on these Principles from companies, fellow investors and other stakeholders.

II. PURPOSE

These Global Principles have been adopted by the CalPERS Board, through its Investment Committee, in order to create the framework for considerations that must be taken into account when CalPERS:

- Executes its shareowner proxy voting responsibilities;
- Engages investee companies to achieve long-term sustainable risk-adjusted returns;
- Requests internal and external managers of CalPERS capital to make investment decisions on its behalf;

- Advocates with policy-makers and international organizations on financial market reform.

Proxy voting

CalPERS implements its proxy voting responsibility in a manner that is consistent with these Global Principles unless such action may result in long-term harm to the company that outweighs all reasonably likely long-term benefit; or unless such a vote is contrary to the interests of the beneficiaries of the System.

It is therefore important for shareowners such as CalPERS to exercise their rights to participate and make their voting decisions based on a full understanding of the information and legal documentation presented to them. CalPERS' proxy voting responsibilities cover a wide range of corporate governance issues centered around various management and shareowner proposals. Specific voting topics may include board quality, investor rights, compensation, corporate reporting, capital structure, environmental and social related issues. When exercising our voting rights, we will cast votes "for" or "against", individual management and shareowner proposals consistent with the interest of our beneficiaries and consistent with the Global Principles.

CalPERS will vote "against", an individual or slate of director nominees at companies that do not effectively oversee these interests. CalPERS will also withhold its vote in limited circumstances where a company has consistently demonstrated long-term economic underperformance.

As part of CalPERS' commitment to transparency, we publish our proxy voting activities at over 11,000 company annual general meetings.

Shareowner engagement

CalPERS has a long history of constructively engaging companies confidentially through in-person meetings, correspondence, and by telephone. In instances where companies fail to meet the standards of conduct defined by our Global Principles, CalPERS may file shareowner proposals to achieve governance reforms.

CalPERS prefers constructive engagement to divesting as a means of affecting the conduct of the entities in which we invest. This is because investors that divest lose their ability as shareowners to positively influence the company's strategy and governance.

Advocacy

CalPERS engages policy makers on regulatory and legislative reforms which support the Global Principles. CalPERS' priorities are approved by the Board in legislative guidelines.

CalPERS works through its federal representatives and also partners with organizations, both domestically and internationally.

~~4 Throughout this document, CalPERS has chosen to adopt the term "shareowner" rather than "shareholder", whenever it is providing capital through equity investments. This is to reflect a view that equity ownership carries with it active responsibilities and is not merely passively "holding" shares. For corporate governance structures to work effectively, Shareowners must be active and prudent in the use of their rights. In this way, Shareowners must act like owners and continue to exercise the rights available to them."(2005 CFA Institute: Centre for Financial Market Integrity, The Corporate Governance of Listed Companies: A Manual for Investors). Where CalPERS holds debt or uses other non-equity based investment vehicles terms other than "shareowner" may be applied accordingly.~~

III. GLOBAL GOVERNANCE PRINCIPLES

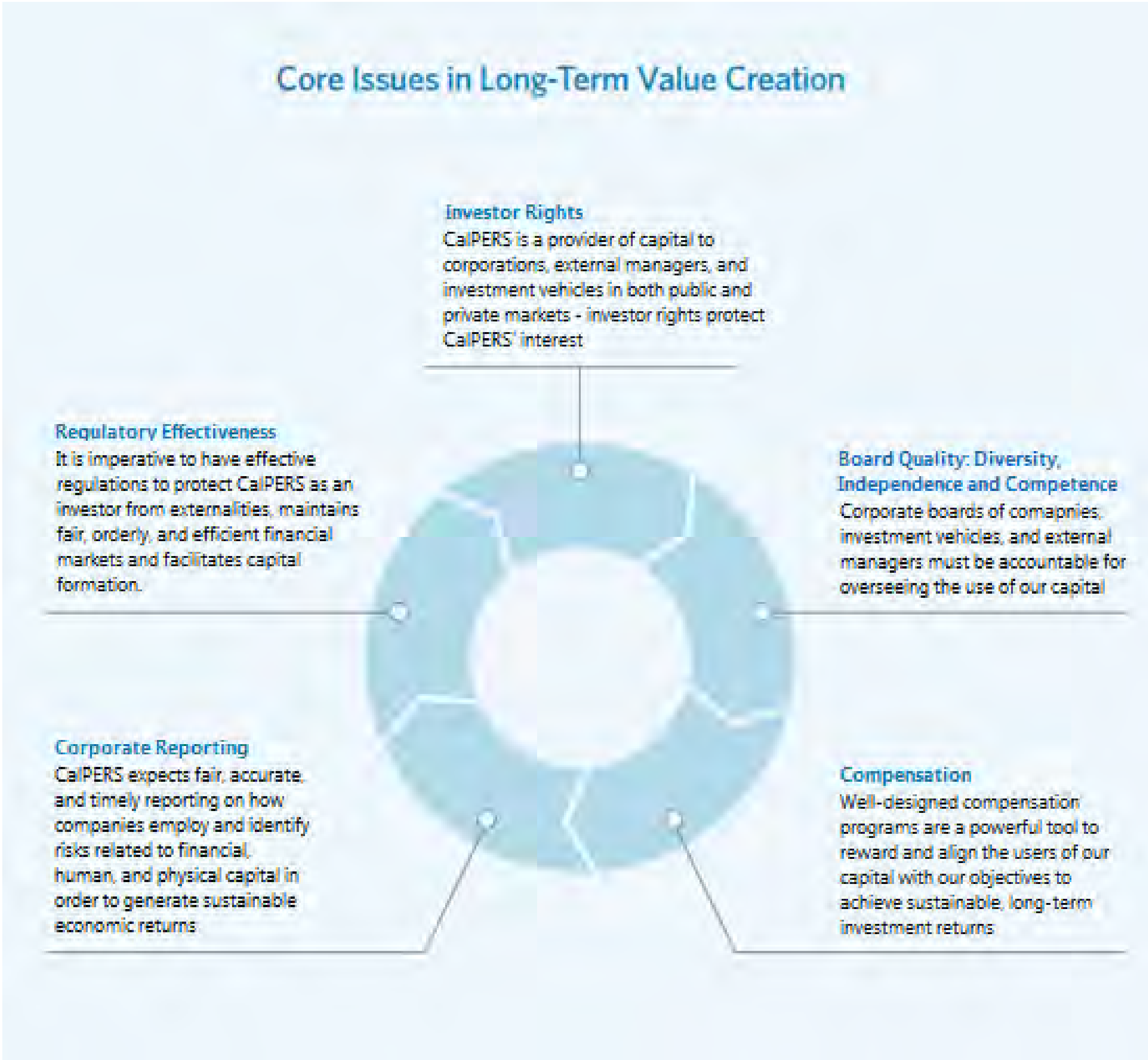
We believe that fully accountable governance structures produce, over the long term, the best returns to shareowners. So while we recognize that governance best practices are constantly evolving, we believe the following accountable governance structures provide the underlying tenets that should be adopted by all companies and markets – both developed and emerging – to establish the foundation for achieving long-term sustainable investment returns.

In particular we have identified five core issues that we believe have a long-term impact on risk and return:

A. Investors Rights
B. Board Quality: Diversity, Independence and Competence
C. Compensation
D. Corporate Reporting
E. Regulatory Effectiveness

As demonstrated in the diagram below, it is important to recognize that we believe that managing these five issues is mutually reinforcing. Approaches that only tackle some areas and not others would not be compatible with these Principles.

California Public Employees' Retirement System
Total Fund Investment Policy Appendices



California Public Employees' Retirement System
Total Fund Investment Policy Appendices

A. Investor Rights

CalPERS is a provider of capital to corporations, external managers, and investment vehicles in both public and private markets – investor rights protect CalPERS interests.

CalPERS recommends that corporations adopt the following shareowner rights:

1. **One-share/one-vote:** A shareowners' right to vote is inviolate and should not be abridged. All investors must be treated equitably and upon the principle of one-share/one-vote.

   a. **Redress:** Minority shareowners should be protected from abusive actions by, or in the interest of, controlling shareowners acting either directly or indirectly, and should have effective means of redress. Proper remedies and procedural rules should be put in place to make the protection effective and affordable. Where national legal remedies are not afforded the board is encouraged to ensure that sufficient shareowner protections are provided in the company's bylaws.

2. **Access to Director Nominations:** Shareowners should have effective access to the director nomination process. Companies should provide access to management proxy materials for a long-term investor or group of long-term investors owning in aggregate at least three percent of a company's voting stock, to nominate up to 25 percent of the board. Eligible investors must have owned the stock for at least three years. Company proxy materials and related mailings should provide equal space and equal treatment of nominations by qualifying investors.

   To allow for informed voting decisions, it is essential that investors have full and accurate information about access mechanism users and their director nominees. Therefore, shareowners nominating director candidates under an access mechanism should adhere to the same SEC rules governing disclosure requirements and prohibitions on false and misleading statements that currently apply to proxy contests for board seats.

3. **Shareowner Approval Rights:** The board should ensure that shareowners have the right to vote on major decisions which may change the nature of the company in which they have invested. Such rights should be clearly described in the company's governing documents and include:

   a. **Sale or Pledge of Corporate Assets**: Major corporate decisions concerning the sale or pledge of corporate assets that would have a material effect on shareowner value. Such a transaction will automatically be deemed to have a material effect if the value of the assets exceeds 10 percent of the assets of the company and its subsidiaries on a consolidated basis.
   b. **Mergers and Acquisitions**: Material and extraordinary transactions such as mergers and acquisitions.
   c. **Debt Issuance**: Issuing debt to a degree that would excessively leverage the

company and imperil its long-term viability.

d. **Share Repurchases (buy-backs)**: The corporation's acquisition of five percent or more of its common shares at above-market prices other than by tender offer to all shareowners.
e. **Issuance of New Shares**: The board should be mindful of dilution of existing shareowners and provide full explanations where pre-emption rights are not offered.
f. **Poison Pill Approval:** No board should enact nor amend a poison pill (shareowner rights plan) except with shareowner approval or other structures that act as anti-takeover mechanisms. Only non-conflicted shareowners should be entitled to vote on such plans and the vote should be binding. Plans should be time limited and put periodically to shareowners for re-approval.
    i. **Continuing Directors**: Corporations should not adopt so-called "continuing director" provisions (also known as "dead-hand" or "no-hand" provisions, which are most commonly seen in connection with a potential change in control of the company) that allow board actions to be taken only by: (1) those continuing directors who were also in office when a specified event took place or (2) a combination of continuing directors plus new directors who are approved by such continuing directors.
g. **Significant Related Party Transaction**: Shareowners should have the right to approve significant related party transactions and this should be based on the approval of a majority of disinterested shareowners. The board should submit the transaction for shareowner approval and disclose (both before concluding the transaction and in the company's annual report):
    i. the identity of the ultimate beneficiaries including, any controlling owner and any party affiliated with the controlling owner with any direct / indirect ownership interest in the company;
    ii. other businesses in which the controlling shareowner has a significant interest; and
    iii. Shareowner agreements (e.g. commitments to related party payments such as license fees, service agreements and loans).

The board should disclose the process for reviewing and monitoring related party transactions which, for significant transactions, includes establishing a committee of independent directors. This can be a separate committee or an existing committee comprised of independent directors, for example the Audit Committee. The committee should review significant related party transactions to determine whether they are in the best interests of the company and, if so, to determine what terms are fair and reasonable. The conclusion of committee deliberations on significant related party transactions should be disclosed in the company's annual report to shareowners.

4. **Majority Vote Requirements:** Shareowner voting rights should not be subject to supermajority voting requirements. A majority of proxies cast should be able to:

    a. **Bylaw and Charter Amendments**: Amend the company's governing documents such as the Bylaws and Charter by shareowner resolution.
    b. **Director Removal**: Remove a director with or without cause.

c. **Director Elections:** In an uncontested director election, a majority of proxies cast should be required to elect a director. In a contested election, a plurality of proxies cast should be required to elect a director. Resignation for any director that receives a withhold vote greater than 50 percent of the votes cast should be required. Unless the incumbent director receiving less than a majority of the votes cast has earlier resigned, the term of the incumbent director should not exceed 90 days after the date on which the voting results are determined.

d. **Auditor Ratification by Shareowners:** The selection of the independent external auditor should be ratified by shareowners annually.

5. **Corporate Proxy and Voting Mechanisms**: The board should promote efficient and accessible voting mechanisms that allow shareowners to participate in general meetings either in person or remotely, preferably by electronic means or by post, and should not impose unnecessary hurdles.

a. **Universal Proxy**: To facilitate the shareowner voting process in contested elections – opposing sides engaged in the contest should utilize a proxy card naming all management nominees and all dissident nominees, providing every nominee equal prominence on the proxy card.

b. **Sponsoring and Implementation of Shareowner Resolutions:** Shareowners should have the right to sponsor resolutions. A shareowner resolution that is approved by a majority of proxies cast should be implemented by the board.

c. **Proxy Confidentiality:** Proxies should be kept confidential from the company, except at the express request of shareowners.

d. **Cumulative Voting Rights:** Shareowners should have the right to cumulate votes in a contested election of directors. Such a right gives shareowners the ability to aggregate their votes for directors and either cast all of those votes for one candidate or distribute those votes for any number of candidates

e. **Shareholder Identification:** The board should ensure that the company maintains a record of the registered owners of its shares or those holding voting rights over its shares. Registered shareowners, or their agents, should provide the company (where anonymity rules do not preclude this) with the identity of beneficial owners or holders of voting rights when requested in a timely manner. Shareowners should be able to review this record of registered owners of shares or those holding voting rights over shares.

f. **Bundled Voting**: Shareowners should be allowed to vote on unrelated issues separately. Individual voting issues (particularly those amending a company's charter), bylaws or anti-takeover provisions should not be bundled.

g. **Broker Votes**: Uninstructed broker votes and abstentions should be counted only for purposes of a quorum.

h. **Advance Notice, Holding Requirements and Other Provisions**: Advance notice bylaws, holding requirements, disclosure rules, and any other company imposed regulations on the ability of shareowners to solicit proxies beyond those required by law should not be so onerous as to deny sufficient time, limit the pool of eligible candidates, or otherwise make it impractical for shareowners to submit nominations or proposals and distribute supporting proxy materials.

6. **Special Meetings and Written Consent:** Shareowners should be able to call special meetings or act by written consent.

7. **Judicial Forum:** Companies should not attempt to restrict the venue for shareowner claims by adopting charter or bylaw provisions that seek to establish an exclusive forum. Nor should companies attempt to bar shareowners from the courts through the introduction of forced arbitration clauses.

B. Board Quality: Diversity, Independence and Competence

Corporate boards of companies, investment vehicles and external managers must be accountable for overseeing the use of our capital.

1. **Director Accountability:** As a fiduciary, a director owes a duty of loyalty to the corporation and its shareowners and must exercise reasonable care in relation to his or her duties as a director. Directors should be accountable to shareowners, and management accountable to directors.

    a. **Long-term Vision:** Corporate directors and management should have a long-term strategic vision that, at its core, emphasizes sustained shareowner value and effective management of both risk and opportunities in the oversight of financial, physical, and human capital. In turn, despite differing investment strategies and tactics, shareowners should encourage corporate management to resist short-term behavior by supporting and rewarding long-term superior returns.
    b. **Accessibility to Shareowner Inquiry:** To ensure this accountability, directors must be accessible to shareowner inquiry concerning their key decisions affecting the company's strategic direction.
    c. **Annual Director Elections:** Every director should be elected annually. Accountability mechanisms may require directors to stand for election on an annual basis or to stand for election at least once every three years.
    d. **Board Size:** The board periodically reviews its own size, and determines the size that is most effective toward future operations.
    e. **Director Attendance:** Absent compelling and stated reasons, directors should be expected to attend at least 75 percent of the board and key committee meetings on which they sit.
    f. **Director Time Commitment:** The board adopts and discloses guidelines in the company's proxy statement to address competing time commitments that are faced when directors, especially acting CEOs, serve on multiple boards.

2. **Informed Directors**: Directors should receive training from independent sources on their fiduciary responsibilities and liabilities. Directors have an affirmative obligation to become and remain independently familiar with company operations; they should not rely exclusively on information provided to them by the CEO to do their jobs. Directors should be provided meaningful information in a timely manner prior to board meetings and should be allowed reasonable access to management to discuss board issues.

a. **Board Access to Management:** The board should have a process in place by which all directors can have access to senior management.

b. **New Director Induction:** The board should have in place a formal process of induction for all new directors so that they are well-informed about the company as soon as possible after their appointment. Directors should also be enabled to regularly refresh their skills and knowledge to discharge their responsibilities.

3. **Board Independence:** Independence is the cornerstone of accountability. It is now widely recognized that independent boards are essential to a sound governance structure. Nearly all corporate governance commentators agree that boards should be comprised of at least a majority of "independent directors." But the definitional independence of a majority of the board may not be enough in some instances. The leadership of the board must embrace independence, and it must ultimately change the way in which directors interact with management. Independence also requires a lack of conflict between the director's personal, financial, or professional interests, and the interests of shareowners.

a. **Majority of Independent Directors:** At a minimum, a majority of the board consists of directors who are independent. Boards should strive to obtain board composition made up of a substantial majority of independent directors.

b. **Independent Executive Session:** Independent directors should meet periodically (at least once a year) alone in an executive session, without the CEO. The independent board chair or lead (or presiding) independent director should preside over this meeting.

c. **Board Role of Retiring CEO:** Generally, a company's retiring CEO should not continue to serve as a director on the board and at the very least be prohibited from sitting on any of the board committees.

4. **Board Committee Independence:** The full board is responsible for the oversight function on behalf of shareowners. Should the board decide to have other committees (e.g. an executive committee) in addition to those required by law, the duties and membership of such committees should be fully disclosed. Committees who perform the audit, director nomination and executive compensation functions should consist entirely of independent directors. The board (not the CEO) should appoint the committee chairs and members. Committees should be able to select their own service providers. Some regularly scheduled committee meetings should be held with only the committee members (and, if appropriate, the committee's independent consultants) present. The process by which committee members and chairs are selected should be disclosed to shareowners.

5. **Board Chairperson Independence and Leadership:** The board should be chaired by an independent director. The chair is responsible for leadership of the board and ensuring its effectiveness. The chair should ensure a culture of openness and constructive debate that allows a range of views to be expressed. The CEO and chair roles should only be combined in very limited circumstances; in these situations, the board should provide a written statement in the proxy materials discussing why the combined role is in the best interest of shareowners, and it should name a lead independent director to fulfill the

following duties:

~~a. Coordinate the scheduling of board meetings and preparation of agenda material for board meetings and executive sessions of the board's independent or non-management directors.~~

- **a.** Coordinate the scheduling of board meetings and preparation of agenda material for board meetings and executive sessions of the board's independent or non-management directors.
- **b.** Lead board meetings in addition to executive sessions of the board's independent or non-management directors.
- **c.** When selecting a new CEO, boards should re-examine the traditional combination of the "chief executive" and "chair" positions.
- **d.** Define the scope, quality, quantity and timeliness of the flow of information between company management and the board that is necessary for the board to effectively and responsibly perform their duties.
- **e.** Oversee the process of hiring, firing, evaluating, and compensating the CEO.
- **f.** Approve the retention of consultants who report directly to the board.
- **g.** Advise the independent board committee chairs in fulfilling their designated roles and responsibilities to the board.
- **h.** Interview, along with the chair of the nominating committee, all board candidates, and make recommendations to the nominating committee and the board.
- **i.** Assist the board and company officers in assuring compliance with and implementation of the company's Governance Principles.
- **j.** Act as principal liaison between the independent directors and the CEO on sensitive issues.
- **k.** Coordinate performance evaluations of the CEO, the board, and individual directors.
- **l.** Recommend to the full board the membership of the various board committees, as well as selection of the committee chairs.
- **m.** Be available for communication with shareowners.

6. **Director Independence**: The board should ensure that policies and procedures on conflicts of interest are established, understood and implemented by directors, management, employees and other relevant parties. If a director has an interest in a matter under consideration by the board, then the director should promptly declare such an interest and be precluded from voting on the subject or exerting influence. Each company should disclose in its annual proxy statement the definition of "independence" relied upon by its board. The board's definition of "independence" should address, at a minimum, a director who:

- **a.** Is not currently, or within the last five years has not been, employed by the Company in an executive capacity.
- **b.** Has not received more than $50,000 in direct compensation from the Company during any 12-month period in the last three years other than:
  - i. Director and committee fees including bona fide expense reimbursements.
  - ii. Payments arising solely from investments in the company's securities.
- **c.** Is not affiliated with a company that is an adviser or consultant to the Company or a member of the Company's senior management during any 12-month period in the last three years that has received more than $50,000 from the Company.

d. Is not a current employee of a company (customer or supplier) that has made payments to, or received payments from the Company that exceed the greater of $200,000 or 2 percent of such other company's consolidated gross revenues.

e. Is not affiliated with a not-for-profit entity (including charitable organizations) that receives contributions from the Company that exceed the greater of $200,000 or 2 percent of consolidated gross revenues of the recipient for that year.

f. Is not part of an interlocking directorate in which the CEO or other employee of the Company serves on the board of another company employing the director.

g. Has not had any of the relationships described above with any parent or subsidiary of the Company.

h. Is not a member of the immediate family of any person described in 6a-h.

7. **Board Responsibilities:** The board responsibilities should include:

a. CEO Performance: Independent directors establish CEO performance criteria focused on optimizing operating performance, profitability and shareowner value creation; and regularly review the CEO's performance against those criteria.

b. Corporate Strategy: Review, approve and guide corporate strategy, capital discipline and allocation, major plans of action, risk policies, business plans.

c. Corporate Performance: Set performance objectives, monitor implementation and corporate performance, and oversee major capital expenditures, and acquisitions/divestitures.

d. Corporate Annual Report and Accounts: Affirm that the company's annual report and accounts present a true and fair view of the company's position and prospects. As appropriate, taking into account statutory and regulatory obligations in each jurisdiction, the information provided in the annual report and accounts should:

i. be relevant to investment decisions, enabling shareowners to evaluate risks, past and present performance, and to draw inferences regarding future performance;
ii. enable shareowners, who put up the risk capital, to fulfill their responsibilities as owners to assess company management and the strategies adopted;
iii. be a faithful representation of the events it purports to represent;
iv. generally be neutral and report activity in a fair and unbiased way except where there is uncertainty. Prudence should prevail such that assets and income are not overstated and liabilities and expenses are not understated. There should be substance over form. Any off-balance sheet items should be appropriately disclosed;
v. be verifiable so that when a systematic approach and methodology is used the same conclusion is reached;
vi. be presented in a way that enables comparisons to be drawn of both the entity's performance over time and against other entities; and
vii. recognize the 'matching principle', which requires that expenses are matched with revenues.
viii. recognize the establishment and maintenance of an effective system of internal control which should be measured against internationally accepted standards of internal audit and tested periodically for its adequacy. Where an internal audit function has not been established, full reasons for this should be disclosed in the

annual report, as well as an explanation of how adequate assurance of the effectiveness of the system of internal controls has been obtained.

e. **Reincorporation:** When considering reincorporation, corporations should analyze shareowner protections, company economic, capital market, macro-economic, and corporate governance considerations. Companies should not reincorporate to offshore locations where corporate governance structures are weaker, which reduces management accountability to shareowners.

f. **Charitable and Political Contributions:** Robust board oversight and disclosure of corporate charitable and political activity is needed to ensure alignment with business strategy and to protect assets on behalf of shareowners. We recommend the following:

   i. **Policy:** The board should develop and disclose a policy that outlines the board's role in overseeing corporate charitable and political contributions, the terms and conditions under which charitable and political contributions are permissible, and the process for disclosing charitable and political contributions annually.

   ii. **Board Monitoring, Assessment and Approval:** The board of directors should monitor charitable and political contributions (including trade association contributions directed for lobbying purposes) made by the company. The board should ensure that only contributions consistent with and aligned to the interests of the company and its shareowners are approved.

   iii. **Disclosure:** The board should disclose on an annual basis the amounts and recipients of monetary and non-monetary contributions made by the company during the prior fiscal year. If any expenditure earmarked or used for political or charitable activities were provided to or through a third-party to influence elections of candidates or ballot measures or governmental action, then those expenditures should be included in the report.

8. **Board, Committee, and Director Evaluation**: No board can truly perform its function of overseeing a company's strategic direction and monitoring management's success without a system of evaluating itself. The board should establish preparation, participation and performance expectations for itself (acting as a collective body), for the key committees and each of the individual directors. A process by which these established board, key committee and individual director expectations are evaluated on an annual basis should be disclosed to shareowners. Directors must satisfactorily perform based on the established expectations with re-nomination based on any other basis being neither expected nor guaranteed.

9. **Board Talent Assessment and Diversity:** The board should facilitate a process that ensures a thorough understanding of the diverse characteristics necessary to effectively oversee management's execution of a long-term business strategy. Board diversity should be thought of in terms of skill sets, gender, age, nationality, race, sexual orientation, gender identity, and historically under-represented groups. Consideration should go beyond the traditional notion of diversity to include a more broad range of experience, thoughts, perspectives, and competencies to help enable effective board leadership. A robust process for how diversity is considered when assessing board talent and diversity should be adequately disclosed and entail:

   a. **Director Talent Evaluation**: To focus on the evolving global capital markets, a board should disclose its process for evaluating the diverse talent and skills needed on the board and its key committees.

b. **Director Attributes**: Board attributes should include a range of skills and experience which provide a diverse and dynamic team to oversee business strategy, risk mitigation and senior management performance. The board should establish and disclose a diverse mix of director attributes, experiences, perspectives and skill sets that are most appropriate for the company. At a minimum, director attributes should include expertise in accounting or finance, international markets, business, human capital management, industry knowledge, governance, customer-base experience or perspective, crisis response, leadership, strategic planning, and competence managing multifaceted risk – including expertise and experience in climate change risk management strategies. Additionally, existing directors should receive continuing education surrounding a company’s activities and operations to ensure they maintain the necessary skill sets and knowledge to meet their fiduciary responsibilities.

c. **Director Nominations**: With each qualified director nomination recommendation, the board should consider the issue of competence, independence, continuing director tenure, as well as board diversity, and take steps as necessary to ensure that the board maintains openness to new ideas, a willingness to re-examine the status quo, and able to exercise judgment in the best interests of the corporation free of any external influence that may attempt to be or may appear to be exerted upon them.

d. **Director Tenure**: Boards should consider all relevant facts and circumstances to determine whether a director should be considered independent – these considerations include the director’s years of service on the board – extended periods of service may adversely impact a director’s ability to bring an objective perspective to the boardroom. We believe director independence can be compromised at 12 years of service – in these situations a company should carry out rigorous evaluations to either classify the director as non-independent or provide a detailed annual explanation of why the director can continue to be classified as independent. Additionally, there should be routine discussions as part of a rigorous evaluation and succession planning process surrounding director refreshment to ensure boards maintain the necessary mix of skills, diversity, and experience to meet strategic objectives.

10. Role of the Audit Committee: At least one member of the Audit Committee should have recent and relevant financial experience. The main role and responsibilities of the Audit Committee should be described in the committee’s terms of reference. This includes:

a. **Auditor Liability:** To strengthen the auditor’s objective and unbiased audit of financial reporting, audit committees should ensure that contracts with the auditor do not contain specific limits to the auditor’s liability to the company for consequential damages or require the corporation to use alternative dispute resolution.

b. **Auditor Selection:** Audit committees should promote expanding the pool of auditors considered for the annual audit to help improve market competition and thereby minimize the concentration of only a small number of audit firms from which to engage for audit services. To allow audit committees a robust foundation to determine audit firm independence, auditors should provide three prior years of activities, relationships, and services (including tax services) with the company, affiliates of the company and persons in financial reporting oversight roles that may impact the independence of the audit firm.

c. **Auditor Rotation:** Audit committees should promote rotation of the auditor to ensure a fresh perspective and review of the financial reporting framework.

d. **Audit Committee Communication with Auditor:** The auditor should articulate to the Audit Committee, risks and other matters arising from the audit that are significant to the oversight of the financial reporting process, including situations where the auditor is aware of disputes or concerns raised regarding accounting or auditing matters. The Audit Committee should consider providing to investors a summary document of its discussions with auditors to enhance investor confidence in the audit process.

e. **Monitoring the integrity of the accounts**: And any formal announcements relating to the company's financial performance, and reviewing significant financial reporting judgments contained in them.

f. **Oversight of key accounting policies and accounting judgments**: Which should be in accordance with generally accepted international accounting standards, and disclosing such policies in the notes to the company's accounts.

g. **Audit Scope**: Agreeing to the minimum scope of the audit as prescribed by applicable law and any further assurance that the company needs. Shareowners (who satisfy a reasonable threshold shareholding) should have the opportunity to expand the scope of the forthcoming audit or discuss the results of the completed audit should they wish to.

h. **Auditor Independence:** Assuring itself of the quality of the audit carried out by the external auditors and assessing the effectiveness and independence of the auditor each year. This includes overseeing the appointment, reappointment and, if necessary, the removal of the external auditor and the remuneration of the auditor. There should be transparency in advance when the audit is to be tendered so that shareowners can engage with the company in relation to the process should they so wish.

i. **Auditor Dialogue**: Having appropriate dialogue with the external auditor without management present and overseeing the interaction between management and the external auditor, including reviewing the management letter provided by the external auditors and overseeing management's response; and reporting on its work and conclusions in the annual report.

j. **Assertion of Internal Financial Controls:** The Audit Committee should require the auditor's opinion to include commentary on any management assertion that the system of internal financial controls is operating effectively and efficiently, that assets are safeguarded, and that financial information is reliable as of a specific date, based on a specific integrated framework of internal controls.

k. **Audit Committee Expertise:** Audit Committee financial expertise at a minimum should include skill-sets as outlined by Section 407(d)(5)(i) of Regulation S-K and the Exchange listing requirements. Boards should consider the effectiveness of the Audit Committee and designated financial expert(s) in its annual assessment. Firms may be able to reduce their cost of capital as related to the quality of its financial reporting. The quality of financial reporting can be increased by appropriately structuring the Audit Committee with effective financial expertise.

l. **Annual Reporting:** Disclosing in the annual reporting the following:

   i. Assessment of the independence and objectivity of the external auditor to assure the auditors and their staff have no financial, business, employment or family and other personal relationships with the company;

ii. Assessment of the appropriateness of total fees charged by the auditors;
iii. Assessment of non-audit services and fees charged including limitations or restrictions tied to the provision of non-audit services;
iv. Explanation of why non-audit services were provided by the auditor rather than by another party and how the auditor's independence has been safeguarded;
v. Rational for recommending the appointment, reappointment or removal of the external auditor, including information on tendering frequency, tenure, and any contractual obligations that acted to restrict the choice of external auditors;
vi. Auditor rotation period;
vii. Assessment of issues which resulted in an auditor resignation;
viii. Assessment of all relationships between the registered public accounting firm or any affiliates of the firm and the potential audit clients or persons in a financial reporting oversight role that may have a bearing on independence.

11. **Role of the Nomination Committee**: The main role and responsibilities of the nomination committee should be described in the committee's terms of reference. This includes:

a. **Skills Matrix**: Developing a skills matrix, by preparing a description of the desired roles, experience and capabilities required for each appointment, and then evaluating the composition of the board.
b. **Board Appointments**: Leading the process for board appointments and putting forward recommendations to shareowners on directors to be elected and re-elected.
c. **Director Conflicts of Interest**: Upholding the principle of director independence by addressing conflicts of interest (and potential conflicts of interest) among committee members and between the committee and its advisors during the nomination process.
d. **Independent Consultants**: Considering and being responsible for the appointment of independent consultants for recruitment or evaluation including their selection and terms of engagement and publically disclosing their identity and consulting fees.
e. **Shareowner Dialogue**: Entering into dialogue with shareowners on the subject of board nominations either directly or via the board; and
f. **Board Succession Planning**.

12. **Role of the Compensation Committee**: The main role and responsibilities of the compensation committee should be described in the committee terms of reference. This includes:

a. **Compensation Philosophy**: Determining and recommending to the board the remuneration philosophy and policy of the company.
b. **Oversight of Plan Design, Implementation, Monitoring and Evaluation**: Short-term and long-term share-based incentives and other benefits schemes including pension arrangements, for all executive officers.
c. **Director Conflicts of Interest**: Ensuring that conflicts of interest among

committee members and between the committee and its advisors are avoided.

d. Independent Consultants: Appointing any independent remuneration consultant including their selection and terms of engagement and disclosing their identity and consulting fees; and

e. Shareowner Dialogue: Maintaining appropriate communication with shareowners on the subject of remuneration, either directly or via the board.

13. Risk Oversight: In response to the turmoil in the financial markets and economic uncertainties, CalPERS has elevated the importance of risk oversight and management. The primary goal is to ensure companies adopt policies, operating procedures, internal controls, federal and state law compliance programs, reporting, and decision-making protocols to effectively manage, evaluate, and mitigate risk. The ultimate outcome is to ensure that companies function as "risk intelligent" organizations. CalPERS recommends the following:

a. The board is ultimately responsible for a company's risk management philosophy, organizational risk framework and oversight. The board should be comprised of skilled directors with a balance of broad business experience and extensive industry expertise to understand and question the breadth of risks faced by the company. Risk management should be considered a priority and sufficient time should be devoted to oversight.

b. The company should promote a risk-focused culture and a common risk management framework should be used across the entire organization. Frequent and meaningful communication should be considered the "cornerstone" for an effective risk framework. A robust risk framework will facilitate communication across business units, up the command chain and to the board. The company's culture with regard to risk and the process by which issues are escalated and de-escalated within the company should be evaluated at intervals as appropriate to the situation.

c. The board should set out specific risk tolerances and implement a dynamic process that continuously evaluates and prioritizes risks. An effective risk oversight process considers both internal company related risks such as operational, financial, credit, solvency, liquidity, corporate governance, cyber-security, environmental, reputational, social, and external risks such as industry related, systemic, and macro-economic.

d. Compensation practices should be evaluated to ensure alignment with the company's risk tolerances and that compensation structures do not encourage excessive risk taking.

e. At least annually, the board should approve a documented risk management plan and disclose sufficient information to enable shareowners to assess whether the board is carrying out its risk oversight responsibilities. Disclosure should also include the role of external parties such as third-party consultants in the risk management process. While ultimate responsibility for a company's risk management approach rests with the full board, having a risk committee (be it a stand-alone risk committee, a combined risk committee with nomination and governance, strategy, audit or other) can be an effective mechanism to bring the transparency, focus and independent judgment needed to oversee the company's risk management approach.

f. While the board is ultimately responsible for risk oversight, executive management should be charged with designing, implementing and maintaining an effective risk program. Roles and reporting lines related to risk management should be clearly defined. At a minimum, the roles and reporting lines should be explicitly set out for the board, board risk committees, Chief Executive Officer, Chief Financial Officer, the Chief Risk Officer, and business unit heads. The board and risk related committees should have appropriate transparency and visibility into the organization's risk management practices to carry out their responsibilities.

14. CEO Succession Plan: The board should proactively lead and be accountable for the development, implementation, and continual review of a CEO succession plan. Board members should be required to have a thorough understanding of the characteristics necessary for a CEO to execute on a long-term strategy that optimizes operating performance, profitability and shareowner value creation. At a minimum, the CEO succession planning process should:

a. Become a routine topic of discussion by the board.
b. Extend down throughout the company emphasizing the development of internal CEO candidates and senior managers while remaining open to external recruitment.
c. Require all board members be given exposure to internal candidates.
d. Encompass both a long-term perspective to address expected CEO transition periods and a short-term perspective to address crisis management in the event of death, disability or untimely departure of the CEO.
e. Provide for open and ongoing dialogue between the CEO and board while incorporating an opportunity for the board to discuss CEO succession planning without the CEO present.
f. Be disclosed to shareowners on an annual basis and in a manner that would not jeopardize the implementation of an effective and timely CEO succession plan.

15. Director Succession Plan: The board should proactively lead and be accountable for the development, implementation, and continual review of a director succession plan. Board members should be required to have a thorough understanding of the characteristics necessary to effectively oversee management's execution of a long-term strategy that optimizes operating performance, profitability, and shareowner value creation. At a minimum, the director succession planning process should:

a. Become a routine topic of discussion by the board.
b. Encompass how expected future board retirements or the occurrence of unexpected director turnover as a result of death, disability or untimely departure is addressed in a timely manner.
c. Encompass how director turnover either through transitioning off the board or as a result of rotating committee assignments and leadership is addressed in a timely manner.
d. Provide for a mechanism to solicit shareowner input.
e. Be disclosed to shareowners on an annual basis and in a manner that would not jeopardize the implementation of an effective and timely director succession plan.

16. **Human Capital Management Practices**: Corporations should adopt maximum progressive practices toward the elimination of human rights violations in all countries or environments in which the company operates. Additionally, these practices should emphasize and focus on preventing discrimination and/or violence based on race, color, religion, national origin, age, disability, sexual orientation, gender identity, marital status, or any other status protected by laws or regulations in areas of a company's operation. Boards should be accountable for companies to develop and implement company policies, procedures, training and internal reporting structures to ensure commitment to:

    a. **Universal Human Rights**: Express our support for universal human rights and, particularly, those of our employees, the communities within which we operate, and parties with whom we do business.
    b. **Equal Employment Opportunity**: Promote equal opportunity for our employees at all levels of the company with respect to issues such as color, race, gender, age, ethnicity or religious beliefs, and operate without unacceptable worker treatment such as the exploitation of children, physical punishment, female abuse, involuntary servitude, or other forms of abuse.
    c. **Freedom of Association**: Respect our employees' voluntary freedom of association.
    d. **Eliminate all Forms of Forced and Compulsory Labor**: Compensate our employees to enable them to meet at least their basic needs and provide the opportunity to improve their skill and capability in order to raise their social and economic opportunities.
    e. **Provide a safe and healthy workplace:** Protect human health and the environment; and promote sustainable development.
    f. **Promote fair competition**: Including respect for intellectual and other property rights, and not offer, pay or accept bribes.
    g. **Strategic Social Investment**: Work with governments and communities in which we do business to improve the quality of life in those communities – including their educational, cultural, economic and social well-being – and seek to provide training and opportunities for workers from disadvantaged backgrounds.
    h. **Application to Supply Chain**: Promote the application of these principles by those with whom we do business.

C. Compensation

Well-designed compensation programs are a powerful and effective tool to reward and align the users of our capital with our objectives to achieve sustainable, long-term investment returns.

Implicit in CalPERS' Principles related to compensation, is the belief that the philosophy and practice of compensation needs to be performance-based. We also advocate improved disclosure, and enhanced compensation committee accountability for compensation.

We believe that shareowners should have an effective mechanism to stimulate healthy debate for the purpose of holding management accountable for performance through compensation programs; however we do not generally believe that it is optimal for shareowners to approve individual contracts at the company level.

CalPERS recommends the following:

1. Total Compensation – Structure and Components

a. **Board Designed, Implemented, and Disclosed to Shareowners:** To ensure the alignment of interest with long-term shareowners, compensation programs are to be designed, implemented, and disclosed to shareowners in the annual proxy statement by the board, through an independent compensation committee. Compensation programs should not restrict the company's ability to attract and retain competent executives.

b. **Mix of Cash and Equity:** Compensation should be comprised of a combination of cash and equity based compensation.

c. **Quantum**: Compensation should be reasonable and equitable and the quantum should be determined within the context of the company as a whole. Compensation committees should set appropriate limits on the size of long-term incentive awards granted to executives. So-called "mega-awards" or outsized awards should be avoided, except in extraordinary circumstances, because they can be disproportionate to performance.

d. **Shareowner Advisory Vote on Executive Compensation:** Companies should submit executive compensation policies to shareowners for non-binding approval on an annual basis.

e. **Targeting Total Compensation Components:** Overall target ranges of total compensation and components therein including base salary, short-term incentive and long-term incentive components should be disclosed. When setting performance goals for "target" bonuses, the compensation committee should set performance levels below which no bonuses would be paid and above which bonuses would be capped. Except in extraordinary situations, the compensation committee should not "lower the bar" by changing performance targets in the middle of bonus cycles. If the committee decides that changes in performance targets are warranted in the middle of a performance cycle, it should disclose the reasons for the change and details of the initial targets and adjusted targets.

f. **Peer Relative Analysis:** Disclosure should include how much of total compensation is based on peer relative analysis and how much is based on other criteria. There should be annual disclosure of the companies in peer groups used for benchmarking and/or other comparisons. If the peer group used for compensation purposes differs from that used to compare overall performance, such as the five-year stock return graph required in the annual proxy materials, the compensation committee should describe the differences between the groups and the rationale for choosing between them. In addition to disclosing names of companies used for benchmarking and comparisons, the compensation committee should disclose targets for each compensation element relative to the peer/benchmarking group and year-to-year changes in companies composing peer/benchmark groups.

g. **Pay for Performance**: Compensation of the executive oversight group should be driven predominantly by performance. The compensation committee should establish performance measures for compensation that are agreed to ahead of time and publicly disclosed.

h. **Alignment with Business Strategy:** Compensation committees should have a well-articulated philosophy that links compensation to long-term business strategy.

i. **Sustainability Objectives and Compensation:** Compensation plans should be designed to support sustainability performance objectives particularly with regard to risk management, environmental, health, and safety standards. Sustainability objectives that trigger payouts should be disclosed.

2. **Salary**: Since salary is one of the few components of compensation that is not "at risk," it should be set at a level that yields the highest value for the company at least cost. In general, salary should be set to reflect responsibilities, tenure and past performance, and to be tax efficient—meaning no more than $1 million.

   a. **Above-median Salary**: The compensation committee should publicly disclose its rationale for paying salaries above the median of the peer group.

   b. **Employee Compensation**: Compensation to employees should be made to enable them to meet at least their basic needs and provide the opportunity to improve their skills and capabilities in order to raise their social and economic opportunities.

3. **Incentive Compensation**

   a. **Performance Link:** A significant portion of compensation should be comprised of "at risk" pay linked to optimizing the company's operating performance and profitability that results in sustainable long-term shareowner value creation.

   b. **Types of Incentive Compensation:** The types of incentive compensation to be awarded should be disclosed such as the company's use of options, restricted stock, performance shares or other types. Compensation committees should disclose the size, distribution, vesting requirements, other performance criteria and grant timing of each type of long-term incentive award granted to the executive oversight group. Compensation committees also should explain how each component contributes to the company's long-term performance objectives.

   c. **Establishing Performance Metrics:** Performance metrics such as total stock return, return on capital, return on equity and return on assets, should be set before the start of a compensation period while the previous years' metrics which triggered incentive payouts should be disclosed. The compensation committee should approve formulaic bonus plans containing specific qualitative and quantitative performance-based operational measures designed to reward executives for superior performance related to operational/strategic/other goals set by the board. Such awards should be capped at a reasonable maximum level. These caps should not be calculated as percentages of accounting or other financial measures (such as revenue, operating income or net profit), since these figures may change dramatically due to mergers, acquisitions and other non-performance-related strategic or accounting decisions.

d. **Multiple Performance Metrics:** Plan design should utilize multiple performance metrics when linking pay to performance.

e. **Performance Hurdles:** Performance hurdles that align the interests of management with long-term shareowners should be established with incentive compensation being directly tied to the attainment and/or out-performance of such hurdles. Provisions by which compensation will not be paid if performance hurdles are not obtained should be disclosed to shareowners.

f. **Retesting Incentive Compensation:** Provisions for the resetting of performance hurdles in the event that incentive compensation is retested should be disclosed.

g. **Clawback Policy:** Companies should recapture incentive payments that were made to executives on the basis of having met or exceeded performance targets during a period of fraudulent activity or a material negative restatement of financial results for which executives are found personally responsible.

4. Equity Compensation

a. **Equity Ownership:** Executive equity ownership should be required through the attainment and continuous ownership of a significant equity investment in the company. Executive stock ownership guidelines and holding requirements should be disclosed to shareowners on an annual basis. In addition to equity ownership, a company should make full disclosure of any pledging policies. Further, stock subject to the ownership requirements should not be pledged or otherwise encumbered.

b. **Employee Share Dealing**: The board should develop clear rules regarding any trading by directors and employees in the company's own securities. Individuals should not benefit directly or indirectly from knowledge which is not generally available to the market.

c. **Hedging:** The use of derivatives or other structures to hedge director or executive stock ownership undermines the alignment of interest that equity compensation is intended to provide. Companies should therefore prohibit the activity and provide full disclosure of any hedging policies.

d. **Post-retirement Holdings**: Executives should be required to continue to satisfy the minimum stock holding requirements for at least six months after leaving the company.

e. **Equity Grants Linked to Performance:** Equity based compensation plans should incorporate performance based equity grant vesting requirements tied to achieving performance metrics. The issuance of discounted equity grants or accelerated vesting are not desirable performance based methodologies. Stock awards should not be payable based solely on the attainment of tenure requirements.

f. **Unvested Equity Acceleration upon a Change-in-Control:** In the event of a merger, acquisition, or change-in-control, unvested equity should not accelerate but should instead convert into the equity of the newly formed company.

g. **Recapturing Dividend Equivalent Payouts:** Companies should develop and disclose a policy for recapturing dividend equivalent payouts on equity that does not vest. In addition, companies should ensure voting rights are not permitted on unvested equity.

h. **Equity Grant Vesting Period:** Equity grants should vest over a period of at least three years.
i. **Equity Grant Repricing:** Equity grant repricing without shareowner approval should be prohibited.
j. **Grant Timing**: Except in extraordinary circumstances, such as a permanent change in performance cycles, long-term incentive awards should be granted at the same time each year. Companies should not coordinate stock award grants with the release of material non-public information. The grants should occur whether recently publicized information is positive or negative, and stock options should never be backdated.
k. **Evergreen or Reload Provisions:** "Evergreen" or "Reload" provisions should be prohibited.
l. **Distribution of Equity Compensation:** How equity-based compensation will be distributed within various levels of the company should be disclosed.
m. **Equity Dilution and Run Rate Provisions:** Provisions for addressing the issue of equity dilution, the intended life of an equity plan, and the expected yearly run rate of the equity plan should be disclosed.
n. **Equity Repurchase Plans:** If the company intends to repurchase equity in response to the issue of dilution, the equity plan should clearly articulate how the repurchase decision is made in relation to other capital allocation alternatives.
o. **Shareowner Approval:** All equity based compensation plans or material changes to existing equity based compensation plans should be shareowner approved.
p. **Cost of Equity Based Compensation:** Reasonable ranges which the board will target the total cost of new or material changes to existing equity based compensation plans should be disclosed. The cost of new or material changes to existing equity based compensation plans should not exceed that of the company's peers unless the company has demonstrated consistent long-term economic outperformance on a peer relative basis.
q. **Gross-ups**: Senior executives should not receive gross-ups beyond those provided to all the company's employees.
r. **Tabular Disclosure**: The annual proxy statement should include a table detailing the overhang represented by unexercised options and shares available for award and a discussion of the impact of the awards on earnings per share.

5. Stock Options

a. **Board Approval:** The board's methodology and corresponding details for approving stock options for both company directors and employees should be highly transparent and include disclosure of: 1) quantity, 2) grant date, 3) strike price, and 4) the underlying stock's market price as of grant date. The approval and granting of stock options for both directors and employees should preferably occur on a date when all corporate actions are taken by the board. The board should also require a report from the CEO stating specifically how the board's delegated authority to issue stock options to employees was used during the prior year.
b. **Performance Options:** Stock options should be: (1) indexed to peer groups

or (2) premium-priced and/or (3) vest on achievement of specific performance targets that are based on challenging quantitative goals.

c. **Discount Options:** Discount options should not be awarded.

d. **Option Repricing:** "Underwater" options should not be repriced or replaced (either with new options or other equity awards), unless approved by shareowners. Repricing programs, with shareowner approval, should exclude directors and executives, restart vesting periods and mandate value-for-value exchanges in which options are exchanged for a number of equivalently valued options/shares.

6. **Use of "Other" Forms of Compensation**: Compensation policies should include guidelines by which the company will use alternative forms of compensation ("perquisites"), and the relative weight in relation to total compensation if perquisites are utilized. To the degree that the company will provide perquisites, it should clearly articulate how shareowners should expect to realize value from these other forms of compensation.

7. **Retirement Plans**

a. **Defined Contribution/Benefit Plans:** Should be clearly disclosed in tabular format showing all benefits available whether from qualified or non-qualified plans and net of any offsets.

b. **Supplemental Executive Retirement Plans (SERPs):** Supplemental plans should be an extension of the retirement program covering other employees. They should not include special provisions that are not offered under plans covering other employees, such as above-market interest rates and excess service credits. Payments such as stock and stock options, annual/long-term bonuses and other compensation not awarded to other employees and/or not considered in the determination of retirement benefits payable to other employees should not be considered in calculating benefits payable under SERPs.

c. **Deferred Compensation Plans:** Investment alternatives offered under deferred compensation plans for executives should mirror those offered to employees in broad-based deferral plans. Above-market returns should not be applied to executive deferrals, nor should executives receive "sweeteners" for deferring cash payments into company stock.

8. **Severance Agreements**

a. **Severance Agreement Disclosure:** In cases where the company will consider severance agreements, the policy should contain the overall parameters of how such agreements will be used including the specific detail regarding the positions within the company that may receive severance agreements; the maximum periods covered by the agreements; provisions by which the agreements will be reviewed and renewed; any hurdles or triggers that will affect the agreements; a clear description of what would and would not constitute termination for cause; and disclosure of where investors can view the entire text of severance agreements.

b. **Severance Agreement Amendments:** Material amendments to severance agreements should be disclosed to shareowners.

c. **Shareowner Approval of Severa nce Payments:** Severance payments that provide benefits with a total present value exceeding market standards should be ratified by shareowners.

9. **Employment Contracts**: Companies should only provide employment contracts to executives in limited circumstances, such as to provide modest, short-term employment security to a newly hired or recently promoted executive. Such contracts should have a specified termination date (not to exceed three years) and contracts should not be "rolling" or be on an open-ended basis.

10. **Change-in-control Payments**: Any provisions providing for compensation following change-in-control events should be "double-triggered." That is, such provisions should stipulate that compensation is payable only: (a) after a control change actually takes place and (b) if a covered executive's job is terminated because of the control change.

11. **Director Compensation:** Pay for a non-executive director and/or a non-executive chair is structured in a way which ensures independence, objectivity, and alignment with shareowners' interests. The annual director compensation disclosure included in the proxy materials should include a discussion of the philosophy for director pay and the processes for setting director pay levels.

a. **Combination of Cash and Equity:** Director compensation should be a combination of cash and stock in the company.

b. **Equity Ownership:** Director equity ownership should be required through the attainment and continuous ownership of an equity investment in the company. Director stock ownership guidelines and holding requirements should be disclosed to shareowners on an annual basis. Equity obtained with an individual's own capital provides the best alignment of interests with other shareowners.

c. **Vesting of Equity-based Awards**: Equity-based compensation to non- employee directors should be fully vested on the grant date. The main benefits are the immediate alignment of interests with shareowners and the fostering of independence and objectivity for the director.

d. **Amount of Annual Retainer**: The annual retainer should be the sole form of cash compensation paid to non-employee directors. Ideally, it should reflect an amount appropriate for a director's expected duties, including attending meetings, preparing for meetings/discussions and performing due diligence on sites/operations (which should include routine communications with a broad group of employees). In some combination, the retainer and the equity component also reflect the director's contribution from experience and leadership. Retainer amounts may be differentiated to recognize that certain non-employee directors - possibly including independent board chairs, independent lead directors, committee chairs or members of certain committees - are expected to spend more time on board duties than other directors.

e. **Performance-based Compensation**: Performance-based compensation for directors creates potential conflicts with the director's primary role as an independent representative of shareowners and is therefore not recommended.

f. **Perquisites**: Directors should not receive perquisites other than those that are meeting-related, such as airfare, hotel accommodation or modest travel/accident insurance. Health, life and other forms of insurance; matching grants to charities; financial planning; automobile allowances and other similar perquisites cross the line as benefits offered to employees. Charitable awards programs are an unnecessary benefit; directors interested in posthumous donations can do so in their own via estate planning. Infrequent token gifts of modest value are not considered perquisites.

- **g. Employment Contracts, Severance and Change-of-control Payments**: Non-employee directors should not be eligible to receive any change-in-control payments or severance arrangements.
- **h. Retirement Benefits**: Since non-employee directors are elected representatives of shareowners and not company employees, they should not be offered retirement benefits, such as defined benefit plans or deferred stock awards, nor should they be entitled to special post-retirement perquisites.
- **i. Deferred Compensation Plans**: Directors may defer cash pay via a deferred compensation plan for directors. However, such investment alternatives offered under deferred compensation plans for directors should mirror those offered to employees in broad-based deferral plans. Non-employee directors should not receive "sweeteners" for deferring cash payments into company stock.
- **j. Disgorgement**: Directors should be required to repay compensation to the company in the event of malfeasance or a breach of fiduciary duty involving the director.

D. Corporate Reporting

CalPERS expects fair, accurate and timely reporting on how companies employ and identify risks related to financial, human and physical capital, in order to generate sustainable economic returns.

1. Integrated Financial Reporting: Financial reporting plays an integral role in the capital markets by providing transparent and relevant information about the economic performance and condition of businesses. Effective financial reporting depends on high quality accounting standards, as well as consistent application, rigorous independent audit and enforcement of those standards. Companies should provide for the integrated representation of operational, financial, environmental, social, and governance performance in terms of both financial and non-financial results in order to offer investors better information for assessing risk. The board should provide an integrated report that puts historical performance into context, and portrays the risks, opportunities and prospects for the company in the future, helping shareowners understand a company's strategic objectives and its progress towards meeting them. Such disclosures should:

- **a.** be linked to the company's business model.
- **b.** be genuinely informative and include forward-looking elements where this will enhance understanding.
- **c.** describe the company's strategy, and associated risks and opportunities, and

explain the board's role in assessing and overseeing strategy and the management of risks and opportunities.

d. be accessible and appropriately integrated with other information that enables shareowners to obtain a picture of the whole company.

e. use key performance indicators that are linked to strategy and facilitate comparisons.

f. use objective metrics where they apply and evidence-based estimates where they do not; and

g. be strengthened where possible by independent assurance that is carried out annually and with regard to established disclosure standards.

2. **Transparency**: Operational, financial, and governance information about companies must be readily transparent to permit accurate market comparisons; this includes disclosure and transparency of objective globally accepted minimum accounting standards, such as the International Financial Reporting Standards (IFRS).

   a. **Comprehensive Disclosure:** The board should present a balanced and understandable assessment of the company's position and prospects in the annual report and accounts in order for shareowners to be able to assess the company's performance, business model, strategy and long-term prospects.
   b. **Materiality**: The board should disclose relevant and material information on a timely basis so as to allow shareowners to take into account information which assists in identifying risks and sources of wealth creation. Issues material to shareowners should be set out succinctly in the annual report, or equivalent disclosures, and approved by the board itself.
   c. **Board Governance Principles:** The board should adopt and disclose a written statement of its own governance principles, and re-evaluate them on at least an annual basis.
   d. **Corporate Responsibility:** It is recommended that corporations adopt the Global Reporting Initiative Sustainability Reporting Guidelines to disclose economic, environmental, and social impacts.

3. **Proxy Materials:** Proxy materials should be written in a manner designed to provide shareowners with the information necessary to make informed voting decisions. Similarly, proxy materials should be distributed in a manner designed to encourage shareowner participation. All shareowner votes, whether cast in person or by proxy, should be formally counted with vote outcomes formally announced.

4. **Auditor's Enhanced Reporting to Investors**: Auditors should provide independent assurance and attestation to the quality of financial statements to instill confidence in the providers of capital. Auditors should bring integrity, independence, objectivity, and professional competence to the financial reporting process. The audit opinion should state whether the financial statements and disclosures are complete, materially accurate, and free of material misstatement, whether caused by error or fraud. Auditors should provide a reasonable and balanced assurance on financial reporting matters to investors in narrative reports such as an Auditor's Discussion and Analysis (AD&A) or a Letter to the Shareowners. Enhanced reporting should include:

a. Business, operational and risks believed to exist and considered.
b. Assumptions used in judgments that materially affect the financial statements, and whether those assumptions are at the low or high end of the range of possible outcomes.
c. Appropriateness of the accounting policies adopted by the company.
d. Changes to accounting policies that have a significant impact on the financial statements.
e. Methods and judgments made in valuing assets and liabilities.
f. Unusual transactions.
g. Accounting applications and practices that are uncommon to the industry.
h. Identification of any matters in the Annual Report that the auditors believe are incorrect or inconsistent with the information contained in the financial statements or obtained in the course of their audit.
i. Audit issues and their resolutions, which the audit partner documents in a final audit memo to the Audit Committee.
j. Quality and effectiveness of the governance structure and risk management.
k. Completeness and reasonableness of the Audit Committee report.

5. **Stakeholder Relations**: CalPERS believes that corporations should strive for active cooperation with stakeholders will be most likely to create wealth, employment and sustainable economies. With adequate, accurate and timely data disclosure of environmental, social, and governance practices, shareowners are able to more effectively make investment decisions by taking into account those practices of the companies in which the System invests.

6. **Environmental Management Practices:** Good practice includes development of robust policies and practices to address both risk and opportunity arising from environmental issues. Ceres provides an example on climate change as follows:

Board Oversight:

a. Board is actively engaged in climate change policy and has assigned oversight responsibility to board member, board committee or full board.

Management Execution:

b. Chairman/CEO assumes leadership role in articulating and executing climate change policy.
c. Top executives and/or executive committees assigned to manage climate change response strategies.
d. Climate change initiatives are integrated into risk management and mainstream business activities.
e. Executive officers' compensation is linked to attainment of environmental goals and greenhouse gas emission targets.

Public Disclosure:

f. Securities filings disclose material risks and opportunities posed by climate change.
g. Public communications offer comprehensive, transparent presentation of response measures.

Emissions Accounting:

h. Company calculates and registers greenhouse gas emissions savings and offsets from operations.
i. Company conducts annual inventory of greenhouse gas emissions and publicly reports results.
j. Company has an emissions baseline by which to gauge future greenhouse gas emissions trends.
k. Company has third-party verification process for greenhouse gas emissions data.

Strategic Planning:

l. Company sets absolute greenhouse gas emission reduction targets for facilities, energy use, business travel and other operations (including direct emissions.)
m. Company participates in greenhouse gas emissions trading programs – up to 30.
n. Company pursues business strategies to reduce greenhouse gas emissions, minimize exposure to regulatory and physical risks, and maximize opportunities from changing market forces and emerging controls.

7. **Codes of Conduct/Ethics:** The board should adopt high standards of business ethics through codes of conduct/ethics (or similar instrument) and oversee a culture of integrity, notwithstanding differing ethical norms and legal standards in various countries. This should permeate all aspects of the company's operations, ensuring that its vision, mission and objectives are ethically sound and demonstrative of its values. Codes should be effectively communicated and integrated into the company's strategy and operations, including risk management systems and remuneration structures.

   a. **Behavior and Conduct**: The board should foster a corporate culture which ensures that employees understand their responsibilities for appropriate behavior. There should be appropriate board level and staff training in all aspects relating to corporate culture and ethics. Due diligence and monitoring programs should be in place to enable staff to understand relevant codes of conduct and apply them effectively to avoid company involvement in inappropriate behavior.
   b. **Bribery and Corruption:** The board should ensure that management has implemented appropriately stringent policies and procedures to mitigate the risk of bribery and corruption or other malfeasance. Such policies and procedures should be communicated to shareowners and other interested parties.
   c. **Whistleblowing**: The board should ensure that the company has in place an independent, confidential mechanism whereby an employee, supplier or other stakeholder can (without fear of retribution) raise issues of particular concern with

regard to potential or suspected breaches of a company's code of ethics or local law.

d. **Prohibit Greenmail:** Every company should prohibit greenmail.

8. **Company General Meetings:** The general meeting agenda should be posted on the company's website at least one month prior to the meeting taking place. The agenda should be clear and properly itemized and include the date and location of the meeting as well as information regarding the issues to be decided at the meeting.

   a. **Vote Deadline**: The board should clearly publicize a date by which shareowners should cast their voting instructions.
   b. **Share Blocking**: The practice of share blocking or requirements for lengthy share holdings should be discontinued.
   c. **Selection and Notification of Meeting Time and Location**: Corporations should make shareowners' expense and convenience primary criteria when selecting the time and location of shareowner meetings. Appropriate notice of shareowner meetings, including notices concerning any change in meeting date, time, place or shareowner action, should be given to shareowners in a manner and within time frames that will ensure that shareowners have a reasonable opportunity to exercise their franchise.
   d. **Record Date and Ballot Item Disclosure**: To promote the ability of shareowners to make informed decisions regarding whether to recall loaned shares: (1) shareowner meeting record dates should be disclosed as far in advance of the record date as possible, and (2) proxy statements should be disclosed before the record date passes whenever possible.
   e. **Timely Disclosure of Voting Results**: A company should broadly and publicly disclose in a timely manner the final results of votes cast at annual and special meetings of shareowners. Whenever possible, preliminary results should be announced at the annual or special meeting of shareowners. If a board-endorsed resolution has been opposed by a significant proportion of votes, the company should explain subsequently what actions were taken to understand and respond to the concerns that led shareowners to vote against the board's recommendation.
   f. **Election Polls**: Polls should remain open at shareowner meetings until all agenda items have been discussed and shareowners have had an opportunity to ask and receive answers to questions concerning them.
   g. **Meeting Adjournment and Extension**: Companies should not adjourn a meeting for the purpose of soliciting more votes to enable management to prevail on a voting item. A meeting should only be extended for compelling reasons such as vote fraud, problems with the voting process or lack of a quorum.
   h. **Electronic Meetings**: Companies should hold shareowner meetings by remote communication (so-called "virtual" meetings) only as a supplement to traditional in-person shareowner meetings, not as a substitute. Companies incorporating virtual technology into their shareowner meeting should use it as a tool for broadening, not limiting, shareowner meeting participation. With this objective in mind, a virtual option, if used, should facilitate the opportunity for remote attendees to participate in the meeting to the same degree as in-person attendees.
   i. **Director Attendance**: All directors should attend the annual shareowners' meeting

and be available, when requested by the chair, to respond directly to oral or written questions from shareowners.

j. **Broker Non-Votes:** Broker non-votes should be counted for quorum purposes only.

E. Regulatory Effectiveness

It is important to have effective regulation as it protects CalPERS as an investor from externalities, maintains fair, orderly and efficient financial markets, and facilitates capital formation. In order to fulfill their vital functions, regulators need to have funding which is independent, sufficient, and multi-year.

1. **Code of Best Practices:** Each capital market in which shares are issued and traded should adopt its own Code of Best Practices to promote transparency of information, prevention of harmful labor practices, investor protection, and corporate social responsibility. Where such a code is adopted, companies should disclose to their shareowners whether they are in compliance.

2. **Financial Markets:** Policy makers and standards setters who impact investment portfolio risk and return should promote fair, orderly, and effectively regulated financial markets through addressing the following:

   a. **Transparency:** To promote full disclosure so that the financial markets provide incentives that price risk and opportunity.
   b. **Governance:** To foster alignment of interest, protect investor rights and independence of regulators.
   c. **Systemic Risk:** For earlier identification by regulators of issues that give rise to overall market risk that threaten global markets and foster action that mitigates those risks.

3. **Global Accounting Standards:** Convergence to one set of high quality global accounting standards to ensure integrity of financial reporting without compromising quality is critical.

4. **Political Stability:** Progress toward the development of basic democratic institutions and principles, including such things as: a strong and impartial legal system and respect and enforcement of property and shareowner rights. Political stability encompasses:

   a. **Political risk:** Internal and external conflict, corruption, the military and religion in politics, law and order, ethnic tensions, democratic accountability, and bureaucratic quality.
   b. **Civil liberties:** Freedom of expression, association and organization rights; rule of law and human rights; free trade unions and effective collective bargaining; personal autonomy and economic rights.

c. **Independent judiciary and legal protection**: An absence of irregular payments made to the judiciary, the extent to which there is a trusted legal framework that honors contracts, clearly delineates ownership and protects financial assets.

5. **Transparency:** Financial transparency, including elements of a free press, is necessary for investors to have truthful, accurate and relevant information. Transparency encompasses:

   a. **Freedom of the press:** Structure of the news delivery system in a country, laws and their promulgation with respect to the influence of the news, the degree of political influence and control, economic influences on the news, and the degree to which there are violations against the media with respect to physical violations and censorship.
   b. **Monetary and fiscal transparency:** The extent to which governmental monetary and fiscal policies and implementation are publicly available in a clear and timely manner, in accordance with international standards.
   c. **Stock exchange listing requirements:** Stringency of stock exchange listing requirements with respect to frequency of financial reporting, the requirement of annual independent audits, and minimal financial viability.
   d. **Accounting standards:** The extent to which U.S. Generally Accepted Accounting Principles, or International Accounting Standards are used in financial reporting and whether the country is a member of the International Accounting Standards Council.

6. **Productive Labor Practices:** No harmful labor practices or use of child labor. In compliance, or moving toward compliance, with the International Labor Organization (ILO) Declaration on the Fundamental Principles and Rights at Work. Productive Labor Practices encompasses:

   a. **ILO ratification:** Whether the convention is ratified, not ratified, pending ratification or denounced.
   b. **Quality of enabling legislation:** The extent to which the rights described in the ILO convention are protected by law.
   c. **Institutional capacity:** The extent to which governmental administrative bodies with labor law enforcement responsibility exist at the national, regional and local levels.
   d. **Effectiveness of implementation:** Evidence that enforcement procedures exist and are working effectively and evidence of a clear grievance process that is utilized and provides penalties that have deterrence value.

7. **Market Regulation and Liquidity:** Regulators should address reputational risk and ensure potential market and currency volatility is adequately rewarded. Market regulation and liquidity encompasses: market capitalization, change in market capitalization, average monthly trading volume, growth in listed securities, market volatility as measured by standard deviation, and return/risk ratio.

8. **Capital Market Openness:** Regulators should ensure free market policies, openness to foreign investors, and legal protection for foreign investors. Capital market openness

encompasses:

a. **Foreign investment:** Degree to which there are restrictions on foreign ownership of local assets, repatriation restrictions or un-equal treatment of foreigners and locals under the law.
b. **Trade policy:** Degree to which there are deterrents to free trade such as trade barriers and punitive tariffs.
c. **Banking and finance:** Degree of government ownership of banks and allocation of credit, freedom financial institutions have to offer all types of financial services and protectionist banking regulations against foreigners.

9. **Settlement Proficiency/Transaction Costs**: Regulators should ensure reasonable trading and settlement proficiency and reasonable transaction costs. Settlement proficiency/transaction costs encompass:

a. **Trading and settlement proficiency:** Degree to which a country's trading and settlement is automated, and success of the market in settling transactions in a timely, efficient manner.
b. **Transaction costs:** The costs associated with trading in a particular market, including stamp taxes and duties, amount of dividends and income taxes and capital gains taxes.

APPENDIX A

United Nations Supported Principles for Responsible Investment

Launched in April 2006, The Principles for Responsible Investment (PRI) provides the framework for investors to give appropriate consideration to environment, social and corporate governance (ESG) issues. The PRI was created as an initiative of the UN Secretary-General and coordinated by the UNEP Finance Initiative and the UN Global Compact. An international working group of 20 institutional investors was supported by a 70-person multi-stakeholder group of experts from the investment industry, intergovernmental and governmental organizations, civil society and academia.

CalPERS is one of the original signatories.

The Principles

1. We will incorporate ESG issues into investment analysis and decision-making processes.
2. We will be active owners and incorporate ESG issues into our ownership policies and practices.
3. We will seek appropriate disclosure on ESG issues by the entities in which we invest.
4. We will promote acceptance and implementation of the Principles within the investment industry.
5. We will work together to enhance our effectiveness in implementing the Principles.
6. We will each report on our activities and progress towards implementing the Principles.

In signing the Principles, we as investors publicly commit to adopt and implement them, where consistent with our fiduciary responsibilities. We also commit to evaluate the effectiveness and improve the content of the Principles over time. We believe this will improve our ability to meet commitments to beneficiaries as well as better align our investment activities with the broader interests of society.

We encourage other investors to adopt the Principles.

Additional information can be found at www.unpri.org.

APPENDIX B

LIST OF MEMBERSHIPS AND ENDORSEMENTS SUPPORTED BY CALPERS

1. **The Global Sullivan Principles**
   https://www.sullivanprinciples.html/

2. **UN Global Compact Principles**
   https://www.unglobalcompact.org/

3. **Council of Institutional Investors (CII)**
   http://www.cii.org/

4. **International Corporate Governance Network Principles (ICGN)**
   https://www.icgn.org/

5. **Ceres**
   http://www.ceres.org/

6. **Investor Network on Climate Risk (INCR)**
   http://www.ceres.org/investor-network/incr

California Public Employees' Retirement System
Total Fund Investment Policy Appendices

Appendix ~~8~~9
Total Fund Investment Policy Document History

Adopted by the Investment Committee	March 16, 2015
Administrative Changes to Appendix 5, Investment Benchmarks, to reflect closure of State Peace Officer & Firefighters (POFF) Fund	April 14, 2015
Approved by the Investment Committee Revisions relevant to the strategic asset allocation process and the Long-Term Care Fund	June 15, 2015
Approved by the Investment Committee Effective Revisions relevant to Liquidity Program changes to ensure enough liquidity is available to meet obligations; and benchmark change to cash-only	June 15, 2015 July 1, 2015
Approved by the Investment Committee Revisions relevant to the 2015 Investment Policy Revision Project, including revisions to current policy content, new policy content, and general changes to enhance clarity and address non-material inconsistencies and formatting.	April 18, 2016
Approved by the Investment Committee [Revisions to the divestment section and establishment of a new section, the Governance and Sustainability Strategy, incorporating key components of the legacy Global Governance Program Policy, repealed as of]	[MONTH, DD, YYYY]

The following policies were incorporated into the Total Fund Investment Policy and repealed on April 18, 2016:

- Currency Overlay Program
- Liquidity Program
- Low Duration Fixed Income Program
- Multi-Asset Class Partners Program
- Securities Lending

The following polices were incorporated into the Total Fund Investment Policy and repealed on March 16, 2015:

- Total Fund Statement of Investment Policy
- Investment Beliefs
- Asset Allocation Strategy
- Benchmarks
- Risk Management Program
- Global Derivatives and Counterparty Risk
- Leverage
- Divestment
- Opportunistic Program
- Plan Level and Asset Class Transition Portfolios
- Role of Private Asset Class Board Investment Consultants
- Custody Management
- Economically Targeted Investments

- Terminated Agency Pool