Private Equity Annual Program Review

Greg Ruiz Managing Investment Director

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Annual Program Review Outline

Section	Page
Executive Summary	3-6
Executive Summary: Private Equity (PE)	3
Major Accomplishments (2018-2019)	4
Major Initiatives (2019-2020)	5
Performance for Period Ending June 30, 2019	6
I. Program Overview	8-12
Program Role	9-10
Investment Beliefs	11
Governance & Sustainability Integration	12
II. Investment Review	13-17
Investment Objective	14
Investment Performance for Period Ending June 30, 2019	15
Portfolio Positioning	16
Program Characteristics	17
III. Business Review	18-23
Investment Office Organization Chart	19
Functional Organization Chart	20
Staffing Overview	21
Business Overview	22
Program Expenses	23



Executive Summary | Private Equity (PE)

- 1. Portfolio
 - Objective: Enhance equity returns through an active, value-added investment style
 - Approach: Consistent, long-term commitment to the asset class is necessary to achieve targeted returns

2. People and Processes

- Inclusive and collaborative team culture
- Dedicated to continuous improvement, data/technology integration, and cost efficiency

3. Performance

- Benchmark: PE has outperformed the policy benchmark over the 1 and 20 year time horizons; underperformed over the 3, 5 and 10 year time horizons
- Asset Liability Management (ALM) Assumptions: PE has outperformed the ALM expected return over the 3, 5, 10 and 20 year time horizons; underperformed over the 1 year time horizon
- Other Asset Classes: Private Equity has outperformed all asset classes, including Global Equity, over the 3, 5, 10 and 20 year time horizons; underperformed Global Fixed Income over a 1 year time horizon



Executive Summary | Major Accomplishments

2018-2019 Major Accomplishments

- Scaled capital commitments to nearly ~\$7b, while maintaining high underwriting standards
- Evolved team structure by integrating underwriting and monitoring functions
- Built a more effective and collaborative culture
- Assessed new paths of PE capital deployment



Executive Summary | Major Initiatives

2019-2020 Major Initiatives

- Initiate strategic planning process to frame long-term objectives
- Focus on our core capabilities: effective underwriting, engaged monitoring and partnership with high-quality managers
- Integrate data more deeply into our business processes
- Expand investment capabilities
- Continued integration of ESG factors into our investment processes



Executive Summary | Private Equity Performance

For Period Ending June 30, 2019

Program	20 YR	10 YR	5 YR	3 YR	1 YR
	Net	Net	Net	Net	Net
	Return	Return	Return	Return	Return
Private Equity (\$26.5b)	10.2	14.0	9.6	12.5	7.7
PE Policy Benchmark	8.3	16.6	10.3	14.1	4.0
Excess Return	1.8	(2.5)	(0.8)	(1.6)	3.7
ALM	8.3	8.3	8.3	8.3	8.3
Excess Return	1.9	5.7	1.3	4.2	-0.6
CalPERS GE Policy Benchmark					
(as of 3/31/19 to match PE one	5.5	12.9	6.9	11.4	2.7
quarter lag)					
Excess Return	4.7	1.1	2.6	1.2	5.0

*Source: State Street



Appendix



I. Program Overview



II. Investment Review

III. Business Review



Program Role | Execute CalPERS Strategic Plan

CalPERS 2017-22 Strategic Goal

Strengthen the long-term sustainability of the pension fund, cultivate a risk-intelligent organization, and reduce cost and complexity.



Investment Office Mission (Generate Returns to Pay Benefits)

Manage portfolio in a cost effective, transparent, and risk-aware manner

Vision

- Investment Beliefs and CalPERS Core Values: principles underlying our investment decisions
- Operate with a focus on repeatable, predictable, and scalable portfolios and practices
- Seek alignment of interests with our primary stakeholders, our business partners, and ourselves
- Use clearly articulated performance, risk, and cost metrics to evaluate our value-add to the funds
- Investment and business activities are supported by a solid platform of effective risk management and controls



Program Role | Private Equity

The Private Equity Program plays a strategic role within the Total Fund by providing benefits of:

- Maximizing risk-adjusted rate of return
- Enhancing the equity return of the Total Fund



Investment Beliefs | Alignment and Integration

The Investment Beliefs are not a checklist to be applied to every decision. They are a guide for decision making that often requires balancing multiple, related decision factors.

	Short Name	Investment Belief
1	Liabilities	Liabilities must influence the asset structure
2	Long-Term Horizon	A long time investment horizon is a responsibility and an advantage
3	Stakeholders	CalPERS investment decisions may reflect wider stakeholder views
4	Three Forms of Capital	Long-term value creation requires effective management of three forms of capital: financial, physical, and human
5	Accountability	CalPERS must articulate its investment goals and performance measure, and ensure clear accountability for their execution
6	Strategic Allocation	Strategic asset allocation is the dominant determinant of portfolio risk and return
7	Risk Reward	CalPERS will take risk only where we have a strong belief we will be rewarded
8	Costs Matter	Costs matter and need to be effectively managed
9	Multi-faceted Risk	Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error
10	Resources / Process	Strong processes and teamwork and deep resources are needed to achieve CalPERS goals and objectives



Governance & Sustainability | PE Integration

How PE integrates environmental, social, and governance (ESG) considerations:

- Reviews how GPs incorporate ESG into their investment process through the ILPA DDQ that includes a UNPRIdeveloped ESG questionnaire
- Discusses ESG practices and issues at the Limited Partner Advisory Committee (LPAC) meetings
- Requires ILPA Fee and Profit Sharing template for all new investments
- Engages managers in the PE portfolio and select peer LPs on their approach to carbon footprint data collection



II. Investment Review



Investment Review

Business Review



Investment Objective

PE is managed in alignment with the CalPERS Total Fund Investment Policy's investment objectives as follows:

- Maximize risk-adjusted rate of return and enhance the equity return to the Total Fund
- Invest with a long-term horizon
- Focus on manager selection and alignment of interests
- Costs matter



Performance | Public Employees' Retirement Fund (PERF)

For Period Ending June 30, 2019

	As of June 30, 2019			10 Yr		5 Yr		3 Yr			1 Yr					
Asset Class	Mark	nding et Value (bil)	% of Total Fund Assets	Interim Policy Weight % ¹	Net Return	BM Return	Excess Bps									
	•					10 10/	(10)				10.00/	10.00/				
Growth	\$	212.4	57.4%	58.00%	11.6%	12.1%	(49)	7.1%	7.5%	(37)	12.3%	12.9%	(60)	6.3%	6.3%	6
Public Equity	\$	185.9	50.2%	50.0%	11.1%	10.9%	20	6.7%	6.7%	(8)	12.3%	12.5%	(25)	6.1%	6.2%	(16)
Cap Weighted	\$	131.4	35.5%	35.0%	11.0%	10.8%	20	6.5%	6.5%	(9)	11.9%	12.2%	(27)	5.1%	5.3%	(20)
Factor Weighted	\$	54.6	14.7%	15.0%	-	-	-	-	-	-	-	-	-	13.4%	13.5%	(10)
Private Equity	\$	26.5	7.1%	8.0%	14.0%	16.6%	(254)	9.6%	10.3%	(80)	12.5%	14.1%	(156)	7.7%	4.0%	368
Income	\$	106.3	28.7%	28.0%	6.6%	5.2%	137	4.1%	3.5%	56	3.3%	2.7%	62	9.6%	9.3%	31
Long Spread	\$	56.7	15.3%	10.0%	-	-	-	-	-	-	-	-	-	9.5%	9.0%	49
Long Treasury	\$	37.8	10.2%	15.0%	-	-	-	-	-	-	-	-	-	10.5%	10.5%	(3)
High Yield	\$	11.7	3.2%	3.0%	-	-	-	-	-	-	-	-	-	8.4%	8.0%	40
Real Assets	\$	40.9	11.0%	13.0%	4.1%	8.4%	(430)	7.5%	8.6%	(111)	6.4%	6.8%	(42)	3.7%	6.5%	(283)
Inflation ²	\$	0.0	0.0%	0.0%	NM	NM	NM									
Liquidity	\$	3.7	1.0%	1.0%	1.1%	1.2%	(9)	1.3%	1.2%	10	1.7%	1.3%	37	2.6%	2.2%	45
Trust Level ³	\$	7.0	1.9%	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Fund	\$	370.3	100.0%	100.0%	9.1%	9.5%	(33)	5.8%	6.1%	(23)	8.8%	9.0%	(21)	6.7%	7.1%	(42)

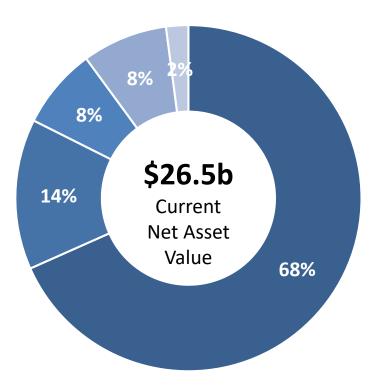
*Source: State Street



Interim policy weight reflects the weights in effect at the beginning of the first day of the subsequent month.
As of February 2019, the Inflation program has been liquidated and subsequently linked historical returns are no longer meaningful.
Trust Level includes Multi Asset Class, Completion Overlay, Risk Mitigation, Absolute Return Strategies, Plan Level Transition and other Total Fund level portfolios.

Portfolio Positioning | Private Equity

For Period Ending June 30, 2019



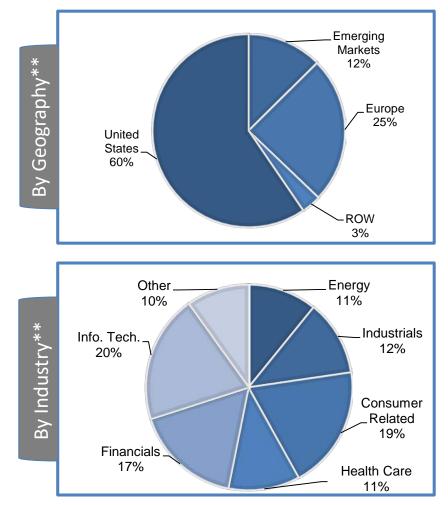
Strategy	Net Asset Value	Current	Target	5-Year Net Return
Buyouts	\$18.0	68%	65%	11.0%
Growth/Expansion	\$3.9	14%	15%	10.9%
Credit Related	\$2.0	8%	10%	2.2%
Opportunistic	\$2.1	8%	10%	14.0%
Venture Capital	\$0.5	2%	<1%	3.2%
Total	\$26.5	100%	100%	9.6%

Based on NAV as of June 30, 2019; \$s in billions; Source: State Street



Investment Review | Program Characteristics

Investment Type	Net Asset Value (NAV)*	% of NAV
Funds	\$18.4	69%
Fund-of-Funds	\$2.2	8%
Co-Investments/ Direct Investments	\$1.4	5%
Separate Accounts	\$4.5	17%
TOTAL	\$26.5	



* Based on NAV as of June 30, 2019; \$s in billions; Source: State Street. Values may not add up to 100% due to rounding **Based on Market Value as of March 31, 2019; Source: PEARS. Other includes Materials, Telecom, Services, and Utilities.

> Investment Office Private Equity

III. Business Review

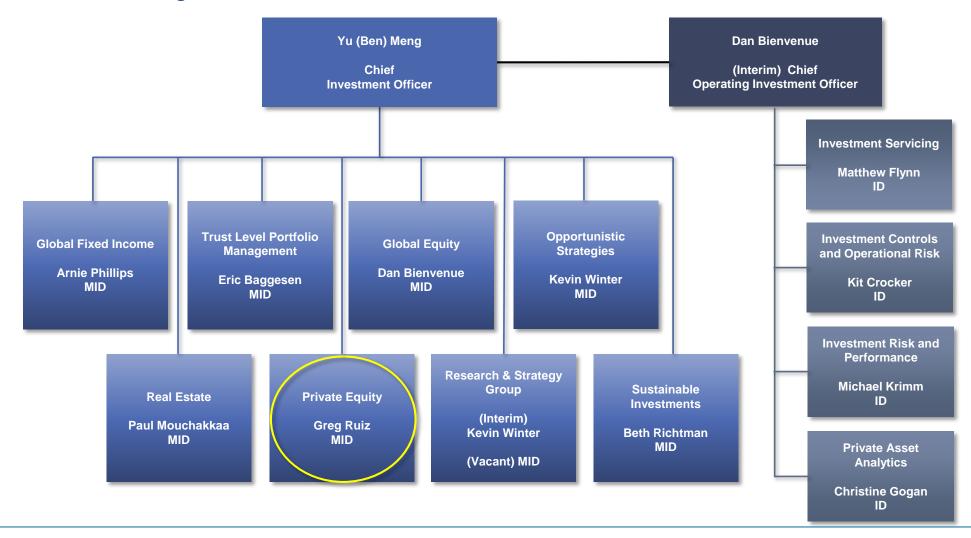
Program Overview

Investment Review

Business Review

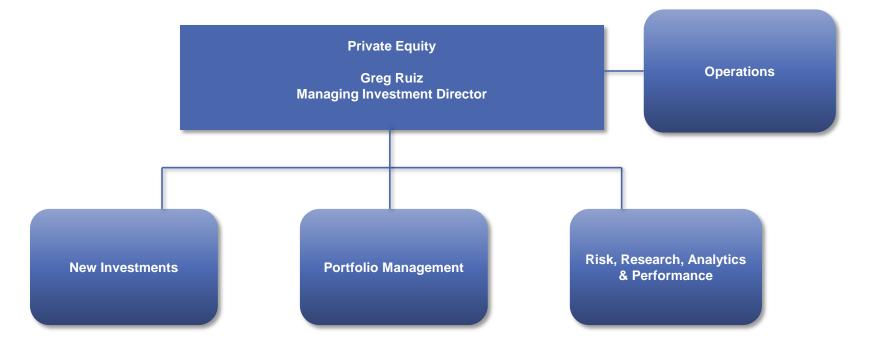


Investment Office Organization Chart



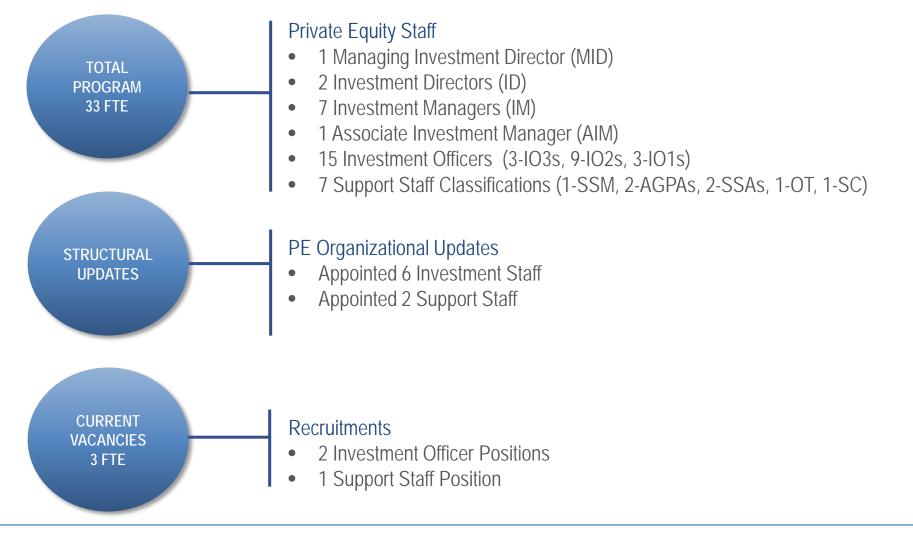


Functional Organization Chart





Staffing Overview





Business Overview | PE Functions

Private Equity		Private Equity is part of the Strategic Asset Allocation to Growth and is targeted to enhance the Global Equity return
New Investments	Sourcing, Due Dilige	ence, Market & Investment Review, Investment Recommendations, Legal Negotiations
Portfolio Management	Quarterly Monitoring Other LPs	g Report, Review of Financial Statements, Processing Cash Flows, Communication with
Risk, Research, Analytics & Performance	Market and Compet Attribution, Risk Ana	titive Assessment, Cash Flow Analysis, Capital Allocation and Pacing, Performance alysis
	-	
Operations	HR, Contracts, Doci	ument Management, Travel



Program Expenses

		2018-19			2017-18	
Expense Type	AUM (\$millions)	Fees Paid (\$millions)	Fees Paid ² (BPS)	AUM (\$millions)	Fees Paid (\$millions)	Fees Paid ² (BPS)
Internal Management	\$	\$5.2	2	\$	\$ 6.3	2
External Management ¹	\$26.5	\$798.1	302	\$ 27.2	\$ 678.8	250
Consultants Expense	N/A	\$.9	0	N/A	\$.7	0
Technology & Operating Expense	N/A	\$9.1	3	N/A	\$8.6	3
Total Program	\$ 26.5	\$ 813.3	307	\$ 27.2	\$ 694.3	256

1. Includes base and performance fees 2. BPS calculated on fee type AUM. Internal Management, Consultants and Technology & Operating Expense BPS



calculated on Total Program AUM AUM Sourced from INVO-IRP Total Fund Package.

Expense Fees are derived from FINO Expense Reports