

Global Equity Annual Program Review

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Global Equity Performance Summary

- Challenging Environment for Absolute Returns
- Relative Return Significantly Positive

	One-Year Net Return	Three-Year Net Return	Five-Year Net Return	Ten-Year Net Return
Global Equity (\$153 B)	-3.4%	6.8%	6.1%	4.7%
Policy Benchmark	-4.0%	6.5%	5.9%	5.0%
Excess Return	0.6%	0.3%	0.2%	(0.3%)
Active Risk (Realized)	0.5%	0.3%	0.3%	0.8%

Portfolio Positioning



	Active Weight					TOTAL
	US	Dev Europe	Dev Asia	x JP	Japan	
TOTAL	0.2	-0.3	0.2	-0.2	0.2	--
Defensive	0.2	0.0	0.2	0.1	0.2	0.7
Cyclicals	-0.3	0.1	0.1	-0.2	-0.1	-0.5
Financials	0.1	-0.4	-0.2	0.0	-0.1	-0.6
Commodities	0.2	0.0	0.1	0.0	0.2	0.5

- Low Active Risk
- Defensive Positioning
- Lower Beta / Higher Quality Than One Year Ago

Business Update

- Fiscal Year 2015-2016 Major Accomplishments
 - Execution Services and Strategy (ESS) established
 - Capital Allocation Governance Framework
 - Strategy Rationalization
- Fiscal Year 2016-2017 Major Initiatives
 - Enhance Factor Allocation Framework
 - Strategy Exploration (ESG, Drawdown Mitigation, etc.)
 - Technology Enhancements

Appendix

Review Outline

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- 1** Liabilities
- 2** Long-Term Horizon
- 3** Stakeholders
- 4** Three Forms of Capital
- 5** Accountability
- 6** Strategic Allocation
- 7** Risk Reward
- 8** Costs Matter
- 9** Multi-faceted Risk
- 10** Resources/Process

Investment Beliefs Key

	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 of 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.

I. Program Overview

Program Role

- Primary role
 - “The role of equities is total return oriented and to capture the equity risk premium (ERP), defined as the excess return over risk-free government bonds, by means of ownership risk in companies and exposure to corporate earnings growth.” (2013 Asset Liability Management (ALM) Workshop)
- Drivers of total performance
 - Price appreciation
 - Cash yield
- Risks
 - Economic: High sensitivity to global economic growth variability
 - Liquidity: Portfolio expected to remain highly liquid

Program Investment Philosophy

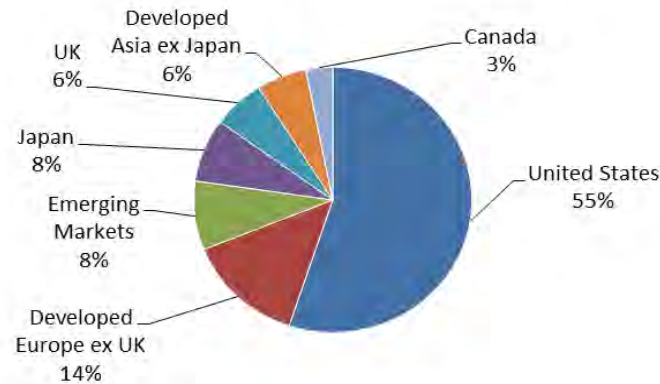
- Global equity markets are unpredictable
 - Priority on the efficient delivery of the ERP through a risk-managed combination of index-oriented, alternative beta, and traditional active management
- Sources and levels of alpha vary over time and across geographies
 - Stock selection strategies in which we have conviction
 - Factor-based exposures, reflecting structural and opportunistic views
- Resulting Characteristics:
 - 59% of portfolio invested in low-cost, internally managed index-oriented strategies
 - 14% of portfolio invested in alternative beta
 - 27% of portfolio invested in traditional active strategies, both internally and externally managed, to capture factor and stock selection alpha
 - Low and time-varying levels of active risk in the 0-50 basis points (bps) range

Policy Benchmark

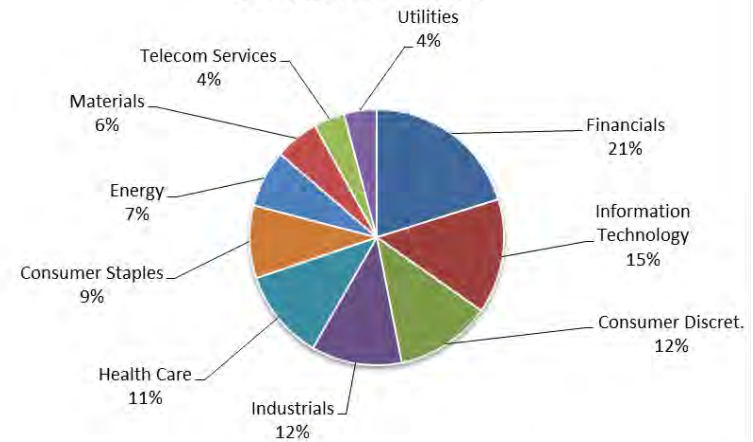
CalPERS Custom FTSE All World, All Capitalization

- Excludes tobacco, firearms, Iran/Sudan
- Complies with emerging market principles
- Covers 47 countries, 37 currencies
- Holds approximately 10,000 securities, weighted by market-capitalization

GE HOLDINGS BY REGION



GE HOLDINGS BY SECTOR



Program Characteristics

- Total assets: \$153 billion
- 82% internally managed, 18% externally managed

	Index Oriented	Alternative Beta	Active	Emerging Managers	Total
% of Assets Under Management (AUM)	59%	14%	25%	2%	\$153 B
Forecast Active Risk (bps)	8	153	113	171	31

Mandate Mix

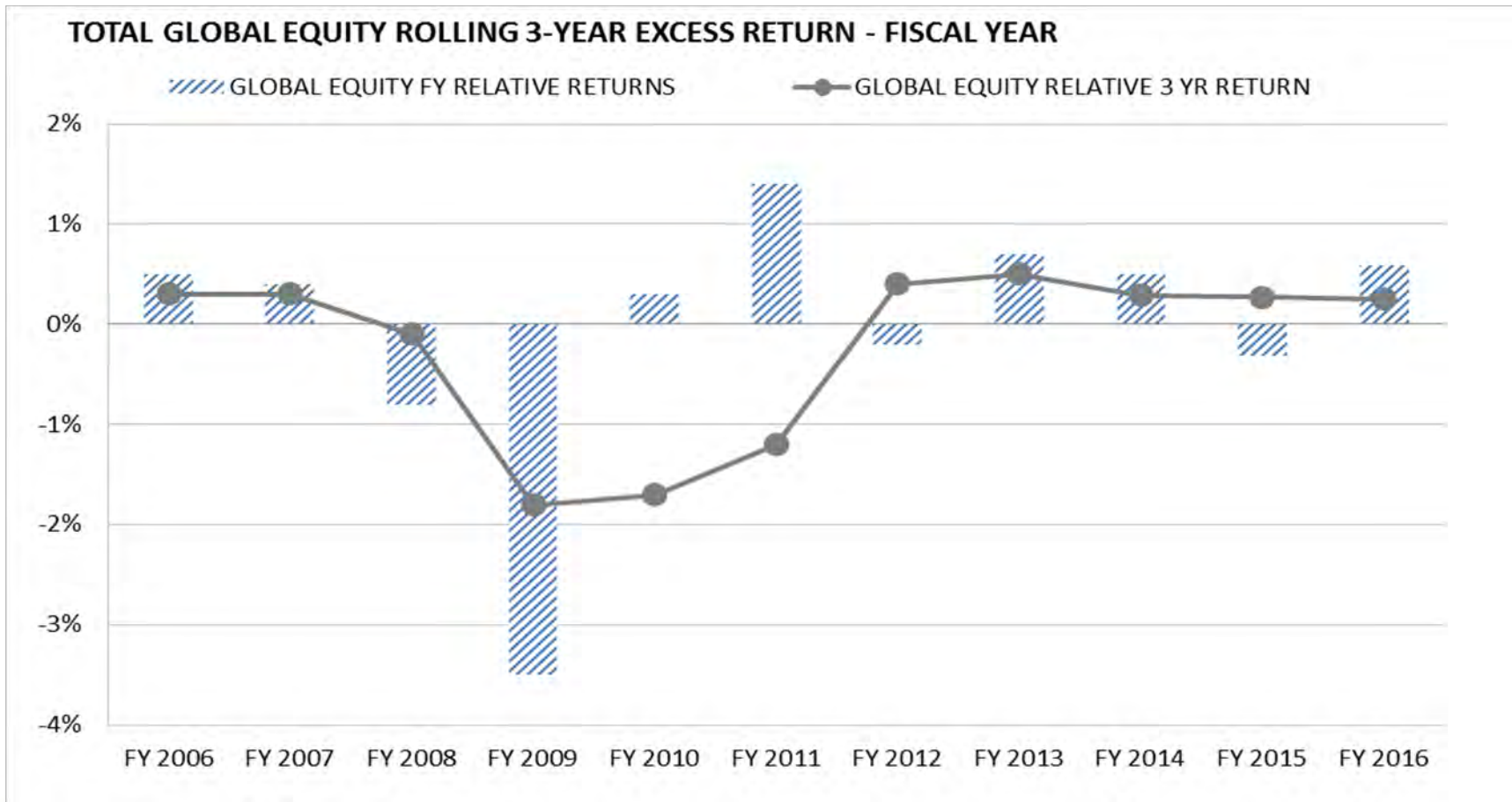
Global	\$0 B	\$1 B	\$20 B	\$.5 B	\$22 B
US	\$51 B	\$10 B	\$6 B	\$1 B	\$68 B
International Developed	\$36 B	\$7 B	\$8 B	\$1 B	\$52 B
Emerging Markets	\$3 B	\$3 B	\$5 B	\$.5 B	\$11 B

FEES

One-Year Fees Paid	\$9 MM	\$6 MM	\$125 MM	\$21 MM	\$161 MM
Cost / AUM (bps)	1	3	48	81	11

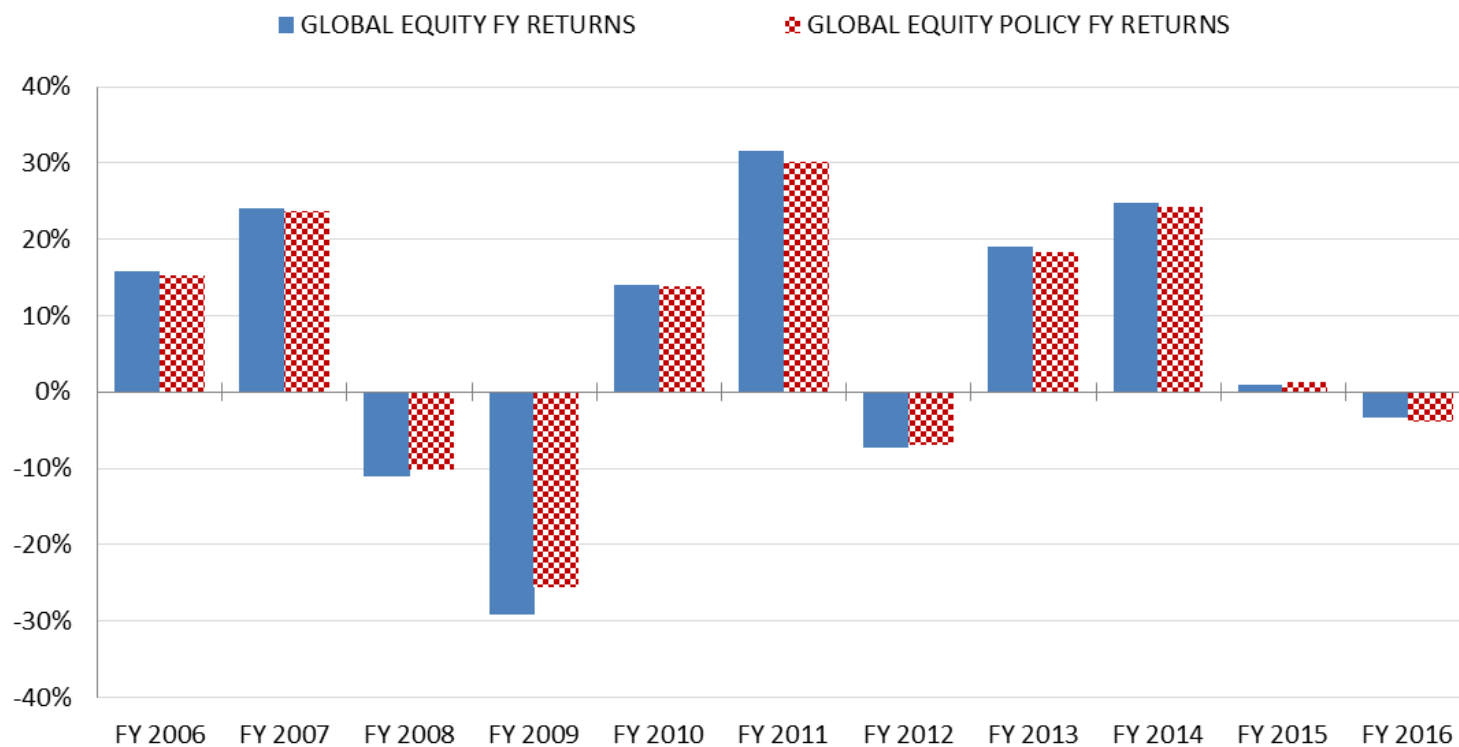
II. Investment Review

Global Equity Rolling 3-Year Excess Return



Global Equity Annual Returns

TOTAL GLOBAL EQUITY ANNUAL RETURNS - FISCAL YEAR

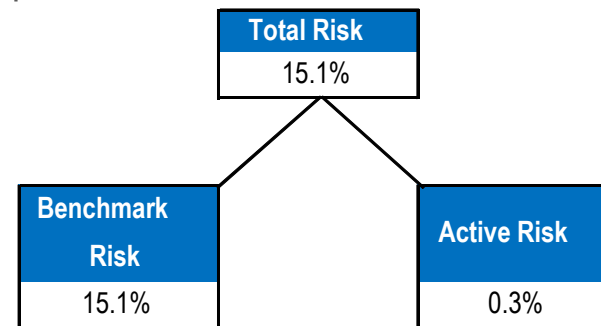


One-Year Excess Return Contributors

Positive Contributors	Negative Contributors
Developed Markets Strategies (+32 bps)	U.S. Strategies (-23 bps)
Global Market Strategies (+20 bps)	
Emerging Market Strategies (+9 bps)	
Internal Momentum (+8 bps)	
Securities Lending (+8 bps)	
Index Oriented (+5 bps)	
Structured Products (+4 bps)	

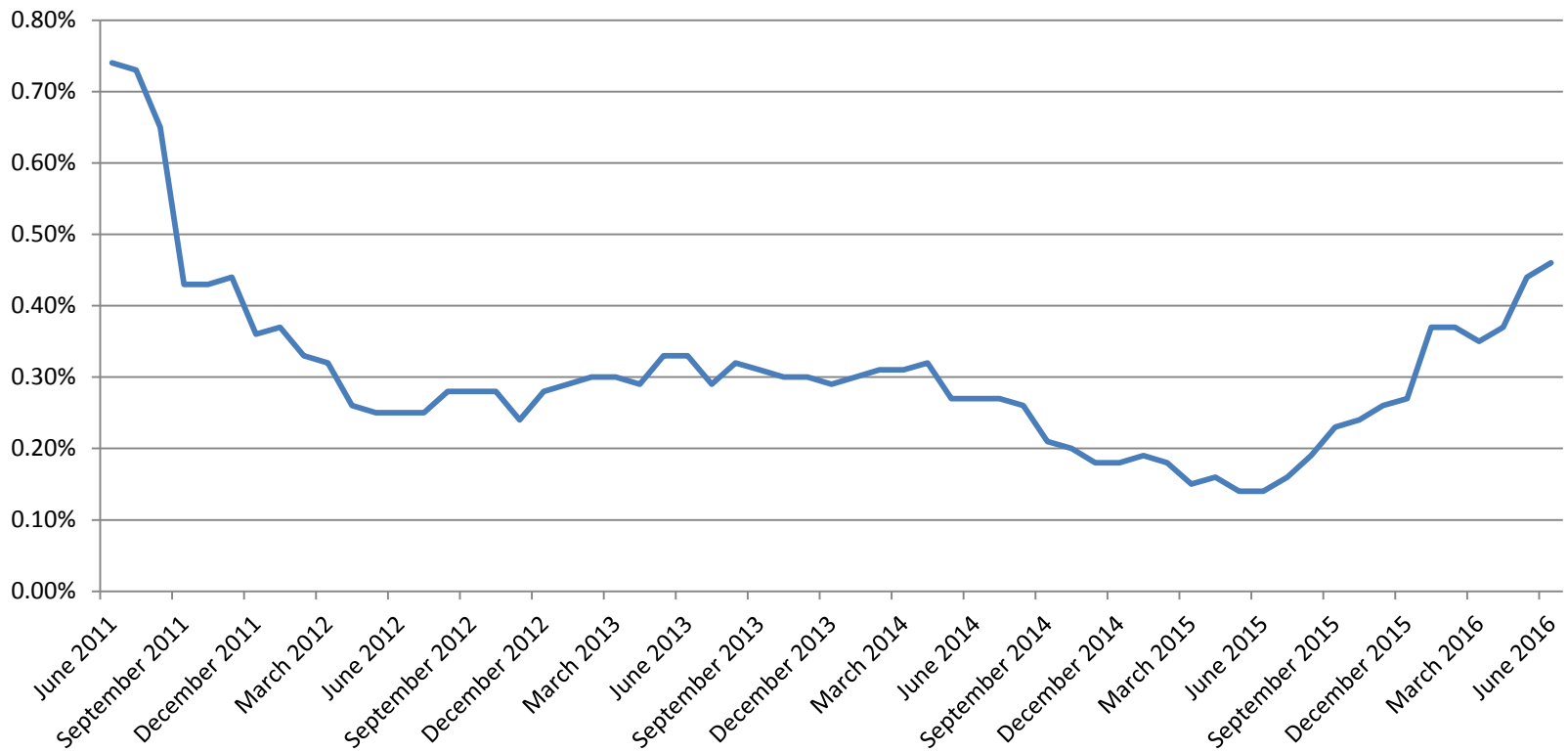
Global Equity Risk Profile

- Global Equity Forecasted Risk is 15.1%
- Forecasted Tracking Error is 0.3% and is within guidelines
- Correlation vs. the entire PERF portfolio is 0.99
- 1-month value-at-risk: \$10.9 billion
- 1-month expected shortfall: \$13.8 billion



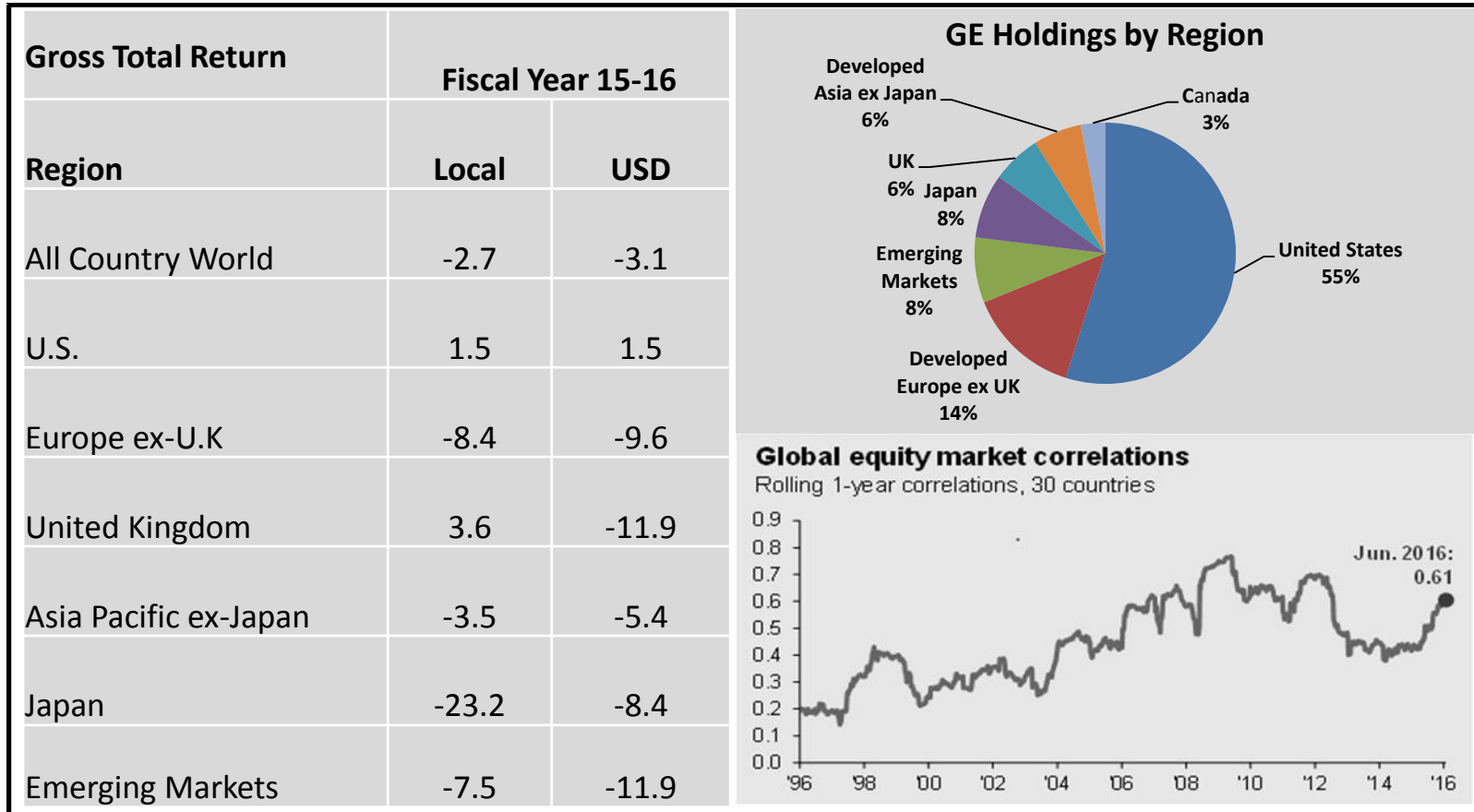
Portfolio Active Risk

Five-Year Trend in Realized Active Risk



Context and Positioning

Global Equity Markets

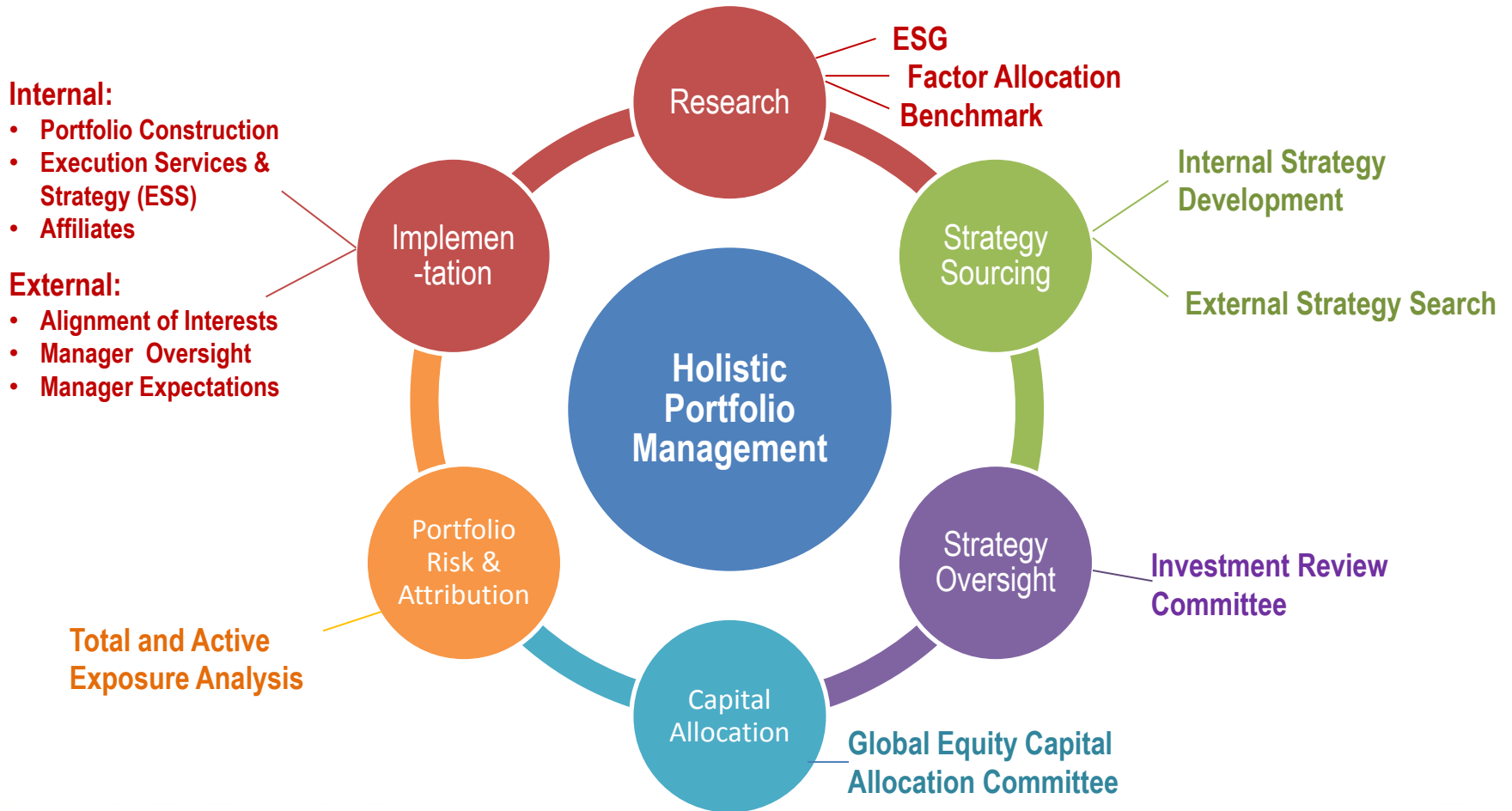


III. Business Review

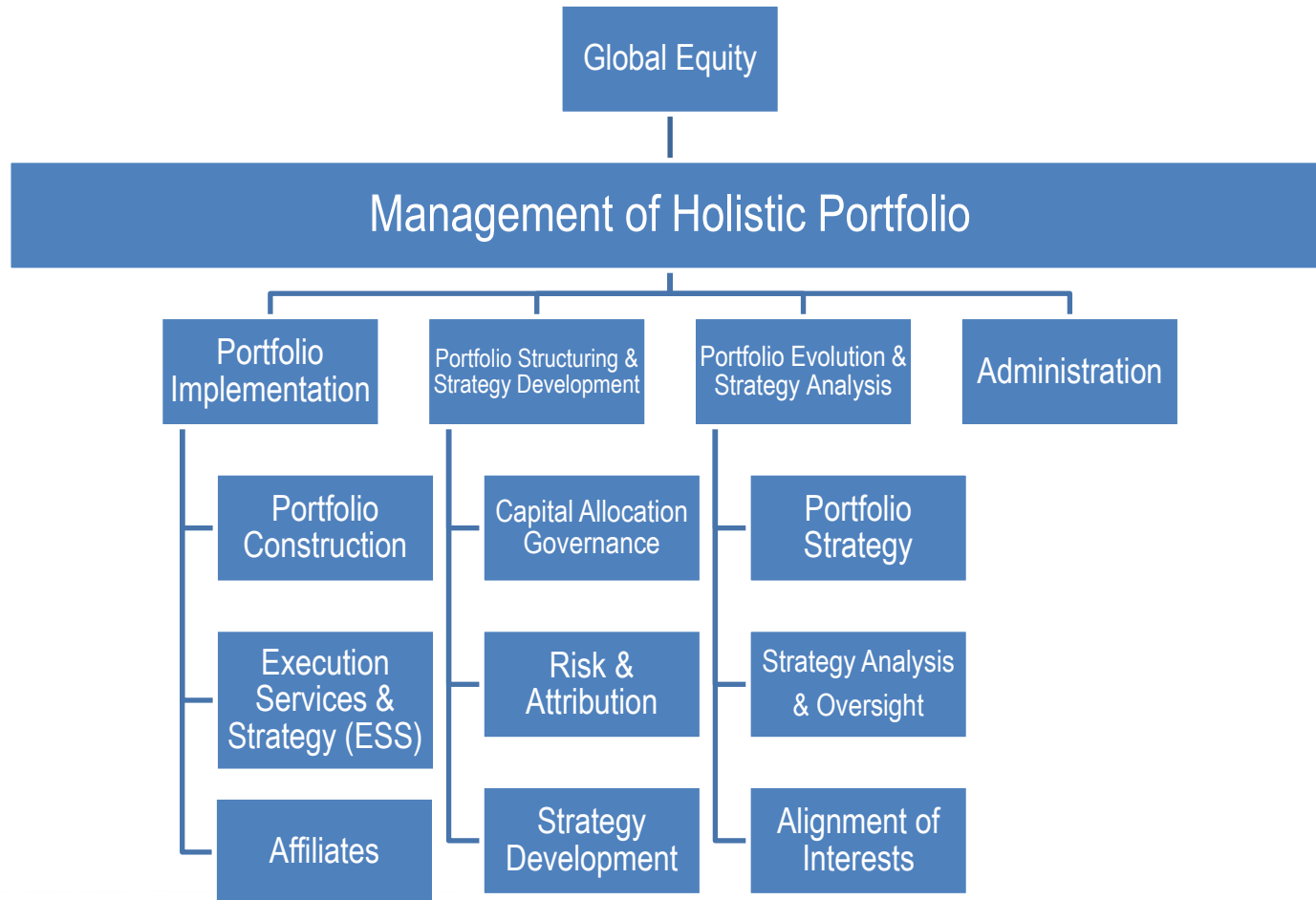
Business Philosophy

- Management of the holistic portfolio
 - Disciplined and inclusive capital allocation process
 - Multi-dimensional risk management
- Capitalize on strengths
 - Long horizon investor
 - Utilize natural “long” positioning
 - Systematic harvesting of market anomalies
- Efficient deployment of the business model
 - “One Team, One Mission” culture
 - Heavy use of technology and automation
 - Continuous improvement

Investment Model Elements



Functional Organizational Chart



Staffing Overview

TOTAL PROGRAM

- 51 positions within Global Equity

STAFFING UPDATES

- Appointed 5 Investment Officers
- Appointed 2 Admin Staff
- Transferred 1 Investment Manager to GE
- Transferred 1 Investment Officer to GE

CURRENT VACANCIES

- 1 Investment Director
- 2 Investment Officers
- 2 Admin Staff

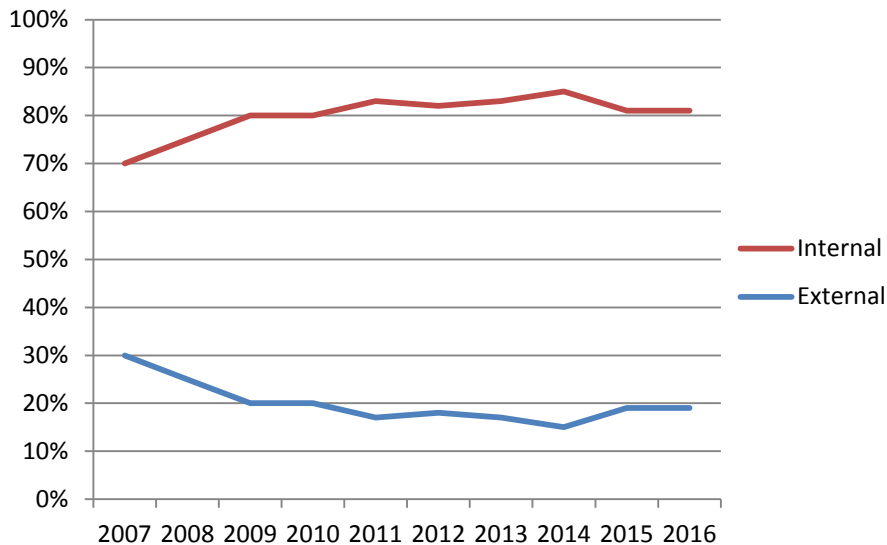
Program Expenses

	FY 2015-16			FY 2014-15		
	AUM (\$billions)	Fees Paid (\$millions)	Fees Paid (BPS)	AUM (\$billions)	Fees Paid (\$millions)	Fees Paid (BPS)
Index Oriented	\$90	\$9	< 1	\$106	\$9	< 1
Internal Active	\$34	\$6	2	\$31	\$10	3
External Management	\$25	\$93	36	\$20	\$87	44
Activist Managers	\$1	\$32	389	\$2	\$29	107
Emerging Managers	\$3	\$21	81	\$3	\$19	65
Consultants Expense	N/A	\$3	< 1	N/A	\$3	< 1
Technology & Operating Expense	N/A	\$13	< 1	N/A	\$13	< 1
Total Program	\$153	\$178	12	\$162	\$170	11

Trend in Implementation

- The percentage of assets managed in-house (82% today) has increased over time
- 53% of Global Equity’s active strategies are now managed in-house.

Internal | External



Internal Active | External Active

