CalPERS Chief Investment Officer
Total Fund Performance and Risk Report

Period Ending September 30, 2013
Joe Dear, CIO

Investment Committee

November 2013

CalPERS | Investment Office

CalPERS CIO Total Fund Update

Economic and Market Conditions

Slow growth with low inflation persists and global conditions have improved, both favorable for risk assets

Portfolio Risk

Portfolio Total Risk continues to trend lower but remains elevated versus pre-crisis levels with Growth assets continuing to drive Total Risk

Total Fund Performance

Total Fund continues to outperform the Policy Benchmark with Growth assets generating strong total performance for the fiscal year-to-date (FYTD) period

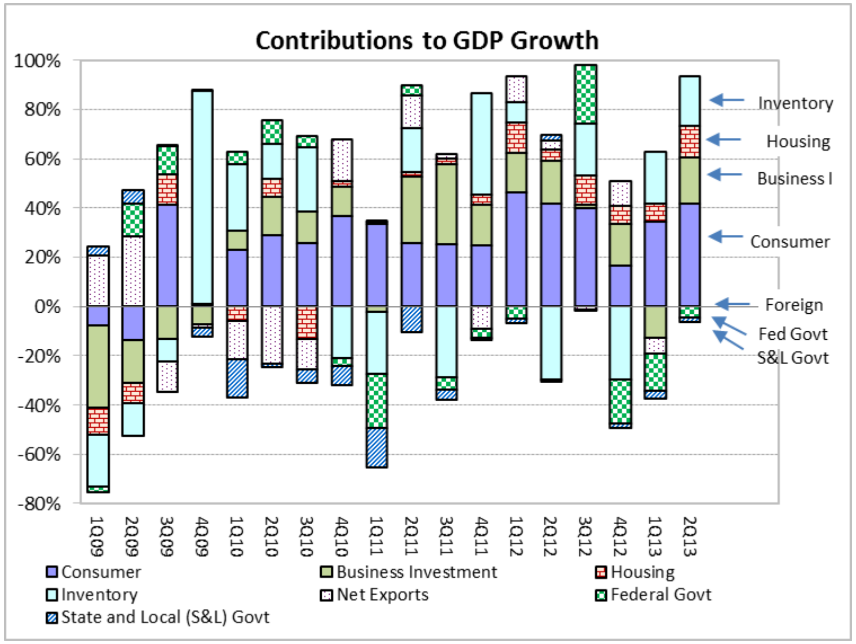
Economic Trends

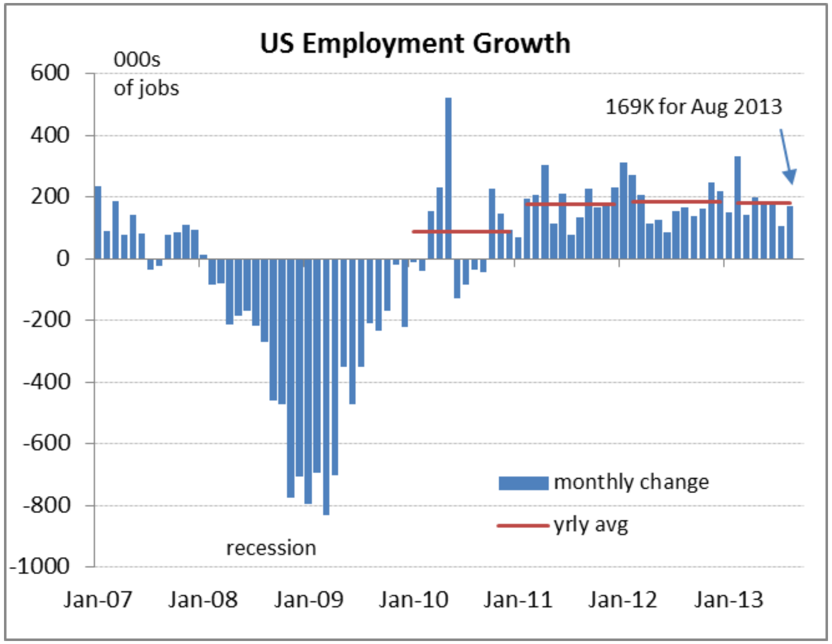
- Slow and stable US economic growth with low inflation is likely to persist. The private sector's fundamentals continue to improve but the government sector continues to be a modest drag on growth.
- The economic cycle has tentatively improved in Europe, Japan and China.

Positive	Same Trend	Negative
- US business surveys *ISM, Philly Fed and small business surveys all shave all improved during the summer.*	**- Jobs growth** *- Very steady jobs growth at around 180K per month for the past two years.*	**- Government shutdown** *- Direct GDP impact small but may impact spending decisions for a while.*
- Existing home sales *A very strong summer based on more inventory and rising prices/rates.*	**- Consumer sentiment** *- Sentiment fell during the fiscal crisis but is still elevated vs last year.*	**- Capex orders and shipments** *- Capex orders have fallen in July-August but after a very strong second quarter.*
- Claims for unemployment insurance *Fell below 300,000 until California caught up with processing delays.*	**- Consumer spending** *Steady 4 to 5% yearly pace but chain stores losing wallet share to big ticket.*	**- Housing affordability** *- Higher prices and mortgage rates reduce affordability by half of its cycle gain.*
- Household balance sheet *Further strengthening of net worth and deleveraging achieved in 2Q 2013.*	**- Housing starts** *- Stable at around 900K pa with recent shift toward single family from multis.*	**- Credit growth** *Bank lending to businesses decelerates further but other funding sources replace*
- Global cycle indicators *- Improved global PMI's leading indicators, auto sales and world trade.*	**- Core inflation** *- Core inflation measures reported by the Fed remain in the low 1% range.*	

US Economy and Employment

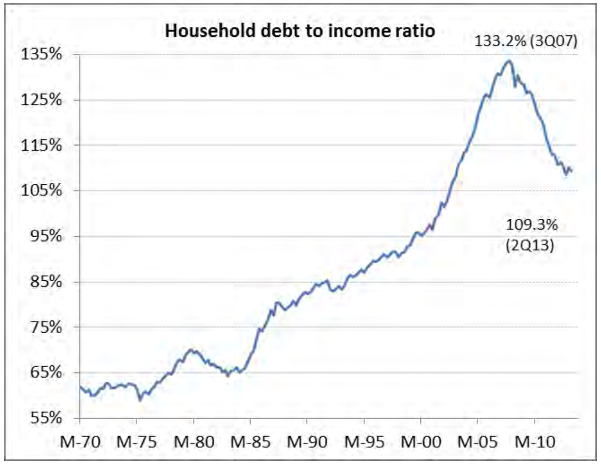
- US GDP grew at an annual rate of 2.5% in 2Q 2013. Household spending on durables, house building and business investment in structures were strong points.
- US jobs growth continues at a steady pace of around 180K per month, less than required to absorb those unemployed and underemployed from the 2009 recession.

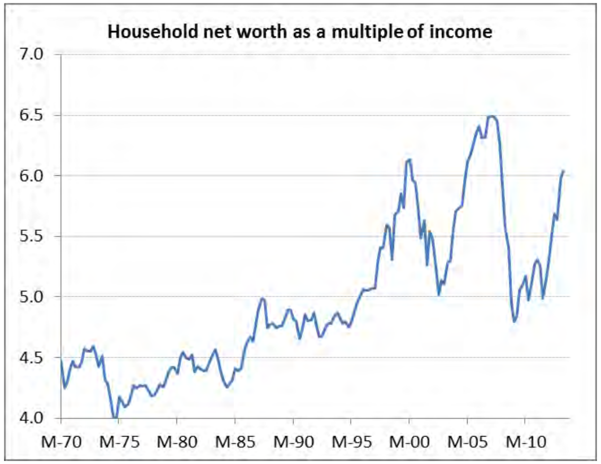


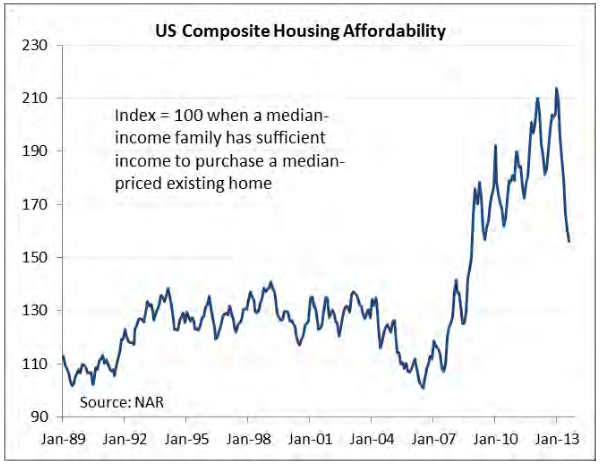


Current Issue – Householders doing better

- The US householder debt burden continues to recede and net worth has rebounded to more than six times income, making households less fearful of spending.
- Meanwhile, the recovery of house prices and higher interest rates have eroded housing affordability but it is still comfortably higher than pre recession.

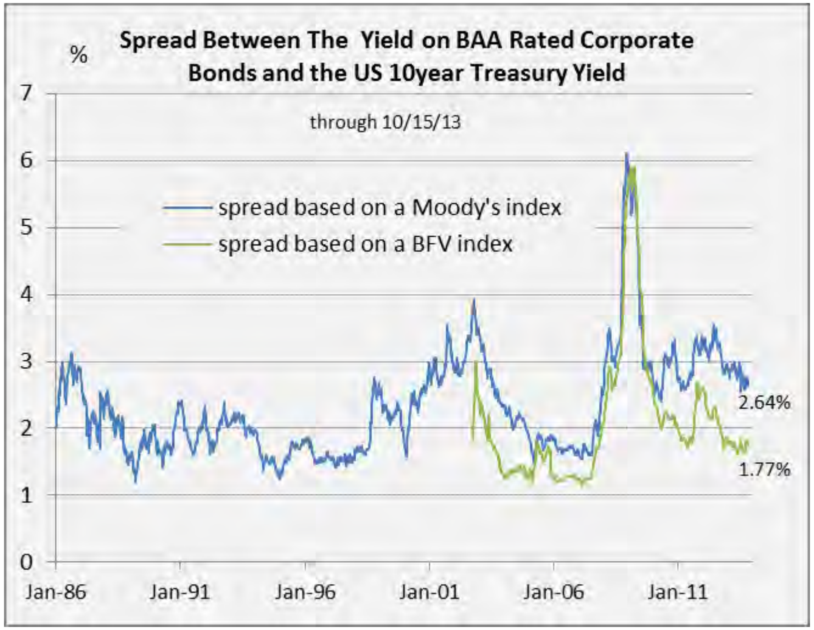




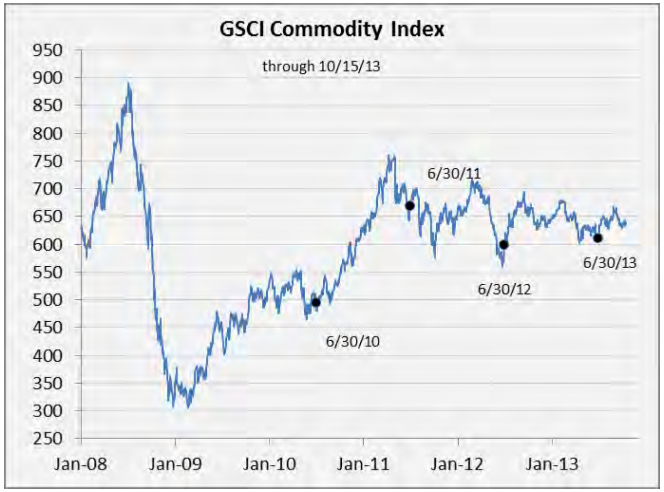


Market Environment

- The US bond market is now priced for a gradual tapering of Federal Reserve Asset Purchases, commencing either in December 2013 or in 1Q 2014. The market is also priced for a Fed funds target rate still below 1% at the end of 2015.
- Corporate spreads to Treasuries have continued to modestly narrow.



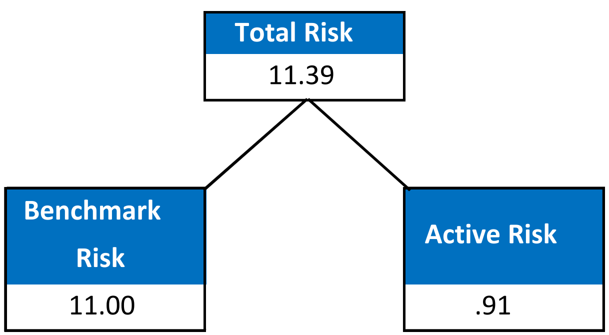
Market Environment

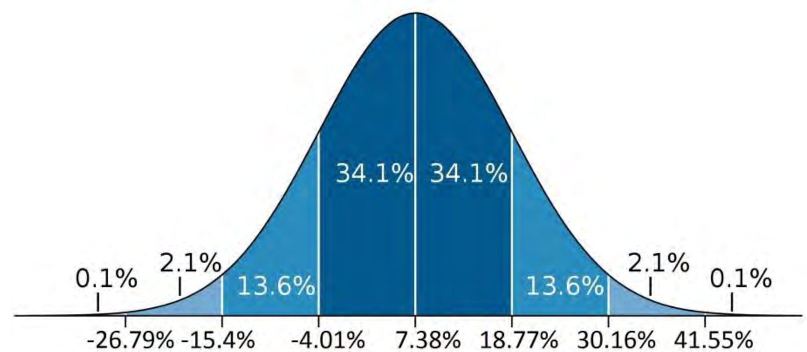


Total Fund Risk Profile

As of August 31, 2013

- Total Fund Forecast Risk is 11.39%
- Forecast Tracking Error is 0.91% and is within guidelines
- 10-Day Value-at-Risk is $9.8 billion
- 10-Day Expected Shortfall is $12.3 billion



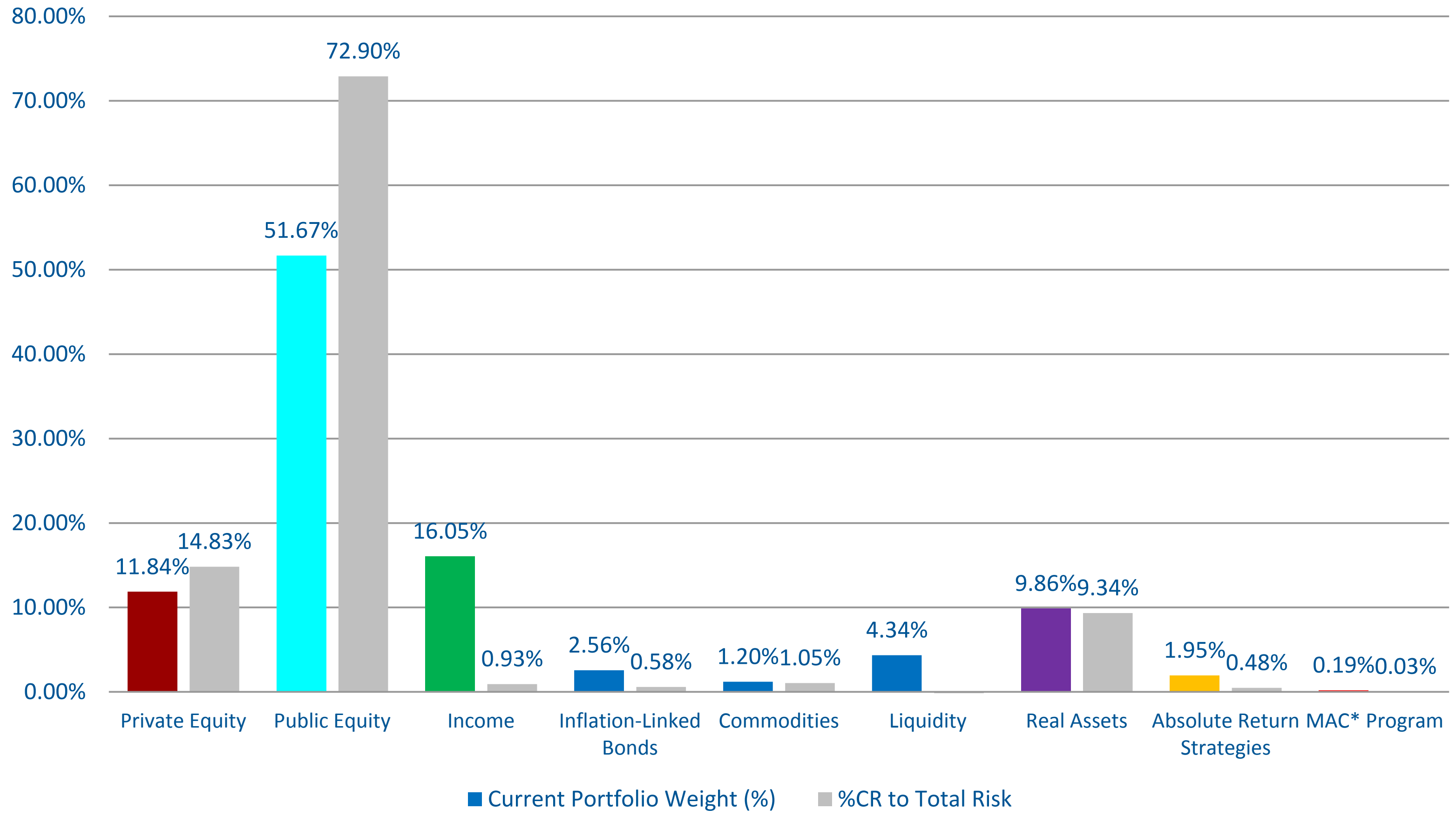


Forecasted Distribution of Returns*

*Based on Forecasted Returns from 2010 Asset Liability Workshop of 7.4% and Predicted Risk of 12.18%

Contribution to Risk (CR)

Portfolio Weight and Contribution to Total Risk – as of August 31, 2013



* Multi-Asset Class (MAC) Program

Total Fund Performance Summary

- 1-year return of 13.74% outperformed strategic benchmark by 140 basis points (BPS)
- Both 10-year and 20-year returns underperformed strategic policy benchmark by 81 BPS and 10 BPS respectively
- 10-year return of 7.2% is below current actuarial return expectation of 7.5%, 20-year return of 7.7% is above

As of 9/30/13	EMV* (Millions)	FYTD	1-YR	3-YR	5-YR	10-YR	20-YR	ITD**	Inception Date
TOTAL FUND	**$271,454**	**5.40**	**13.74**	**10.24**	**6.62**	**7.22**	**7.70**	**8.65**	**07/88**
POLICY INDEX		*4.84*	*12.34*	*10.06*	*8.16*	*8.03*	*7.8*		
Excess Return		*0.56*	*1.40*	*0.18*	*(1.54)*	*(0.81)*	*(0.10)*		

*Ending market value (EMV)
** Inception to date (ITD)

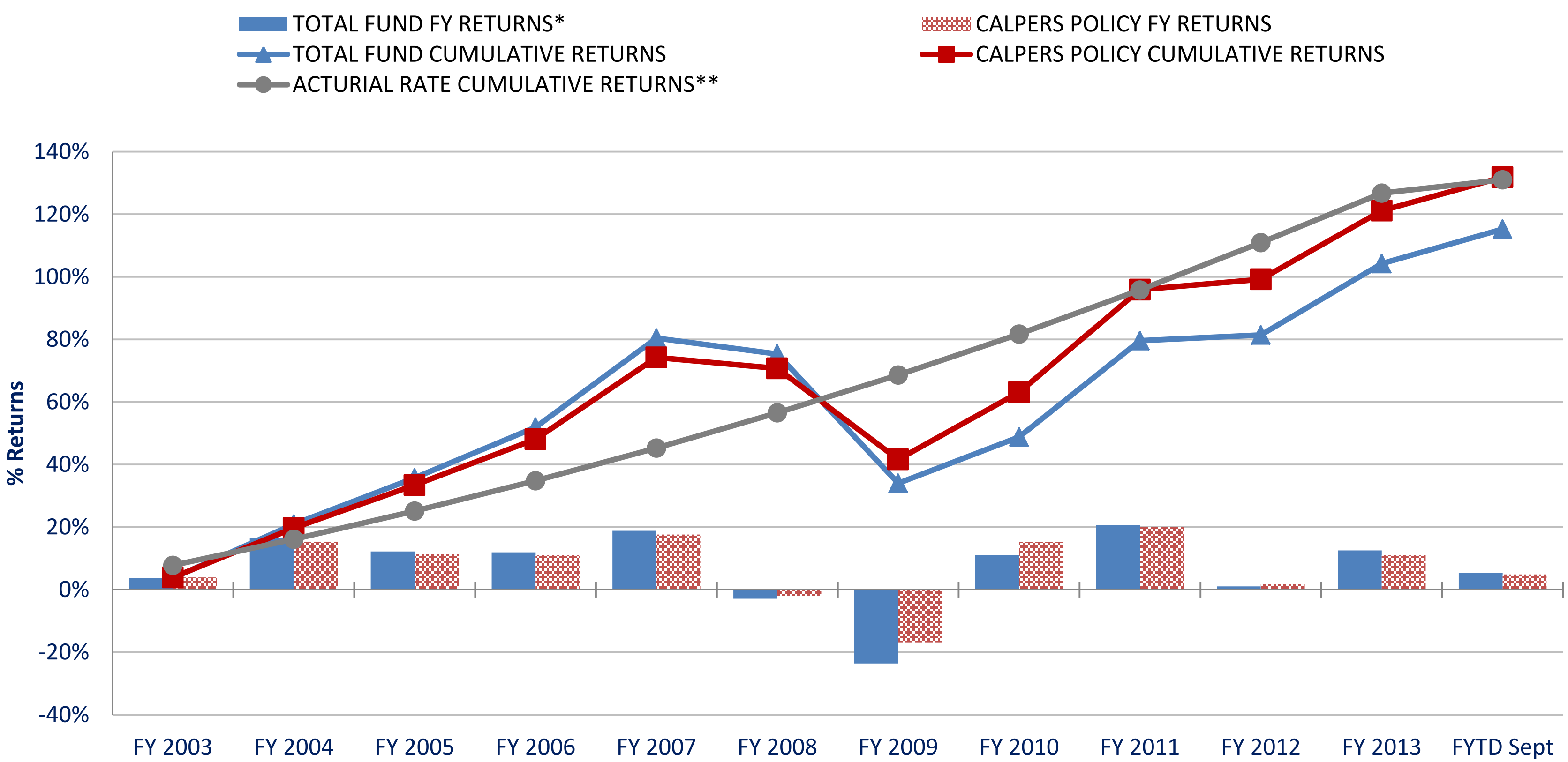
Total Fund FYTD Performance

Asset Class	Average Weight (%)	FYTD Return (%)	Contribution to Return (%)
TOTAL FUND ex OVERLAY	**100.0**	**5.5**	**5.5**
Strategic Asset Class			
GROWTH	64.5	7.9	5.1
PUBLIC EQUITY	*52.5*	*8.6*	*4.5*
PRIVATE EQUITY	*12.0*	*4.6*	*0.6*
INCOME	15.3	0.6	0.1
REAL ASSETS	9.9	1.4	0.1
INFLATION	3.4	2.6	0.1
LIQUIDITY	4.0	0.1	0.0
Tactical Programs			
ARS with Equitization	2.4	6.0	0.2
MAC	0.1	0.0	0.0
TRANSITION + PLAN LEVEL	0.3	(3.8)	0.0

- Growth assets are primary contributors to returns accounting for 5.1% of 5.5% total return.
- ARS with Equitization accounted for 0.2% of 5.5% total return.

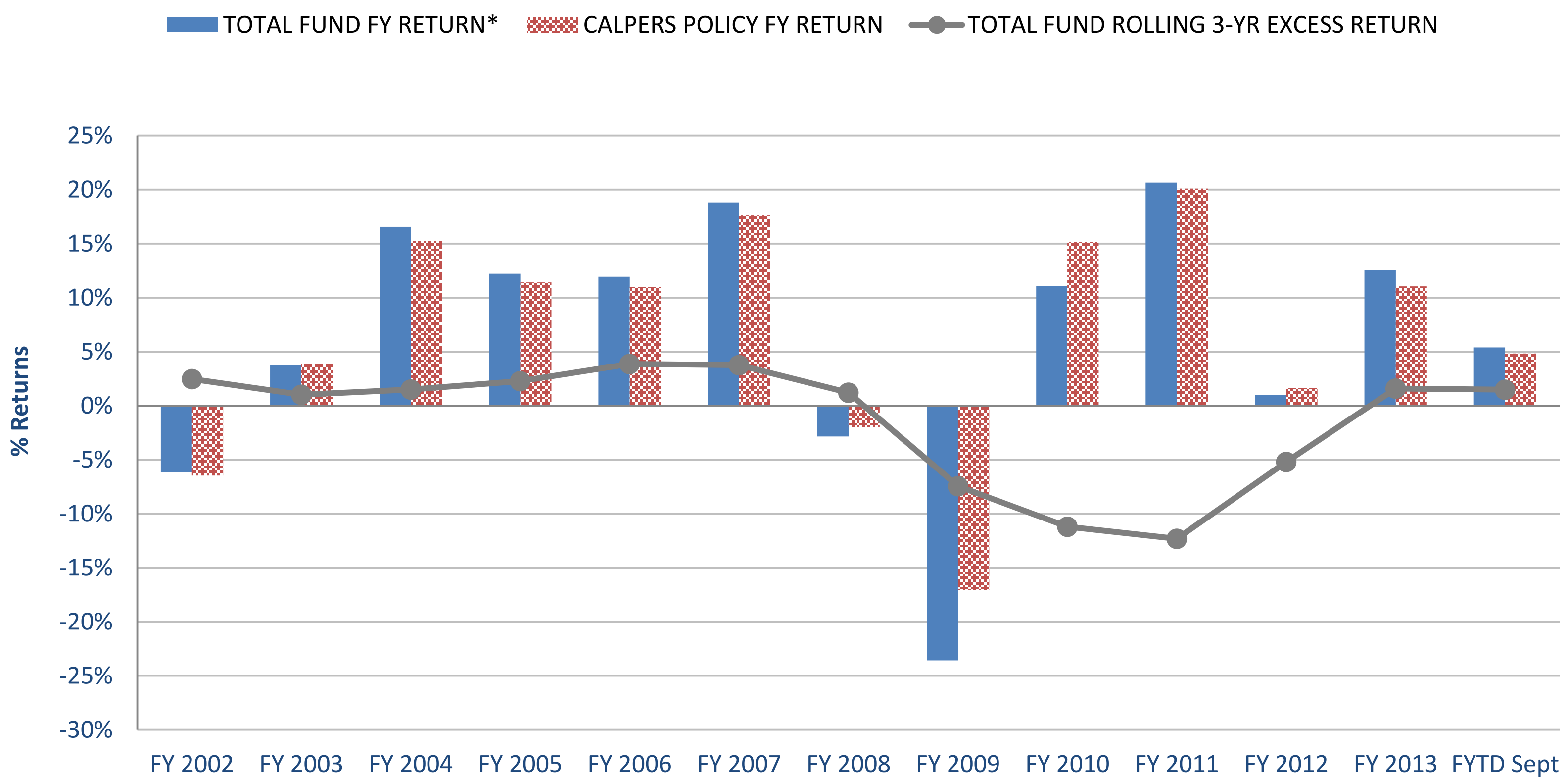
Source: FactSet; Weights and returns calculated utilizing monthly linked returns.

Total Fund Cumulative Returns



*Inflation, Liquidity and Real Assets were created on July 1, 2011 from existing portfolios; therefore historical values are being represented for prior years.
** Actuarial Rate FY 2003-12 was 7.75%, FY 2012-14 rate is 7.5%

Total Fund 3-Year Rolling Excess Return



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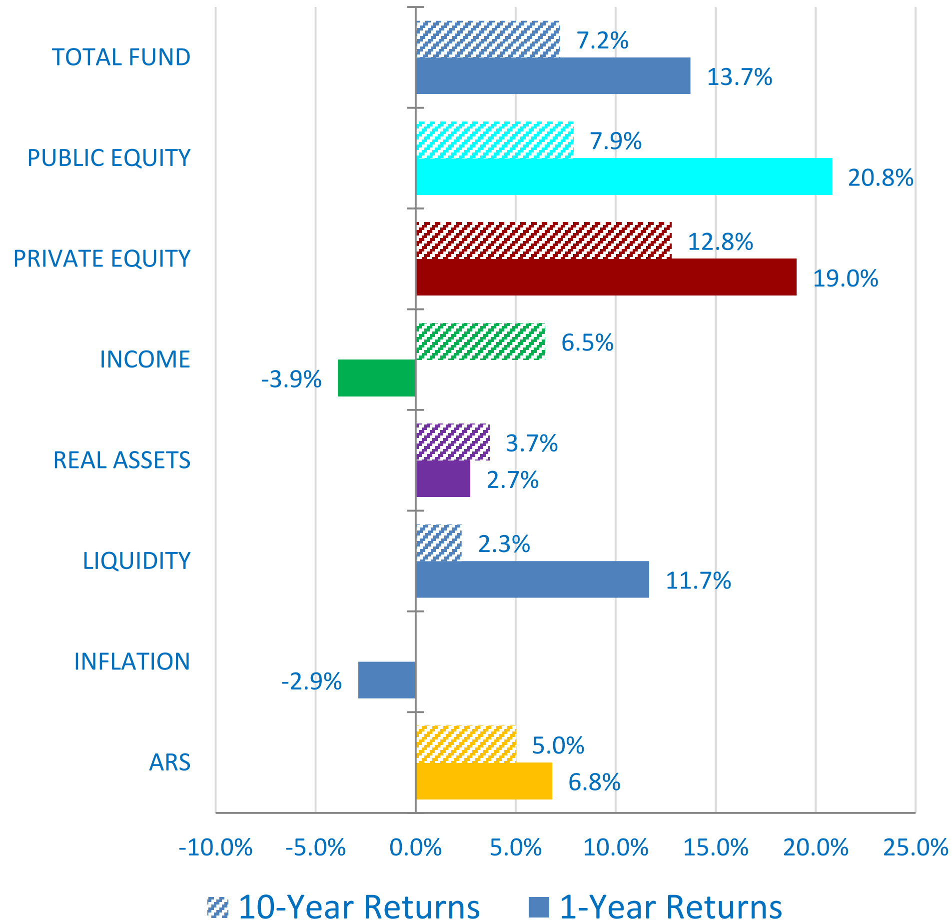
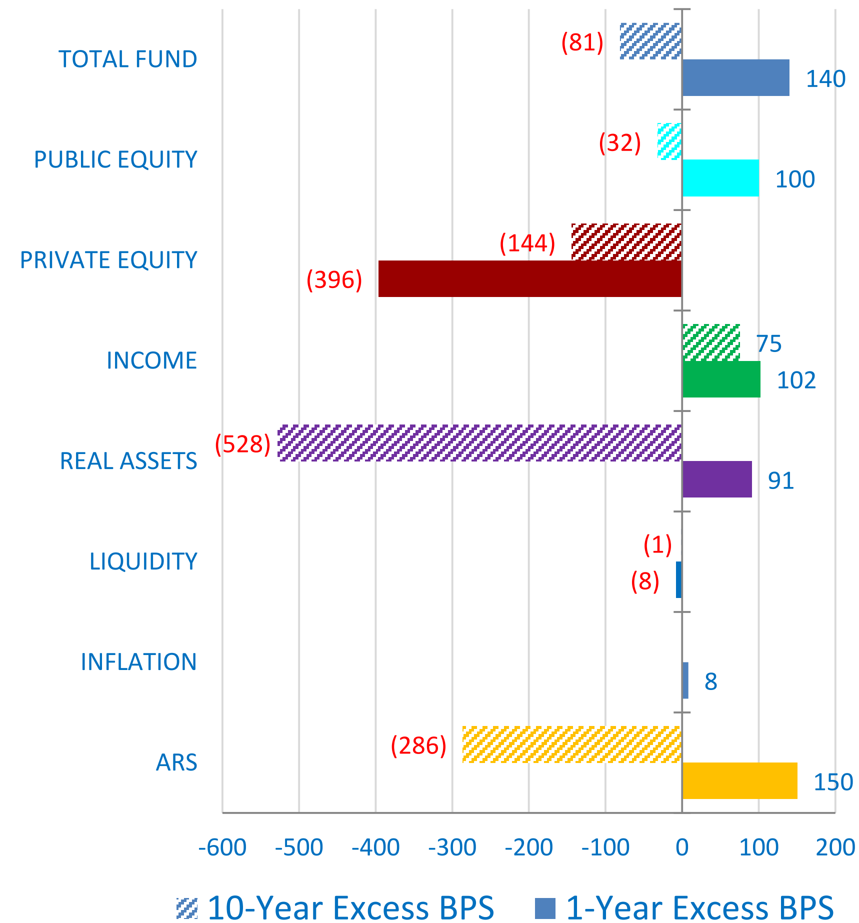
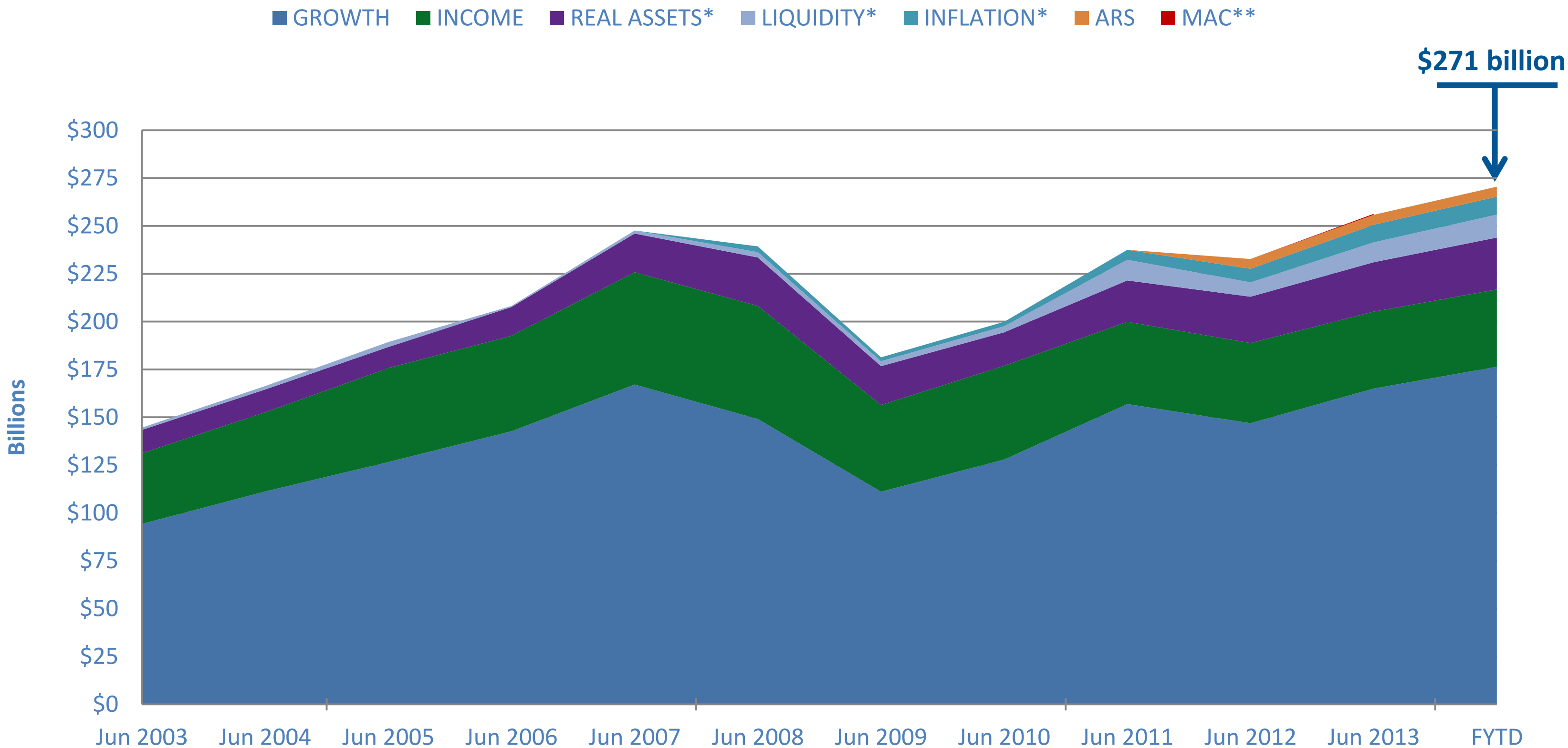
Total Returns and Relative Returns





Total Fund Allocation Trend

Total Fund up $106 billion from February 2009



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** MAC funded in December 2012.

Asset Liability Management Expectations

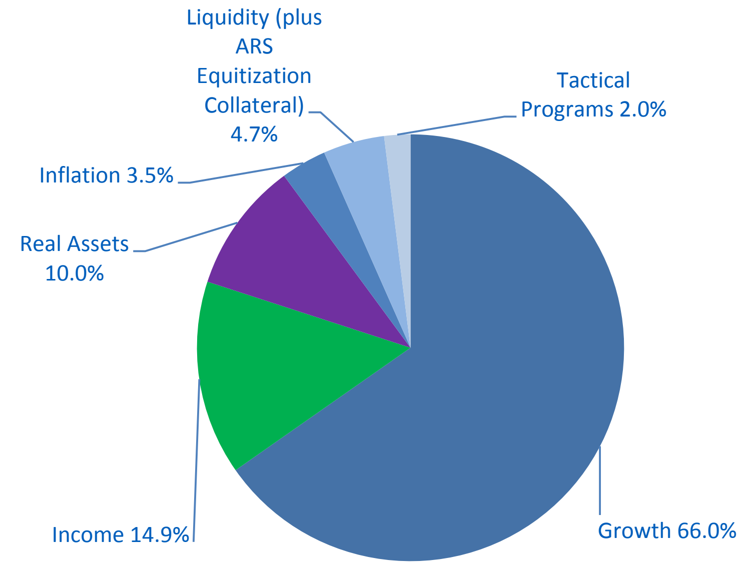
Expected Risk and Return vs. Current Projected Risk and 3-Year Return

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 August 31, 2013.

Asset Allocation

As of September 30, 2013

Asset Class	Policy Target	Actual Effective Weight	Variance
Strategic Asset Class			
GROWTH	**64%**	**66.0%**	**2.0%**
PUBLIC EQUITY (Plus ARS Equitization)	*50%*	*54.5%*	*4.5%*
PRIVATE EQUITY	*14%*	*11.5%*	-2.5%
INCOME	**17%**	**14.9%**	**-2.1%**
REAL ASSETS	**11%**	**10.0%**	**-1.0%**
INFLATION	**4%**	**3.5%**	**-0.5%**
LIQUIDITY (Plus ARS Equitization Collateral)	**4%**	**4.7%**	**0.7%**
Tactical Programs		**2.0%**	
ARS	N/A	**1.9%**	
MAC	N/A	**0.2%**	
OVERLAY + TRANS + PLAN LEVEL	N/A	**-0.1%**	
Total Allocation	**100%**	**101%**	



Actual Effective Portfolio Allocation

Total Fund Positioning

- Increased allocation to Public Equity driven by overlay of ARS Program
  - ARS Program is funded through Public Equity assets
  - Overlay is implemented through a Equity Futures strategy
- Over allocations to Public Equity and under allocation to Real Assets and Inflation had a positive impact on returns
- Under allocations to Private Equity and Real Assets were driven by the challenges to effectively deploy capital

Conclusion

- Favorable market conditions prevail. Risks associated with build up of economic imbalances are gradually receding and central banks are supportive.
- Portfolio Total Risk levels continue to decline but remain elevated versus pre-crisis levels while Active Risk remains within established Policy limits.
- Strong FYTD total and relative performance continues trend of performance recovery since 2009 financial crisis with Growth assets driving returns.