

Services To Be Provided

In performing the services outlined below, the Consultant will, at all times, be subject to and comply with the Total Fund Statement of Investment Policy and each of CalPERS other investment policies (collectively the Policies or the Policy), and any subsequent revisions, amendments, or removal of any Policy. Policies may be found at www.calpers.ca.gov.

A. General Investment Consulting

- Review and provide written opinions as an independent fiduciary on reports prepared by CalPERS staff (Staff), as requested by the CalPERS Board of Administration Investment Committee (Board).
- Provide opinions on matters relevant to the prudent and optimal management of the System¹, as requested by the Board.
- Identify and create a peer benchmark for the Public Employees' Retirement Fund (Total Fund) The benchmark for the Total Fund will hereafter be referred to as the CalPERS Peer Universe.
- Identify and create a peer benchmark for each component of the Affiliate Trusts², in components where a peer exists. The benchmarks for Affiliate Trusts will hereafter be referred to as the Affiliates Peer Universe.
- Provide review and analysis for the Total Fund relative to the CalPERS Peer Universe.
- Provide review and analysis for each component of the Affiliate Trusts relative to the appropriate Affiliates Peer Universe, as requested by the Board.
- Attend all CalPERS Board of Administration Investment Committee (IC) meetings.
- Attend CalPERS IC sub-committee meetings, as requested by the Board.
- Provide research, detailed market analysis and trends, and advice on specific pension topics, as requested by the Board.
- Inform the Board of any market conditions that arise which could potentially create undue risk to the System and any components of the System.

B. Asset Allocation and Risk Management

1. Asset Allocation and Liability Management Review

CalPERS undertakes a periodic asset liability management (ALM) review.

CalPERS Investment Office, Actuarial Office, and Financial Office Staff are responsible for the ALM review. The ALM review includes, but is not limited to:

- Definition of the market opportunity set and asset classes relevant to CalPERS.
- Assessment and perspective regarding the benchmarks used for the various asset classes.

¹ The System is comprised of the Public Employees' Retirement Fund, the Affiliate Trusts, and any other system, fund, or trust administered by the Board of Administration of the Public Employees Retirement System.

² Affiliate Trusts include the following: Annuitants' Health Care Coverage Fund (referred to as the California Employers' Retiree Benefit Trust), Judges' Retirement Fund, Judges' Retirement System II Fund, Legislators' Retirement Fund, Long-Term Care Fund, Public Employees' Health Care Fund, Public Employees' Deferred Compensation Fund, Supplemental Contributions Program Fund, and the State Peace Officers' and Firefighters' Defined Contribution Plan Fund.

- Establishment of capital market assumptions for the opportunity set used in the modeling process.
- Critique and perspective on the strengths and weaknesses of using a modern portfolio theory analytic framework as the basis for the modeling.
- Critique and perspective on transforming an asset class perspective into market risk factors.
- Assessment of the strengths and weaknesses of “active” versus “passive” management in the various parts of the asset classes.
- Transforming market characteristics into actuarial assumption sensitivities.
- Risk assessment on all elements contributing to the analysis from both an investment and an actuarial perspective.
- Engagement with various stakeholders.

The General Pension Board Consultant, with respect to the above process, is expected to:

a) Total Fund

- Participate in each step and topical area of the ALM review as requested, including:
 - Meeting with Staff,
 - Develop analytic frameworks and communication materials,
 - Contribute to the development of estimates and forecasts used in the modeling process, and
 - Participate in the presentation and dialog during ALM workshop sessions with the Board, or the designated subcommittee of the Board.
- Provide an opinion on Board decisions relative to ALM, to include whether decisions were:
 - Based on reasonable estimates and assumptions, and
 - Developed by processes comporting with best business practices.

b) Affiliate Trusts

- Participate in discussions on ALM for the Affiliate Trusts,
- Review and provide feedback on ALM plan developed by Staff, and
- Review and provide an opinion on Investment Committee agenda items for ALM.

2. Risk Management

- Review and provide opinions to the Board on the risk characteristics and the risk profile of the Total Fund, including analysis relative to the CalPERS Peer Universe.
- Review and provide opinions to the Board on the risk characteristics and the risk profile of each of the Affiliate Trusts, as appropriate, including analysis relative to the appropriate Affiliate Peer Universe.

C. Ongoing Education

- Provide Board and Staff, as appropriate, with educational sessions including but not limited to:
 - Investment topics pertinent to prudently managing the System, and
 - Current investment topics and capital market trends.

D. Investment Policy Review

- Monitor and review how Staff is adhering to the Policies.
- Review, analyze, and provide an independent recommendation on the Policies, including any procedures, as proposed by Staff, outside advisors, or specialty consultants. The review and recommendation should ensure that the Policies:
 - Meet industry standards,
 - Are consistent with other Policies,
 - Use best practices,
 - Align with CalPERS Investment Beliefs,
 - Reflect the Board's accepted risk tolerance, and
 - Assist the Board in meeting the long-term investment objectives of CalPERS.
- Provide written recommendations for amendments and/or modifications to any Policy, including procedures referenced in the policy, and provide detailed justification for recommendations.
- Prepare and present reports and recommendations for reviewing and updating Policy criteria and objectives which include strategies for public and private asset classes/programs.

E. External Manager Review

- Review and provide an opinion on the process used to identify and source external managers, as requested by the Board.
- Provide advice to the Board on questions or issues that arise in the course of administering the external manager programs on strategic issues related to structure, policy, and benchmarks.
- Review and opine on investment management fees and related expenses, as requested by the Board.

F. Performance

- Review and approve all requests for benchmark replacements and modifications.
- Review and provide an opinion on the Total Fund Policy Benchmark³, as defined in Policy and components of the Total Fund Policy benchmark, as requested by the Board.
- Review and provide written opinions of custom benchmarks, as requested by the Board.
- Report on the investment risk and performance of the Total Fund, and provide an analysis of CalPERS investment risk and performance compared to CalPERS Peer Universe. The analysis should include recommendations and justifications for recommendations, on any issues in the analysis that would hinder the Board's ability to meet CalPERS long-term investment objectives.
- Report on the investment risk and performance of the Affiliate Trusts, and provide an analysis of CalPERS investment risk and performance compared to the Affiliates Peer Universe. The analysis should include recommendations and justifications for recommendations, on any issues in the analysis that would hinder the Board's ability to meet CalPERS long-term investment objectives.

³ Total Fund Policy Benchmark is currently defined in the Benchmarks Policy, Exhibit 2, as the average return of the asset class benchmark indices weighted by asset class benchmark allocations plus the benchmark return of the total fund currency overlay program. This definition may be amended in subsequent policy revisions.

- Prepare a one (1) page annual report on the investment performance for the CalPERS Annual Financial Report (CAFR).
- Analyze for reasonableness, the benchmarks, measurements and appropriateness of all factors within Staff performance plans, compared to industry peers.
- Validate year-end, quantitative measurements on Staff performance plans.

G. Investment Office Program Review

- Benchmark the internal programs against industry standards, best practices, and if applicable, the appropriate component of CalPERS Peer Universe or Affiliates Peer Universe. Provide a written report to the Board.
- Provide periodic written program reviews, as requested by the Board.
- Review and provide comment on asset class program reviews and agenda items, as requested. Provide a written report to the Board.