

Global Equity Annual Review - Supplemental Report

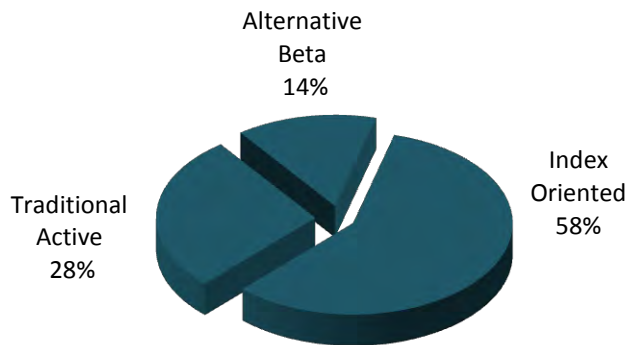
Period Ending June 30, 2017

Investment Objective

The role of equities is total return oriented and to capture the equity risk premium, defined as the excess return over risk free government bonds, by means of ownership risk in companies and exposure to corporate earnings growth. The major driver is appreciation, with some cash yield.

- CalPERS ALM Workshop (2013)

Global Equity Program



Asset Class Characteristics

Managing Investment Director: Dan Bienvenue

Assets: \$156.2 Billion

Benchmark: FTSE Custom All-World, All-Cap Index

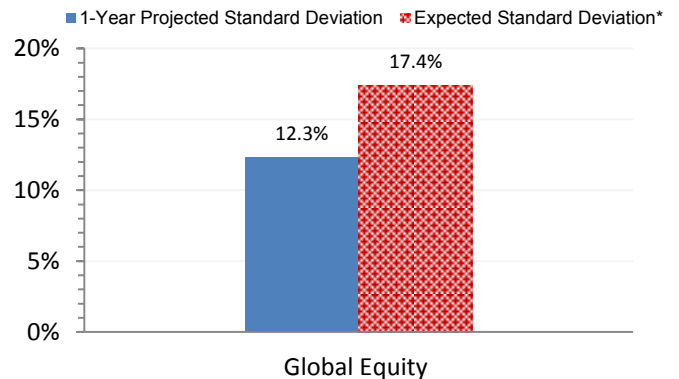
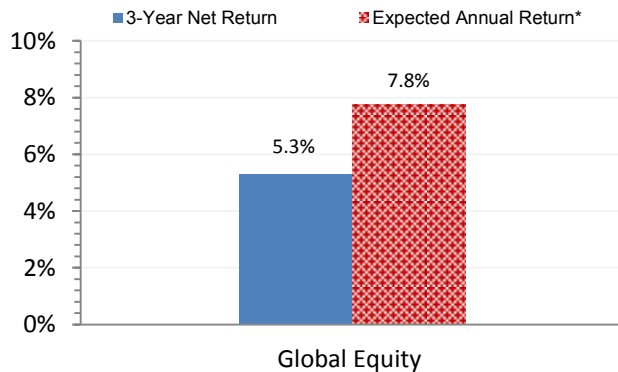
- Coverage includes 47 countries, 37 currencies, and approximately 10,000 securities
- CalPERS customization excludes tobacco, firearms, thermal coal, Iran/Sudan and complies with emerging market principles
- Utilize 86 strategies :
 - 5 Index Oriented (58%)
 - 49 Traditional Active (28%)
 - 32 Alternative Beta (14%)
- Internal management of 40 strategies
- External management of 41 strategies by 40 external managers
 - Emerging Manager Program: 5 advisors overseeing 22 strategies and 22 managers
 - All other external managers: 19 strategies and 18 managers
- US - 51%
- Int'l Developed - 42%
- Emerging Markets - 7%

Class Allocation	Global Equity
Strategic Target Range %	39-53%
Interim Strategic Target %	46%
Actual Investment %	48%
Variance % (Strategic vs. Actual)	2%
Interim Strategic Target	\$ 148.8 Billion
Actual Investment	\$ 156.2 Billion
Variance \$(Interim Strategic vs. Actual)	\$ 7.3 Billion

Note: Strategic Target effective October 1, 2016

Asset Liability Management Expectations

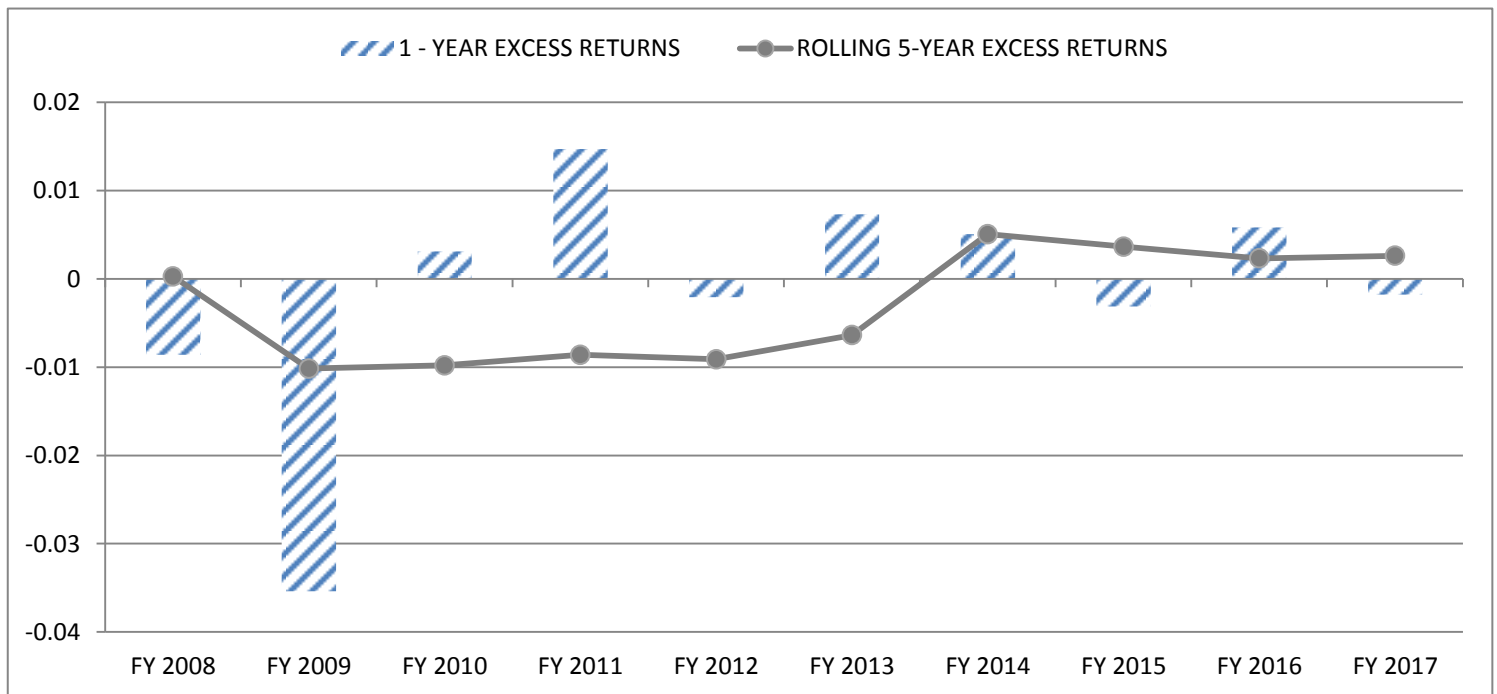
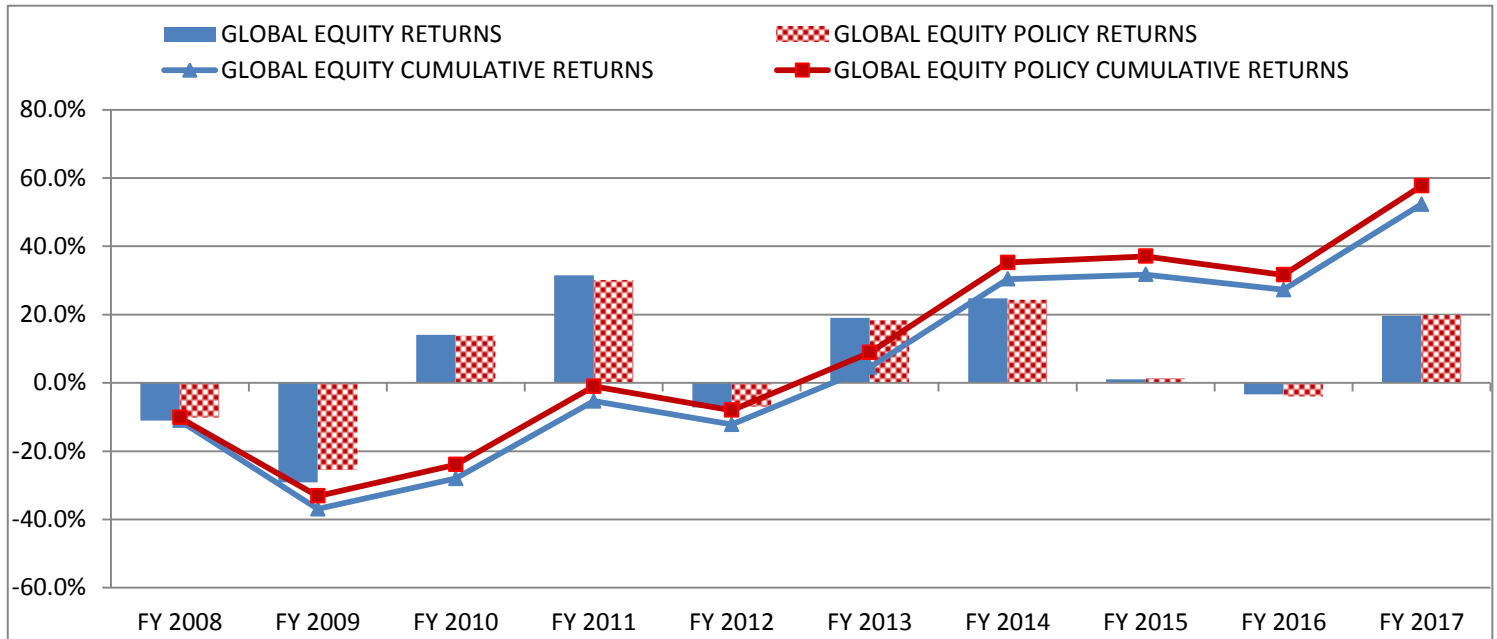
*Capital markets assumptions used in the 2017 ALM Workshop



GLOBAL EQUITY PERFORMANCE

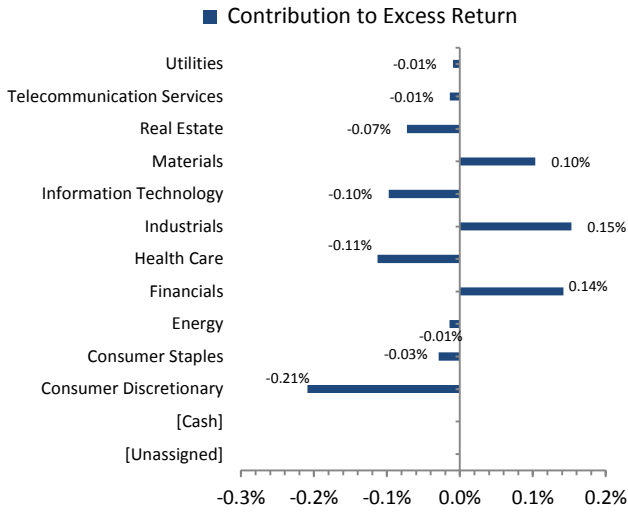
MONTH ENDING JUNE 30, 2017		1-YR		3-YR		5-YR		10-YR	
Asset Class*	Ending Market Value	Net Return	Excess BPS	Net Return	Excess BPS	Net Return	Excess BPS	Net Return	Excess BPS
GLOBAL EQUITY	\$ 156.2 Billion	19.6%	(18)	5.3%	5	11.6%	26	4.3%	(36)
INDEX ORIENTED	\$ 90.6 Billion	20.0%	23	5.4%	11	11.8%	12	4.6%	13
TRADITIONAL ACTIVE	\$ 43.2 Billion	19.4%	3	5.8%	16	11.9%	94	5.0%	60
ALTERNATIVE BETA	\$ 22.3 Billion	19.1%	(101)	4.1%	(58)	10.8%	52	3.9%	2

* Performance for the total asset class and 3 portfolio strategies based on ending market value

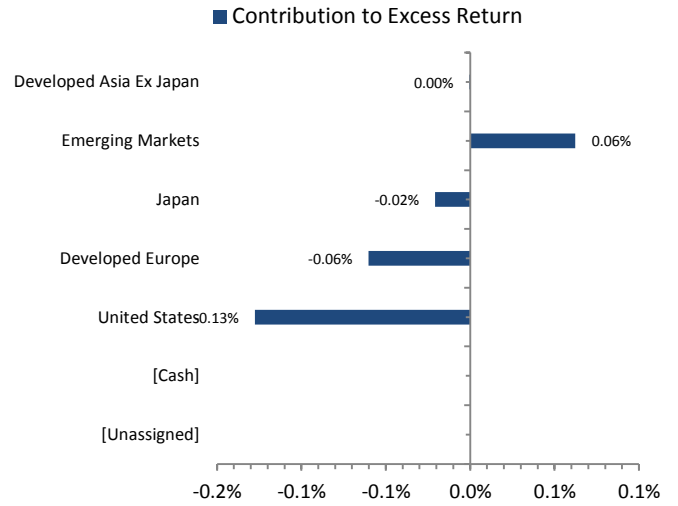


GLOBAL EQUITY ATTRIBUTION (FY 2016-2017)

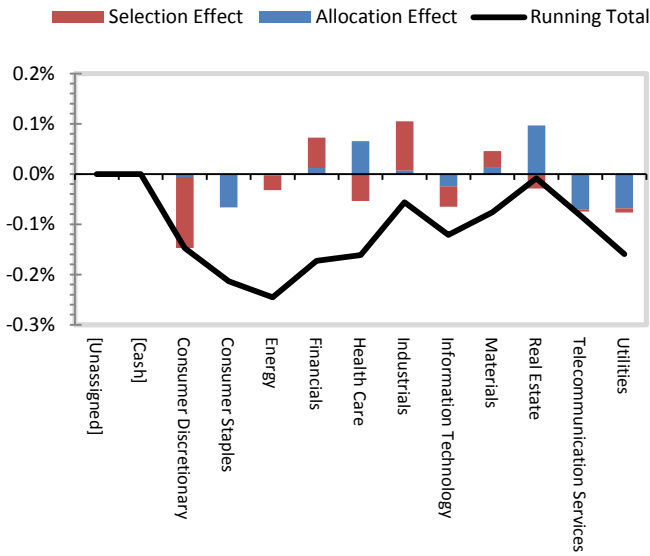
Contribution to Excess Return by Sector



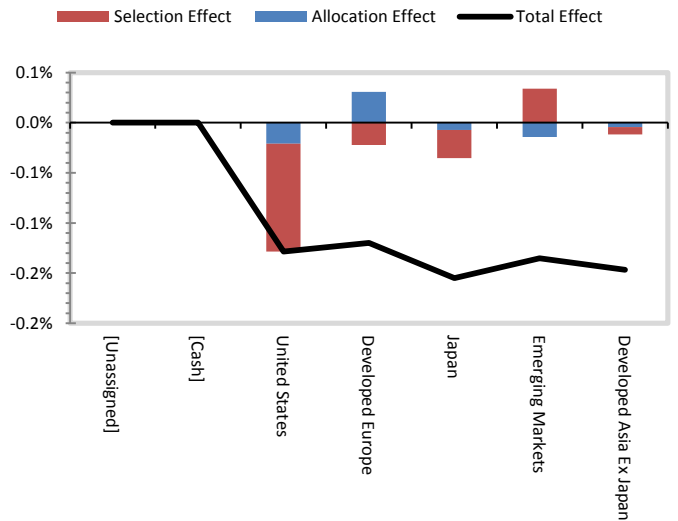
Contribution to Excess Return by Region & Country



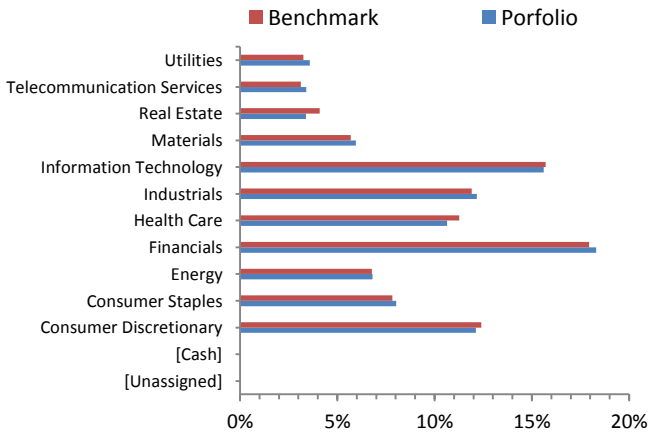
Attribution by Sector



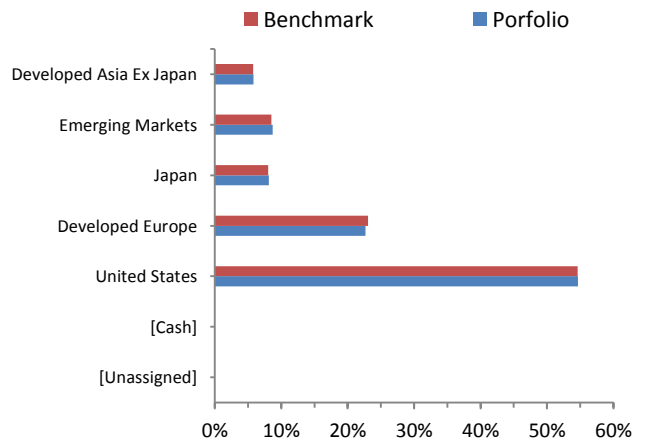
Attribution by Region & Country



Relative Weight by Sector

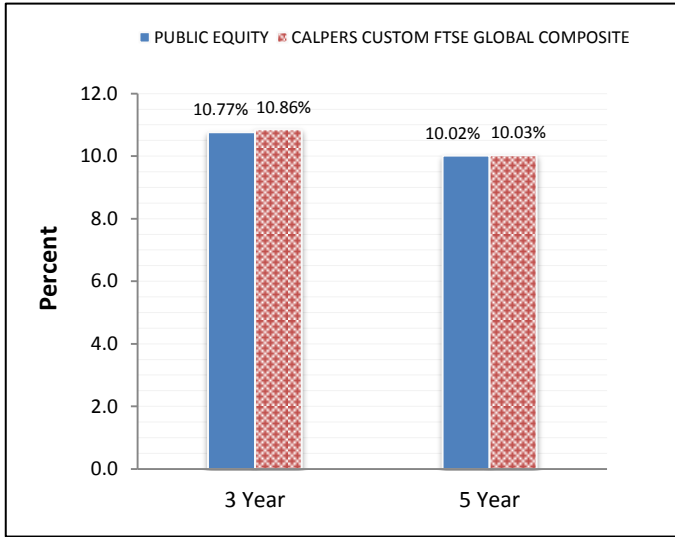


Relative Weight by Region & Country

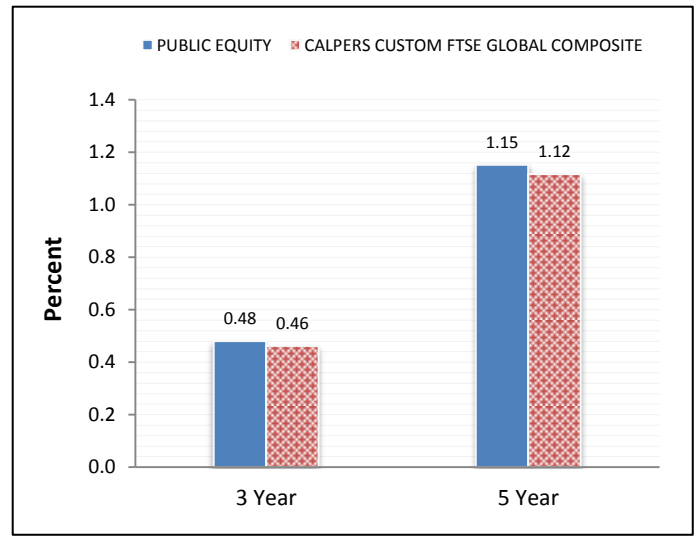


GLOBAL EQUITY INVESTMENT RISK

Annualized Standard Deviation



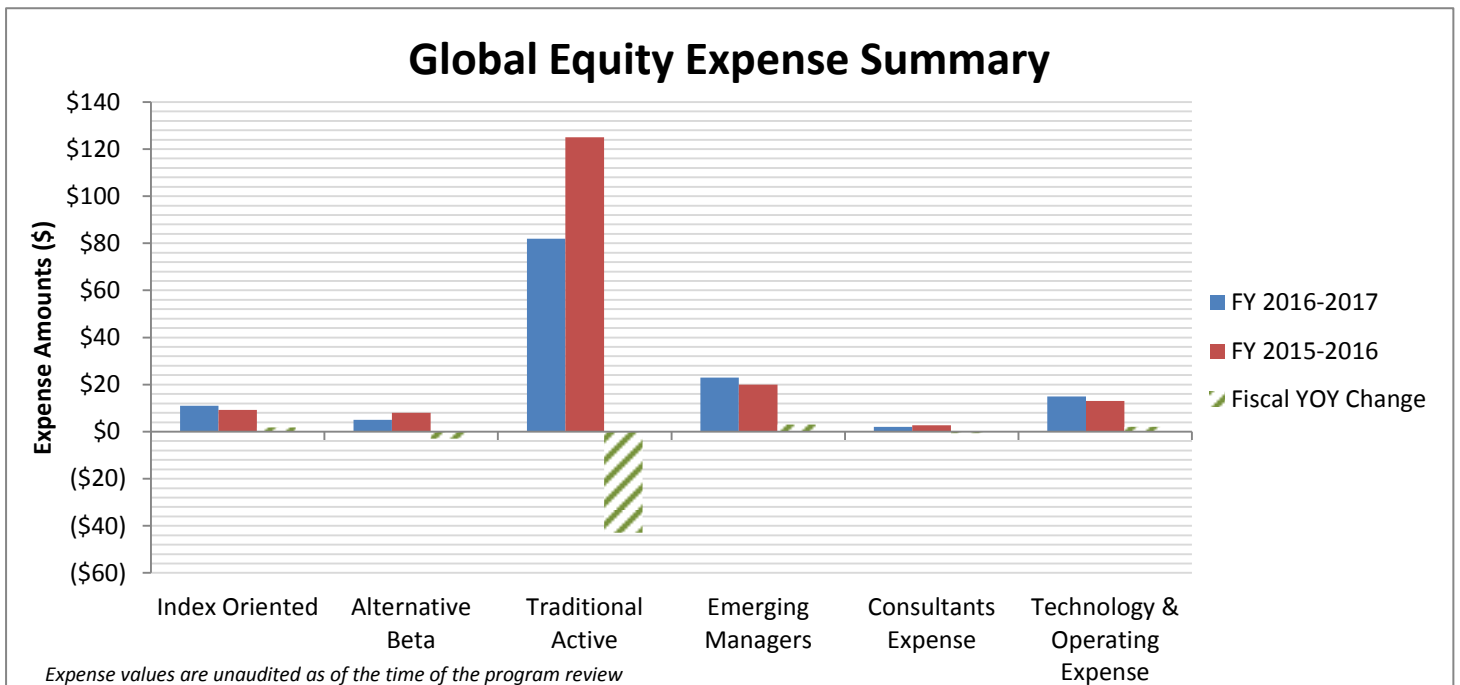
Sharpe Ratio



GLOBAL EQUITY EXPENSES

Global Equity Expenses	FY 2015-2016 (\$millions)	FY 2016-2017 (\$millions)	Fiscal YOY Change (\$millions)
Index Oriented	\$9	\$11	\$2
Alt Beta	\$8	\$5	-\$3
Traditional Active	\$125	\$82	-\$43
Emerging Managers	\$20	\$23	\$3
Consultants Expense	\$3	\$2	-\$1
Technology & Operating Expense	\$13	\$15	\$2

Global Equity Expense Summary



GLOBAL EQUITY STAFFING

Senior Management Team	Years with CalPERS	Years Experience
Dan Bienvenue - MID	13	22
John Cole - ID	5	37
Steve Carden - ID	13	17
Tim Misik - ID	8	24
Simiso Nzima - ID	12	16
Investment Team	Number of Members	
Investment Managers	9	
Associate Investment Managers	7	
Investment Officers	23	
Additional Resources	Number of Members	
Administrative Support Staff	16	

Global Equity Staffing Updates

- Appointed 2 Investment Directors
- Appointed 2 Investment Managers
- Appointed 3 Associate Investment Officers
- Appointed 5 Investment Officers
- Appointed 8 Admin Staff
- Transferred 1 Investment Manager to GE
- Transferred 6 Investment Officers to GE
- Transferred 5 Admin Staff to GE
- Current Vacancies
 - 3 Investment Managers
 - 2 Associate Investment Officers
 - 3 Investment Officers
 - 3 Admin Staff

GLOBAL EQUITY POLICY

REVIEWED	AMEND	POLICY/DELEGATION NAME	ACTION
✓	NO	Total Fund Investment Policy	No changes required
✓	NO	Global Equity Policy	No changes required
✓	NO	Global Governance	No changes required
✓	NO	Global Equity MID Delegation of Authority	No changes required
✓	NO	Global Equity Securities Lending Investment Policy, Procedures and Guidelines	Addition of Israel and Greece to permissible countries of approved equity lending markets

GLOBAL EQUITY CalPERS Investment Beliefs**CalPERS Investment Beliefs****#1 Liabilities must influence the asset structure**

Provide an important dual role of high expected total return combined with liquidity

#2 A long time investment horizon is a responsibility and an advantage

Investment horizon permits substantial capital allocation despite significant volatility in asset class

#3 CalPERS investment decisions may reflect wider stakeholder views, provided they are consistent with its fiduciary duty to members and beneficiaries

Close engagement with Global Governance team to implement important CalPERS stakeholder views

#4 Long-term value creation requires effective management of three forms of capital: financial, physical and human

Portfolio compliance and sustainability monitoring tools ensure portfolios are being managed according to expectations

#5 CalPERS must articulate its investment goals and performance measures and ensure clear accountability for their execution

Performance measures based on rolling 3-year performance, balancing short-term performance with the long-term health of the Trusts

#6 Strategic asset allocation is the dominant determinant of portfolio risk and return

Actively participate in the Asset Liability Management workshop to establish capital market and portfolio assumptions

#7 CalPERS will take risk only where we have a strong belief we will be rewarded for it

Take a prudent level of active risk aligned with the belief that Strategic Asset Allocation is the dominant driver of risk and return

#8 Costs matter and need to be effectively managed

Manage a cost efficient portfolio making extensive use of internally managed strategies, which are highly cost effective

#9 Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error

Actively incorporate multiple measures of risk including: stress test, macro exposures, correlations and factor style exposures

#10 Strong processes and teamwork and deep resources are needed to achieve CalPERS goals and objectives

Strong team and deep bench with a clear alignment around a core philosophy and investment process