CalPERS Trust Level Review

Period Ending December 31, 2014

Ted Eliopoulos, CIO
Wylie Tollette, COIO
Eric Baggesen, SIO

Investment Committee
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Executive Summary

Trust Level Performance

- Public Employees' Retirement Fund (PERF) generated 6.5% for the 1-year period ending December 31, 2014
- Affiliate Defined Benefit Plans captured strong relative performance over the 1-year, 3-year, and 5-year return periods

Economic and Market Conditions

- The US economic recovery continues to improve but against a riskier backdrop of weak foreign economies and falling inflation

Portfolio Risk

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

Review Outline

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I. Economics and Market Overview

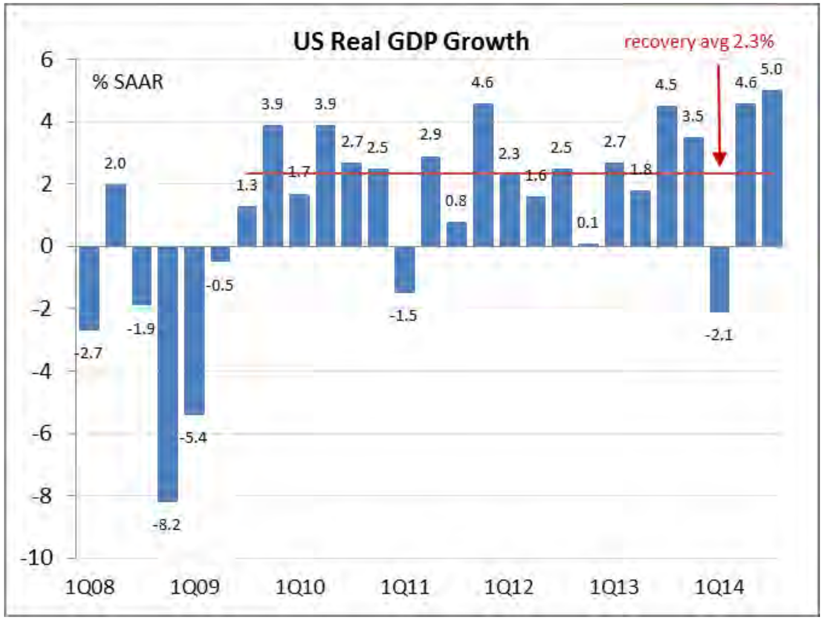
Economic Trends

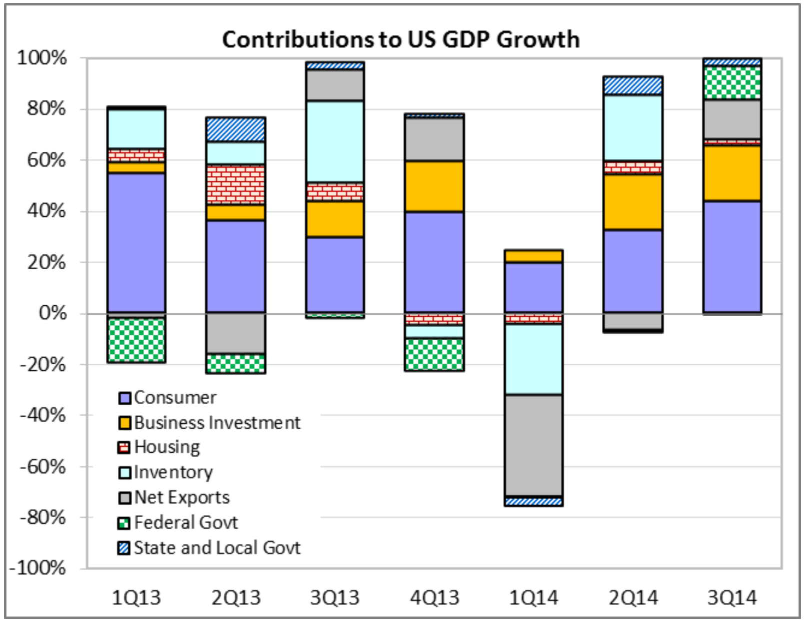
- US economic recovery accelerates but global conditions weaken

Positive	Same Trend	Negative
- Lower Oil prices help US US is still a net energy importer (15% of usage), so lower prices are a net gain to the economy. **- GDP growth** Real GDP growth(E) likely met 4% rate in the second half of 2014. **- Demand for labor improving** Job openings +20% YoY, more quitting for better jobs, small business plans to increase comp. **- Personal confidence surge** Repaired balance sheets and better labor markets have restored household confidence. **- Services sector rolling along** 5% YoY growth in 3Q14 and a further improvement in health related spending. **- Credit growth** Bank credit growing at around 7% YoY and households cautiously adding leverage. **- GDP - Rates gap** For example, low borrowing costs relative to GDP have recently stimulated mortgage lending. **- ECB and BoJ monetary measures** Implies potential global monetary base expansion well beyond past year's.	**- Labor market repair** Labor Market Conditions Index and Atlanta Fed spider recovering at steady modest pace. **- Household spending growth** Household spending growth steady at around 4%, albeit with shifting composition. **- Rising dollar** Gradually rising dollar is helping to bridge gap between US and foreign growth.	**- Slower global growth** China, Japan and Europe finish the year with question marks about sources of growth. **- Deflation likely in 2015** Headline CPI inflation predicted to drop to -1% by June 2015, possibly stifling investment. **- Oil - losers as well as winners** Lower prices will induce drop in rig count, capex and jobs in states like TX and ND. **- Business capex** While the recovery in investment has been solid since the recession it has recently leveled out. **- Triennial Survey of Consumer Finances** Income and wealth gains since 2010 have been concentrated in high income groups. **- Stretched valuations?** US household net worth as a multiple of income has leveled out near past cycle highs. **- Greek austerity concerns** Greece will try to reschedule debt again, setting up a conflict with the EU at the 5th Review.

US Economic Growth and Employment

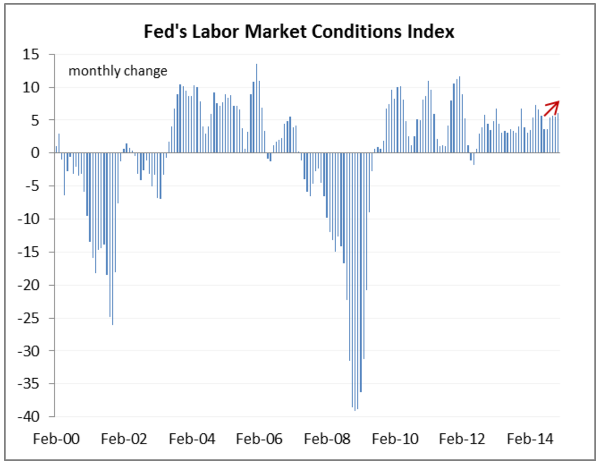
- US real GDP growth made a solid recovery in the second quarter, led by household spending on car and furnishings plus improved business investment and state and local government spending.

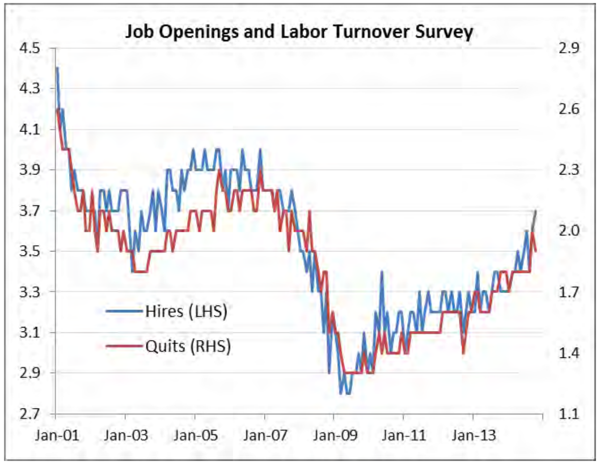




Tightening Labor Market But No Wage Pressures

- The Federal Reserve's Labor Market Conditions Index showed improved gains since our last Review.
- Hiring and leaving for a better job have improved and the pool of available labor has diminished, yet wages growth is very low.



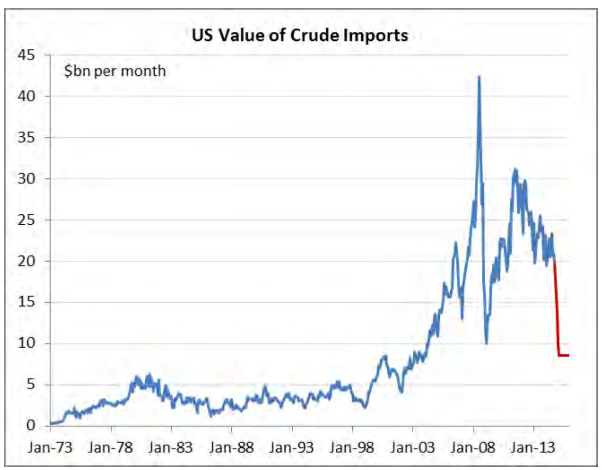


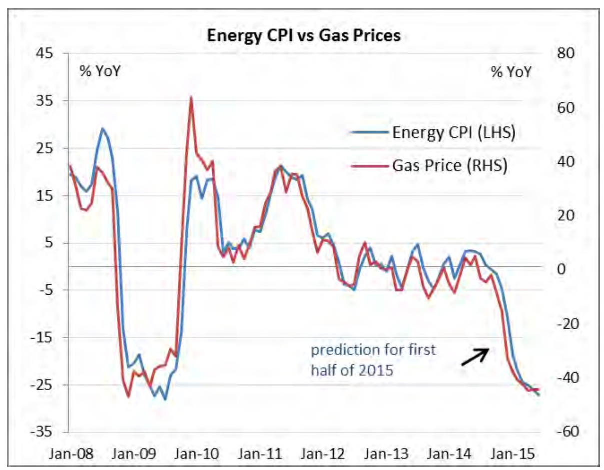
Domestic drivers of growth

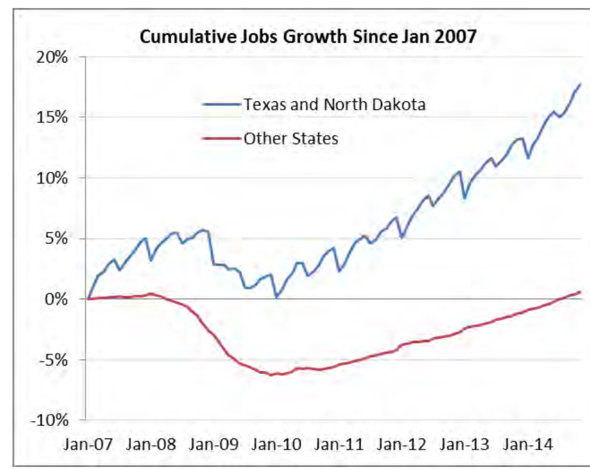
- **Household** – High confidence, strong wage bill growth, lower gas prices and improved mortgage refinancing activity all support spending, despite an offset from slower balance sheet improvement.
- **Corporate** – Profits growth has eased a little but ageing capital stock and high use of existing capacity supports capex.
- **Housing** – Concentration on multis and low household formation restrain GDP share to 3%.
- **Government** – Spending growth turns slightly positive as state and local revenues improve.

Net benefits from plunging Oil prices

- As a net importer of energy, US trade balance will continue to benefit from lower Oil prices.
- Energy is 8.4% of the US CPI and falling prices will pull the US into outright deflation during 2015, benefiting real household incomes.
- If US Oil and Gas Production eases jobs growth might shift away from TX and ND.

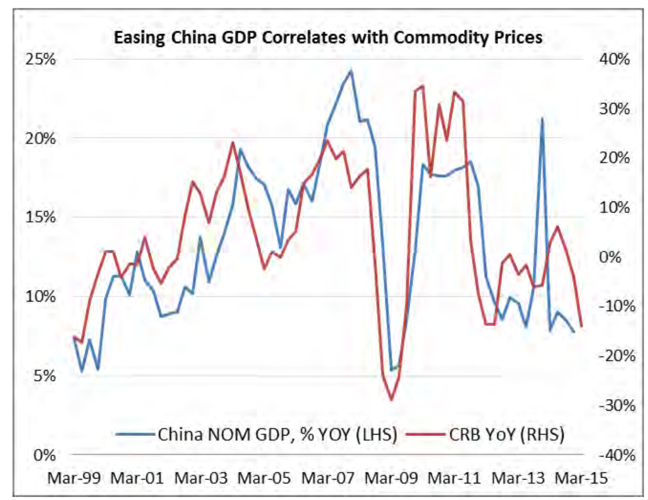






Global recovery still weak and vulnerable

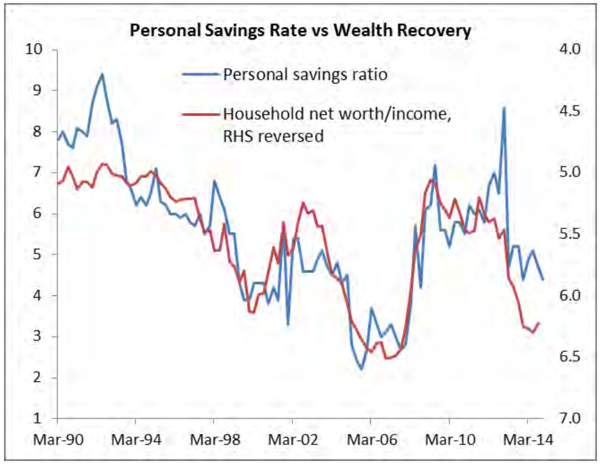
- The International Monetary Fund still expects global growth to improve in 2015-16 but only in Developed Markets, and slowly.
- China is struggling with low credit growth, falling producer prices and a very strong currency. That is adding to global disinflation.

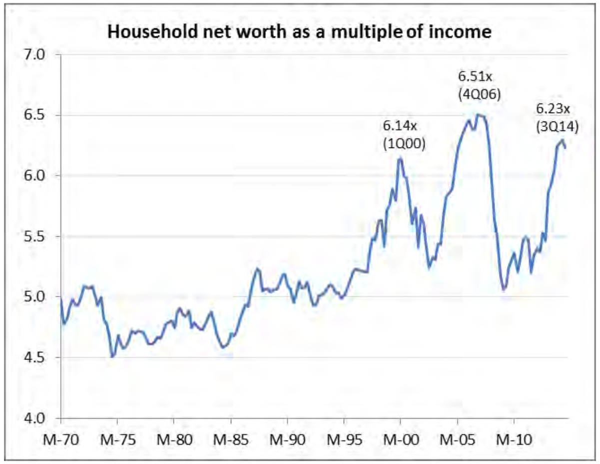


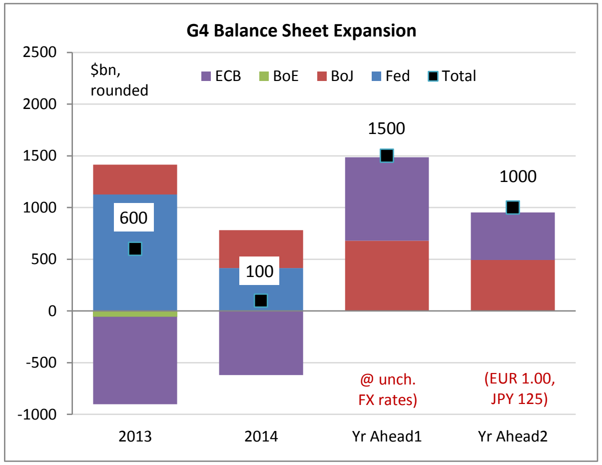
Source: International Monetary Fund, January 2015

Asset Prices Likely to Grow Less Aggressively

- Improved household net worth has encouraged a little more spending out of current income, as US households save a little less.
- Now household net worth valuations starting to look toppish as a multiple of income.
- That said, quantitative easing by Japan and Europe will be supportive.







Market Environment

- Much of the reduction in foreign stocks this fiscal year is in currency.

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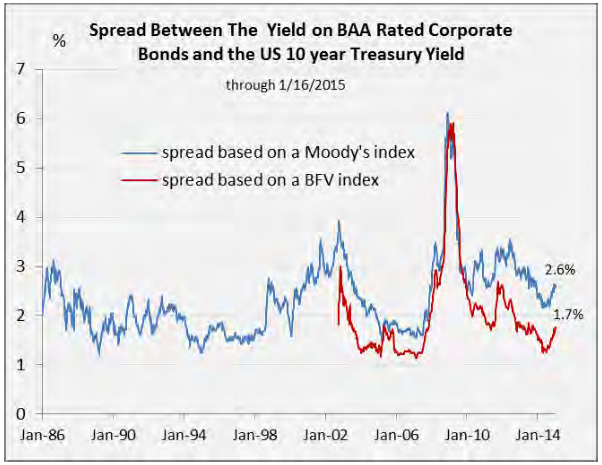
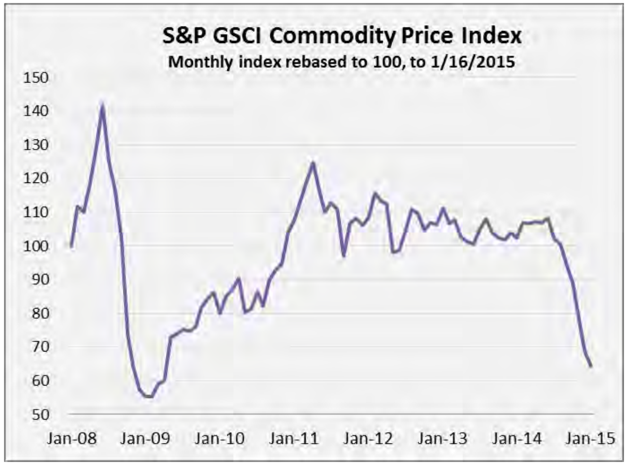
Market Environment

- The US 10-year bond yield has declined by 75 basis points during our current fiscal year to date, buoyed by foreign demand and disinflation.
- Corporate bonds have not kept up with the decline in Treasury yields.





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
GROWTH	61%
INCOME	19%
REAL ASSETS	12%
INFLATION	6%
LIQUIDITY	2%

- 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

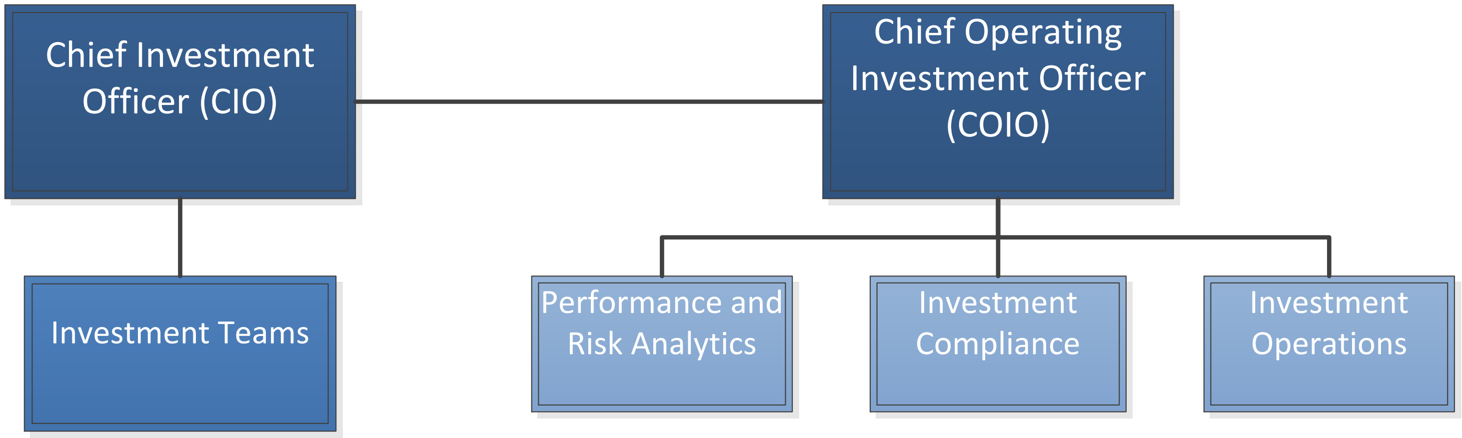
- Implementation Strategy & Capital Deployment
- Macro Economic Research
- Asset Class Research and Views
- Tactical Positioning

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

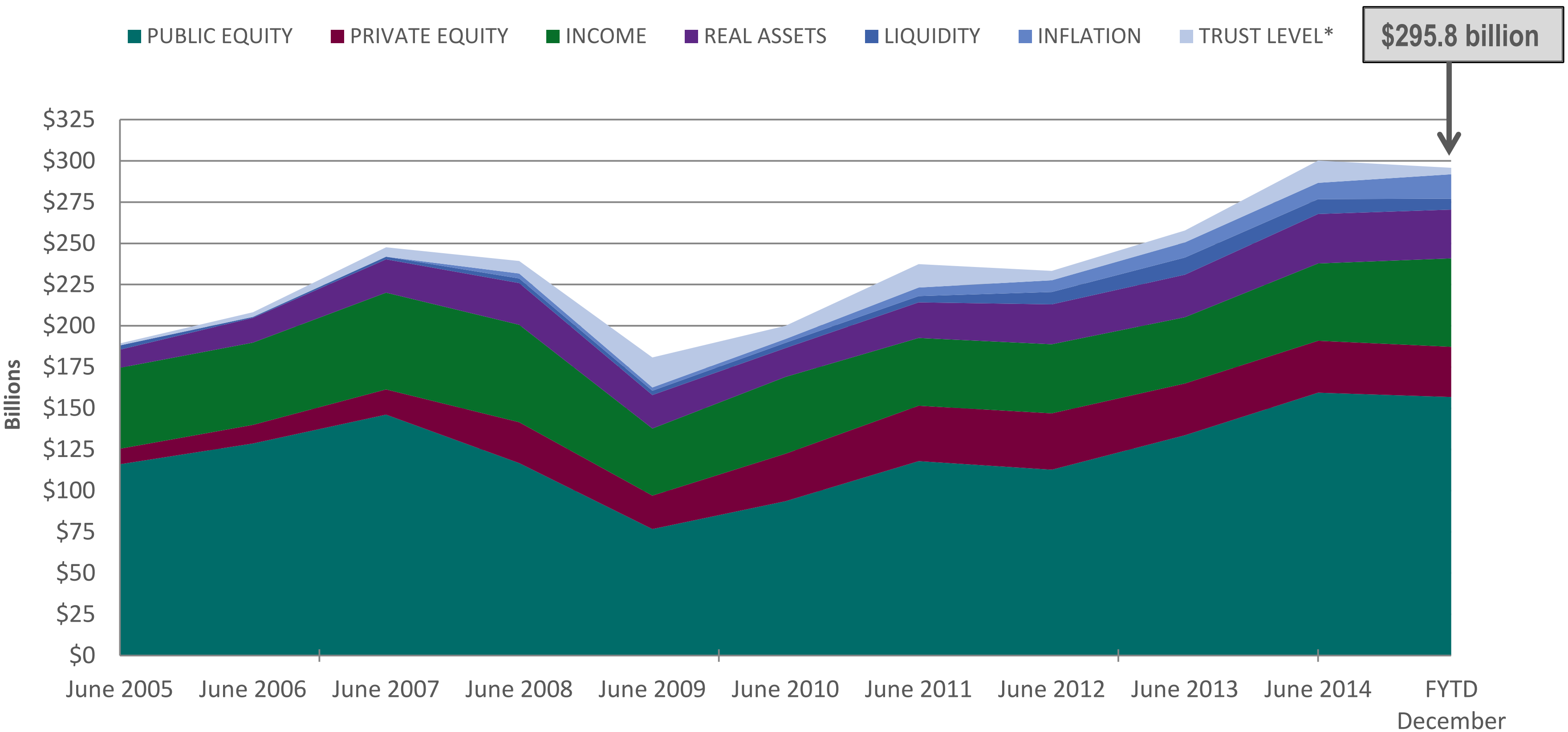
Trust Characteristics

As of December 31, 2014

• Defined Benefit Assets Managed	$305.3B
– PERF	$295.8B
– Long-Term Care Fund	$4.1B
– CERBT Fund	$4.2B
– Judges’ Retirement System Fund II	$1.0B
– Legislators’ Retirement System Fund	$0.12B
– Judges’ Retirement Fund	$0.05B

PERF Allocation Trend

As of December 31, 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 2013 Asset Liability Management Workshop. Actual returns are based on 3-year annualized net return and actual risk based on current projected standard deviation as of November 30, 2014.

PERF Performance Summary

- 1-year return of 6.5% underperformed strategic benchmark by 31 basis points (BPS).
- Over the long-term, the 10- year and 20-year returns underperformed the strategic policy benchmark.
- However, the 20-year return is above current actuarial return expectation of 7.5%.

	1-YR Net Return	3-YR Net Return	5-YR Net Return	10-YR Net Return	20-YR Net Return
PERF	**6.5%**	**11.9%**	**9.8%**	**6.2%**	**8.3%**
POLICY INDEX	6.8%	**12.0%**	**9.6%**	**7.1%**	**8.5%**
Excess Return	(0.3%)	(0.1%)	0.2%	(0.9%)	(0.2%)

Affiliate Funds Performance Summary

- All Defined Benefit Plans outperformed their respective benchmarks over the 1-year period
- The 5-year and 10-year return for all Defined Benefit Plans outperformed their respective benchmarks

Defined Benefit Plans	1-YR Net Return	1-YR Excess BPS	3-YR Net Return	3-YR Excess BPS	5-YR Net Return	5-YR Excess BPS	10-YR Net Return	10-YR Excess BPS
JUDGES' RETIREMENT FUND	0.1%	4	0.0%	(3)	0.1%	1	1.7%	13
JUDGES' RETIREMENT SYSTEM II FUND	5.7%	2	11.6%	32	9.8%	9	6.4%	7
LEGISLATORS' RETIREMENT SYSTEM FUND	6.8%	9	7.9%	58	8.3%	32	6.2%	27
CERBT STRATEGY 1	5.2%	25	11.5%	29	9.3%	13	-	-
CERBT STRATEGY 2	5.7%	11	9.5%	34	-	-	-	-
CERBT STRATEGY 3	6.7%	27	7.5%	35	-	-	-	-
CALPERS HEALTH CARE BOND FUND	6.6%	59	3.8%	110	5.2%	72	5.1%	38
LONG-TERM CARE FUND	7.3%	29	6.5%	44	7.0%	26	5.4%	26

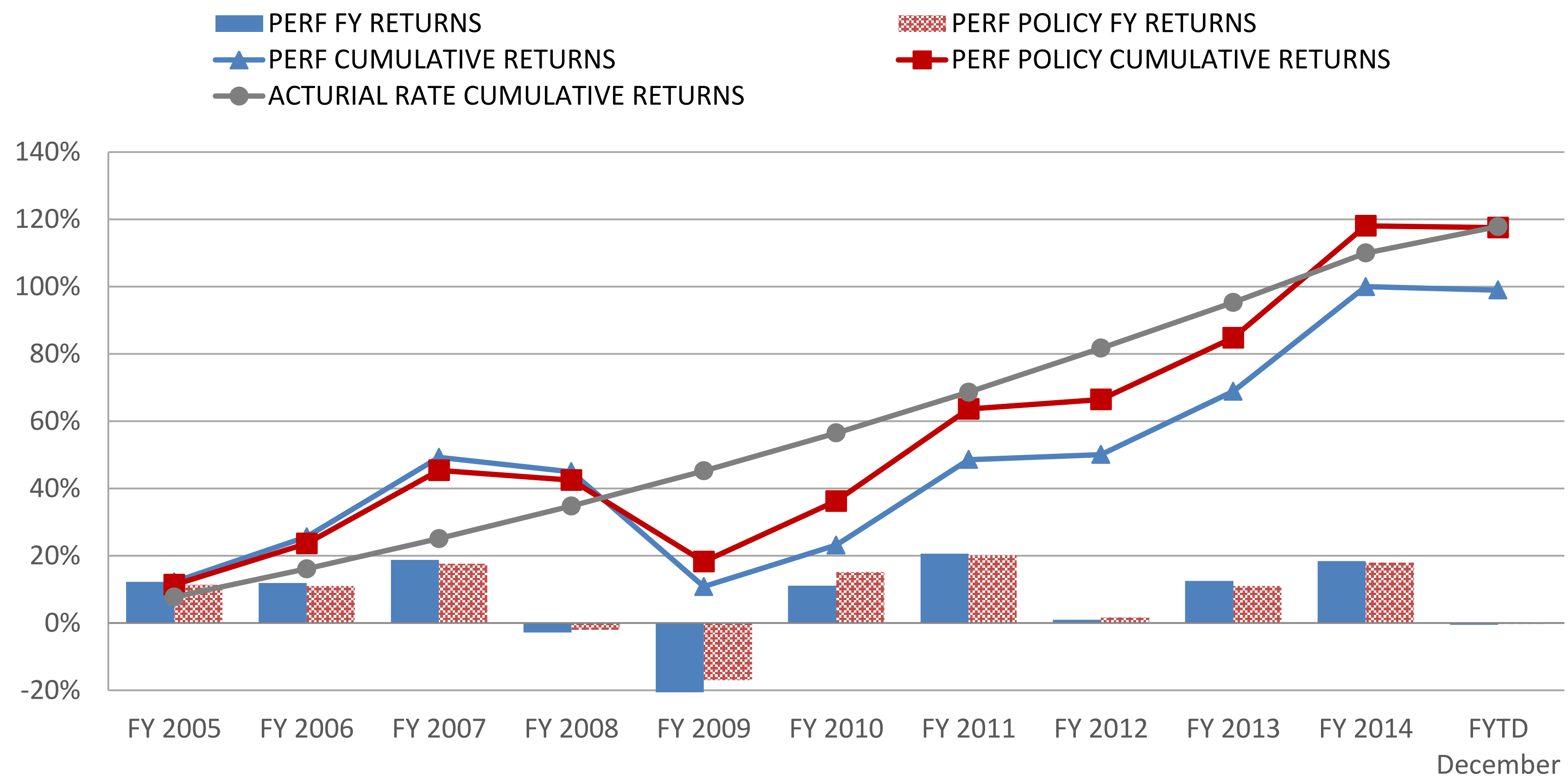
PERF Contribution to Return

Asset Class	Average Weight (%)	1-Year Return (%)	Contribution to Return (%)
GROWTH	**64.3**	**6.2**	**4.0**
PUBLIC EQUITY	*53.7*	*4.6*	*2.6*
PRIVATE EQUITY	*10.6*	*14.6*	*1.5*
INCOME	**16.4**	**9.9**	**1.6**
REAL ASSETS	**9.9**	**13.0**	**1.3**
REAL ESTATE	*8.6*	*13.1*	*1.1*
FORESTLAND	*0.8*	*3.7*	*0.0*
INFRASTRUCTURE	*0.6*	*23.3*	*0.1*
LIQUIDITY	**3.0**	**1.5**	**0.1**
INFLATION	**4.2**	**-5.1**	**-0.4**
TRUST LEVEL	**2.1**	**18.2**	**0.1**
ARS WITH EQUITIZATION	*1.5*	*4.6*	*0.1*
TRANSITION+PLAN LEVEL	*0.3*	*-*	*0.0*
MAC	*0.4*	*9.8*	*0.0*
PERF ex OVERLAY	**100.0**	**6.6**	**6.6**

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

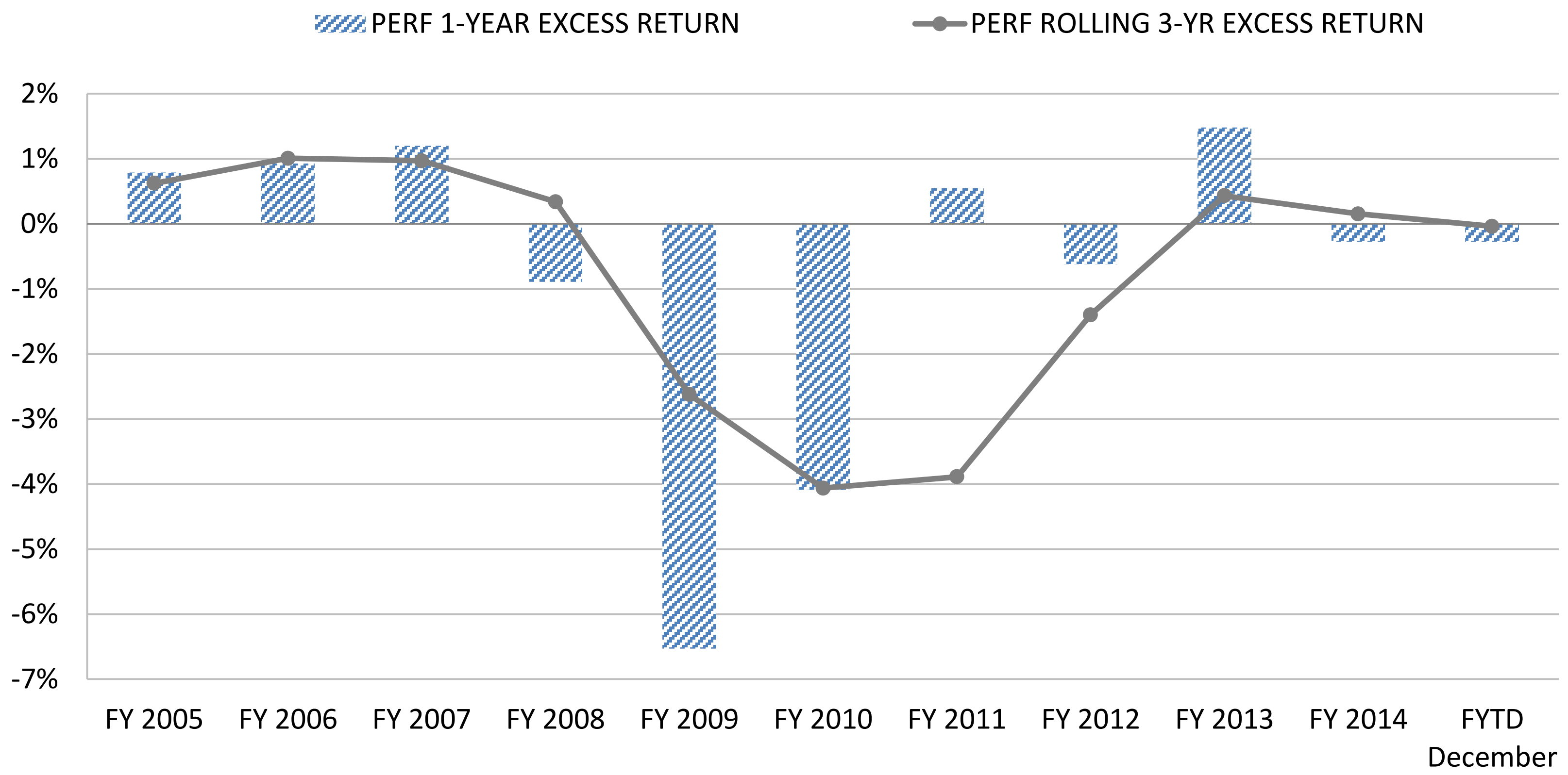
- Growth assets remain the primary contributors to returns accounting for 4% of 6.6% total return.

PERF Cumulative Returns

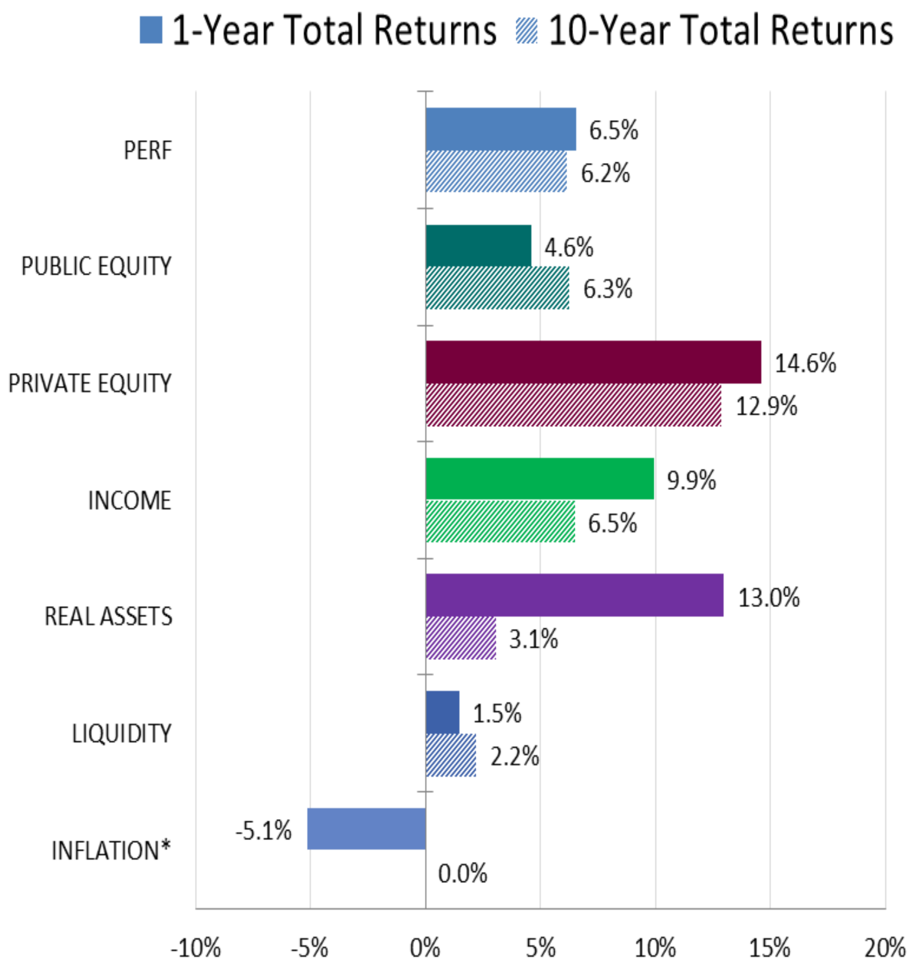


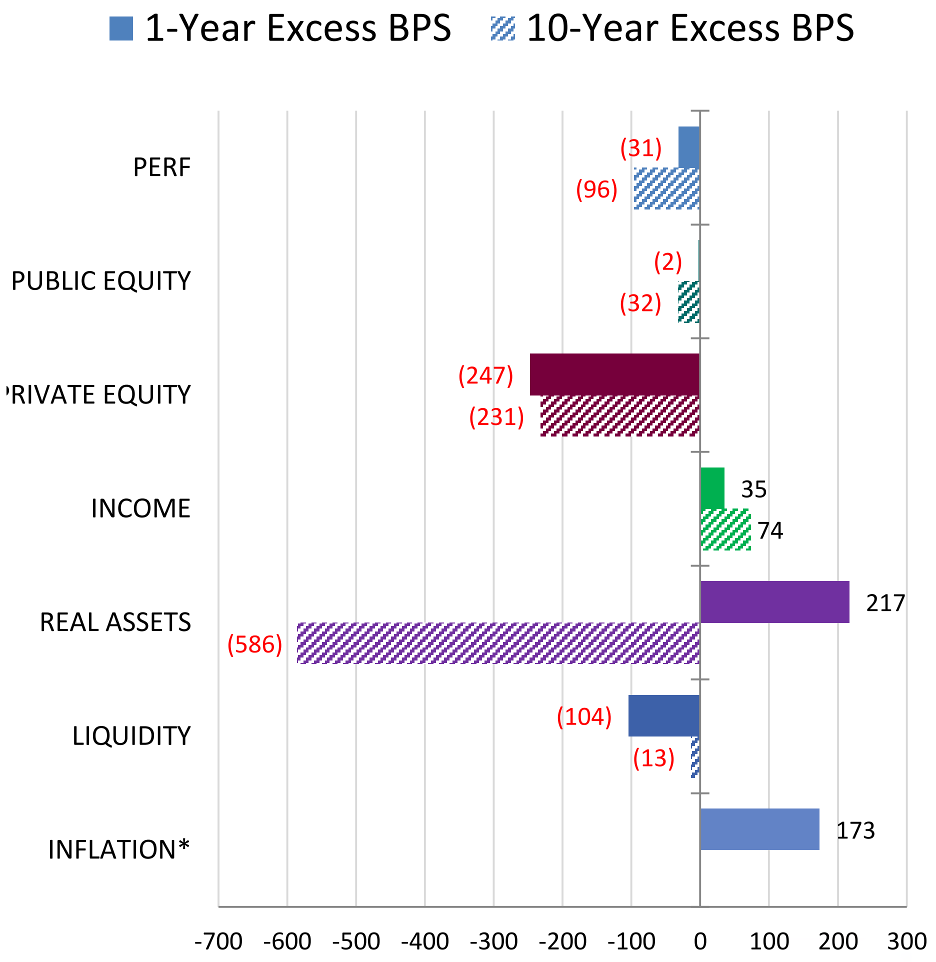
Note: Actuarial Rate FY 2003-12 was 7.75%, FY 2012-14 rate is 7.5%

PERF Rolling 3-Year Excess Return



PERF Short-Term vs. Long-Term Performance



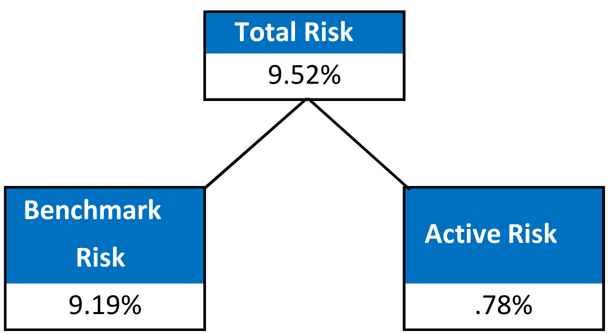


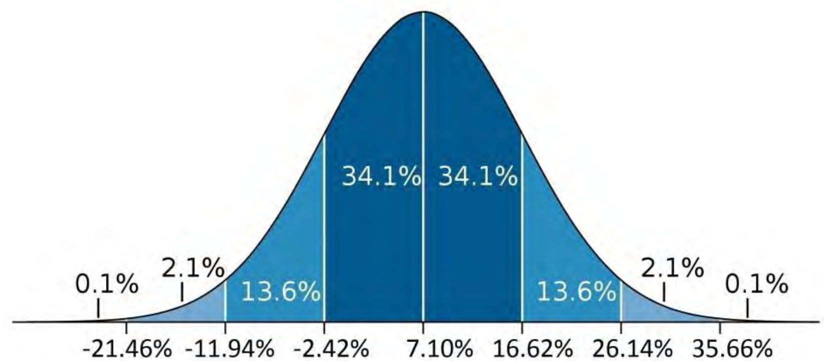
*Inflation has an inception date of October 2007, therefore 10-year returns and excess BPS are unavailable

PERF Risk Profile

As of November 30, 2014

- Total Fund Forecast Risk is 9.52%
- Forecast Tracking Error is 0.78% and is within guidelines
- 10-Day Value-at-Risk is $9.23 billion
- 10-Day Expected Shortfall is $11.6 billion



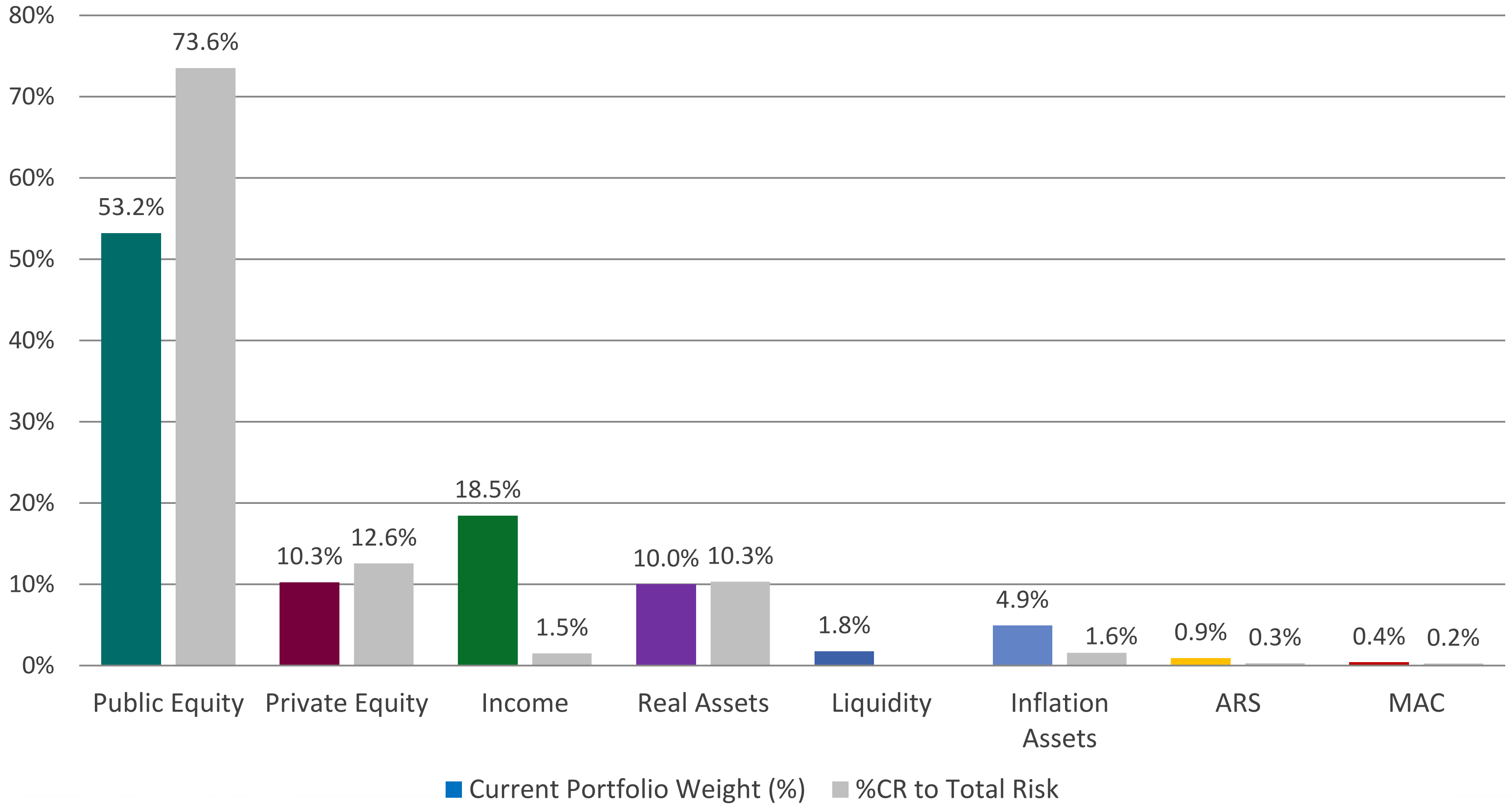


Forecasted Distribution of Returns*

*Based on Forecasted 10-Year Returns from 2013 Asset Liability Workshop of 7.1% and Predicted Risk of 9.52%

Contribution to Risk (CR)

Portfolio Weight and Contribution to Total Risk – as of November 30, 2014

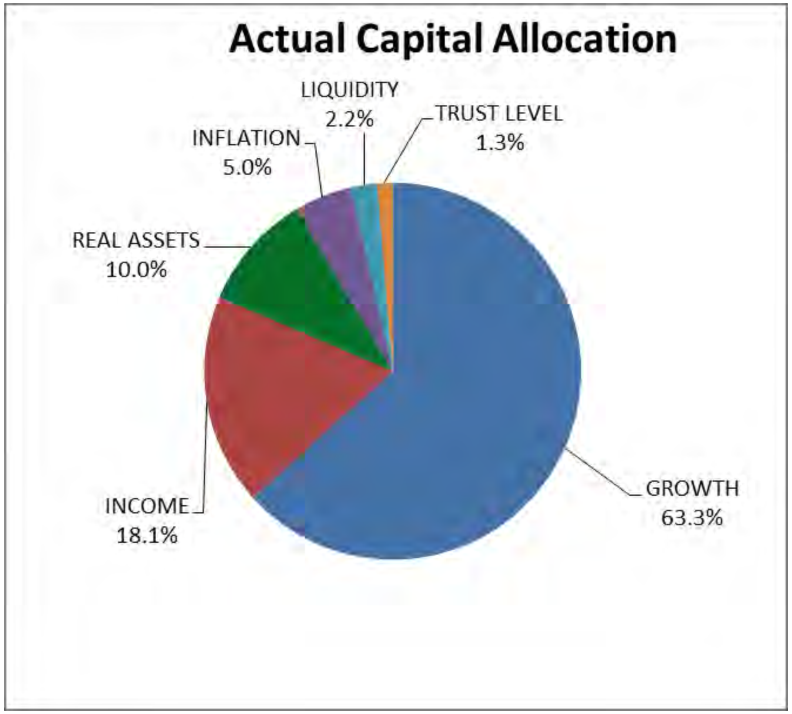


PERF Asset Allocation

As of December 31, 2014

	Actual Allocation (%)	Interim Strategic Target (%)*	Variance (%)
GROWTH	**63.3%**	**61%**	**2.3%**
PUBLIC EQUITY	*53.0%*	*51%*	*2.0%*
PRIVATE EQUITY	*10.3%*	*10%*	*0.3%*
INCOME	**18.1%**	**19%**	**-0.9%**
REAL ASSETS	**10.0%**	**12%**	**-2.0%**
REAL ESTATE	*8.5%*	*10%*	*-1.5%*
FORESTLAND	*0.8%*	*1%*	*-0.2%*
INFRASTRUCTURE	*0.7%*	*1%*	*-0.3%*
INFLATION	**5.0%**	**6%**	**-1.0%**
LIQUIDITY	**2.2%**	**2%**	**0.2%**
TRUST LEVEL	**1.3%**	**N/A**	**1.3%**
ARS	*0.9%*	*N/A*	*0.9%*
MAC	*0.4%*	*N/A*	*0.4%*
OVERLAY+TRANS+PLAN	*0.0%*	*N/A*	*0.0%*
TOTAL FUND	**100.0%**	**100.0%**	**0.0%**

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



PERF Positioning

- Asset allocations are closely aligned with the 2013 ALM workshop interim targets reflecting on illiquid asset class deployment
- More than 60% of the portfolio is allocated to Growth Assets, therefore, Public Equity and Private Equity will continue to be the primary contributors and drivers of performance
- Over allocation to Public Equity and under allocation to Income, Private Equity, and Real Assets had a negative impact on returns relative to the Policy Benchmark for the calendar year

Conclusion

- The PERF generated 6.5% for the 1-year period ending December 31, 2014 and underperformed the Policy Benchmark by 31 BPS primarily due to overweight in Public Equity
- Affiliate Defined Benefit Plans captured strong relative performance over the 1-year, 3-year, and 5-year return periods
- Stronger US economic growth but against a riskier global backdrop of disinflation and vulnerable growth
- Portfolio volatility continues to be driven almost entirely by Growth assets