

CalPERS Trust Level Review

Period Ending June 30, 2014

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Investment Committee
August 2014

Executive Summary

Trust Level Performance

- Public Employees' Retirement Fund (PERF) continues to outperform with Growth assets generating strong performance
- Affiliate Defined Benefit Plans captured strong relative performance over the 1-year, 3-year, and 5-year return periods

Economic and Market Conditions

- Slow but steady growth in many economies continues, however an end to unusually accommodative central bank policy is in view

Portfolio Risk

- Portfolio volatility continues to be driven almost entirely by Growth assets




Review Outline

- I. Economic and Market Overview
 - i. Economic Environment
 - ii. Market Environment
- II. Trust Level Overview
 - i. Program Role and Scope
 - ii. Policy Benchmark
 - iii. Investment Model
 - iv. Organizational Alignment
 - v. Trust Characteristics
- III. Investment Review
 - i. ALM Assumptions
 - ii. Trust Performance
 - iii. Risk Profile
 - iv. Portfolio Characteristics/Positioning

I. Economics and Market Overview

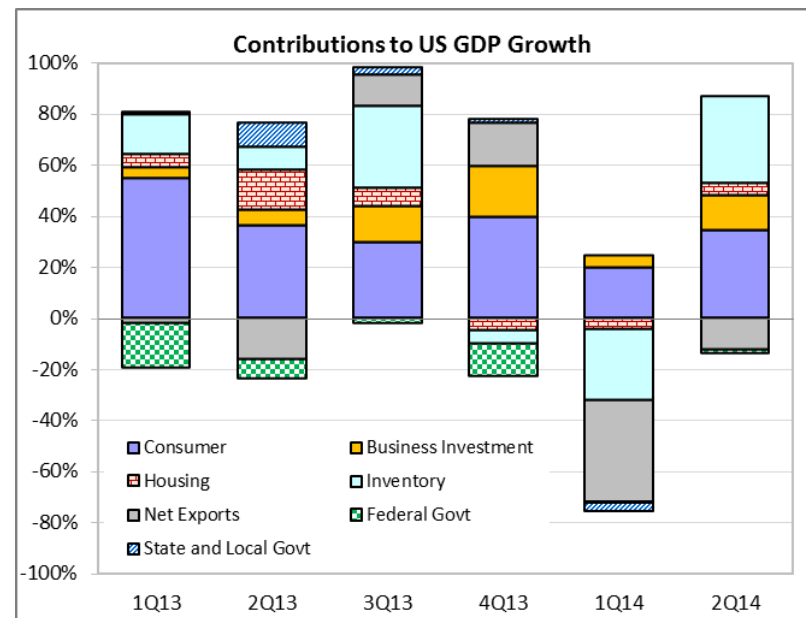
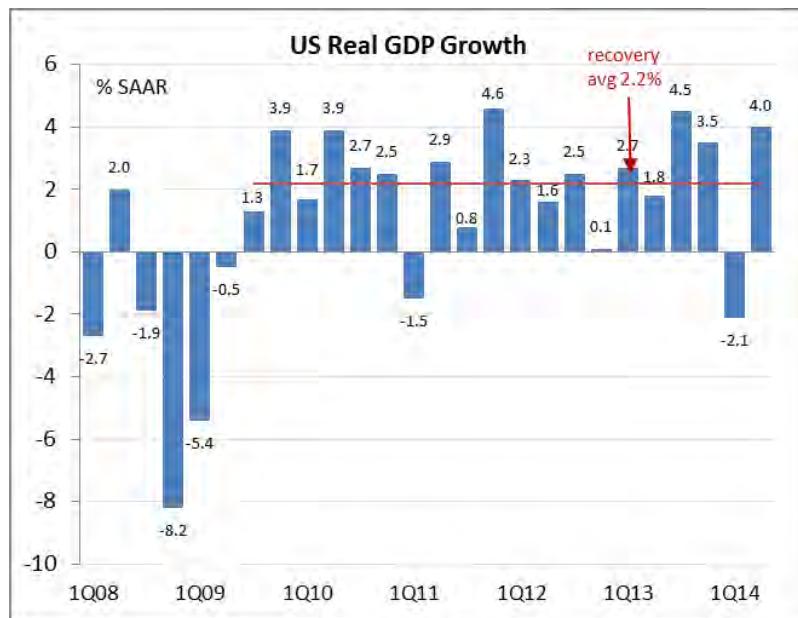
Economic Trends

- Gradual economic recovery continues, calibrated by headwinds

 Positive	 Same Trend	 Negative
<ul style="list-style-type: none"> - GDP recovery Nice 2Q rebound in GDP growth after weather impacted Q1, despite low numbers on services. - Jobs growth this year Despite cold winter, jobs growth running 231K per month this year vs 194K in 2013. - Sharp rise in job openings Showing up in JOLT, ISM, small business and Empire State surveys. - Spending on cars, furnishings, chain stores Spending on 'services' has been slow but households have busy in some sectors. - Credit growth Bank lending continues to improve, especially for small banks (7.7% YoY). - Household conservatism Cautious behavior of households keeps Fed comfortable with low rates regime - Global cycle Indications from PMIs etc are that the global economy will have a better second half. 	<ul style="list-style-type: none"> - Business capex Core capital goods orders growing at a steady, modestly improving pace. - Labor market 'spider' Labor market repair continues but not at a pace that would 'scare' Fed into tightening. - Policy clarity Fed's guidance suggests no asset purchases after Oct, tightening starts by mid 2015. 	<ul style="list-style-type: none"> - Housing rebound less than anticipated Both the supply and demand side of the housing equation have cooled ... except rentals demand. - Inflation If inflation were to accelerate further, the Fed may signal greater tightening urgency. - Shrinking unemployed pool Drop in unemployed per opening, claims below 300K, surge in 'hard to fill', jump in quits. - Valuations? Household net worth as a multiple of income is approaching highs of past two cycles. - Global risks still tangible Geopolitics and concerns around stimulus prospects in Europe, Japan and China.

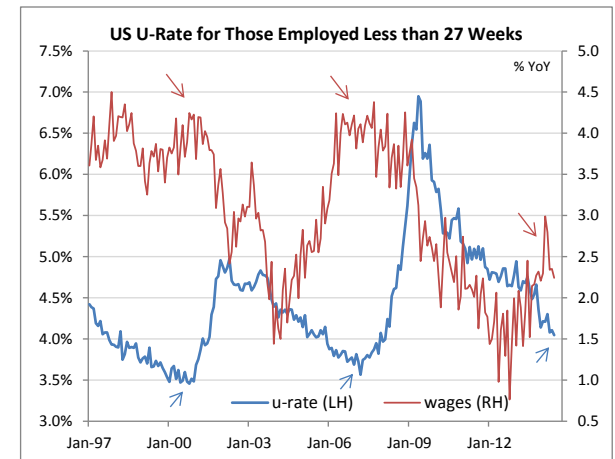
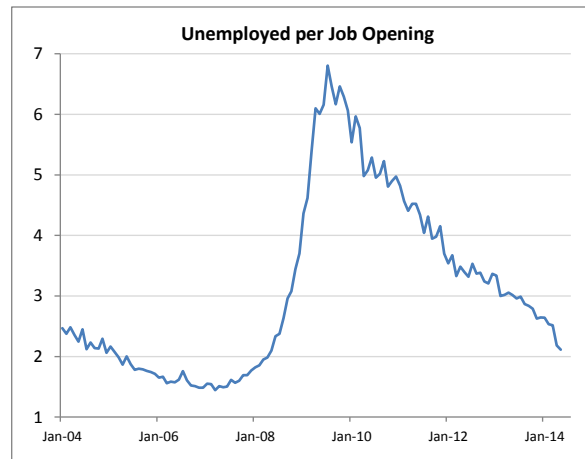
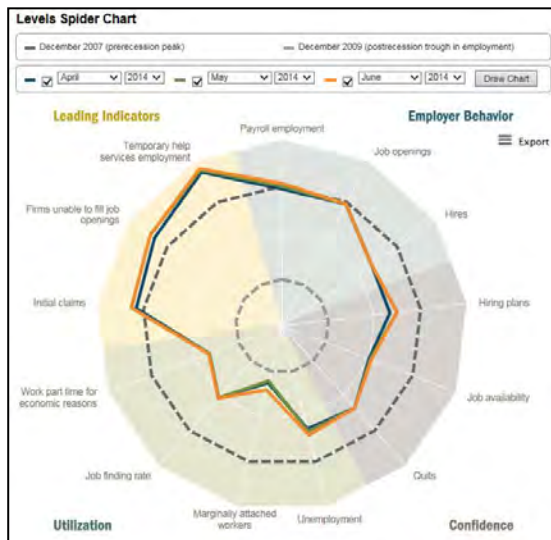
US Economic Growth and Employment

- US real GDP growth made a solid recovery in the second quarter, led by household spending on car and furnishings plus improved business investment and state and local government spending.



Labor market and the Fed's "punchbowl"

- The Fed's spider chart suggests a further slow improvement in the jobs market.
- A key issue for the Fed is when the tighter labor markets starts to produce more wage and price pressures.

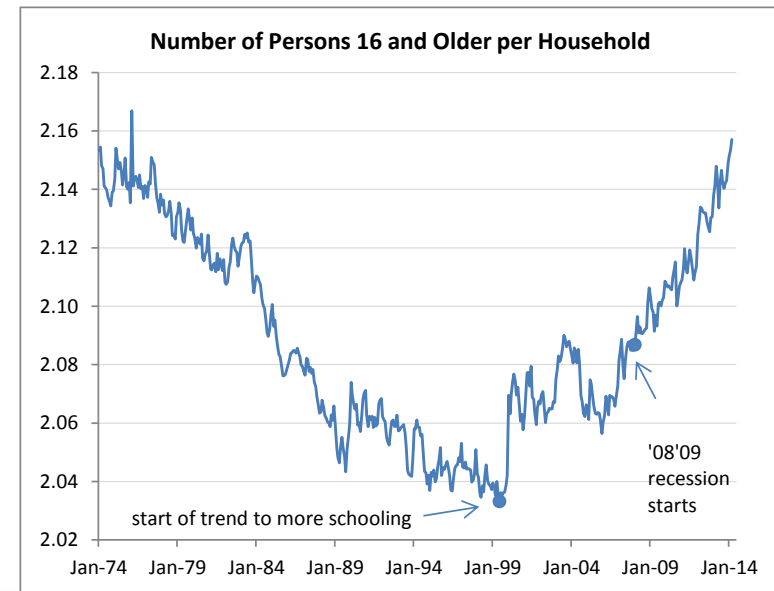
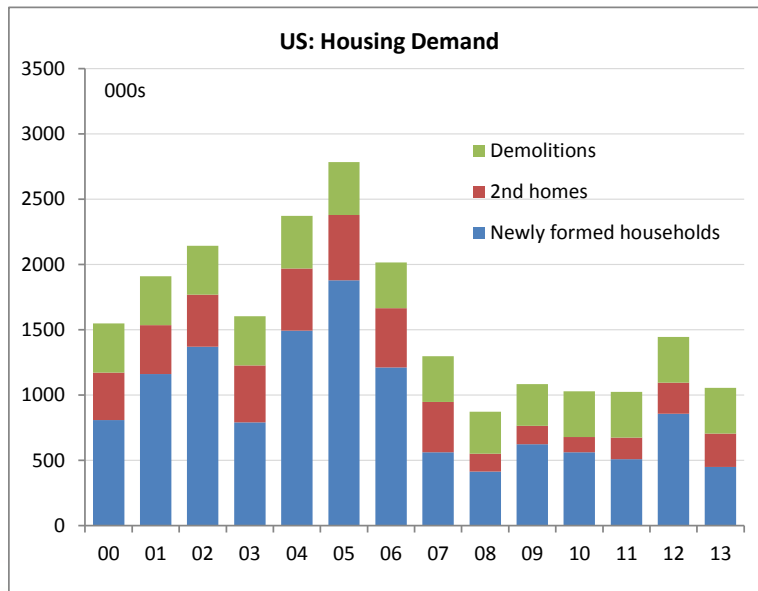


Domestic drivers of growth

- **Consumer** – Soft wages growth and a rise in the measured personal savings ratio = restrained spending.
- **Corporate** – Businesses need to see stronger final demand before amping up their capex spend.
- **Housing** – Concentration on multis and low household formation restrain GDP share to 3%.
- **Government** – Less drag than last year but still palpable.

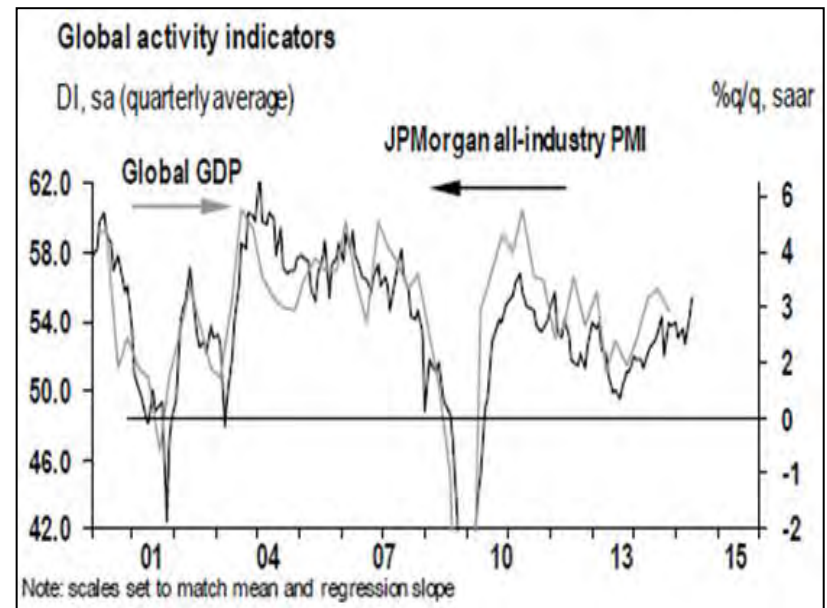
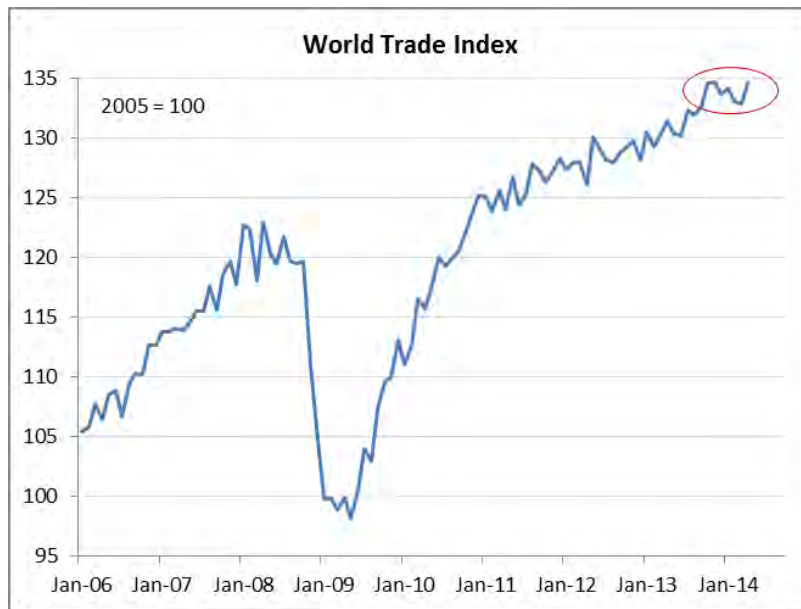
The slow but persistent housing recovery

- Low household formation has suppressed the growth of the housing stock to only 1 mio per year since the boom years.
- Another factor in soft residential construction has been a skew toward apartments rather than single family homes.



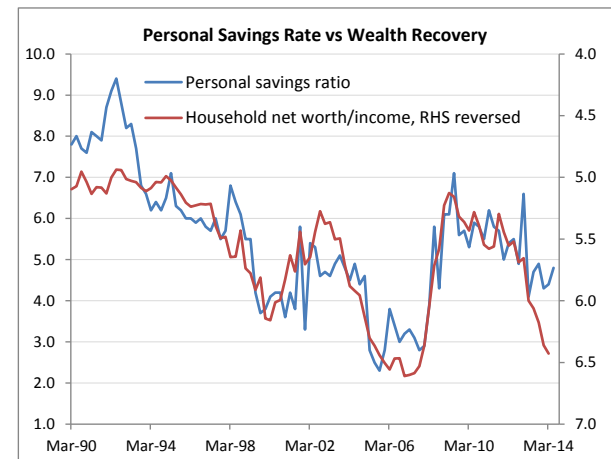
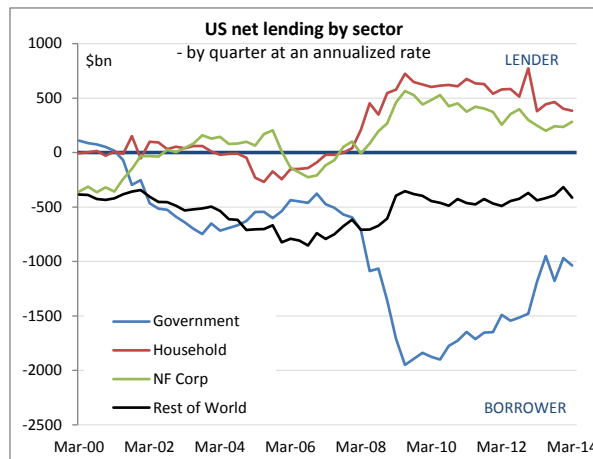
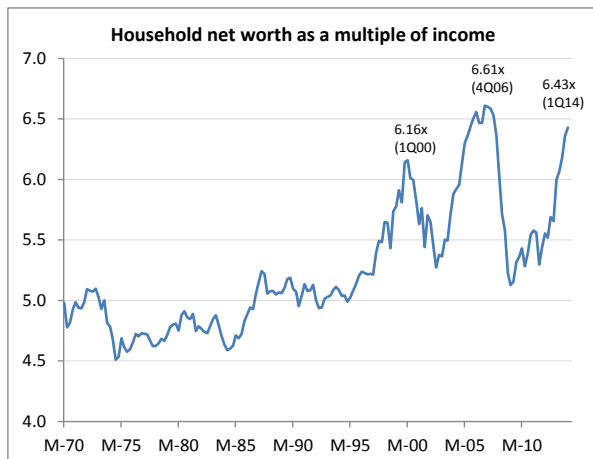
Global recovery could improve in 2nd half

- Leading indicators suggest a stronger second half for the global economy but in Japan, China and Europe it somewhat relies on very accommodative policy settings translating into actual economic performance.



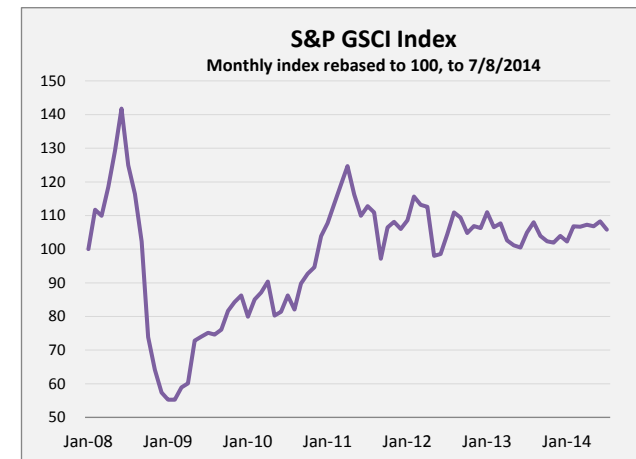
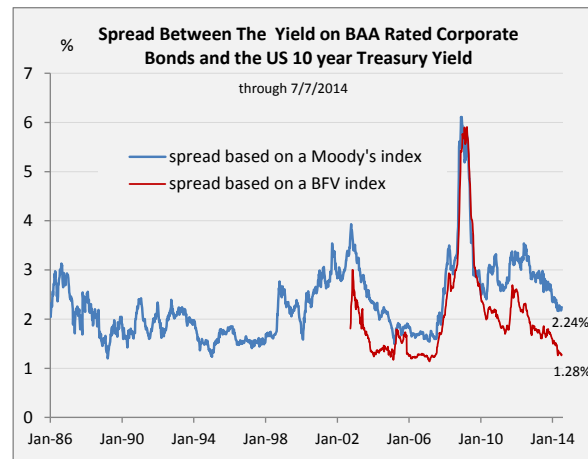
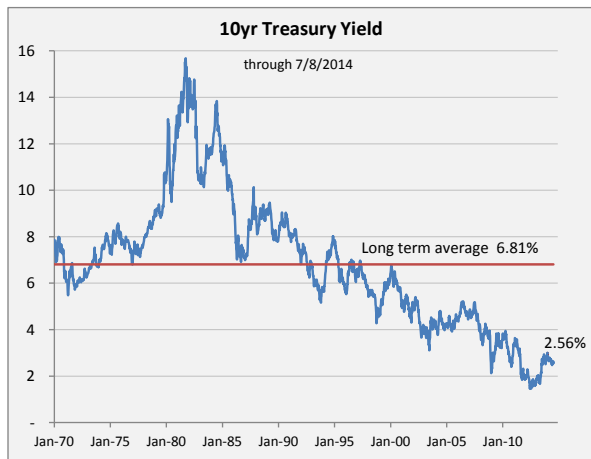
Risks to Asset Prices?

- As a multiple of income, financial and real assets are now looking fairly rich.
- That said, the net lending position of households and corporates, and conservative personal spending patterns, suggest that high valuations are at very least sustainable.

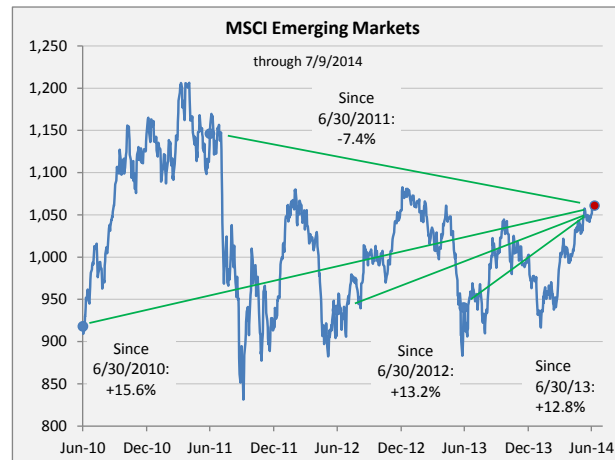
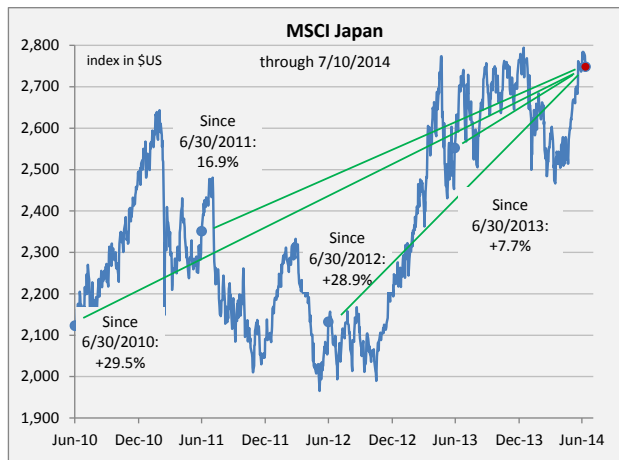
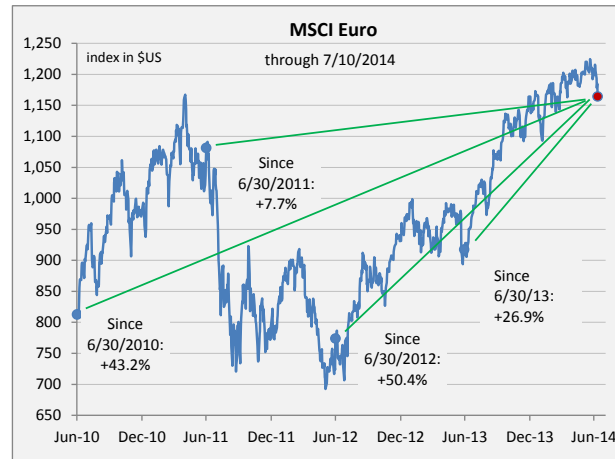
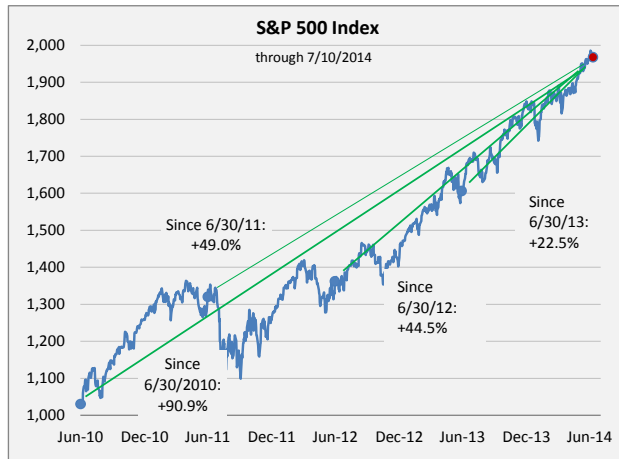


Market Environment

- The US 10-year bond yield finished 2013 at 3.0% and has fallen to 2.5%.
- Corporate spreads to Treasuries have continued to narrow in a low risk environment.
- Commodity prices have been subdued, consistent with a steady US dollar and slower demand growth from China.



Market Environment



II. Trust Level Overview

Program Role and Scope

Investment Program Strategic Objective

The overall objective of CalPERS' investment program is 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.

Key Risks and Program Characteristics:

- Broad diversification of assets to minimize impact of individual security losses
- Prudent risk taking within the context of long-term investment horizon

PERF Policy Benchmark

CalPERS' Custom Policy Benchmark

- 5 Policy Asset Classes aligned with Asset Liability Management Target Weights

Asset Class	Interim Target Weight (Effective 7/1/2014)
GROWTH	61.00%
INCOME	19.00%
REAL ASSETS	12.00%
INFLATION	6.00%
LIQUIDITY	2.00%

- 15 Individual Benchmarks aligned with Strategies
- Customizations: Tobacco, Firearms, Iran/Sudan, Applies Emerging Market Principles

Investment Model

Guiding Philosophy

The Strategic Asset Allocation process seeks to support the long-term health and sustainability of the public pension system by deploying capital across asset classes in a manner that meets the long-term return expectations while taking prudent levels of risk and balancing the needs of beneficiaries and employer agencies.

Asset Liability Workshop

- Investable Asset Evaluation
- Long-Term Capital Market Assumptions
- Define Investment Constraints
- Portfolio Optimization
- Benchmark Evaluation

Investment Strategy

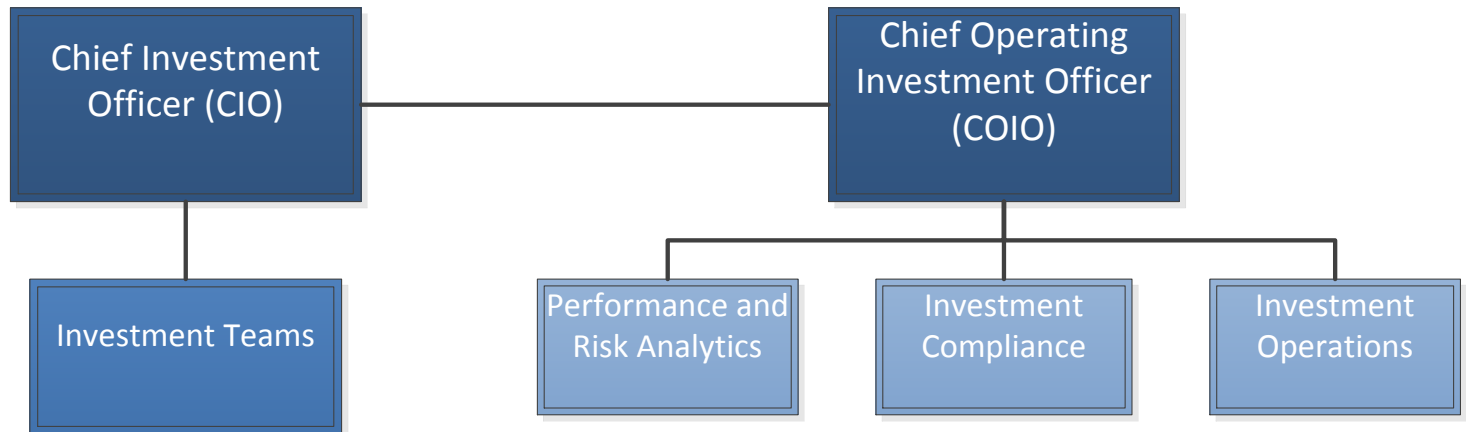
- Implementation Strategy & Capital Deployment
- Macro Economic Research
- Asset Class Research and Views
- Tactical Positioning

Monitoring and Evaluation

- Capital Market Assumption Evaluation
- Asset Class Evaluation
- Independent Risk and Analytics Engagement

Organizational Alignment

Investment Teams Supported by Dedicated Functional Groups



Team Oriented Approach with Support Areas that act as Key Internal Partners While Maintaining Clear Segregation of Duties

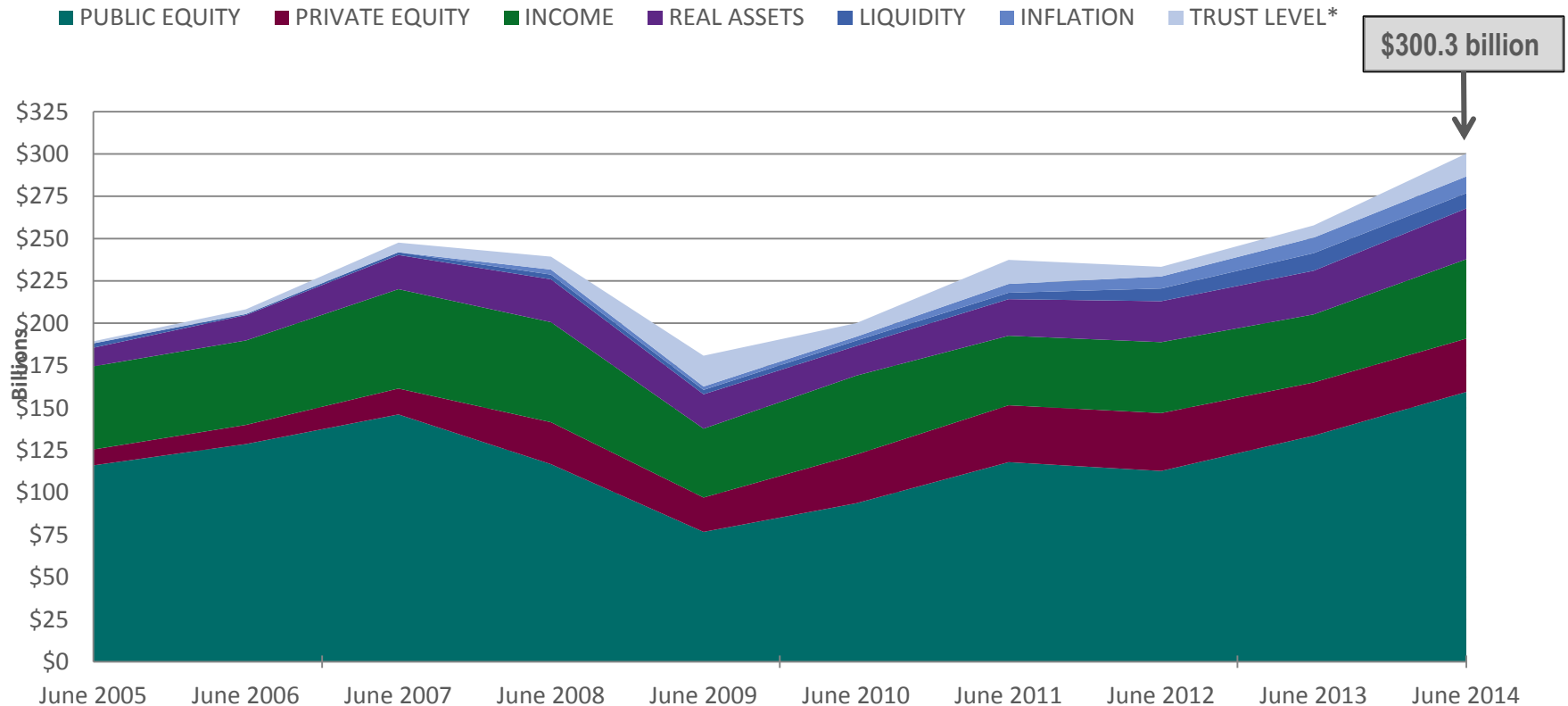
Trust Characteristics

As of June 30, 2014

• Defined Benefit Assets Managed	\$309.4B
– PERF	\$300.3B
– Long-Term Care Fund	\$4.1B
– CERBT Fund	\$3.8B
– Judges' Retirement System Fund II	\$1.0B
– Legislators' Retirement System Fund	\$0.13B
– Judges' Retirement Fund	\$0.05B

PERF Allocation Trend

Surpassed \$300 billion as of June 30, 2014

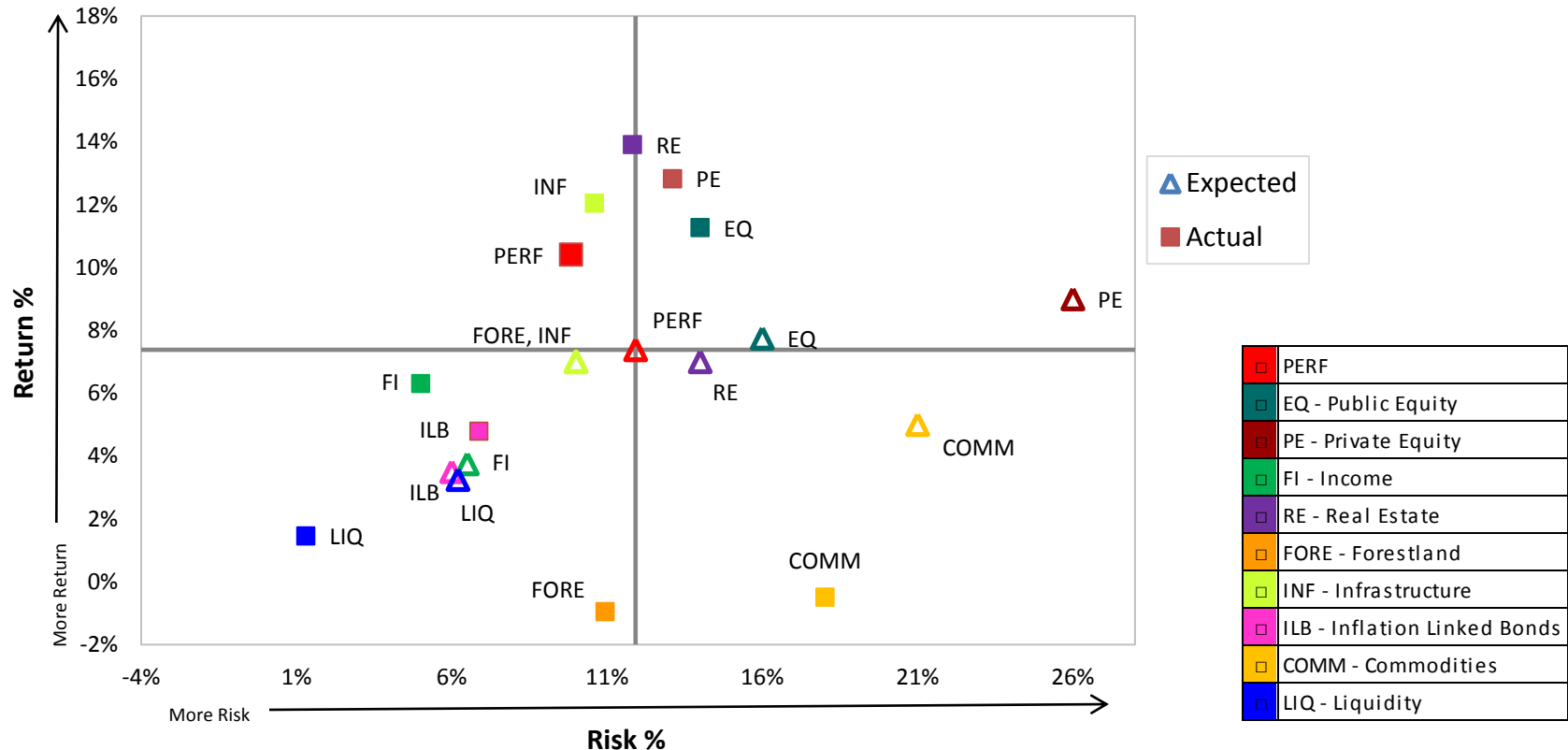


* Trust Level includes ARS, Multi-Asset Class (MAC), Overlay, Transition, and Plan Level Portfolios

III. Investment Review

PERF Asset Liability Management Assumptions

Expected Risk and Return vs. Actual Risk and Return



Note: Expected risk and return is based on 2010 Asset Liability Management Workshop, excluding ARS and MAC. Actual returns are based on 3-year annualized net return and actual risk based on current projected standard deviation as of May 31, 2014.

PERF Performance Summary

- 1-year return of 18.4% outperformed strategic benchmark by 40 basis points (BPS).
- 20-year return of 8.4% underperformed strategic policy benchmark by 20 BPS but is above current actuarial return expectation of 7.5%.

	1-YR	3-YR	5-YR	10-YR	20-YR
	Net Return	Net Return	Net Return	Net Return	Net Return
PERF	18.4%	10.4%	12.5%	7.2%	8.4%
POLICY INDEX	18.0%	10.0%	13.0%	8.1%	8.6%
Excess Return	0.4%	0.4%	(0.5%)	(0.9%)	(0.2%)

Affiliate Funds Performance Summary

- The 5-year return for all Defined Benefit Plans outperformed their respective benchmarks
- Judges' Retirement Fund underperformed a cash equivalent benchmark for the 1-year and 3-year periods

Defined Benefit Plans	1-YR		3-YR		5-YR		10-YR	
	Net Return	Excess BPS	Net Return	Excess BPS	Net Return	Excess BPS	Net Return	Excess BPS
JUDGES' RETIREMENT FUND	0.0%	(4)	0.0%	(4)	0.1%	2	1.8%	12
JUDGES' RETIREMENT SYSTEM II FUND	18.6%	26	10.6%	(5)	14.0%	39	7.3%	(0)
LEGISLATORS' RETIREMENT SYSTEM FUND	13.1%	47	8.4%	13	11.4%	78	6.9%	4
CERBT STRATEGY 1	18.5%	38	9.9%	6	13.9%	26	-	-
CERBT STRATEGY 2	15.6%	36	-	-	-	-	-	-
CERBT STRATEGY 3	12.9%	58	-	-	-	-	-	-
CALPERS HEALTH CARE BOND FUND	5.0%	61	4.3%	60	5.9%	103	4.9%	(1)
LONG-TERM CARE FUND	10.5%	36	5.7%	9	10.6%	51	6.2%	18

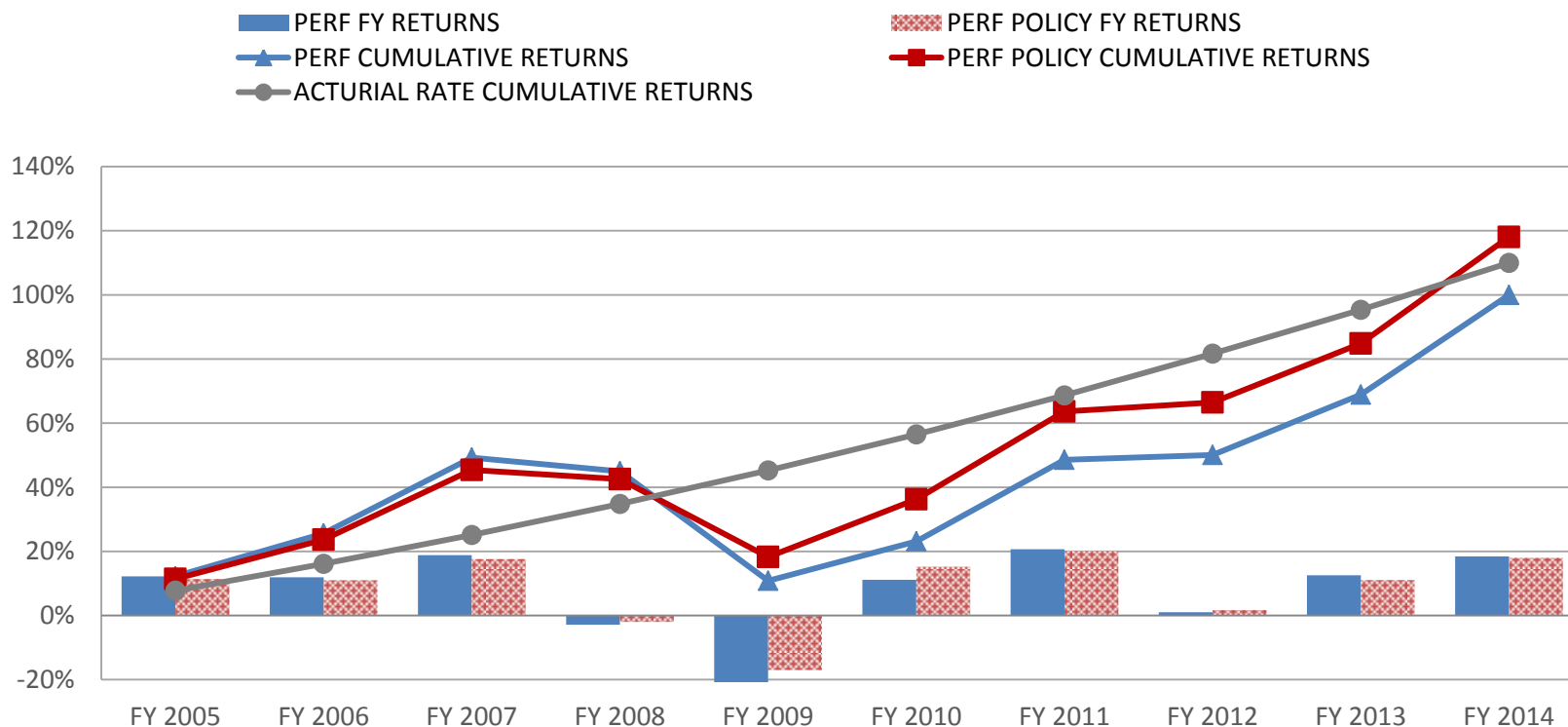
PERF Contribution to Return

Asset Class	Average Weight (%)	1-Year Return (%)	Contribution to Return (%)
GROWTH	65.1	23.9	15.3
PUBLIC EQUITY	53.9	24.8	13.1
PRIVATE EQUITY	11.2	20.0	2.2
INCOME	15.1	8.3	1.3
REAL ASSETS	9.8	13.4	1.3
REAL ESTATE	8.6	13.9	1.2
FORESTLAND	0.8	2.5	0.0
INFRASTRUCTURE	0.5	22.8	0.1
LIQUIDITY	4.0	0.6	0.0
INFLATION	3.4	8.3	0.3
TRUST LEVEL	2.5	18.2	0.4
ARS WITH EQUITIZATION	2.0	15.6	0.4
TRANSITION+PLAN LEVEL	0.2	5.2	0.0
MAC	0.3	11.5	0.0
PERF ex OVERLAY	100.0	18.6	18.6

- Growth assets remain the primary contributors to returns accounting for 15.3% of 18.6% total return.

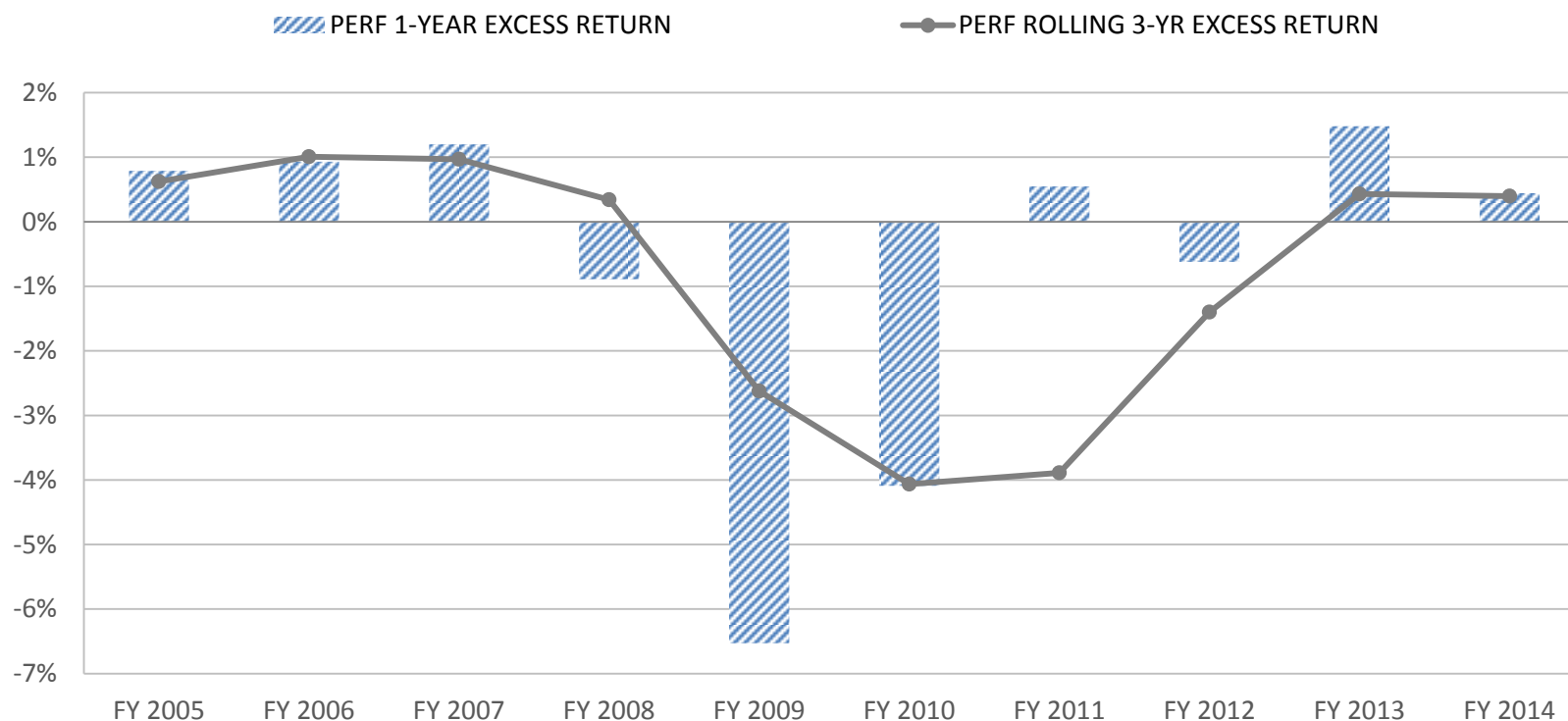
Source: FactSet; Weights and returns calculated utilizing monthly linked returns.

PERF Cumulative Returns



Note: Actuarial Rate FY 2003-12 was 7.75%, FY 2012-14 rate is 7.5%

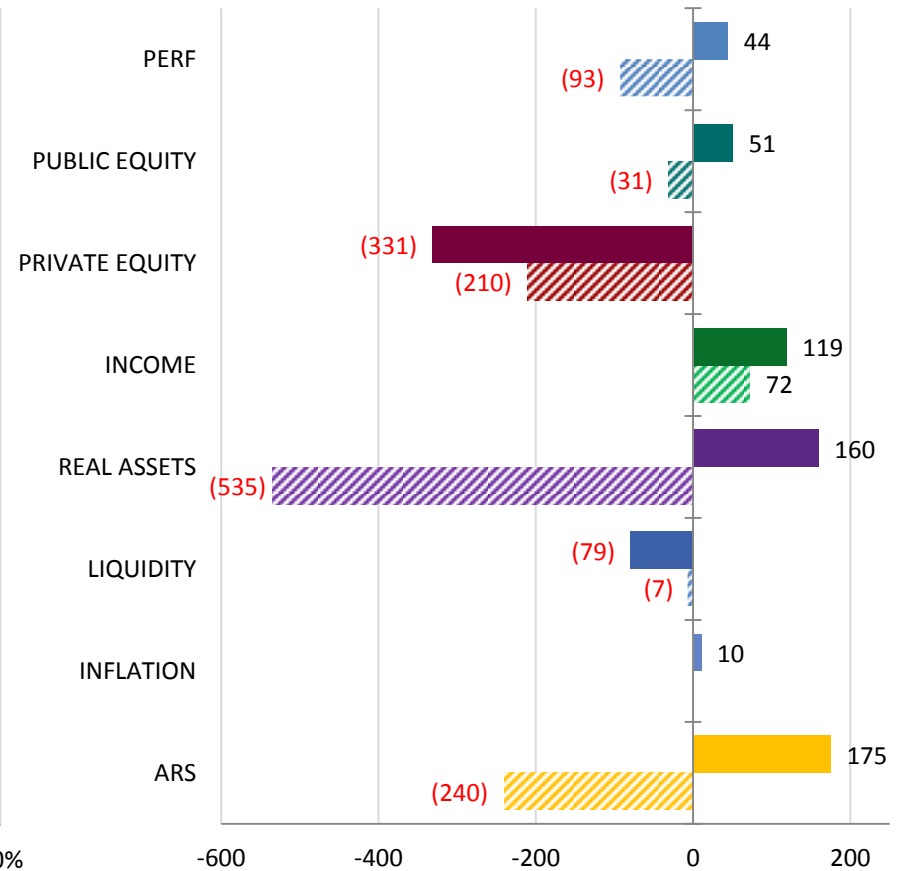
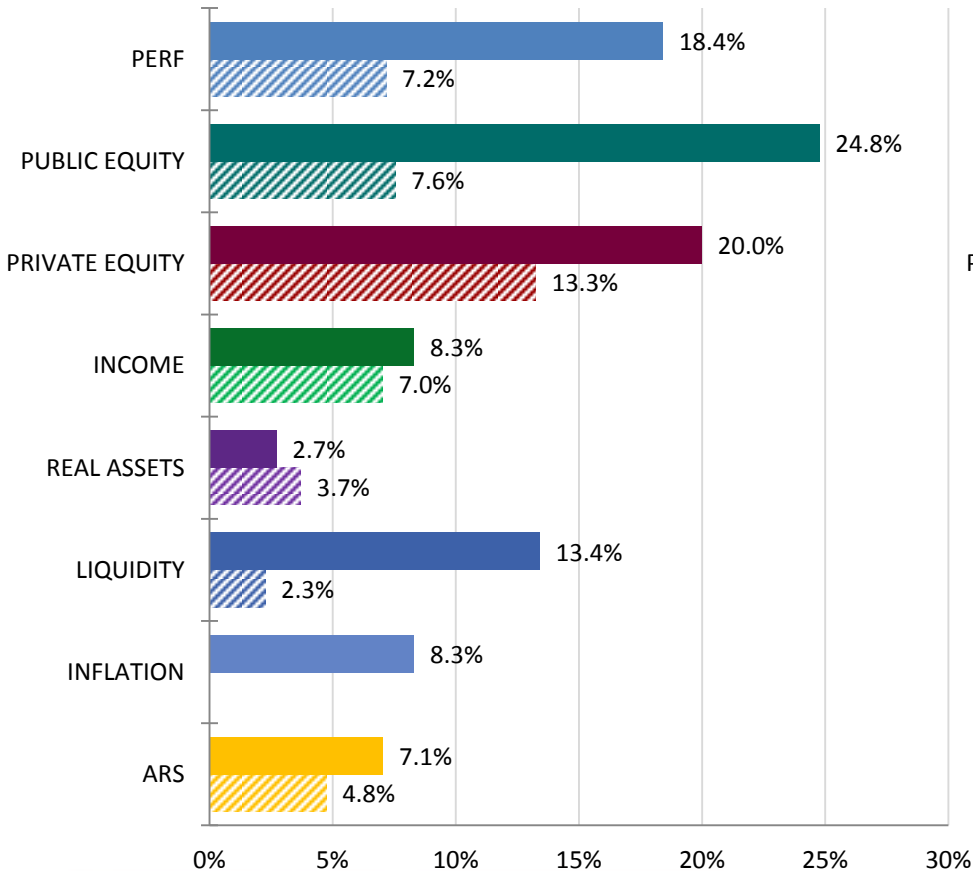
PERF Rolling 3-Year Excess Return



PERF Short-Term vs. Long-Term Performance

■ 1-Year Total Returns ■ 10-Year Total Returns

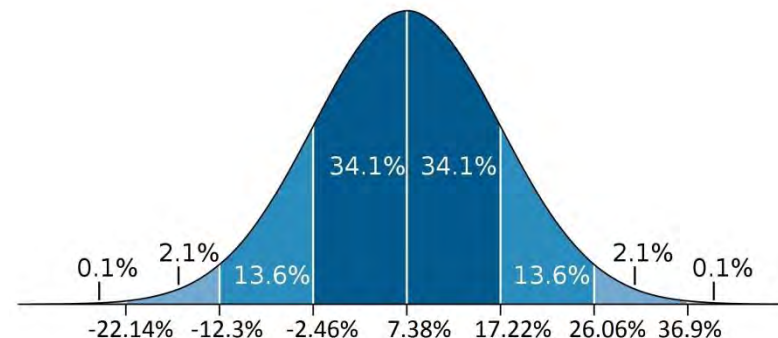
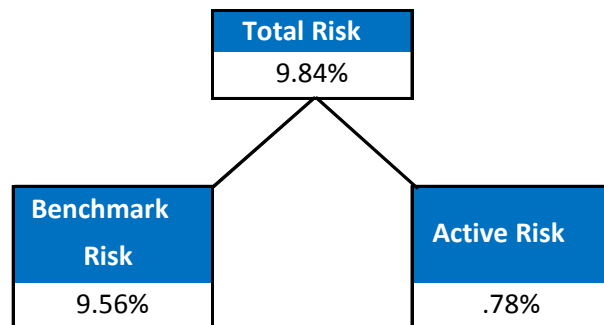
■ 1-Year Excess BPS ■ 10-Year Excess BPS



PERF Risk Profile

As of May 31, 2014

- Total Fund Forecast Risk is 9.84%
- Forecast Tracking Error is 0.78% and is within guidelines
- 10-Day Value-at-Risk is \$9.3 billion
- 10-Day Expected Shortfall is \$11.6 billion

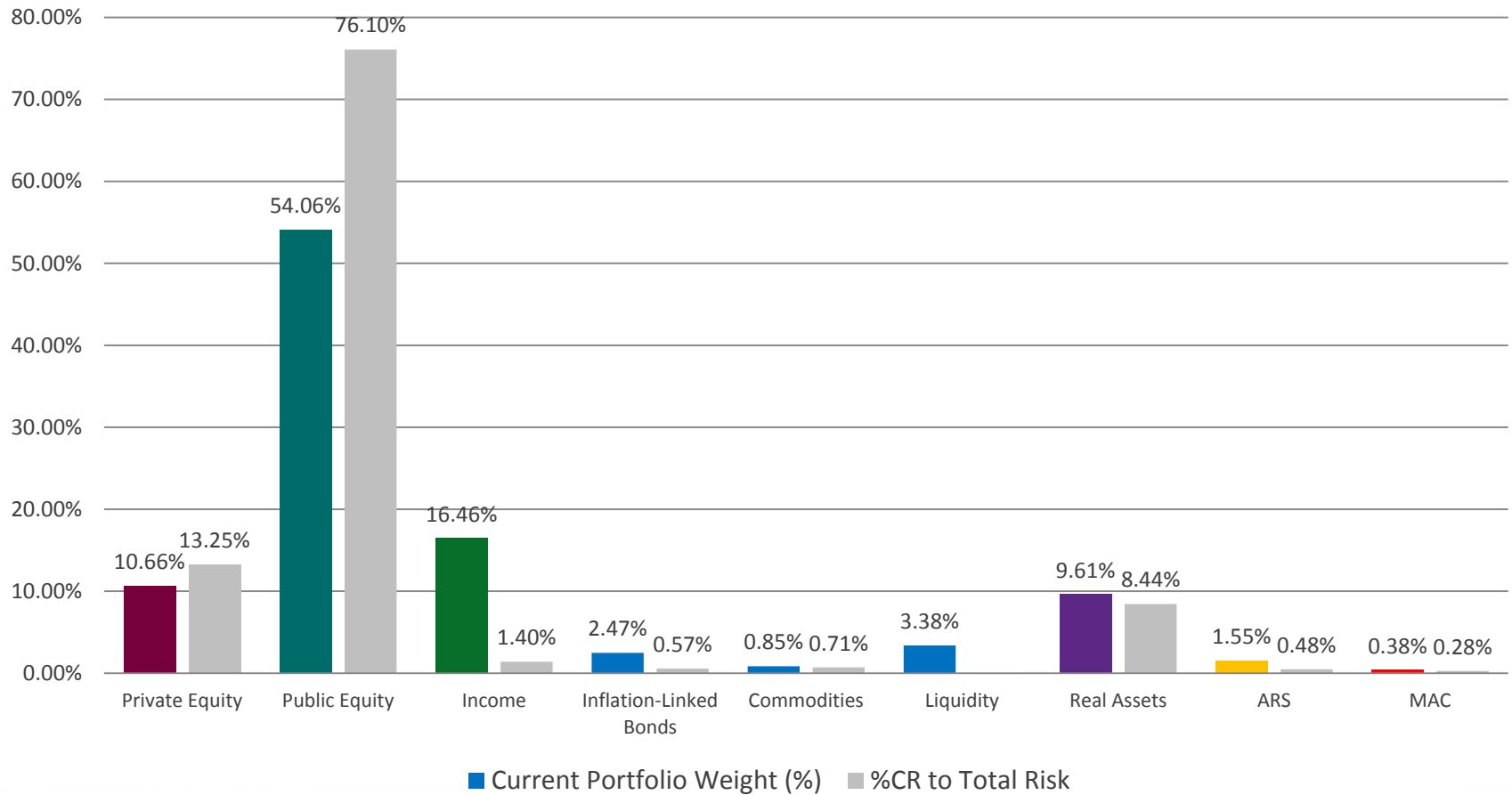


Forecasted Distribution of Returns*

*Based on Forecasted Returns from 2010 Asset Liability Workshop of 7.4% and Predicted Risk of 9.84%

Contribution to Risk (CR)

Portfolio Weight and Contribution to Total Risk – as of May 31, 2014

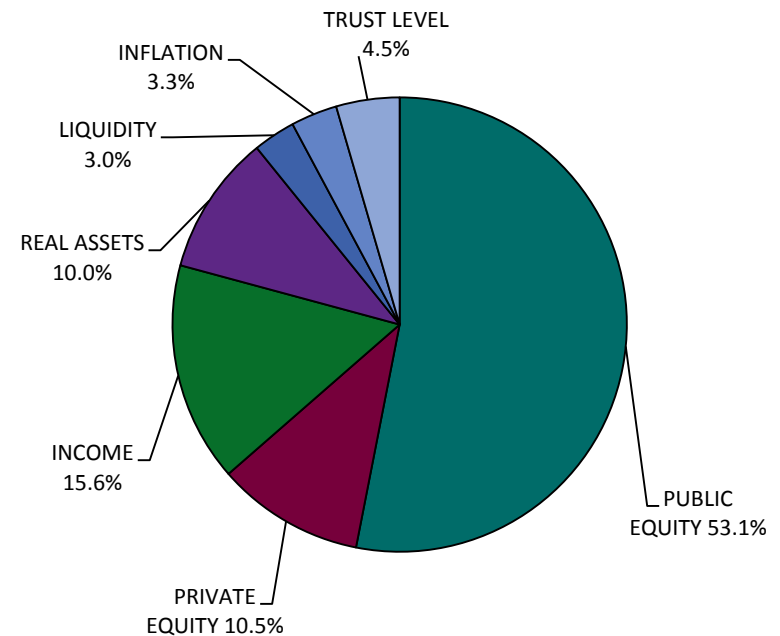


PERF Asset Allocation

As of June 30, 2014

	Actual Allocation (%)	Interim Strategic Target (%)*	Variance (%)
GROWTH	63.6%	61%	2.6%
PUBLIC EQUITY	53.1%	51%	2.1%
PRIVATE EQUITY	10.5%	10%	0.5%
INCOME	15.6%	19%	-3.4%
REAL ASSETS	10.0%	12%	-2.0%
REAL ESTATE	8.6%	10%	-1.4%
FORESTLAND	0.8%	1%	-0.2%
INFRASTRUCTURE	0.6%	1%	-0.4%
INFLATION	3.3%	6%	-2.7%
LIQUIDITY	3.0%	2%	1.0%
TRUST LEVEL	4.5%	N/A	4.5%
ARS	1.5%	N/A	1.5%
MAC	0.4%	N/A	0.4%
OVERLAY+TRANS+PLAN	2.6%	N/A	2.6%
TOTAL FUND	100.0%	100.0%	0.0%

Actual Capital Allocation



*Interim strategic targets were adopted by the Board at the May 2014 Investment Committee meeting and are effective July 1, 2014

PERF Positioning

- Transition to 2014 ALM workshop interim targets is currently underway
- Allocations will align with interim targets with limitations around illiquid asset class deployment
- During the 13/14 Fiscal Year (FY), strong Public Equity returns drove allocation higher with an average 4% over allocation
- Over allocation to Public Equity and under allocation to Income, Real Assets and Inflation had a positive impact on returns relative to the Policy Benchmark for the FY

Conclusion

- Economic imbalances remain largely contained, supporting risk appetite in the asset allocation
- Portfolio volatility continues to be driven almost entirely by Growth assets
- Strong FY total and relative performance continues trend of performance recovery since 2009 financial crisis with Growth assets driving returns